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INTRODUCTION

Summer 2024 Edition

Law of Environmental Protection was first published in 1987, and over three decades has served private, public, and nonprofit practitioners, scholars, educators, students, and more as an invaluable resource on environmental law in the United States. The treatise is written by highly experienced attorneys, academics, and environmental program administrators dedicated to providing readers with detailed and timely guidance for both understanding and complying with key environmental laws and regulations.

Yet the field is constantly changing, with the enactment of new laws, amendments to existing statutes and regulations, significant court decisions, scientific and technological innovation, and the development of new areas in environmental protection and natural resource management.

- New chapter—Chapter 31: Ocean and Coastal Governance

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About the Contributors

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Part A

INTRODUCTORY

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Environmental Law ⇐149E

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Additional References
Environmental Law Institute, <https://www.eli.org/>

Chapter 1

Introduction*

I. ENVIRONMENTAL PROTECTION LAW

- § 1:1 Generally
- § 1:2 Environment and pollution
- § 1:3 From ideals to practicality to ideals?

II. THE PLAN OF THIS BOOK

- § 1:4 Generally

III. CODIFICATION AND REFORM

- § 1:5 Generally
- § 1:6 Consistency among statutes
- § 1:7 —Designation of pollutants
- § 1:8 —Environmental quality standards and goals
- § 1:9 —Control methods
- § 1:10 —EPA's functional programs
- § 1:11 Reform
- § 1:12 —Procedural reform
- § 1:13 — —The construction ban for new sources
- § 1:14 — —Transferable permits

*By Sheldon M. Novick; updated by Scott Schang. Previous updates by Jon Cannon, Elizabeth D. Mullin, and Celia Campbell-Mohn.

- § 1:15 —Reform of standards and goals
- § 1:16 —Study recommendations
- § 1:17 Sustainability: next generation environmental protection?

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adv: CAA "Clean Air Act"
 adv: CERCLA "Comprehensive Environmental Response, Compensation, and Liability Act"
 adv: CWA "Clean Water Act"
 adv: EPCRA "Emergency Planning and Community Right-to-Know Act"
 adv: FIFRA "Federal Insecticide, Fungicide, and Rodenticide Act"
 adv: "Federal Water Pollution Control Act"
 adv: MPRSA "Marine Protection, Research, and Sanctuaries Act"
 adv: NEPA "National Environmental Policy Act"
 adv: "Noise Control Act"
 adv: "Oil Pollution Act"
 adv: "Pollution Prevention Act"
 adv: RCRA "Resource Conservation and Recovery Act"
 adv: SDWA "Safe Drinking Water Act"
 adv: "Solid Waste Disposal Act"

adv: “Surface Mining Control and Reclamation Act”
 adv: TSCA “Toxic Substances Control Act”
 adv: “Uranium Mill Tailings Radiation Control Act”
 adv: “Department of Energy”
 adv: “Department of Justice” “U.S. Attorney”
 adv: “Department of Interior”
 adv: “EPA” “Environmental Protection Agency”
 adv: “FERC” “Federal Energy Regulatory Commission”
 adv: “NRC” “Nuclear Regulatory Commission”
 adv: “Atomic Energy Act”

Primary Authority

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 Toxic Substances Control Act, 15 U.S.C.A. § 2601
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 Surface Mining Control and Reclamation Act of 1977, 30 U.S.C.A. § 1201
 Federal Water Pollution Control Act, 33 U.S.C.A. § 1251
 Oil Pollution Act of 1990, 33 U.S.C.A. § 2701
 Safe Drinking Water Act, 42 U.S.C.A. § 300f
 Atomic Energy Act, 42 U.S.C.A. § 2011
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 Noise Control Act 42 U.S.C.A. § 4901
 Resource Conservation and Recovery Act, 42 U.S.C.A. § 6901
 Solid Waste Disposal Act, 42 U.S.C.A. § 6901
 Clean Air Act, 42 U.S.C.A. § 7401
 Uranium Mill Tailings Radiation Control Act of 1978, 42 U.S.C.A. § 7901
 Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C.A. § 9601
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I. ENVIRONMENTAL PROTECTION LAW

§ 1:1 Generally

Environmental protection law is about ensuring the ability of the environment to continue to provide for the welfare of people, animals, plants, and other life into the future. It addresses the release of pollutants, wastes, and toxic substances into the environment and the ability of the environment to continue to provide the life support services upon which life on Earth depends.

When this treatise was first written in 1986, its editors stated that environmental protection law “is about the release of pollutants, wastes, and toxic substances into the environment. It does not otherwise concern natural resources, wildlife, wilderness, or public parks.” Several decades later, this formulation seems too narrow. Environmental protection law has grown beyond traditional pollution control statutes to encompass aspects of land use, industrial ecology, climate change, energy conservation and use, and the still-developing rubric of “sustainability.”

This treatise retains its focus on the impacts of human activity on the natural

world as its centering point. It also aims to explain the practice of environmental law, not serve as an academic examination of this vital area of law.

Modern environmental protection law, although it had some older history, arguably began with the Federal Water Pollution Control Act of 1948. The major laws took their present form after passage of the National Environmental Policy Act (NEPA) in 1969. These are relatively young statutes, but after several decades of growth and revision, they do form a single body of law, but not a body of law at rest.

Environmental law in the early 1970s was often mistaken as an offshoot of administrative law. Enough time has passed for us to see the cohesive field of environmental protection law arise. Just as after a fire a forest regrows through a succession of species, environmental protection law has grown and morphed by developing from strict command and control regulations to voluntary mechanisms to cap-and-trade schemes to private environmental governance. Environmental law has many tools in its toolkit, and modern environmental law utilizes a diverse set of tools to address the multiple ways in which humans and the environment interact.

§ 1:2 Environment and pollution

The “environment” is our surroundings—air, water, soil, and groundwater both outside and below houses and workplaces and the air inside our homes and workspaces.¹

Residuals—gases, liquids, and trash discarded or left behind—are called “wastes,”² “pollutants,” or “contaminants.”³

Pollution and wastes are residual materials that are of no value in themselves to a particular process or purpose. This does not mean, however, that they may not be of value for other purposes. A balloon is not an air pollutant. It may be a hazard to aircraft and its release may be prohibited, but it is the intended product of an activity.

Some products are regulated to prevent excessive or inadvertent releases and to avoid unwanted effects.⁴ The bulk of environmental protection law, however, deals after the fact with unwanted residuals. As products improve and industrial processes grow more efficient, this body of after-the-fact controls may eventually shrink into insignificance, but for the moment it remains the cornerstone of environmental protection law.⁵

Environmental protection law concerns the release of residuals into the environment. A common synonym, less precise, is “pollution control.” Control of pollution has grown along with expanding ideas of what a proper habitation should be. In the cold climates where our law was formed, for centuries people lived inside their suit of clothes most of the year; wastes went under the straw. When houses

[Section 1:2]

¹See CERCLA § 101(8), 42 U.S.C.A. § 9601(8) (enumerating the definitions of separate environmental media from other statutes).

²See Resource Conservation and Recovery Act (RCRA) § 1004(27), 42 U.S.C.A. § 6903(27) (“solid waste”); § 14:11.

³See, e.g., Clean Air Act § 302(g), 42 U.S.C.A. § 7602(g) (pollutants are materials that enter ambient air); Clean Water Act § 502(6), 33 U.S.C.A. § 1362(6) (pollutants are waste materials discharged into water); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) § 101(33), 42 U.S.C.A. § 9601(33) (a “pollutant or contaminant” is material that may cause harm if released into the environment). The term “contaminant” is more often reserved for foreign substances in food or drinking water supplies, however.

⁴See Chapters 16 and 18 (Part E).

⁵See, e.g., William McDonough and Michael Braungart, *Cradle to Cradle* (2002) (arguing for designing zero waste processes).

became warmer and more comfortable, smoke went up the chimney and wastes went out into the street. The city became a community, and wastes were piped out of town or carried to a dump.

The 21st century habitation is the globe—or at least the thin film of biosphere on its surface, “spaceship Earth” in Adlai Stevenson’s famous phrase. The old reflex to put wastes outside the community is still with us; there is always someone suggesting that wastes be sent to the sun or into the depths of the earth. But for all its global size, the regulated “environment” is mostly the common space that the public inhabits. It only rarely penetrates indoors or reaches into outer space or into the earth below the zone of moisture.

These definitions taken together show that environmental protection law is the rule of global housekeeping; it says what the public will accept in our common habitation and what they will exclude as foreign or unsanitary. The law protects human health and safety as well as the environment. The decisions about what to allow and what to exclude from the environment touch deep feelings about cleanliness, morality, and esthetics.⁶

Increasingly, environmental protection law is informed by an understanding of the interconnectedness between humans and the Earth’s ecosystem, which breaks down traditional Western conceptions of people as separate from nature. As we see that our wastes wind up in the air we breathe and water we drink, as we find persistent pollutants in species worldwide, we are coming to understand environmental protection law to be as much about sustainable development of the human species and maintenance of the ecosystem that sustains us as about pollution control. Climate change—the environmental effects of emissions of greenhouse gases from human activities—is perhaps the most dramatic demonstration yet that humans are inseparable from our environment. Just as we are shaped by the quality of the air and water we breathe and drink, the environment is inexorably shaped by our activities.

§ 1:3 From ideals to practicality to ideals?

The purpose of the statutes described in this book is to do away with significant pollution of the environment. Over time, the purpose of environmental protection law is also to ensure human activities do not irreparably harm the ecosphere.

When pollution was defined as garbage, without value of any kind, the purpose was sensible enough. People felt pretty strongly about it, and the statutes record this general feeling. The environmental protection statutes set their goals in absolute terms. The Clean Water Act says that all pollution discharges should be ended.¹ Four statutes say that minimum standards of environmental quality must be met regardless of the cost or inconvenience.²

With the benefit of 40 years experience, these absolute standards and goals may seem unreachable and impractical. The statutes often provide, however, a series of intermediate steps and controls that, in most cases, are designed to be accomplished with practical and available methods. The statutory goals and standards are not expressly compromised, but the schedules have lengthened, and the intermediate steps have multiplied, as experience has shown what could be accomplished within

⁶See M. Douglas & A. Wildavsky, *Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers* (1982).

[Section 1:3]

¹The deadline for ending all discharges was 1985. See Clean Water Act § 101(a)(1), 33 U.S.C.A. § 1251(a)(1).

²The Clean Air Act, the Clean Water Act, the Safe Drinking Water Act (nondegradation by injection wells) and RCRA; other statutes may have similar implicit requirements. See §§ 2:15, 2:20.

the limits of an existing industrial system. Environmental protection law as originally conceived is a complex system of transitional programs, whose overall purpose is satisfied by steady progress toward the goal, but with no realistic respect of meeting the goal.

Some consider incremental progress sufficient and believe that technological advances will allow progress to continue. Others believe that it is time to revisit the goals set forth in the statutes and recommit to meeting those goals or revise the goals to be achievable in light of experience.

One reaction in the late 1980s and early 1990s to the realization of the slow march of progress was the concept of pollution prevention—focus on the front end of the pipe, not the tail end. This led to new legislative and regulatory initiatives. In addition, the focus on voluntary methods for meeting environmental goals, as opposed to command and control regulations, the advent of corporate social and environmental responsibility, and the use of reporting in environmental regulations drew the focus away from complex, and what was widely portrayed as costly and inefficient, government regulation toward voluntary corporate self-policing and reporting that was expected to ameliorate environmental conditions for much of the 1990s and 2000s.

The climate crisis, which started to garner widespread public and political attention around 2005, coincided with increased use of the term “sustainability” to refer not just to sustainable development but to serve as a kind of inexact proxy for sustaining the environment, which is quite similar to the purpose of environmental protection law described above.³ Yet at a political level, environmental issues have gone from garnering widespread, bipartisan support to serving as a proxy for big government. As a result, the United States suffers political paralysis in acting on climate change and revising and updating environmental protection law.

II. THE PLAN OF THIS BOOK

§ 1:4 Generally

This treatise includes the federal statutes administered primarily by the United States Environmental Protection Agency. There are 10 principal statutes. Listed in order of their enactment in current form, and as presently amended, they are:

1. The Clean Air Act, 42 U.S.C.A. §§ 7401 to 7671q
2. The Federal Water Pollution Control Act (commonly called “the Clean Water Act”), 33 U.S.C.A. §§ 1251 to 1387 (surface water pollution)
3. The Marine Protection, Research, and Sanctuaries Act, 16 U.S.C.A. §§ 1401 to 1445 (ocean dumping)
4. The Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C.A. §§ 135 to 136y (pesticides)
5. The Safe Drinking Water Act, 42 U.S.C.A. §§ 300f to 300j-26 (public drinking water supplies; groundwater protection)
6. The Toxic Substances Control Act (“TSCA”), 15 U.S.C.A. §§ 2601 to 2692 (manufacturing and use of toxic substances)
7. The Solid Waste Disposal Act (commonly called the Resource Conservation and Recovery Act or “RCRA”), 42 U.S.C.A. §§ 6901 to 6992k (solid and hazardous waste management)
8. The Comprehensive Environmental Response, Compensation, and Liability Act (“Superfund” or “CERCLA,” the hazardous waste cleanup program), 42 U.S.C.A. §§ 9601 to 9675

³U.S. environmental law has long incorporated notions of sustainable development. *See, e.g.*, 42 U.S.C.A. § 4331.

9. The Pollution Prevention Act of 1990, 42 U.S.C.A. §§ 13101 to 13109
10. The Oil Pollution Act of 1990, 33 U.S.C. §§ 2701 to 2762

A glance at the table of contents shows we have not simply taken each statute and gone through it, section by section. There are several handbooks or treatises covering one or several of the statutes in this way. As the number of statutes has grown, as they have been repeatedly amended, this kind of treatment has become less useful.

First, the statutes often overlap and refer to or supplement each other. Four statutes, for instance, have some provisions that apply to groundwater protection.

Second, the volume of materials is becoming unmanageable—the statutes alone fill a rather large book, and the Environmental Law Reporter now has over 40 volumes of cases arising principally under these statutes. EPA's implementing regulations fill several feet of shelf. Some synthesis of and guide through this material, rather than just a summary of section headings, seems to be needed.

Third, because EPA was assembled piecemeal from other agencies, and its authority was assembled piecemeal from successive statutes, there is no explicit overall charter or statement of purpose, nor is there a single statute in which EPA's organization and procedures can be found. These have all evolved in practice.

For these reasons, we have broken up and rearranged the statutes so that the practitioner can see them as they are administered and enforced, and so that general principles are easier to see.

Part B includes the general principles and methods evolving from repeated amendments of all relevant statutes, and the decisions of the courts construing or enforcing them. There is a description of EPA's organizations and procedures, which reflect this accumulated experience.

Part C describes the functional programs, such as state roles and enforcement, which are common to several statutes.

Part D describes what professionals often refer to as the "media programs." These do not correspond exactly to the contours of any statute, although readers will recognize air, water, soil, and groundwater as general areas of environmental protection law. We have presented the pertinent statutory programs as they have been administered, and as they are commonly applied to actual products or facilities.

Part E continues traditional environmental protection law with the statutes regulating chemical products and manufacturing directly or provision of environmental services: toxic chemicals, pesticides, biotechnology, and drinking water.

Part F takes us into the expansion of the law of environmental protection beyond pollution control law to ecosystem protection in the form of oceans law, invasive species, climate, and wildlife management.

Part G examines the next generation of environmental protection law in the form of proposals to reform environmental protection law and to give ground to what is popularly called sustainability as it intersects with environmental protection law.

For convenience of presentation, we have further grouped the pollution control statutes by environmental medium. No tightly compartmented arrangement is possible or necessary, of course. There is no sharp line between ground water and surface water; one shades imperceptibly into the other, and the statutes do not show a sharp jurisdictional break between them. A lot of cross-referencing is therefore needed in any plan of arrangement. But we have tried to group the major headings in a way that reflects the purpose or application of the statutes. We have put the injection well provisions of the Safe Drinking Water Act, for instance, under a common heading with other waste disposal statutes, rather than with the Clean Water Act, which also contains well permit provisions.

The only aspect of the outline at all surprising to the experienced practitioner may be the lack of a major heading for “hazardous waste.” The Superfund program for cleaning up hazardous waste sites is at center stage, and it is linked with RCRA, the hazardous waste management program, within EPA and within Congressional committee jurisdictions. In this treatise, these two programs make a subtopic within a larger category: the protection of soil and groundwater. This arrangement represents a prediction by the volumes first editors about the way the law would develop. While this convergence has yet to manifest, we are not yet prepared to revisit this approach.

The following chapters are mainly descriptive, but as the parallel provisions of the statutes have not been brought together before in this way, we have occasionally noted inconsistencies, and have described major proposals for reform of these common elements. These are briefly summarized in the next section.

III. CODIFICATION AND REFORM

§ 1:5 Generally

In 1983, shortly after returning as Administrator of EPA, and after a period of deep turmoil in the Agency, William D. Ruckelshaus asked the National Academy of Public Administration to study EPA’s management and budget systems. The Academy set up a panel of ten, chaired by Frank C. Carlucci, and the panel delivered its report in 1984.¹ Many of the panel’s recommendations have since been carried out. The following is one that has not yet been fulfilled:

Consolidating the Statutes. In our investigation of EPA’s budget and personnel procedures, we were struck by the extent to which they mirror the disjointed legal structure of the agency

Since EPA is responsible for administering laws that originated in many Congressional committees and subcommittees, the Agency has expressed frustration over the need to testify before 19 House committees and subcommittees plus seven Senate panels. Agency officials appear before Congress as often as 90 times a year to deliver similar reports.

Redundant testimony aside, EPA’s statutory fragmentation leads to budget rigidities, impedes efficient administration and causes confusion. Statutory fragmentation, moreover, costs more money than would consistency.

Congress and the EPA should begin to develop an organic law covering protection of earth, air and water. Progress toward a comprehensive environmental protection statute may be slow, but it is worth the effort.

. . . .

We recommend that EPA, the Executive Branch and Congress work closely to identify common approaches implicit in the environmental laws. Common administrative strategies can be devised for all of them.²

Even before this last recommendation had been delivered, the Administrator began an internal study of the need for statutory reform. The first report of this study, an internal memorandum delivered in June 1984,³ focused on inconsistencies among the statutes, and the confusion caused by application of several different

[Section 1:5]

¹National Academy of Public Administration, *Steps Toward a Stable Future: A Report by a Panel of the National Academy of Public Administration Assessing the Budget and Personnel Processes of the Environmental Protection Agency* (1984).

²National Academy of Public Administration, *Steps Toward a Stable Future: A Report by a Panel of the National Academy of Public Administration Assessing the Budget and Personnel Processes of the Environmental Protection Agency* 5 (1984).

³Memorandum from Ernest B. Abbott to Statutory Review Contacts, June 12, 1984 (“Response to December 27, 1983 Statutory Review Questionnaire”).

statutes to a single environmental problem.

The first fruit of these efforts was a draft “Integrated Enforcement Act,” which would have provided consistent enforcement authority for EPA under most of its statutes, drawing on what the Agency viewed as the best from each. The Administration decided, however, to use the draft during reauthorization of each of the statutes, rather than as a separate piece of legislation. (In 1984, nearly all of the Agency’s statutes were due—or overdue—for reauthorization.) Some modest reforms resulted.

In 1987, the Agency began to study the possibility of a single, organic statute. Considering the difficulty getting individual statutes reauthorized—even the top-priority Superfund statute was allowed to expire in 1985 and dragged on under temporary resolutions for a year—it is no wonder this effort lagged until in present times, it is no longer discussed.

The National Academy report suggests that an organic statute for EPA would begin with “common approaches implicit in all the environmental laws.”⁴ Once these have been identified, of course, they would be open to criticism and revision. Any project to draft a new statute therefore easily becomes a project to reform the laws.

Former Deputy Administrator Robert Sussman proposed an “integrating” statute that would reform the implementation of EPA’s programs without replacing “the existing media-specific laws.”⁵ The purpose of such a statute would be to facilitate programs that are more flexible, performance-based, and collaborative while avoiding the controversy that has surrounded the proposal for an organic statute.

In this treatise, the authors have identified some areas of inconsistency among the statutes and have identified gaps in their coverage. Their main task was to describe the law as they found it, but at a few points they have also discussed proposals for reform. Summarized in this section are only those suggestions which touch common features of the statutes. Many other statute-specific suggestions for clarification and improvement are found in the discussions of individual statutes and in Part G.

In the following brief summary, we have tried to separate the related issues of codification—which requires consistency—and fundamental reform. The recent trend of legislation has been toward more stringent and comprehensive controls, and so “consistency” would mean bringing older, less restrictive programs—especially for toxic pollutants—up to the stringent levels of more recent legislation.

§ 1:6 Consistency among statutes

In Chapters 2 through 10, the authors review elements which are common to the EPA statutes. At almost every heading and subheading, differences and inconsistencies are noted. Some of the major inconsistencies are the following.

§ 1:7 Consistency among statutes—Designation of pollutants

The criteria for designating pollutants and wastes for control are not consistently stated, and are even less consistently administered, among the separate media programs. This may lead to diversion of pollutants from one medium to another, as famously happened when clean air mandates to use methyl tert-butyl ether (MTBE)

⁴National Academy of Public Administration, *Steps Toward a Stable Future: A Report by a Panel of the National Academy of Public Administration Assessing the Budget and Personnel Processes of the Environmental Protection Agency* 5 (1984).

⁵Robert M. Sussman, An “Integrating” Statute, 13 *Env’tl Forum* 16, 17 (1996).

resulted in widespread water contamination.¹ RCRA allows wastes to be designated by characteristic and potential for harm, the Clean Air Act requires a showing of actual harm from air pollutants, and the Clean Water Act contains a somewhat arbitrary list of “toxic” pollutants. Many hazardous wastes designated for regulation under RCRA are not expressly designated for regulation as toxic pollutants under other statutes, with the result that, instead of being sent to landfills, some wastes are being dumped into sewers or vented directly into the air. EPA can designate more toxic pollutants for regulation under its existing authority, and may base hazardous waste designations on actual risks, but the statutory criteria for designation are different and coverage is likely to remain inconsistent without statutory changes. Furthermore, EPA cannot usually impose controls in one medium solely to forestall diversion from another.

Designations set the priorities for government action. Consideration should be given to allowing more general, explicit use of risk analysis, particularly the separate identification of individual and population risk in all media, as under TSCA § 4(f) designations, to ensure that the worst problems are tackled first. *See* § 2:11.

§ 1:8 Consistency among statutes—Environmental quality standards and goals

Environmental quality standards and goals are sometimes inconsistent among the statutes. There are nine different definitions of what constitutes an “imminent hazard” (two in CERCLA alone), each triggering EPA’s *ad hoc* response authority a little differently. *See* § 2:10. A common provision could ratify the case law in this area, to avoid constant relitigation. Four statutes apply to groundwater quality directly, but have different and inconsistent definitions of “groundwater” and impose different, occasionally inconsistent standards. Many of the groundwater standards are also inconsistent with surface water standards and with state law.

Environmental quality standards for toxic chemicals are established differently for drinking water and in each of the different environmental media. *See* § 2:23. Inconsistencies can be alarming to the public and may result in diversion of pollutants from one medium to another. The role these standards play and the basis for them should be clarified.

§ 1:9 Consistency among statutes—Control methods

Under many of its statutes, EPA is authorized to require controls based on the cost and availability of control measures. Some of these controls are imposed by nationally uniform rules, and others case by case. The rules differ greatly in detail, but they share common principles, which are discussed in Chapter 3.

These “technology-based” rules have been extensively criticized and as extensively praised. Because the rules differ so much among themselves, both criticism and praise may be warranted. Most observers think that the proliferation of technology-based rules could be reduced so that there were, for instance, fewer criteria for establishing performance standards for new sources of all pollutants. The Clean Air Act alone now has three sets of such criteria, all of which may apply simultaneously to a single plant.

Technology-based rules for existing facilities might be simplified and made more uniform to impose controls more consistently in different media. Some major sources of air pollution, for instance, remain without any control required by federal law, even for designated pollutants. This inequality is very much resented in states

[Section 1:7]

¹*See generally* <http://www.epa.gov/mtbe/faq.htm>.

where controls for existing sources have been costly and difficult.

Fewer, more broadly applicable standards for control would be easier to administer, there would be fewer challenges to fundamental principles, and standards would be less vulnerable to industry-by-industry pressures.

§ 1:10 Consistency among statutes—EPA’s functional programs

The National Academy report and EPA studies have focused on the need for consistency in the way EPA performs identical functions—such as enforcement or financial assistance to state agencies—under different statutes. EPA’s functional programs are reviewed in Chapters 4 through 10. Inconsistency in enforcement among the statutes is probably the worst problem, and is discussed in Chapter 9, but there are also inconsistencies in the delegation of programs to state authority, the oversight of delegated programs, in the programs for providing financial and technical assistance to the states, the procedures for permit issuance, and in research and development programs.

The statutes are especially inconsistent with regard to assessment of environmental quality. This is the sort of essential, managerial work that is often neglected in the media-specific, problem-oriented statutes. Under the Clean Air Act a monitoring network is required, but no other statute creates a systematic source of environmental quality data. Assessment of environmental quality is not even identified as a separate function in most media programs. Federal and state agencies therefore lack information about environmental problems and the effects of control programs on them.

For lack of data, priorities may be badly skewed because attention turns to the areas where information is available, instead of toward the most serious problems. EPA and many state agencies are like the man who loses his keys in a dark alley, but looks for them under a street lamp where the light is better. The Agency’s creation of the Office of Environmental Information, headed by the Agency’s Chief Information Officer, an Assistant Administrator level position, reflects an effort to provide better integrated environmental data to states, local governments, and the public.

§ 1:11 Reform

The subject of this treatise is the law as it stands. We hope it may also be helpful in any discussion of reform to existing statutes. The following is a brief summary of some major statutory reforms that have been suggested in the literature, or which have suggested themselves to the authors. For a review of major reform proposals beyond revisions to existing statutes, *see* Part G.

§ 1:12 Reform—Procedural reform

Many procedural problems in individual programs might be avoided simply by providing more consistency and choosing the best of each as a model. The Clean Air Act has already been noted as a program that would greatly benefit from features common in other statutes. But there are a few pervasive procedural problems. Two deserve particular mention.

§ 1:13 Reform—Procedural reform—The construction ban for new sources

EPA’s statutes prohibit the construction of new industrial facilities until all applicable permits have been issued. The statutes also often prohibit modification or expansion of existing facilities until all permits have been issued.

The uncertainty and delay caused by this pervasive “construction ban” have been

persuasively criticized as a serious obstacle to modernization,¹ which the environmental protection statutes—and economic prosperity—otherwise require.

The construction ban for new sources had its origin in the early 1970s, when NEPA and the Clean Water Act appeared to give the federal government a role in facility siting and land use planning. As the law has developed, and as the economy has changed, the need for EPA intervention in site planning, and the statutory support for NEPA-type construction permit conditions, have gradually eroded. The origin of the ban, and its pros and cons, are discussed in greater detail in § 3:17, below.

The original purpose of the ban having largely been lost, it persists because of the leverage it gives EPA (and citizen intervenors) over new-source permit applicants. It is no longer needed, however, and should be dropped, except in the few cases—such as surface mines, dredge-and-fill operations, and landfills—where construction itself must be regulated.

A source of friction and complaint would be removed along with the construction ban, with little cost to environmental programs.

§ 1:14 Reform—Procedural reform—Transferable permits

One reform that is energetically put forward is the proposal to abolish the whole system of technology-based controls and permits and put in their place a system of emission trading.¹

Briefly summarized, the idea is to issue—or sell at auction—permits allowing plants to emit the same aggregate amount of pollution they now discharge. The total allowed by the permits would then be reduced every few years at a rate determined by Congress to ensure progress in control. Companies would be free to buy and sell their permits, but each would be bound by the terms of the permit they owned.

The purpose of the reform is to allow economic incentives, rather than government commands, to guide behavior. Managers of companies that discharge pollution could increase their profits by developing new, more efficient ways of reducing pollution and then selling off their unneeded emission permits to other less flexible or inventive companies. Pollution would decrease in the most efficient way possible, with the least degree of government intervention. An overlay of restrictions would prevent pollution “hot spots” from developing.

In the 1990 Amendments to the Clean Air Act, Congress adopted a cap-and-trade system for SO₂ acid rain controls under Title IV.² That program is generally credited with producing reductions in SO₂ emissions ahead of the statutory schedule and at a significantly lower cost than was initially predicted.³ EPA is actively pursuing other applications of emissions trading under the Clean Air Act, and it has also embraced trading among dischargers within a watershed as a cost-effective means to achieve water quality goals.⁴ Increased use of market mechanisms has been

[Section 1:13]

¹See § 3:17.

[Section 1:14]

¹See §§ 2:15, 3:24.

²CAA §§ 401 to 406, 42 U.S.C.A. §§ 7651 to 7651e. See §§ 3:24, 12:57.

³A. Ellerman, et al., 1996 Update on Compliance and Emissions Trading Under the U.S. Acid Rain Program (1997).

⁴Administration Clean Water Plan: Restoring and Protecting America's Waters 88 (1988).

urged by a number of studies of EPA and its programs.⁵ Trading has been a preferred greenhouse gas control method, although it is being used in tandem with traditional regulatory efforts in California and other states.

The principal obstacle to further expansion of this reform is not statutory, but practical. Pollution emissions are not always fungible, and many are toxic and could create “hotspots” of contamination. The public therefore demands some progress in control pretty much at every source. Imagine a plant manager who comes to a public meeting and says, “We want to put our benzene into the air—which you breathe—instead of sending it to the wastewater treatment plants, because it is cheaper for us, and EPA says the risks to the United States population don’t increase.” The answer is predictable and rude. Very few individuals or communities are volunteering to inhale pollution for the public good. Once a toxic pollutant has been designated for control and a source identified, the public regularly demands controls as close to complete eradication of the pollutant as can be achieved.

Emissions trading is usually presented as a procedural reform, which would eliminate inefficient “command and control” regulations. For transferable permits to be more widely used for toxic pollutants, however, not only the present permit system, but the fundamental purposes of the laws, would have to be changed.

§ 1:15 Reform—Reform of standards and goals

Polls consistently show that the present statutes reflect public sentiment and political reality. Proposals for radical change are still made, knowing that they require deep changes in public attitudes, changes as profound as the social movement which produced the present system. The arguments for and against such changes are fundamentally moral and political. The principal issues are set out in Chapter Five.

Two kinds of proposals are made. The first is simply to relax environmental quality standards and goals because they are unreasonably strict or inefficient. This is a straightforward argument, and is often supported by analysis, using resource economics, showing the “inefficiency” of the laws. Efficiency may not be an appropriate standard to apply, and perhaps for this reason the argument so far has not been persuasive.

The second proposal is more complex. It accepts the public’s wish to do away with toxic pollutants as quickly as possible, but argues that the present system of laws, with its inflexible standards, distorts EPA’s efforts so that little progress is made. The argument is made in general terms that EPA should attack the worst problems first and let the minor problems take care of themselves. As noted in Chapter 5, even from an environmentalist perspective, the best way may have become the enemy of the good.

The statutes admittedly set goals and standards that cannot all be met, and which often cannot be met as quickly as the statutes require, but until recently the needed compromises with practicality have been implicit and have been expressed in extended schedules and interim steps based on cost or availability. EPA in recent years has sought to gain more flexibility in the standards themselves, to make the compromises explicit—and permanent.

The proposal most often made is to substitute for the present complex, implicit system of negotiation and compromise, a system of risk management that would allow EPA to assess environmental risks in objective terms, estimate the costs of

⁵*E.g.*, Enterprise for the Environment, *The Environmental Protection System in Transition* 39–40 (1998); National Academy of Public Administration, *Resolving the Paradox of Environmental Protection* 25–27 (1997); J. Clarence Davies & Jan Mazurek, *Pollution Control in the United States: Evaluating the System* 289 (1998).

control, and then attack the problems that promised the best chance of progress.¹ Inconsistencies among media would be eliminated. The public would get the best results for its regulatory dollar.

Risk management is discussed in § 2:9. By sacrificing long-term goals, risk management for efficiency gives up the hope for continued progress in technology; by comparison with the present statutes it would be a static system, its optimism lost. Critics of this approach also question whether enough accurate information is available to make such management decisions or whether in the absence of real data the whole process would become just a screen for a preconceived agenda of relaxing controls.

Risk management also seems to miss the point, in a fundamental way. “Pollution” is not really a sliding scale. Environmental protection law is founded on a deep feeling that filth should not be thrown onto our doorsteps. The statutes reflect that judgment and provide mechanisms for implicit compromise.

Proposals to do away with standards entirely, and substitute a form of objective risk management, require not only changes in public feeling, but changes in the way Congress deals with the conflict between ideals and practicality. Such changes may or may not be desirable: they hardly seem likely.

§ 1:16 Reform—Study recommendations

In 1998, EPA stimulated a fresh outpouring of recommendations and proposals for reform. Reports by the National Academy of Public Administration,¹ the Enterprise for the Environment,² and senior policy experts at Resources for the Future³ suggest wide agreement on points of improvement, including: (1) a performance-based or results-oriented management system, which would include setting environmental goals and measuring progress toward meeting those goals; (2) better and more accessible information about the environment; (3) more collaborative decisionmaking and public involvement; (4) increased flexibility and efficiency (e.g., through use of market mechanisms); (5) better integration across media-based programs; and (6) pilot projects and experimental programs to increase responsiveness to local conditions and needs. All of these suggested improvements have been incorporated into the Agency’s own reinvention agenda and are reflected in Agency program initiatives and organizational changes.

In the early 2000s, a series of reports and books focused on sustainable development, likely in part due to major international summits of 1992 and 2002 influencing U.S. domestic thought on how the U.S. regulates environmental protection.⁴

In the late 1990s and early 2000s, attention turned away from U.S. environmental protection reform as the political rancor in Washington, D.C., reached new heights,

[Section 1:15]

¹See EPA Science Advisory Board, *Reducing Risk: Setting Priorities and Strategies for Environmental Protection* (SAB-EC-90-021, Sept. 1990).

[Section 1:16]

¹National Academy of Public Administration, *Resolving the Paradox of Environmental Protection* (1997).

²Enterprise for the Environment, *The Environmental Protection System in Transition* (1998).

³J. Clarence Davies & Jan Mazurek, *Pollution Control in the United States: Evaluating the System* (1998).

⁴See, e.g., President’s Council on Sustainable Development, *Sustainable America: A New Consensus for Prosperity, Opportunity, and A Healthy Environment for the Future* (1996), available at <http://clinton2.nara.gov/PCSD/Publications/index.html>; M. Chertow & D. Esty, *Thinking Ecologically: The Next Generation of Environmental Policy* (1997); J. Dernbach, *Stumbling Towards Sustainability* (2002).

and environmental issues often became a central point of contention between bickering parties. No new environmental laws or major reform initiatives passed Congress from 1990 until hope for a federal climate law grew in 2009 and 2010 only to be dashed.⁵

Finally, in 2016 Congress and the Obama Administration enacted the Frank R. Lautenberg Chemical Safety for the 21st Century Act.⁶ That it took decades to amend a statute with obvious flaws that were commonly agreed to shows the glacial pace of environmental law reform after its sprint into being in the early 1970s.

Chapter 26 provides a thorough discussion of these studies and their common recommendations.

§ 1:17 Sustainability: next generation environmental protection?

As the 40th anniversaries of the passage of NEPA and creation of EPA passed in 2010, it is fair to ask whether it is time to birth a new generation of environmental protection. Draft federal climate legislation did not seem to be a new generation of legislation, but did reflect many of the lessons learned along the way—using market mechanisms, relying on reporting and liability to change behavior, and keeping some command and control where appropriate. Thoughts that we may be able to revise environmental protection efforts to focus on sustainable design of industrial processes, on ecosystem services, and on integrating the externalities of pollution into the mainstream economy seem like very big ideas at a point in time when the public's capacity for environmental issues is rather narrow. In this vein Chapter 27 reviews progress the United States has made toward sustainability.

It will be interesting to see over the next 10 to 20 years whether environmental protection law continues to incorporate the lessons of the past and the reform efforts that were made along the way, whether it fundamentally shifts to change its goals and methods of doing things, or a little of both.

⁵Arguably amendments to the Safe Drinking Water Act and adoption of the Food Quality Protection Act in 1996 qualify, but these were far less remarkable than the Clean Air Act Amendments of 1990. The point holds that there was no major reworking of a federal environmental statute or new statute adopted for 26 years.

⁶Pub. L. No. 114-182, 130 Stat. 448.

Part B

PRINCIPLES AND METHODS

Research References

Additional References

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Chapter 2

The Goals of Environmental Protection*

I. INTRODUCTION

§ 2:1 In General

II. THE ORIGIN OF ENVIRONMENTAL QUALITY STANDARDS

§ 2:2 Introduction

§ 2:3 Local air and water quality standards

§ 2:4 State air and water quality standards

§ 2:5 —Oregon's air pollution statute

§ 2:6 —State standards

§ 2:7 The movement for control of technology

§ 2:8 Thresholds and goals

III. THRESHOLDS OF ACTION

§ 2:9 In General

§ 2:10 Imminent and substantial hazards

§ 2:11 Designated pollutants

§ 2:12 —Conventional pollutants

§ 2:13 —Toxic pollutants

IV. NATIONAL AMBIENT STANDARDS FOR CONVENTIONAL POLLUTANTS

§ 2:14 Introduction

§ 2:15 Standards as interim goals

§ 2:16 Ambient standards as the basis of control—Environmental quality modeling

§ 2:17 Regional modeling

§ 2:18 Other aspects of ambient standards

V. GOALS

*By **Sheldon M. Novick**; § 2:5 by **Madeline Thomas** and **Sheldon M. Novick**; updated by **Scott Schang**. Previous updates by **Robert V. Percival** and **Ann Powers**.

- § 2:19 Introduction
- § 2:20 Nondegradation standards
- § 2:21 —Background pollution
- § 2:22 —Increments for conventional pollution
- § 2:23 De minimis standards for toxic pollutants
- § 2:24 —De minimis standards
- § 2:25 —Schedules and controls
- § 2:26 Long-term goals of technology-based control

VI. THE PURPOSE OF ENVIRONMENTAL PROTECTION LAWS

§ 2:27 In General

Research References

Primary Authority

Clean Water Act § 101(a)(1), 33 U.S.C.A. § 1251(a)(1)
 Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C.A. §§ 136 to 136y
 Toxic Substances Control Act, 15 U.S.C.A. § 2601
 Marine Protection, Research, and Sanctuaries Act 16 U.S.C.A. § 1401
 Surface Mining Control and Reclamation Act of 1977, 30 U.S.C.A. § 1201
 Federal Water Pollution Control Act, 33 U.S.C.A. § 1251
 Oil Pollution Act of 1990, 33 U.S.C.A. § 2701
 Safe Drinking Water Act, 42 U.S.C.A. § 300f
 Atomic Energy Act, 42 U.S.C.A. § 2011
 National Environmental Policy Act of 1969, 42 U.S.C.A. § 4321
 Noise Control Act 42 U.S.C.A. § 4901
 Resource Conservation and Recovery Act, 42 U.S.C.A. § 6901
 Solid Waste Disposal Act, 42 U.S.C.A. § 6901
 Clean Air Act, 42 U.S.C.A. § 7401
 Uranium Mill Tailings Radiation Control Act of 1978, 42 U.S.C.A. § 7901
 Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C.A. § 9601
 Emergency Planning and Community Right-to-Know Act (EPCRA) 42 U.S.C.A. § 11001
 Pollution Prevention Act of 1990, 42 U.S.C.A. § 13101

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I. INTRODUCTION

§ 2:1 In General

Some obvious questions about environmental law do not have obvious answers. For instance: What is the purpose of the Environmental Protection Agency (EPA)? EPA administers nine major statutes, and has some responsibilities under four others,¹ but none provides the agency with a general charter.²

Each of the statutes EPA administers has narrow statements of purpose that are

[Section 2:1]

¹(1) Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C.A. §§ 136 to 136y [hereinafter FIFRA].

(2) Marine Protection, Research, and Sanctuaries Act, 16 U.S.C.A. §§ 1401 to 1445 (the ocean dumping statute) [hereinafter MPRSA].

(3) Safe Drinking Water Act, 42 U.S.C.A. §§ 300f to 300j-26 [hereinafter SDWA].

(4) Solid Waste Disposal Act (commonly known as the Resource Conservation and Recovery Act),

expressed as goals of environmental quality to be achieved. There are dozens of environmental quality goals in the laws. One of the purposes of the Clean Water Act, for instance, is to attain “water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water.”³ The Clean Air Act seeks, among other things, air quality that, “allowing an adequate margin of safety, [is] requisite to protect the public health.”⁴ There are environmental quality goals like these for pollution in every part of the environment of the United States—surface waters, coastal waters, ground waters, outdoor air, and soil; there are also goals for noise levels and for radiation in all media.⁵

The goals are not, of course, self-executing; the statutes often require EPA to identify pollutants that are causing the most serious problems⁶ and then translate the general goals of the statutes into concrete objectives—limits of concentration of the designated pollutants—that are to be achieved or maintained. These precise objectives are called “environmental quality standards.”⁷ EPA must design programs, usually to be administered by the states, to accomplish these objec-

42 U.S.C.A. §§ 6901 to 6992k (solid and hazardous waste) [hereinafter RCRA].

(5) Clean Air Act, 42 U.S.C.A. §§ 7401 to 7671q.

(6) Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C.A. §§ 9601 to 9675 [hereinafter CERCLA or Superfund].

(7) Federal Water Pollution Control Act, 33 U.S.C.A. §§ 1251 to 1387 [hereinafter Clean Water Act].

(8) Toxic Substances Control Act, 15 U.S.C.A. §§ 2601 to 2692 [hereinafter TSCA].

(9) Pollution Prevention Act of 1990, 42 U.S.C.A. §§ 13101 to 13109.

EPA reviews environmental impact statements prepared by other agencies under the National Environmental Policy Act of 1969, 42 U.S.C.A. §§ 4321 to 4361, which is administered by the Council on Environmental Quality, and has an advisory role under the Oil Pollution Act of 1990, 33 U.S.C.A. § 5002. EPA has some regulatory authority under the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C.A. §§ 1201 to 1328, which is primarily administered by the Department of Interior. Finally, EPA has some responsibility for radiation in the environment under the Atomic Energy Act, 42 U.S.C.A. §§ 2011 to 2282, and the Uranium Mill Tailings Radiation Control Act of 1978, 42 U.S.C.A. §§ 7901 to 7942. Under the Reagan Administration, the Agency ceased implementing the Noise Control Act of 1972, 42 U.S.C.A. §§ 4901 to 4918, for which funds are no longer appropriated. I have included the Noise Control Act in the following discussion, however, as it casts its own small light on the pattern of congressional action.

²EPA was created by President Nixon’s Reorg. Plan No. 3 of 1970, 42 U.S.C.A. § 4321 note. *See* § 4:1. The order primarily transferred functions from other agencies, and neither made nor stated policy. “Indeed, it is almost impossible to describe what American ‘environmental policy’ is. Policy is not contained in statutes or even in the Federal Register, but in the multitude of orders and rulings of state and federal officials throughout the country.” S. Melnick, *Regulation and the Courts: The Case of the Clean Air Act* 384 (1983).

³Clean Water Act § 101(a)(1), 33 U.S.C.A. § 1251(a)(1).

⁴Clean Air Act § 109(a)(1), 42 U.S.C.A. § 7409(b)(1).

⁵*See* Clean Water Act § 303, 33 U.S.C.A. § 1313 (pollutants in surface waters of the United States); Noise Control Act § 5(a)(2), 42 U.S.C.A. § 4904(a)(2) (ambient noise) (this statute is not presently enforced); Clean Air Act § 109, 42 U.S.C.A. § 7409 (pollutants in outdoor air). The surface water and hazardous waste programs have goals for groundwater quality. *See* *Sierra Club v. Lynn*, 502 F.2d 68, 72, 4 Env’tl. L. Rep. (Env’tl. L. Inst.) 20844, 20851 (5th Cir. 1974) (nondegradation standards for groundwater); RCRA §§ 3002 to 3004, 42 U.S.C.A. §§ 6922 to 6924; 40 C.F.R. pt. 264, subpt. F (groundwater protection standards for hazardous waste facilities); CERCLA § 121, 42 U.S.C.A. § 9621 (standards for groundwater quality to be borrowed from other statutes). The Clean Water Act and MPRSA, the ocean dumping statute, set water quality goals for coastal waters and for the oceans beyond coastal waters used for dumping by the United States. MPRSA § 102, 33 U.S.C.A. § 1412. In Superfund, the soil pollution standards are borrowed from other statutes, as needed, to set limits for waste cleanup. *See* CERCLA § 121, 42 U.S.C.A. § 9621. EPA sets guidance for other agencies to use in regulating radiation-producing activities. 40 C.F.R. pts. 190 to 192.

⁶*See* § 2:9.

⁷*See, e.g.,* *Lead Indus. Ass’n v. EPA*, 647 F.2d 1130, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20643 (D.C. Cir. 1980), cert. denied, 449 U.S. 1042 (1980). In the Clean Water Act, the term “standard” is used

tives—a process discussed throughout this book.

There are environmental quality goals, criteria, or standards for hundreds of pollutants in air, water, soil, and groundwater. One of EPA's purposes, for instance, is to keep additions to the background level of sulfur dioxide below an annual average of 2 micrograms (millionths of a gram) per cubic meter of air, 5 micrograms per cubic meter in any twenty-four hour period, and 25 micrograms in any three-hour period, in the national parks and forests.⁸ Other programs are directed at other categories of air pollutants while others aim to see that states maintain dissolved oxygen levels and other conventional pollutants in surface water at levels which meet federal criteria. Scores of distinct programs are designed to maintain the quality of groundwater, drinking water, and the oceans.⁹

Do these programs fit some overall plan? The environmental protection laws are such a ragbag, collected piecemeal over the course of over twenty-five years, that we might be tempted to say EPA has no single overall purpose; it has just a miscellany of unrelated programs to control different pollutants that have come to attention at various times for different reasons. But there is something more than this. In the repeated enactments by Congress, there is a general pattern of the kind more familiar in the decisions of common-law courts than in statutes—open to dispute and filled with inconsistencies—but a pattern all the same.¹⁰ To help the discussion, I will first sketch out the general pattern, and then fill in or at least suggest some of the details, and the occasional inconsistencies.

Environmental protection work begins with a problem or an injury: smog in Los Angeles, say, or contaminated drinking water supplies. There is a threshold to cross; the problem must be sufficiently significant to deserve government attention. Congress has marked some general problems for attention and has given EPA authority to identify others as they appear.¹¹

Once an environmental pollution problem has been identified as warranting government attention, pollutants that cause or contribute to the problem are formally designated—again, this may be done by Congress or by EPA.¹² In the examples given, nitrogen oxides and hydrocarbons, constituents of automobile

indiscriminately to refer to emission limits, performance criteria, or environmental quality standards; professionals often follow the Clean Air Act's usage and reserve "standards" for measures of environmental quality, a practice followed herein.

⁸Clean Air Act § 163(b)(1), 42 U.S.C.A. § 7473; 40 C.F.R. pt. 51.

⁹See Clean Water Act § 303, 33 U.S.C.A. § 1313 (pollutants in surface waters of the United States); Noise Control Act § 5(a)(2), 42 U.S.C.A. § 4904(a)(2) (ambient noise) (this statute is not presently enforced); Clean Air Act § 109, 42 U.S.C.A. § 7409 (pollutants in outdoor air). The surface water and hazardous waste programs have goals for groundwater quality. See *Sierra Club v. Lynn*, 502 F.2d 68, 72, 4 Env'tl. L. Rep. (Env'tl. L. Inst.) 20844, 20851 (5th Cir. 1974) (nondegradation standards for groundwater); RCRA §§ 3002 to 3004, 42 U.S.C.A. §§ 6922 to 6924; 40 C.F.R. pt. 264, subpt. F (groundwater protection standards for hazardous waste facilities); CERCLA § 121, 42 U.S.C.A. § 9621 (standards for groundwater quality to be borrowed from other statutes). The Clean Water Act and MPRSA, the ocean dumping statute, set water quality goals for coastal waters and for the oceans beyond coastal waters used for dumping by the United States. MPRSA § 102, 33 U.S.C.A. § 1412. In Superfund, the soil pollution standards are borrowed from other statutes, as needed, to set limits for waste cleanup. See CERCLA § 121, 42 U.S.C.A. § 9621. EPA sets guidance for other agencies to use in regulating radiation-producing activities. 40 C.F.R. pts. 190 to 192.

¹⁰This is not a novel method of construing statutes. See G. Calabresi, *A Common Law for the Age of Statutes* (1982); Elliot et al., *Toward A Theory of Statutory Evolution: The Federalization of Environmental Law*, 1 J.L. Econ. & Org. 313 (1985).

¹¹In RCRA, for instance, Congress expressed the judgment that disposal of hazardous wastes on land was a serious problem requiring correction, RCRA § 1002(b), 42 U.S.C.A. § 6901(b), and gave EPA general authority to locate and respond to "imminent and substantial endangerments" caused by waste disposal, 42 U.S.C.A. § 7003, 42 U.S.C.A. § 6973. See § 2:10.

¹²See, e.g., Clean Air Act § 112, 42 U.S.C.A. § 7412 (EPA originally directed to designate toxic air

exhaust, were identified as causes of Los Angeles smog; and a long list of hazardous wastes has been identified as causing or contributing to contamination of drinking water supplies.

Wherever the problem is found, EPA will then set in motion a regulatory system to control or eliminate the pollutants that have been designated.¹³ When the problem and the pollutant are widespread, EPA may set a numerical standard of environmental quality that simplifies the threshold step: if a designated pollutant exceeds its numerical standard, cleanup is required, without further deliberation.¹⁴

In some cases, the threshold standard also serves as an interim goal; once the local hazard has been identified, cleanup continues until pollution drops below the threshold for response. In Clean Air Act programs to control nitrogen oxides and hydrocarbons, for instance, state and local governments have some discretion whether to continue improving local environmental quality, once the action-triggering standards have been achieved.¹⁵

In many cases, however, once a pollutant has been designated for control, the statutes set further and more ambitious goals than simply removing the immediate hazard. The first of these goals is “non-degradation.” With great consistency, environmental protection statutes prohibit any significant degradation of the environment by designated pollutants.¹⁶ Once a pollutant has been designated, therefore, no significant increase in concentration of the pollution anywhere is permitted, even if no local hazard independently meriting government response would result.

Second, if the pollutant is “toxic” or a “hazardous waste,” the statutes generally set a goal of eliminating all significant release of the pollutant into the environment¹⁷ and may sometimes require rapid reduction of emissions regardless of the availability of controls.¹⁸ Most land disposal of designated untreated hazardous wastes has been ended, for instance, and all contamination of soil or groundwater must be cleaned up until all significant pollution has been removed.¹⁹ If the risk posed by a toxic chemical is unreasonable, manufacture and sale of the chemical may be prohibited.²⁰

Third, all new sources of pollution, and many existing sources, are required to continually improve control of designated pollutant emissions.²¹ This general “technology-forcing” requirement has its own implicit goals of environmental quality; taken with other standards and goals, it creates an immense ratcheting mechanism, which allows movement only forward, toward continual improvement in environmental quality.

Taken together, these goals and standards show that EPA has an overall charter and purpose. The agency must identify pollutants which cause or contribute to environmental hazards. Once these pollutants are identified, with few exceptions

pollutants; Congress listed specifics in 1990); Clean Air Act § 122, 42 U.S.C.A. § 7422 (Congress designates certain pollutants for early attention); TSCA § 6(e), 15 U.S.C.A. § 2605(e) (Congress designates PCBs for regulation).

¹³See § 2:9.

¹⁴See § 2:14.

¹⁵See § 2:19.

¹⁶See § 2:20.

¹⁷See § 22:49.

¹⁸See § 2:25.

¹⁹See RCRA § 3004(d) to (k), 42 U.S.C.A. § 6924(d) to (k); CERCLA § 121, 42 U.S.C.A. § 9621; 40 C.F.R. pt. 268; *see generally* Ch. 14.

²⁰See § 2:13.

²¹See § 2:26 and Ch. 3.

they must be reduced to insignificant levels in the environment.

II. THE ORIGIN OF ENVIRONMENTAL QUALITY STANDARDS

§ 2:2 Introduction

There were at least four separate movements for environmental protection, in the years when the present statutes were adopted, that formed their purposes.

First, there was a long-standing movement for the conservation and preservation of wilderness and natural resources, which provided political support for pollution control statutes and contributed the pervasive nondegradation policy to the laws.¹

Second, in the 1940s there was a locally-based movement to clean up city air and water, which were fouled by soft-coal smoke and sewage.²

Third, beginning in the 1950s, there was a series of disputes between some major industrial facilities and their neighbors, often farmers whose crops were damaged by the plant emissions.³ These disputes found their way to state courts and state legislatures and, when added to the activism of local governments, brought state governments into pollution control for the first time.⁴

Fourth and finally, beginning in the early 1960s, there was a national movement for control of radiation and toxic chemicals, which quickly broadened into a movement for the regulation of modern technology.⁵

The purposes of environmental protection law, and the standards and goals which express those purposes, were shaped by these movements, which have converged in a single program to eliminate significant pollution.

§ 2:3 Local air and water quality standards

Drinking water supply, sewage collection and treatment, and smoke control have long been the responsibilities of city and county government; the intrusion of state and federal programs is fairly recent, and not always welcomed at the local level.

Philadelphia, New York, and Boston built public drinking water supply systems, in part to protect public health after cholera epidemics in the early nineteenth century;¹ sewage collection and treatment followed a little later.²

The first environmental quality standards probably were devised to measure the fitness of water for drinking. As public water supply systems became more common,

[Section 2:2]

¹See § 2:20. An alliance of eastern industrial states and western conservation groups—particularly the Sierra Club—supported the principle of nondegradation, because of their common interest in seeing that the western states did not become pollution havens for industry. See B. Ackerman & W. Hassler, *Clean Coal/Dirty Air: or How the Clean Air Act Became a Multibillion-Dollar Bail-Out for High-Sulfur Coal Producers and What Should Be Done About It* (1981). Conservation and preservation organizations and sportsmen's groups also take credit for the wetlands protection program in the Clean Water Act and the visibility protection for national parks found in the Clean Air Act. In more recent years, conservation groups have supported strong hazardous waste legislation. For a more general history of the movement, see, e.g., J. Petulla, *American Environmentalism—Values, Tactics, Priorities* 43-96 (1980).

²See § 2:3.

³See § 2:5.

⁴See § 2:6.

⁵See § 2:7.

[Section 2:3]

¹See, e.g., N. Blake, *Water For The Cities* (1957).

²Boston installed the first sewage collection in 1823. See P. Adrian, *Governing Urban America* 435 (1961).

measures of water quality were standardized. Intuitive judgments about water quality gave way to precise identification of the factors that caused illness. Water was brought to Philadelphia from the Schuylkill River, to New York from Croton, and to Boston from the Cochituate, on an intuition that improved hygiene would prevent disease—long before disease agents were known or identified. Much later, enteric bacteria were identified as the agents of cholera and other water-borne disease; indicator bacteria were identified and counted to set a standard for water quality. These were the progenitors of the present measures of water quality.³

There was a similar evolution of air quality standards. In the 1940s, the air of some major cities had become intolerable, largely because soft, high-sulfur coal was the common fuel for home heating and industrial power. In London, coal-smoke fogs had become lethal;⁴ in St. Louis, Pittsburgh, and Detroit, headlights were needed at noon on winter days because of coal smoke. In Donora, Pennsylvania, an air pollution episode caused seventeen deaths;⁵ in St. Louis, all the pine trees died.⁶

There were protests; in St. Louis, housewives marched with mops and brooms. Most eastern cities adopted smoke-control ordinances.⁷ Natural gas, newly available from the Southwest on transmission lines built during the war, began to supplant soft coal for heating, fuel oil began to enlarge its share of the market, and big coal-burning boilers began to control their emissions.⁸

The municipal ordinances began an evolution of air quality standards similar to the development of water quality standards. Smoke control moved from judgments that the air was foul, to rough but objective standards—the Ringelmann chart of opacity, for instance, was and is a commonly used standard of smoke control; smoke with opacity greater than 20 percent, on the Ringelmann chart, was typically prohibited by ordinances enforced by trained “smoke readers.” Later, sulfur oxides were identified as the worst component of the winter smogs caused by sulfur-rich coal burning, and numerical standards for sulfur in fuel, or in air, replaced the earlier intuitive judgments that smoke was a hazard.⁹

Such standards had two characteristics that have been carried into modern use.

³See 3 R. Clark, *Waters and Water Rights* § 201 (2d ed. 1984).

⁴Ministry of Health, *Reports on Public Health and Related Subjects No. 95, Mortality and Morbidity During the London Fog of December, 1952* (HMSO 1954).

⁵H. Schrenk et al., *Division of Industrial Hygiene, Public Health Service, Federal Security Agency, Public Health Bulletin No. 306, Air Pollution in Donora, Pa.* (1949).

⁶Personal communication with David M. Gates, Director, Missouri Botanical Garden.

⁷For a history of early municipal air pollution ordinances, see M. Creuson, *The Un-Politics of Air Pollution: A Study of Non-Decisionmaking in the Cities* (1971). See also Elaine Koerner, *Silent Partners*, 14 *Env'tl. F.*, Mar./Apr. 1997, at 18 (arguing that the concern of women's clubs about air and water pollution predated the late nineteenth century conservation movement).

⁸See L. Lave & G. Omenn, *Clearing the Air: Reforming the Clean Air Act 1* (1981) (improvement in air quality plainly attributable to, in part, aggressive municipal and metropolitan control programs).

⁹In the late 1960s and early 1970s, metropolitan governments were being encouraged to form, and regional planning organizations became the focus of federal assistance programs. See, e.g., *The Intergovernmental Assistance Act of 1968*, Pub. L. No. 90-577, 82 Stat. 1098 (codified as amended at 31 U.S.C.A. §§ 6501 to 6508, 40 U.S.C.A. §§ 531 to 535) (federal assistance must be approved by regional planning agency); Advisory Commission on Intergovernmental Relations, “Metropolitanisation: A Challenge to Federalism” (1969). Metropolitan areas that cut across local government and state boundaries were treated as units in air and water pollution control and continue to be basic planning and enforcement units for air and water pollution control. The federal Public Health Service often worked directly at the urban level, drawing together the affected state and local governments. Air quality standards began to appear in the metropolitan areas. St. Louis, where local citizens' groups had contributed to strong smoke-control ordinances, was the first metropolitan area (East St. Louis in Illinois was included in the area) to make the transition to a standards-based program, in part through intense Public Health Service encouragement. See, e.g., Schulman, *New Standards in the Making*, *Scientist & Citizen* (St. Louis), Jan. 1967, at 16; Missouri Air Conservation Commission, *Air Quality Standards*

First, they measured the fitness of a resource for use—the fitness of water for drinking or bathing, for instance, or of air for breathing. Second, they assumed or created a threshold. Safety or fitness was an all-or-nothing determination. Legal standards generally were still in this form. The law had not yet discovered probabilities; actions were either reasonable or not, foreseeable or not, depending largely on what the judges thought proper or desirable.¹⁰ We know now that “thresholds” or “safety” standards are largely political judgments; that when a large population is exposed to a pollutant, there are only diminishing probabilities of harm as pollution levels drop. There is no standard of absolute safety.¹¹

§ 2:4 State air and water quality standards

State statutes at first concerned themselves with different subjects than local governments—the air and water pollution caused by large industrial facilities. These plants were often outside effective local government or were too important to local economies for city governments to control. Oregon adopted the first state air pollution control ordinance; its history is illuminating.

§ 2:5 State air and water quality standards—Oregon’s air pollution statute¹

Oregon’s law was one result of disputes that began during the Second World War. As part of the war effort, the federal government sponsored a rapid buildup of

and Air Pollution Control Regulation for the St. Louis Metropolitan Area (1968); *see also* Report of Abatement Conference, New York Metropolitan Area, United States Public Health Service (1969).

¹⁰*See* Note, Origin of the Modern Standard of Due Care in Negligence, 1976 Wash. U.L.Q. 447 (1977). Through the nineteenth century, legal standards of behavior were codes of conduct. A line was drawn between that behavior which a person might follow safely and that which was proscribed. The latter was considered “conduct which a man pursues at his peril.” O. Holmes, *The Common Law* 79 (1881 & facsimile ed. 1982). Holmes thought that legal rules of behavior could be written out like a set of regulations. *Id.* at 123–29. Some behavior might be expected to harm those to whom one owed a duty of care, in the “natural” or “foreseeable” course of events, and so was forbidden by judges. *See* Note, Origin of the Modern Standard of Due Care in Negligence, 1976 Wash. U.L.Q. 447, 457–63 (1977); *see also* F. Pollock, *The Law of Torts* 36 (1887).

Early in the twentieth century, however, modern notions of probability and mathematical calculations of likely harm began to creep into the standard of conduct. *See, e.g.,* *Chicago, B. & Q. R.R. v. Kravenbuhl*, 65 Neb. 889, 91 N.W. 880 (1902). In 1915, Henry Terry first stated the idea that conduct was forbidden if the severity of the probable risk outweighed the probable benefits. He analyzed risk into elements of probability and magnitude of the harm if it occurred. Terry, *Negligence*, 29 *Harv. L. Rev.* 40 (1915). A similar analysis was adopted by Judge Learned Hand in *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d Cir. 1947) and *Conway v. O’Brien*, 111 F.2d 611, 612 (2d Cir. 1940), and was approved by the Restatement of Torts §§ 291 to 293 (1934); Restatement (Second) of Torts §§ 291 to 293 (1965). *But see* Kelley, *A Critical Analysis of Holmes’s Theory of Torts*, 61 Wash. U.L.Q. 681 (1983) (attributing the modern view to Holmes). This is a more modern, mathematical approach to probability and harm. In the same way, the modern view is that legislative standards should be based on the empirical probability of risk weighed against the costs of control. *See, e.g.,* *Reserve Mining Co. v. EPA*, 514 F.2d 492, 5 *Env’tl. L. Rep. (Env’tl. L. Inst.)* 20596 (8th Cir. 1975); *see also* *Ethyl Corp. v. EPA*, 541 F.2d 1, 6 *Env’tl. L. Rep. (Env’tl. L. Inst.)* 20267 (D.C. Cir.) (en banc), cert. denied, 426 U.S. 941 (1976). In *Ethyl Corp.*, which has been much admired, Judge J. Skelly Wright said he thought harm should be analyzed into separate elements of probability and magnitude, in terms reminiscent of Judge Hand and Henry Terry. *See also* F. Anderson, D. Mandelker & D. Tarlock, *Environmental Protection: Law and Policy* 171–72 (1984).

¹¹*See* *Lead Indus. Ass’n v. EPA*, 647 F.2d 1130, 10 *Env’tl. L. Rep. (Env’tl. L. Inst.)* 20643 (D.C. Cir. 1980), cert. denied, 449 U.S. 1042 (1980) (ambient air quality standard requires judgment of levels that provide for public health with a margin of safety, although there is no scientifically “safe” threshold level).

[Section 2:5]

¹By Madeline Thomas and Sheldon M. Novick.

aluminum reduction plants in the Northwest, where hydroelectric power dams provided an inexpensive source of electricity. During the Korean War, the expansion continued because of the demand for aluminum for use in jet aircraft.² Since the reduction of aluminum ore requires large amounts of electricity, the aluminum industry has been centered near large power dams and away from population centers. Reduction plants, like ore smelters, release large amounts of waste material, including air pollutants. Fluorides, which contaminate aluminum ore and which can be toxic to plants and animals, are particularly bothersome emissions.³

In Oregon, an agricultural state, orchards and farms surrounded the aluminum plants. By the late 1940s, fluoride poisoning was visible in some cattle, and damage to crops was observed. The owners of farms near the Reynolds Aluminum Company's Troutdale plant, for example, believed that their farms were being destroyed and that their own health had been affected by emissions from the plant. Accordingly, they brought suit in 1949 for money damages and to halt the emissions.⁴ Troutdale is near the Washington border, and some of the claimants in the Oregon action were Washington landowners. Their claims were dismissed on the ground that the Oregon court had no jurisdiction over the injuries to the Washington plaintiffs. However, these plaintiffs successfully refiled in Washington.⁵ Other actions were brought in both state and federal court in Oregon. This litigation eventually produced a kind of summary of common-law strategies: there were suits grounded in nuisance, trespass, and negligence, with claims for injunctions and damages for injuries to health, personal property, and real estate.⁶

The suits moved slowly; the aluminum company defendants, perhaps because of large potential liabilities to other landowners, were reluctant to settle. Many cases were decided on motion or after trial. Resolution, of course, took years; trials were long and elaborate. As in other pollution damage cases, there were complex factual issues regarding causation and damages.⁷

While the suits were well publicized,⁸ the plaintiffs did not passively wait for the outcome. Bills were introduced in the state legislature that would have declared air pollution a "nuisance." This would have had the effect of deciding some of the issues in the various lawsuits. Industry lobbyists apparently did not oppose state legislation, as such, but pressed for a law that would have authorized only the study of

²See *Arvidson v. Reynolds Metals Co.*, 125 F. Supp. 481, 482–83 (W.D. Wash. 1954) (chronicling the advent of aluminum plants in Washington state), *aff'd*, 236 F.2d 224 (9th Cir. 1956), *cert. denied*, 352 U.S. 968 (1957); *see also* *Renken v. Harvey Aluminum, Inc.*, 226 F. Supp. 169, 170–71 (D. Or. 1963) (describing the aluminum reduction process).

³See *Renken v. Harvey Aluminum, Inc.*, 226 F. Supp. 169 (D. Or. 1963); *Fairview Farms, Inc. v. Reynolds Metals Co.*, 176 F. Supp. 178, 183 (D. Or. 1959).

⁴See *The Oregon Statesman*, Jan. 18, 1951, at 1. col. 4 (suits in federal district court by 100 neighboring farmers against Troutdale plant filed in 1948 and 1949; decision by Judge James A. Fee for Oregon plaintiffs on liability issue; accounting of damages ordered).

⁵*Arvidson v. Reynolds Metals Co.*, 107 F. Supp. 51 (W.D. Wash. 1952) (motion by Oregon industrial defendant to transfer to Oregon district court denied). *See* *Arvidson v. Reynolds Metals Co.*, 125 F. Supp. 481 (W.D. Wash. 1954) (evidence of damages from fluorides insufficient), *aff'd*, 236 F.2d 224 (9th Cir. 1956), *cert. denied*, 352 U.S. 968 (1957).

⁶See, e.g., *Martin v. Reynolds Metals Co.*, 135 F. Supp. 379 (D. Or. 1952) (personal injuries caused by negligence), *aff'd sub nom. Reynolds Metals Co. v. Yturbe*, 258 F.2d 321 (9th Cir. 1958), *cert. denied*, 358 U.S. 840 (1958); *Martin v. Reynolds Metals Co.*, 221 Or. 86, 342 P.2d 790 (1959) (fluoride pollution constitutes trespass), *cert. denied*, 362 U.S. 918 (1960). *See also* *Reynolds Metals Co. v. Lampert*, 316 F.2d 272 (9th Cir. 1963) (trespass); *Renken v. Harvey Aluminum, Inc.*, 347 F. Supp. 55 (D. Or. 1971) (arbitration award under consent decree), *aff'd*, 475 F.2d 766 (9th Cir. 1973); *Renken v. Harvey Aluminum, Inc.*, 226 F. Supp. 169 (D. Or. 1963) (nuisance action, injunction); *Fairview Farms, Inc. v. Reynolds Metals Co.*, 176 F. Supp. 178 (D. Or. 1959) (trespass).

⁷See n.19, *infra*, and accompanying text.

⁸See, e.g., *The Oregon Statesman*, Jan. 18, 1951, at 1. col. 4.

pollution effects and control methods.⁹ A compromise bill was enacted that authorized the state to bring public nuisance actions against pollution sources, declared pollution to be contrary to state policy, and created a new state agency within the Board of Health to adopt and enforce pollution control rules.¹⁰ It seems to have been expected that the newly-created board would set air quality standards and would then review particular pollution complaints on a case-by-case basis to determine what controls would be needed when discharges caused air pollution to exceed those limits.¹¹ There would be no enforceable rules until standards had been set and a control order issued to a pollution source; violations of an order were punishable by fine. These provisions apparently emerged as a compromise between the plaintiffs' groups, who wanted pollution emissions to be *per se* actionable, and industry representatives, who took the position that there should be careful study of each pollution claim and that no action should be taken without evidence of actual harm.¹² Soon after the implementation of the Oregon pollution control law, the Manufacturing Chemists Association published a pamphlet in which they recommended the Oregon statute as a model for other states.¹³

The lawsuits, unsurprisingly, dragged on for years.¹⁴ Outcomes often depended on arbitrary factors, such as the residence of the plaintiffs or on the forms of action available in the courts. Although all the claims arose from the similar actions of the aluminum company defendants, the standard of liability to be applied varied in each case in accordance with the type of harm incurred. Claims for damage to health, for example, could only be maintained on a negligence theory. In such cases, the reasonableness of the defendant's behavior was the criterion of liability.¹⁵ Damage to real estate, by comparison, gave rise to a claim in trespass, which provided for strict liability without regard to the reasonableness of the defendant's behavior.¹⁶ Nuisance suits could potentially reach more of the damage claims, but the courts had to weigh the value of the offending conduct against the magnitude of the damage which resulted. At the time the initial suits were brought, aluminum plants were recognized as an essential defense industry during wartime; the value of this activity therefore outweighed its incidental injurious effects.¹⁷ A nuisance action against an aluminum reduction plant finally succeeded in 1963, after the exigency of war had abated and the technology to better control the fluoride effluents became

⁹Air Pollution Compromise Attempted, Oregon Daily Journal, Mar. 9, 1951, at 4, col. 3.

¹⁰Oregon Air Pollution Act, 1951 Or. Laws, 696, *codified at* Or. Rev. Stat. §§ 449.705 to 449.755, *repealed* 1959 Or. Laws c. 357 § 15.

¹¹The members of the Air Pollution Authority, established by the Oregon Air Pollution Act, took it for granted that their job was to set air quality standards. *See* Minutes of the first meeting of the [Oregon] Air Pollution Authority, Aug. 24, 1951.

¹²Newspaper reports made it plain, as did the proceedings of the Air Pollution Authority, that the administrative procedures were intended to resolve the same disputes that were being brought to court. Oregon Air Pollution Act, 1951 Or. Laws, 696, *codified at* Or. Rev. Stat. §§ 449.705 to 449.755, *repealed* 1959 Or. Laws c. 357 § 15. Control of Air Pollution, The Oregon Statesman, Jan. 11, 1951, at 4, col. 1; 1954-56 Or. St. Air Pollution Auth. Biennial Rep. 8-9 (1956).

¹³*See* Subcommittee on Legislation Principles, Manufacturing Chemists Association, A Rational Approach to Air Pollution Legislation 6 (1952).

¹⁴*See, e.g.,* Arvidson v. Reynolds Metals Co., 125 F. Supp. 481, 482-83 (W.D. Wash. 1954); Martin v. Reynolds Metals Co., 221 Or. 86, 342 P.2d 790, 793 (1959).

¹⁵*See* Reynolds Metals Co. v. Yturbide, 258 F.2d 321, 327-28 (9th Cir. 1958) (discussion of standards of reasonable conduct), cert. denied, 358 U.S. 840 (1958).

¹⁶*See* Martin v. Reynolds Metals Co., 221 Or. 86, 342 P.2d 790, 793 (1959).

¹⁷*See, e.g.,* Arvidson v. Reynolds Metals Co., 125 F. Supp. 481, 483 & 488 (W.D. Wash. 1954) (United States has "very important interest" in "large scale production of aluminum essential to national defense"), *aff'd*, 236 F.2d 224 (9th Cir. 1956), cert. denied, 352 U.S. 968 (1957).

available; the remedy was an injunction to curb the plant's emissions.¹⁸ There were also the difficult problems of proof of causation and of damages: one trial required 75 witnesses, 342 exhibits, trips to all of the plaintiffs' farms, and a 2500-page transcript.¹⁹ In another case, one plaintiff, who was a minor when the litigation began, eventually prevailed on a negligence theory for personal injuries only after she had married and the Korean conflict had long ended.²⁰

The administrative procedures set up by the state statute suffered from their own delays and vagaries, however, and produced few results. Minutes of the Oregon Air Pollution Control Board's early meetings are taken up with discussions of budgets, personnel, and procedure. At the third meeting, the Authority heard its first complaint—from farmers near the Troutdale aluminum reduction plant. The Authority responded by agreeing to acquire copies of the research studies underway at Oregon State College in conjunction with other government agencies and promising to investigate the complaint.²¹ Other citizen complaints of smoke and bad smells were heard: "Mrs. Olson also stated that the plant operates twenty-four hours per day and an odor is wafted on the breeze, and that when she complained to the local authorities they told her it was caused by trains which run near her home and they were of no help."²² The Authority, as do all government agencies, had to wade through a bog of trivialities, politics, and institutional pettiness.

After five years, the Authority decided that fluoride emissions were not a public nuisance. No standards were set, and no emission controls were required by the government until the first private nuisance suit succeeded in 1963.²³

What role did environmental quality standards finally play in the administrative program? They seem to have developed as general standards of liability; the administrative agency could make *ad hoc* judgments that emissions were a "nuisance" requiring a remedy; or the agency could set environmental quality standards for particular pollutants, which would simplify the decision process. Wherever the standards were exceeded, a remedy would be imposed without further evidence of damage or causality. In this way, uniform environmental quality standards substituted for the standards of liability under common law that had been used by courts and absorbed into legislation.

It is plain that, while the term "nuisance" is carried into the legislation, the standards were not derived from any of the common law forms of action; they were simply intuitive judgments of what was actionable. In this they more closely resembled the standards of reasonable conduct in negligence law than any other, but were not derived from the common law at all. They were a new development in law—express thresholds for administrative action.

§ 2:6 State air and water quality standards—State standards

Other states soon followed Oregon's path. California set numerical guidance criteria for air quality—to establish uniformity among the local governments who were regulating air and water quality, and to set thresholds for action by the state and local agencies for major dischargers. In California, a major impetus for the new

¹⁸*Renken v. Harvey Aluminum, Inc.*, 226 F. Supp. 169, 174, 175–76 (D. Or. 1963).

¹⁹*Arvidson v. Reynolds Metals Co.*, 125 F. Supp. 481, 482–83 (W.D. Wash. 1954).

²⁰*Reynolds Metals Co. v. Yturbide*, 258 F.2d 321 (9th Cir. 1958), *aff'd*, *Martin v. Reynolds Metals Co.*, 135 F. Supp. 379 (D. Or. 1952), *cert. denied*, 358 U.S. 840 (1958).

²¹Minutes of the third meeting of the [Oregon] Air Pollution Authority, December 21, 1951, at 1-2.

²²Minutes of the fourth meeting of the [Oregon] Air Pollution Authority, June 11, 1952, at 4.

²³*Reynolds Metals Co. v. Yturbide*, 258 F.2d 321 (9th Cir. 1958), *aff'd*, *Martin v. Reynolds Metals Co.*, 135 F. Supp. 379 (D. Or. 1952), *cert. denied*, 358 U.S. 840 (1958); *see also* Or. St. Air Pollution Auth. Biennial Report 20, 21 (1956).

legislation was the dispute between farmers in the Los Angeles basin, whose crops were being damaged by air pollutants, and local oil refineries that the farmers believed—erroneously, as it turned out—to be the source of the oxidants which were doing the damage. The real culprit was the smog produced largely from auto exhausts.¹ By the early 1960s, the movement was widespread, and the United States Public Health Service began to provide assistance to state health agencies in setting air and water quality standards.

There was a dramatic expansion in the use of air quality standards in the 1960s, in part because of the Public Health Service's energetic sponsorship. Federal officials actively campaigned for state and local ordinances based on air quality standards; the campaign urged an expanded role for the standards themselves.² Instead of merely serving as thresholds for government response, standards—in the Public Health Service's model ordinances—served also as the goal to be achieved and the basis for remedies.³ This expanded role for standards is discussed in § 2:15, below.

By 1967, the standards approach was sufficiently widespread to be adopted as the national norm, and the first federal legislation simply tried to establish more uniformity among the states in setting the thresholds for regulation; federal controls or remedies were rejected.⁴

§ 2:7 The movement for control of technology

In the 1960s and early 1970s, many people perceived industry as expanding without limits and industrial technology as developing too rapidly for comprehension or rational control. The environmental protection statutes codify some of this concern.

Nuclear fallout and the indiscriminate use of pesticides were the first objects of concern for this movement, which drew together national organizations and local

[Section 2:6]

¹In California, state air pollution control law began with disputes between farmers and oil refineries; the farmers thought, erroneously, that the refineries were the source of ozone which had been damaging their crops. *See* Middleton & Clarkson, *Motor Vehicle Pollution Control*, 15 *Traffic Q.* 306, 311 (1961) (damage to crops from ozone traceable to motor vehicle emissions). The state set criteria for air quality to guide county enforcement action. *See, e.g.,* [California] Assembly Interim Committee on Public Health, *Air Pollution: Its Health Effects and Its Control* (Assembly Interim Committee Report 1957-1959, No. 17) 15-16 (1959).

²*See* Air Pollution Control Board, State of New York, *Ambient Air Quality Objectives—Classification System* (1964).

³Considerable impetus was given to this trend by a national conference convened by the Public Health Service in 1962, and then by an influential report. *See* Committee on Science on the Promotion of Human Welfare, American Association for the Advancement of Science, *The Air We Breathe* (1965) [hereinafter cited as *Dixon Report*]; *see also* Dixon & Lodge, *Air Conservation Report Reflects National Concern*, 148 *Sci.* 1060 (1965), widely known at the time as “the Dixon Report.” Much of the technical work for this report was done at the National Center for Atmospheric Research in Boulder, Colorado. In the following year, Colorado adopted a standards-based system. *See* 1966 Colo. Sess. Laws 210, ch. 45; Subcommittee on Air and Water Pollution, *Air Pollution—1967*; Hearings on S. 780, 90th Cong., 1st Sess. 849-75 (1967). In all of these studies, reports, and statutes, the standards are the conventional all-or-none thresholds. In the *Dixon Report*, this is the premise of the system. The margin of pollution that can be accepted is called the “assimilative capacity” of the air; this “assimilative capacity” is treated as a natural resource to be distributed efficiently among competing users. Both the premise and the conclusion are open to serious question.

⁴In 1967, the Administration proposed uniform national emission limits, but Congress rejected the proposal. The 1967 Air Quality Act encouraged the states to continue to develop air quality standards as triggers for case-by-case abatement action and required state standards to meet minimum federal criteria. Air Quality Act of 1967, Pub. L. No. 89-234, 79 Stat. 903.

citizens groups.¹ There is no place here for a complete history of this complex movement, about which there is a growing literature. Its contribution to environmental protection law was profound. A whole vocabulary of “technology assessment” and “technology forcing” entered the legal lexicon, and statutes sought to guide technology toward distant goals.²

The movement for technology control had a reactionary reputation,³ but its aims were not destructive. It was a movement to reform industry and make it more responsive to public policy; to bring an end to pollution without sacrificing consumer products or economic prosperity; and to a large extent, although with varying degrees of force, the environmental statutes adopted the movement’s aims.⁴ Science and ingenuity, given enough time, would accomplish this seemingly utopian objective without undue cost or disruption.⁵ As it has turned out, pollution cannot be entirely abolished, and so the goal of minimizing pollution has produced a new set of environmental quality standards that express the goal in achievable terms.⁶

§ 2:8 Thresholds and goals

As we have seen, there has been a similar pattern of development in each of the settings in which environmental quality standards appeared. First, when environmental problems came to government attention, courts, agencies, and legislatures decided whether the problems required government response. As these decisions were repeated, they developed a common form, and similar analyses were used to support the results. A standard of liability or public health hazard provided the threshold of government response.

Where a response was called for, the next step often was to identify particular chemicals or pollutants as the cause of the problem (or as symbols or indicators of more complex pollution sources). Finally, ambient standards were set for the designated pollutants, which thereafter served as the threshold for government response.

In this way, local agency determinations that smoke was intolerable or water unfit to drink gradually gave way to standards for identified pollutants; as we have seen, in state programs ambient standards became surrogates for findings that pollution required a remedy.

In the 1960s, federal statutes began to set uniform or minimum criteria for state programs; the elements of earlier state law were absorbed into the federal statutes, which began to require that the states set environmental quality standards at mini-

[Section 2:7]

¹See Lutts, *Chemical Fallout: Rachel Carson’s “Silent Spring,” Radioactive Fallout, and the Environmental Movement*, 9 *Env’tl. Rev.* 211 (1985); Commoner, *Fallout and Water Pollution—Parallel Cases*, *Scientist & Citizen*, Nov. 1964, at 2.

²See, e.g., Bonine, *The Evolution of Technology Forcing in the Clean Air Act* (BNA Environment Reporter Monograph No. 21 1975).

³See, e.g., R. Neuhaus, *In Defense of People: Ecology and the Seduction of Radicalism* (1971).

⁴See § 2:19. Nuclear electric power, supersonic transport, the fluoridation of drinking water, unsafe autos, and the proposal to dig a sea-level Panama Canal using nuclear explosives were other targets of this loosely organized movement; prominent figures were Ralph Nader and Barry Commoner, but there was no overall organization and the movement is difficult to characterize. As to its aims, see, e.g., S. Novick, *The Electric War: The Fight over Nuclear Power* (1977); L. Tribe, *Channeling Technology Through Law* 1–5 (1973); Speth, *The Federal Role in Technology Assessment and Control*, in *Federal Environmental Law* 420 (E. Dolgin & T. Guilbert eds. 1974).

⁵See § 10:62.

⁶See § 2:19.

mum levels.¹

The environmental protection statutes each encapsulate this history. Each of the statutes gives EPA similar authority to respond in appropriate fashion to “imminent and substantial hazards,” the term of art for pollution discharges that require a local response,² or to pollution which causes or contributes to public health damage.³ If a pollution problem is widespread or often repeated, EPA is directed to identify the pollutants that cause or contribute to the problem. Controls may then follow; if the pollutant is a common one, EPA may be required to set environmental quality standards that will henceforward serve as the thresholds for government response and displace the earlier local, *ad hoc* determinations.⁴ Wherever common or “conventional” pollutants exceed these threshold standards, they are presumed to require regulation. The threshold standards, of course, are, in the traditional form, judgments of acceptable or safe environmental quality. Toxic pollutants, as we shall see, are treated somewhat differently.⁵

Finally, as we have already noted, the statutes set up environmental quality goals: When a pollutant is designated, and the threshold for regulation is passed, a system of controls is put in motion whose goal is usually to keep or reduce the pollutant to insignificant levels.⁶ These are the goals of technology management, and as we shall see, the ultimate purposes of environmental protection.⁷

III. THRESHOLDS OF ACTION

§ 2:9 In General

Criteria for identifying environmental problems that require government response lie at the threshold of environmental protection law. The early history of

[Section 2:8]

¹The Water Pollution Control Act of 1948, ch. 758, 62 Stat. 1155, the first federal statute to address pollution expressly, authorized federal “abatement” actions only where pollution in one state caused danger in another. The Rivers and Harbors Act of 1899, §§ 10 and 13, was revived and reinterpreted in the 1960s to prohibit unpermitted discharges of pollution into navigable waterways, see *United States v. Republic Steel Corp.*, 362 U.S. 482 (1960), but the older law lacked any legislative basis for setting a threshold of allowable pollution, and therefore was used as a means of gaining jurisdiction and framing remedies; cases were brought on *ad hoc* judgments of hazard. The first suggestion of numerical threshold standards appears in an Administration proposal in 1955, in the legislative history of what became the 1956 Amendments to the Water Pollution Control Act. The Administration proposed uniform standards to serve as thresholds for abatement action in place of the awkward, case-by-case findings of danger to health or welfare. See Staff of the House Comm. on Public Works, *Comparative Changes Proposed to be Made in the Water Pollution Control Act*, 84th Cong., 1st Sess. 6 (1955). The proposal was not accepted, and both air and water legislation continued to rely on administratively awkward abatement conferences that were convened upon *ad hoc* findings of injury or hazard. See The Clean Air Act of 1963, Pub. L. No. 88-206, 77 Stat. 392. In 1965, Congress for the first time required states to set water quality standards for “interstate” waters, in accordance with uniform federal criteria. Water Quality Act of 1965, Pub. L. No. 89-234, 79 Stat. 903. The Air Quality Act of 1967, Pub. L. No. 90-148, 81 Stat. 485, required states to adopt similar standards for air quality in polluted regions. See generally Barry, *The Evolution of Enforcement Provisions of the Federal Water Pollution Control Act: A Study of the Difficulty of Developing Effective Legislation*, 68 Mich. L. Rev. 1103 (1970); Jorling, *The Federal Law of Air Pollution Control*, in *Federal Environmental Law* 1058, 1062 n.19 (E. Dolgin & T. Guilbert eds. 1974).

²See § 2:10.

³See § 2:13.

⁴See § 2:12.

⁵See § 2:23.

⁶See Ch. 3.

⁷See §§ 2:26 and 2:27.

threshold criteria and standards is discussed above.¹ In the following section we will discuss in more detail the present form and use of threshold criteria in their three common expressions: criteria for “imminent and substantial endangerment” responses, criteria for designating pollutants for control, and numerical standards.

§ 2:10 Imminent and substantial hazards

The first threshold of environmental quality is the “imminent and substantial hazard” criterion, preserved in all statutes except the Noise Control Act.¹ This is the government’s general emergency-response authority.

The federal government has not used its emergency response authority very often in the older air and water pollution control programs, where state and local agencies have been in place for many years. In the new hazardous waste programs, however, the government began with a series of emergency responses, and the imminent hazard authority continues to be the principal criterion for triggering government action.²

Superfund—the hazardous waste cleanup program—required EPA to publish guidelines for use of imminent hazard authority under several statutes, which the Agency did in cursory form, by listing the factors it would consider before acting.³ These were general, common-sense criteria: The numbers of people affected, the routes by which they may be exposed, and the availability of alternate means of resolving the problem.⁴

Once these factors are assessed, the Agency must weigh them in some fashion and determine whether to proceed. Although the language of the imminent hazard authorities differs in small ways among the statutes, there are fundamental principles common to all of them.

[Section 2:9]

¹See § 2:2.

[Section 2:10]

¹See FIFRA § 6(c), 7 U.S.C.A. § 136d(c) (EPA may suspend registration of pesticide on finding of “imminent hazard,” by order without hearing in case of “emergency,” but states have primary responsibility to enforce); TSCA § 7, 15 U.S.C.A. § 2606 (district courts may grant relief in suits by EPA to “protect health or the environment from the unreasonable risks associated with” an “imminently hazardous chemical”); Clean Water Act § 504, 33 U.S.C.A. § 1364 (EPA may bring suit and provide financial assistance to abate “imminent and substantial endangerment to the health [or] welfare of persons”); MPRSA § 105(d), 33 U.S.C.A. § 1415(d) (district courts may enjoin “an imminent . . . violation” of the ocean dumping permit requirements); Safe Drinking Water Act § 1431, 42 U.S.C.A. § 300i (after determining local government has not acted, EPA may issue orders, file suits, or take other action “necessary” to abate an “imminent and substantial endangerment to the health of persons”); RCRA § 7003, 42 U.S.C.A. § 6973 (EPA may issue orders or bring suit to “restrain” persons contributing to an “imminent and substantial endangerment to health or the environment,” or take such other action as may be “necessary to protect health and the environment”); Clean Air Act § 303, 42 U.S.C.A. § 7603 (EPA may issue orders or bring suits to abate “imminent or substantial endangerment to the health of persons”); CERCLA §§ 104 & 106, 42 U.S.C.A. §§ 9604 & 9606 (EPA has different authorities for different substances; for conventional pollutants, called “pollutants or contaminants,” the agency may respond where there is an “imminent and substantial danger to the public health or welfare,” under section § 104(a)(1)(B). At any location where there are toxic pollutants, however, called “hazardous substances” in this statute, the agency may either respond itself, if there is a “threat of a release,” or issue orders or bring suit for equitable relief, where there is an “imminent and substantial endangerment to the public health or welfare or the environment”). Under the Noise Control Act, EPA’s Administrator may only issue orders or bring suits to “restrain” violations of the Act “necessary to protect the public health and welfare.” Noise Control Act § 11, 42 U.S.C.A. § 4910.

²See CERCLA §§ 104(a), 106(a), 42 U.S.C.A. §§ 9604(a), 9606(a); RCRA § 7003, 42 U.S.C.A. § 6923.

³See 47 Fed. Reg. 20664 (1982).

⁴47 Fed. Reg. 20664 (1982). See § 14:107.

It is well established, for instance, that only the risk, and not necessarily the damage, must be imminent.⁵ Thus, where hazardous chemicals are slowly seeping out of a landfill, and will not reach water supplies for years, still there is an “imminent and substantial endangerment,”⁶ and probably would be so even if the leaking had not yet begun, but was imminent.

This places the emphasis on risk, in the sense of probabilities of future harm. In a leading case, Judge J. Skelly Wright pointed this out, and laid the basis of modern practice.⁷

EPA and the federal courts now tend toward analysis of the significance of risk. In idealized form, this means grouping and weighing factors in a manner reminiscent of older tort-law standards. Significance is analyzed into the probability that a harm will occur, and the magnitude of the harm if it happens; the significance of the risk analyzed in this way is then weighed against the burden of preventive measures.⁸ This is the method of analysis developed in common-law negligence cases beginning about 1900, and it is expressed in some well-known decisions of the late Judge Learned Hand and in the Restatement of Torts,⁹ which have been brought into environmental protection law via Judge Wright’s decision and those which have followed his.

This analysis remains somewhat abstract and academic because in the press of urgent work, EPA has rarely had time to make such analyses expressly, and the courts have only rarely been called on to review imminent hazard determinations, until recently. In the hazardous waste program, imminent hazard determinations are sometimes made on the ground by On-Scene Coordinators who must determine

⁵See *United States v. Price*, 688 F.2d 204, 213–14, 12 Env’tl. L. Rep. (Env’tl. L. Inst.) 21020, 21024–25 (3d Cir. 1982) (and cases cited); *cf.* *Ethyl Corp. v. EPA*, 541 F.2d 1, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20267 (D.C. Cir. 1976) (en banc), cert. denied, 426 U.S. 941 (1976) (lead in fuel unreasonably endangers public health); see generally Skaff, *The Emergency Powers in the Environmental Protection Statutes: A Suggestion for A Unified Emergency Provision*, 3 Harv. L. Rev. 298 (1979).

⁶See *United States v. Price*, 688 F.2d 204, 213–14, 12 Env’tl. L. Rep. (Env’tl. L. Inst.) 21020, 21024–25 (3d Cir. 1982).

⁷See *Ethyl Corp. v. EPA*, 541 F.2d 1, 6, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20267, 20270 (D.C. Cir. 1976), cert. denied, 426 U.S. 941 (1976).

⁸See, e.g., *Massachusetts v. Andrus*, 594 F.2d 872, 892 (1979); *Carroll Towing Co.*, 159 F.2d at 173 (2d. Cir. 1947); see also *Environmental Defense Fund, Inc. v. EPA*, 548 F.2d 998, 7 Env’tl. L. Rep. (Env’tl. L. Inst.) 20012 (D.C. Cir. 1976); *Environmental Defense Fund, Inc. v. EPA*, 510 F.2d 1292, 5 Env’tl. L. Rep. (Env’tl. L. Inst.) 20243 (D.C. Cir. 1975). In these pesticide cases, EPA has expressly based its decision on an analysis of significant risk. See also 41 Fed. Reg. 7552 (1976).

Unifying the emergency response powers is hindered by the differences in wording among them. The only consistent thread is that all the statutes protect health against an imminent risk. But the different statutes protect “health,” “public health,” or the “health of persons”; some also protect “welfare,” “public welfare,” the “welfare of persons,” or no welfare at all. Some protect the “environment” and others do not; some defer to local authority and others do not; some authorize administrative orders, others only suits; some allow any relief necessary, some allow relief *in rem*, others only *in personam*. CERCLA requires a balancing of equities, presumably preserving the common-law standard for injunctions, while others are unclear. Two statutes allow relief only when the statute has been violated, others allow relief regardless of violations. Still others, like RCRA, are ambiguous on this point. One may argue to a court that the health of (identified?) persons is narrower than public health, and narrower still than a notion of unqualified “health,” but it is hard to imagine that any difference in meaning was actually intended. The problem is of long standing, but no legislative remedy has been proposed. See Skaff, *The Emergency Powers in the Environmental Protection Statutes: A Suggestion for A Unified Emergency Provision*, 3 Harv. L. Rev. 298 (1979). Instead, Congress has directed EPA to issue guidelines for using the emergency, information gathering, and other enforcement authorities under six of the nine statutes (omitting ocean dumping, noise, and pesticides). See CERCLA § 106(c), 42 U.S.C.A. § 9606(c). EPA responded by listing some common-sense criteria it would consult, but left both the method of setting the standard to be determined separately in every case. See 47 Fed. Reg. 20664 (1982).

⁹See § 2:2.

whether to respond to traditional emergencies.¹⁰ In more extended cleanup operations, the agency uses a rather mechanical “Hazard Ranking System,” which allows the agency to list all hazardous substance “releases” in order of priority; while all such releases must present imminent and substantial hazards, it will be some years—if ever—before the agency begins to approach the lowest rankings which set the threshold for response.¹¹

§ 2:11 Designated pollutants

While EPA may formulate *ad hoc* responses to imminent local hazards, national regulatory programs are established only for designated pollutants or categories of pollutants.¹ In most cases, EPA must designate any pollutant that meets the criteria provided in a statute.² (In a few cases, Congress itself has designated pollutants.)³ Once a pollutant has been designated, environmental quality standards must be set,⁴ or other regulatory programs set in motion, whose environmental quality goals are implicit.⁵

Not all pollutants are equal. The pollution control laws express a special distaste for “toxic” pollutants, which are subject to especially stringent standards. Toxic pollutants include cancer-causing chemicals as well as unfamiliar synthetic chemicals, which are produced in small quantities or which have only local effects. There is no precise definition of what distinguishes a toxic from a conventional pollutant, however, and the categories vary from one statute to another, although each has some version of the distinction.⁶ In the Clean Water Act, pollutants are either “toxic” or “conventional,” and I will follow the common practice of using these terms

¹⁰See 40 C.F.R. Part 300; § 14:115.

¹¹See CERCLA § 105, 42 U.S.C.A. § 9605; 40 C.F.R. Part 300, appendix B. § 14:115.

[Section 2:11]

¹See, e.g., Clean Air Act §§ 108, 109, 42 U.S.C.A. §§ 7408, 7409; Clean Water Act § 304(a)(1), 33 U.S.C.A. 1314(a)(1) (water quality criteria concerning effects of “pollutants”); RCRA § 7003, 42 U.S.C.A. § 6973 (imminent hazards from “solid waste” or designated hazardous wastes); CERCLA § 104, 42 U.S.C.A. § 9604 (listed hazardous substances, or category of “pollutant or contaminant”). Note that water quality standards were established for “dissolved oxygen,” which is not a pollutant but a quality of the environment necessary to support life; complex computer models are used to relate pollutant discharges to this standard. See *Mississippi Comm’n on Natural Resources v. Costle*, 625 F.2d 1269, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20931 (5th Cir. 1980); see also § 2:16. The levels of ozone in the stratosphere would be another exception. See Clean Air Act § 601(10), 42 U.S.C.A. § 7671(10) (EPA establishes “ozone depletion potential” for substances).

²See *NRDC v. Train*, 545 F.2d 320, 7 Env’tl. L. Rep. (Env’tl. L. Inst.) 20004 (2d Cir. 1976) (designation of lead as an air pollutant mandatory); Clean Air Act § 108, 42 U.S.C.A. § 7408; see also *NRDC v. Train*, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20588 (D.D.C. 1976) (settlement agreement to designate and regulate toxic water pollutants); *Environmental Defense Fund, Inc. v. Ruckelshaus*, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20173 (D.D.C. 1973) (EPA must regulate designated hazardous air pollutants); Clean Water Act § 307(a), 33 U.S.C.A. § 1317(a).

³See, e.g., TSCA § 6(e), 42 U.S.C.A. § 2605(e); RCRA § 3004(d), 42 U.S.C.A. § 6924(d); Clean Air Act § 112(b), 42 U.S.C.A. § 7408. More often, however, Congress lists pollutants for EPA to consider. See, e.g., CAA § 122, 42 U.S.C.A. § 7422; RCRA § 3004(g), 42 U.S.C.A. § 6924(g).

⁴See Clean Air Act, §§ 109 & 112, 42 U.S.C.A. §§ 7409 & 7412; Clean Water Act, §§ 303 to 304, 33 U.S.C.A. §§ 1313 to 1314; see also *Environmental Defense Fund, Inc. v. Ruckelshaus*, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20173 (D.D.C. 1973) (final order) (EPA must promulgate final rule for asbestos, beryllium, and mercury).

⁵See § 2:26.

⁶See *Ethyl Corp. v. EPA*, 541 F.2d 1, 14, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20267, 20273 (D.C. Cir. 1976) (en banc, cert. denied, 426 U.S. 941 (1976) (contrasting conventional endangerment standard with measure of *de minimis* harm). Compare, e.g., Clean Water Act §§ 301(b)(1), 304(a)(4), 33 U.S.C.A. §§ 1311(b)(1), 1314(a)(4) (control of “conventional” pollutants) with Clean Water Act §§ 301(b)(2)(A), (C), 304(e), 307, 33 U.S.C.A. §§ 1311(b)(2)(A), (C), 1314(e), 1317 (control of “toxic” pollutants); compare also

of art to apply to all the statutes, although in the Clean Air Act, for instance, both “conventional” and “toxic” pollutants may be toxic chemicals in the ordinary sense of those words.

There are separate programs for toxic and conventional pollutants in each statute, each with its own peculiarities, drawn from the medium itself and from the statute’s history. Here we will say only a few words about the characteristics of the two categories of pollutants, so far as they affect the designation process.

§ 2:12 Designated pollutants—Conventional pollutants

Conventional pollutants are the familiar materials of traditional pollution control programs. They include the pollutants discharged into water by sewage treatment plants,¹ as well as the smoke and dust² that are still the most common air pollutants. As noted earlier, the first environmental quality standards were devised for these pollutants by local water protection agencies in the nineteenth century, and such pollutants are conventional, in the sense of being both common and familiar.

Conventional pollutants often are treated as if, in very low concentrations, they had no effect at all; by implication, therefore, they are treated as if effects would only appear above some level or “threshold.”³ (This is, as we have noted, the traditional assumption.)

Clean Air Act § 109, 42 U.S.C.A. § 7409 *with* Clean Air Act § 112, 42 U.S.C.A. § 7412.

The MPRSA and the Ocean Dumping Convention prohibit dumping of “toxic” materials beyond *de minimis* concentrations, but permit some dumping of conventional materials. *See* § 2:20, note 4. RCRA, the hazardous waste disposal statute, distinguishes between ordinary solid wastes and “hazardous” solid wastes. *Compare* RCRA §§ 4001 to 4009, 42 U.S.C.A. §§ 6941 to 6949 (ordinary solid waste) *with id.* §§ 3001 to 3011, 42 U.S.C.A. §§ 6921 to 6934 (hazardous waste). The waste-spill cleanup statute, CERCLA, distinguishes between “pollutants” and “hazardous substances.” CERCLA § 104, 42 U.S.C.A. § 9604. TSCA and FIFRA apply to toxic materials only. TSCA § 3, 15 U.S.C.A. § 2602; FIFRA § 2, 7 U.S.C.A. § 136. The Safe Drinking Water Act alone fails to make the distinction (although pollutants that have no health effects at all are distinguished from those that do) and applies “conventional” safety limits to all pollutants. Safe Drinking Water Act § 1401, 42 U.S.C.A. § 300f. *Cf.* Hazardous Substances Act, 15 U.S.C.A. § 1261; The Delaney Amendment, 21 U.S.C.A. § 348(c)(3)(A) (distinguishing carcinogenic food additives).

The distinction is neither complete nor consistent, of course; like everything else in environmental protection laws, there are idiosyncrasies in each statute. The Clean Water Act requires EPA to list pollutants that are neither toxic nor conventional. Clean Water Act § 301(g)(1), 33 U.S.C.A. § 1311(g)(1). Some materials are treated as conventional under some statutes and toxic under others. Acid, for instance, is a conventional pollutant under the Clean Water Act § 304(a)(4), 33 U.S.C.A. § 1304(a)(4), but may be a hazardous waste under RCRA, *see* 40 C.F.R. Part 261, and consequently a hazardous substance under CERCLA as well. Lead is regulated as a conventional “criteria” pollutant under the Clean Air Act, but as a toxic chemical under all others. The reasons for some of these differences lie in the absorptive capacity of the different environmental media, but other differences seem to be owed solely to whimsy.

[Section 2:12]

¹*See* Clean Water Act § 304(a)(4), 33 U.S.C.A. § 1314(a)(4). The 1987 amendments to the Clean Water Act provide for a category of pollutants that is neither conventional nor toxic. It includes ammonia, chlorine, iron, color, and total phenols. Clean Water Act § 301(g)(1), 33 U.S.C.A. § 1311(g)(1).

²Smoke and dust are regulated as “particulate” pollutants designated under Clean Air Act § 108, 42 U.S.C.A. § 7408; 40 C.F.R. §§ 50.6.

³*Lead Indus. Ass’n v. EPA*, 647 F.2d 1130, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20643 (D.C. Cir. 1980) (standards must be set, although there is no actual threshold), cert. denied, 449 U.S. 1042 (1980). Conventional pollutants may have a threshold of action in any one person; it seems likely that a healthy adult, for instance, could breathe sulfur dioxide at the levels allowed by ambient standards without any risk at all. There may be no evidence that healthy adults are injured by breathing ambient sulfur dioxide. When a large population is exposed, however, young, old, sick, and disabled people are also exposed, and the apparent threshold vanishes. In any uncontrolled situation, therefore, the idea of a threshold has little meaning, even for conventional pollutants. For toxic pollutants, such as cancer-causing chemicals, there may be no threshold even for a single person; if a single molecule of

Consequently, there is an orderly system of identifying conventional pollutants and setting environmental quality standards that serve as thresholds for government response. These standards have played an important role in environmental protection, and for a time dominated air and water pollution control: they are discussed more fully in the next section.

§ 2:13 Designated pollutants—Toxic pollutants

For toxic pollutants, however, good practice assumes there is no threshold of risk; while perhaps not always correct, this is a prudent assumption and is consistently applied to cancer-causing chemicals.¹

The goals set for the regulation of “toxic” chemicals are very stringent, for the very reason that there is assumed to be no threshold of safety. We will discuss these goals below.² For the moment, however, the question is a narrower one, the designation of toxic chemicals for regulation. This is in part a matter of setting priorities—at any given time, in a limited government faced by a limitless number of diminishing risks, there must be a threshold for designating chemicals for attention.

From 1970 to 1980, Congress and EPA repeatedly addressed this question; in those years, it seemed plain that any chemical found to be already causing or contributing to health damage through its presence in the environment, and not a conventional pollutant, would be designated “toxic” and listed for control.³ This criterion was established in the Clean Air Act,⁴ which also provided that, once designated, toxic pollutants were to be reduced drastically—well below the threshold for designation—to levels that provided an “ample margin of safety.”⁵ For cancer-causing chemicals and most other toxic pollutants, this required substantial eradication of the pollutant, as there was no threshold of safe concentration.

This two-step procedure, of designation and eradication, was followed, somewhat less clearly, in the Clean Water Act⁶ and the hazardous waste regulatory statute, the Resource Conservation and Recovery Act (RCRA). In RCRA, the definition of a “hazardous waste” is a material that meets the Clean Air Act’s criterion for a toxic pollutant or which causes an imminent hazard.⁷ Once designated, the waste enters a severe regulatory program designed to gradually end contamination of soil and groundwater.⁸

The designation process was formalized in the Toxic Substances Control Act

DNA is damaged, for instance, the damage may express itself as an injury—the only theoretical threshold is zero. *See* Industrial Union Dep’t, *AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607, 636 n.41 (1980).

[Section 2:13]

¹*See, e.g.*, *Industrial Union Dep’t, AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607, 624–25 (1980); 44 Fed. Reg. 58642 (1979) (EPA’s air “cancer policy”); 42 Fed. Reg. 54148, 54165 to 67 (1977) (OSHA policy for carcinogens); D. Doniger, *The Law and Policy of Toxic Substances Control: A Case of Vinyl Chloride* 82–84 (1978).

²*See* § 2:24.

³These were years in which a series of chemical products already in wide use—PCBs, PBBs, mercury, cadmium, asbestos, chlorofluorocarbons, halogenated solvents, and so on—were discovered or thought to create hazards like those attributed to radioactive fallout from weapons testing and the broadcast of pesticides. *See, e.g.*, *Environment Magazine* issues for the early 1970s; § 2:2.

⁴*See* Clean Air Act of 1970, Pub. L. No. 91-604, § 112(a)(1) (subsequently amended).

⁵*See* Clean Air Act of 1970, Pub. L. No. 91-604, § 112(b)(1)(B). This language was retained in the 1990 amendments to the Clean Air Act, § 112(f)(2), 42 U.S.C.A. § 7412(f)(2).

⁶*See* Federal Water Pollution Control Act Amendments of 1972, § 307, Pub. L. No. 92-500.

⁷*See* RCRA § 1004(5), 42 U.S.C.A. § 6903(5).

⁸*See* § 14:20.

(TSCA). This statute allowed EPA to look to the sources of toxic chemicals and designate them before they became actual problems in the environment.⁹ Under TSCA, the criterion for designating a chemical is that it poses a “significant” or “unreasonable” risk of hazard;¹⁰ a determination EPA must make using modern risk analysis; significant risks must be weighed against the social burden of control.¹¹ Once designated under TSCA, however, the chemical theoretically may be subject to severe control. Congress set the tone by designating polychlorinated biphenyls (PCB) in the statute itself and then requiring that the chemical be removed from all use that would allow any significant release into the environment.¹² The statute gives the Agency authority to ban manufacture or use of designated chemicals, but subsequent judicial interpretation largely negated this authority.¹³

Although EPA was at first slow to designate toxic pollutants, in 1980, the Agency dramatically abandoned its cautious, case-by-case designations.¹⁴ In its regulations implementing RCRA hazardous waste provisions, EPA designated a wide range of industrial chemicals, simultaneously, for regulation as toxic and otherwise “hazardous” wastes.¹⁵ Congress ratified this wholesale designation¹⁶ and so the pattern of designations has now fundamentally changed.

The change had profound effects on all of environmental law. The hazardous waste control programs themselves became extraordinarily ambitious. RCRA effectively ended land disposal of most hazardous wastes.¹⁷

Hazardous wastes listed for control under RCRA are also automatically designated as “hazardous substances” under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which imposes retroactive liability on persons who discarded these materials in the past.¹⁸ Any continued release risks serious liability.¹⁹ Where hazardous substances or hazardous wastes contaminate soil or groundwater, responsible parties may bear the cost of cleaning them up

⁹See § 16:4.

¹⁰See TSCA §§ 4(f), 5(b)(4)(A)(i), 5(e), 5(f), 6(a), 15 U.S.C.A. §§ 2603(f), 2604(b)(4)(A)(i), 2604(e), 2604(f), 2605(a).

¹¹See, e.g., TSCA § 4(f), 15 U.S.C.A. § 2603(f). A chemical must be designated for early regulation if it poses either a “serious” or a “widespread” risk of harm; the disjunctive seems to require separate analyses of individual and population risks. The risk must also be found to be “unreasonable,” which seems to require that the risk be weighed against some estimate of control costs.

¹²See TSCA § 6(e), 15 U.S.C.A. § 2605.

¹³See TSCA §§ 6(a)(1)(A), 6(a)(5), 15 U.S.C.A. §§ 2605(a)(1)(A), 2605(a)(5). It does, however, admonish the Agency to impose the “least burdensome requirements” that will protect adequately against risk. *Id.* § 6(a), 15 U.S.C.A. 2605(a). After the *Corrosion Proof Fittings v. EPA* decision in 1991, however, effectively eviscerated EPA’s authority, EPA has not used its Section 6(a) authority. See generally § 16:22.

¹⁴See, e.g., *Natural Resources Defense Council v. Train*, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20588 (D.D.C. 1976). In this case, EPA agreed to establish water quality standards for toxic water pollutants, but required best available technology controls more quickly; D. Doniger, *The Law and Policy of Toxic Substances Control: A Case of Vinyl Chloride* 82–86 (1978). The vinyl chloride settlement provided for air pollution controls based on the best currently available technology, to be tightened as technology improves, until all significant emissions are eliminated. EPA did not move beyond the original emission limits in ten years, however, and NRDC brought suit to enforce the original settlement agreement. In deciding the case, the court set out criteria for interpreting the mandate of Clean Air Act § 112 which were later adopted in the 1990 Clean Air Act Amendments. See *NRDC v. Thomas*, 824 F.2d 1146, 17 Env’tl. L. Rep. (Env’tl. L. Inst.) 21032 (D.C. Cir. 1987).

¹⁵See 45 Fed. Reg. 33119 (1980); 40 C.F.R. pt. 261.

¹⁶See RCRA §§ 3004(d) to (h), 42 U.S.C.A. §§ 6924(d) to (h) (land-disposal prohibition applied to all listed wastes; additional wastes to be listed).

¹⁷RCRA §§ 3004(d) to (h), 42 U.S.C.A. §§ 6924(d) to (h).

¹⁸See CERCLA §§ 101(14), 107, 42 U.S.C.A. §§ 9601(14), 9607.

¹⁹See § 14:127.

everywhere that EPA finds a hazard—and without regard to whether the designated substances cause or contribute to the hazard.²⁰ Again, because of the broad designation of chemicals, these requirements create an immensely ambitious cleanup program and begin to stretch the limits of manufacturers' liability.

In the late 1980s national environmental groups pressed EPA to designate more toxic air pollutants, and to regulate more aggressively discharges into sewage treatment plants, under Clean Water Act categorical pretreatment regulations.²¹ EPA abandoned the compromises of earlier years—in which the goal of the elimination of toxic pollution discharges was preserved as a goal to be approached only as rapidly as the best available treatment technology would allow. The Agency sought to have the statutes altered to avoid the problem.²² In 1987, Congress showed its impatience with the slow pace of controlling water toxics by amending the Clean Water Act to require specifically the assessment and control of various sources.²³ Then, in 1990, after years of negotiations, a major revision to the Clean Air Act was enacted. Regarding toxics, Congress completely revised section 112, adding a list of 189 hazardous air pollutants to be regulated and requiring EPA to establish standards for major sources.²⁴ In addition, the amendments directly addressed the problem of ozone depletion, phasing out those substances that cause depletion and regulating their disposal and replacement.²⁵

IV. NATIONAL AMBIENT STANDARDS FOR CONVENTIONAL POLLUTANTS

§ 2:14 Introduction

EPA and state agencies set standards for environmental quality, as we have seen, for designated pollutants.¹ These standards were particularly important in the early years of the air and water pollution control programs and continue to serve several different functions, not always clearly distinguished.

To begin with, as we saw in the previous section, standards for conventional pollutants served as uniform thresholds for government response to widely-found chemicals. The standards, or the criteria on which they were based, were set uniformly across the country, and the government's response was therefore triggered by similar concentrations of pollutants wherever they were found. This triggering function continues to be important, especially in air and water pollution

²⁰See *United States v. Wade*, 546 F. Supp. 785, 12 Env'tl. L. Rep. (Env'tl. L. Inst.) 21051 (E.D. Pa. 1982); § 14:138.

²¹See, e.g., *Natural Resources Defense Council v. EPA*, 790 F.2d 289, 16 Env'tl. L. Rep. (Env'tl. L. Inst.) 20693 (3d Cir. 1986).

²²See L. Thomas, *Controlling Pollution for Permanent Protection: Toward A Whole Systems Approach to Environmental Policy* 9 (1985) (pamphlet published by EPA).

²³Water Quality Act of 1987, Pub. L. No. 100-4, § 308(a), 33 U.S.C.A. § 1314(1). In 1992, EPA promulgated guidance on priority toxic pollutants for the states that had not yet adopted regulations. One of the more controversial issues was determination of an "acceptable" level of risk for human carcinogens. See 54 Fed. Reg. 60848 (Dec. 22, 1992); § 13:73.

²⁴Pub. L. No. 101-549, § 301; 42 U.S.C.A. § 7412.

²⁵Clean Air Act § 602, 42 U.S.C.A. § 7671a. The United States was a signatory to the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, 26 I.L.M. 1550 (1987), which imposed limits on the production and consumption of chlorofluorocarbons (CFCs) and other chemicals that are depleting stratospheric ozone. Congress demonstrated its concern about this problem when enacting the 1990 amendments to the Clean Air Act by including provisions that are more protective than those required by the Protocol. See Clean Air Act §§ 601 to 618, 42 U.S.C.A. §§ 7671 to 7671q.

[Section 2:14]

¹See § 2:24.

control programs.² A similar function is served by the numerical scores assigned to abandoned hazardous waste sites and the groundwater quality standards that trigger corrective action under RCRA.³

Under the Clean Air Act, for example, states must identify areas in which designated pollutants exceed national standards;⁴ for each such area, the state must prepare and carry out a plan to control the designated pollutant.⁵

Standards can be used in this way for only a limited number of commonly found pollutants, of course; it would not be practical to set uniform national standards for thousands of chemicals, many of which are only rarely found as pollutants, and for many of which no threshold is accepted.⁶ But, for conventional pollutants, which by definition require national cleanup programs, threshold standards have been necessary and useful.

Once a cleanup program is in motion, the state or federal standard that triggered the program may also serve as a goal. This happens so naturally that the shift in function is not always noticed.

§ 2:15 Standards as interim goals

Interim goals are useful where cleanup programs must begin with drastic or disruptive measures to meet a perceived emergency. The standard that triggers cleanup tells the state or EPA where these measures are needed; once the pollution drops below the triggering threshold, the emergency is past, and while further control may still be required, it can be carried out on a more relaxed schedule. The Clean Air Act primary standards, and Clean Water Act standards for fishable and swimmable water, are indeterminate standards of this type. Ultimate or long-range goals of pollution control may also be in the form of standards.¹

Standards that define the goals of pollution control programs also define the limits of a natural resource. There is only so much water flowing in a stream. Once a standard has been set, it defines the capacity of the stream to receive pollutants; the amount of pollutant that can be discharged into the stream in any hour or day is fixed. This limited capacity to absorb pollutants can be parceled out, auctioned, or traded in a market, like any scarce commodity.

Wherever standards can be used in this way, the government's role in pollution control theoretically can be limited. Once the standard is set, and the allowable rate of discharges determined, the allowable discharges can be sold or distributed in some way that mimics the operation of a free market, and each discharger is left free to exercise his or her ingenuity to find the most efficient way of staying within the purchased limits. State plans to achieve primary air quality standards may be set up this way.

The potential for such market-type allocations of control, which—assuming the premises—would be optimally efficient, was one of the strong forces behind the

²See Chs. 12, 13.

³See RCRA §§ 14:101, 14:117, 14:126.

⁴See Clean Air Act § 107(d)(1), 42 U.S.C.A. § 7407(d)(1).

⁵See Clean Air Act §§ 110(a), 172, 42 U.S.C.A. §§ 7410(a), 7502.

⁶In 1981, for instance, EPA had 3,500 chemicals under consideration for regulation under one of its nine statutes. See National Research Council, *Risk Assessment in the Federal Government* 12 (1983).

[Section 2:15]

¹See § 2:19. The distinction between interim and long-term goals in Canadian air pollution law is similar. See M. Mellon, L. Ritts, S. Garrod & M. Valiante, *The Regulation of Toxic and Oxidant Air Pollution in North America* 93 (1986).

adoption of standards-based air and water pollution control programs.² There are only a few situations, although these few are important, where market-type programs based on standards have proven to be practical, however.

Market-type schemes may work where a single discharger's emissions are not very important, and the government is therefore indifferent, within wide limits, to the way controls are allocated among sources. On a big river, for instance, it may not matter very much how much organic material a sewage treatment plant or factory discharges, so long as the aggregate of emissions from all sources is kept within the stream's ability to maintain the specified levels of dissolved oxygen.³

One often-cited success of market-type allocations is the Clean Air Act "bubble" program for hydrocarbon emissions; these discharges are often innocuous in themselves, but the aggregate emissions from a wide area contribute to the formation of smog. Individual emission controls, within the overall limit or "bubble," can be allocated by auction or other market-type schemes.⁴ Diffuse or distant sources of pollution—like the sources of acid rain—are good candidates for such control programs. In this regard, Title IV was added to the Clean Air Act in 1990, creating a market-based system to reduce SO₂ emissions from a limited number of power plants.⁵

When a single source's emissions are important, goal-setting standards cannot be divided and sold very easily. Single-source impacts are important whenever, taken alone, they have an impact that requires a remedy. This happens most often in one of two cases: where a very large source of conventional pollutants has emissions that exceed allowable standards and where a source emits toxic pollutants and the goal is to reduce emissions to insignificant levels.⁶

Even in these cases a sort of market for pollution rights can be established. But there is only one source of pollution; the other traders are the neighbors of the source, who want to consume the air or water by breathing and drinking. They can bargain with the source to allocate the resource among them. The former Weirton Steel plant in West Virginia, for instance, was the main source of pollution, as well as jobs, in Weirton, West Virginia. The employees of the plant for a time owned it and lived nearby; when they decided on levels of control, they were bargaining among themselves to allocate the burden of pollution. EPA for a time tried to encourage such bargaining among the owners and neighbors of a copper smelter, the principal source of arsenic pollution in Tacoma, Washington. Here, instead of allocating controls among sources in an efficient way, the government is allocating injuries among the people affected by pollution, and this raises different moral and political questions.

Uniform national standards encourage the first sort of market-type allocation, where many sources contribute to the pollution problem. They allow an efficient al-

²The important support the Public Health Service and the academic community gave standards-based programs, for instance, was based in part on the idea that air and water had limited "assimilative capacity," and that this limited capacity was a resource that could be allocated most efficiently by markets, or by calculations which mimicked market operation. *See, e.g.,* Committee on Science on the Promotion of Human Welfare, American Association for the Advancement of Science, *The Air We Breathe* (1965).

³For a rare success story of such a control program, see Ackerman & Sayer, *The Uncertain Search for Environmental Policy: Decisionmaking Along The Delaware River*, 120 U. Pa. L. Rev. 419 (1972).

⁴*See, e.g.,* T. Tietenberg, *Emissions Trading: An Exercise in Reforming Pollution Policy* (1985); *cf.* R. Liroff, *Air Pollution Offsets: Trading, Selling and Banking* (1980) (markets for regulatory credits in air pollution programs).

⁵Clean Air Act § 403, 42 U.S.C.A. § 7651b.

⁶*See* § 2:23.

location of controls. They effectively prohibit the second type of market allocation, however, where a single source's emissions are important and the bargaining must be held between the source and its neighbors who risk injury. National standards were intended to—and do—prohibit such bargains. Industry is obliged, in effect, to bargain with the government, which is in a stronger negotiating position than the scattered neighbors of industrial plants.

When emissions from a single source are important, the standard is transformed. Instead of simply triggering a control program, and providing a method of allocating controls among sources, the standard defines the level of control needed at a single source. The standard of liability becomes, all at once, the measure of relief. In this third role, standards have proven complex and hard to manage.

In the following section, we will discuss the use of standards directly as the basis of relief, to define the level of control needed at a single source.

§ 2:16 Ambient standards as the basis of control—Environmental quality modeling

It is sometimes possible to measure directly the impact of a single source on environmental quality. More often, however, the impact must be calculated or predicted.

The technique for predicting an emission's impact on environmental quality is called "modeling." Direct experiments to determine the impact of pollutant emissions on the environment are rarely carried out, in part because they are expensive and in part because they are rarely conclusive. Air quality standards, for instance, must be met with respect to all air to which the public has access,¹ while physical experiments necessarily are limited to a few places and times. Abstract calculations are therefore required, if only to generalize from the results of experiments. Where the environment is already clean, experiments to detect the tiny increments of degradation permitted by the statutes are not possible, and calculations of theoretical impact are all that can be done.² Finally, the regulation of new sources requires some method of predicting the impact of pollution sources not yet built.

Instead of releasing a pollutant and seeing where it goes, therefore, a state official trying to set an emission control for a major source will perform mathematical calculations of where the pollutant would be carried if it were released. A mathematical formula that serves as a surrogate or "model" of the environment can be used in such work to predict the effects of an emission on environmental quality at all times and places.³

Air quality modeling is probably the best developed of these methods. The 1990 amendments to the federal Clean Air Act imposed a wide variety of technology-based controls on emission sources. This has served to reduce the role of air quality modeling in setting emission limits for many sources. The 1990 amendments also focus much more heavily on long-range regional air quality control strategies, a trend that also diminishes the role of air quality modeling for individual sources. Nevertheless, there remain some situations in which modeling as it was practiced before the 1990 amendments remains important. The following text describes some of the experiences with air quality monitoring during the era following the 1972

[Section 2:16]

¹See 40 C.F.R. pt. 50.1(e).

²See *Alabama Power Co. v. Costle*, 606 F.2d 1068, 5 Env'tl. L. Rep. (Env'tl. L. Inst.) 20400 (D.C. Cir.), modified, 636 F.2d 323, 10 Env'tl. L. Rep. (Env'tl. L. Inst.) 20001 (D.C. Cir. 1979).

³See Kramer, *Air Quality Modeling: Judicial, Legislative and Administrative Reactions*, 5 Colum. J. Env'tl. L. 236 (1979).

amendments.

The principal air-quality modeling techniques approved by EPA for general use⁴ were tested after World War I by British scientists trying to learn how poison gas clouds were dispersed on battle fields. The scientists found that, over short distances and close to the ground, a plume of buoyant gas would travel with the wind and disperse in a regular way through the random motions of the air. The slow dispersal of the plume could be described by the familiar bell-shaped or “Gaussian” curve of chance distribution.⁵ Gaussian-plume dispersion modeling has been refined and is now applied to the dispersion of buoyant plumes of pollutants from smokestacks; this modeling technique provides a reasonable approximation of pollutant dispersion over several miles.

EPA-approved forms of Gaussian-plume dispersion modeling cannot be extended over long distances, however, because the layering of the atmosphere and large-scale movements of air overwhelm the steady winds and small, random motions which account for the regular dispersion pattern upon which the approved modeling depends.⁶ Any rough terrain that rises higher than the emitting chimney adds serious difficulties. Predicting so simple a movement as the passage of a plume of smoke over a hilltop higher than the smokestack, under all meteorological conditions, is still as much an art as it is a science. Under some conditions, a smoke plume may run squarely into the hill, and at other times it may be lifted smoothly over the hilltop without touching the ground. The effects of stagnant or very turbulent air are especially difficult to predict.

It must be remembered that a major industrial plant emits hundreds of thousands of tons of sulfur dioxide each year, which may travel hundreds of miles with the winds, while national ambient air quality standards allow only millionths of a gram to be present in any cubic meter in any three-hour period.⁷ Models can certainly be improved and eventually may account for all of the myriad pertinent factors that affect the impact of one source’s emissions on the environment. Yet, as the models become more elaborate and accurate, the modeling exercise requires more and more data about the actual physical conditions of the site. Because slight variations in the physical circumstances can affect the results of the model, the refinement of the models requires ever more detail about the site itself. As a result, the distinction between modeling and monitoring experiments begins to blur, and the effort devoted to modeling approaches that needed to measure the actual event.

In the many cases where EPA-approved models are not suitable, the Agency allows a case-by-case demonstration of the validity of a new model.⁸ The courts have urged EPA to open its list of generic approvals for new models;⁹ the Agency has

⁴See 40 C.F.R. pt. 51 app. W [hereinafter cited as Modeling Guideline]. The Modeling Guideline was originally a separate document incorporated by reference in EPA regulations. See, e.g., 40 C.F.R. §§ 51.160(f), 51.166(l)(1).

⁵See F. Pasquill, *Atmospheric Diffusion* 5, 168–69 (1974).

⁶See Modeling Guideline, 60 Fed. Reg. 23928 (May 8, 1995); 70 Fed. Reg. 68228 (Nov. 9, 2005).

⁷See, e.g., 40 C.F.R. § 50.4 (primary standards for SO₂ are measured in micrograms—millions of a gram per cubic meter).

⁸EPA provides in Appendix A of the Modeling Guideline summaries of refined air quality models that are preferred for specific site applications. Both EPA models and models developed by others are included. 40 C.F.R. pt. 51 app. A to app. W.

⁹See *Texas v. EPA*, 499 F.2d 289, 301 n.16, 4 Env’tl. L. Rep. (Env’tl. L. Inst.) 20744, 20749 n.16 (5th Cir. 1974) (upholding EPA reliance on simple “rollback” modeling but urging more refined techniques); *Alabama Power Co. v. Costle*, 636 F.2d 323, 374–94, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20001, 20019–32 (D.C. Cir. 1979) (opinion by Robinson, J.) (urging EPA to move beyond Gaussian-plume models approved in the Modeling Guideline), modifying 606 F.2d 1068, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20400 (D.C. Cir. 1979) (per curiam).

somewhat increased the number and variations of approved models, but site-by-site judgments of the models still are necessary.

Despite the severe limits of site-specific models, modeling must be done. The whole scheme of controls for existing sources based on environmental quality depends on establishing the degree to which emissions from a source will be precipitated from or diluted by the surrounding air. EPA and state scientists, and a growing corps of professional consultants, have developed a variety of *ad hoc* techniques. All modeling involves a good deal of professional judgment in selecting the appropriate tools and data, in adjusting assumptions to meet the apparent circumstances, and in discarding obviously incorrect results. Because scientists differ in their exercise of such judgment, however, each modeling effort is open to criticism. Even when approved models are used—but more surely when *ad hoc* techniques must be employed—modeling can be a source of delay and controversy. As in the case of all technical decisions, of course, courts will be highly deferential to EPA's determinations regarding choice of air quality models and data inputs. Only where there is marked deviance between model predictions and monitored data or between the EPA Guideline and EPA practice will a court be likely to reverse or remand.¹⁰

The natural and inevitable result was that site-specific “modeling” developed into a form of gamesmanship.¹¹ Because of the difficulty in reaching scientific agreement on the dispersal of pollutants in the air at any location, there is a strong temptation to reach compromise verdicts; to set an emission limit that represents, not the level which protects health or welfare in all instances, but the level which can be achieved politically and economically. Such decisions are unsatisfactory in themselves and are open to attack in the courts.¹²

§ 2:17 Regional modeling

There are many situations in which site-specific air quality modeling cannot be done. The most important case is the common one of an ambient air pollutant that is not emitted as such from any source, but which results from chemical or physical changes in airborne matter. An example of such a pollutant is smog. When hydrocarbons and nitrogen oxides are exposed to sunlight, they undergo complex reactions which produce a mix of chemicals, including ozone, which may be damaging to health. Some of the pollutants which enter into the smog reaction are quite inert under other circumstances, and may travel long distances before becoming a part of the physical and chemical reaction which produces smog. Sulfur dioxide, nitrogen oxides, particles, and hydrocarbons all participate in atmospheric reactions. Different reactions predominate at different times of day, depending upon the height of the sun, the temperature and humidity, and the presence of other pollutants and natural materials.

Water quality, even more than air quality, is determined by the interactions of

¹⁰See, e.g., *Kamp v. Hernandez*, 752 F.2d 1444, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20216 (9th Cir. 1985); *Ohio Power Co. v. EPA*, 729 F.2d 1096, 14 Env'tl. L. Rep. (Env'tl. L. Inst.) 20354 (6th Cir. 1984), cert. denied, 53 U.S.L.W. 3403 (U.S. Nov. 27, 1984); *Wisconsin Elec. Power Co. v. Costle*, 715 F.2d 323, 13 Env'tl. L. Rep. (Env'tl. L. Inst.) 20803 (7th Cir. 1983); *Texas v. EPA*, 499 F.2d 289, 4 Env'tl. L. Rep. (Env'tl. L. Inst.) 20744 (5th Cir. 1974); see also *Cleveland Elec. Illuminating Co. v. EPA*, 572 F.2d 1150, 8 Env'tl. L. Rep. (Env'tl. L. Inst.) 20312 (6th Cir. 1978) (CEI II) (upholding selection of Gaussian-plume modeling for rural sources, but remanding for reconsideration of modeling of highly turbulent conditions).

¹¹“Modeling is becoming elevated to the same high art of gamesmanship as lawyering, and often a company finds it cheaper to hire modelers and lawyers than to put in pollution control equipment.” Address by Douglas M. Costle to the Air Pollution Control Association (Montreal, June 23, 1980) at 10.

¹²See *Union Elec. Co. v. EPA*, 427 U.S. 246, 265–66, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20570, 20575 (1975) (EPA may not consider feasibility of provisions of state plans to meet standards).

pollutants with the environment and living things. EPA has found few techniques for modeling the effects of a single source's emissions through such complex interactions of pollutants over a long distance, and there are reasons to think such modeling may not be possible in many situations except in the most abstract sense because the actual physical relationship of sources and effects is so attenuated that no site-specific model could ever be validated.

In such situations EPA has used two methods instead of site-specific models. The first, principally used in the early years after the 1970 Clean Air Act Amendments, is called "rollback." When using rollback modeling, a state determines, as best it can, the area in which emissions contribute to pollution of ambient air or water. The state requires all sources of relevant pollutants to reduce or "roll back" their emissions by the proportion in which concentrations of pollutants exceed the standard. If pollutant levels are 150 percent of the standard, for instance, each source which contributes to the problem will reduce its emissions by one third. There is no effort to determine the actual contribution of any one source to ambient pollution, and the effect of rollback on purely local pollution is difficult to predict.¹ The technique has been used with some success in water pollution control, where it is a form of "waste load allocation."²

A second approach is the use of regional models, which aggregate the emissions from several sources and calculate their impact over long periods of time and over large geographical areas. Regional models are less sensitive to minute variations in local conditions than are site-specific models and therefore can be used with less data and less effort. These models are used to predict the aggregate pollutant contributions of large regions to the smog which forms over them; other such models are being adapted for use in predicting long-range transport of sulfur dioxides, nitrogen dioxides, and smog. Although their predictions of long-term averages and wide impacts are difficult to verify, regional models allow more realistic allocation of control burdens than do rollback models, and provide some promise as knowledge of the atmosphere and its chemistry improves.

Regional models may ultimately be adapted to the site-specific state plans by some variation of the "bubble" procedure; controls will be allocated among sources within a region according to political or economic considerations, so long as the total emissions from the region being modeled remain within permissible, modeled limits. To the extent such regional models dominate a cleanup program—as they may in any scheme for controlling acid rain, smog and particulate pollution, which account for the bulk of conventional pollutants in the air, and nonpoint source or long-range conventional water pollution—the controversies over site-specific models will diminish.

§ 2:18 Other aspects of ambient standards

Environmental quality standards, once set, apply everywhere and at all times in the environment.¹ Defendants have explored the limits of these standards, however, and have found some jurisdictional issues. Standards are set medium-by-medium;

[Section 2:17]

¹See generally *Texas v. EPA*, 499 F.2d 289, 4 Env'tl. L. Rep. (Env'tl. L. Inst.) 20744 (5th Cir. 1974); *South Terminal Corp. v. EPA*, 504 F.2d 646, 662–63, 4 Env'tl. L. Rep. (Env'tl. L. Inst.) 20768, 20772–73 (1st Cir. 1974).

²See Clean Water Act § 303(d)(1)(C), 33 U.S.C.A. § 1313(d)(1)(C); Ackerman & Sayer, *The Uncertain Search for Environmental Policy: Scientific Factfinding and Rational Decisionmaking Along the Delaware River*, 120 U. Pa. L. Rev. 419 (1972).

[Section 2:18]

¹See Clean Air Act § 109, 42 U.S.C.A. § 7409 (1982); 40 C.F.R. § 50.1(e) (definition of "ambient

for instance, federal surface water quality criteria usually do not apply to groundwater² and air quality standards apply only to outdoor air to which the public has access.³ There may be room to argue that an air standard does not apply, and that controls therefore are not required, when an alleged violation occurs over company-owned land. EPA generally takes the view that a discharger may not buy up surrounding lands in order to remove discharges from the “environment,” but this view has not been tested in court.

Standards are limits in time as well as space. A standard is always measured over some period of time, although the period may be only an instant. There is a very large difference between emissions averaged over a year and emissions measured instantaneously. Enforcement officials generally prefer instantaneous measurements as they are easiest to establish and enforce; industry generally asks for long-term averages, which allow greater flexibility of operation. When a short-term standard has been exceeded in absolute terms, the defendant may argue that the company has nevertheless complied with the standard when considered as an annual average. In this way, the defendant may get credit for shutdowns and periods of low emissions. Enforcement officials are forced to argue over averaging times, which are technical and seem less important than absolute concentrations. In reality, of course, averaging times are as important as concentrations, since damage is done by exposure over time.

Finally, there is the abstruse issue of probability. Environmental quality varies continuously over time and space; concentrations of pollutants in air or water obviously do not remain constant, but vary in response to changes in source emissions, the flow of the medium, turbulence, and the random motions of molecules. By stating the standards as averages, some of the shorter-term variations are ignored. But continuous variations still create several difficult problems.

The worst is the problem of the rare event. Early in the control programs, EPA professionals discovered that rare conjunctions of weather and pollution could create unusually bad pollution in small spaces or for brief periods. It seemed unreasonable to base control programs on these rare events; standards were therefore written in a way that discounted their effect. Air quality standards, for instance, ignore single “exceedances”;⁴ control requirements are based on the *second* highest pollution value measured or predicted; and water quality standards do not apply to very unusual stream flow conditions.⁵ Short-term air quality standards must be exceeded at a specified frequency before controls will be required.⁶

Environmental quality modeling, however, tends to rest on worst-case assumptions. The result is that modeling will predict extremely rare events, based

air”). The Clean Water Act’s water quality criteria apply everywhere and at all times, although the standards based on the criteria are set for each water segment. *Mississippi Comm’n on Natural Resources v. Costle*, 625 F.2d 1269, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20931 (5th Cir. 1980); Clean Water Act § 304, 33 U.S.C.A. § 1314.

²See *Exxon Corp. v. Train*, 554 F.2d 1310, 7 Env’tl. L. Rep. (Env’tl. L. Inst.) 20594 (5th Cir. 1977). But see *United States Steel Corp. v. Train*, 556 F.2d 822, 7 Env’tl. L. Rep. (Env’tl. L. Inst.) 20419 (7th Cir. 1977). The Fifth Circuit’s well-reasoned opinion in *Exxon Corp.* is plainly preferable and has generally been followed, although the issue remains unresolved. See *Norfolk v. United States Army Corps of Eng’rs*, 968 F.2d 1438, 22 Env’tl. L. Rep. (Env’tl. L. Inst.) 21337 (1st Cir. 1992).

³See 40 C.F.R. § 50.1(e) (definition of “ambient air”).

⁴“Exceedances” is a jargon term that refers to concentrations of a pollutant in excess of the standard set for it, but which are not repeated and are therefore not violations of the standard. See 40 C.F.R. § 50.4–.12.

⁵*Mississippi Comm’n on Natural Resources v. Costle*, 625 F.2d 1269, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20931 (5th Cir. 1980).

⁶See, e.g., 40 C.F.R. § 50.8 (one-hour carbon monoxide standard may be exceeded no more than once per year).

on unlikely conjunctions of worst-case weather and worst emissions. Controls based on such calculations may seem unreasonable.

EPA has occasionally proposed to change its modeling techniques to allow more realistic assumptions and to disregard rare events.⁷ The unreasonableness of basing controls on extremely rare events remains a strong argument against such controls, however, and industrial sources occasionally rely on such arguments to obtain relaxation of state regulations.

All of these factors add additional complexity to the systems of controls based on environmental quality standards. Because these complexities have meant delay, Congress, to ensure at least some immediate cleanup at existing sources, began in 1972 to impose technology-based requirements on existing sources—as they had already been imposed on new facilities. This was a considerable step, and effectively removed the need for a local, action-triggering standard. Once a pollutant had been designated, control was required, regardless of local pollution levels.

This technology-based model was followed in most later legislation, so that action-triggering threshold standards, and remedies based directly on such standards, are receding in importance.⁸ Technology-based controls are discussed in Ch 3.

V. GOALS

§ 2:19 Introduction

There are several express goals to be achieved for designated pollutants. Where the environment has already been polluted, environmental quality standards for conventional pollutants may serve as both triggers for the cleanup and as milestones to mark progress. These interim standards were discussed in the preceding section and need no further elaboration.

There are other express goals for control of designated pollutants.

First, where the environment is still unpolluted, it is to be kept free of any significant pollution; this goal has been translated into complex environmental quality standards under several statutes. *See* § 2:20.

Second, especially tight controls are usually required for emissions of toxic substances. These emissions are considered hazardous even from single sources, and so controls have been based directly or implicitly on environmental quality standards. *See* § 2:23.

Third, beginning with the Clean Water Act, environmental protection programs have increasingly relied on technology-based forms of relief or control for all designated pollutants. These control programs have another set of environmental quality goals, sometimes explicit, and sometimes implicit. *See* § 2:26.

All of the statutes have slightly different formulations of these goals, and some goals must be inferred from control schemes. These goals have enough in common to allow some generalization. All of them are expressions of an overriding purpose, which is to keep designated pollutants at negligible levels and to reduce them to insignificance wherever they are found.

⁷The “ExEx” Modeling technique for sulfur dioxide emissions to take into account variability of sulfur in coal is an example of one such proposal. The “ExEx” method (for “expected exceedances”) is a statistical probability model to determine the effects of emissions, taking into account the daily variations in the sulfur content of coal. *See generally* Memorandum from Walter C. Barber, Director, Office of Air Quality Planning and Standards, to Barbara Blum, Deputy Administrator, EPA Memorandum on Proposal for Determining Compliance with Sulfur Dioxide Standard, *reprinted in* 10 Env’t Rep. (BNA) 1872 (1980). *See also* 12 Env’t Rep. (BNA) 353 (1981) (rejection of 30 day averaging method to substitute for ExEx).

⁸Congress does, however, continue to rely on such standards in some circumstances. *See* Clean Water Act § 304(l)(1), 33 U.S.C.A. § 1314(l)(1) (toxic control strategies to meet water quality standards).

§ 2:20 Nondegradation standards

The first of the goal-setting standards to be fully articulated grew out of the nondegradation programs. These began with a policy established under the forerunner of the Clean Water Act, later codified in EPA regulations and endorsed by Congress, which provided that standards for interstate waters must not allow any degradation of existing water quality, no matter how clean the environment already was.¹

This goal, as articulated by Judge Pratt in *Sierra Club v. Ruckelshaus*, was added to the Clean Air Act in 1970:

In Section 101(b) of the Clean Air Act, [42 U.S.C.A. § 7401(b) (1982)] Congress states four basic purposes of the Act, the first of which is “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.” . . . On its face, this language would appear to declare Congress’ intent to improve the quality of the nation’s air and to prevent deterioration of that air quality, no matter how presently pure that quality in some sections of the country happens to be.²

Federal law now also fixes a nondegradation standard for groundwater³ and for the oceans.⁴

In general, therefore, environmental protection law prohibits any significant

[Section 2:20]

¹The Department of Interior announced a “nondegradation policy” for interstate waters in a press release dated February 8, 1968, quoted in part in Zener, *Federal Law of Water Pollution Control*, in *Federal Environmental Law* 682, 717 (E. Dolgin & T. Guilbert eds. 1974). This is now a requirement for water quality standards set by the states. 40 C.F.R. §§ 131.6, 131.12. It arguably rested on language now found in the Clean Water Act, specifically “to restore and maintain the . . . integrity of the nation’s waters,” Clean Water Act § 101(a), 33 U.S.C.A. § 1251(a), and is reinforced by the goal of ending all discharges of pollutants. Clean Water Act § 101(a)(1), 33 U.S.C.A. § 1251(a)(1). Congress, in amending the Act in 1987, included specific reference to this antidegradation policy. Clean Water Act § 303(d)(4)(B), 33 U.S.C.A. § 1313(d)(4)(B). *See also* Clean Water Act § 402(o), 33 U.S.C.A. § 1342(o) (antibacksliding); § 13:73. There is at least a hint in their language and history that the secondary standards authorized by the Clean Air Act § 109(b)(2), 42 U.S.C.A. § 7409(b)(2), are *de minimis* standards: “air quality . . . requisite to protect the public welfare from any known or anticipated adverse effects” (emphasis added).

²*Sierra Club v. Ruckelshaus*, 344 F. Supp. 253, 256, 2 Env’tl. L. Rep. (Env’tl. L. Inst.) 20262, 20263 (D.D.C.), *aff’d per curiam*, 2 Env’tl. L. Rep. (Env’tl. L. Inst.) 20656 (D.C.Cir. 1972), *aff’d* by an equally divided court *sub nom.* *Fri v. Sierra Club*, 412 U.S. 541, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20684 (1973).

³The Safe Drinking Water Act requires waste disposal wells to be designed and used so as to eliminate any significant release of wastes into groundwater. Safe Drinking Water Act § 1421, 42 U.S.C.A. § 300h; 40 C.F.R. §§ 146.1 to 146.52. Other kinds of hazardous waste land-disposal facilities must be designed not to release significant concentrations of waste into groundwater. *See, e.g.*, RCRA § 3004, 42 U.S.C.A. § 6924 (performance standards for facilities must “protect human health and the environment”; no other considerations are authorized); 40 C.F.R. §§ 264.90, 264.301. Solid waste disposal on land generally should not pollute groundwater. RCRA §§ 4001 to 4009, 42 U.S.C.A. §§ 6941 to 6949. Finally, underground storage tanks must be designed to avoid leakage. RCRA § 9002, 42 U.S.C.A. § 6991a. While the coverage is spotty, nondegradation standards consistently apply where federal law designates groundwater pollutants for regulation.

⁴The Ocean Dumping Convention, implemented in the United States by the Marine Protection, Research and Sanctuaries Act, prohibits the dumping of any significant concentration of toxic chemicals or radioactive materials. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters, art. IV, § 1(a), Dec. 29, 1972, 26 U.S.T. 2403, T.I.A.S. No. 8165. The Convention prohibits dumping of toxic materials, oil, and persistent plastics listed in Annex I, when they are present in wastes in more than “trace” concentrations. *Id.* at Annex I.

EPA may not ban all dumping under MPRSA, but must prohibit significant degradation of the ocean. *See New York City v. EPA*, 11 Env’tl. L. Rep. (Env’tl. L. Inst.) 20763 (S.D.N.Y.), modified, 543 F. Supp. 1084, 12 Env’tl. L. Rep. (Env’tl. L. Inst.) 21003 (S.D.N.Y. 1981).

increase of designated pollutants anywhere in the environment. This is, however, not so draconian as it first appears. It is not a ban on all new emissions: Some new emissions are allowed so long as they do not lead to impermissible increases in environmental pollution. “Nondegradation” is, in short, a severe form of environmental quality standard.⁵ It has two components: a background level and an increment of allowable increase.

§ 2:21 Nondegradation standards—Background pollution

Trees emit “pollutants”—hydrocarbons that may contribute to a kind of natural smog. The blue haze over the Smoky Mountains is in part natural.¹ There are also naturally occurring oxides of sulfur and nitrogen in the air; mercury and other metals, of course, occur naturally.² Pollution from human activities is often as pervasive and more severe than naturally occurring phenomena.

Generally, new facilities, or major modifications of existing facilities, are not permitted to increase existing pollution significantly.³ In some programs, existing emissions also must be cut back to *de minimis* levels.⁴ Background pollution, from human and natural sources, therefore, is measured in order to set control limits for existing or proposed facilities. Accordingly, background pollution is determined site-by-site; one measures the upstream, “upgradient” (for groundwater) or upwind concentrations of pollutants and deducts the contributions attributed to known controllable sources. The remainder is background.⁵ Measurement can be a considerably complex process, especially when determining the background pollution level of groundwater, where flows are complex and hard to determine. Determination of background air pollution is also very complex; the factors to consider are highly variable, and pollution can be carried for considerable distances.⁶ As a general rule, a discharger is not required to control its emissions below background—that is, below the level of incoming air or water. Moreover, dischargers may use their own calculation of background pollution to defend against charges of impermissible

⁵See Hines, A Decade of Nondegradation Policy in Congress and the Courts: The Erratic Pursuit of Clean Air and Clean Water, 62 Iowa L. Rev. 642 (1977).

[Section 2:21]

¹The “blue haze” over the Great Smoky Mountains “is due to . . . aerosol produced in photochemical reactions of natural, volatile organic emissions from plants and trees. Since 1960, investigators . . . have discovered that plants and trees do, in fact, emit a variety of volatile organics and have concluded that natural organic vapors may contribute significantly to formation of aerosols.” Stevens, Dzubay, Shaw, McClenny, Lewis & Wilson, Characterization of the Aerosol in the Great Smoky Mountains, 14 Env’tl. Sci. & Tech. 1491, 1491 (1980) (EPA study conducted by Environmental Sciences Research Laboratory). The study concluded, however, that over half the fine-particle aerosol in the Great Smoky Mountains is currently composed of acid sulfates, the result of industrial pollution. *Id.* at 1497.

²See Kim & Fitzgerald, Sea-Air Partitioning of Mercury in the Equatorial Pacific Ocean, 231 Sci. 1131 (1986) (mercury vapor from natural sources in ocean comparable to all vapor releases from human activity).

³See, e.g., Clean Air Act §§ 165 to 166, 173, 42 U.S.C.A. §§ 7475 to 7476, 7503; see § 2:20 for nondegradation standards applicable to groundwater and oceans.

⁴This is the goal for all water pollution sources—often more honored in the breach than the observance—and hazardous waste land disposal facilities found to be emitting hazardous wastes. 40 C.F.R. § 264, Subpart F (groundwater protection). It also is the case with sources of toxic air pollutants. Clean Air Act § 112, 42 U.S.C.A. § 7412. See generally § 2:23.

⁵See U.S. EPA Guideline on Air Quality Models, 40 C.F.R. p. 51, app. W. Background is also calculated as part of the modeling process to predict the impact of existing sources. For each, the method of calculation is the same.

⁶See § 2:16 (dispersion modeling).

pollution.⁷

Background pollution levels are highly variable from place to place and from moment to moment. All nondegradation standards must take this variability into account, either by averaging it over a baseline period, as in the Clean Air Act,⁸ or by including a statistical measure of variability within the standard, as in the groundwater standards set for hazardous waste facilities.⁹

§ 2:22 Nondegradation standards—Increments for conventional pollution

The second component of the nondegradation standard is an “increment”—the increase in pollution above background levels that will be accepted. This is sometimes a measure of concentration, as in the Clean Air Act’s increments for some conventional pollutants,¹ or it may be a measure tied to the existing variation in background levels, as in the hazardous waste regulations that prohibit statistically significant increases in pollution from land disposal facilities² or water quality standards that prescribe a range of variation.³

The term “increment” is taken from the Clean Air Act, where nondegradation standards are expressly analyzed into baseline and increment components. A moment’s thought will show, however, that any nondegradation standard must include both a baseline and some measure to determine significant increases: First, because the baseline fluctuates, there must be some means of detecting significant increases in this fluctuating base; and second, because modern chemistry can detect infinitesimal concentrations of pollutants—with radioactive tracers, as small as a single molecule—and models of the impact of proposed new sources will mechanically predict infinitely small concentrations of pollution from almost any activity. A simple prohibition, therefore, is impossible. Nondegradation must come to mean, as it has, no *significant* degradation.⁴

When increments were first defined for conventional pollutants in the Clean Air Act, the foregoing considerations were not controversial propositions. Conventional pollutants, more or less by definition, were considered largely harmless in concentrations below the conventional standards. Congress set somewhat arbitrary incre-

⁷EPA may not rely on generalized presumptions when local data are available. *See, e.g.*, *Ohio v. EPA*, 784 F.2d 224, 16 Env’tl. L. Rep. (Env’tl. L. Inst.) 20447 (6th Cir. 1986), on reh’g, 798 F.2d 880, 16 Env’tl. L. Rep. (Env’tl. L. Inst.) 20870 (6th Cir. 1986); *cf.* *Natural Resources Defense Council v. Train*, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20588, 20591 (D.D.C. 1976) (consent decree: EPA need not regulate toxic water pollutants present in a discharge solely as a result of their presence in intake from the same body of water).

⁸Background for new sources is fixed, somewhat arbitrarily, as the average pollution level during the year in which a permit application is first submitted; this is called a “baseline.” *See Alabama Power Co. v. Costle*, 606 F.2d 1068, 1088–89, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20410–11 (D.C. Cir. 1979), modified, 636 F.2d 223, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20001 (D.C. Cir. 1980); Clean Air Act § 169(4), 42 U.S.C.A. § 7479(4). For existing sources, the background is calculated as an average of the data which is available. *See* U.S. EPA Guideline on Air Quality Models, 40 C.F.R. p. 51, app. W.

⁹40 C.F.R. § 264.99 (and appendix IV to section 264).

[Section 2:22]

¹Clean Air Act § 163, 42 U.S.C.A. § 7473.

²40 C.F.R. § 264.

³Water quality standards for conventional pollutants typically include a mean value and a range of allowable variations. *See, e.g.*, 40 C.F.R. § 131 subpart D (federally promulgated standards).

⁴*See Alabama Power Co. v. Costle*, 606 F.2d 1068, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20400 (D.C. Cir. 1979), modified, 636 F.2d 323, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20001 (D.C. Cir. 1980); Jorling, *Federal Law of Air Pollution Control*, in *Federal Environmental Law* 1058, 1078 (E. Dolgin & T. Guilbert eds. 1974) [hereafter Jorling].

ments for sulfur dioxide and particles and authorized EPA to set further increments.⁵ The states have had nondegradation standards for conventional water pollutants since the 1960s, with few challenges.⁶ The purpose of the conventional nondegradation programs, however, was not to prevent immediate harm—except in some cases to prevent loss of visibility over long distances—but to preserve a resource.⁷ The increment therefore was a rough, nearly arbitrary measure to distinguish statistically significant increases of pollution from background variations.

When EPA began to consider increments for toxic chemicals, the situation was more complex. EPA prudently assumed that there was no threshold for risk from these pollutants—that even very slight concentrations might give cause for concern. Of course, there was still an infinite gradation of possible concentrations, and certainly at some low level of concentration risk became trivial for any pollutant, but the problem of setting increments became more complex.

Nondegradation standards do more than protect unpolluted environments. They also protect the gains made by cleanup programs in polluted areas. On the one hand, environmental quality is preserved everywhere against any significant increase. On the other hand, EPA's panoply of steadily tightening control requirements requires declining emissions of all regulated pollutants.

The result is that industry is lashed to a vast ratcheting mechanism, on which movement is always forward toward a cleaner environment, and never backward. The pressure of economic growth may keep pollution levels constant for a time, but the pressure for improvement, and the ratchet to prevent backsliding, are always in place.

§ 2:23 De minimis standards for toxic pollutants

Both the Clean Air and Clean Water Acts, when first enacted, contained very stringent requirements for “toxic” pollutants. The language of the statutes led to the irresistible conclusion that no more than *de minimis* levels of these pollutants were to be allowed in air or water.¹ The London Dumping Convention as implemented by MPRSA, the ocean-dumping statute, similarly prohibited the dumping of significant concentrations of toxic chemicals in the oceans.² The Safe Drinking Water Act, RCRA, and CERCLA—the statutes regulating disposal of hazardous wastes into the ground—prohibit the release of toxic materials into groundwater.³ With regard to toxic chemicals, therefore, an undegraded environment was a clearly stated goal.

There were several problems with these provisions for toxic pollutants that hindered their implementation. The first was conceptual: toxic chemicals could be measured in tiny quantities, and could be mathematically predicted to occur in infinitesimal concentrations. They sometimes occurred as accompaniments of

⁵Clean Air Act §§ 161, 163, 42 U.S.C.A. §§ 7471, 7473.

⁶See § 2:20.

⁷See Jorling, Federal Law of Air Pollution Control, in Federal Environmental Law 1058, 1078–79 (E. Dolgin & T. Guilbert eds. 1974).

[Section 2:23]

¹Both the Clean Air Act and the Clean Water Act when enacted required environmental quality standards for toxic pollutants that allowed “an ample margin of safety.” Clean Air Act § 112(a), 42 U.S.C.A. § 7412(a); Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, § 2, 86 Stat. 816, amended by Clean Water Act of 1977, Pub. L. No. 92-217, 91 Stat. 1566, codified at 33 U.S.C.A. § 1317. Since there was assumed to be no threshold for most toxic pollutants, this was taken to require a virtual ban on emissions. See, e.g., *Comm. on Pub. Works, National Air Quality Standards Act of 1970*, S. Rep. No. 91-1196, 94–95 (1970).

²See § 2:20.

³See § 2:20.

ordinary activity. A ban on all toxic pollutants would be equivalent to a ban on much economic activity, unless the ban were selective, or modified by some notion of significance.⁴

§ 2:24 De minimis standards for toxic pollutants—De minimis standards

The increment approach taken for conventional pollutants would not necessarily satisfy the purpose of the statutes, however, for there was no level of toxic pollutants—even an arbitrarily small one—that could be taken as a threshold. Regulators prudently assumed that cancer-causing chemicals, the most common toxic pollutants, posed some risk at any exposure. The mathematical models used to predict injuries from toxic chemicals are capable of predicting infinitesimal gradations of risk to match the infinitesimal gradations of concentration predicted by diffusion models.

Most statutes are silent on how this difficulty should be resolved. At least in some settings, a statistical test may be used to determine significant departures from background pollution regardless of absolute concentration, as in RCRA groundwater protection.¹ For many toxic chemicals in other settings, however, this approach is not feasible.

The difficulty remains, therefore, of setting some standard which is so low as to be negligible, but which is not an unattainable zero.²

There is some guidance from case law in different settings. As discussed in an earlier section, the courts of appeals have occasionally looked at the threshold of government action, and in this context there is a hint of how *de minimis* standards might be set. In the course of applying a tort-law analysis of significant risk, which like “reasonably foreseeable” harms was to be analyzed into the probability of the accident, and the magnitude of the harm if it occurred, Judge J. Skelly Wright observed:

This position must be confined to reasonable limits, however. In *Carolina Environmental Study Group v. United States*, 510 F.2d 796 (1975), a division of this court found the possibility of a class 9 nuclear accident, a disaster of ultimate severity and horrible consequences, to be so low that the Atomic Energy Commission’s minimal consideration . . . was sufficient. Likewise, even the absolute certainty of *de minimis* harm might not justify governmental action.³

Toxic pollutants are like the Class 9 accident; they have horrible consequences; many cause cancer. At some point, horrible as they are, however, they are just too dilute to be concerned about. The probability of harm is too remote. There is some *de minimis* concentration of cancer-causing chemicals that does not merit control.

Just how this *de minimis* level is to be set may take some time to resolve. EPA is

⁴See, e.g., *Industrial Union Dep’t, AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607, 625 (1980) (benzene); *Natural Resources Defense Council v. EPA*, 824 F.2d 1146, 1154 (D.C. Cir. 1987) (en banc).

[Section 2:24]

¹See 40 C.F.R. § 264.99(c), pt. 264 app. IV.

²“Zero” is a mathematical abstraction. In environmental practice, there is an engineer’s “zero,” which may be the limits of detection, or the limits of controls; there is a psychological “zero,” a person’s subjective judgment of what he or she will trouble themselves over. See, e.g., B. Fischhoff et al., *Acceptable Risk* (1981). There is a cultural or political “zero,” the level of environmental quality that the members of a community accept as “clean” or “safe.” See M. Douglass & A. Wildavsky, *Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers* (1982). These different purposes may coincide, of course, but often they do not. Statutes, more or less by definition, express a political and cultural judgment, which is analyzed more fully in Ch 5.

³*Ethyl Corp. v. EPA*, 541 F.2d 1, 18 n.32, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20267, 20275 n.32 (D.C. Cir. 1976) (en banc), cert. denied, 426 U.S. 941 (1976).

trying to apply a traditional tort-law formula, by weighing the significance of the risk, against the burden of regulation; the agency implicitly compares itself to the reasonable person of negligence law, who is under a duty to take only those control measures not grossly disproportionate to the significance of the risk.

Environmentalists, however, have argued that costs should not be taken into account in setting the limits of regulation; once designated, toxic pollutants should be reduced to negligible levels, regardless of cost.⁴

In logic and in practice it seems costs must be weighed in some fashion or no risk would ever be too slight to escape control. Some pollutants—probably radiation and benzene among them—cannot be entirely eradicated. A complete blindness to cost would lead to a permanent crusade against diminishing risk. Since the costs of control rise as the risks decline, there must be some stopping place. EPA calculates costs and benefits to society as a whole. This slights the individual who is exposed to the toxic pollutants, who seems to be sacrificed to the general welfare in this kind of calculus.⁵

At least part of the government's job is to concern itself with otherwise helpless individuals. But it need not take the most extreme position. Most people are willing to make some sacrifices for the community of which they are citizens; and so the average, affected individual does not entirely ignore costs. There is still some *de minimis* level of risk he or she is willing to assume, as a good citizen. It is probably this objective standard of reasonableness that the laws set.⁶

In the last few years much attention has been brought to the issues of risk assess-

⁴See Novick, In Defense of Irrational Laws, *Envtl. Forum* at 10 (July 1984); Doniger, Time for Action, *Envtl. Forum* at 29 (Feb. 1984). "Negligible" remains to be defined, of course, since "zero" is only a mathematical abstraction; this is some implicit recognition of cost in any standard. The question is whether the standard will be a cultural or psychological minimum, or whether some cognizable risk will be accepted for the sake of other values. As a goal, eliminating all risk is not unreasonable; it simply expresses a preference among choices for the one which leads toward least pollution. See W. Rodgers, 1 *Envtl. L.* 20 (1986). Compromises with practicality may be made on the route and in the schedule, but not on the goal itself. See Ch 3.

⁵See generally Novick, In Defense of Irrational Laws, *Envtl. Forum* (July 1984). The Reagan Administration formally adopted cost-benefit analysis as an overriding element of regulation, wherever it is not forbidden by statute, and it is now a mainstay of regulatory analysis. See Exec. Order No. 12,291, 46 *Fed. Reg.* 13193 (Feb. 17, 1981); Thomas Decides Cost Data Can Be Used in Setting Secondary Air Quality Standards, *Inside EPA Weekly Report*, Sept. 6, 1985, at 1. As we have seen, however, environmental quality standards are not a balance between equally weighed costs and benefits; public health and welfare are given priority, and the standards express levels of risk to public health and welfare that require government response, or ultimate goals of environmental protection programs. Cf. *American Textile Mfrs. Inst. v. Donovan*, 452 U.S. 490, 11 *Envtl. L. Rep.* (Envtl. L. Inst.) 20736 (1981) (cost benefit analysis not required for reasonable regulation under Occupational Safety and Health Act); see also Stewart, Regulation in a Liberal State: The Role of Non-commodity Values, 92 *Yale L.J.* 1537 (1983). The Reagan order was supplanted in 1993 by Executive Order No. 12,866, signed by President Clinton, which took a more balanced approach to regulatory analysis, 58 *Fed. Reg.* 51735 (Oct. 4, 1993). That order was amended by subsequent orders. See, e.g., E.O. 13563, 76 *FR* 3821 (Jan. 21, 2011).

⁶See *Industrial Union Dep't, AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607 (1980). Here, a plurality of the Court found that there is some level of risk too small to regulate, and thought it "obvious" that a risk of one chance in a billion of contracting cancer from a drink of water was too trivial for the government to concern itself with. *Id.* at 725–26. This standard of *de minimis* risk is evidently easier to state than to explain. It is plainly an objective standard, but is not based on an equal weighing of costs against benefits or on general utilitarian values. See discussion in note 5. It presumably is based on inarticulate cultural or moral values. See, e.g., *Lochner v. New York*, 198 U.S. 45, 74 (1905) (Holmes, J. dissenting) ("General propositions do not decide cases. The decision will depend on a judgment or intuition more subtle than any articulate major premise"); Ch. 5; Stewart, Regulation in a Liberal State: The Role of Non-commodity Values, 92 *Yale L.J.* 1537 (1983). The judgment in *Industrial Union* reflects in part, as the Court's example shows, the government's proper concern for the most affected individual. See § 5:4. It seems to rest on what a reasonable person would be willing to accept. It would be unreasonable for the government to remedy risks that are accepted by some objective standard as

ment and management. The Agency itself has made efforts to evaluate its work in light of the seriousness of the risks addressed,⁷ and Congress has taken a deep interest in using it to set priorities for the various programs.⁸ Risk assessment is not without its flaws, however, and the debate over its appropriate uses will undoubtedly continue.⁹

§ 2:25 De minimis standards for toxic pollutants—Schedules and controls

The second difficulty was the lack of any adequate transition; the statutes seemed to call for an immediate reduction of toxic pollution to *de minimis* levels.¹ It quickly became apparent that literal enforcement of these statutes would require the shutdown of large segments of industry. EPA at first simply delayed taking any action. Then, in a series of compromises with environmentalists concerning air and water pollution, EPA constructed a system modeled on that used for conventional pollutants. The *de minimis* air and water quality standards were converted into more or less distant goals. Existing pollution sources were required only to use the best available control technology and then to make steady progress in further reducing pollution by updating the technological requirements. Strict environmental quality standards were not abandoned, but were deferred.²

This was an important compromise, with implications for all of environmental

among the necessary risks of life in a civilized community. To the extent the standard of reasonableness rests on this rationale—the willing acceptance by an imagined reasonable person who is most adversely affected by the risk—it rests on fundamental principles of fairness and justice. *See* J. Rawls, *A Theory of Justice* 11–17 (1971).

⁷EPA's first major work on the subject of risk-based programs was a 1987 report by its Science Advisory Board, *Unfinished Business: A Comparative Assessment of Environmental Problems*. A second report by the Board, *Reducing Risk*, was issued in 1990. The two publications are credited with stimulating much congressional debate. They found, not surprisingly, that EPA's regulatory priorities corresponded much more closely with the concerns of the general public than with the comparative risk rankings of the Agency's experts.

⁸When amending the Clean Air Act in 1990, Congress directed a review by the National Academy of Sciences of the risk assessment methodology used by EPA to determine risks associated with hazardous air pollutants. Clean Air Act § 112(o), 42 U.S.C.A. § 7412(o). The amendments also established a Risk Assessment and Management Commission charged with making a full investigation of the policy implications and appropriate uses of risk assessment and risk management in regulatory programs under various federal laws. In 1996, Congress authorized limited use of comparative risk assessment to justify alternative maximum contaminant levels for radon in drinking water. Safe Drinking Water Act § 1412(b)(13), 42 U.S.C.A. § 300g-1(b)(13).

⁹*See, e.g.,* Resources for the Future, *Worst Things First? The Debate Over Risk-Based Environmental Priorities* (1994); Paul A. Locke, *Reorienting Risk Assessment* (Environmental Law Institute Research Brief No. 4, Sept. 1994). The debate over risk assessment now includes the role of sustainability as a decisionmaking framework. *See* National Research Council, *Sustainability and EPA* (2010).

[Section 2:25]

¹The 1972 Federal Water Pollution Control Act Amendment required that effluent limitations based on *de minimis* standards were to be set for each toxic chemical and were to be promulgated in final form within nine months from the listing of a pollutant. Clean Water Act § 307(a)(2), 33 U.S.C.A. § 1317(a)(2). Such effluent limitations were to be effective within a year, and the whole country was to be in compliance with them by July 1, 1977. *Id.* § 301(b)(1)(C), 33 U.S.C.A. § 1311(b)(1)(C). The Clean Air Act required immediately effective “emission standards” for toxic pollutants to be promulgated in final form within six months after designation of the pollutants. *See* Environmental Defense Fund, Inc. v. Ruckelshaus, 3 Env'tl. L. Rep. (Env'tl. L. Inst.) 20173 (D.D.C. 1973); Clean Air Act § 112, 42 U.S.C.A. § 7412.

²*See* D. Doniger, *The Law and Policy of Toxic Substances Control: A Case of Vinyl Chloride* 82–86 (1978) (vinyl chloride settlement); *see also* Environmental Defense Fund, Inc. v. Ruckelshaus, 3 Env'tl. L. Rep. (Env'tl. L. Inst.) 20173 (D.D.C. 1973) (consent order). In general, the terms of the settlements allowed EPA to preserve the environmental quality goals contained in the statutes, but avoided any draconian effects by deferring their attainment until such time as they could be achieved by using best

protection law. It allowed EPA to stretch out schedules for control technology in implicit recognition of practical constraints.

In 1977, the Clean Water Act was amended to incorporate a version of this scheme.³ EPA began to develop general criteria for *de minimis* standards for the largest class of toxics—the cancer-causing chemicals.⁴ But implementation was delayed by the difficulty of setting standards for cancer-causing pollutants. With the change in Administration in 1981, the whole program was abandoned.⁵ The problem of *de minimis* standards for toxic pollutants therefore remains unresolved, but a prudent assumption is that it will not disappear. In the 1984 RCRA amendments, Congress reaffirmed its intention of protecting groundwater from any significant contamination. Land-disposal of hazardous wastes may continue so long as the wastes are treated to best-available-technology levels, which presumably must continually improve; the ultimate goal remains to ban all but *de minimis* pollution of soil and groundwater.⁶ In the 1986 Superfund revisions, *de minimis* standards for toxic pollutants set under other statutes were adopted as the goals for cleaning up soil and groundwater.⁷ Until recently, it seemed very unlikely that Congress would accept any softening of the standard for eliminating significant toxic pollution of air or surface water by EPA or the courts. Revisions to FIFRA and the Safe Drinking Water Act adopted in 1996 indicate that there was a substantial philosophical shift in that body in the 104th Congress that continues.

§ 2:26 Long-term goals of technology-based control

The Clean Water Act sets as the national purpose that “the discharge of pollutants into navigable waters be eliminated by 1985.”¹

Senator Edmund S. Muskie was the proponent of this language, added to the stat-

available technology. This was explicit in the vinyl chloride settlement, and implicit in the structure of the water toxics settlement. The latter allowed—and for a few chemicals, required—EPA to set separate toxics standards, but generally fitted the control of toxics into the general scheme of gradually tightening best available technology, with a goal of ending all pollution discharges. *See* Natural Resources Defense Council v. Train, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20588, 20590 (D.D.C. 1976) (consent decree); Clean Water Act § 301(b)(2)(A), 33 U.S.C.A. § 1311(b)(2)(A). *Cf.* City of New York v. EPA, 543 F. Supp. 1084, 12 Env'tl. L. Rep. (Env'tl. L. Inst.) 21003 (S.D.N.Y. 1981) (prohibition of ocean dumping of sludge limited to materials that unreasonably degrade the ocean).

³Clean Water Act of 1977, Pub. L. No. 95-217, §§ 42(b), 53(a), 54(a), 91 Stat. 1566, 1583, 1591–92 (amending Clean Water Act §§ 301, 307, 33 U.S.C.A. §§ 1311, 1317). These amendments incorporated into the statutes a version of the settlement reached in Natural Resources Defense Council, Inc. v. Train, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20588 (D.D.C. 1976). EPA now requires state water quality criteria for designated toxic pollutants, 40 C.F.R. § 131.11(a)(2), but did not press very hard to have such standards established. Then in 1987, Congress expressed its displeasure with the slow pace of regulation by enacting Clean Water Act § 304(l) requiring control strategies for toxic wastewater discharges. 33 U.S.C.A. § 1314(l). The program has been controversial but has led to increased controls.

⁴*See* 44 Fed. Reg. 58642 (1979).

⁵*See, e.g.,* Sierra Club v. Ruckelshaus, 602 F. Supp. 892, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20080 (N.D. Cal. 1984). At issue was the Administrator's refusal to regulate emissions of radionuclides, a designated toxic air pollutant, from sources where the controls would have been very expensive, and the aggregate risk to the population small. *See* Brief for Respondent at 30–30B, Environmental Defense Fund, Inc. v. Thomas, No. 84-1524 (D.C. Cir. brief filed 10–9–86); 50 Fed. Reg. 5191 (1986); 49 Fed. Reg. 43913 (1985).

⁶*See, e.g.,* RCRA §§ 1002(b)(5) to 1002(b)(7), 3004(d) to (k), 42 U.S.C.A. §§ 6901(b)(5) to (7), 6924(d) to (k).

⁷*See* CERCLA § 121, 42 U.S.C.A. § 9621; 50 Fed. Reg. 47946, 47948 (1985) (applicability of environmental quality standards to Superfund remedial program). H. R. Conf. Rep. No. 99-962, at 243–51 (1986) (discussing cleanup standards); Pub. L. No. 99-499, § 121, 100 Stat. 1613 (1986).

[Section 2:26]

¹Clean Water Act § 101(a)(1), 33 U.S.C.A. § 1251(a)(1).

ute in 1972, similar to the action-forcing schedules he sponsored in the Clean Air Act in 1970. Unfortunately, however, the goal was so ambitious and the schedule was so short that this language has not always been taken very seriously.² If we set aside the unrealistic date, however, and soften the draconian “eliminated” by some notion of reasonableness or significance—just as similar language in the Clean Air Act has been softened to require only that no “significant” degradation occur—the Clean Water Act’s goal is simply the gradual end of significant pollution. This is an awesomely ambitious, but not an unreasonable goal.

The method by which this goal is to be achieved is a system of gradually tightening controls based on available technology. The state of the art of control technology continually improves, and EPA’s regulations are periodically revised to take the improvement into account. Emissions from every source therefore will gradually—but continually—decline, until the goal of eliminating all significant pollution discharges has been achieved.³

These gradually tightening controls first appeared in the Clean Air Act’s standards for new vehicles and major new stationary sources of pollution. When the Clean Water Act was amended in 1972, they became the central method of the program and were extended to all sources, although the heaviest burden continued to lie on new sources. This general program was then followed in the subsequent statutes, so that there is now a generally tightening system of controls.⁴ This system is described in more detail in the next chapter.

Taken together with the system of environmental quality standards, these controls create a vast ratcheting effect. Ambient environmental quality standards for conventional pollutants are interim goals, which must be promptly achieved everywhere. Nondegradation standards prohibit any significant increase in pollution anywhere. Emissions of toxic pollutants and land disposal of hazardous wastes must be eliminated as quickly as improvements in the best technology allow. Control technology must always improve. As existing sources of pollution are slowly outmoded and replaced by new facilities, equipped with the best available pollution controls, environmental quality can never worsen, and eventually should improve until all significant discharges are ended.⁵ This is the ultimate goal of environmental protection law.

²See, e.g., Monitor: WPCF Roundtable Discussion—Congressional Staffs Take a Retrospective Look at P.L. 92-500, *J. Water Pollution Control Fed’n*, Aug.-Sept. 1981, at 3; cf. *National Wildlife Fed’n v. Gorsuch*, 693 F.2d 156, 181, 13 Env’tl. L. Rep. (Env’tl. L. Inst.) 20015, 20027–28 (D.C. Cir. 1982).

³See, e.g., *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 204–05, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20563, 20564 (1976) (goal of technology-based emission limits is to end all discharges).

⁴See, e.g., *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 204–05, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20563, 20564 (1976) (water pollution must be gradually eliminated); *ASARCO, Inc. v. EPA*, 578 F.2d 319, 327, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20164, 20168–69 (D.C. Cir. 1978) (Clean Air Act new source performance standards ensure continual progress in reducing air pollution emissions, even where air quality standards have been met); *Environmental Defense Fund, Inc. v. Costle*, 578 F.2d 337, 342, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20200, 20202 (D.C. Cir. 1978) (Safe Drinking Water Act Controls are “progressive in nature, adapting to increasing knowledge and experience”); RCRA § 3004(o), 42 U.S.C.A. § 6924(o) (performance standards for hazardous waste management facilities, “[s]hall be revised from time to time to take into account improvements in the technology of control and measurement”); § 3:2.

⁵See, e.g., *ASARCO, Inc. v. EPA*, 578 F.2d 319, 327, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20164, 20168 (D.C. Cir. 1978); *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 204–05, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20563, 20564 (1976); *ASARCO, Inc. v. EPA*, 578 F.2d 319, 327, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20164, 20168–69 (D.C. Cir. 1978); *Environmental Defense Fund, Inc. v. Costle*, 578 F.2d 337, 342, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20200, 20202 (D.C. Cir. 1978). See also DeMocker, Greenwald & Engels, *Extended Lifetimes for Coal-Fired Power Plants: Effect Upon Air Quality*, *Pub. Utils. Fortnightly*, Mar. 20, 1986, at 30. EPA’s projections show sulfur dioxide emissions declining rapidly toward a minimum less than one-third of the present total, despite economic growth, if new

VI. THE PURPOSE OF ENVIRONMENTAL PROTECTION LAWS

§ 2:27 In General

Looking across all of the statutes, as we have done, some landmarks are visible. EPA must identify and designate the pollutants that cause or contribute to environmental hazards which rise above statutory thresholds. The Agency must set ambient standards that trigger cleanup actions and which serve as milestones for progress in control.

The Agency must then continue managing the national system of remedies over which it presides toward the goal of gradually eliminating all significant concentrations of designated pollutants from the environment.

De minimis standards of environmental quality define the ultimate goals of environmental protection law; they express a standard of negligible pollution, different from an abstract and unachievable mathematical zero. These goal-setting standards include the nondegradation standards, which prohibit any significant increase in designated pollutants in any environmental medium, and *de minimis* standards for toxic pollutants, which are less clearly defined. Finally, technology-forcing regulations implicitly drive all pollution levels toward *de minimis* levels.

The goal of ending significant pollution is not quickly achievable and may not be achievable at all; there are inconsistencies and omissions in the statutory scheme that have evolved. Still, the general pattern is clear and gives a clear direction to EPA and to the regulated community. Despite the political turmoil over environmental issues in, the pattern seems unlikely to change it in any fundamental respect.

plants replace the old as originally expected (beyond that point, economic growth again causes an increase in emissions if new source standards are not further tightened). The increased cost of new plants, however, has led power companies to keep older facilities in operation for up to sixty years, thwarting the original program. The question here, however, is not whether the original program was well conceived or whether it works, but only what the purpose of the law has been.

For the sake of disclosing bias, I will say that I support the program to gradually eliminate significant pollution. Many of the most substantial costs are behind us, and new developments in biotechnology, energy conversion, and materials promise to make possible, albeit slowly, the fundamental changes in productive technology that the statutes aim for and encourage. The federal government can play a modest part toward seeing that the great changes in industrial technology, which are coming in any case, serve social purposes as much as possible.

Chapter 3

The Methods of Environmental Protection*

I. INTRODUCTION

§ 3:1 In general

II. TECHNOLOGY-FORCING

§ 3:2 Assessment and control of technology

§ 3:3 Action-Forcing

§ 3:4 Performance standards

§ 3:5 —“Technology-Based” control

§ 3:6 —Emission limits: “dilution is not the solution”

III. “EXISTING” AND NEW SOURCES OF POLLUTION

§ 3:7 In general

IV. CONTROLS FOR “EXISTING” SOURCES AND FACILITIES

§ 3:8 Introduction: Grandfathering

§ 3:9 Reasonably available controls

§ 3:10 Best available controls

§ 3:11 Variances

V. CONTROLS FOR NEW SOURCES AND FACILITIES; NEW PRODUCTS; MODIFICATIONS OF EXISTING SOURCES AND FACILITIES

§ 3:12 Introduction

§ 3:13 Definition of new source or facility; New products

§ 3:14 Modifications of existing sources or facilities; New uses of existing products

§ 3:15 —Reconstruction

§ 3:16 —Expansion and new uses

§ 3:17 Preconstruction review; Construction bans

§ 3:18 Performance standards for new facilities

§ 3:19 Variances

VI. THE PERMIT SYSTEM

§ 3:20 Federal and state permit programs: “Delegation”

§ 3:21 Procedure—Permit procedures

§ 3:22 —Confidentiality of business information

§ 3:23 —Negotiating a permit

VII. BEYOND COMMAND AND CONTROL REGULATION:

*By **Sheldon M. Novick**; § 3:24 by **Barry Breen**; updates to §§ 3:1 through 3:20 by **Robert V. Percival**.

INNOVATIVE APPROACHES TO ENVIRONMENTAL PROTECTION

- § 3:24 Introduction
- § 3:25 Tinkering with command and control regulation—The command and control process
- § 3:26 —Citizen suits to enforce standards contained in regulations and permits
- § 3:27 —Removing the rulemaking function from the regulators: California’s Proposition 65 and negotiated rulemaking—In general
- § 3:28 — —Direct regulation by voters
- § 3:29 — —Negotiated rulemaking
- § 3:30 —Modifying the permitting function of the regulators: Transferable pollution permits
- § 3:31 Directly influencing the decisionmaking process—Governmentalizing operational decisions
- § 3:32 —Requiring decisionmakers to consider environmental factors
- § 3:33 —Giving decisionmakers more information
- § 3:34 “Private command and control regulation”: Enlisting banks and insurers as regulators
- § 3:35 Using the tax system to impose costs on polluters
- § 3:36 Using the liability system to impose costs on polluters—The retrospective liability system
- § 3:37 —Liability to the government to clean up pollution
- § 3:38 —Liability to the government to pay damages for pollution
- § 3:39 —Liability to private parties to clean up pollution
- § 3:40 —Liability to private parties to pay damages for pollution
- § 3:41 Liability to the environment itself
- § 3:42 New tools for effectively achieving environmental goals: A choice of practicalities and values

VIII. THE NEXT 40 YEARS OF ENVIRONMENTAL LAW

- § 3:43 Introduction
- § 3:44 Looking backward: past predictions of the future environment
- § 3:45 —Paul Ehrlich’s *Population Bomb*
- § 3:46 —Gregg Easterbrook’s *A Moment on the Earth*
- § 3:47 —Bjørn Lomborg’s *The Skeptical Environmentalist*
- § 3:48 Legal responses to environmental risks
- § 3:49 Looking forward: contemporary predictions of the environmental future
- § 3:50 —Al Gore’s *The Future*
- § 3:51 —The 2052 Project
- § 3:52 —Emerging technologies: the case of driverless motor vehicles
- § 3:53 Conclusion: the future of global environmental law

Research References

Primary Authority

Clean Water Act § 101(a)(1), 33 U.S.C.A. § 1251(a)(1)
 Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C.A. §§ 136 to 136y
 Toxic Substances Control Act, 15 U.S.C.A. § 2601
 Marine Protection, Research, and Sanctuaries Act 16 U.S.C.A. § 1401
 Safe Drinking Water Act, 42 U.S.C.A. § 300f
 National Environmental Policy Act of 1969, 42 U.S.C.A. § 4321
 Resource Conservation and Recovery Act, 42 U.S.C.A. § 6901
 Clean Air Act, 42 U.S.C.A. § 7401

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I. INTRODUCTION

§ 3:1 In general

In the last chapter, we summarized the common goals and standards of the environmental protection statutes EPA administers, whose overall purpose is the gradual elimination of significant pollution.

In this chapter we will review the common methods of carrying out these programs.

The dominant method is a system of permits issued to facilities where pollutants are discharged or hazardous wastes are managed. Five of EPA's statutes establish such permit systems.¹

Permits contain emission limits, or other performance standards, for release of designated pollutants or management of wastes. Federal statutes and EPA regulations set minimum criteria for these standards and schedules for compliance; state agencies usually issue the permits and enforce them, in accordance with procedures that permit participation by the public. Federal and state governments, the private discharger, and interested members of the public therefore converge in the permit system.

Emission limits and other standards in permits are of two general kinds. The first is determined site by site, and protects minimum levels of environmental quality;² the second kind of emission limit is part of a general system of "technology forcing."³ Technology-forcing emission limits are usually set uniformly for categories of industry,⁴ and are periodically revised and made more stringent.⁵ Permits accordingly bring to bear on individual facilities methods designed to achieve both interim standards and long-range goals of environmental protection law.

II. TECHNOLOGY-FORCING

§ 3:2 Assessment and control of technology

Environmental protection law was strongly influenced by a movement, in the

[Section 3:1]

¹The Clean Air Act requires major sources of air pollution to obtain operating permits that embody all the Act's restrictions applicable to those sources. The Clean Water Act, Safe Drinking Water Act (well disposal), and Marine Protection, Research, and Sanctuaries Act (MPRSA) (ocean dumping) prohibit discharges of designated pollutants without a permit. The Resource Conservation and Recovery Act (RCRA) prohibits hazardous waste management without a permit. *See* § 3:20. Under the Toxic Substances Control Act (TSCA), manufacturers must submit information about existing toxic chemical substances and prior notice before manufacturing new products; the burden is on EPA to act, but when it does the Agency issues rules and conditional orders which are the functional equivalent of permits. *See* Ch 16. Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), pesticides must be submitted to EPA for registration, and may then only be sold subject to EPA's label restrictions. *See* Ch 17.

²*See* § 3:4. Controls based directly on environmental quality are discussed more fully in § 2:14.

³*See generally* § 3:2.

⁴*See* § 3:6.

⁵*See* §§ 3:8, 3:12.

1960s and early 1970s, for assessment and control of industrial technology.¹ The movement began in the 1950s with a successful effort to put nuclear power under civilian guidance and control.² The movement expanded with the broadly based opposition to atmospheric testing of nuclear weapons, which ended with the Partial Test Ban Treaty of 1963.³ Rachel Carson's 1962 book on the hazards of pesticides, *Silent Spring*, had an immense impact; and Ralph Nader, after the publication of *Unsafe At Any Speed* in 1965, led a growing consumer movement that sought to influence industrial technology and products.⁴ Barry Commoner produced an overall theory; he thought that modern technology was fundamentally disruptive to the environment, because of its immense scale and its release of chemicals and radiation that were foreign to the natural environment.⁵ The remedy would require a conscious redirection of industrial development.

The federal government was one focus of this growing movement. Some of the more doubtful new technologies were federally sponsored—the supersonic transport, nuclear power plants, civilian applications of nuclear explosives, and chemical and biological weapons testing.⁶ Pesticides, drugs, and food additives were already registered and regulated by the federal government. The literature of the time argued that only the federal government could control the biggest industrial companies. To some degree the movement was modeled on the Civil Rights movement, and looked to the federal government as an agent for social change.⁷

One concern of the movement was that industrial companies had grown so large in the post-war years, and industrial technology had grown so powerful, that they dominated the marketplace and responded only to internal needs; lacking constraint, industrial growth was inadvertently damaging the environment.⁸ Federal

[Section 3:2]

¹See, e.g., Speth, *The Federal Role in Technology Assessment and Control*, in *Federal Environmental Law* 420, 422 (E. Dolgin & T. Guilbert eds., 1974) (“the new movement for technology assessment and control”).

²See S. Novick, *The Electric War: The Fight Over Nuclear Power* 24–30 (1976).

³See United States Arms Control and Disarmament Agency, *Arms Control and Disarmament Agreements: Texts and Histories of Negotiations* (1982 ed.); *Scientist and Citizen*, Sept.-Oct. 1964 (test-ban treaty anniversary issue).

⁴Also important in these years was the curious movement against fluoridation of drinking water, which mobilized a great deal of hostility to modern technology.

⁵See B. Commoner, *The Closing Circle: Nature, Man and Technology* (1971); B. Commoner, *Science and Survival* (1966).

⁶For a snapshot of some of this discussion, see *Our World In Peril: An Environment Review* (S. Novick & D. Cotrell eds., 1970).

⁷The Environmental Defense Fund and the Natural Resources Defense Council, leading environmental plaintiffs groups, were as their names suggest modeled in part on the NAACP's Legal Defense Fund; both continue to be associated with individual rights. An important dispute at the center of environmental law is the degree to which affected individuals must be protected from risk, an issue in which both groups have been active. See § 2:24; S. Novick, *The Electric War: The Fight Over Nuclear Power* 259 (1976) (interview with Gus Speth, one of the founders of NRDC). See also L. Tribe, *Channeling Technology Through Law* (1973) (emphasizing the potential of new technology to invade personal rights).

⁸See J.K. Galbraith, *The New Industrial State* (1967); Speth, *The Federal Role in Technology Assessment*, in *Federal Environmental Law* 420, 422–24 (E. Dolgin & T. Guilbert eds., 1974). Speth cites many of the numerous books of the 1960s addressing this general theme. The brief summary in the text hardly does justice to the many thoughtful analyses of modern technology published in these years. There were also, of course, counterarguments. Some people thought that whatever technology was in use, population growth would rapidly overwhelm any progress made, and would shatter the fragile environment. Attention to technology was therefore a dangerous diversion. See, e.g., Ehrlich & Holdren, *Review of Commoner, The Closing Circle*, *Env't*, Mar. 1972, at 24. For a more detached view

controls and alternative, smaller-scale and more adaptive technology were sought.⁹

This strand of the movement lost much of its impetus after the oil shock of 1973, the long industrial recession that followed, and the rise of foreign competition to challenge U.S. corporations.¹⁰ American industrial technology no longer seemed so powerful as to need control. By the 1980s, pollution in the United States began to seem more a relic of obsolescent technology than a result of modern advance.¹¹

A second theory, ultimately more influential, was that there was nothing inherently damaging about technological development, but that market prices—and therefore industry—simply had not taken the costs of environmental damage into account; the federal government, through taxes or regulations, therefore should force industry to “internalize” the costs of environmental damage. Industrial ingenuity would then provide goods and services without excessive damage to the environment.¹²

Federal agencies which sponsor new technology similarly are required—by the National Environmental Policy Act (NEPA)—to assess the impact of their programs on the environment.¹³ An early and important victory for the technology-assessment movement was the decision in *Scientists’ Institute for Public Information v. AEC*, which held that under NEPA, federal agencies must assess the environmental impacts of whole programs, and not only of separate permit and funding actions.¹⁴

Passage of NEPA itself was owed in part to the influence of the movement. NEPA expresses the faith that advancing science and technology would ultimately reconcile industry to the environment, without any sacrifice of prosperity, if only industry and government could be obliged to exercise their ingenuity in this direction.¹⁵ This expression of faith was the preamble for the technology-forcing provisions of the

of the movement, see M. Douglas & A. Wildavsky, *Risk and Culture: An Essay on the Selection of Technical and Environmental Dangers* (1982).

⁹See, e.g., E.F. Shumacher, *Small Is Beautiful* (1973). A far more sophisticated analysis is M. Bookchin, *Post-Scarcity Anarchism* (1971).

¹⁰See, e.g., E. Rothschild, *Paradise Lost: The Decline of the Auto-Industrial Age* (1973).

¹¹The emphasis now is on stimulating new technology that is less destructive than the old. See, e.g., Ashford et al., *Using Regulation to Change the Market for Innovation*, 9 Harv. Envtl. L. Rev. 419 (1985).

¹²If there is an established view, this is it. See Message of the President of the United States, Message on the Environment, H.R. Doc. No. 91-225, at 1, 2 (1970) [hereinafter *The President’s 1970 Message*]. There is an immense literature on the problem of “externalities”—the difficulty is that free goods, like air and water, are also limited. Lacking a price, there is no inducement to conserve them. K.W. Kapp argued in *The Social Costs of Private Enterprise* (1963) that the traditional method of accounting for costs was simply a “cloak for large-scale spoliation.” Garrett Hardin popularized the question in his paper, *The Tragedy of the Commons*, 162 Science 1243 (1968), where he was similarly pessimistic.

¹³See National Environmental Policy Act of 1969 § 102(2)(c), 42 U.S.C.A. § 4332(2)(c); § 10:1.

¹⁴*Scientists’ Inst. for Pub. Information v. Atomic Energy Comm’n*, 481 F.2d 1079, 3 Envtl. L. Rep. (Envtl. L. Inst.) 20525 (D.C. Cir. 1975). Plaintiff’s counsel and the moving force in the litigation was the young Natural Resources Defense Council.

¹⁵See NEPA § 101(b)(3), 42 U.S.C.A. § 4331(b)(3); Congressional White Paper on a National Policy for the Environment, Submitted to the United States Congress under the auspices of the Committee on Interior and Insular Affairs, United States Senate, and the Committee on Science and Astronautics, United States House of Representatives, 90th Cong. (1968). The Congressional white paper, which contained a draft of the eventual NEPA statement of policy, was a paean to technology assessment. It said, “[d]ecisions to make new technological applications must include consideration of unintended, unanticipated, and unwanted consequences. Technology should be directed to ameliorating these effects so that the benefits of applied science are retained.” *Id.* at 16. See generally § 10:55; cf. T.B. Taylor & C. Humpstone, *The Restoration of the Earth* (1973). These authors, a well-known scientist and an attorney, proposed that all human activities be conducted in a contained manner, without any release of residuals to the environment except air, water, carbon dioxide, and heat. The authors are even optimistic about containing carbon dioxide from fuel burning. The authors cited the Clean Water Act

environmental protection laws.

In 1970, President Nixon's message to Congress on the environment¹⁶ contained the first proposals for technology-forcing in federal law. Emission standards for new models of automobiles, and for selected categories of industrial plants, would be set more stringently than technology already in wide use could meet.

The express intent was to force a shift to fundamentally new industrial technology, believed to be available but not in use for lack of incentive. For instance, although emission limits for automobiles might soon "begin outrunning the technological limits of our capacity to reduce pollution from the internal combustion engine,"¹⁷ the President's message said, emission limits would continue to tighten, and the government would provide assistance in developing "an alternative low-pollution power source."¹⁸ For new factories in selected categories, "[n]ational standards will ensure that advanced abatement technology is used in constructing the new facilities, and that levels of air quality are maintained in the face of industrial expansion."¹⁹ Toxic air pollutants were to be subject to stringent regulations, "to guarantee the earliest possible elimination of clear health hazards even in minute quantities."²⁰ This was the charter of modern environmental protection law. In the year following his message President Nixon proposed legislation for control of air and water pollution, ocean dumping, regulation of solid wastes, and the control of toxic chemical manufacture; in all of these statutes, a moderate form of what we now call "technology-forcing" was an important feature. Industrial technology was to be nudged into nonpolluting paths.

§ 3:3 Action-Forcing

Congress soon made the nudge a shove.

The Senate environmental pollution subcommittee, chaired by Senator Edmund S. Muskie after 1963, played a key role in federal legislation, and through the 1960s the subcommittee was determinedly deferential to the states. Early pollution control statutes consequently deferred heavily to state governments, and allowed them to construct minimal (or optimal, depending on one's perspective) control strategies, based on their judgments of what the local environment would require and what local industry could afford.¹

The pace of progress in control was excruciatingly slow, however, and there was considerable disparity among the states. Congress gradually took up in gingerly fashion the idea of nationally uniform controls for industry, to force the pace and direction of development more rapidly and consistently across the country. Senate Public Works Committee Chairman Jennings Randolph, responding to Johnson

amendments of 1972, which called for the end of all discharges of pollution, as the first step in their program. *Id.* at 47.

¹⁶See Message of the President of the United States, Message on the Environment, H.R. Doc. No. 91-225, at 1, 2 (1970).

¹⁷Message of the President of the United States, Message on the Environment, H.R. Doc. No. 91-225, at 6 (1970).

¹⁸Message of the President of the United States, Message on the Environment, H.R. Doc. No. 91-225, at 6 (1970).

¹⁹Message of the President of the United States, Message on the Environment, H.R. Doc. No. 91-225, at 8-9 (1970).

²⁰Message of the President of the United States, Message on the Environment, H.R. Doc. No. 91-225, at 8 (1970).

[Section 3:3]

¹See, e.g., Air Quality Act of 1967 Pub. L. No. 90-148, 81 Stat. 485; Muskie, The Role of the Federal Government in Air Pollution Control, 10 Ariz. L. Rev. 17 (1968); § 2:9.

Administration proposals in 1967, said that control technology, and the regulations which required control, should make progress “hand in hand,” so that industry would be obliged to adopt controls that were available, but not yet in use.² This was one of the themes of later legislation, but technology-forcing was not a part of the Clean Air Act amendments that year.

As pollution continued to worsen, public and congressional patience wore thin, and a series of increasingly drastic measures were imposed. President Nixon’s message to Congress in 1970, and the legislative proposals that accompanied the message, included proposals for guiding technology toward better control, but contained few schedules or inducements for rapid progress. The Administration proposals, as noted in the preceding section, applied technology-forcing only to selected new sources of pollution, and left the bulk of existing industry to be controlled by state plans of the kind that had so far produced little progress.

Public pressure was swelling, however. In the spring of 1970, the press gave extensive attention to the first “Earth Day” conferences held on campuses across the United States, clean-shaven copies of anti-war demonstrations. Senator Gaylord Nelson, the patron of Earth Day, shared in the publicity. Also that spring there appeared a book by two young associates of Ralph Nader, sharply critical of Senator Muskie, and of the Administration’s cautious approach.³

By summer, Senator Muskie’s subcommittee began to add very stringent schedules and enforcement programs to the Administration proposals.⁴ The Clean Air Act of 1970 and the Clean Water Act amendments of 1972, as they emerged from the subcommittee and as they were finally adopted, both required the states to clean up air and water, at least to the levels EPA deemed acceptable for public health, on roughly a five-year schedule, without regard to the present availability of control technology.⁵

One focus of attention in 1970 was the pace of development in the auto industry. Senate additions to the Clean Air Act told the auto makers—in the face of their insistence that changes could not be made so quickly—to produce new cars that would bring air quality within health-based standards on the same short schedule.⁶

Stringent schedules were added to the state plans for existing sources of pollution as well. The schedules in the Clean Air Act of 1970 are sometimes called “technology-forcing,” but they were too short to allow much change in technology; and to the extent they applied to existing sources of pollution, no great changes were expected. They were action-forcing or compliance-forcing; they said, “Comply or shut down.” State governments were given some latitude to make provisions for individual facilities, but overall air and water quality standards were to be met regardless of cost.⁷ If older plants had to shut down to make way for newer, cleaner facilities, the costs and disruption would be accepted.

Congress also adopted the Administration’s long-range program of technology-forcing for new industrial facilities, which was now a complementary element of a larger scheme. Beginning with the Clean Air Act of 1970, environmental protection

²Senate Subcommittee Hearings on S.780, Air Quality Act of 1967, 90th Cong., 766–77 (1967).

³J. Esposito & L. Silverman, *Vanishing Air: The Ralph Nader Study Group Report on Air Pollution* (1970).

⁴See Bonine, *The Evolution of “Technology-Forcing” in the Clean Air Act*, (BNA Env’tl. Rep. Monograph No. 21, 1975).

⁵See Ch 11.

⁶“Congress has served notice on the automobile industry that it expects development of a very low emission vehicle within the next five years—a feat that some automobile company executives claim to be impossible.” R. Ayres & R. McKenna, *Alternatives to the Internal Combustion Engine* v (1972).

⁷See, e.g., *Union Elec. Co. v. EPA*, 427 U.S. 246, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20570 (1976).

statutes all required that new sources of pollution, before they were built, would be required to adopt state-of-the-art pollution control technology.⁸

Congressional schedule-setting changed the character of the programs. Action-forcing schedules for existing sources of pollution would ensure prompt protection of public health. The longer range program required steady overall progress in the technology used in industry; every advance, as soon as it was demonstrated, would become an industry norm.⁹ This second program of long-range technology forcing was intended to guide industry into a path which would lead to the eventual elimination of all significant pollution.¹⁰

Action-forcing and technology-forcing have merged into a single, complex program. Short-term schedules ensure that the program has urgency, that public health is protected, and that pressure on existing sources of pollution is at least as sharp as the pressure applied to technology for new sources. The hopes for long-term progress continue to rest with the more leisurely development of new technology.

Technology-forcing programs, as they developed in the air and water pollution laws of the early 1970s, have been a feature of all environmental protection law since then. To the Administration's unforced "hand-in-hand" approach Congress continued to add action-forcing schedules; as in the hazardous waste laws,¹¹ the 1986 Amendments to the Safe Drinking Water Act,¹² and the 1990 Clean Air Act Amendments,¹³ where they again served to give the technology-forcing program urgency and bite.

Technology-forcing, in short, is a continuing experiment in national management, with goals and objectives to be met, and schedules for their attainment. Like other modern management systems, it is performance-based; the characteristic control method is a performance-based emission limit, described in the next subsection.

§ 3:4 Performance standards

The third component of most control strategies is a performance standard. A common example is an emission limit, contained in a facility permit. The emission limit states the amount or concentration of pollutant that may be released to the environment from a facility. The permit holder may use any control technology—with some exceptions discussed below—to achieve this performance.

There are three common methods of setting performance standards.

First, EPA may base them directly on environmental quality standards, by calculating the discharge which can be allowed without exceeding the environmental quality standards, and then translating this into an emission limit or some other performance standard. Controls based directly on environmental quality in this way

⁸See § 3:20.

⁹See Stewart, Regulation, Innovation and Administrative Law: A Conceptual Framework, 69 Calif. L. Rev. 1259 (1981). Stewart argues that such a scheme discourages innovation. See also Huber, The Old-New Division in Risk Regulation, 69 Va. L. Rev. 1025 (1983).

¹⁰See EPA v. California ex rel. State Water Resources Bd., 426 U.S. 200, 202–05, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20563, 20564–65 (1976); § 2:23.

¹¹See, e.g., RCRA § 3004(d) to (k), 42 U.S.C.A. § 6924(d) to (k)(staged ban on land disposal of hazardous wastes).

¹²See, e.g., Safe Drinking Water Act Amendments of 1986, Pub. L. No. 99-339, 100 Stat. 642 (1986). A decade later Congress relaxed some of these requirements when it adopted the Safe Drinking Water Act Amendments of 1996, Pub. L. No. 104-182, 110 Stat. 1613. The 1996 Amendments provide more flexibility to EPA to consider costs and benefits when setting standards. They also replace a requirement that EPA issue rules for twenty-five drinking water contaminants every three years with a mandate to decide whether to regulate at least five additional contaminants every five years.

¹³Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990).

are discussed in § 2:14, above. Such limits are set without explicit reference to cost or available technology, and may be “action-forcing” in the sense that they must be met on a fixed schedule, regardless of cost; but they are not part of the technology-forcing system EPA administers, except as they serve to protect minimum standards of public health and welfare while longer-range goals are being met.

A second type of performance standard is based on a balance between the benefits of an activity and the environmental damage it may do. The balance is usually struck at the point where the costs of control become greatly disproportionate to the benefits, given the available technology. For pesticides used on food crops, for instance, this balance is reflected in a tolerance set for pesticide residues in food.¹ Once the balance is struck and required levels of performance are determined, EPA works backward and sets an emission limit or other performance standard. This is necessarily a case-by-case process, and eschews uniform controls. It is technology-forcing only in the mild, hand-in-hand fashion. Except under the Toxic Substances Control Act (TSCA) and the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), it is rarely authorized explicitly.

The third type of performance standard is based on some benchmark performance—of the best plant in an industry, for example. Standards of this kind are called “technology based”; they can be technology-forcing when they require performance that cannot be achieved without some advance over usual practice. This is the preferred method of control under the five EPA statutes that regulate air, surface water, and groundwater pollution.

§ 3:5 Performance standards—“Technology-Based” control

Uniform national controls based on industrial benchmarks, the program of technology-forcing first sketched out by the Johnson¹ and Nixon² Administrations, were developed in the Clean Air and Clean Water Acts into a highly structured system of performance standards that was further elaborated in later statutes.

Two types of benchmarks are often used to set performance standards. The first is sometimes called “reasonably available” control technology, and the second, “best available” control technology, although each statutory program has its particular terms and variations.

The first category, which is now of diminishing importance, is usually applied only to “existing” sources of conventional pollutants. Existing sources may be required, for a time, to perform only as well as the best plants in their industry already do. This is a modest standard, tied to the upper levels of existing practice; it is a kind of standard of reasonable behavior, and provides a transition for existing sources of pollution into the new regulatory system.³

A higher standard is set for most hazardous waste management facilities and sources of toxic pollutants, and for all new sources of pollution. The benchmark for this level of control is often some variation of the best technology which has been demonstrated, and which will be available when required.⁴ This standard looks not to existing practice, but to demonstrations of what can be achieved by effort; it is a

[Section 3:4]

¹See Federal Food, Drug and Cosmetic Act § 408, 21 U.S.C.A. § 346a; § 18:4.

[Section 3:5]

¹Senate Subcommittee Hearings on S.780, Air Quality Act of 1967, 90th Cong., 766–77 (1967).

²See Message of the President of the United States, Message on the Environment, H.R. Doc. No. 91-225 (1970).

³See § 3:7.

⁴See § 3:7.

standard that in time grows steadily more stringent, forcing technology into new paths.⁵

Many existing sources of conventional pollutants, initially required only to install reasonably available controls, eventually are required to upgrade their performance to standards based on the best available technology.⁶

Once benchmarks of either type are chosen, EPA sets enforceable standards which reflect their performance, and writes these standards, with schedules for compliance, into enforceable permits.

Performance standards based on benchmark technology are sometimes more briefly called “technology-based,” which is a convenient term as long as it is not misunderstood. Many factors may go into the choice of the benchmark, including cost and availability, and the financial condition of the industrial category as a whole. The choice of technology is the result, and not the basis, of a decision on the performance which should be required.⁷ Furthermore, EPA regulations do not ordinarily require any particular technology to be *used* (although there are marked exceptions in the hazardous waste program.)⁸ Permit holders are usually free to find the most efficient way of meeting performance standards.

Practice often departs from theory. Sometimes, the apparent freedom to choose a method of meeting performance standards is no more than a form, and the control technology is effectively prescribed. In a much-studied instance, large new coal-burning electric power plants were effectively required to employ stack-gas scrubbers for sulfur dioxide, although the Clean Air Act otherwise calls for performance-based standards wherever possible.⁹

In the hazardous waste laws, extensively revised after the Reagan Administration’s ill-starred reform efforts, the statutes often prescribe the means by which performance standards are to be met.¹⁰ And performance-based standards are not always possible; when a building is demolished, for instance, the contractor cannot measure emissions of asbestos dust.¹¹

In situations like these, the statutes abandon the performance principle, and authorize or require specified practices or design standards.¹²

§ 3:6 Performance standards—Emission limits: “dilution is not the solution”

A common form of performance standard is the “emission limit,” as it is called in the Clean Air Act, or “effluent limitation” in the Clean Water Act, which specifies an allowable discharge of a designated pollutant. The Clean Air and Clean Water Acts

⁵See § 3:12.

⁶See § 3:9.

⁷See, e.g., § 12:143. See generally B. Ackerman & W. Hassler, *Clean Coal/Dirty Air: or How the Clean Air Act Became a Multibillion-Dollar Bail-Out for High-Sulfur Coal Producers and What Should Be Done about It* (1981).

⁸See, e.g., RCRA § 3004(o)(1)(A), 42 U.S.C.A. § 6924(o)(1)(A); 40 C.F.R. § 264.301(c) (new landfills must have two liners and a leachate collection system). Even here, however, landfill owner/operators may obtain approval of alternate systems with equivalent performance. RCRA § 3004(o)(2), 42 U.S.C.A. § 6924(o)(2).

⁹See B. Ackerman & W. Hassler, *Clean Coal/Dirty Air: or How the Clean Air Act Became a Multibillion-Dollar Bail-Out for High-Sulfur Coal Producers and What Should Be Done about It* (1981).

¹⁰See, e.g., RCRA § 3004(o), 42 U.S.C.A. § 6924(o) (minimum technological standards).

¹¹See *Adamo Wrecking Co. v. United States*, 434 U.S. 735, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20171 (1978); Clean Air Act § 111(h), 42 U.S.C.A. § 7411(h).

¹²Clean Air Act § 111(h), 42 U.S.C.A. § 7411(h).

rely heavily on emission limits and effluent limitations applied to major discharges,¹ and this pervasive control method is a point of reference for later statutes.² A few words about emission limits (to use just one term) therefore may be helpful.

Emission limits are usually written as allowable *rates* of release—amounts of pollutant per unit of time—rather than as concentrations—amounts of pollutant per unit of dilution. This simple device prevents dischargers from meeting their performance standards by diluting their discharges.

Only the Clean Air Act expressly provides that dilution is not an acceptable form of control; and even that prohibition is sharply limited. What now amounts to a general rule against dilution as a method of control has grown up within the administrative process; like some other principles of environmental protection law, it is no less well established for lacking explicit statutory authority.³

In many cases, the rule against dilution has a firm environmental basis. Discharges from sewage treatment plants, to take an example, may burden small

[Section 3:6]

¹See, e.g., Clean Air Act §§ 110(a)(2)(B), 110(a)(2)(D), 42 U.S.C.A. §§ 7410(a)(2)(B), 110(a)(2)(D) (state plans must contain emission limits for existing and new stationary sources); Clean Air Act § 111(a)(1)(A)(i), 42 U.S.C.A. § 7411(a)(1)(A)(i) (new source performance standards to include emission limitations); Clean Water Act §§ 301 to 302, 33 U.S.C.A. §§ 1311 to 1312 (effluent limitations for point sources).

²Hazardous waste land treatment and disposal facilities are subject to a general nondegradation standard of environmental quality, which has been translated into a complicated set of overlapping design and performance standards, some of which can be understood as stringent emission limits similar to the emission limits for toxic pollutants set in the Clean Air and Water Acts. Land treatment facilities, for instance, must operate within the parameters of a “demonstration” that wastes will not be released from the treatment facility. See 40 C.F.R. §§ 264.272(a)–.273(a).

New land disposal facilities must have two liners, an upper liner which is usually a plastic membrane that may tear or leak, and a bottom liner of compacted clay or other natural material, as a last line of resistance. The performance of bottom liners is specified as a maximum “permeability,” which is defined as the rate at which liquids pass through the liner, and is in effect an emission limit for the facility, when other safeguards fail. The thickness of the bottom liner prevents discharges during the operating life of the facility. See RCRA § 3004(o)(5)(B), 42 U.S.C.A. § 6924(o)(5)(B). New land disposal facilities must have active leachate collection systems to prevent emissions even if the liners are faulty. See 40 C.F.R. § 264.99. The facilities must also have leak-detection systems, RCRA § 3004(o)(1)(A), 42 U.S.C.A. § 6924(o)(1)(A), and overlaid on these standards is a separate set of criteria for groundwater protection which must be met, if other systems fail and there is some detectable contamination of groundwater. See RCRA § 3005(d) to (m), 42 U.S.C.A. § 6925(d) to (m). Finally, apparently on the theory that none of the performance and design standards can be reliably met, there are separate controls on the wastes which can be placed in land disposal facilities, for which there must be a demonstration, “to a reasonable degree of certainty,” that there will be “no migration” from the disposal facility, RCRA § 3004(d) to (g), 42 U.S.C.A. § 6924(d) to (g). It would be rash to generalize about these multiple layers of belts and suspenders, but it might be helpful to think of them as separate emission limits, each of which allows no significant discharges, and each of which must operate when all others fail.

(If all fail, of course, the owner or operator of the facility may be required to take corrective action—containing or cleaning up the spill; and if the owner/operators are not available, generators who sent wastes to the facility and other responsible parties may be liable for the costs of cleanup. See § 14:83.)

Underground oil and chemical storage tanks regulated under RCRA are subject to performance standards that similarly attempt to limit leaks, and to prescribe leak detection and response standards that are functionally equivalent to emission limits. See RCRA §§ 9003 to 9004, 42 U.S.C.A. §§ 6991b to 6991c; § 14:72.

³Like the nondegradation principle, this is a part of EPA lore and is only partly codified. See, e.g., Clean Air Act § 123, 42 U.S.C.A. § 7423 (prohibiting “dispersion techniques”); §§ 13:62, 13:63 (emission limits under Clean Water Act are usually written to prohibit dilution as a method of control); 40 C.F.R. § 261.3(b)(2) (certain listed hazardous wastes remain subject to regulation regardless of dilution). Dilution is not accepted as a method of treatment that would exempt hazardous waste from otherwise applicable restrictions on land disposal. See 51 Fed. Reg. 40572, 40592 (1986) (citing legislative history).

bodies of water, where the total quantity of nutrients has an effect on aquatic life. In air pollution the total quantity of precursors, rather than their concentration, may be the critical factor in the accumulative effects of acid deposition.

There are exceptions to the rule, when pollutants are innocuous after dilution.⁴ But even where there is no firm evidence that the total mass of pollutants has any effect in itself, or where pollutants may be rapidly degraded after release, the principle is usually followed.⁵ There is even a common saying, “dilution is not the solution to pollution.” This general principle sometimes requires extraordinary efforts to clean up or dispose of very dilute pollutant or waste streams.

The more general reasons for the rule seem to be, first, to maintain an equitable distribution of controls among the states—those with extensive resources available for diluting effluents or wastes should not become pollution havens; and second, to preserve the integrity of the technology-forcing system. If dilution were available as a control method, there would be little inducement to limit discharges, until the whole environment had been saturated to reduce wastes or to capacity. The rule against dilution is therefore an important, if rarely mentioned, tool in the program to eliminate all significant pollution.

III. “EXISTING” AND NEW SOURCES OF POLLUTION

§ 3:7 In general

Environmental protection law is new, and requires many changes to be made in settled industries. Much of the law is therefore devoted to the transition from an old order to a new one.

This transition is marked by a pervasive distinction between existing and new sources of pollution, existing and new facilities for hazardous waste management, existing and new chemical substances and pesticides.

Existing industrial plants, of course, represent existing jobs and considerable investments, and have only limited flexibility to change. Planned new enterprises, however, can be based on fundamentally new technology, built in from the outset, without disrupting settled arrangements. With sufficient ingenuity, the conventional wisdom goes, clean new factories can be built to provide the same economic product that the older, polluting technology supplied.¹

The separation of existing and new is common and natural enough; it first appeared in distinctive form in the Clean Air Act of 1970. Until 1970, federal law rested on state plans, which imposed controls only where thresholds of damage had

⁴When wastes are hazardous solely because of a characteristic that they lose when diluted—acidity or reactivity would be examples—they cease to be regulated when they lose the characteristic. 40 C.F.R. § 261.3(a)(2)(iii). Discharges of acid, oil and grease, and heat to surface waters are similarly regulated on the basis of concentration, presumably because these pollutants have no effect when diluted, and are very unlikely to be reconcentrated once released to the environment.

⁵The Clean Air Act prohibition against dispersion techniques, for instance, on its face applies to all regulated pollutants, even those like carbon monoxide, which degrade rapidly in the environment, although it has not been often applied to such pollutants. EPA generally tried to prohibit dumping and discharge of nutrient materials into the ocean until partially overruled by a court, *New York City v. EPA*, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 20763 (S.D.N.Y. 1981), modified, 543 F. Supp. 1084, 12 Env'tl. L. Rep. (Env'tl. L. Inst.) 21003 (S.D.N.Y. 1981), and by Congress, *see* Clean Water Act § 301(h), 33 U.S.C.A. § 1311(h) (exemption for ocean discharges of publicly owned sewage treatment works available on some conditions).

[Section 3:7]

¹*See* § 3:2; *cf.* § 10:53 (technological optimism is the basis of NEPA substantive policies). Of course, there are critics who say that only a new social order can produce a new kind of productive technology, but even these critics share the optimism as to what technology can accomplish, given the right social conditions. *See, e.g.,* B. Commoner, *The Closing Circle* 287-92 (1971).

already been passed.² These environmental-quality based programs were elaborate and unwieldy, and slow to show progress. Successive Administrations proposed uniform national performance standards for major sources of pollution³ to ensure more rapid progress. After a decade of increasing frustration with the states' efforts to control their industries, Congress in 1970 finally accepted a compromise: For existing sources of air pollution, the states could continue to tailor controls to each site, requiring controls only where thresholds of damaging pollution had already been passed. For planned major new sources of pollution, however, Congress authorized uniform national performance standards.⁴

In this grand compromise, existing sources of pollution were put under considerable pressure, but settled arrangements were protected as much as public health would allow. For planned new facilities, however, there were no settled arrangements to protect, no complex demonstrations of damage and causality to overcome; EPA was directed to set performance standards for selected categories of new facilities, applied uniformly across the country, to drive technology in a new direction. This was technology-forcing: "The law had finally cut through the bewildering complexities to promise our children a new world in which spanking new plants would churn out the old consumer goods in harmony with nature."⁵

This grand compromise survived in its initial form for only a few years. Congress grew impatient, and, beginning with the Clean Water Act of 1972, increased the pressure on existing sources of pollution, by requiring performance-based controls for their discharges.⁶

Industrial growth slowed in the 1970s, and new sources were fewer and less important than had been expected; by the 1980s it was plain that technology-forcing would be slower and more difficult than had appeared to the bright hopes of ten years before. Attention turned to end-of-the-pipe controls for pollutants and waste that were equally suitable for existing and new sources and generators.

But the distinction between existing sources and new sources was fundamental. The Clean Air Act drew the distinction most sharply, but all later statutes (except Superfund) followed to some degree.⁷

The overall pattern of the statutes as they emerged from the 1970s was this:

²See Jorling, *The Federal Law of Pollution Control*, in *Federal Environmental Law* 1058, 1062 (E. Dolgin & T. Guilbert eds., 1974).

³See §§ 3:2, 3:3.

⁴See Clean Air Act § 111, 42 U.S.C.A. § 7411; § 11:2.

⁵B. Ackerman & W. Hassler, *Clean Coal/Dirty Air: or How the Clean Air Act Became a Multibillion-Dollar Bail-Out for High-Sulfur Coal Producers and What Should Be Done about It* 12 (1981). Ackerman and Hassler are speaking sarcastically, but accurately. They go on to say, "By giving statutory prominence to technological means of production in new plants, Section 111 [of the Clean Air Act] would disort policy perceptions for years to come." *Id.*

⁶See Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, § 2, 86 Stat. 816 (1972); Ch 13.

⁷See Clean Air Act § 111, 42 U.S.C.A. § 7411 (new source performance standards); Clean Air Act § 165, 42 U.S.C.A. § 7465 (permits for new sources in attainment areas); Clean Air Act § 173, 42 U.S.C.A. § 7503 (permits for new sources where air quality standards have not been achieved). Later statutes carried the distinction forward in numerous ways; the most important are the Clean Water Act § 306, 33 U.S.C.A. § 1316 (new source performance standards, and RCRA § 3004(a), 42 U.S.C.A. § 6924(a) (new and existing hazardous waste management facilities distinguished). TSCA's overall purposes are divided among information gathering, regulation of existing risks, and prevention of risks from new products. See § 16:1. FIFRA grandfathers existing pesticides, but only for a time; eventually all must be reregistered on a schedule expedited by amendments adopted in 1996. FIFRA § 4, 7 U.S.C.A. § 136a-1. Under Safe Drinking Water Act regulations, some existing injection wells are grandfathered, and some new injection wells for waste disposal are severely restricted or banned. See 40 C.F.R. pt. 144, subpts. B, C. The ocean dumping statute, the MPRSA, does not explicitly distinguish between old and new dumping practices, but the statute cut off most existing dumping on December

Environmental protection standards were imposed on new sources from the day construction began. As to existing sources, however, controls were slowly phased in over a prolonged grandfathering period, and installed in increments. Eventually, however, most existing sources were brought up to standards comparable in cost, if not always in performance, to standards for new sources. Under the Clean Air Act—where new source controls differ most widely from controls on existing sources—EPA uses econometric models to predict the impact of new source performance standards, in an effort to forestall self-defeating stringency.⁸

New source standards were immediately effective, but controls for existing sources were phased in over several years, and so there was a period—more than a decade—when new sources were disproportionately burdened. Some large new projects may have been delayed or cancelled for this reason. Commentators argued that environmental protection law—along with other health and safety regulation—had contributed to the decline in industrial productivity.⁹

It is difficult to see how the transition to a new system of control could have been managed differently, however. It was important to keep from building existing problems into another generation of new industrial plants. Yet it was not possible to immediately bring existing facilities up to the same high standards. The only real possibility for rapid progress was the one chosen.

As described in the following sections, this transition is largely complete. Standards for new sources and products will continue to tighten, as they are reviewed in the light of technological advance, as will standards for existing sources. Somewhat better performance should be steadily required of new sources, to reflect the greater ease with which controls can be installed in new plants.¹⁰

New plants and new products, in short, continue to carry the hopes of technology-forcing as a means of creating a fundamentally new industrial technology, and of continually reducing the production of pollutants and waste.

But the cost and the burden of new controls should no longer be much greater for new than for older facilities; there are a few lingering exceptions, which seem to

31, 1981, and new dumping after that time was required to meet very stringent requirements. MPRSA § 101(a). Early noise regulation for aircraft, which preceded EPA, contained performance standards for new aircraft alone, and grandfathered existing aircraft. *See* Greenwald, *Law of Noise Pollution* 7-8 (BNA Env't Rep. Monograph No. 2, May 1, 1970). In the Noise Control Act of 1972, still in effect but no longer funded, EPA was directed to study the "adequacy of noise emission standards on new and existing aircraft, together with recommendations on the retrofitting and phaseout of existing aircraft." Noise Control Act § 7(a), 42 U.S.C.A. § 4906.

⁸Under the cost minimization model [used by EPA to evaluate new source performance standards—NSPS—under the Clean Air Act] the higher the costs of pollution controls required by the NSPS, the more utilities will delay the retirement of older plants which do not have to comply with the NSPS, and the more utilities will be discouraged from building and operating new plants which must meet the NSPS." Costs are accordingly minimized to prevent this from occurring. *Sierra Club v. Costle*, 657 F.2d 298, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 20455 (D.C. Cir. 1981).

See TSCA § 2(b)(3), 15 U.S.C.A. § 2601(b)(3) ("[EPA's] authority over chemical substances and mixtures should be exercised in such a manner as not to impede unduly or create unnecessary technological barriers to innovation.").

⁹*See, e.g.,* Huber, *The Old-New Division in Risk Regulation*, 69 Va. L. Rev. 1025 (1983); Stewart, *Regulation, Innovation, and Administrative Law: A Conceptual Framework*, 69 Calif. L. Rev. 1259 (1981). Even in the 1970s, however, substantive rules did not discriminate against new sources. Clean Water Act NSPS for many industries were less stringent than "best available technology" or BAT (issued prospectively) for existing facilities. Since new sources were protected from changes for 10 years, they often had a cost advantage. *See* 1 General Counsel Opinions 395 (1979); § 3:8.

¹⁰[T]he most desirable time to determine the health and environmental effects of a substance, and to take action to protect against any potential adverse effects, occurs before commercial production begins. Not only is human and environmental harm avoided or alleviated, but the cost of any regulatory action, in terms of jobs and capital investment is minimized.

H.R. Rep. No. 94-1679, at 65 (1976) (conference report on TSCA).

have little intrinsic justification. Under RCRA, existing hazardous waste land-disposal facilities were not subject to the minimum technology-based requirements imposed on new facilities because of the near impossibility of retrofitting landfills with bottom liners. Most land disposal of untreated waste is to be ended as soon as possible, in any case, and few if any new facilities are expected to be built. Manufacturers of new chemical substances must submit prior notices to EPA before manufacturing, but they may proceed without delay unless EPA takes some regulatory action; this program is considered something of a model by industry.

For the future, of course, new source standards will continue to tighten, as we note in § 3:12 below. Whether EPA will succeed in keeping the new standards at a high enough level to encourage innovation, but not so high a level as to discourage innovation, remains to be seen.

So much for the theoretical scheme. In practice, there is a substantial added burden on new products and facilities, but it is procedural, and has nothing to do with substantive requirements. Existing plants generally continue in operation while permit applications are processed. But construction of new facilities, and modernization of many existing facilities, must wait until a permit has been issued. The burden of regulatory delay and uncertainty therefore falls much more heavily on a new plant; a large facility often needs several permits, each of which has its own single-purpose procedure. And in each procedure, EPA generally requires opportunities for public participation. This, of course, allows neighbors who oppose a new facility to delay its construction.

Prior review of new facilities and products is discussed at more length in § 3:17, below. We will note here only that the delays and uncertainties caused by new source review are substantial, are only sometimes justified, and may play a role in discouraging exactly the innovation which the technology-forcing program—the source of the requirement—seeks.

IV. CONTROLS FOR “EXISTING” SOURCES AND FACILITIES

§ 3:8 Introduction: Grandfathering

EPA’s major statutes differentiate between “existing” and new sources of pollution, hazardous waste management facilities, chemical substances and pesticides.¹ In this section we will discuss the rules which apply to “existing” sources and facilities. “Existing” is in quotation marks because it is a jargon term, customarily used to describe everything which is not “new,” itself a term of art.

“Existing” sources and facilities include those already in operation, but also some

[Section 3:8]

¹The Clean Air and Clean Water Acts have special provisions for “new” sources of pollution, *see* § 3:7; all other sources are “existing,” and for a time are subject to less restrictive controls. The underground injection well regulations issued under the Safe Drinking Water Act carry forward these distinctions to some degree and grandfather some existing wells. *See* § 3:7. RCRA expressly authorizes a distinction between “existing” and “new” hazardous waste management facilities, RCRA § 3004(a), 42 U.S.C.A. § 6924(a), and follows the Clean Air Act pattern by requiring technology-based standards for new hazardous waste land-disposal facilities, RCRA § 3004(o), 42 U.S.C.A. § 6924(o), and underground storage tanks, RCRA § 9003(e), 42 U.S.C.A. § 6991b. Existing toxic chemical and pesticide products are grandfathered under TSCA and FIFRA, although EPA must eventually reregister all existing pesticide products, FIFRA § 4, 7 U.S.C.A. § 136a-1, and may regulate unreasonable hazards from existing toxic substances. TSCA § 6, 15 U.S.C.A. § 2605.

Superfund, *see* § 14:83, which only applies after the fact to releases that must be cleaned up, of course has no distinction between new and existing sources. Moreover, it applies retroactive liability to previously legal waste disposal practices, exactly the reverse of the usual grandfathering for existing practices. This exception tests the rule, but nonetheless seems consistent with it. Past practices have no special sanctity as such. The purpose of grandfathering is generally to protect settled arrangements, and there is no continuing investment in past dumping.

which have not yet been built. Under the Clean Air Act, a “new” source comes into existence when construction commences; a source under construction, but not yet built on the date when new-source standards became applicable, may be an existing source.² A source comes into existence when substantial commitments are made; the emphasis of all the statutes is on settled arrangements, rather than physical facilities.

For existing sources of pollution, the statutes allow time for transition from these settled arrangements, and provide some variances to ensure fair—or at least reasonable—treatment of sources in different circumstances.

The transition time is often short: The Clean Air Act of 1970, for instance, gave the states about three years to carry out their plans for bringing air pollution within federal health standards;³ the Clean Water Act Amendments of 1972 allowed five years for dischargers to employ minimum controls;⁴ and RCRA made standards for hazardous waste management facilities effective six months after promulgation.⁵ Statutes regulating toxic chemicals and pesticides, however, allowed existing products to remain on the market without additional control, unless and until EPA had reviewed them.⁶

The schedules in the statutes at first were so short that it was easy to overlook that they did establish a transition period, however brief. The Clean Air Act’s deadlines were occasionally called “technology-forcing,” because the statute required compliance regardless of cost.⁷ But, it would be more accurate to call them “action-forcing” or “compliance-forcing,” since they did not allow enough time for any real development of technology for retrofitting existing sources.⁸ In these early years the schedules for retrofitting seemed only to put added pressure on older facilities to make way for new ones with more efficient production techniques and controls.⁹

A deadline is only one side of a schedule; the other is the time allowed for compliance. As deadlines were missed, schedules were extended,¹⁰ and the purpose of the time allowed for compliance became more apparent. The more time that was

²“New sources” are those to which no substantial commitments have yet been made on the date in question. See 40 C.F.R. § 51.18(j)(1)(xvi). In common usage “existing sources” are sources which are not new, and therefore the term includes some facilities which have not yet been built, but for which substantial commitments have been made, such as entering into an enforceable contract which cannot be breached without significant penalty, or by making substantial commitments to a continuous course of on-site construction. *Id.*

³The 1970 Amendments allowed about two years for EPA to set standards and for the states to prepare and submit plans to meet them; the plans were required to show attainment of standards by 1975. See *Union Elec. Co. v. EPA*, 427 U.S. 246, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20570 (1976).

⁴See Clean Water Act § 301(b)(1), 33 U.S.C.A. § 1311(b)(1).

⁵See RCRA § 3010(b), 42 U.S.C.A. § 6930(b).

⁶FIFRA, however, requires EPA to reregister all existing pesticide products under the more stringent health and safety provisions of its 1972 and 1996 amendments. FIFRA § 4, 7 U.S.C.A. § 136a-1.

⁷See *Union Elec. Co. v. EPA*, 427 U.S. 246, 258–59, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20570, 20573 (1976).

⁸The Clean Air Act allowed about five years for attainment of air quality standards, of which two years would be consumed by setting of standards and preparation and approval of state implementation plans. By contrast, construction time for a major new power station was then more than five years.

⁹See *Union Elec. Co. v. EPA*, 427 U.S. 246, 259, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20570, 20573 (1976); see also *id.* at 269–70, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) at 20576 (Powell, J., concurring).

¹⁰The original Clean Air Act deadline for meeting most health-based “primary” air quality standards was 1975; the latest extension for transportation-related pollutants runs to the end of 2010, thirty-five years later. The Clean Water Act still states a goal of ending all discharges of pollution to surface waters by 1985, Clean Water Act § 101(a)(1), 33 U.S.C.A. § 1251(a)(1), but many interim deadlines were extended to dates ranging from 1983 to 1987, Clean Water Act § 301(b)(2), 33 U.S.C.A.

allowed for compliance, the less disruption there was for settled arrangements.

Even after existing facilities were brought into the new regulatory system, controls were imposed in increments, providing a further period of transition.

First, existing fixed sources had to ensure that their emissions did not violate health-based environmental quality standards, once the initial transition period was over. (These threshold standards of environmental quality are discussed in the preceding chapter.) This, as one might expect, was a consistent requirement in all the statutes.¹¹ The minimum controls required to protect health-based standards were sometimes burdensome, but EPA had designated few toxic pollutants for regulation, and there were relatively few sources large enough to violate standards for conventional pollutants on their own.¹² When environmental quality standards were limiting, it proved extremely difficult to base controls directly on them.

Environmental protection statutes, beginning with the Federal Water Pollution Control Act Amendments of 1972, therefore required a system of uniform controls. These began with a general standard of reasonable behavior for existing facilities, regardless of whether emissions exceeded threshold standards of environmental quality.¹³ Existing sources of pollution were held to a standard of reasonable cleanliness, which weighed the costs and availability of controls, but generally assumed, *a priori*, that the environment required protection without proof of harm. This first layer of control ensured some progress toward environmental quality goals, where they had not been met; reasonably available controls also were a gradual first step in a broad, highly structured technology-forcing program.

This layer of reasonably available controls is generally in place for conventional industrial air and water pollutants, public drinking water supplies, municipal sewage, and nonhazardous wastes, see § 3:9 below, although there are continuing enforcement problems at a few major facilities in each category.

The third increment of control was only just getting underway in 1986; this was a layer of more strongly technology- forcing controls for most pollutants, but with special emphasis on toxic discharges and hazardous wastes.¹⁴ These controls bring existing sources up to levels comparable or identical to those required of new sources.

§ 1311(b)(2), and the ultimate goal remains as an aspiration for the indefinite future.

¹¹See, e.g., Clean Air Act § 110(a)(2)(B), 42 U.S.C.A. § 7410(a)(2)(B); Clean Water Act § 302(a), 33 U.S.C.A. § 1312(a). Under RCRA, existing land disposal facilities must assess groundwater quality while their permit applications are pending, 40 C.F.R. § 265.93, and may be required to remedy any imminent hazard which is found. Once a permit is issued the existing facility must comply with groundwater protection standards. 40 C.F.R. § 264.92. Standards for injection wells under the Safe Drinking Water Act are similar, and generally prohibit any significant deterioration of underground drinking water supplies. See 40 C.F.R. pt. 146. Prior to 1982, some ocean dumping of sewage sludge and industrial waste which did not “unreasonably degrade” the ocean environment was allowed to continue, MPRSA § 102, 42 U.S.C.A. § 1412; dumping of dredged materials is still subject to this standard, MPRSA § 103, 42 U.S.C.A. § 1413. Existing toxic chemical products and pesticides may remain on the market so long as EPA does not find they pose an unreasonable risk.

¹²These few large sources are primarily large power stations, steel mills, and auto manufacturing plants. (Existing smelters, major air pollution sources in the West, were allowed to install RACT controls rather than comply with air quality standard based emission limits. Clean Air Act § 119, 42 U.S.C.A. § 7419.) They were, however, the focus of EPA enforcement efforts during the 1970s. Controls based directly on environmental quality standards are discussed in more detail in §§ 2:16, 2:17.

¹³The Federal Water Pollution Control Act Amendments of 1972 extended this requirement to all existing dischargers. See Clean Water Act § 301(b)(1), 33 U.S.C.A. § 1311(b)(1). The Clean Air Act followed suit in 1977, but only for those major sources in areas where air quality does not meet primary standards. These sources must employ reasonably available control technology, but only with respect to the pollutants which exceed the standards. See Clean Air Act § 172(b)(2), 42 U.S.C.A. § 7502(b)(2).

¹⁴See, e.g., Clean Water Act § 301(b)(2), 33 U.S.C.A. § 1311(b)(2); § 3:10. RCRA contains a series of progressively tightening restrictions on land disposal of hazardous wastes, and further required EPA to revise its standards for all existing as well as new hazardous waste management facilities to reflect

The term of art for this layer of control is “BAT”—“best available technology.”

Existing plants may have a final protection, even at this stage, which differentiates them from new sources: variances which may be used to extend schedules, to excuse compliance or to adapt nationally applicable rules to local conditions. The Supreme Court has held that strict, otherwise uniform rules must provide some variance procedure for existing sources, but not for new sources.¹⁵

Controls for toxic chemicals and pesticides are set case by case, according to very general criteria, and there accordingly are no uniform standards applied to categories of products, as there are in pollution control and hazardous waste management. However, these statutes differentiate in their own way between existing and new products. Existing chemical substances and pesticides were allowed to remain on the market without additional controls under TSCA and FIFRA, at least for a time; under FIFRA, this provided for a lengthy grandfathering period until Congress required EPA to expedite the reregistration of existing products when it amended the statute in 1996.

The whole system of controls for existing sources of pollution is an immense grandfathering system, filled with exceptions and special provisions. Its purpose is to assist the birth of a new industrial order, with least disruption to the old.

§ 3:9 Reasonably available controls

As we saw in the last chapter, environmental protection began with a system of controls based directly on environmental quality. Beginning in the 1970s, a second layer of controls was added, “reasonably available controls”; these controls were imposed uniformly, even where no damage to environmental quality was attributed to the source. A third round of strongly technology-forcing controls based on the “best available” technology followed. For many dischargers, this has been a progression of increasingly stringent controls.

In the 1980s, programs for control of hazardous wastes and toxic pollutants tended to skip over the intermediate, “reasonably available” control step. Environmental quality standards were set at very stringent *de minimis* levels for toxic substances and hazardous wastes, and any transition between these and still more stringent standards, designed to end most toxic emissions and hazardous waste land disposal, was brief, or omitted entirely. See § 2:23, above.

TSCA and FIFRA, the statutes regulating the manufacture of toxic substances and pesticides, as already noted, called for case-by-case controls, and so of course there were no categorical controls comparable to reasonably available control technology or best available control technology.

By the 1980s, therefore, reasonably available controls were required principally for existing sources of conventional pollutants and nonhazardous wastes. Under the Federal Water Pollution Control Act Amendments of 1972,¹ existing “point sources” of conventional pollutants were required to install at least a minimum level of reasonably available controls, in addition to whatever requirements the states imposed to protect water quality standards, by July 1, 1977.² In 1977, the Clean Air Act was

advancing control technology. RCRA § 3005(o), 42 U.S.C.A. § 6925(o). Under TSCA and FIFRA, however, toxic chemical and pesticide products, once they have passed muster, are not subject to additional controls, unless needed to alleviate unreasonable risks. See § 3:10.

¹⁵See § 3:11.

[Section 3:9]

¹Pub. L. No. 92-500, 86 Stat. 816 (1972).

²See Clean Water Act § 301(b)(1)(A), (B), 33 U.S.C.A. § 1311(b)(1)(A), (B).

amended,³ and a similar requirement of “reasonably available control technology” was extended to major existing sources of conventional pollutants—those for which national air quality standards had been established—in areas where the states had failed to achieve the health-based air quality standards.⁴ RCRA imposed a similar round of modest controls on nonhazardous waste disposal facilities.⁵ Safe Drinking Water Act “interim” regulations were similar.⁶

Under the Clean Air and Clean Water Acts, benchmarks for this round of controls are explicitly provided. Under the Clean Water Act, the benchmark for industrial sources of conventional pollutants was the “best practicable control technology currently available.”⁷ For publicly owned sewage treatment works, the benchmark was “secondary treatment,” already widely in use.⁸ Under the Clean Air Act, the benchmark was “reasonably available control technology,”⁹ the term we have been using for the entire class.

Under all of these standards, existing sources must perform at least as well as the best plants in their industry.¹⁰ Under the Clean Air Act, performance standards may be site-specific,¹¹ but under the Clean Water Act, EPA set performance standards uniformly across the country.¹²

EPA weighs costs before imposing transitional controls for existing sources, but environmental values predominate, unless costs are greatly disproportionate to the benefits of control.¹³

Although mildly technology-forcing, reasonably available controls set a standard of reasonable behavior, usually drawn from existing practice; they are what a civilized facility is expected to do, even without proof of harm.

§ 3:10 Best available controls

EPA gradually updates most of the controls imposed on existing sources and

³Clean Water Act § 301(a)(1)(A)(i), 33 U.S.C.A. § 1311(a)(1)(A)(i).

⁴See Clean Air Act Amendments of 1977, Pub. L. No. 95-95, *adding* Clean Air Act § 172(b)(3), 42 U.S.C.A. § 7502(b)(3).

⁵See RCRA § 4004, 42 U.S.C.A. § 6944. RCRA also authorized controls for existing underground storage tanks, which may be similar. See RCRA § 9003, 42 U.S.C.A. § 6991b.

⁶See Safe Drinking Water Act § 1411(a), 42 U.S.C.A. § 300g-1.

⁷See Clean Water Act § 301(b)(1)(A), 33 U.S.C.A. § 1311(b)(1)(A).

⁸Clean Water Act § 301(b)(1)(B), 42 U.S.C.A. § 1311(b)(1)(B).

⁹The Clean Air Act requires emission limits based on “reasonably available control technology” (RACT) for existing sources in areas where air quality standards had not been attained. See Clean Air Act § 172(c)(1), 42 U.S.C.A. § 7502(c)(1); 40 C.F.R. pt. 51, app. B.

¹⁰Under the Clean Water Act, the BPT standard is the “average of the best existing performance,” and has its primary impact on “the most pollution-prone segment of the industry.” *EPA v. National Crushed Stone Ass’n*, 449 U.S. 64, 76, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20924, 20927 (1980); 39 Fed. Reg. 6580 (1974).

Under the Clean Air Act, the states determine what is “reasonable available control technology,” and their determinations are not reviewable in federal courts. *Union Elec. Co. v. EPA*, 427 U.S. 246, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20570 (1976); *National Steel Corp. v. Gorsuch*, 700 F.2d 314, 325, 13 Env’tl. L. Rep. (Env’tl. L. Inst.) 20295 (6th Cir. 1983).

See *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1061, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20284, 20306–07 (D.C. Cir. 1978) (BPT may exceed all existing industry practice, “when present practices are uniformly inadequate”).

¹¹See *National Steel Corp. v. Gorsuch*, 700 F.2d 314, 322–23, 13 Env’tl. L. Rep. (Env’tl. L. Inst.) 20295, 20298–99 (6th Cir. 1983).

¹²See *E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 7 Env’tl. L. Rep. (Env’tl. L. Inst.) 20191 (1977) (Clean Water Act): RCRA § 3005(a), 42 U.S.C.A. § 6925(a).

¹³*Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1061, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20284, 20306–07 (D.C. Cir. 1978).

chemical products. One reason is the failure of earlier expectations that new sources would rapidly replace older and more polluting industrial facilities. Such progress, which might have been relatively painless, has not occurred. The great transformations that were hoped for, from new energy sources, new auto power plants, and biotechnology, have been slow in coming. The focus has shifted for a time, therefore, from fostering new technology in future facilities to forcing much more stringent controls in existing plants.

Ocean dumping of industrial wastes and sewage sludge was to end by December 31, 1981, except for dumping of materials that would not significantly degrade the ocean.¹ Public drinking water supplies were subject to expanded, more stringent, final regulations.²

On July 1, 1983, all existing dischargers of water pollution were to be subject to a second round of more stringent controls based on the “best” technology for controlling conventional and toxic pollutants (these rules were completed by 1986).³ Hazardous waste management permits for existing facilities were further tightened by Congress in 1984, and both the permits and underlying standards must be reviewed periodically by EPA.⁴ Most land disposal of hazardous wastes now being carried out must be ended, or the waste subjected to the best available treatment before disposal.⁵ The Toxic Substances Control Act provides a range of measures for EPA to use, and while there is no formal program of increasing control, the few existing chemical products that have been designated for regulation under this statute often have been subject to gradually tightening control.⁶ Pesticides with existing registrations must be “reregistered,” and their label requirements brought up to modern standards.⁷

Superfund, under which EPA cleans up abandoned waste dumps, is also a “retrofitting” statute, in a way; many companies must go back and clean up—or pay for EPA’s cleanup—of waste disposal practices that may have been entirely proper at the time.⁸

In 1990, Congress amended the Clean Air Act to require sources of 189 listed toxic air pollutants to employ the maximum achievable control technology.⁹ It also mandated sharp cutbacks in sulfur dioxide emissions. EPA has periodically tightened existing controls for conventional pollutants. Air quality standards for ozone and particulate matter were tightened in 1997 and the states will be obliged to impose a new round of control measures.

The near-universal pattern, therefore, is a second round of controls to ensure fur-

[Section 3:10]

¹See *City of New York v. EPA*, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 20763 (S.D.N.Y.), modified, 543 F. Supp. 1084, 12 Env'tl. L. Rep. (Env'tl. L. Inst.) 21003 (S.D.N.Y. 1981); § 3:6; see also 42 U.S.C.A. § 1412a.

²See *Environmental Defense Fund v. Costle*, 578 F.2d 337, 339–40, 8 Env'tl. L. Rep. (Env'tl. L. Inst.) 20200, 20200–01 (D.C. Cir. 1978); Safe Drinking Water Act § 1412(b), 42 U.S.C.A. § 300g-1(b).

³See Clean Water Act § 301(b)(2), 33 U.S.C.A. § 1311(b)(2).

⁴See RCRA §§ 3004(o), 3005(a), 42 U.S.C.A. §§ 6924(o), 6925(a).

⁵See RCRA §§ 3004(b) to (o), 42 U.S.C.A. §§ 6924(b) to (o).

⁶See, e.g., TSCA § 6(e), 42 U.S.C.A. § 2605(e) (gradual elimination of most PCB manufacturing and use).

⁷See FIFRA § 4, 7 U.S.C.A. § 136a-1.

⁸See §§ 14:98, 14:138.

⁹The statute requires the maximum degree of emissions reductions achievable taking into consideration costs and non-air quality health and environmental impacts and energy requirements. For new sources, this cannot be less stringent than controls achieved in practice by the best-controlled similar source. For existing sources, this cannot be less stringent than controls achieved by the best performing 12 percent of such sources. See Clean Air Act § 112(d), 42 U.S.C.A. § 7412(d).

ther progress in controlling pollution emissions, especially toxic pollutants and hazardous wastes. This round of gradually tightening regulations for existing sources—often called “retrofitting”—brings them fully into the technology-forcing program, which at first was reserved for new sources.

The most common benchmark for this round of emission limits is the “best available” technology.¹⁰ “Available” means that the technology has been demonstrated, although it is not necessarily in use, and will be available when compliance is required.¹¹ Versions of this benchmark are used to set standards for control of toxic air pollutants, toxic or “unconventional” water pollutants,¹² and for treatment of many hazardous wastes preceding land disposal.¹³

Conventional pollutants are treated somewhat differently under the Clean Air and Clean Water Acts. The Clean Air Act does not now require a second explicit, technology-based round of controls for existing sources of conventional pollutants for which national air quality standards have been established, although controls have been tightening as deadlines for attainment of the standards approach and pass. The Clean Water Act does require the “best conventional pollutant control technology”—usually abbreviated as “BCT”—which differs from BAT by including a cost-effectiveness criterion.¹⁴ Sewage treatment plants, and nonhazardous waste disposal facilities, are not subject to a second round of technology-based controls.

End-of-the-pipe controls for pollutants and wastes—and the program to clean up waste dumps—may hold center stage for a while longer. It has been much more difficult and taken much more time to clean up existing sources of pollution than was thought when the environmental protection statutes were written. For the long run, however, continued progress will rest on the replacement of existing sources of waste and pollution with newer and more efficient facilities, and federal law continues to look toward that horizon.

§ 3:11 Variances

Technology-forcing controls for existing sources of pollution are often subject to variances and waivers.

The Clean Air Act allows states to consider local factors in setting technology-forcing emission limits for existing sources of air pollution.¹ The Supreme Court has held,² and twice reaffirmed,³ that technology-forcing rules for existing sources under the Clean Water Act—the most extensive scheme of retrofitting rules in EPA

¹⁰The term is from the Clean Water Act § 301(b)(2)(A), 33 U.S.C.A. § 1311(b)(2)(A), but is now commonly used as an acronym for the whole class of technology-forcing controls. *See, e.g.*, Stewart & Ackerman, Comment: Reforming Environmental Law, 37 Stan. L. Rev. 1333, 1335 (1985).

¹¹*See, e.g.*, Hooker Chem. & Plastics Corp. v. Train, 537 F.2d 620, 636, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20467, 20476–77 (2d Cir. 1976).

¹²*See* Clean Water Act § 301(b)(2)(A), 33 U.S.C.A. § 1311(b)(2)(A).

¹³The 1984 Hazardous and Solid Waste Amendments to RCRA allow prior treatment of wastes as a means of avoiding the land-disposal ban. RCRA § 3004(m), 42 U.S.C.A. § 6964(m). The Agency, relying on legislative history, interprets this as requiring the “best demonstrated, available technology” (BDAT). *See* 51 Fed. Reg. 40572, 40588 (1986); 40 C.F.R. pt. 268, subpt. D. EPA describes BDAT as a technology which has been demonstrated, if only at bench scale, but which is currently *commercially* available; in this latter respect, it differs somewhat from BAT under the Clean Water Act. *See* 51 Fed. Reg. 40572, 40588 (1986).

¹⁴*See* American Paper Inst. v. EPA, 660 F.2d 954, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 20865 (4th Cir. 1981); Clean Water Act § 301(b)(4)(B), 33 U.S.C.A. § 1311(b)(4)(B).

[Section 3:11]

¹*See* National Steel Corp. v. Gorsuch, 700 F.2d 314, 322–23, 13 Env'tl. L. Rep. (Env'tl. L. Inst.) 20295, 20298–99 (6th Cir. 1983).

²*See* E.I. du Pont de Nemours & Co. v. Train, 430 U.S. 112, 128, 7 Env'tl. L. Rep. (Env'tl. L. Inst.)

statutes—must have provisions for variances. Congressional efforts to do away with such variances for toxic substances have been narrowly construed.⁴ Existing hazardous waste facilities are subject to performance standards, which allow some variation in permit terms from site to site,⁵ and the rules for ending land disposal of hazardous wastes have a provision for variances.⁶

Variances are not usually available solely on the basis of financial hardship.⁷ Congress does occasionally give dispensations for financial hardship, however. An example is the relief given to some troubled steel companies under the Clean Air Act, who were in a few cases allowed to modernize their facilities in exchange for extended schedules of compliance with consent decrees.⁸ “Waivers” are also available to some existing sources of nontoxic water pollutants, otherwise subject to BAT effluent limits, which are making reasonable progress in control but cannot afford to comply fully.⁹ The Safe Drinking Water Act authorizes variances for small water supply systems that cannot afford to comply with national standards.¹⁰ There are no financial hardship variances in the hazardous waste laws.

More commonly, financial resources are taken into account, if at all, on an industry-wide basis when rules are set determining what controls are available or feasible; weaker companies sink or swim.¹¹

Fairness nevertheless remains an underlying factor in variance procedures. In the Clean Water Act cases referred to above,¹² the Supreme Court has held, not only that some provision for variances for existing sources must be allowed under the Clean Water Act, but that this is a more general requirement of law, with Constitutional overtones. It is not yet clear how far these decisions apply to technology-forcing rules under other statutes, nor what variance procedures meet the requirement.

The Court began this line of cases, in *E.I. du Pont de Nemours & Co. v. Train*, with what appeared to be construction of a narrow provision in the Clean Water Act. The statute called for technology-based rules for existing “point sources” of pol-

20191, 20194 (1977).

³See *Chemical Mfrs. Ass’n v. Natural Res. Def. Council, Inc.*, 470 U.S. 116, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20230, 20234 (1985); *EPA v. National Crushed Stone Ass’n*, 449 U.S. 64, 72–73, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20924, 20926–27 (1981).

⁴See *Chemical Mfrs. Ass’n v. Natural Res. Def. Council, Inc.*, 470 U.S. 116, 125, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20230, 20233 (1985) (EPA has discretion to grant “fundamentally different factor” variances from pretreatment controls for existing sources of toxic pollutants, despite Clean Water Act provision which apparently bars variances for toxics.).

⁵See 40 C.F.R. pt. 264; §§ 14:52, 14:58.

⁶See RCRA § 3004(h), 42 U.S.C.A. § 6924(h).

⁷See, e.g., *EPA v. National Crushed Stone Ass’n*, 449 U.S. 64, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20924 (1980) (no hardship variances from Clean Water Act BPT regulations); *National Steel Corp. v. Gorsuch*, 700 F.2d 314, 13 Env’tl. L. Rep. (Env’tl. L. Inst.) 20295 (6th Cir. 1983) (Clean Air Act RACT rules need not be achievable by particular company). TSCA and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) lack any provisions for financial hardship variances. RCRA’s performance standards do not consider financial capability, and it is a condition of most permits that permit applicants demonstrate adequate financial resources to comply. See § 14:55.

⁸See Pub. L. No. 97-23, § 2, 95 Stat. 139 (1981) (known as the Steel Industry Compliance Extension Act, or “SICEA”).

⁹Clean Water Act § 301(c), 33 U.S.C.A. § 1311(c). *But see* Clean Water Act § 301(g), 33 U.S.C.A. § 1311(g) (eliminating “BAT waivers” for toxic pollutants, which leaves waivers applicable only to dischargers of the small number of “unconventional pollutants”—neither conventional nor toxic—that have been designated). See *id.* Clean Water Act § 301(b)(2)(A), (F), 33 U.S.C.A. § 1311(b)(2)(A), (F).

¹⁰See SDWA § 1415(E), 42 U.S.C.A. § 300g-4(E).

¹¹See *EPA v. National Crushed Stone Ass’n*, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20924 (1980).

¹²See § 3:11.

lution; the Court upheld EPA's rules setting standards for whole categories of sources, in part because the Agency had provided for variances where "fundamentally different factors" differentiated an existing point source from others in its category.¹³ The Court held that no such variances for new sources were required, however. In denying variances to new sources, the Court seemed to reject any available arguments from the statutory language for requiring them at existing sources.¹⁴ In a later opinion, however, the Court repeated that a variance procedure must be included in categorical rules for existing sources.¹⁵

EPA, partly relying on the *du Pont* rule, created an "FDF" variance procedure for discharges of toxic pollutants into treatment systems, despite a Clean Water Act provision which seemed to prohibit any variances for toxic discharges.¹⁶ These "pretreatment standard" FDF variances, and EPA's broad reading of the *du Pont* variance requirement, were attacked in *Chemical Manufacturers Association v. Natural Resources Defense Council*,¹⁷ and a majority reaffirmed *du Pont*. The Court now held, however, that the requirement of a variance procedure was not found in the Clean Water Act, but rested on a more general principle of law: "The Court has previously upheld regulations [under other statutes] in part because provision for an exception or variance helped assure the parties of due process."¹⁸ No further explanation was given. The majority of five seemed to be saying to the dissenters that, if pressed any further, it would find a requirement for variances in the Constitution.¹⁹

Since existing sources, but not new sources, must have access to a variance procedure, the *du Pont* line cases suggests that any broad technology-forcing program must have special provisions for existing facilities.

V. CONTROLS FOR NEW SOURCES AND FACILITIES; NEW PRODUCTS; MODIFICATIONS OF EXISTING SOURCES AND FACILITIES

§ 3:12 Introduction

¹³See *E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 128, 7 Env'tl. L. Rep. (Env'tl. L. Inst.) 20191, 20194 (1977).

¹⁴*E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 137-38, 7 Env'tl. L. Rep. (Env'tl. L. Inst.) 20191, 20197 (1977). The Court said, for instance, that variances were expressly provided for BAT rules, but not for new sources, and that the rules for new sources required uniformity, *id.* at 138, 7 Env'tl. L. Rep. (Env'tl. L. Inst.) at 20197; concluding that no variances for new sources were required. But these arguments would have just as much force applied to BPT regulations, where the Court reached the opposite result.

¹⁵See *EPA v. National Crushed Stone Ass'n*, 449 U.S. 64, 72, 10 Env'tl. L. Rep. (Env'tl. L. Inst.) 20924, 20926 (1980).

¹⁶See Clean Water Act § 301(g), 42 U.S.C.A. § 1311(g).

¹⁷*Chemical Mfrs. Ass'n v. Natural Res. Def. Council, Inc.*, 470 U.S. 116, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20230 (1985).

¹⁸*Chemical Mfrs. Ass'n v. Natural Res. Def. Council, Inc.*, 470 U.S. 116, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20230, 20235 n.25 (1985).

¹⁹Justice White wrote for the majority. Justice Stevens, author of the unanimous *du Pont* opinion which was at issue, joined the vigorous dissent by Justice Marshall. The dissenters left no shred of basis for the *du Pont* holding in the Clean Water Act; apparently in response the majority added the footnote quoted in the text, asserting broader "due process" grounds for the variance requirement. Of the three cases cited as precedent, two dealt only with statutes that required "hearings," and the question was whether a rule making procedure met the requirement. *Federal Power Comm'n v. Texaco, Inc.*, 377 U.S. 33, 39-41 (1964); *United States v. Storer Broadcasting Co.*, 351 U.S. 192, 205 (1956). In the third case, *United States v. Allegheny Ludlum Steel Co.*, 406 U.S. 742 (1972), the Esch Car Service Act required not hearings, but that regulation be "reasonable." The Court held that an informal rulemaking, coupled with a variance procedure, met this requirement. There is no hint of a general requirement that all rules be "reasonable" in this sense; if there is such a general requirement it is more likely to be found in the Administrative Procedure Act.

Six of EPA's nine statutory programs contain provisions for prior review of new pollution sources, hazardous waste management facilities, toxic chemical products, and pesticides.¹ A tenth statute, NEPA, sets out a model of general procedures for these prior reviews,² and Superfund requires notices to be given when unpermitted releases occur.³ The system of prior review is comprehensive, but was assembled in pieces at different times, and is composed of overlapping, single-purpose procedures. Integrating these separate reviews is a significant management problem.

The procedures fall into two categories: preconstruction reviews for new facilities (and major alterations in existing facilities), and prior reviews for new products (or significant new uses for existing products).

Preconstruction reviews have common procedural and substantive elements, which are discussed in this section, although details vary considerably.

Major new air pollution sources, all new water pollution sources, and hazardous waste management facilities are subject to similar preconstruction reviews. None may be built without a permit, which incorporates any site-specific environmental quality limits, and technology-forcing performance standards.⁴ States may also (but need not) have a permit program for new underground storage tanks of petroleum products and hazardous substances.⁵

New product reviews are more variable. New toxic chemicals and pesticide products (and significant new uses of existing products) must be submitted to EPA.⁶ New biotechnology products may be subject to review before release into the environment. The emerging procedures in this area are discussed in more detail in Ch 19, below.

These pervasive requirements for prior review have a double purpose: to prevent irreversible environmental damage before it occurs and to inject environmental values into management planning. These are also among the purposes of NEPA, and so it is not surprising that NEPA and new-source review have been closely entwined.

§ 3:13 Definition of new source or facility; New products

[Section 3:12]

¹See Clean Air Act §§ 165, 172(b)(6), 173, 42 U.S.C.A. §§ 7475, 7502(b)(6), 7503 (major stationary sources of air pollution).

The Clean Water Act contains no express construction ban, but EPA regulations prohibit construction of a new point discharge before a permit has issued (or a finding of no significant impact has been made). See 40 C.F.R. § 122.29; § 3:11.

Others are RCRA § 3005(a), 42 U.S.C.A. § 6925(a) (hazardous waste management facilities), and TSCA § 5, 15 U.S.C.A. § 2604 (premanufacture notices). FIFRA does not prohibit manufacture, but prohibits any person from transferring or holding for sale, any unregistered pesticide. FIFRA § 3(a), 7 U.S.C.A. § 136a(a).

MPRSA § 102, 42 U.S.C.A. § 1412, prohibits ocean dumping without a permit and essentially supplements the Clean Water Act permit program. See § 13:132.

Although not a separate statutory program, prior review of biotechnology products that may be released into the environment is becoming a functionally separate federal program. See Ch 19.

The Safe Drinking Water Act is the only one of EPA's regulatory programs which has no requirement for prior review. Permits for public drinking water supplies are not federally required, but state law usually requires prior regulatory approval.

Superfund and the Pollution Prevention Act do not regulate private behavior.

²See National Environmental Policy Act § 102(2), 42 U.S.C.A. § 4332(2); § 3:17.

³See CERCLA § 103, 42 U.S.C.A. § 9603.

⁴See § 3:20.

⁵See RCRA § 9004(a)(7), 42 U.S.C.A. § 6991c(a)(7).

⁶See discussion in note 1; Chs 16, 17.

The first new-source program was the New Source Performance Standards (NSPS) of the Clean Air Act.¹ The 1970 Clean Air Act Amendments applied these standards to major new sources in designated industrial categories. A “new” source was one whose construction had not yet “commenced” on the date that an NSPS for the category was proposed.² As new-source review procedures were added to the statute, the same definition was used, and eventually was applied to any major source of an air pollutant designated for regulation.³ The definition was then picked up in subsequent pollution-control statutes.

The key for defining a new source is still the date on which construction “commenced.”⁴ Construction of a pollution source or hazardous waste management facility “commences” when a substantial and enforceable commitment is made, or a continuous course of on-site construction has begun, and all local pollution-related permits have been obtained.⁵ Preliminary site-preparation, such as clearing land and building access roads, usually is not “commencement of construction,” except in the Clean Water Act program where site preparation is more likely to be a source of significant water pollution.⁶

There is no similarly sharp line defining the point at which new products enter the regulatory system. Under TSCA, EPA must be notified before a “new” chemical substance is “manufactured”;⁷ the Agency takes the view that this requirement may apply to production for commercial research or development.⁸ Pesticides may not be distributed or sold without EPA registration and labelling, but there is no similar bar to manufacturing.⁹ EPA issues “experimental use” permits to allow spraying of some unregistered pesticides during research and development.¹⁰

New biotechnology products are subject to TSCA, and must be reviewed before they are released to the environment during commercial development, unless they have been reviewed under FIFRA or another agency’s statutes; these products are discussed in more detail in Ch 19.

[Section 3:13]

¹See Clean Air Act § 111, 42 U.S.C.A. § 7411.

²See *Potomac Elec. Power Co. v. EPA*, 650 F.2d 509, 11 Env’tl. L. Rep. (Env’tl. L. Inst.) 20815 (4th Cir. 1981); Clean Air Act § 111(a)(2), 42 U.S.C.A. § 111(a)(2); 40 C.F.R. § 60.1 (“commenced construction” means committed to a continuous course of construction of the affected facility).

³See 40 C.F.R. § 60.1(a).

⁴See *Potomac Elec. Power Co. v. EPA*, 650 F.2d 509, 11 Env’tl. L. Rep. (Env’tl. L. Inst.) 20815 (4th Cir. 1981) (Clean Air Act).

Clean Water Act new source standards apply to facilities in regulated categories if their construction “commences” on or after the date standards are promulgated (if they take effect within 120 days after promulgation). Clean Water Act § 306(a)(5), 33 U.S.C.A. § 1311(a)(5); 40 C.F.R. § 122.2. The definition of “commences construction” is closely similar to the Clean Air Act regulations. 40 C.F.R. § 122.29(b)(4).

Under EPA’s RCRA regulations, existing “interim status facilities” were those that had “commence[d] construction” on or before the effective date of interim status regulations; this definition follows the Clean Air Act regulations. 40 C.F.R. § 270.70. All facilities which commence construction after this date are “new” in the sense that they must receive permits containing technology-forcing controls before construction or operation. RCRA § 3005(a), 42 U.S.C.A. § 6925(a).

⁵See, e.g., 40 C.F.R. §§ 60.2 (air), 122.29(b) (water), 270.2 (waste).

⁶40 C.F.R. § 122.29(b)(4)(B).

⁷See TSCA § 5(a)(1)(A), 15 U.S.C.A. § 2604(a)(1)(A).

⁸See 40 C.F.R. § 704.3 (“manufacture for commercial purposes”). “Manufacture” also includes production as byproduct. 40 C.F.R. § 704.3. A “new” chemical substance is one which does not appear on a list of existing chemical products EPA compiled under TSCA § 8(b). See TSCA § 3(9), 15 U.S.C.A. § 2602(9).

⁹See FIFRA § 3(a), 7 U.S.C.A. § 136a(a); 40 C.F.R. § 152.15.

¹⁰See FIFRA § 5, 7 U.S.C.A. § 136c; 40 C.F.R. pt. 172.

§ 3:14 Modifications of existing sources or facilities; New uses of existing products

Some modifications of existing sources of pollutants, expansions of hazardous waste management facilities, and significant new uses of chemical products and pesticides may be treated as if they were new sources, facilities, or products. This is an area of considerable technical complexity; only major headings are given here. Rules concerning modifications give management some flexibility, at least in big industrial companies, to determine whether or when new-source rules will apply to new capacity, but only if these considerations are taken into account early in planning. Once modification or construction begins, a new regulatory apparatus may be installed along with the new equipment.

§ 3:15 Modifications of existing sources or facilities; New uses of existing products—Reconstruction

Under the Clean Air Act, existing sources in industrial categories to which NSPS applied become subject to those standards if they are “reconstructed”—if they are more than half rebuilt.¹ Under RCRA, there is a similar rule, which prohibits replacement of existing land disposal units during “interim status.”² New-source rules will apply to these reconstructions, even if the reconstructed facilities would emit fewer pollutants or handle fewer wastes than the existing sources and facilities.

Under the Clean Water Act, by contrast, there is no “reconstruction” rule: New-source rules apply only to free-standing new sources, and not to modifications of existing sources.³ The logic, at least, is consistent, since under the Clean Water Act, existing and new sources are both subject to comparable BAT controls.

The question of rebuilding existing facilities does not arise under other statutes. A similar issue, new uses of existing chemicals and pesticides, is addressed in the next subsection.

§ 3:16 Modifications of existing sources or facilities; New uses of existing products—Expansion and new uses

Expansions are treated differently at different times and places. The Clean Air Act and RCRA impose new-source rules for expansions of stationary sources and hazardous waste land-disposal facilities. The Clean Water Act has no similar rule; other statutes vary.

Under the Clean Air Act, “major modifications”—substantial increases in a facility’s capacity to emit pollution—may be treated as new sources.¹ Unless an NSPS applies, however, new source rules apply only if the modification results in a signifi-

[Section 3:15]

¹See 40 C.F.R. § 60.15.

²EPA RCRA regulations, 40 C.F.R. § 270.72, had included a reconstruction rule copied from the Clean Air Act program, except that the baseline for measuring reconstruction was the entire facility. As this would have allowed considerable expansion at interim status land disposal facilities, Congress amended the regulation in 1984. RCRA now applies new facility rules to any replacement for an existing “unit,” or any added “unit,” at an existing interim status facility. RCRA § 3015, 42 U.S.C.A. § 6936. This is similar to the application of Clean Air Act modification rules to an “affected facility” rather than an entire plant.

³See 40 C.F.R. § 122.29(b)(1). A complete replacement of an existing source is a new source, however. 40 C.F.R. § 122.29(b)(1)(ii).

[Section 3:16]

¹See Clean Air Act §§ 111(a)(4), 171(4), 42 U.S.C.A. §§ 7411(a)(4), 7501(4); 40 C.F.R. § 60.14; § 12.88.

cant increase in emissions. So long as older capacity is being retired, and new capacity does not increase emissions, it may be possible to gerrymander the boundaries of the “source” so that new-source rules will not apply.²

Under RCRA, expansions of existing land-disposal facilities also trigger new-facility rules, and there is less opportunity to gerrymander.³

The Clean Water Act, as noted in the preceding subsection, does not apply new-source rules to expansion or modification of existing facilities. Expansions of existing pollution sources under the Clean Water Act, and expansions other than those enumerated above, may require permit modifications, but do not trigger new-source review.⁴

New uses of existing chemical substances and pesticides may also be subject to review as if they were new products; here again, however, the applicable statutes differ somewhat.⁵

§ 3:17 Preconstruction review; Construction bans

NEPA requires federal “agencies” to give prior consideration to the environmental impact of their major actions affecting the environment.¹ Since EPA appeared to be an “agency” to which the statute applied, in the early 1970s environmentalists and regulated companies both sued EPA under NEPA, the environmentalists to enjoin EPA from approving new sources, and regulated companies to enjoin or defer new source standards.²

The responses to these suits were complex.

In *International Harvester Co. v. Ruckelshaus*, the D.C. Circuit Court of Appeals held that NEPA did not apply to EPA’s new-source standard rulemaking under the Clean Air Act, because the Agency was following equivalent procedures, and was carrying out the purposes of both statutes.³ The courts have broadened this holding into a general rule that EPA is excused from NEPA procedures so long as it follows functional equivalents under other statutes.⁴ In 1972, while this litigation was pending, the Federal Water Pollution Control Act Amendments made their way to passage. Congress, siding with environmentalist plaintiffs, applied NEPA procedures to EPA’s grants and permits for new industrial sources of water pollu-

²See *Chevron, U.S.A. v. NRDC*, 467 U.S. 837, 14 Env’tl. L. Rep. (Env’tl. L. Inst.) 20507 (1984); *Alabama Power Co. v. Costle*, 636 F.2d 323, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20001 (D.C. Cir. 1979).

³See RCRA § 3015, 42 U.S.C.A. § 6936.

⁴See, e.g., 40 C.F.R. §§ 122.62, 124.5 (procedures for modifying permits).

⁵See TSCA §§ 5(a)(1)(B), 5(a)(2), 15 U.S.C.A. §§ 2604(a)(1)(B), 2604(a)(2) (significant new uses of existing chemical substances).

[Section 3:17]

¹NEPA § 102(2)(C), 42 U.S.C.A. § 4331(2)(C); § 10:1.

²See generally F. Anderson, *NEPA In the Courts* 109-16 (1974); § 5.15.

³*International Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 650 n.130, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20133, 20149 n.130 (D.C. Cir. 1973) (Leventhal, J.) (one-year suspension of new-model auto standards).

⁴See *Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d 375, 379-87, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20642, 20643-47 (D.C. Cir. 1973) (Leventhal, J.) (New Source Performance Standards). Judge Leventhal relied on the now-famous compromise over jurisdiction between Senators Jackson and Muskie. The “narrow exemption” created by this decision, *Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d 375, 387, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20642, 20647 (D.C. Cir. 1973), has been broadened into a general exemption for EPA’s procedures when they are “functionally equivalent” to NEPA’s. See, e.g., *Maryland v. Train*, 415 F. Supp. 116, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20496 (D. Md. 1976), rev’d in part, 556 F.2d 575, 7 Env’tl. L. Rep. (Env’tl. L. Inst.) 20443 (4th Cir. 1977). This latter case, which concerned ocean dumping, added the dictum that functionally equivalent procedures must provide for public participation.

tion, but exempted permits for existing sources and EPA's rulemaking from NEPA.⁵ Relying on NEPA, the Agency then promulgated regulations prohibiting construction of any new point source of water pollution until a Clean Water Act permit had been granted.⁶ The Clean Water Act, which prohibited only discharges, plainly would not support a construction ban. The Agency believed such a ban was necessary, and authorized by NEPA, to avoid the irreversible commitment of environmental resources which NEPA was intended to forestall.⁷

By 1974, after the first OPEC oil embargo, Congress exempted all Clean Air Act actions from NEPA procedures, apparently hoping to avoid procedural obstacles to increased coal use.⁸ NEPA procedures were not explicitly addressed in any of the subsequent statutes, and EPA now assumes that the "functional equivalent" rule applies everywhere that NEPA is not expressly made applicable.

In a separate line of cases, the Supreme Court cast doubt on the proposition that NEPA conferred any substantive authority on agencies,⁹ which in turn seemed to undercut EPA's construction ban regulations. But Congress meanwhile had added express authority for a construction ban to the Clean Air Act,¹⁰ to which NEPA did not apply, and then to RCRA, where it applied to the extent EPA regulations were not equivalent.¹¹

Neither the question of whether substantive authority is conferred by NEPA, nor the basis of EPA's Clean Water Act construction ban, has ever been squarely decided. Under the Clean Water Act, EPA follows what it believes are functionally equivalent procedures. Under the Clean Air Act, where alone the Agency is unconditionally exempt from NEPA compliance, EPA has kept in place regulations which are usually equivalent to NEPA's.

For new sources, as matters now stand, two of the three statutes which require facility permits, the Clean Air Act and RCRA, prohibit construction without a permit; the third, the Clean Water Act, does not expressly contain such a ban, but it makes NEPA applicable, and EPA's regulations, jointly based on the Clean Water Act and NEPA, prohibit construction without a permit.

The construction ban for new sources and facilities (and major modifications of existing sources and facilities to which the new-source regulations apply), is the only substantive aspect of environmental law that discourages innovation, which the statutes otherwise seek to foster. EPA permit regulations, in part to preserve their "functional equivalence" to NEPA procedures, generally require opportunities be given for public participation; *see* § 3:20, below. However desirable in itself, this

⁵Clean Water Act § 511(c)(1), 33 U.S.C.A. § 1371(c)(1). The FWPCA Amendments of 1972 also applied NEPA procedures to Corps of Engineers dredge-and-fill permits, often needed before construction of a new project begins, but exempted all EPA actions concerning permits for existing facilities, where presumably the only effect would be to reduce pollution, and all EPA rulemaking procedures. *Id.* Because of the latter exemption, EPA's programmatic regulations for the sewage treatment program are subject to neither the Administrative Procedure Act nor NEPA.

⁶*See* 40 C.F.R. § 122.29(c). The ban is tied to NEPA procedures. If an Environmental Impact Statement (EIS) is required, construction may not commence until a permit reflecting the EIS has been issued. 40 C.F.R. § 122.29(c)(3). If a preliminary assessment shows no EIS will be needed, construction may commence more rapidly.

⁷*See* General Counsel Opinion No. 76-18 (Sept. 23, 1976), reprinted in 1 EPA General Counsel Opinions 307, 311 (1979).

⁸*See* Energy Supply and Environmental Coordination Act of 1974, § 7(c)(1), 15 U.S.C.A. § 743(c)(1).

⁹*See* Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc., 435 U.S. 519, 8 Env'tl. L. Rep. (Env'tl. L. Inst.) 20288 (1978).

¹⁰*See* Citizens to Save Spencer County v. EPA, 600 F.2d 844, 9 Env'tl. L. Rep. (Env'tl. L. Inst.) 20194 (D.C. Cir. 1979); Clean Air Act §§ 165, 172(b)(6), 173, 42 U.S.C.A. §§ 7475, 7502(b)(6), 7503.

¹¹*See* RCRA § 3005(a), 42 U.S.C.A. § 6925(a).

adds to the delays and uncertainties of permitting. Because of the construction ban, the burden of delay falls entirely on the applicant.

Except in a few cases, the value of the ban now seems to be marginal. It may have seemed necessary in a time of rapid industrial expansion, but today it only seems justified in a few cases, such as construction in wetlands, or the construction of strip mines, where construction itself may be the source of environmental damage. In most cases, new source standards apply to operation, rather than construction, of the facility. The standards are published and must be taken into account in design and construction, with or without a construction ban. Unless NEPA indeed confers authority on EPA to make land-use planning decisions, the ban has little purpose.¹²

EPA staff like the construction ban because it gives them considerable leverage in negotiating with permit applicants. The question is whether the added burden on new facilities is justified, or whether it just favors continuation of older and presumably less desirable facilities.

Under TSCA section 5, by contrast, new product manufacturing may proceed, after notice to EPA, unless the Agency acts to stop it. This procedure has worked well, and might be adopted more widely.

§ 3:18 Performance standards for new facilities

Performance standards for new sources and facilities are similar in form to those for existing sources and facilities. Under the Clean Air and Clean Water Acts, for instance, performance-based emission limits are often based on a benchmark technology—variations on the “best available” theme.¹ Under the Clean Air Act, categorical New Source Performance Standards are emission limits based on the best available, demonstrated technology.² When categorical standards do not apply, the permitting agency establishes similar benchmarks, site by site, during new source review.³ Under the Clean Water Act, new source performance standards are set for industrial categories, and are usually identical to the BAT emission limits for existing sources.⁴

New hazardous waste disposal facilities (and modifications of existing disposal facilities) are subject to “minimum technological requirements,”⁵ as well as any additional controls needed to forestall groundwater contamination. Congress specified minimum standards in the statute, and required that they be updated periodically. The standards appear to require the best available or feasible technology, but no

¹²The Agency’s original justification for the ban acknowledges that it only has a significant purpose if it allows the Agency to consider siting alternatives, and other factors outside its authorizing statutes. See EPA General Counsel Opinion No. 76-18.

[Section 3:18]

¹See generally J. Quarles, Federal Regulation of New Industrial Plants (BNA Env’tl. Rep. Monograph No. 28, 1979).

²See *Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d 375, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20642 (D.C. Cir. 1973); Clean Air Act § 111(a)(1), 42 U.S.C.A. § 7411(a)(1).

³The benchmarks are “best available control technology” in attainment areas, Clean Air Act § 169(3), and “lowest achievable emission rate,” presumably a more stringent standard, where air quality standards have not been attained. Clean Air Act § 171(3), 42 U.S.C.A. § 7501(3). EPA often sets both BACT and LAER equal to the applicable NSPS, but where there is no NSPS, it may set the benchmarks case by case. See *Northern Plains Resource Council v. EPA*, 645 F.2d 1349, 11 Env’tl. L. Rep. (Env’tl. L. Inst.) 20635 (9th Cir. 1981). Both benchmarks may apply to different emissions in the same plant, and other conditions attach to new sources in nonattainment areas. See Clean Air Act § 173, 42 U.S.C.A. § 7503. See generally § 12:85.

⁴See Clean Water Act § 306(a)(1), 33 U.S.C.A. § 1316(a)(1) (“best available, demonstrated technology”).

⁵See RCRA § 3004(o), 42 U.S.C.A. § 6924(o).

benchmark is expressly set.⁶ Treatment standards for hazardous waste, to allow continued land-disposal in the future, resemble new source performance standards under the Clean Air and Clean Water Acts.⁷

New source performance standards are technology-forcing in the strongest sense:

We are inclined to agree with the Administrator, that as long as feasible technology permits the demand for new automobiles to be generally met, the basic requirement of the [Clean Air] act would be satisfied, even though this might occasion fewer models and a more limited choice of engine types. The driving preference of hot rodders are not to outweigh the goal of a clean environment.⁸

Performance, in short, is to be improved, even if substantial costs are required, and even if some changes in products or production technology are needed. The benchmark technology for new sources is feasible, or “available,” if it is technically proven, and is not simply out of reach because of cost or other limitations.

Most new source standards are to be periodically reviewed and updated, and presumably to be tightened, as technology advances.⁹ From a public policy standpoint, intermediate standards are far less important than the general principle of steady improvement.¹⁰

The hope for new-source standards was that they would produce new processes and products that would be free of significant pollution. The hope, and the method, were based on an expanding and innovating industrial base. However, existing facilities were kept in service long past their expected lifetimes.¹¹ As a result, the program to redirect productive technology has proven to be much slower and more difficult than it looked in the early 1970s. It remains firmly written into the statutes EPA administers, however, and Congress shows no signs of wanting to abandon the effort.

§ 3:19 Variances

There are very few explicit variances from new source standards. When regulating new sources, there are no settled arrangements to protect; costs and feasibility have been taken into account, so far as the statutes permit, in the standards themselves.¹ There is accordingly a lot of attention paid to whether the standards apply in the first place; definitions of “commence construction” and of “source” and “major modification” are pushed to see whether they will allow room for exclusions from otherwise applicable rules.² Each program has an accretion of technical rules in this area which must be consulted.

⁶See RCRA § 3004(o), 42 U.S.C.A. § 6924(o).

⁷See § 3:8.

⁸*International Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 640, 3 *Envtl. L. Rep.* (Envtl. L. Inst.) 20133, 20143 (D.C. Cir. 1973).

⁹Clean Water Act § 306(b)(1)(B), 33 U.S.C.A. § 1316(b)(1)(B); RCRA § 3004(o), 42 U.S.C.A. § 6924(o).

¹⁰See, e.g., *ASARCO, Inc. v. EPA*, 578 F.2d 319, 327, 8 *Envtl. L. Rep.* (Envtl. L. Inst.) 20164, 20169 (D.C. Cir. 1978) (purpose of NSPS is to enhance air quality beyond levels required by national air quality standards, and to avoid any degradation of air quality).

¹¹See DeMocker et al., *Extended Lifetimes for Coal-Fired Power-Plants: Effect on Air Quality*, *Pub. Utils. Fort.*, Mar. 20, 1986, at 30.

[Section 3:19]

¹See *E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 137–38, 7 *Envtl. L. Rep.* (Envtl. L. Inst.) 20191, 20196–97 (1977) (Clean Water Act); *ASARCO, Inc. v. EPA*, 578 F.2d 319, 329, 8 *Envtl. L. Rep.* (Envtl. L. Inst.) 20164, 20170 (D.C. Cir. 1978) (Clean Air Act does not allow NSPS “bubbles”).

²See, e.g., *ASARCO Inc. v. EPA*, 578 F.2d 319, 8 *Envtl. L. Rep.* (Envtl. L. Inst.) 20164 (D.C. Cir. 1978).

Variances or extensions in schedules for compliance with new source standards are sometimes given to encourage innovative methods of control.³ Where a company has difficulty complying for other reasons, EPA may agree to an extended schedule of compliance in a consent order or decree.⁴

VI. THE PERMIT SYSTEM

§ 3:20 Federal and state permit programs: “Delegation”

EPA prefers to establish its requirements through legislative-type rules.¹ Permits therefore have a particular purpose in EPA procedures. Permits apply the Agency’s legislative rules to individual pollution sources and hazardous waste management facilities:

[T]he permit defines and facilitates compliance with, and enforcement of, a preponderance of a discharger’s obligations. . . . [Permits] transform generally applicable effluent limitations into obligations (including a timetable for compliance) of the individual discharger.²

Five of EPA’s statutes each create one or more such permit systems. There are tens of thousands of dischargers and waste management facilities subject to these permit programs; the federal government has neither the resources nor the expertise to issue permits to all of them. The permitting statutes EPA administers (except the ocean dumping program) therefore oblige the Agency to defer to states with permit programs that meet statutory criteria.³ EPA now prefers to restrict itself to issuing legislative rules, leaving the permits to state officials, although early in the air and water pollution control programs the federal government played a more active role in permitting. The same transition is now underway in the newer hazardous waste management program.

State and local governments therefore have once again become the principal permit issuing—and enforcement—authorities in environmental protection programs. EPA issues permits and routinely enforces them only in those states which have not yet adopted environmental protection programs that meet federal standards.

There are several exceptions to the usual pattern. EPA issues ocean dumping

³See Clean Air Act § 111(j), 42 U.S.C.A. § 7411(j); RCRA § 3004(o)(2), 42 U.S.C.A. § 6924(o)(2).

⁴*But see* Bethlehem Steel Corp. v. Train, 544 F.2d 657, 7 Env’tl. L. Rep. (Env’tl. L. Inst.) 20019 (3d Cir. 1976) (EPA may not expressly extend the Clean Water Act’s July 1, 1977 compliance deadline). The Agency may, however, exercise enforcement discretion with regard to violations past that date. The Agency’s view is that the courts, if not EPA itself, may fashion equitable relief that extends statutory compliance dates.

[Section 3:20]

¹See § 4:5.

²*EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20563 (1976).

³The Clean Air Act and Safe Drinking Water Act purport to require states to submit plans, Clean Air Act § 110(a)(1), 42 U.S.C.A. § 7410(a)(1); Safe Drinking Water Act § 1422(b)(1), 42 U.S.C.A. § 300h-1(b)(1) (states where underground injection control program necessary). The requirement is of doubtful constitutionality. See § 12:142. In all other statutes, state legislative action is voluntary. In four statutes, when states submit programs which meet statutory criteria, EPA must approve them, and thereafter must allow the states to assume the primary role in permit issuance and enforcement: (1) Clean Air Act § 110(a)(2), 42 U.S.C.A. § 7410(a)(2); (2) Clean Water Act § 402(b), 33 U.S.C.A. § 1342(b); (3) Safe Drinking Water Act § 1422(b), 33 U.S.C.A. § 300h-1(b); (4) RCRA § 3006(b), 42 U.S.C.A. § 6929(b).

In a fifth statute, FIFRA, there is no formal permit system, but states with approved programs assume “primacy” for enforcement of pesticide regulations. FIFRA § 26, 7 U.S.C.A. § 136w-1.

permits,⁴ and registers pesticides,⁵ although once registered, pesticide sale and use is principally regulated by state agencies.⁶ EPA also has sole responsibility for reviewing toxic substances and regulating their manufacture under TSCA,⁷ and with narrow exceptions is the sole agency to regulate motor vehicle production.⁸

When EPA approves a state program under the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, or RCRA, it is customary to say that EPA has “delegated” responsibility to the state, but the term is misleading, except when applied to a few programs under the Clean Air Act. State programs are usually authorized or approved by EPA, and operate in lieu of the federal program so long as they meet statutory requirements.⁹ EPA retains concurrent authority to enforce permit requirements (after notice to the state) in authorized programs.¹⁰ The Agency may also veto individual state permits.¹¹

§ 3:21 Procedure—Permit procedures

There are common elements among the federal statutes EPA administers, but they differ greatly in detail; state programs add still more variation. The requirements for approving or modifying permits therefore differ in many large and small ways in the various state and federal media-specific programs.

EPA made one exhausting attempt to provide a single, integrated set of permitting regulations, but was defeated by the differences among the statutes; the “consolidated permit regulations” were “deconsolidated” in 1983.¹

Despite reform and rereform of the substantive regulations, however, there is still

⁴See MPRSA § 102, 33 U.S.C.A. § 1412.

⁵See FIFRA, Ch 17.

⁶See FIFRA § 26, 7 U.S.C.A. § 136w-1.

⁷See TSCA, Ch 16.

⁸See Clean Air Act, tit. II, 42 U.S.C.A. §§ 7521 to 7590. The exception is a provision which allows states to adopt California’s pioneering program of vehicle emission standards. See Clean Air Act § 209, 42 U.S.C.A. § 7543.

⁹See Clean Air Act § 110(a)(1), 42 U.S.C.A. § 7410(a)(1); Safe Drinking Water Act § 1422(b)(1), 42 U.S.C.A. § 300h-1(b)(1). Under the Clean Air Act, EPA may formally “delegate” authority to the states to implement and enforce the federal new source performance standards. See Clean Air Act § 111(c), 42 U.S.C.A. § 7411(c). In all later statutes, Congress carefully avoided any formal delegations of federal authority, partly to avoid application of NEPA to state actions. See, e.g., EPA General Counsel Opinion 76-18 (Sept. 23, 1986), *reprinted in* 1 EPA General Counsel Opinions 307 (1979) (citing legislative history of the Clean Water Act).

¹⁰See § 9:1.

¹¹See, e.g., Clean Water Act § 402(d)(2), 33 U.S.C.A. § 1342(d)(2).

[Section 3:21]

¹The consolidated permit regulations combined in one format the permit regulations for the RCRA hazardous waste program, the Clean Water Act NPDES and section 404 permits, Safe Drinking Water Act injection well permits, and the Clean Air Act’s PSD program. Ocean dumping permits were not included, presumably because they were not state administered. See 45 Fed. Reg. 33290 (1980). The consolidation was a regulatory reform effort, designed to make permits easier to obtain, especially for new facilities. Its heart was in the right place: It provided a single, combined application form, a uniform procedure and a single set of regulations. In practice, however, the Agency found that consolidated permit applications were very rare, partly because the permitting authorities were divided at the state level, and partly because “the various permit programs regulate inherently different activities and thus must impose generally different sorts of requirements.” 48 Fed. Reg. 14145, 14147 (1983). Environmentalists and trade associations challenged the consolidated permit regulations, with a long list of complaints which had accumulated in the separate programs. The President’s Task Force on Regulatory Reform targeted the consolidated regulations, and EPA finally undid the consolidation. 48 Fed. Reg. 14145 (1983).

There are still common procedural regulations, however, found at 40 C.F.R. Part 124, which note any variations in procedure among the different permit programs.

a reasonably uniform set of *procedural* regulations for most permits. Part 124 of EPA's regulations, title 40 of the Code of Federal Regulations, now contains procedures for issuing, modifying or terminating hazardous waste management permits under RCRA, point-source discharge permits under the Clean Water Act, stateadministered section 404 permits, injection-well permits issued under the Safe Drinking Water Act, and PSD permits issued under the Clean Air Act.

Excluded from the common procedures are emergency permits and RCRA "permits-by-rule," ocean dumping permits, federally-issued section 404 permits, and state new-source air pollution permits issued under nonattainment area rules. Also excluded are actions which EPA does not consider permit actions, such as RCRA interim status and Safe Drinking Water Act authorization by rule, and actions under TSCA and FIFRA.

The major common elements in the permit procedures are as follows:

1. *Notice.* When a permit application is complete, the permit issuing agency will prepare a draft permit (or a statement of intent to deny the permit), and issue a public notice, with a request for comment. If EPA is the issuing agency, the proposal will be accompanied by a detailed statement of facts or of the basis of the proposal. *See* 40 C.F.R. §§ 124.6 to 124.10.

2. *Hearing and Comments.* A public hearing may be held; public comments will be received during a stated period. 40 C.F.R. §§ 124.10 124.14. A trial type evidentiary hearing on NPDES permits will be held if requested. An EPA innovation is the informal, nonadversary "panel" hearing which may be employed at this stage, if trial-type hearings are not requested. *See* 40 C.F.R. part 124 subpart F. Contested permit provisions will be stayed, if they are severable.

3. *Action.* The issuing agency (for EPA, a regional office) will then take action on the permit application. The original notice and statement of basis, public comments and any agency responses form the administrative record in EPA proceedings.

4. *Appeals.* Appeals in state proceedings are usually governed by state law. In EPA proceedings, persons who have commented usually may file a written appeal within the Agency. Permits are issued by regional offices; appeals are taken to the administrator.

§ 3:22 Procedure—Confidentiality of business information

Most business people who deal with the federal government have become used to the openness of federal records. The federal Freedom of Information Act (FOIA)¹ requires federal agencies, including EPA, to disclose their records to anyone who asks, with only a few, narrowly drawn exceptions.² Agency records, for these purposes, include documents submitted to the agency and in the agency's control. Information submitted to EPA to obtain a permit, or in response to EPA's authorized information-gathering, will usually become a public record even if under other circumstances it would be exempt from disclosure under FOIA.³ The only important exceptions are trade secrets, which must be disclosed to EPA under TSCA and

[Section 3:22]

¹5 U.S.C.A. § 552.

²*See* 5 U.S.C.A. § 552(b). Trade secrets and confidential business information are exempt from disclosure by 5 U.S.C.A. § 552(b)(4).

³*See, e.g.,* Clean Air Act § 114(c), 42 U.S.C.A. § 7414 ("emissions data" otherwise exempt from disclosure become public records); Clean Water Act § 308(b), 33 U.S.C.A. § 1318(b) ("effluent data"). RCRA arguably does not alter the exemption already available, however. *See* RCRA § 3007(b), 42 U.S.C.A. § 6927(b) (excluding from disclosure only material prohibited from disclosure under 18 U.S.C.A. § 1905).

FIFRA, and which the Agency will keep confidential.⁴ Under FIFRA, however, EPA may require compulsory licenses to be granted to competitors applying for approval of similar products.⁵

Although few such claims are granted, EPA does allow business firms submitting information to make claims of business confidentiality, and will maintain confidentiality while it decides the claims. If the Agency makes an adverse ruling, it will continue to retain confidentiality for a brief period to allow district court review. Business confidentiality is never accepted as a reason for withholding information which the Agency demands, however. Nonprofit organizations sometimes file claims, but are not eligible for the FOIA exemption.⁶

EPA may not disclose confidential business information; improper disclosure may be a criminal violation of the Trade Secrets Act.⁷

§ 3:23 Procedure—Negotiating a permit

Permits are issued by EPA's regional offices (*see* § 4:3 below), and in a state-administered program, usually by local or regional offices as well. Permit writing is not a mechanical task, and judgment goes into the application of general rules to particular circumstances. Each local office develops a good deal of lore about permit conditions, much of which is never written down.

Face to face conversations are usually helpful. In any substantial matter, and always when the permit application is contested, it is a good idea to involve both EPA and state personnel from the outset.

VII. BEYOND COMMAND AND CONTROL REGULATION: INNOVATIVE APPROACHES TO ENVIRONMENTAL PROTECTION*

§ 3:24 Introduction

As noted in the previous section, current law protects the environment primarily through a system of legislative-type regulations applied to particular polluters through individual permits. Permittees may comply with their permits in any way they choose so long as they meet whatever minimum requirements the permits set out; government agencies bring enforcement actions if those requirements are violated. This arrangement, generally called “command and control” regulation, can be bureaucratic and can make the achievement of environmental protection more

⁴*See* TSCA § 14, 15 U.S.C.A. § 2613 (prohibiting disclosure of data exempt from disclosure under 5 U.S.C.A. § 552(b)(4), i.e., trade secrets and confidential business information, but excluding health and safety studies); FIFRA § 10, 7 U.S.C.A. § 136h (prohibiting disclosure of trade secrets and confidential business information, with several significant exemptions for health and safety tests and other data).

⁵Applicants for registration may rely on supporting data submitted by prior registrations, even without the permission of the prior registrant, so long as the new applicant offers compensation. FIFRA § 3(c)(1)(F), 7 U.S.C.A. § 136a(c)(1)(F). Pesticides with active ingredients initially registered after September 30, 1978, are protected for ten years from compulsory licensing of supporting data. FIFRA § 3(c)(1)(F)(i), 7 U.S.C.A. § 136a(c)(1)(F)(i). *See* *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 14 Env'tl. L. Rep. (Env'tl. L. Inst.) 20539 (1984).

⁶*See, e.g.,* *National Parks & Conservation Ass'n v. Morton*, 498 F.2d 765, 770, 4 Env'tl. L. Rep. (Env'tl. L. Inst.) 20385, 20388 (D.C. Cir. 1974) (exemption only available to avoid harm to competitive position); *Washington Research Project, Inc. v. HEW*, 366 F. Supp. 929, 936 (D.D.C. 1973), modified on other issues, 504 F.2d 238 (D.C. Cir. 1974), cert. denied, 421 U.S. 963 (1974); *R. Milgrim*, 1 Trade Secrets § 6.02A[2][A].

⁷18 U.S.C.A. § 1905.

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costly than necessary.¹

Command and control regulation is not the only possible legal structure for protecting the environment. Existing law has experimented with several alternatives in particular environmental contexts, and other variations are possible although not presently codified in American law. The remainder of this chapter examines these alternative approaches and describes existing laws embodying them.

One major theme of this discussion is that there is no one universally best approach to environmental protection. Policymakers must therefore do more than obediently learn one approach and apply it to every new problem. Rather, they can best serve environmental protection by selecting a tactical mix of approaches, using each when its advantages are maximized and its disadvantages minimized. Adopting a combination of different approaches is often the best strategy. Although modern environmental law has experimented modestly with alternative approaches, it has overemphasized command and control regulation without adequately considering the limits of that model.

The following subsections treat in turn six principal alternatives to command and control regulation:

- tinkering with the command and control system while retaining its basic structure of legislative rules applied through government permits;
- directly influencing the process by which decisionmakers make their decisions;
- enlisting private economic institutions, such as banks and insurance companies, as regulators of their customers' environmental activities;
- using the tax system to impose costs on polluters;
- using the liability system to impose costs on polluters; and
- granting legal rights to the environment itself.

§ 3:25 Tinkering with command and control regulation—The command and control process

The pure command and control system is a four-step regulatory process. Three steps are exclusively the province of government; one step is exclusively the province of the regulated entity.

First, *government* writes regulations setting general standards for pollution control.

Second, *government* writes permits setting particular requirements for individual facilities.

Third, regulated *private entities* operate their facilities in any way they choose so long as they meet the minimum permit requirements.

Fourth, if permit conditions are violated, *government* brings enforcement actions against the private parties.

In most environmental contexts, this pure command and control approach has now been altered at least modestly. Existing law has granted private parties varying degrees of influence over each of the steps in which government is the prime actor. The following three subsections analyze these modifications.

§ 3:26 Tinkering with command and control regulation—Citizen suits to enforce standards contained in regulations and permits

[Section 3:24]

¹For a detailed critique of the failures of command and control regulation, see Stewart, Economics, Environment, and the Limits of Legal Control, 9 Harv. Envtl. L. Rev. 1 (1985).

The least intrusive way to modify the pure command and control model is to provide for citizen suits. This approach modifies the fourth step of command and control regulation by allowing nongovernmental entities to bring enforcement actions. In effect, it appoints “private attorneys general.”

Most federal environmental laws that adopt the command and control model now allow private citizens as well as the government to sue to enforce regulatory requirements and permit conditions.¹ First added to the Clean Air Act in 1970, citizen suit provisions have become a staple of all major command and control statutes except the Federal Insecticide, Fungicide and Rodenticide Act.² Basically, these provisions allow any adversely affected person to bring a civil action in federal court against any other person who is violating a specific legal requirement.³ Citizen suit provisions typically authorize injunctive relief; three of them go one step farther and also allow citizens to seek monetary penalties, which are deposited into the federal treasury rather than paid to the citizen enforcers.⁴ Persons who bring citizen suits can recover their costs, including reasonable attorney fees and expert witness fees.

Essentially, provisions for citizen enforcement suits leave it to government agencies to define environmental goals through regulation and permit writing. They tinker with the command and control model by allowing private *enforcement* of the goals thus defined. The government has already done all the policy-level balancing of costs and benefits; the citizen suit revolves around the factual issues of whether or not the defendant has met the government standards.⁵

Citizen suits thus do not seriously alter the command and control model. They do not interfere with the formal processes by which government sets environmental priorities and balances costs and benefits—they merely implement those decisions by enforcing them. They do not exclude the government’s own enforcement program, but rather operate alongside it. When government has limited enforcement resources and hence limited ability to prosecute all the violations that deserve prosecution, citizens can serve as supplemental enforcers, acting in cases that government regulators miss or that are of lower priority but nonetheless worthy of enforcement. In a period of governmental inattention to environmental laws, citizen

[Section 3:26]

¹Clean Air Act § 304, 42 U.S.C.A. § 7604; Federal Water Pollution Control Act § 505, 33 U.S.C.A. § 1365; Noise Control Act § 12, 42 U.S.C.A. § 4911; Resource Conservation and Recovery Act § 7002, 42 U.S.C.A. § 6972; Toxic Substances Control Act § 20, 15 U.S.C.A. § 2619; Safe Drinking Water Act § 1449, 42 U.S.C.A. § 300j-8. On citizen suits generally, see J. Miller & Environmental Law Institute, *Citizen Suits: Private Enforcement of Federal Pollution Control Laws* (1986).

²FIFRA’s congressional parentage may explain this exception. Although administered by EPA, FIFRA was written and is amended by the Senate and House Agriculture Committees rather than by one of the environmental committees. See J. Miller & Environmental Law Institute, *Citizen Suits: Private Enforcement of Federal Pollution Control Laws*, 6 (1986).

³How much “adverse effect” is necessary to confer standing is sometimes unclear, but courts have been quite liberal in allowing plaintiffs to bring citizen suits. See J. Miller & Environmental Law Institute, *Citizen Suits: Private Enforcement of Federal Pollution Control Laws*, 19–25 (1986).

⁴See J. Miller & Environmental Law Institute, *Citizen Suits: Private Enforcement of Federal Pollution Control Laws*, 83 (1986); Garrett & Winner, *A Clean Air Act Primer*, 22 *Envtl. L. Rep. (Envtl. L. Inst.)* 10301, 10310 (1992). The three statutes that authorize monetary penalties are the Clean Water Act, Clean Air Act, and the Resource Conservation and Recovery Act. On avoiding the requirement that penalties be paid to the federal treasury by instead funding particular projects or specially created environmental trust funds, see Stever, *Environmental Penalties and Environmental Trusts—Constraints on New Sources of Funding for Environmental Preservation*, 17 *Envtl. L. Rep. (Envtl. L. Inst.)* 10356 (1987).

⁵One citizen suit provision, RCRA § 7002, was amended in 1984 and now gives the citizen-plaintiff and the court a role in balancing competing policy interests. This expanded citizen suit authority is more than mere tinkering with the command and control approach to regulation. It is analyzed in § 3:39.

suits can rise to the level of primary enforcement agent.

These advantages come with certain drawbacks, however. In some cases, a regulatory agency and a permit holder have long-term understandings about the conditions that will trigger enforcement, but have not reduced these understandings to writing in the permit. In these cases, the government will not seek enforcement sanctions when it believes the regulated entity has lived up to the environmental demands made of it, although not up to the letter of the permit. Nevertheless, a successful citizen suit could be brought. After a few such cases, permit holders and regulators are likely to reduce all such understandings to writing in their permits. While this has the salutary effect of bringing more of the government's regulatory decisions into the open for public scrutiny and comment, it also increases the transaction costs of administering the system by making the permits critically important as embodiments of all the understandings between the regulators and the regulated.⁶

§ 3:27 Tinkering with command and control regulation—Removing the rulemaking function from the regulators: California's Proposition 65 and negotiated rulemaking—In general

Two other types of tinkering alter the command and control structure more seriously than citizen suit provisions do. Citizen suit provisions make the government share authority for enforcement, the fourth step of the command and control system. The next two types of tinkering, direct regulation by voters and negotiated rulemaking, affect the system's first step, the up-front legislative rulemaking.

§ 3:28 Tinkering with command and control regulation—Removing the rulemaking function from the regulators: California's Proposition 65 and negotiated rulemaking—Direct regulation by voters

In the typical command and control approach, the legislature sets out a statutory framework for the environmental program, then delegates authority to the regulatory agency to write specific rules implementing it. There is always some variation in exactly how much specificity is written into the statute and how much is left to regulatory discretion. At one extreme, the statute may simply state goals and allow the agency nearly complete discretion in implementation. At the other extreme, the legislative direction may be very detailed, even specifying harsh regulatory standards that will automatically take effect unless the administrative agency affirmatively finds that a less stringent approach is more appropriate.¹ Despite this variation, the fundamental model remains one of the agency implementing broad

⁶See Terris, *Environmentalists' Citizen Suits*, 17 *Envtl. L. Rep. (Envtl. L. Inst.)* 10254, 10255–56 (1987).

There is also the theoretical possibility, acknowledged by some who actually bring citizen suits, of a kind of blackmail. *Id.* The scenario is something akin to a "strike suit" in tort law: a frivolous claim brought to harass the defendant and cause it to settle for some modest but nonetheless real sum rather than pay the legal fees necessary to defend the case. Such suits are less likely in the environmental context because penalties are not paid directly to plaintiffs, but the suits may still be brought to obtain settlements consisting of funding of particular environmental projects. See Stever, *Environmental Penalties and Environmental Trusts—Constraints on New Sources of Funding for Environmental Preservation*, 17 *Envtl. L. Rep. (Envtl. L. Inst.)* 10356 (1987). On the whole, there is little evidence of such abuse in practice.

[Section 3:28]

¹These are often called "hammer provisions," and are an innovation introduced in the 1984 amendments to the Resource Conservation and Recovery Act. See C. Harris, W. Want, & M. Ward, *Hazardous Waste: Confronting the Challenge* 84-98 (1987). In general, successive legislative enactments have moved environmental statutes in the direction of greater legislative specificity and less administrative discretion. See Strock, *The Congress and the President: From Confrontation to Creative Tension*, 17 *Envtl. L. Rep. (Envtl. L. Inst.)* 10006 (1987).

statutory guidance through regulatory rules.

One recent variation, however, is so complete a removal of agency discretion as to constitute a virtual end to the agency's rulemaking function. This variation appears in California's Proposition 65, which was enacted into law on November 4, 1986.² Adopted by voter referendum, Proposition 65 is lawmaking by the people themselves, not the legislature. Proposition 65 prohibits businesses from knowingly discharging known carcinogens and reproductive toxins into water or onto land where drinking water will likely be affected, unless the business can show that no significant amount of the discharged chemical will enter drinking water and that the discharge otherwise conforms with all laws.³ Proposition 65 requires the governor of California to promulgate a list of known carcinogens and reproductive toxins to be covered by this prohibition.⁴ While the state Health and Welfare Agency is the lead agency for implementing Proposition 65, there is remarkably little discretionary rulemaking to be done. Essentially, the people of California, not a combination of legislature and administrative agency, have made the rules. The people chose virtually to ban the discharge of listed chemicals outright, eliminating the initial command-and-control step of legislative rulemaking.

Proposition 65 has advantages and disadvantages. On the one hand, it carries a strong moral mandate and very high popular awareness. There is an appealing and elegant simplicity to its straightforward approach. On the other hand, it is criticized as rigid, unrealistic, and poorly integrated with California's numerous legislative and regulatory provisions on toxics control. Moreover, it is not clear that Proposition 65 has actually succeeded in replacing the rulemaking functions normally performed by the legislature and the implementing agency. The breadth of its provisions has resulted in agency efforts to issue regulations making it more manageable.⁵ Some of these regulations have been "legislative" in the sense of being very general. They have also been highly controversial. It may be that while citizen efforts such as Proposition 65 can partially replace the rulemaking step of the command and control system, they cannot replace that step completely.

§ 3:29 Tinkering with command and control regulation—Removing the rulemaking function from the regulators: California's Proposition 65 and negotiated rulemaking—Negotiated rulemaking

Another recent innovation, negotiated rulemaking, tinkers with the rulemaking step of command and control regulation in a different way than Proposition 65 does. Negotiated rulemaking is the convening of interest groups outside of the administrative agency to draft regulations for the agency to consider proposing.¹ In the environmental context, this involves face-to-face meetings among agency representatives and industry and environmental groups, though ultimately agency management can accept or reject any consensus reached at these meetings.² EPA has

²The formal title of Proposition 65 is the California Safe Drinking Water and Toxic Enforcement Act, codified at Cal. Health & Safety Code §§ 25249.5 to 25249.13.

³Proposition 65 also requires certain consumer warnings concerning hazardous substances. *See* § 3:32.

⁴As of July 1, 1988, 231 such chemicals had been listed.

⁵*See, e.g.*, 22 Cal. Code Regs. §§ 12201, 12401, 12405, 12601, 12711, 12901.

[Section 3:29]

¹*See* Procedures for Negotiating Proposed Regulations, Recommendation No. 82-4 of the Administrative Conference of the United States, 1 C.F.R. § 305.82-4.

²Procedures for Negotiating Proposed Regulations, Recommendation No. 82-4 of the Administrative Conference of the United States, 1 C.F.R. § 305.82-4.

experimented with negotiated rulemaking on several occasions.³

Essentially, negotiated rulemaking is ordinary rulemaking with an extra step: before the agency proposes a rule for public comment, it first solicits very intensive input from the groups most affected or interested. Although it increases the up-front costs of drafting regulations, when applied to properly selected topics it can decrease costs in the long run by averting court challenges to the promulgated regulations.⁴

To encourage negotiated rulemaking, in 1990 Congress passed the Negotiated Rulemaking Act, adding specific statutory authority for the process to the Administrative Procedure Act.⁵

§ 3:30 Tinkering with command and control regulation—Modifying the permitting function of the regulators: Transferable pollution permits¹

Citizen suit provisions tinker with enforcement, the fourth step of command and control regulation; Proposition 65 and negotiated rulemaking affect the first step, regulation writing. A system of transferable pollution permits modifies the second step, permit issuance. Under this approach, permits are not written for individual facilities. Instead, they are written for individual units of pollution. The permits are initially issued to facilities, but may subsequently be traded, bought, and sold among facilities in an open market. If it works properly, this open market controls pollution cost-effectively: facilities that can cut pollution cheaply will do so and sell their extra permit units to those that cannot. The system is sometimes called “emissions trading.” Because each facility can make a profit by selling its “excess compliance,” it has an economic incentive to do better than the minimum necessary to stay within its initial permit allotment. The overall level of pollution can be controlled by periodically reducing the amount of pollution allowed under each permit unit.²

EPA has adopted transferable pollution permits in a few contexts, and has them under consideration in several others. EPA’s regulatory program under the Clean Air Act includes a mature system of emissions trading.³ After the 1990 Clean Air Act Amendments, the Chicago Board of Trade announced it would set up a trading

³For example, EPA has tried negotiated rulemaking in developing regulations on pesticide emergency exemptions and truck engine emission penalties. *See* Procedures for Negotiating Proposed Regulations, Recommendation No. 85-5 of the Administrative Conference of the United States, 1 C.F.R. § 305.85-5.

⁴Procedures for Negotiating Proposed Regulations, Recommendation No. 85-5 of the Administrative Conference of the United States, 1 C.F.R. § 305.85-5. The literature on negotiated rulemaking is extensive. *See, e.g.*, Harter, Negotiating Regulations, 71 Geo. L.J. 1 (1982); Panel Discussion: Negotiated Rulemaking, 17 Env’tl. L. Rep. (Env’tl. L. Inst.) 10245 (1987); Perritt, Negotiated Rulemaking: An Evaluation, 74 Geo. L.J. 1625 (1986); and Perritt, Negotiated Rulemaking in Practice, 5 J. Pol’y Analysis & Mgmt. 482 (1986).

⁵Pub. L. No. 101-648. The Negotiated Rulemaking Act is codified at 5 U.S.C.A. §§ 561 to 570. *See* Pub. L. No. 102-354.

[Section 3:30]

¹This subsection is based in part on § 3:24 of a previous edition of this treatise; that section was written by Sheldon M. Novick.

²On transferable pollution permits generally, *see* Ackerman & Stewart, Comment: Reforming Environmental Law, 37 Stan. L. Rev. 1333 (1985), and Ackerman & Stewart, Reforming Environmental Law: The Democratic Case for Market Incentives, 13 Colum. J. Env’tl. L. 171 (1988).

³This program is analyzed in detail in § 12:35. *See also* U.S. EPA, Emissions Trading Policy Statement (Nov. 18, 1986), 51 Fed. Reg. 43814 (1986), Env’tl. L. Rep. (Env’tl. L. Inst.) Administrative Materials 35007. *See generally* Hahn & Hester, Where Did All the Markets Go? An Analysis of EPA’s Emissions Trading Program, 6 Yale J. Reg. 109 (1989). Hahn & Hester estimate that in the air program, emissions trading has already achieved savings in the billions of dollars with no significant detriment to environmental quality. *Id.* at 136-38.

market for sulfur dioxide emission allowances.⁴ There have been a few examples of emissions trading under the Clean Water Act.⁵ The agency has considered extending the concept to nonpoint source water pollution, pesticide registration, and efforts to preserve stratospheric ozone.⁶

Emissions trading seems most suitable for regulatory problems in which sources collectively harm a regional environment, but singly do not appreciably harm local environments. As emission permits are traded, pollution levels in the immediate vicinity of some sources will probably rise or fall substantially. If this significantly increased the risk to local populations, it would largely be viewed as unfair, since individuals would be exposed to increased pollution, involuntarily and without compensation, in order for society overall to control pollution less expensively.

§ 3:31 Directly influencing the decisionmaking process— Governmentalizing operational decisions

In a sense, all of the modifications to command and control regulation analyzed in the previous subsections serve to “privatize,” or at least “de-governmentalize,” the three steps of command and control regulation in which government is the primary actor. That is, they all allow nongovernment entities some measure of influence on these steps.

Another alternative takes the opposite approach. It “governmentalizes” the one step that classic command and control regulation leaves to private entities: the making of operational decisions.¹ The command and control system lets regulated entities operate as they choose, so long as they stay within the regulatory boundaries. In contrast, this alternative gives regulators a role in operational decisionmaking. In its pure form, it inserts the regulatory process directly into the fabric of private decisions on activities that may harm the environment. Since this approach is not necessarily focused on ensuring that decisions comply with the specific substantive rules and permit requirements issued under command and control regulation, it can be virtually independent of those rules and permits.

No United States environmental laws currently incorporate the pure form of this alternative. However, two modified versions are widely used. The first version requires government entities to consider environmental factors in making certain decisions about their own activities and those of private parties. This forces public and private actors to design their activities in consideration of those environmental factors. The second version obligates private entities to disseminate information about the environmental effects of their activities. This may have various effects on the behavior of both the parties disseminating the information and those receiving it.

§ 3:32 Directly influencing the decisionmaking process—Requiring decisionmakers to consider environmental factors

The most prominent example of the decisional approach to environmental protec-

⁴Potts & Lippman, Regulators Approve Trading In Firms’ Pollution Credits, *Washington Post*, Apr. 22, 1992, at F1. *See also* Hamilton, TVA to Buy Pollution “Credits” From Wisconsin Utility, *Washington Post*, May 12, 1992, at C1.

⁵*See* U.S. General Accounting Office, *Water Pollution: Pollutant Trading Could Reduce Compliance Costs If Uncertainties Are Resolved* (1992).

⁶Levin, Bubbles and Barriers, *The Environmental Forum*, May/June 1988, at 13.

[Section 3:31]

¹*See* § 3:25.

tion is the National Environmental Policy Act.¹ NEPA requires federal decisionmakers to prepare environmental impact statements for major federal actions significantly affecting the quality of the human environment.² These federal actions include decisions to allow private parties to conduct certain activities. Since private parties must design those activities to satisfy federal decisionmakers, NEPA's insertion of environmental considerations into federal decisionmaking has an indirect but powerful influence over private decisionmaking. Therefore, although this subsection focuses on the federal decisionmakers whom NEPA directly addresses, much of the discussion also applies to the private decisionmakers whom the statute indirectly affects.³

NEPA does not impose any particular emission limits, technology standards, ambient environmental standards, or other substantive requirements. Rather, it imposes essentially procedural controls on the process of deciding whether—and how—to conduct proposed actions. It forces decisionmakers to explicitly confront the environmental consequences of those actions, opening the process to public and EPA comment⁴ and requiring public explanations for the final decisions. NEPA ultimately relies on the power of public opinion and the good faith of decisionmakers to ensure consideration of environmental values.

While NEPA is the most widely known federal law that operates this way, it is not the only one. The Endangered Species Act⁵ requires federal decisionmakers to consult with the Fish and Wildlife Service or the National Marine Fisheries Service to determine that a proposed action is not likely to jeopardize any endangered species.⁶ The consulted service issues a biological opinion on whether the action is likely to jeopardize such a species. Ultimately, however, the responsible federal decisionmaker, not the service issuing the biological opinion, is responsible for determining whether the proposed action violates the Endangered Species Act's prohibition of federal actions likely to jeopardize endangered species.⁷

Similarly, the National Historic Preservation Act⁸ requires federal decisionmakers to consider the effects a proposed action will have on historic properties, and to seek the comments of the State Historic Preservation Officer, the federal Advisory Council on Historic Preservation, and interested members of the public.⁹ The federal decisionmakers can choose to ignore these comments, however.¹⁰

These statutes do not go so far as they might in terms of regulatory intrusiveness

[Section 3:32]

¹42 U.S.C.A. §§ 4321 to 4370a.

²NEPA's requirements are thoroughly analyzed in Ch 10.

³Of course, the entities that are indirectly subject to NEPA because they must satisfy the requirements of federal agencies may themselves be other government agencies rather than private parties.

⁴EPA acts under a legislative provision which by historical accident happens to have been placed in the Clean Air Act, but which authorizes EPA to comment on all impact statements, whether they have to do with air or not. Clean Air Act § 309, 42 U.S.C.A. § 7609. *See* § 10:31.

⁵16 U.S.C.A. §§ 1531 to 1543.

⁶Which service must be consulted depends on the type of species. Endangered Species Act § 7, 16 U.S.C.A. § 1536. Implementing regulations are at 50 C.F.R. § 402.

⁷*Sierra Club v. Froehlke*, 534 F.2d 1289, 1303, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20448, 20454 (8th Cir. 1976); *National Wildlife Fed'n v. Coleman*, 529 F.2d 359, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20344, 20349 (5th Cir. 1976). *See also* the suggestion in the implementing regulations that compliance with the jeopardy opinion is not automatic. 50 C.F.R. § 402.15(b) (1987) ("If a jeopardy biological opinion is issued, the Federal agency shall notify the Service of its final decision on the action.").

⁸16 U.S.C.A. §§ 470 to 470w-6.

⁹National Historic Preservation Act § 106, 16 U.S.C.A. § 470f. Implementing regulations appear at 36 C.F.R. § 800.

¹⁰*Paulina Lake Historic Cabin Owners Ass'n v. U.S.D.A. Forest Serv.*, 577 F. Supp. 1188, 1192 n.1

into the decisionmaking process. The Coastal Zone Management Act¹¹ gives environmental regulators an even greater say in federal decisions.

These statutes give environmental regulators, and in some circumstances the public, a point of entry into the decisionmaking process. This forces decisionmakers to explicitly consider environmental values. Although federal decisionmakers need not obtain permits, and environmental regulators do not usually have ultimate veto power over their decisions, these statutes have proven quite effective in protecting the environmental values they address. This may be in part because few federal decisionmakers are actively anti-environment; that is, few officials make environmental damage a goal. More commonly, decisionmakers simply fail to think about the environment at all: it has no constituency in the way that grants or program needs do, and environmental harm often does not become manifest until after a particular set of decisionmakers leaves office.

Each of these federal statutes inserts environmental regulators into the *process* of making compliance decisions on private actions, but only through other federal officials who must approve those actions under other law anyway. This class of statutes does not go so far as to insert regulators directly into *private* decisionmaking. Though it has been suggested that private parties be required to submit environmental impact statements directly,¹² restricting such requirements to government agencies is not as severe a limitation as might at first appear. The statutes discussed above generally apply to federal funding or loans for private projects, federal permitting or approval, and other federal involvement with otherwise private decisions, whether that federal involvement is environmental or not. Thus, these statutes have a powerful reach into private life, leading one commentator to reflect that NEPA's application is "virtually unlimited" and that the required federal nexus is a "nonissue."¹³

Nineteen states and Puerto Rico have followed the federal model and added "mini-NEPAs" to state law.¹⁴ Four of these state laws—those of California, Hawaii, New York, and Washington—apply not only to *state* government decisions but also to decisions of local governments.¹⁵ Thus, private development decisions subject to local land use regulation such as zoning require environmental impact statements.¹⁶ While this does not bring the private sector completely within the ambit of the statutes that directly influence the decisionmaking process, it comes close.

§ 3:33 Directly influencing the decisionmaking process—Giving decisionmakers more information

Direct regulatory involvement in the actual processes of private decisionmaking is rare or nonexistent in our society. Indeed, it may be outside our frame of reference

(D. Or. 1983); *Pennsylvania v. Morton*, 381 F. Supp. 293, 299, 5 Env'tl. L. Rep. (Env'tl. L. Inst.) 20008, 20011 (D.D.C. 1974). *See also* Bell, *Protecting the Built Environment: An Overview of Federal Historic Preservation Law*, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 10354, 10362 (1985); Bell, *Historic Preservation: A New Section 106 Process*, 17 Env'tl. L. Rep. (Env'tl. L. Inst.) 10002, 10004 n.54 (1987).

¹¹16 U.S.C.A. §§ 1451 to 1464. *See* Coastal Zone Management Act § 307(c), 16 U.S.C.A. § 1456(c).

¹²Stone, *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*, 45 S. Cal. L. Rev. 450, 484 (1972).

¹³F. Anderson, *NEPA in the Courts* 57 (1973). *See generally* Ellis & Smith, *The Limits of Federal Environmental Responsibility and Control Under the National Environmental Policy Act*, 18 Env'tl. L. Rep. (Env'tl. L. Inst.) 10055 (1988) (concluding that the limits to NEPA are based on the actual jurisdictional reach of the federal agency involved).

¹⁴*See* § 7:11.

¹⁵Mandelker, *NEPA Law and Litigation* § 12.02 (2001).

¹⁶Mandelker, *NEPA Law and Litigation* § 12.02 (2001).

for distinguishing public from private responsibilities.¹ Nonetheless, with increasing frequency, environmental protection laws have endeavored to *affect*, if not control, private decisions by supplying particular kinds of information to private decisionmakers. Those decisionmakers are then free as before to act as they choose, but as a practical matter, at least some of them are likely to act differently after receiving new information.

A leading example of this “more information” style of protecting the environment is California’s Proposition 65,² which includes a powerful right-to-know provision. Proposition 65 requires businesses to give “clear and reasonable warning” to any individuals they expose to known carcinogens and reproductive toxins, with very narrow exceptions. This requirement serves conventional command and control purposes such as informing local planning agencies and emergency response teams of the nature of the hazards in their areas. In addition, however, public dissemination of warnings might be expected to lead to public pressure not to use these chemicals and to less public use of the products associated with them.³ These effects on individual decisionmaking may in turn influence businesses to reduce their use or discharge of these chemicals. Proposition 65 enforcement prompted the Gillette Company to reformulate its “Liquid Paper” correction fluid so that it no longer contains trichloroethylene, a hazardous chemical.⁴

Federal law also includes an example of environmental protection through public information. The Emergency Planning and Community Right-to-Know Act (EPCRA)⁵ was enacted in 1986 as Title III of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).⁶ EPCRA generally requires public reporting of hazardous chemical data that already exists but had been difficult to obtain and compare. Facilities must provide local agencies and any inquiring member of the public with information on hazardous chemicals used and with annual reports of toxic chemical releases.⁷

§ 3:34 “Private command and control regulation”: Enlisting banks and insurers as regulators

In the traditional command and control model, the government writes regulations setting general standards, then writes individual permits for regulated facilities. Private owners and operators of the facilities then make their own decisions on how to comply, and if they fail the government brings enforcement actions.

Section 3:25 described several ways in which the government’s roles in command

[Section 3:33]

¹See Commoner, A Reporter at Large—The Environment, *The New Yorker*, June 15, 1987, at 46, 64.

²The formal title of Proposition 65 is the California Safe Drinking Water and Toxics Enforcement Act, codified at Cal. Health & Safety Code §§ 25249.5 to 25249.13. § 3:26, discussed Proposition 65’s outright ban on discharges to water of known carcinogens or reproductive toxins.

³Haag, Proposition 65’s Right-to-Know Provision: Can It Keep Its Promise to California Voters?, 14 *Ecology L.Q.* 685, 687–89, 703–07 (1987).

⁴See Stevens, Regulating Toxics at the State Level: Proposition 65’s Warning Requirement, 9 *Stan. Env’tl. L. Rev.* 84, 128–29 (1990).

⁵42 U.S.C.A. §§ 11001 to 11050.

⁶42 U.S.C.A. §§ 9601 to 9675.

⁷See § 14:149. See generally Burcat & Hoffman, The Emergency Planning and Community Right-to-Know Act of 1986: An Explanation of Title III of SARA, 18 *Env’tl. L. Rep. (Env’tl. L. Inst.)* 10007 (1988). Dow Chemical Company credits a pre-EPCRA voluntary pollution report with triggering the company’s program to cut its air pollution. See Kriz, An Ounce of Prevention, *National Journal*, Aug. 19, 1989, at 2094.

and control regulation can be partially “privatized,” or shared with nongovernmental entities. In contrast, § 3:31 described the government’s heightened role in otherwise private decisionmaking under statutes modeled after the National Environmental Policy Act. Under either approach, however, when there is real, discretionary regulating to be done, government regulators do it.

Some environmental laws superimpose on this structure a system that turns private institutions into regulators in their own right. These private institutions are generally financial intermediaries such as banks¹ and insurance companies. It is their pervasiveness that makes these institutions attractive as quasi-regulators. They administer the capital markets; without bank loans and insurance, as a practical matter many private undertakings could not be pursued. Because banks and insurers are asked to participate voluntarily in so many private ventures, making environmental protection in their self-interest goes a long way toward integrating that protection into the structure of their clients’ projects.

The “private regulation” system works by making banks and insurers liable in some circumstances when projects they lend to or insure are liable. For banks, this is done in two principal ways.

First, applicable law may subordinate a bank’s security interest in its loans’ collateral to a higher priority government interest in environmental cleanup expenses.² This encourages every bank to protect the government’s environmental interests, since until those higher priority interests are satisfied the bank’s interests go unsatisfied. Thus, before lending to a project posing environmental dangers, a bank has reason to ensure that environmental safeguards are in place.

Second, environmental statutes may treat banks as themselves liable in specified circumstances. Current law is often imprecise on exactly when bank liability is triggered, leading to EPA interpretive rulemaking on the issue.³ To avoid this liability, banks are increasingly calling for environmental assessments on questionable properties before accepting them as collateral for loans. Merely identifying previously latent problems often serves to accelerate cleanup, and of course banks can insist on environmental improvements prior to making loans.⁴

Insurers have a similar incentive to police the operations of their insureds. Insurers have traditionally provided educational programs to reduce many kinds of risks, and periodically inspect large insureds either to offer advice on making their operations safer or to decide what insurance rates to assess and whether to insure at all. So long as there is some reasonable chance that insurers will ultimately be held liable for environmental cleanup costs, as is certainly the case now, insurers have a

[Section 3:34]

¹The term “bank” is used here to include true banks as well as savings and loans and similar financial institutions that lend money to or invest in facilities subject to environmental regulation.

²Statutes, frequently called “superlien statutes,” often provide for such subordination. *See generally* Comment, State Superfund Superliens: Who Do They Lean On?, 1 Vill. Envtl. L. J. 163 (1990); Priority Lien Statutes: The States’ Answer to Bankrupt Hazardous Waste Generators, 31 Wash. U.J. Urb. & Contemp. L. 373 (1987); State “Superlien” Statutes: An Attempt to Resolve the Conflict Between the Bankruptcy Code and Environmental Law, 59 Temp. L.Q. 981 (1986). CERCLA § 107(1) creates a federal lien subordinating some but not all other interests, and the Justice Department has vigorously asserted the need for government priority. *See* Firestone, Government Perspectives on Bankruptcy and Environmental Law Interaction, 18 Envtl. L. Rep. (Envtl. L. Inst.) 10358 (1988). *See* especially the useful cataloging of the government’s mixed success at this effort at 10359 n.4.

³The EPA rule is at C.F.R. pt. 300, 57 Fed. Reg. 18344 (Apr. 29, 1992). *See generally* Burcat et al., The Law of Environmental Lender Liability, 21 Envtl. L. Rep. (Envtl. L. Inst.) 10464 (1991).

⁴McMahon, Lender’s Perspectives on Hazardous Waste and Similar Liabilities, 18 Envtl. L. Rep. (Envtl. L. Inst.) 10368 (1988).

powerful incentive to incorporate environmental concerns into their programs.⁵

There are limits to how much “regulating” can be done through banks and insurers, however. First, banks and insurers compete among themselves for business. They stay in business by actually making loans and writing insurance policies, not by turning them down. If a bank or insurer became too strict in its environmental demands, potential customers would switch their business to a laxer bank or insurer, thus “forum shopping” among these private regulators. Depending on how readily customers switch among competing banks and insurance companies, regulation through these financial intermediaries could be only as effective as the standards imposed by the laxest among them, at least in the short run.⁶

Another limit to the role of banks and insurers is that they do not completely control the capital markets. For example, very large companies that need money can bypass banks and issue corporate bonds instead. Such “disintermediation,” as financial analysts label it, is becoming more and more common. Similarly, some firms avoid insurance companies and “self-insure” instead by putting aside contingency funds. In such cases, the overlay of banks and insurers as private regulators will have little effect.⁷

Finally, one possible limit is the strength of the banking and insurance industries themselves. For example, the savings and loan portion of the banking industry is in serious trouble, and there are reports of trouble among some mainline banks as well. When failed banks and savings and loans are rescued by their government insurers such as the Federal Deposit Insurance Corporation, environmental liabilities assigned to the failed institution could then further burden the government’s insurance funds.⁸

Limits such as these suggest that private regulators, such as banks and insurers, cannot completely replace other methods of environmental enforcement. But they still have major roles to play. Banks and insurers are unique leverage points to insert environmental considerations, and by virtue of their special roles in the economy they have special responsibilities as well. Environmental improvement is one of them.

§ 3:35 Using the tax system to impose costs on polluters

All the approaches considered so far attempt to influence private decisions through regulation. Under the command and control model, government sets regulatory parameters within which private decisions must be made. Under statutes like NEPA, regulators play a participatory role in these decisions. When banks and

⁵There is currently a split in the case law on whether the standard commercial insurance policy language covers CERCLA response costs. There is virtually unanimous agreement, however, that it covers natural resource damages, and this is enough to trigger the insurer’s duty to defend the entire lawsuit. Moreover, insurance coverage for personal injuries from environmental pollution remains unaffected by the case law split on coverage of CERCLA response costs.

⁶This problem may abate fairly rapidly after financial intermediaries are made liable for environmental problems. For example, barely five years after CERCLA was enacted, hazardous waste insurance had become extremely difficult to obtain at any price. This hardly suggests that insurers were competing for this business by lowering their environmental standards. Moreover, in the very long run, the accumulated liabilities of polluting customers may drive the laxest banks and regulators out of business.

⁷To the extent that companies avoid financial intermediaries, the alternatives they use may or may not further environmental protection. For example, a company that cannot obtain hazardous waste insurance will, if it is risk-averse, take steps to prevent ever having to “collect” on its self-insurance fund. However, this caution results from the liability imposed on the company as a hazardous waste handler, not as an insurer. It is only indirectly influenced by the insurer liability that may have tightened the insurance market and forced it to self-insure in the first place.

⁸Pollution Raises Cost of Bailout, N.Y. Times, July 20, 1990, at D1, col. 6.

insurers are drafted into service as private regulators, regulated entities probably view them much as they do government regulators.

There is another approach entirely, which is less direct but which can be as effective, and perhaps more so. It involves revising the cost calculus faced by private decisionmakers, so that they internalize costs and behave optimally based on their own perceptions of profit and loss possibilities rather than on the direction of outsiders. This subsection and the next consider the two principal ways of doing this, taxes and liability mechanisms.

A pollution tax system imposes a tax on each unit of pollution. The tax rate can differ among pollutants—one assessment per pound of sulfur dioxide emitted into the air, for example, but another per pound of organic sewage discharged into the river. Economists hail pollution taxes as a way to correct for the market conditions that allow pollution and to raise government revenue at the same time.¹ Government sets the tax rates at the levels necessary to achieve targets for environmental quality; the higher the rates, the less pollution will be produced. The tax rates can be raised or lowered to fine-tune the attainment of environmental goals, or to reflect changing goals. Economists believe that to control a given type of pollution effectively, pollution taxes must replace, not supplement, command and control regulation of that type of pollution.²

A system of pollution taxes is not without disadvantages, however. It suffers from many of the same vulnerabilities as a system of transferable permits. Conceptually, the two approaches are very similar: both allow individual corporations to decide how much they will pollute, and require them to pay for their decisions. In the first case, the payment is to the government in the form of a tax; in the second case, it is to other corporations in the form of the purchase price of permit units. So, for example, although taxes may control pollution at the national or regional level, they seem unsuitable when individual sources willing to pay high rates can create acute local effects.

This is a big limitation, but there remain important environmental issues regarding which pollution taxes could play a greater role than they currently do. Certain global concerns, such as ozone depletion and global warming, seem especially well-suited to pollution taxes.

Indeed, a global issue is the source of what may be the first “tax on pollution.”³ In 1989, Congress enacted the “Excise Tax on Sale of Chemicals Which Deplete the Ozone Layer and of Products Containing Such Chemical.”⁴ Added to the tax code as 26 U.S.C.A. §§ 4681 and 4682, this new provision taxes chlorofluorocarbons and halons at rates that increase from one year to the next. For example, in December 1989, one particular chlorofluorocarbon compound, CFC-11, sold for approximately \$0.80 per pound.⁵ Beginning in January 1990, the tax on CFC-11 is \$1.37 per pound.

[Section 3:35]

¹*See, e.g.*, Blinder, *Why Not Sell Pollution by the Pound?*, Washington Post, Aug. 18, 1987, at A15; Oates, *Taxing Pollution: An Idea Whose Time Has Come?*, Resources, Spring 1988, at 5; Oates, *Pollution Charges As a Source of Public Revenue*, RFF Research Digest, Spring 1992. *See generally* Gaines & Westin, eds., *Taxation for Environmental Protection* (1991).

²Oates, *Taxing Pollution: An Idea Whose Time Has Come?*, Resources, Spring 1988, at 7. The pollution tax would work by giving polluters an incentive to develop low-cost pollution control methods; permits specifying treatment technology, for example, would interfere with this incentive. *See generally* F. Anderson, A. Kneese, P. Reed, S. Taylor, & R. Stevenson, *Environmental Improvement Through Economic Incentives* (1977).

³Weisskopf, *A Clever Solution for Pollution: Taxes*, Wash. Post, Dec. 21, 1989, at A27.

⁴Pub. L. No. 101-239, § 7506, 103 Stat. 2364 (1989).

⁵Weisskopf, *A Clever Solution for Pollution: Taxes*, Wash. Post, Dec. 21, 1989, at A27.

In January 1992, the tax rises to \$1.67 per pound. In January 1993, it rises to \$2.65 per pound. In January 1995, and every year thereafter, the tax increases \$0.45 per pound per year.⁶

§ 3:36 Using the liability system to impose costs on polluters—The retrospective liability system

All the approaches considered so far address environmental damage by seeking to prevent it. Traditional command and control regulation prohibits the release of more pollutants than authorized by permit, and the methods discussed in § 3:25 for tinkering with command and control regulation never deviate from this strategy. Similarly, the techniques considered in § 3:31 for directly influencing private decisions and those discussed in § 3:34 for giving roles to banks and insurers are largely designed to prevent pollution from becoming a problem. Even the pollution taxes considered in the preceding subsection regulate pollution by creating incentives to make less of it. In short, these methods of pollution control are all *prospectively focused*; that is, they are forward-looking tools to prevent pollution in the first place.

This prospective focus is important, but it is not the only one possible. Indeed, in most areas of law a prospective strategy designed to prevent harm is combined with a *retrospective* strategy designed to remedy harm that is not prevented. For example, while traffic laws prospectively regulate driving to prevent accidents, an elaborate retrospective system of tort law nonetheless is in place to compensate accident victims. Some accidents occur because the prospectively focused traffic laws are violated; compliance is rarely if ever perfect, and tort law provides an important “safety net” for victims of lawbreaking. Other accidents occur even when no traffic laws are violated. In these cases, tort law does more than just catch imperfections in the prospective system of accident prevention. Instead, it independently compensates victims based on its own criteria of liability and harm.

At the same time, the existence of an effective retrospective liability system helps deter some harm.¹ Thus a retrospective system also plays an important role in prospective control. In fact, in many important areas of law there is no direct prospective control to speak of; practically all of the relevant law is retrospective, compensating for harm already done. For example, causes of action for slander and libel retrospectively control harmful speech and writing, even though prospective regulation of such communications is very rare. Remedies for breach of contract are mostly retrospective; the law rarely makes a breach prospectively illegal.

Retrospective relief also has a role to play in environmental law. This relief can be divided into four categories:

- (1) liability to the government to clean up pollution;
- (2) liability to the government to pay damages for pollution;
- (3) liability to private parties to clean up pollution; and
- (4) liability to private parties to pay damages for pollution.

Each category is considered in turn below. In general, current law is well-developed in the first category, but has not taken full advantage of the pollution control promise offered by the other three. These three categories seem conceptually ready for expansion.

⁶26 U.S.C.A. § 4681(b).

[Section 3:36]

¹This deterrent effect is triggered if corporations are sensitive to retrospective lawsuits, and there is anecdotal evidence that indeed they are. *See, e.g.,* Safety First, *Fortune*, July 4, 1988, at 14.

§ 3:37 Using the liability system to impose costs on polluters—Liability to the government to clean up pollution

Both the common law and modern statutes provide for liability to the government to clean up pollution. Although the common law doctrines in this area are quite broad, there is even more case law under the newer, statutory remedies. Governments have generally relied on statutory remedies when they are available, rather than on preexisting common law causes of action.

The common law has long given the government the power to sue to abate “public nuisances.”¹ Such suits are exercises of the police power, so they may be brought by state governments, but apparently not by the federal government. In the environmental context, the public nuisance doctrine has been applied to waterborne pollutants at a private dam,² vibrations and noise from blasting,³ odors and pests from animals,⁴ and hazardous waste contamination.⁵ A standard of strict liability applies. The government need only show that the public’s exercise of public rights has been obstructed and that the defendant has caused the obstruction.⁶

The crucial question in a public nuisance case is thus whether there is interference with a “public right.” This way of framing the issue is both the nuisance doctrine’s greatest strength and its greatest weakness. It provides enormous flexibility for the government, which is free to allege a “public right” whenever it finds some environmental insult it thinks should be corrected. However, the doctrine’s vagueness also makes its application difficult and unpredictable. What is the scope of a protected “public right,” and how significant must be its invasion before the law will consider it a “nuisance”? Often, it is not obvious where the public right begins and ends, or who is interfering with whom. If a factory produces odors and the government complains of interference with picnicking in a park nearby, is the factory interfering with the park users’ right to picnic, or is the park trying to interfere with the factory’s right to make its products? In general, the label of rights is not helpful until it is given content. As in many areas of the law, courts have applied an ad hoc balancing test weighing various aspects of the issue, including the social value of the polluting activity and the burden on those harmed of avoiding the harm. The results are often unpredictable and decisions in different cases are often difficult to reconcile.⁷

Another common law doctrine that may apply to environmental cases is that of the public trust. This doctrine holds that the government owns certain resources in trust to benefit the public at large. The public trust and public nuisance doctrines

[Section 3:37]

¹This cause of action is not limited to the environmental context; it extends generally to the government’s power to protect “public rights” from private interference. The doctrine has been applied to protection of public morality, for example.

²Halper, *Public Nuisance and Public Plaintiffs: Rediscovering the Common Law*, 16 *Envtl. L. Rep. (Envtl. L. Inst.)* 10292 (1986).

³*Board of Health v. Copcutt*, 140 N.Y. 12, 35 N.E. 443 (1893).

⁴*New York Trap Rock Corp. v. Town of Clarkstown*, 299 N.Y. 77, 85 N.E.2d 873 (1949).

⁵*Town of Mt. Pleasant v. Van Tassell*, 7 Misc. 2d 643, 166 N.Y.S.2d 458 (N.Y. Sup. Ct. 1957), *aff’d*, 6 A.D.2d 880, 177 N.Y.S.2d 1010 (N.Y. App. Div. 1958).

⁶*New York v. Shore Realty Corp.*, 759 F.2d 1032, 15 *Envtl. L. Rep. (Envtl. L. Inst.)* 20358 (2d Cir. 1985). These and similar cases are discussed more fully in Halper, *Public Nuisance and Public Plaintiffs: Rediscovering the Common Law*, 16 *Envtl. L. Rep. (Envtl. L. Inst.)* 10292 (1986).

⁷One commentator calls the variation in the balances reached a “caprice” that is “apparently endemic” to the doctrine. Brion, *An Essay on LULU, NIMBY, and the Problem of Distributive Justice*, 15 *B.C. Env’tl. Aff. L. Rev.* 437, 461 (1988).

overlap, and in some cases are different labels for the same concept.⁸

The doctrine of *parens patriae* (the king as father of the people) also has occasionally been applied to environmental issues. Originally developed by English courts to allow the king to protect infants, the mentally handicapped, and charities, this concept has been extended by American courts to allow the government to protect the citizenry generally. State governments have typically used the doctrine to sue out-of-state polluters whose contamination is carried into their territory.⁹ The doctrine has not been used often in the environmental area, however; nuisance law on its own seems to have provided governments with a flexible enough cause of action. Moreover, the *parens patriae* doctrine seems not to have developed any independent contours that might inform the nature of the rights protected under nuisance law.¹⁰

At about the time these venerable common law doctrines were called into service against modern environmental problems, legislatures stepped in to create more definite statutory remedies. Federal and state environmental statutes have added a formidable arsenal of statutory causes of action through which the government can seek retrospective remedies for pollution. Most of the federal statutes authorize federal suits in the face of “imminent and substantial endangerment.”¹¹ While not all the statutes use this exact wording, “imminent and substantial endangerment” has come to be treated as a term of art applicable to them all. In general, when an imminent and substantial endangerment is found, the federal government is authorized to seek whatever relief is “appropriate” or “necessary.” This authority is fairly broad, because the courts have interpreted the term “imminent and substantial endangerment” more loosely than a first literal reading might suggest.¹² The relief obtainable ordinarily includes a court order to stop or clean up pollution.

In addition, three statutes authorize the government to implement cleanups and recover their costs from responsible parties. These provisions in CERCLA,¹³ the Federal Water Pollution Control Act (FWPCA),¹⁴ and the Oil Pollution Act.¹⁵ essentially enable the government to seek retrospective liability from polluters by billing them for the cost of cleaning up the pollution.¹⁶ CERCLA cost-recovery actions have become a staple of environmental law.

§ 3:38 Using the liability system to impose costs on polluters—Liability to the government to pay damages for pollution

The liability considered in the previous subsection is equitable in nature. Either the polluter receives a court order to clean up its pollution, or the government cleans it up and bills the polluter through a cost-recovery action, which is essentially an action for restitution. Legal—as opposed to equitable—remedies also exist in

⁸Carlson, Making CERCLA Natural Resource Damage Regulations Work: The Use of the Public Trust Doctrine and Other State Remedies, 18 Env'tl. L. Rep. (Env'tl. L. Inst.) 10299, 10303 (1988).

⁹See, e.g., *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907); *Missouri v. Illinois*, 180 U.S. 208 (1901).

¹⁰On the *parens patriae* doctrine generally, see Curtis, The Checkered Career of *Parens Patriae*: The State as Parent or Tyrant, 25 DePaul L. Rev. 895 (1976), from which the textual discussion draws heavily.

¹¹See, e.g., RCRA § 7003, 42 U.S.C.A. § 6973; CERCLA § 106, 42 U.S.C.A. § 9606; FWPCA § 504, 33 U.S.C.A. § 1364; Safe Drinking Water Act § 1431, 42 U.S.C.A. § 300i; and Clean Air Act § 303, 42 U.S.C.A. § 7603.

¹²See § 14:135.

¹³CERCLA § 107, 42 U.S.C.A. § 9607.

¹⁴FWPCA § 311, 33 U.S.C.A. § 1321.

¹⁵Oil Pollution Act of 1990, Pub. L. No. 101-380, § 1002, 104 Stat. 484 (1990).

¹⁶For more on the CERCLA and FWPCA cost-recovery provisions, see §§ 13:143 and 14:138.

environmental law, though they are less well-developed. This subsection discusses some of those legal remedies.

Five federal statutes create special causes of action for the government to recover damages for injuries to natural resources. The best known of these provisions is in CERCLA, and makes any party who is responsible for the release of hazardous substances liable for these damages.¹ The Oil Pollution Act of 1990 assigns natural resource damage liability to parties responsible for oil spills into United States waters or adjoining shorelines.² The FWPCA creates liability for oil and hazardous substance discharges into navigable waters not already covered by the Oil Pollution Act.³ An untitled statute enacted in 1990, Public Law 101-337, creates liability for any person who injures resources in a national park.⁴ The Marine Protection, Research and Sanctuaries Act (MPRSA) makes any person who injures resources in a federally designated marine sanctuary liable for natural resource damages.⁵

The concept of natural resource damages is a powerful one. It is conceptually different from the forms of retrospective liability previously considered. The common law nuisance doctrine and the imminent and substantial endangerment provisions enable the courts to order a polluter to stop or to clean up pollution. The natural resource damages concept is broader, offering relief to “make the environment whole again,” much as traditional tort damages make the victim whole. The difference between *making the environment whole* and cleaning up the environment is critical. Make-whole relief can go much further.

For example, make-whole relief under a natural resource damages doctrine easily surpasses an injunction merely ordering a polluter to stop polluting, or to move its polluting activity elsewhere. Such an injunction leaves existing harm to the environment unremedied, and only prevents additional harm.

Make-whole relief can also go further than an injunction requiring a polluter to clean up the environment. A polluter is rarely physically or economically able to rid the environment of all traces of its pollution. As a practical matter, the polluter is usually required only to remove pollution down to a regulatory standard, and thus *some* pollution will nearly always be left. In recent years that “some” has often proven to be quite a bit. Many hazardous waste cleanups, for example, cover contamination over but do not destroy it. Natural resource damages are an important category of the residual damages that remain even after the injunctive relief is performed.

Moreover, many years may pass between the polluting incident and the cleanup. The pollution may first go undetected, and then there is often a long period of sampling, monitoring, and investigation to confirm the harm and identify the

[Section 3:38]

¹CERCLA § 107(a)(4)(C), 42 U.S.C.A. § 9607(a)(4)(C).

²Oil Pollution Act of 1990, Pub. L. No. 101-380, § 1002, 104 Stat. 484 (1990). The Oil Pollution Act replaces two earlier natural resource damage provisions: Deepwater Port Act § 18, 33 U.S.C.A. § 1517(i)(3), and Outer Continental Shelf Lands Act § 303, 43 U.S.C.A. § 1813(a). On the historic development of the natural resource damage provisions, see Breen, *Citizen Suits for Natural Resource Damages: Closing a Gap in Federal Environmental Law*, 24 Wake Forest L. Rev. 851 (1989).

³FWPCA § 311(f)(5), 33 U.S.C.A. § 1321(f)(5). Oil Pollution Act § 2002(a) provides that the FWPCA natural resource damage provision does not apply where liability is established under the Oil Pollution Act.

⁴The statute is codified at 16 U.S.C.A. §§ 19jj to 19jj-4.

⁵Marine Protection, Research and Sanctuaries Act § 312, 16 U.S.C.A. § 1443. A fifth federal statute, the Trans-Alaska Pipeline Authorization Act, makes the pipeline right-of-way holder and vessel owners liable for damages in Alaska. However, the statute is not clear that it encompasses natural resource damages rather than economic damages, and the implementing regulations define damages as *economic* loss.

responsible party. This can be followed by negotiations and enforcement to compel cleanup, and finally actual environmental cleanup, which itself can take years. During all this time, the environment remains unremedied; at best, a temporary containment effort keeps the problem from spreading. In cases like this, the natural resource damages concept can play a critical role in obtaining make-whole relief for the environment by assessing a charge for the environmental values lost while the pollution was uncorrected. Indeed, when polluters argue that cleanup is not necessary because “if we give it enough time the environment will purify itself,” this is often a euphemism for dilution of the contamination into the environment to the point where actual removal is not feasible. When this happens, natural resource damages can be an effective way to make the environment whole.

Finally, the make-whole relief of natural resource damages covers damage to plants and wildlife that is often unaddressed by cleanup of contaminated water and soil. Contamination can persist in the bodies of living things, and so affect the food chain, long after it has been removed from the environment. The natural resource damages doctrine provides a cause of action to compensate for the potential harm done to affected species.

The make-whole relief of natural resource damages does not require that the amount recovered from polluters be spent to clean up the pollution they caused. Rather, natural resource damage recoveries can be used for such direct restoration purposes *or* for making the environment whole by improving it elsewhere. For example, if a wetland has been badly damaged, natural resource managers have the option of restoring it or using the same money to improve another wetland in the region, or even to create a new wetland entirely if one is needed and practicable.

At first, the power of the natural resource damages concept was undercut by miserly regulations prepared by the Interior Department to implement the natural resource damage provisions of CERCLA and the FWPCA.⁶ These regulations were generally biased towards underassessing the damage done. They provided that government natural resource trustees would measure damage by choosing the *lesser* of two alternative yardsticks: the cost of physically restoring the injured resource or the “lost-use value” of the resource. Lost-use value is an economic construct that attempts to measure how much the uses of the lost resources were worth; under the Interior Department regulations, it is based on the resources’ market value whenever possible. As a practical matter, however, market value rarely captures all of the environmental benefits of natural resources, and the cost of physical restoration will usually be much higher than the lost-use value as defined in the regulations. A far more preferable yardstick would be the cost of physical restoration *plus* the lost-use value for the time that the resources remained unrestored and thus unavailable to the public and other parts of the ecosystem.

While trustees’ use of the Interior Department natural resource damage regulations is legally only optional, not mandatory, as a practical matter the regulations are of enormous importance. The topic is so conceptually and technically complex that most government agencies need a regulatory roadmap as they prepare natural resource damage cases against polluters. Moreover, CERCLA provides that a natural resource damage assessment prepared in accordance with the regulations is entitled to a rebuttable presumption of validity.⁷

Fortunately, in 1989, the District of Columbia Circuit Court of Appeals overturned

⁶43 C.F.R. § 11. These Interior Department regulations stand in stark contrast to regulations promulgated by the Transportation Department under the natural resource damage provisions of the Outer Continental Shelf Lands Act. The Transportation Department allowed a far more generous recovery, including the full cost of restoring or replacing lost resources as well as some compensation for lost use of resources. 33 C.F.R. §§ 136.213 to 136.217 (1989).

⁷CERCLA § 107(f)(2)(C), 42 U.S.C.A. § 9607(f)(2)(C). The rebuttable presumption applies to

the Interior Department regulations, striking down the requirement that trustees choose the *lesser* of the restoration cost or the lost-use value of the resource.⁸ The court ordered the Interior Department to revise the regulations to provide a “distinct preference” for using the cost of physical restoration as the measure of natural resource damage.⁹ While much depends on how the Department responds to this order, its proposed regulations are encouraging.¹⁰ For now it seems clear that the natural resource damage doctrine has been reinvigorated, and could play a major role in cleaning up pollution and in providing an incentive to avoid polluting in the first place.

Even so, a serious limit on the natural resource damage doctrine remains embedded in federal law. Each of the four statutory provisions allows only government agencies to bring claims for natural resource damages. Thus, under current law, private citizens and environmental groups are not legally authorized to bring such claims, no matter how much they use or depend on the resources.

The Oil Pollution Act provides partial relief for citizens. Under that act, citizens can sue federal officials, asking a court to order the officials to enforce the Oil Pollution Act’s natural resource damage provisions.¹¹ This is an important step forward from CERCLA, the FWPCA, and the MPRSA. But the Oil Pollution Act still falls short of typical citizen suit authority under other environmental provisions, where citizens can sue the federal officials *or* directly sue the polluters.¹² A useful refinement of the citizen suit provisions would amend them to incorporate this full application of the power of citizen suits.¹³

§ 3:39 Using the liability system to impose costs on polluters—Liability to private parties to clean up pollution

The retrospective liabilities considered thus far are liabilities to the government, either as injunctive relief (or cost recovery) or as damages. If environmental law provided remedies only to governments, however, it would be incomplete for two reasons. First, not all pollution damages are inflicted on governments. Pollution often harms individuals and businesses as well. Second, governments are notoriously slow to act, and the environmental area has been no exception.¹

There is thus much room for private enforcement of environmental protection.

administrative and judicial proceedings under both CERCLA and the FWPCA.

⁸Ohio v. United States Dep’t of the Interior, 880 F.2d 432, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 21099 (D.C. Cir. 1989).

⁹The court observed that the Interior Department still has latitude in revising the regulations, and hinted that the court would approve limiting restoration cost to three times the lost-use value, and that lost-use value would be an appropriate measure of damages when physical restoration is not feasible. Ohio v. United States Dep’t of the Interior, 880 F.2d 432, 443–44 n.7, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 21099 n.7 (D.C. Cir. 1989).

¹⁰56 Fed. Reg. 19752 (Apr. 29, 1991).

¹¹Oil Pollution Act, Pub. L. No. 101-380, § 1006(g), 104 Stat. 484 (1990).

¹²See § 3:26 and § 3:39.

¹³Breen, Citizen Suits for Natural Resource Damages: Closing a Gap in Federal Environmental Law, 24 Wake Forest L. Rev. 851 (1989).

[Section 3:39]

¹There is both statistical and anecdotal evidence that government often acts at a snail’s pace in the environmental area. On the statistical side, a recent study evaluated EPA compliance with legally mandated timetables, that is, statutory requirements embodying congressional directives to perform particular acts by particular dates. EPA accomplished only 14 percent of these high-priority tasks on time. It performed only 55 percent of these priorities, whether on time or late. See Environmental and Energy Study Institute & Environmental Law Institute, Statutory Deadlines in Environmental Legislation: Necessary but Need Improvement 12-13 (Sept. 1985) (available in the library of the Environmental Law Institute). For an example of anecdotal evidence of government’s slowness in the environmental

Under existing law, this enforcement usually takes one of three forms. The first, the citizen suit to enforce standards or permits issued by traditional command and control regulatory agencies, has already been considered.² Such citizen suits are the least intrusive form of private environmental enforcement: they merely compel compliance with requirements already set by government regulators.

The other two forms of private enforcement of environmental protection both give the private enforcer substantially more control. The first is the private suit for injunctive relief, and the second is the private suit for damages. This subsection and the next address these forms of enforcement.

Private suits for injunctive relief are generally difficult to bring. While allowing public authorities to sue to abate public nuisances,³ the common law traditionally has been hostile to private lawsuits against public nuisances. Generally, the courts have given private plaintiffs standing only if they have been uniquely harmed by a public nuisance. The harm must be *qualitatively* different from, not just *quantitatively* greater than, that suffered by members of the public generally.⁴ Similarly, courts have restrictively interpreted the three state statutes that permit private citizens to sue to protect the public trust.⁵

Surprisingly, until very recently Congress has not been much more hospitable to private suits for injunctive relief. The first provision authorizing such suits was not enacted until the 1984 amendments to the Resource Conservation and Recovery Act. RCRA section 7002⁶ now permits “any person” to sue “any person” “who has contributed or who is contributing” to a hazardous waste or solid waste “imminent and substantial endangerment to health or the environment.” Essentially, this gives “imminent and substantial endangerment” injunctive relief authority under RCRA to private citizens as well as government regulators.⁷ However, this powerful expansion of “imminent and substantial endangerment” authority was not made a part of amendments to the Safe Drinking Water Act in 1986, CERCLA in 1986, the FWPCA in 1987, or the Clean Air Act in 1990.⁸

§ 3:40 Using the liability system to impose costs on polluters—Liability to private parties to pay damages for pollution

Common law has long recognized a private cause of action to recover for personal injury or property damage resulting from pollution. Actions brought under this tort doctrine form a large body of law.¹

area, *see* ABA Standing Comm. on the Env't, Panel Discussion, Direct Governmental Review, Restriction, and Prohibition of Private Sector Transactions and Property Transfers, 18 Env'tl. L. Rep. (Env'tl. L. Inst.) 10374, 10374–75 (1988).

²*See* § 3:25.

³*See* § 3:36.

⁴*See generally* Prosser and Keeton on the Law of Torts p 586–88. *See also* An Ounce of Prevention: Rehabilitating the Anticipatory Nuisance Doctrine, 15 B.C. Env'tl. Aff. L. Rev. 627 (1988).

⁵The states with such statutes are Michigan, Minnesota, and Connecticut. *See* Gionfriddo, Sealing Pandora's Box: Judicial Doctrines Restricting Public Trust Environmental Citizen Suits, 13 B.C. Env'tl. Aff. L. Rev. 439 (1986).

⁶42 U.S.C.A. § 6972.

⁷*See* § 3:36.

⁸Congress contemplated adding such a provision to CERCLA, but concluded that the cases it would cover could already be brought under the RCRA provision. *See* Atkeson, Goldberg, Ellrod, & Connors, An Annotated Legislative History of the Superfund Amendments and Reauthorization Act of 1986, 16 Env'tl. L. Rep. (Env'tl. L. Inst.) 10360, 10409 (1986).

[Section 3:40]

¹This body of law is the subject of another entire book in this series. M. Dore, Law of Toxic Torts:

Probably the largest hurdle for toxic tort victims is marshalling scientific evidence linking their injuries to particular pollutants, and these pollutants to particular polluters. Proving causation requires substantial sophistication and expense, and it is probable that many deserving victims have been unable to make their cases. Some recent federal legislation offers promise in this regard: CERCLA provides for federal studies of the relationship between particular injuries and particular pollutants, and the Emergency Planning and Community Right-to-Know Act requires polluters to publicly report their discharges of particular pollutants. These measures should ease victims' burdens of demonstrating causation. While there is no federal cause of action for toxic tort victims, most states recognize strict liability and similarly favorable legal theories.

Toxic tort actions play an important role in compensating victims of pollution, and they help deter pollution by making it costly for polluters. However, they have thus far been inadequate tools for protecting the environment because they only compensate for *personally suffered* damages. Pollution-caused disease, loss of property value, and pain and suffering are all compensable, but do not include losses to the *environment* separate from those to the plaintiff. For example, homeowners who sue a polluter for causing groundwater contamination can recover for their physical symptoms of contamination, for reduction in their homes' resale value, and for pain and suffering caused by their injuries, but they cannot recover for the effects of the contamination on the environment at large. Occasionally punitive damages are awarded that exceed the amount necessary to compensate for an individual's injuries. However, punitive damages are awarded to the plaintiff, not the environment, and there is no systematic correlation between punitive damages and otherwise uncompensated damage to the environment.

Consequently, some commentators have suggested that the environment itself ought to have standing to sue in tort. This concept has received some acceptance in the Supreme Court, though never as part of a majority opinion.² The next subsection considers this expansion of liability.

§ 3:41 Liability to the environment itself

The concept that the environment itself may have some legal rights has been most fully articulated in the works of Professor Christopher Stone.¹ One could imagine many sorts of environmental rights; one common formulation would grant an environmental entity, such as a river, a forest, or the atmosphere, the right to recover for damage done to it. That is, polluting an environmental entity would give that entity a cause of action in tort for injunctive relief (an order to the polluter to stop or to clean up) or for damages (payments to remedy the pollution directly or to foster development of another environmental entity similar to the one damaged).

Of course, the environment cannot speak for itself and cannot make its own decisions; this would be done by guardians, appointed much as guardians are appointed to protect the legal rights of children or the mentally handicapped. The guardians could be environmental advocacy groups or court-appointed lawyers competent in the field. Their advocacy would be guided by a set of preferences imputed to the

Litigation/Defense/Insurance (West Group Environmental Law Series).

²See *Sierra Club v. Morton*, 405 U.S. 727, 2 Env'tl. L. Rep. (Env'tl. L. Inst.) 20192 (1972) (Douglas, J., dissenting).

[Section 3:41]

¹The seminal article in the field is Stone, *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*, 45 S. Cal. L. Rev. 450 (1972). Professor Stone has more recently expanded his reasoning in a book-length treatment of the issue, *Earth and Other Ethics* (1987). See also Zak, *Ethics and Animals*, *The Atlantic Monthly*, Mar. 1989, at 69 (advocating legal rights for animals).

environment, including, for example, a preference for maintaining ecosystems' physical integrity and undisturbed natural cycles.

A system providing rights to the environment would not end human exploitation of the environment, but would require some compensation for that exploitation. It would therefore make development more costly. Indeed, such a system is attractive partly because it would make market prices capture more of the true costs of human activities.

Our current system does not recognize as a cost the loss to the ecosystem and to society of environmental amenities previously provided by resources used for development. When we want to use part of the ecosystem for our own ends we pay only what it is worth to the owner, not what it is worth to all of us, although we all rely on it for the basic necessities of life. Each time a forest is cut to build a resort, for example, the developer pays for bricks, mortar, labor, and other factors of production, but not for the loss of the forest to the ecosystem as a whole. But the forest is gone just the same, and the birds that had made their habitat there, the groundwater that had been recharged there, and the carbon dioxide that had been converted to oxygen there are all displaced. Some of the environment is usually lost in the process; there are fewer birds, less groundwater recharge, and less carbon dioxide conversion. Society gains whatever economic benefits the resort generates, but loses the amount by which the true value of the forest exceeded the amount the developer paid for it. In general, one would expect too much development when the economic and legal system does not impose costs on developers commensurate with losses to the ecosystem.

There is thus much reason to favor a system granting rights to the environment. But development of such a system will require sophisticated answers to a set of complex questions.

One difficulty is deciding what level of the environment should have legal rights. Should each individual tree have rights, or all trees of a particular forest, or all trees globally? Should salmon have rights of their own, or only as part of a coastal and riverine ecosystem? Answers to such questions can be important when a particular species is arguably interfering with the ecological balance: should killer bees migrating into the United States from Central America have rights? Answers to questions such as this can also be important even when the ecosystem is in balance: do wolves and caribou have separate rights to be separately protected, or only the right to continue their mutual antagonism free from human intervention?²

Perhaps the problem of assigning environmental rights is really the symptom of a more fundamental question: *why* give rights to the environment? There are at least three possible rationales that in some cases yield different results. First, rights can be assigned to the environment as proxies for the unasserted rights of people who use the environment, but whose individual rights are too small to defend. This makes the environment a sort of proxy for a class action suit. It is an effort to correct procedural flaws in the operations of markets and courts, not to change the underlying philosophies of the existing economic and legal systems. Alternatively, one could assign rights to the environment as a legacy to generations yet unborn. Existing markets and courts protect those who are now living; people destined to be born many decades from now are not represented. Finally, one could grant rights to the environment because on moral grounds one thinks that nonhumans should have rights.

The last approach is not necessarily the most enlightened one. What happens when the rights of a nonhuman conflict with those of a human? Who should give way? Frequently, the humans who most need the help that would come from

²See also § 10:58.

increased development are the poor. Prohibiting further environmental encroachment without redistributing the benefits of existing uses of the environment could freeze the existing social order. In that case, advocating rights for the environment would sound very much like the rich saying, “I’ve got mine, but you can’t have yours.”

In short, the question of whether to recognize environmental rights cannot simply be answered with a “yes.” That answer only opens the door for a whole set of linedrawing issues.

§ 3:42 New tools for effectively achieving environmental goals: A choice of practicalities and values

Environmental protection turns out to be a far subtler field than it might at first appear. The prescriptive approach of command and control regulation overlooks important tools that may supplement or replace that approach to better achieve environmental ends. The tools to choose depend on the environmental problem and the nature of the threat. This is a tactical question, to be answered based on what works as a practical matter. In general, many promising but underutilized tools would “privatize” environmental regulation by increasing the private sector’s incentives for environmental protection.

At the same time, the choice of tools can also depend on one’s view of why we protect the environment in the first place: for ourselves, for our descendants, or for the environment itself. This is at least partly a moral question, informed by fundamental views of the world and the human role in it. The question underlies many of the issues environmental law must resolve. The way society resolves environmental issues reveals much about its underlying moral structure, and can teach us much about ourselves if only we pay attention.

VIII. THE NEXT 40 YEARS OF ENVIRONMENTAL LAW*

§ 3:43 Introduction

The one thing we know about predictions for the future of environmental law is that most of them are likely to be wrong. Uncertainty is a fundamental feature of environmental challenges, and the track record of humans in forecasting future environmental challenges is not one that inspires confidence. In an edition of *The Weekly Standard* that went to press on April 16, 2010—four days before the *Deepwater Horizon* offshore oil platform exploded, precipitating the worst oil spill in U.S. history—a fellow at the American Enterprise Institute wrote: “Improvements in drilling technology have greatly reduced the risk of the kind of offshore [oil] spill that occurred off Santa Barbara in 1969 To fear oil spills from offshore rigs is analogous to fearing air travel now because of prop plane crashes in the 1950s.”¹ Oops.

Some predictions have proven more accurate than others. The very first report of the Council on Environmental Quality (CEQ), published in 1970, devoted an entire chapter to concerns that emissions of greenhouse gases (GHGs) could cause global

*By **Robert Percival**. Adopted with permission from Robert Percival, “Looking Backward, Looking Forward: The Next 40 Years of Environmental Law,” 43 *Envtl.L.Rep.* 10492 (June 2013).

[Section 3:43]

¹Steven F. Hayward, *The Energy Policy Morass*, *The Weekly Standard*, Apr. 26, 2010. The author later issued a “mea culpa,” while arguing that the basic premise of his previous article was correct, despite the BP spill. Steven F. Hayward, *How to Think About Oil Spills*, *The Weekly Standard*, June 21, 2010, <http://www.weeklystandard.com/articles/how-think-about-oil-spills?page=1> (last visited Apr. 29, 2013).

warming and climate change.² While this seems prescient today, prior warnings were issued by the French scientist Joseph Fourier in 1824 and the Swedish scientist Svante Arrhenius in 1896. As sea levels have steadily risen, it was well-known at the beginning of the 21st century that a hurricane could devastate New Orleans or New York City. Following the devastation of New Orleans by Hurricane Katrina, the director of the National Hurricane Center told the U.S. Congress in 2006 that it “is not a question of if a major hurricane will strike the New York area, but when.”³ A year before Hurricane Sandy deluged lower Manhattan in 2012, an author noted a NASA climate study forecasting that “if a Category 3 hurricane, like Katrina, were to hit New York, it could create a storm surge” that “would destroy billions of dollars worth of property and could shut the city down.”⁴

To divine the future of environmental law, it is useful first to consider past predictions, how well they have fared, and why. Thus, this Article begins by reviewing some past predictions in light of what is known today. It then considers the complicated relationship between public perceptions of environmental problems and legislative responses to them considering current political gridlock over environmental concerns. The Article then examines contemporary forecasts of the fate of the planet and the role of technological change in creating opportunities for environmental progress. It concludes by offering some observations about the future, extrapolating from emerging global trends.⁵

§ 3:44 Looking backward: past predictions of the future environment

The U.S. environmental movement has deep historical roots in warnings concerning the impact of unchecked development. In the first edition of his classic work, *Man and Nature: Or, Physical Geography as Modified by Human Action*, former U.S. diplomat George Perkins Marsh cited deforestation of the Middle East to warn of the importance of conserving U.S. forests. The more popular second edition of the work, renamed *The Earth as Modified by Human Action*, provided an important boost to the late 19th century campaign to establish national parks.

In the post-World War II era, the publication of Rachel Carson’s *Silent Spring* is widely credited as a primary impetus for the birth of the modern environmental movement. Carson alerted the public to the dangers of synthetic organic pesticides that would accumulate in the food chain and cause severe, long-term environmental damage. In the wake of Carson’s warnings, the Environmental Defense Fund was founded in 1967 by a group of scientists eager to have dichlorodiphenyltrichloroethane (DDT) banned.

§ 3:45 Looking backward: past predictions of the future environment— Paul Ehrlich’s *Population Bomb*

Population growth inspired early predictions of environmental disaster during the formative years of the modern environmental movement. In his 1968 book *The Population Bomb*, biologist Paul Ehrlich forecast that population growth would soon exceed the earth’s carrying capacity, leading to global famines and resource shortages. Calling Ehrlich a “Malthusian,” economist Julian Simon argued in *The Ultimate Resource* that “[n]atural resources are not finite” because human ingenuity

²CEQ, Environmental Quality—1970 93 (1970).

³Jennifer Peltz, *Hurricane Barriers Floated to Keep Sea Out of NYC*, Associated Press, May 31, 2009.

⁴Alex Prud’homme, *The Ripple Effect* 211 (2011) (Hurricane Sandy, which flooded New York City in October 2012, was a Category 3 hurricane.).

⁵The author previously addressed the future evolution of environmental law in Robert V. Percival, *Environmental Law in the Twenty-First Century*, 25 Va. Env’tl. L.J. 1 (2007).

continually finds more efficient ways to use them. The two agreed in 1980 to test their theories by betting \$1,000 on whether the prices of five metals—chrome, copper, nickel, tin, and tungsten—would be higher or lower in the year 1990. Ehrlich argued that prices would rise with increased demand for a finite supply of the metals. Simon bet that prices would fall. In 1990, Simon won the bet when the prices of all five metals declined in real terms due in part to the development of substitutes.¹

The earth now has seven billion people, but population growth has slowly slipped from the forefront of environmental concerns. As countries develop, birth rates consistently have fallen and the rate of overall population growth has slowed. Ironically, Ehrlich's warning may have contributed to the very trends that defeated his bet. Today, Ehrlich believes that a collapse of global civilization can be avoided "because modern society has shown some capacity to deal with long-term threats, at least if they are obvious or continuously brought to attention (think of the risks of nuclear conflict)."² However, Ehrlich has not yet become a full-fledged optimist. He is skeptical of how well environmental concerns will fare in the political process because "the risks are clearly not obvious to most people" and the costs of preventing them are incurred up front, while the benefits accrue to unknown future generations.

**§ 3:46 Looking backward: past predictions of the future environment—
Gregg Easterbrook's *A Moment on the Earth***

More than two decades after Ehrlich's dire warnings, journalist Gregg Easterbrook made a splash by arguing that environmentalists were a bunch of alarmists because most of the developed world's major environmental problems were nearly solved. In his 1995 book *A Moment on the Earth: The Coming Age of Environmental Optimism*, Easterbrook argued that "the Western world today is on the verge of the greatest ecological renewal that humankind has known; perhaps the greatest that the Earth has known." Easterbrook predicted that in the developed "world pollution will end within our lifetimes, with society almost painlessly adapting a zero-emissions philosophy." He also predicted that "most feared environmental catastrophes, such as runaway global warming, are almost certain to be avoided."¹

Not surprisingly, Easterbrook's views generated considerable controversy. The Environmental Defense Fund complained that Easterbrook "repeatedly criticizes scientists whose dire predictions have not come to pass, without fully acknowledging that their forecasts catalyzed changes in laws and policies that forestalled the predictions themselves."²

More than a decade after his book was published, Easterbrook announced that he had modified his position concerning global warming in the light of mounting scientific evidence. "As an environmental commentator, I have a long record of opposing alarmism. But based on the data I'm now switching sides regarding global warming, from skeptic to convert." Easterbrook proclaimed that "[t]he science has changed

[Section 3:45]

¹John Tierney, *A Bet on the Planet Earth*, N.Y. Times Mag., Dec. 2, 1990, at 52.

²Paul R. Ehrlich & Anne H. Ehrlich, *Can a Collapse of Global Civilization Be Avoided?*, 280 Proceedings of the Royal Society, December 2012, available at <http://dx.doi.org/10.1098/rspb.2012.2845>.

[Section 3:46]

¹Gregg Easterbrook, *A Moment on the Earth: The Coming Age of Environmental Optimism* (1995).

²Environmental Defense Fund, *A Moment of Truth: Correcting the Scientific Errors in Gregg Easterbrook's A Moment on the Earth* (1995).

from ambiguous to near-unanimous concerning the ‘greenhouse effect’ and that greenhouse gas emissions must be curbed.”³

**§ 3:47 Looking backward: past predictions of the future environment—
Bjørn Lomborg’s *The Skeptical Environmentalist***

While visiting a bookstore in Los Angeles in February 1997, a Danish statistician named Bjørn Lomborg read an interview with Simon in *Wired* magazine.¹ Lomborg claims that this experience triggered an epiphany that resulted in his writing *The Skeptical Environmentalist*, published in 2001. In this book, Lomborg claimed that the global environmental movement had vastly overstated the scope of environmental problems. Repeating claims remarkably similar to those of Easterbrook, without citing Easterbrook’s work, Lomborg wrote:

We will not lose our forests; we will not run out of energy, raw materials, or water. We have reduced atmospheric pollution in the cities of the developed world and have good reason to believe that this will also be achieved in the developing world. Our oceans have not been defiled, our rivers have become cleaner and support more life Nor is waste a particularly big problem The problem of the ozone layer has been more or less solved. The current outlook on the development of global warming does not indicate a catastrophe And, finally, our chemical worries and fear of pesticides are misplaced and counterproductive.

Not surprisingly, opponents of environmental regulation quickly embraced Lomborg’s work.² He became a highly sought-after critic of the environmental movement, which he dismissed as the captive of fear mongers. Lomborg ignored the fact that much of the progress he cited was a product of the very movement he criticized.³ As one reviewer noted: “The ultimate irony is that Lomborg could have presented his mass of data as a tribute to the effectiveness of environmental policy. That he chooses to do the opposite says far more about him than about any claimed objectivity of his statistical analysis.”⁴

Some of Lomborg’s predictions have proven to be wildly optimistic. For example, Lomborg predicted that oil prices would remain below \$27/barrel until 2020. Instead, they soared to more than \$140 per barrel in mid-2008 before plunging to \$40/barrel after the global financial crisis and then rising to current levels more than three times higher than Lomborg’s forecast. Lomborg’s rosy view of the impact of climate change also has been contradicted by recent events. Three years ago, Lomborg conceded that global warming is “undoubtedly one of the chief concerns facing the world today” and “a challenge that humanity must confront.”⁵

The dramatic shift that has occurred in U.S. energy supply during the last few

³Steven Milloy, *Global Warming Skeptic Claims Environmental Conversion*, Fox News.com, May 25, 2006, <http://www.foxnews.com/story/2006/05/25/global-warming-skeptic-claims-environmental-conversion/> (last visited Apr. 29, 2013).

[Section 3:47]

¹Jeroen C.J.M. van den Bergh, *An Assessment of Lomborg, The Skeptical Environmentalist and the Ensuing Debate*, 7 J. Integrative Env’tl. Sci. 23 (Mar. 2010).

²See, e.g., Kozinski, *Gore Wars*, 100 Mich. L. Rev. 1742 (2002) (book review).

³Percival, *Skeptical Environmentalist or Statistical Spin-Doctor? Bjørn Lomborg and the Relationship Between Environmental Law and Environmental Progress*, 53 Case W. Res. L. Rev. 263 (2002).

⁴Grubb, *Relying on Manna From Heaven?*, 294 Sci. 1285, 1286 (Nov. 9, 2001). See also Kysar, *Some Realism About Environmental Skepticism: The Implications of Bjørn Lomborg’s the Skeptical Environmentalist for Environmental Law and Policy*, 30 Ecology L.Q. 223 (2003).

⁵Matthew Moore, *Climate “Sceptic” Bjørn Lomborg Now Believes Global Warming Is One of World’s Greatest Threats*, The Telegraph, Aug. 31, 2010, <http://www.telegraph.co.uk/earth/environment/globalwarming/7972383/Climate-sceptic-Bjorn-Lomborg-now-believes-global-warming-is-one-of-worlds->

years was largely unforeseen. The use of hydraulic fracturing to extract natural gas and oil from shale formations has greatly increased the domestic supply of these fuels. This has produced dramatic reductions in the price of domestic natural gas that have shifted our electric supply away from coal.

§ 3:48 Legal responses to environmental risks

The relationship between legal change and public perceptions of environmental risk is complex and uncertain. The enactment of environmental legislation often has required some “trigger event” such as a highly publicized incident of visible environmental harm that generates intense and immediate public concern.¹ Examples include the Superfund legislation² adopted in 1980 after highly publicized contamination of homes in Love Canal by previously buried hazardous wastes, the Emergency Planning and Community Right to Know Act³ adopted in 1986 in response to the Bhopal tragedy, and the Oil Pollution Act of 1990⁴ adopted in response to the *Exxon Valdez* oil spill.

A strong, bipartisan consensus in favor of federal regulation launched the comprehensive environmental legislation Congress passed during the 1970s and early 1980s. While these laws still form the infrastructure of U.S. environmental policy today, for much of the past two decades, legislative gridlock has prevailed in Congress. Today, even highly publicized environmental disasters such as the April 2010 *Deepwater Horizon* oil spill in the Gulf of Mexico have generated scant legislative response. Members of President Barack Obama’s National Commission on the BP *Deepwater Horizon* Oil Spill and Offshore Drilling have sharply criticized Congress for failing to implement the Commission’s recommendations.⁵ Even a modest proposal to repeal the \$75 million limit on liability for non-negligent oil spills from offshore facilities⁶ failed to win approval in the U.S. Senate.

It now seems clear that the bipartisan consensus that spawned ambitious U.S. environmental legislation during the 1970s and 1980s has disappeared. During the 2012 U.S. presidential election campaign, the two major political parties were sharply split in their views concerning regulatory policy. Republican candidates blamed environmental regulation for high unemployment and slow economic growth, while Democrats generally tried to change the subject. Yet, until the 2008 global financial crisis, which produced the greatest economic downturn next to the Great Depression, the U.S. economy prospered despite stringent environmental regulation. Extractive industries, newly freed from the restrictions of campaign finance laws by the U.S. Supreme Court’s decision that they have a First Amendment right to spend directly on election campaigns,⁷ flooded the airwaves with ads blaming high unemployment on U.S. Environmental Protection Agency (EPA) regulation. Despite

[greatest-threats.html](#) (Apr. 29, 2013).

[Section 3:48]

¹Robert V. Percival, *Environmental Legislation and the Problem of Collective Action*, 9 *Duke Envtl. L. & Pol’y F.* 9 (1998).

²42 U.S.C.A. §§ 9601 to 9675, ELR Stat. CERCLA §§ 101 to 405.

³42 U.S.C.A. §§ 11001 to 11050, ELR Stat. EPCRA §§ 301 to 330.

⁴33 U.S.C.A. §§ 2701 to 2761, ELR Stat. OPA §§ 1001-7001.

⁵Oil Spill Commission Act, *Assessing Progress Three Years Later*, Apr. 17, 2013 (giving Congress a Grade of D+ on implementing the Commission’s regulations). *See also* Tom Zeller Jr., *Oil Spill Commission Action Group Gives Congress Low Grades for Regulatory Reform on Drilling*, Apr. 17, 2012, http://www.huffingtonpost.com/2012/04/17/oil-spill-commission-action-grades_n_1431886.html (last visited Apr. 29, 2013).

⁶33 U.S.C.A. § 2704(a)(3).

⁷*Citizens United v. Federal Election Com’n*, 558 U.S. 310, 130 S. Ct. 876, 175 L. Ed. 2d 753, 187

all-time record temperatures and hurricanes that caused unprecedented devastation to coastal areas, climate change nearly disappeared from U.S. political discourse during the 2012 presidential campaign. Climate change was never once mentioned during three 90-minute debates between the presidential candidates.

Public support for environmental protection remains high, and President Obama defeated a candidate who promised to roll back environmental regulation. However, a sluggish economy in the wake of the global financial crisis of 2008 appears to have eroded public support for environmental protection measures. In April 2013, the Gallup polling firm reported that only 47% of the public believed that the U.S. government is doing “too little” to protect the environment, down from 62% in 2006, while 16% believe the government is doing “too much,” an increase from 4% in 2006.⁸ Given that this period encompassed some environmental and climate-related catastrophes, including the 2010 *Deepwater Horizon* oil spill, the 2011 Fukushima Daiichi nuclear accident, and Hurricane Sandy’s devastation of the northeast United States in 2012, these poll results may discourage environmentalists.

Predicting future federal law and policy is difficult because it depends in large part on the country’s future political leadership,⁹ who will be determined based largely on factors exogenous to the environment. Environmental issues played virtually no role in pivotal presidential campaigns in 1980 and 2000, both of which resulted in leaders who pursued sharp changes in federal environmental policy.

Because President Ronald Reagan was ideologically opposed to regulation, congressional distrust of his executive agencies spawned a backlash that led Congress to strengthen U.S. environmental laws during the 1980s. When it reauthorized the federal regulatory statutes, Congress added new provisions specifying actions that regulatory agencies must take coupled with statutory deadlines for completing them. It also adopted far-reaching legislation in 1986 requiring companies to make annual public disclosures concerning their emissions of toxic chemicals.¹⁰

However, today, legislative gridlock prevails in Congress. The Republican takeover of the U.S. House of Representatives in the 2010 elections produced the most anti-environmental house of Congress in U.S. history. During the 112th Congress, the House of Representatives adopted 317 anti-environmental measures, including 145 to reduce EPA’s authority and 95 to dismantle the Clean Air Act.¹¹ These measures did not become law because they could not win passage in the Senate, which is controlled by Democrats more sympathetic to environmental regulation. Due to the partisan split in the two houses of Congress, it has become virtually impossible for Congress to enact any new environmental legislation.

§ 3:49 Looking forward: contemporary predictions of the environmental future

Contemporary predictions for the fate of the planet seem to be shaped in large part by forecasts concerning the future of technology.

L.R.R.M. (BNA) 2961, 159 Lab. Cas. (CCH) P 10166 (2010).

⁸Frank Newport, *Nearly Half in U.S. Say Government Environmental Efforts Lacking*, Gallup Politics, <http://www.gallup.com/poll/161579/nearly-half-say-gov-environmental-efforts-lacking.aspx> (last visited Apr. 29, 2013).

⁹David Vogel, *The Politics of Precaution: Regulating Health, Safety, and Environmental Risks in Europe and the United States* 34 (2012).

¹⁰*See, e.g.*, Emergency Planning and Community Right-to-Know Act, 42 U.S.C.A. §§ 11001 to 11050, ELR Stat. EPCRA §§ 301 to 330.

¹¹42 U.S.C.A. §§ 7401 to 7671q, ELR Stat. CAA §§ 101-618. Database of Anti-Environment Votes in the 112th Congress, updated Sept. 21, 2012, <http://democrats.energycommerce.house.gov/index.php?q=legislative-database-anti-environment&legislation=All&topic=All&statute=All&agency=All> (last visited Apr. 29, 2013).

§ 3:50 Looking forward: contemporary predictions of the environmental future—Al Gore’s *The Future*

In a book entitled *The Future: Six Drivers of Global Change*, former Vice President Al Gore identifies six emerging trends that will pose challenges crucial to the future health of the planet. These include a more deeply interconnected global economy; planetwide electronic communications; a new balance of global political, economic, and military power; shifting influence from states to private actors and from political systems to markets; rapid unsustainable growth; a revolutionary new set of powerful genetic and materials sciences technology; and a radically new relationship between the aggregate power of human civilization and the earth’s ecological systems.

Gore notes that there has been substantial progress on many fronts, including the fact that global poverty is declining and wars seem to be on the decline. In March 2012, the United Nations announced that the world already had achieved in advance of a 2015 deadline the Millennium Development Goal of cutting in half the proportion of people who lack sustainable access to safe drinking water.¹ However, the goal of having 75% of the world’s population with access to improved sanitation is unlikely to be met by 2015. It instead is projected to be only 67%. Signs of global environmental progress noted by Gore include the following:

Some fearsome diseases have been conquered and others are being held at bay. Lifespans are lengthening. Standards of living and average incomes—at least on a global basis—are improving. Knowledge and literacy are spreading. The tools and technologies we are developing—including Internet-based communication—are growing in power and efficacy. Our general understanding of our world, indeed, our universe (or multiverse!) has been growing exponentially. There have been periods in the past when limits to our growth and success as a species appeared to threaten our future, only to be transcended by new advances—the Green Revolution of the second half of the twentieth century, for example.²

While Gore calls himself “an optimist,” he founds such optimism on a belief that Americans eventually will be able to overcome a political system that has been “hacked” by special interests to restore the United States to a leadership role on global environmental issues. “As more of the power to make decisions about the future flows from political systems to markets, and as ever more powerful technologies magnify the strength of the invisible hand, the muscles of self-government have atrophied.”³ The vast majority of members of Congress “now represent the people and corporations who donate money, not the people who actually vote in their congressional districts.”⁴

§ 3:51 Looking forward: contemporary predictions of the environmental future—The 2052 Project

The most detailed forecasts concerning the environmental future come from the Club of Rome, a group better known for its 1972 report called *The Limits of Growth*. That report warned that population growth and development were rapidly exceeding the carrying capacity of the planet. Like Ehrlich’s *Population Bomb*, the report attracted considerable attention, though it is often dismissed today as overly

[Section 3:50]

¹UNICEF and WHO, Progress on Drinking Water and Sanitation 2012 (Mar. 6, 2012).

²Al Gore, *The Future: Six Drivers of Global Change* 72 (Apple Store iPad edition, Original font of 1,962 pages, 2013).

³*Id.* at 50.

⁴*Id.* at 53.

pessimistic. Jørgen Randars, a Norwegian professor who was one of the authors of *The Limits to Growth*, has authored a new report for the Club of Rome predicting the future of the planet in 2052. Randars incorporates 35 predictions from experts in various fields to help guide his predictions.

He concludes that nearly four decades from now, the world will no longer have an expanding population. The *2052 Report* forecasts that global population will reach a peak of 8.1 billion in the early 2040s before declining to 7 billion people by the year 2075. By 2052, 80% of the world population will be living in large urban cities (10-40 billion people) or smaller cities (1-5 million) surrounding megacities, shifting political focus onto water, noise, and air pollution as well as traffic.

The report forecasts that by 2052, the world economy will be 2.2 times larger than it is today, meaning that 120% more goods and services will be produced. Average consumption rates will increase, making for a larger “human ecological footprint” that will only be softened by increased efficiency in the use of natural resources and energy. It is predicted that China will pass the United States in the size of its economy, and India’s economy will come close to the size of the U.S. economy by the year 2050. But China still is forecast to have a per capita gross domestic product (GDP) that trails both the United States (\$56,000 per capita versus a U.S. GDP of \$73,000 per capita) and the non-U.S. Organization for Economic Cooperation and Development (OECD) (\$63,000).

The *2052 Report* forecasts that substantial additional investments will need to be made in the development and implementation of (1) scarce resources to substitute for oil, gas, and phosphorus, (2) measures to control dangerous emissions, (3) replacement of formerly free ecological services such as freshwater and fish protein, (4) repair of accumulated environmental damage from nuclear plants and offshore drilling, (5) measures to protect against future threats such as rising sea levels, (6) measures to rebuild infrastructure damaged by extreme weather, and (7) maintenance of military forces to defend resources, to fight off immigration, and to provide manpower during emergencies. Forced investments from adaptation and disaster costs will increase by 1-10% as the weather gets wilder, crowded locations require expensive new infrastructure investments to be made in exposed locations, and the expected lifetime of existing infrastructure decreases.

Growing economies will correlate with increased emissions and rising global temperatures. By 2052, global energy use will increase by 50% and more than one-half of world energy use will involve fossil fuels. Energy use will remain high, but more of it will be used wisely and sustainably with the sun either directly (through solar heat or electricity) or indirectly (wind, hydro, or biomass) providing an increased share. The greatest uncertainty in this forecast is the speed at which a transition to sustainable energy sources will occur. This transition already is underway, but it will encounter serious difficulties before and after the year 2052. Energy use is forecast to peak in the 2030s before declining as a proportion of GDP by 30% in light of growing incentives, and increased ability to conserve energy.

The *2052 Report* recognizes that increased energy taxes could speed the transition to sustainable energy sources. But it predicts that this will not occur given strong political opposition to it. Other predictions in the 2052 report include the following:

- As global warming increases average temperatures, the oceans will rise more than one foot on average and the risk of the tundra melting and releasing methane gases will increase.
- The use of coal and gas as domestic energy sources will peak by the 2040s due to rapidly increasing use of renewable energy sources.
- As climate change becomes more visible during the 2030s, energy efficiency will increase with rapid growth of renewable energy sources during the 2030s.
- Use of nuclear energy will decline until it reaches 3% of global energy sources,

while use of renewable energy will expand to 37% of such sources by 2052.

- Developing countries such as China, India, and South Africa will continue to use coal heavily until these countries turn to natural gas to decarbonize their energy sources, which will help pave the way for greater reliance on renewable energy sources.
- Renewable energy will increase to 30% of total energy sources by 2030, with hydropower and wind being the most significant sources of renewable energy and solar power becoming the dominant renewable source of electric generation by 2052.
- Carbon capture and storage (CCS) will be installed in nearly 1,000 power plants by 2052 to capture roughly one billion tons of carbon dioxide (CO₂) per year. Yet, nearly nine billion tons of CO₂ will be emitted annually (retrofitting of plants could reduce this by 20%, though the cost of such measures suggests they will likely not be undertaken by 2052).
- The use of genetically modified organisms (GMOs) will increase food production, but agriculture will be severely challenged by climate change. Increased levels of CO₂ will increase the growth of plants, but extreme high and low temperatures that stunt growth provide a mixed estimate of future crop yields (either + or—5% for crop yields by 2052).
- Average consumption in the developed world will be four times the “subsistence level” as food production continues to increase. Elites in society will move away from red meat toward fish as aquaculture increases and fish sources are limited to farms and certified fisheries.
- Unregulated fisheries in Asia, Africa, and South America will collapse and bluefin tuna will become extinct by 2020, but fisheries regulated by the United States, countries in Oceania, Japan, and the European Union will have recovered by 2052.
- About 25% of biodiversity will be eliminated by 2052, with 8% of the world’s plants threatened with extinction because of continued destruction of natural habitats and the introduction of exotic species.

§ 3:52 **Looking forward: contemporary predictions of the environmental future—Emerging technologies: the case of driverless motor vehicles**

Changes in technology, which are among the most difficult to predict, can have an enormous impact on future environmental conditions. The effect of the Internet on communications technology and the impact of hydraulic fracturing on the U.S. energy supply have been dramatic developments that were largely unforeseen. One example of a technology currently under development that may have dramatic environmental consequences in the future is the use of driverless motor vehicles.¹

According to Google, which has heavily invested in driverless technology, the possible benefits of a driverless car include “a 90 percent reduction in accidents, 90 percent less time and fuel wasted in commuting, 1.9 billion gallons of fuel saved, 4.8 billion fewer commuting hours, and \$101 billion in savings in lost productivity and

[Section 3:52]

¹See Angela Greiling Keane, *Self-Driving Cars More Jetsons Than Reality for Google Designers*, Bloomberg.com (Feb. 6, 2013), <http://www.bloomberg.com/news/2013-02-06/self-driving-cars-more-jetsons-than-reality-for-google-designers.html> (last visited Apr. 29, 2013) (noting that Google, Inc. believes it can have self-driving cars “available to consumers in three to five years”); see also Jessica Matsmoto, *BMW Pledges to Have Driverless Cars by 2010*, autoMedia.com (Feb. 28, 2013) (discussing BMW’s collaboration with Continental Automotive and its desire to have a “fully automated” vehicle implemented by 2020).

fuel costs.”² This could save 1.9 billion gallons of gasoline and a potential 16 million ton reduction in CO₂ emissions.³ Enormous reductions in fuel consumption would be the result of the ability of driverless cars to communicate with other “smart” vehicles and to adjust their driving accordingly. Vehicle-to-vehicle communication will reduce congestion by preventing car accidents and needless braking.⁴ Vehicle-to-vehicle communication also will enable driverless cars to take advantage of “drafting,” or decreased air drag, because driverless cars are able to travel much closer together than normal automobiles. Because vehicle-to-vehicle communication will result in fewer accidents, car manufacturers will be able to design vehicles with lighter materials, which will result in vehicles with greater fuel efficiency.

Driverless cars also have the potential of “enabling households to live with fewer cars” by extending “current automobile-sharing systems.”⁵ Because driverless cars will be able to locate, travel to, and deliver users, car-sharing networks could displace today’s personal automobile and shrink the overall supply of vehicles. A reduction in supply of vehicles would mean a reduction in the environmental impact of the production of millions of vehicles.

Driverless cars also could reduce the need for large parking garages, as fewer cars do not require the same amount of parking space. This could allow cities to repurpose parking garages and lots and reduce harmful runoff. Even if driverless cars do not result in fewer cars on the road, drivers no longer will have to search for a parking spot, as vehicle-to-vehicle communication will allow driverless cars to drop off a user and travel to the nearest parking spot, greatly reducing congestion.

§ 3:53 Conclusion: the future of global environmental law

Some environmental challenges that will command the attention of future policymakers already are well-known. Conflicts over water resources are a significant problem that is likely to become even more challenging over time. The most widely forecast environmental challenge—anthropogenic climate change—now has become a contemporary reality as its effects become more apparent each year. Public policy responses to climate change are now heavily focused on adaptation. While in New Orleans for the American Association of Law Schools conference, where this presentation initially was made, the author observed numerous television advertisements for companies that raise homes to reduce their chances of flooding due to further sea-level rise.¹ The National Climatic Data Center confirmed on January 8 that 2012 was the hottest year ever in the United States. Average temperatures were more than one degree warmer (at 55.32 degrees Fahrenheit) than in 1998, the previous hottest year.

The year 2012 was only the world’s 8th or 9th warmest on record due in part to a

²Katherine Ling, *Part-Time Driverless Cars Could Provide Benefits Soon*, Greenwire (Feb. 19, 2013), <http://www.eenews.net.ezproxy.law.umaryland.edu/Greenwire/2013/02/19/19> (last visited Apr. 29, 2013).

³See *id.* (using EPA’s formula for CO₂ emitted per gallon of gasoline combusted to estimate the impact of driverless cars on CO₂ emissions).

⁴See Kevin Bullis, *How Vehicle Automation Will Cut Fuel Consumption*, MIT Tech. Rev. (Oct. 24, 2011), <http://www.technologyreview.com/news/425850/how-vehicle-automation-will-cut-fuel-consumption/> (last visited Apr. 29, 2013) (stating vehicle-to-vehicle communication will reduce congestion “by cutting accidents, coordinating traffic intelligently, and ‘getting rid of those drivers who accelerate through red lights.’”).

⁵Ethan Goffman, *Can Driverless Cars Drive Sustainability?*, SSPP Blog (Oct. 9, 2012), <http://ssppjournal.blogspot.com/2012/10/can-driverless-cars-drive-sustainability.html> (last visited Apr. 29, 2013).

[Section 3:53]

¹See, e.g., Southern Elevations & Shoring Inc., whose motto is “Raising Louisiana’s Homes to Safer Levels,” <http://www.southernelevations.com> (last visited Apr. 29, 2013).

La Niña weather pattern that affected other parts of the world. But the 10 warmest years on record for the planet all have occurred within the past 15 years. Last year's drought in the United States was not quite as severe as the drought that produced the Dust Bowl during the 1930s, but it covered more than 60% of the nation and devastated soybean and corn crops. At least 11 natural disasters occurred in 2012 that each caused more than \$1 billion in damage, with Hurricane Sandy's damage likely to exceed \$60 billion.² In January 2013, record heat waves struck Australia fueling wildfires in Tasmania, New South Wales, the state of Victoria, and the Australian Capital Territory.³ The extreme heat in Australia convinced Australia's Bureau of Meteorology to add additional color codes to its temperature maps for temperatures between 52 and 54 degrees Centigrade (125.6 to 129.2 degrees Fahrenheit) and above 54.

Future technological advances, as outlined in Gore's new book, raise both new challenges and opportunities for improvement in the global environment. During the last few years, technological changes have affected U.S. energy production in a manner that few could have foreseen. The widespread use of hydraulic fracturing has significantly increased domestic production of natural gas and oil. China's oil imports are growing by 8% annually, while U.S. oil imports are declining by 8% per year. As a result, China will soon pass the United States as the world's largest oil importer.⁴ In November 2012, the International Energy Agency predicted that the United States will become the world's largest oil producer by 2020 and that by 2030 the United States will become a net exporter of oil.⁵

Accidents and natural disasters have posed unexpected challenges to environmental policy. The *Deepwater Horizon* oil spill demonstrated the dangers of extracting oil at ever-increasing depths, and Shell's ill-fated efforts to drill in the Arctic have shown the difficulties of drilling in a harsh environment. Just as a new generation of nuclear power plants were about to be launched, the tsunami and Fukushima Daiichi disaster caused countries around the world to rethink their policies toward nuclear power.

One cannot be confident that new technology will largely solve future environmental problems, leading to the dawn of the zero-emissions society Easterbrook and Lomborg had forecast. Indeed, the history of environmental law demonstrates that innovations in pollution control technology are highly correlated with increases in the stringency of emissions controls. If federal regulators continue to demand cleaner and more-efficient production processes and means of transportation, as illustrated by significant increases in fuel economy standards, further progress can be expected in the transition toward a green society. It is less likely that technological progress will occur with respect to environmental problems that are not the focus of regulatory pressure. This is illustrated by the finding of the president's Oil Spill Commission that virtually no progress has been made in oil spill cleanup technologies in the decades since the *Exxon Valdez* oil spill. Nonpoint source pollution is one of the top problems that federal regulatory policy has failed to address effectively, and agricultural interests that strongly oppose actions to redress this problem remain politically powerful.

²Justin Gillis, *It's Official: 2012 Was Hottest Year Ever in the U.S.*, N.Y. Times, Jan. 8, 2013.

³Enda Curran, *Record Heat Wave Fuels Wildfires Across Australia*, Wall St. J., Jan. 8, 2013, at A11.

⁴Benoit Faucon, *China to Overtake U.S. as World's Largest Oil Importer, OPEC Says*, Wall St. J., Apr. 3, 2013, <http://online.wsj.com/article/SB10001424127887323646604578400410832143602.html> (last visited Apr. 29, 2013).

⁵Benoit Faucon & Sarah Kent, *IEA Pegs U.S. as Top Oil Producer by 2020*, Wall St. J., Nov. 12, 2013, <http://online.wsj.com/article/SB10001424127887323894704578114492856065064.html> (last visited Apr. 29, 2013).

Astonishing improvements in information technology have created an illusion of technological progress that, some argue, has masked stagnation in other areas.

[W]e bounded forward in the 1950s and 1960s thanks to a generation of scientists who did not just believe in a better future but invented it. They popularised jet aviation, fed a growing world with the harvest of the “green revolution,” switched on the first nuclear reactors for civilian power, launched the first satellites for communications and built the first integrated circuit, laying the foundations for decades of innovation in information technology.

The genuine progress in IT [information technology] from the 1970s up to the 2000s masked the relative stagnation of energy, transportation, space, materials, agriculture and medicine. . . . We can now use our phones to send cute kitten photos around the world or watch episodes of *The Jetsons* while riding a century-old subway; we can programme software to simulate futuristic landscapes. But the actual landscape around us is almost identical to the 1960s. Our ability to do basic things such as protect ourselves from earthquakes and hurricanes, to travel and to extend our lifespans is barely increasing.⁶

When environmental problems become so bad as to become politically salient, regulation has produced notable successes. In the developed world, air pollution standards have been an unbridled success story. In 2011, EPA released a study finding that air pollution controls mandated by the CAA Amendments of 1990 are saving so many lives that they will produce net benefits of \$1.935 trillion by 2020. The phaseout of leaded gasoline in the United States has been widely emulated throughout the world, producing dramatic reductions in levels of lead in children’s blood.

Horrendous levels of pollution in parts of the developing world are generating pressure to upgrade environmental standards. In January 2013, air pollution in China reached levels described on local microblogs as “postapocalyptic,” “terrifying,” and “beyond belief” and by the U.S. Embassy’s @Beijing Air Twitter feed as “crazy bad.” Pollution in Beijing became so bad that it forced airlines to cancel flights because of poor visibility. The Chinese government required some factories to close to reduce emissions, and it ordered government cars to cut back on travel. But air pollution in China has been so severe that it is causing many to argue for a fundamental rethinking of the country’s air pollution control strategies.⁸

Air pollution is the seventh leading cause of death worldwide, contributing to 3.2 million premature deaths annually.⁹ Most of the global deaths from air pollution occur in Asia. Air pollution is the fourth leading cause of death in China (trailing dietary factors, high blood pressure, and smoking), causing 1.2 million premature deaths there in 2010. In India, air pollution is estimated to cause 620,000 premature deaths annually.¹⁰

In addition to harming public health, pollution takes a heavy toll on the economy. The Chinese Academy of Environmental Planning estimates that the cost of

⁶Garry Kasparov & Peter Thiel, *Our Dangerous Illusion of Tech Progress*, Fin. Times, Nov. 8, 2012, <http://www.ft.com/cms/s/0/8adeca00-2996-11e2-a5ca-00144feabdc0.html#axzz2QxV7t8jQ> (last visited Apr. 29, 2013).

⁷Edward Wong, *On Scale of 0 to 500, Beijing’s Air Quality Tops “Crazy Bad” at 755*, N.Y. Times, Jan. 13, 2013, at 16.

⁸Aaron Back & Josh Chin, *Wen Urges Clean-Air Action as China’s Skies Clog Again*, Wall St. J., Jan. 30, 2013. One unusual illustration of how bad pollution in eastern China has become is provided by reports that pollution so impaired visibility in Zhejiang province that a furniture factory was on fire for four hours before anyone noticed.

⁹*Global Burden of Disease Study 2010*, The Lancet, Dec. 2012, <http://www.thelancet.com/themed/global-burden-of-disease> (last visited Apr. 29, 2013).

¹⁰Edward Wong, *Early Deaths Linked to China’s Air Pollution Totaled 1.2 Million in 2010, Data Shows*, N.Y. Times, Apr. 2, 2013, at A9.

environmental damage in China had risen to \$230 billion annually by 2010, 3.5% of the country's GDP. This estimate is nearly four times greater than the \$62 billion in environmental damage calculated for 2004, which then represented 3.05% of China's GDP. In 2010, it was estimated that the cost of environmental damage in China had risen in 2008 to \$185 billion. Most economists view these estimates as underestimates of actual environmental damage because researchers lack considerable important data.¹¹

Initially, environmental law responded to polluting industries by encouraging them to locate away from populated areas. This "zoning function" performed by the early common law eventually was replaced by a "technology-forcing" one as fear of liability inspired industry to develop new pollution control technology. Responding to new controls on various environmental risks in developed countries, industry exported them abroad. Today, this pattern is rapidly changing as developing countries upgrade their environmental standards and nongovernmental organizations (NGOs) shine the spotlight of international publicity on companies who degrade the environment, even if such degradation is legal under domestic law.

Due to the growth of NGO networks throughout the world, no corporation can damage the environment in some remote corner of the planet without fear of protests at its far away corporate headquarters. NGOs in the developing world are using creative information disclosure strategies to promote environmental protection. In China, Ma Jun's Institute of Public and Environmental Affairs (IPEA) has made major strides in improving environmental and working conditions in the supply chains of major multinational electronics companies. Faced with audits by the IPEA and other NGOs revealing environmental and labor violations in its suppliers, Apple Corporation has agreed to employ regular independent auditors to police its supply chain.¹²

Information disclosure strategies also have been used to create incentives for Chinese government officials to implement the law. The Natural Resources Defense Council, in partnership with the IPEA, publishes an annual Pollution Information and Transparency Index (PITI) report. The PITI report ranks 113 cities in China on how well they have performed in making environmental information available to the public under China's Open Information Law. The publicity that it has received has spurred many local officials to contact the IPEA and the NRDC to find out how they can improve their performance. As environmental conditions continue to deteriorate in China, the Chinese public is becoming increasingly militant in demanding greater transparency. Barbara Finamore, NRDC's Asia Director, expresses optimism that China may move toward regular publication of some form of Pollution Release and Transfer Register, as more than 50 other countries have done (*see, e.g., the U.S. Toxics Release Inventory*).¹³

While environmental concerns continue to command broad popular support, it has now become virtually impossible to shepherd new environmental legislation through Congress. Proponents of environmental progress need to work on building creative,

¹¹Edward Wong, *Cost of Environmental Damage in China Growing Rapidly Amid Industrialization*, N.Y. Times, Mar. 30, 2013, at A4.

¹²Charles Duhigg & Nick Wingfield, *Apple Asks Outside Group to Inspect Factories*, N.Y. Times, Feb. 13, 2012, <http://bits.blogs.nytimes.com/2012/02/13/apple-announces-independent-factory-inspections/> (last visited Apr. 29, 2013). Apple now issues an annual supplier responsibility report that discloses steps it has taken to ensure that its suppliers comply with China's environmental and labor laws. Apple Corporation, *Supplier Responsibility: 2013 Progress Report* (2013), available at http://www.apple.com/supplierresponsibility/pdf/Apple_SR_2013_Progress_Report.pdf.

¹³Barbara Finamore, *A Step Forward for Environmental Transparency in China*, NRDC.org, http://switchboard.nrdc.org/blogs/bfinamore/a_step_forward_for_environment.html (last visited Apr. 29, 2013).

bipartisan coalitions to win the political battles of the future. For example, economic conservatives who oppose federal subsidies could be strong supporters of efforts to eliminate some of the most environmentally destructive subsidy programs. The perceived political wisdom is that energy taxes are political suicide, following the ill-fated effort in the early days of the first Clinton Administration to interest Congress in adopting a British thermal unit (BTU) tax.¹⁴ Yet, it makes enormous sense to consider shifting much of the tax burden away from productive labor and toward discouraging environmentally damaging production and consumption decisions. Energy taxes can create powerful incentives to improve energy efficiency and to reduce overall energy consumption, and they need not increase the overall tax burden if they are rebated in a proper manner.

Great progress has been made in controlling air and water pollution in the developed world, but climate change is creating substantial new environmental challenges to countries throughout the world. It would be comforting to be able confidently to predict a future of unbroken progress in environmental protection, but such progress is not inevitable.¹⁵ The notion that globalization would result in an unstoppable and beneficial spread of democracy, capitalism, and innovation is now being openly questioned.¹⁶

Until bipartisanship returns to environmental politics,¹⁷ the future of environmental policy will depend largely of who controls the White House and Congress, which usually is determined by factors divorced from voters' environmental values. The global financial collapse in 2008 created an opportunity for opponents of environmental regulation to erect a deceptive narrative blaming it for unrelated economic troubles. This narrative seeks to depict environmental regulation as excessive and economically damaging. It seeks to exploit high levels of unemployment to demonize regulation as "job killing,"¹⁸ even though "life saving" usually would be a more appropriate description. The narrative is founded on a false dichotomy between environmental regulation and a robust economy. Economic history demonstrates that strong environmental protection measures can coexist with a strong economy, but political history shows that a weak economy can be a threat to environmental protection. Thus, promotion of a strong economy is crucial for improving the future of environmental policy and, in turn, the kind of planet our progeny will inherit.

¹⁴William O'Keefe, *Will the Carbon Tax Make a Comeback?*, Wall St. J., Dec. 20, 2012, <http://online.wsj.com/article/SB10001424127887324469304578145640617261224.htm> (last visited Apr. 29, 2013).

¹⁵*Cf.* Steven Jay Gould, *Full House: The Spread of Excellence From Plato to Darwin* (1996) (explaining why progress is not inevitable).

¹⁶*See, e.g.,* Gillian Tett, *Davos Man's Belief in Globalisation Is Being Shaken*, Fin. Times, Mar. 8, 2013, at 24.

¹⁷As depressing as the current partisan split on environmental issues may be, things could be worse. *See* David Deming, *What the Oil Business Could Learn From the NRA*, Wall St. J., Mar. 1, 2013, at A11 (advocating that the oil industry should embrace the scorched-earth lobbying tactics of the National Rifle Association when lobbying against environmental initiatives).

¹⁸*See, e.g.,* Michael J. Boskin, *The Anatomy of Government Failure*, Wall St. J., Oct. 20, 2012, at A13 ("Consider the EPA's ever-tighter pollution standards of dubious benefits causing ever higher additional costs.").

Chapter 4

Administrative Agencies and Procedures*

I. THE ENVIRONMENTAL PROTECTION AGENCY

- § 4:1 Introduction
- § 4:2 Headquarters
- § 4:3 Regional and field offices

II. EPA'S ADMINISTRATIVE PROCEDURE

- § 4:4 In general
- § 4:5 Rulemaking
- § 4:6 Licensing
 - § 4:7 —Product licensing
 - § 4:8 —Facility licensing
- § 4:9 State and tribal program approval
- § 4:10 State and tribal cooperation and consultation
- § 4:11 Judicial review
- § 4:12 Public participation
- § 4:13 Expert consultation
- § 4:14 Enforcement

APPENDIX 4A. Principal EPA Offices

APPENDIX 4B. EPA Regions

APPENDIX 4C. EPA Organizational Chart

Research References

Primary Authority

Federal Advisory Committee Act, 5 U.S.C. App. 2
Inspector General Act, 5 U.S.C.A. App. 3
Administrative Procedure Act, 5 U.S.C. § 551
Federal Insecticide, Fungicide and Rodenticide Act 7 U.S.C. § 135
Toxic Substances Control Act, 15 U.S.C.A. § 2601
Food, Drug, and Cosmetic Act, 21 U.S.C. § 301
Clean Water Act, 33 U.S.C §§ 1251
Marine Protection Research and Sanctuaries Act, 33 U.S.C. § 1401
Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 103
Safe Drinking Water Act, 42 U.S.C. § 300
Resource Conservation and Recovery Act, 42 U.S.C.A. § 6901
Clean Air Act, 42 U.S.C.A. § 7401
Pollution Prevention Act, 42 U.S.C. § 13101

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U.S. Department of Agriculture, <https://www.usda.gov>

*§ 4:1 by **Sheldon M. Novick**; § 4:4 by **William F. Pedersen**; updated by **Scott Schang**; previous updates by **Jacqueline M. McNamara**, **Lynn Vendinello**, and **Jon Cannon**.

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Linda Breggin & Heidi Hallman, Environmental Law Institute, Building Capacity to Participate in Environmental Protection Agency Activities: A Needs Assessment and Analysis, Available at Environmental Law Institute, <https://www.eli.org/>

I. THE ENVIRONMENTAL PROTECTION AGENCY

§ 4:1 Introduction

A number of federal agencies play key roles in environmental protection and natural resource conservation. This chapter provides an overview of the Environmental Protection Agency (EPA) as the primary agency entrusted with carrying out the mandates of the major federal statutory regimes. However, other agencies, such as the Fish & Wildlife Service and the National Marine Fisheries Services (NOAA Fisheries), have substantial regulatory and enforcement authority under laws like the Endangered Species Act, and merit more robust discussion in other chapters of this treatise.

Contrary to a common misapprehension, EPA is not an independent regulatory agency, but is firmly under the President's supervision. This is because EPA was not created by Congress, but rather by an executive order in 1970.¹ It is the only major regulatory agency lacking a statutory charter. EPA is headed by an administrator, who serves at the President's pleasure; however, the Administrator does have cabinet-rank status.²

One result of EPA's establishment by executive order is that it lacks an overall charter.³ Another is that the Agency consists of offices and laboratories scattered around the country that were once affiliated with other agencies.⁴ For example, the air pollution program had long been part of the Public Health Service, laboratory facilities and some radiation control staff were reassigned to the EPA from the former Atomic Energy Commission, and the water pollution control program and pesticide regulation duties were reassigned from the Department of Interior and the Department of Agriculture, respectively.

After more than 50 years, a cohesive agency has emerged that is both sizeable and effective. The various parts of EPA, however, still vary widely in their operations because of their designated functions. The office in charge of pesticides, for example, receives funding by industry application fees to carry out the work of evaluating and approving individual product registrations, which is very different from the air office, which sets air emissions standards for categories of sources. Relationships with the regulated community, state officials, and environmental

[Section 4:1]

¹Reorg. Plan No. 3 of 1970, 35 Fed. Reg. 15623 (1970), *reprinted in* 5 U.S.C.A. app. at 1132 (1982), *and in* 84 Stat. 2086 (1970).

²The White House, The Cabinet, <http://www.whitehouse.gov/administration/cabinet> (last visited Feb. 13, 2020).

³See Ch 2.

⁴See Environmental Law Institute, Celebrating Pioneers in Environmental Law—George P. Shultz, <https://www.eli.org/celebrating-pioneers-in-environmental-law/george-p-shultz> (last visited Feb. 13, 2020) (Shultz comments on the 1970 reorganization of the EPA, stating that when a new agency is formed “if they're not careful, they're going to get all of the dogs.”).

groups also vary widely within EPA.⁵

§ 4:2 Headquarters

The offices within EPA are headed by an assistant administrator, usually a presidential appointee confirmed by the Senate. The Agency has grown by acquiring new programs, each headed by a new assistant administrator. EPA began with five assistant administrators, one each over research; enforcement; planning and management; air and water pollution control; and “categorical programs”—miscellaneous radiation, pesticide, and solid waste programs.

Two assistant administrators were added by statute in 1976.¹ In 1978, the Inspector General Act assigned EPA, like all other federal agencies, an inspector general, one element of the Carter Administration’s reform of the civil service.²

The Agency underwent significant reorganization during the early Reagan and Clinton administrations. In 1981, Anne Burford (then Anne Gorsuch) drastically reorganized the Agency.³ In 1983, William Ruckelshaus reversed some of Gorsuch’s changes and implemented new changes of his own. Under Ruckelshaus, the General Counsel was elevated to assistant administrator rank, and two associate administrator positions—which do not require congressional approval—were created.⁴ In 1993, Clinton-appointed EPA Administrator Carol M. Browner announced that the Office of Enforcement would be reorganized and renamed the Office of Enforcement and Compliance Assurance (OECA).⁵

The Agency has also reorganized its planning, budgeting, and accountability functions, as part of its response to recommendations for reforms and its implementation of the Government Performance and Results Act (GPRA). Previously, the positions of Chief Financial Officer and Assistant Administrator for Administration and Resource Management (OARM) were held by the same presidential appointee. Budgeting functions were carried out by OARM; planning and accountability reviews were the responsibility of the Assistant Administrator for Policy, Planning and

⁵See Ch 2.

[Section 4:2]

¹Toxic Substances Control Act § 26(g), 15 U.S.C.A. § 2625(g); Resource Conservation and Recovery Act § 2001(a), 42 U.S.C.A. § 6911(a). An Office of Noise Abatement was established by the Clean Air Act of 1970, and a budget authorized by the Noise Control Act, but both were allowed to lapse for lack of funding in the Reagan Administration.

²See 5 U.S.C.A. app III, § 1.

³See A. Burford, *Are You Tough Enough?* 89-99 (1986); J. Lash, K. Gillman & D. Sheridan, *A Season of Spoils* 30-62 (1984).

⁴Burford had reorganized the management and planning offices and the enforcement function; Ruckelshaus separated management and planning, assigning each to new assistant administrators. He separated the enforcement and legal counsel offices, which Burford had combined, but left intact her decentralization of the enforcement function. See Pub. L. No. 98-80, 97 Stat. 485, *codified at* 42 U.S.C.A. § 4370(a); S. Rep. No. 196, 98th Cong., 1st Sess. (1983), *reprinted in* United States Code Congressional and Administrative News p 909. The Burford reorganization of enforcement work was followed by a dramatic decline in EPA enforcement suits, and the reorganization was thought to reflect the administrator’s hostility to federal enforcement. See J. Lash, K. Gillman & D. Sheridan, *A Season of Spoils*, 45-53 (1984). From 1982 onward, enforcement litigation returned to traditional levels, but the reorganization has probably had some effect on the way the Agency uses the enforcement function. See § 4:3.

⁵EPA Press Release, EPA Administrator Details Design of Reorganized Enforcement Office, p.1 (Oct. 13, 1993); see also Memorandum from Carol M. Browner, EPA Administrator, to All EPA Employees (Oct. 12, 1993). Eight offices make up OECA: Office of Administration and Policy (OAP); Office of Civil Enforcement (OCE); Office of Criminal Enforcement, Forensics and Training (OCEFT); Office of Compliance (OC); Office of Environmental Justice (OEJ); Office of Federal Activities (OFA); Federal Facilities Enforcement Office (FFEO); and Office of Site Remediation Enforcement (OSRE).

Evaluation (OPPE). On March 30, 1997, the Agency created a new Office of the Chief Financial Officer, separate from OARM, and consolidated under that office those budgeting, planning, and accountability functions previously under OARM and OPPE. This reorganization was accompanied by creation of a new goal-based planning, budgeting, and accountability system administered through the new office.

The General Counsel appoints and supervises the legal work of EPA lawyers at headquarters and in the regional offices.⁶

In addition to its dozen Assistant Administrators (counting the Inspector General, the General Counsel, and the Chief Financial Officer), the Agency now has three Associate Administrators—one for congressional and intergovernmental relations, another for external affairs and environmental education, education, and public affairs, and a third for homeland security.⁷

As part of an initiative to centralize data management and to emphasize the important role EPA plays in gathering and making available environmental data, Administrator Carol Browner created the Office of Environmental Information (OEI) on October 26, 1999, to—“improve the way EPA collects, manages, integrates, and provides access to environmental information.”⁸

Also reporting directly to the Administrator are the ten EPA regional offices, which are the Agency’s operating units and which are discussed more fully below, a number of staff offices,⁹ and the Administrator’s own immediate aides.

The Administrator therefore nominally supervises about fifty senior staff directly, which would be a difficult task even if the Administrator were not required to spend a large portion of his or her time in congressional offices, hearing rooms, and meeting with constituent groups. This work is shared with the Deputy Administrator, who generally takes significant responsibility for internal management of the Agency, and by the Administrator’s Chief of Staff. To further ease the management burden for both, many of the communications with the ten regions flow through the Regional Operations staff.

This large group of senior managers consists almost entirely of political appointees, meaning tenure in the positions is short, and each administration begins with an entirely new set of senior managers. Each administration therefore typically spends a great deal of time relearning what its predecessors painfully learned. In recent years, to provide a reservoir of experienced management at senior levels, EPA has appointed career civil servant deputies for the assistant administrators; these deputies are expected to remain with the Agency and to provide continuity from administrator to administrator. They have considerable independent authority.

§ 4:3 Regional and field offices

From its earliest years, EPA has been a decentralized agency that operates through its ten regional offices; indeed, roughly half the Agency’s personnel operate out of the regional offices. At the time of EPA’s creation, the Nixon Administration had embarked on the New Federalism, which emphasized decentralizing the management of the federal government into regional offices. EPA was divided be-

⁶The Department of Justice, through the U.S. Attorney’s Offices, represents the Agency in much civil litigation and in all criminal prosecutions.

⁷See Appendix 4C.

⁸U.S. Environmental Protection Agency, 1998 Toxics Release Inventory Data Release Questions and Answers 22, <http://www.epa.gov/tri/tridata/tri98/qanda/qa.pdf>.

⁹*E.g.*, Science Advisory Board, Office of Civil Rights, Office of Administrative Law Judges, Office of Cooperative Environmental Management, Regional Operations staff, and Office of Children’s Health Protection. See Appendix 4C.

tween a headquarters and ten regional offices scattered across the United States. These presumably were better able to oversee and partner with state and local programs than the vast bureaucracy in Washington.

EPA's operating programs have remained decentralized in the regions to a large degree. Generally speaking, headquarters sets policy and makes general rules; the regional offices carry out the programs. This decentralization has generally proved successful. Pollution control programs are primarily state programs, and the Agency's ability to tailor its roles, programs, and operations across a myriad of local environments is limited. Many of its programs operate at even lower levels of government—both air pollution control and water pollution control programs are often operated by municipal or county governments. And, of course, the environment itself and its requirements vary greatly from place to place.

People who interact with the Agency are regularly surprised, and not always pleased, by the large degree of autonomy that the regional offices possess, especially over enforcement and permitting activities. Regional offices also disburse grant funds to state agencies, and to local governments for sewage treatment works. It is always wise to begin with a regional office if there is a question about any of these matters.

Each regional office is headed by a regional administrator, who is a political appointee but not a presidential appointee.¹ This appointment is usually made in consultation with the senior senator and governor of the state, which is host to the regional office. The regional administrator is responsible for ensuring that the work of the Agency in that region is carried out. The work itself is defined by the national program managers—the assistant administrators in Washington—who issue policies and set goals for performance. The regional administrators and the assistant administrators and their staffs collaborate to ensure consistency between national policies and regional implementation, most commonly via joint planning and budgeting exercises and frequent consultations.

EPA views the state governments as the “operating units” of the federal system, and much of the regional offices' work consists of supervision or support of state programs, for which they provide financial and some technical assistance. Regional offices pass on to the states, as well as they can, the policies and requirements that are issued from Washington. The regional offices sign program-specific formal agreements with each state, which include criteria for enforcement and for other conditions of financial assistance.² Where state programs are inadequate, or where the states have chosen not to assume responsibility, EPA regional offices must be prepared to step in and issue permits and enforce them directly.³

The Agency's large research program is also decentralized, but in a different manner. Research is nominally organized within the headquarters unit, under the Assistant Administrator of Research and Development, but it is actually carried on in a series of laboratories inherited from other agencies—the Department of Interior, the Public Health Service, and the old Atomic Energy Commission—that are scattered around the country. The facility in Las Vegas, for instance, is a legacy of the Atomic Energy Commission's years of study of fallout from bomb testing.

[Section 4:3]

¹There has been some congressional suggestion that EPA regional administrators should be confirmed by the Senate. *See* EPA Regional Oversight Act of 2012, S. Rep. No. 112th-3053 (2012).

²*See* Ch 7.

³*See* §§ 9:42, 9:43.

II. EPA'S ADMINISTRATIVE PROCEDURE*

§ 4:4 In general

Environmental law—or, to state it more accurately, the law of EPA—is primarily built around eight statutes that can conveniently be grouped into four sets of two. First, there are the Clean Air Act¹ and the Clean Water Act,² two significant “old line” regulatory statutes with very similar general frameworks. The second set consists of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA),³ under which pesticides are licensed and regulated, and a parallel statute with a more modernized design, the Toxic Substances Control Act (TSCA),⁴ under which other chemicals are regulated in a somewhat analogous way. The third set includes the Solid Waste Disposal Act (RCRA)⁵ and “Superfund” (also called CERCLA),⁶ which regulate hazardous waste and hazardous substances in a significantly overlapping manner. Finally, there are two minor statutes regulating the water cycle: the Safe Drinking Water Act⁷ and the Marine Protection, Research and Sanctuaries Act (the “Ocean Dumping Act”).⁸ A ninth statute, the Pollution Prevention Act of 1990, authorizes establishment of a program to help prevent or reduce the generation of pollution.⁹

Despite the tremendous variety of programs and procedures under these statutes, explored in some more detail below, three common threads tend to run through all of them.

First, with some exceptions, the dominant vehicle for action is a notice-and-comment procedure—generally, but not always, rulemaking of different forms. Indeed, the evolution of the programs under these statutes has accounted for much of the development of modern administrative law.

Corresponding to this stress on notice and comment is a bias against formal, trial-type hearings. Those who designed the statutes by and large thought such procedures obsolete, as did the Agency's first administrator; over the years, most of his successors have agreed. EPA has consistently tried to minimize reliance on such hearings.

Finally, the statutes embody a great many imaginative approaches to enlisting the judicial process in regulatory tasks. Though these may not be part of administrative procedure *per se*, they are touched on briefly below.

§ 4:5 Rulemaking

When EPA was created in 1970, most important agency decisions were still made by formal trial-type hearings before an Administrative Law Judge (ALJ). Though academic interest in rulemaking was growing, the process was not yet generally

*By William F. Pedersen.

[Section 4:4]

¹42 U.S.C.A. §§ 7401 to 7671q.

²Federal Water Pollution Control Act, 33 U.S.C.A. §§ 1251 to 1387.

³7 U.S.C.A. §§ 136 to 136y.

⁴15 U.S.C.A. §§ 2601 to 2692.

⁵42 U.S.C.A. §§ 6901 to 6992k.

⁶42 U.S.C.A. §§ 9601 to 9675. Included with Superfund is the Emergency Planning and Community Right-to-Know Act, 42 U.S.C.A. §§ 11001 to 11050, which requires facilities to report the presence and environmental releases of various hazardous substances to regulatory authorities.

⁷42 U.S.C.A. §§ 300f to 300–26.

⁸33 U.S.C.A. §§ 1401 to 1445.

⁹42 U.S.C.A. §§ 13101 to 13109.

used to carry out specific requirements authorized or mandated by major regulatory programs. Even when rulemaking was used, it was generally to set the boundaries and frame the matters for formal hearings and not to issue commands that would themselves be reviewed in court directly.

The Administrative Procedure Act (APA) provisions on rulemaking, enacted in 1946, reflect this relative lack of past significance. These provisions state only that an agency that wishes to issue a rule must publish a notice in the *Federal Register* providing either the text of the rule or a description of the “subjects and issues involved,” must receive comments, and must then issue a final rule together with a response to the comments received.¹ Even these requirements do not apply to “interpretive” rules, “general statements of policy,” or substantive rules in a number of specific categories.²

Enactment of the Clean Air and Clean Water Acts placed a great strain on this historically somewhat undeveloped system. In just a few years, numerous vitally important commands under these two statutes were to be issued as rules and complied with under heavy penalties. This development, which was paralleled to a somewhat lesser extent in other agencies, raised two questions.

The first was how to structure the somewhat minimal APA procedures to provide a responsible forum for decisionmaking that could also yield a record for judicial review. The solution, which is now universally accepted, was to leverage the rulemaking process to frame a written dialogue in which all interested persons can contribute the full range of their information and arguments before the final agency decision. As a result, the agency must issue its proposal supported by a full discussion of the facts, analytical methods, and policy issues involved. The burden then shifts to the public to support their views in comparable detail. The agency, when taking final action, must respond to the comments and update the analysis in the light of the information it has received.

This approach to rulemaking was first set out by the late Judge Leventhal in an EPA case.³ It was then developed and expanded in a law review article authored by an EPA employee,⁴ and was eventually written in detail into the Clean Air Act.⁵

The second question raised by the increased importance of rulemaking was whether to adopt new hearing procedures that move rulemaking somewhat more toward the form of a trial in light of the increased importance of the issues involved.

Some early EPA cases suggested that this might be accomplished,⁶ but, like all other expressions of this nature, they were terminated by the Supreme Court’s emphatic disapproval in *Vermont Yankee*.⁷ That case, of course, did not prevent Congress from requiring such procedures if it so chose. Currently, provisions in EPA statutes for a legislative, public meeting-type hearing in connection with rulemak-

[Section 4:5]

¹5 U.S.C.A. § 553.

²5 U.S.C.A. § 553(a).

³*Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d 375, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20642 (D.C. Cir. 1973).

⁴Pedersen, *Formal Records and Informal Rulemaking*, 85 Yale L.J. 38 (1975).

⁵Clean Air Act § 307(d), 42 U.S.C.A. § 7607(d).

⁶*International Harvester Co. v. EPA*, 478 F.2d 615, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20133 (D.C. Cir. 1973); *Appalachian Power Co. v. Ruckelshaus*, 477 F.2d 495, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20310 (4th Cir. 1973).

⁷*Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20288 (1978).

ing are common.⁸ Accordingly, these developments have run their course with very little change in the statutory standards for rulemaking with which EPA began in 1970. The Clean Water Act, FIFRA, RCRA, CERCLA, the Ocean Dumping Act, and the Safe Drinking Water Act all adopt, without qualification, the APA procedures for agency rulemaking. TSCA incorporates a number of finely adjusted rulemaking procedures of its own, but the sum total of their deviations from the old model is modest.

The “legislative veto”—a congressional veto of regulations without the President’s involvement—was also much discussed in these years, but CERCLA and FIFRA are the only EPA statutes where attempts to insert any form of a legislative veto were successful.⁹ Those vetoes have likely now become inoperative since the Supreme Court disapproved such enactments as unconstitutional in *Chadha*.¹⁰

With this first set of issues now essentially settled and the basic framework for rulemaking established, attention turned to the interaction of that structure with informal conduct resulting from its more relaxed procedures. The questions here fall into two broad categories.

The first concerns the appropriate role for conversations, held between agency staff and persons outside the Agency, that are not written down. Conversations within the Agency have never given rise to significant legal issues—they are considered “merged” in the Agency’s final policy decisions. However, discussions with persons outside the Executive Branch, and with officials at the Office of Management and Budget (OMB) or the White House, have continued to generate lively controversy.

The D.C. Circuit’s opinion in *Sierra Club v. Costle* contains the definitive *judicial* pronouncement on both these issues.¹¹ There, the court required only that, if non-Executive Branch persons contributed significant new facts to the rulemaking in oral comments, these facts should be recorded in a memo to the file in order to ensure a complete record.¹² Where conversations with White House officials were concerned, the court left somewhat open the question whether even this much acknowledgement of such interaction would be required.¹³

Despite this strong judicial language, contacts of both types continue to have a significant potential for both legal and political controversy.

Even on the purely legal level, one can argue that any informal meetings between an agency and a non-federally approved outside group violate the Federal Advisory Committee Act (FACA). FACA prohibits contact with any “advisory committee,” which is very broadly defined, unless it has been formally chartered by the government and its actions meet FACA’s requirements—such as ensuring committee meetings are open to the public and are advertised in the *Federal Register*.¹⁴ Although

⁸See, e.g., RCRA §§ 3001(a), 3002(a), 3003(a) & 3004(a), 42 U.S.C.A. §§ 6921(a), 6922(a), 6923(a) & 6924(a) (almost all major RCRA regulations must be promulgated after “opportunity for public hearings”).

⁹FIFRA § 25, 7 U.S.C.A. § 136w; CERCLA § 305, 42 U.S.C.A. § 9655.

¹⁰*Immigration and Naturalization Serv. v. Chadha*, 462 U.S. 919, 13 Env’tl. L. Rep. (Env’tl. L. Inst.) 20663 (1983) (holding one-house legislative vetoes invalid under Article I of the Constitution, which subjects the exercise of legislative power to the requirement of bicameral passage and presentment to the President).

¹¹*Sierra Club v. Costle*, 657 F.2d 298, 11 Env’tl. L. Rep. (Env’tl. L. Inst.) 20455 (D.C. Cir. 1981).

¹²*Sierra Club v. Costle*, 657 F.2d 298, 400–04, 11 Env’tl. L. Rep. (Env’tl. L. Inst.) 20455 (D.C. Cir. 1981).

¹³*Sierra Club v. Costle*, 657 F.2d 298, 404–08 11 Env’tl. L. Rep. (Env’tl. L. Inst.) 20455 (D.C. Cir. 1981).

¹⁴Pub. L. No. 92-463, § (3)2, 86 Stat. 770 (codified at 5 U.S.C.A. App. 2). Its requirements apply to

EPA does not take such a conservative view of the law—which itself could well be questioned as violating First Amendment rights to free speech and to petition the government—the Agency does acknowledge that any course of meetings with one group, that could be construed as adopting that group as a preferential source of advice, might well be subject to legal challenge. Accordingly, EPA has stated through a series of policy announcements that, while not discouraging meetings held in the course of rulemaking, they must be balanced among the various interest groups involved so that no one group receives preference. In addition, though there is no set and predictable practice, it is entirely possible that a memo to the file will be prepared after any one of these meetings, regardless of the true importance of the comments.

The question of White House involvement, or, more frequently these days, OMB involvement, is more politically than legally controversial. The controversy rests on a fear that these central bodies will displace the Agency's decisionmaking power as vested in it by Congress. In reaction to that concern, EPA adopted a policy of placing in the public record all written communications between itself and OMB.¹⁵ However, the significance of this practice should not be exaggerated, since typically there is very little written documentation of dealings between EPA and OMB.

The second category involves a fear of formal hearings growing too complex for the Agency to operate or too adversarial. There is concern that even new procedures, developed in response to this fear, have themselves become too easy for the Agency to operate or too adversarial and must themselves be reformed once again. The first set of such reforms (apart from the departed legislative veto) were laid out in specific statutes and take the form of requirements that EPA complete certain studies, or consult certain definite groups, or satisfy demanding *substantive* regulatory tests, before regulating (or not regulating) in certain areas.¹⁶ The second set of reforms reflect a new interest in framing rules by a process of negotiation among those interested rather than by formalized legal procedures.¹⁷ "Regulatory negotiation" has played a role in the Agency's efforts to implement the 1990 amendments to the Clean Air Act.

Over time, EPA has also begun to explore the possibilities of "interpretive" rules, which have the advantage—for EPA—of not requiring preissuance notice and comment. EPA has used such rules as vehicles for some very important statements on the legal meaning of new statutes.¹⁸

§ 4:6 Licensing

Licensing—the requirement that prior governmental permission be obtained in

any group "established or utilized by one or more agencies in the interest of obtaining advice and recommendations."

¹⁵The same requirement was inserted into the Clean Air Act in 1977 as a reaction to the centralized review practices of the Nixon and Ford Administrations. Clean Air Act § 307(d)(4)(B)(ii), 42 U.S.C.A. § 7607(d)(4)(B)(ii).

¹⁶For an example of the first approach, see RCRA § 3001(b)(3)(A), 42 U.S.C.A. § 6921(b)(3)(A) (mining wastes may not be regulated under RCRA prior to completion of study); of the second, see FIFRA § 25(a)(2), 7 U.S.C.A. § 136w(a)(2) (FIFRA regulations must be specially transmitted to the Secretary of Agriculture for comment); of the third, see RCRA § 3004(g), 42 U.S.C.A. § 6924(g) (land disposal of wastes permitted only if EPA finds they will not migrate off site).

¹⁷EPA has used the method of "regulatory negotiation" in setting air pollution standards for wood stoves, coke ovens, and reformulated gasoline.

¹⁸So, for example, many of EPA's views on the legal meaning of the 1984 RCRA amendments were set forth in a "codification rule" issued without notice and comment. See 50 Fed. Reg. 28702 (1985).

order to do something¹—takes several different forms at EPA. For example, new pesticides, like new drugs, must be registered before they can be marketed.² Hazardous waste management facilities must have permits,³ and parties discharging effluent and other substances into the water must also obtain permits for that discharge.⁴ “Major” new sources of air pollution must be issued a permit prior to construction,⁵ while the 1990 Clean Air Act amendments require “operating permits” for all such sources.⁶

In prior times, analogous licensing decisions were the domain of formal hearings. Although this is also true at EPA to a limited extent, that inherited approach has lost significant ground in an area in which the magnitude of the public and private interests and investments at issue arguably creates great pressures for its retention. Moreover, even where these procedures have been retained, they have been qualified in various ways that move them more toward the rulemaking model.

§ 4:7 Licensing—Product licensing

The regulatory program for new and existing pesticides under FIFRA, for example, is a longstanding registration, or licensing program that is very similar to new drug licensing under the Food, Drug and Cosmetic Act.¹ Any “registrant” or potential registrant of a pesticide is entitled to a full formal trial-type hearing in order to challenge any agency decision to deny initial clearance to its product or take it off the market. In practice, applicants find these hearings too long and expensive to be useful in challenging an agency decision not to approve a new pesticide. The burden of delay works against the private applicant, and the chances of final success are probably small. On the other hand, this process can work against EPA when the Agency seeks to remove an existing pesticide from the market. Here, the pesticides tend to remain on the market during the administrative proceeding, thus casting the burden of delay on the Agency. Some of these hearings can extend over several years.

EPA resolved this situation by now reviewing existing pesticides through an informal, rulemaking-type procedure, before reaching a decision whether to start a hearing to remove a pesticide from the market.² Simply through its existence, this administrative review process has reduced the importance of the hearing in reaching the decisions that EPA actually does make, and has increased the frequency of voluntary settlement between the Agency and registrants.

Congress has not duplicated this product licensing scheme in enacting FIFRA’s sister statute, the Toxic Substances Control Act (TSCA). TSCA instead requires EPA to act affirmatively to bar a new chemical from the market rather than making Agency inaction itself a bar, as with a new pesticide under FIFRA. TSCA compensates for that by greatly reducing the procedural burdens that attend exercise of that power. New chemicals, unlike new pesticides, *do not* require formal

[Section 4:6]

¹The term “license” is defined at 5 U.S.C.A. § 551(8), which contains the definitions for the Administrative Procedure Act.

²FIFRA § 12, 7 U.S.C.A. § 136(j).

³RCRA § 3005(a), 42 U.S.C.A. § 6925(a).

⁴Clean Water Act §§ 301 and 402, 33 U.S.C.A. §§ 1311 and 1342.

⁵Clean Air Act §§ 165 and 173, 42 U.S.C.A. §§ 7475 and 7503.

⁶See 42 U.S.C.A. §§ 7661 to 7661f.

[Section 4:7]

¹See 21 U.S.C.A. § 355.

²See 40 C.F.R. pt. 154. There is an exception for emergencies.

EPA approval before they can be marketed. Instead, they must be presented to the EPA for a specified review period.³ If the Agency thinks that the chemical is suspect in some way, it can block it from the market by relatively informal means.⁴ However, if it takes no action, the chemical is automatically approved.

§ 4:8 Licensing—Facility licensing

A similar procedural evolution has taken place where EPA licensing of individual sources of pollution or potential pollution—“facility licensing”—is concerned. The first major EPA program of this nature was the water pollution discharge permit program under the Clean Water Act, formally known as the National Pollutant Discharge Elimination System (NPDES) program.¹ Here, the courts originally read an ambiguous statute as requiring a formal APA hearing before a Clean Water Act permit can be amended or denied. However, after the Supreme Court’s *Chevron* decision instructed courts to grant more deference to agency legal interpretations, EPA revised its Clean Water Act regulations to eliminate any entitlement to a formal hearing.² The courts subsequently upheld this revision.³ Notably, the test is somewhat different for permits for discharging dredged or fill materials in wetlands or other waters. The Army Corps of Engineers issues these permits through an informal hearing process,⁴ subject to an EPA veto if the Agency disagrees sufficiently strongly with the decision reached.⁵

When Congress amended the solid waste laws to provide a separate permit program for hazardous waste facilities,⁶ it did not require the grant or denial of those permits to be attended by such legal formalities at all. Instead, it accepted EPA’s intention to make these decisions by a notice and comment process, and added that a permit could only be *revoked* through a trial-type hearing,⁷ and that the hearing on the *grant* of any such permit would have to be extensively advertised in the locality involved.⁸

The permitting process under the Clean Air Act requires even less. Here, the statute simply states that a decision shall be made—generally by a state. All EPA requires, when it is the issuing authority, is a moderate notice and comment opportunity, analogous to rulemaking.⁹ EPA has adopted the same rule for the issuance of Clean Air Act operating permits.¹⁰ Likewise, only informal hearings are required for permits to inject fluids into wells under the Safe Drinking Water Act.¹¹ Permits under the Ocean Dumping Act, however, require an opportunity for a

³TSCA § 5, 15 U.S.C.A. § 2604.

⁴TSCA § 5, 15 U.S.C.A. § 2604.

[Section 4:8]

¹See Clean Water Act §§ 301, 402, 33 U.S.C.A. §§ 1311, 1342.

²See 65 Fed. Reg. 30866 (May 15, 2000).

³See *Dominion Energy Brayton Point, LLC v. Johnston*, 443 F.3d 12 (1st Cir. 2006).

⁴33 C.F.R. pt. 325.

⁵Clean Water Act § 404(c), 33 U.S.C.A. § 1344(c).

⁶RCRA § 3005, 42 U.S.C.A. § 6925. This provision was added to the statute in 1976 and took effect when its implementing regulations became binding in the early 1980s.

⁷RCRA §§ 3008(a) to (b), 42 U.S.C.A. §§ 6928(a) to (b).

⁸RCRA § 7004(b)(2), 42 U.S.C.A. § 6974(b)(2).

⁹40 C.F.R. pt. 124 (subparts A & C).

¹⁰See 40 C.F.R. pt. 70; 57 Fed. Reg. 32250 (July 21, 1992).

¹¹40 C.F.R. § 145.11.

formal hearing.¹²

§ 4:9 State and tribal program approval

Two separate categories of EPA action, little studied by academics in spite of their major importance, concern the relations between EPA and the states and sovereign tribes in administering pollution control programs. Both fall in an intermediate area between rulemaking and adjudication.

Under the Clean Water Act, RCRA, and the Safe Drinking Water Act, EPA administers the regulatory program required by the statute unless it finds that a state has a comprehensive alternative program that would be at least as protective. Upon such a finding, EPA can cease its efforts and allow the state instead to run the program within its boundaries. If EPA finds that the state is no longer performing acceptably, it can revoke its approval and resume the program itself.¹ A number of statutes, including the Clean Water Act,² Clean Air Act,³ and Safe Drinking Water Act,⁴ have similar procedures allowing federally-recognized tribes to be “treated in a manner similar to states,” or “TAS,” for purposes of administering these regulatory programs. Other environmental statutes, such as TSCA and EPCRA, are silent on the role of tribes, although the Agency interprets these statutes as authorizing tribal administration.⁵

EPA approval decisions, as a formal matter, are made through rulemaking-type notice and comment processes, though these are generally only the culmination of months or years of informal negotiation. The question of how much procedure must be afforded in order to revoke this approval in a state is debatable, and has never been resolved since EPA has never in fact revoked an approval. Strong arguments can be made that an adjudicatory hearing is required.

Under the Clean Air Act, a state or federally recognized tribe wishing to run the control program—or part of it—can adopt individual regulations and submit them to EPA for approval.⁶ The courts have required these approvals to take place through formal notice and comment procedures.⁷ Because of the procedural burdens such an automatic requirement entails, EPA has adopted a number of procedural devices for getting around it in individual cases.⁸

Mindful of the difficulty of making an all-or-nothing decision such as a program disapproval, the Clean Water Act provides that EPA can “veto” any state or tribal

¹²40 C.F.R. pt. 223.

[Section 4:9]

¹See Clean Water Act § 402, 33 U.S.C.A. § 1342(a); RCRA § 3006, 42 U.S.C.A. § 6926; Safe Drinking Water Act § 1422, 42 U.S.C.A. § 300h-1.

²Clean Water Act § 518, 33 U.S.C.A. § 1377.

³Clean Air Act § 301, 42 U.S.C.A. § 7601.

⁴Safe Drinking Water Act § 1422, 42 U.S.C.A. § 300h-1.

⁵As of October 2019, EPA issued 83 TAS approvals—under various environmental regulatory programs—to federally recognized tribes for TAS. See EPA, Tribes Approved for Treatment as a State (TAS) <https://www.epa.gov/tribal/tribes-approved-treatment-state-tas> (last visited Feb. 25, 2020).

⁶EPA requires tribes first obtain TAS approval for each specific program or function.

⁷For a full discussion, see Pedersen, *Why the Clean Air Act Works Badly*, 129 U. Pa. L. Rev. 1059, 1078 n.66 (1981).

⁸So, for example, EPA omits the notice and comment period for rules that it thinks will not be controversial, but only on condition that no adverse comments are received. If such comments are received (which they rarely are), it recycles the rule for full notice and comment. EPA can also approve “generic” rules under which all changes that can be described by simple mathematical formulas are approved in advance.

permit issued under an approved program simply by lodging a disapproval notice.⁹ EPA then becomes the issuing authority for that permit. The Clean Air Act permit program contains a similar provision.¹⁰ Paradoxically, Congress did not provide any parallel authority where the far more sensitive issue of licensing hazardous waste management facilities was concerned. However, EPA has attempted to repair that gap by regulation.¹¹

§ 4:10 State and tribal cooperation and consultation

As discussed elsewhere in this treatise,¹ principles of cooperative federalism oblige EPA not only to offer to delegate authority, where allowed, to states and tribes, but also to consult with these co-equal sovereigns in program design and implementation. This may also be characterized as the federal government recognizing and leveraging state and tribes' preexisting sovereign authority—such as through their police powers—over public health, and to regulate pollution and the use of natural resources. This special status of state and tribal governments has been recognized in a variety of ways, including designation of such governments as “cooperating agencies” under the National Environmental Policy Act² and entering into cooperative agreements under the Marine Mammal Protection Act.³

It is important to note the federal government's special trust responsibility to tribes as “domestic dependent nations.”⁴ Executive Order 13175 requires government-to-government consultation on matters with Tribal implications, although this policy is not subject to judicial review.⁵ A limited number of statutes do explicitly require consultation,⁶ but none of the major environmental statutes require such consultation. A few statutes, such as the Marine Mammal Protection Act and the Endangered Species Act,⁷ specifically exempt Alaska Natives from regulation except when under specific circumstances, which themselves are qualified by certain procedural safeguards.

§ 4:11 Judicial review

The classic form of judicial review—resolving challenges to agency action—has continuously received a high degree of attention over EPA's history. Courts have helped frame the rulemaking procedures described above. In addition, the courts played an important role in insisting, in EPA's early days, that EPA had to discuss the technical questions it faced in acceptable technical detail if it wanted its rules

⁹Clean Water Act § 402(d), 33 U.S.C.A. § 1342(d).

¹⁰42 U.S.C.A. § 7661d(b).

¹¹40 C.F.R. § 271.19.

[Section 4:10]

¹*See generally* Ch. 7.

²40 C.F.R. § 1501.6; Memorandum from George Frampton to Heads of Federal Agencies re: Designation of Non-Federal Agencies to be Cooperating Agencies with Implementing the Procedural Requirements of the National Environmental Policy Act (July 28, 1999).

³Marine Mammal Protection Act § 119, 16 U.S.C.A. § 1388.

⁴*Worcester v. State of Ga.*, 31 U.S. 515, 561, 8 L. Ed. 483, 1832 WL 3389 (1832); *U.S. v. Mitchell*, 463 U.S. 206, 225, 103 S. Ct. 2961, 77 L. Ed. 2d 580 (1983).

⁵Exec. Order No. 13,175, 65 Fed. Reg. 67,249 (2000) (President William J. Clinton).

⁶*See, e.g.*, Native American Graves Protection and Repatriation Act (NAGPRA), Pub. L. 101-601; 25 U.S.C. §§ 3001 to 3013; National Historic Preservation Act (NHPA), Pub. L. No. 89-665; 16 U.S.C. §§ 470 et seq.

⁷16 U.S.C. § 1371(b); and 16 U.S.C. § 1539(e).

sustained in court.¹ However, once that discussion had been provided, the rules would generally be upheld regardless of the policy choices EPA had made. Although the trends of deference to final agency decisions have grown increasingly stronger—and not just where factual judgments or policy choices are concerned, but also for legal interpretations—some Supreme Court Justices have questioned the Court’s commitment to such *Chevron* deference.²

Judicial decisions also implement the “action forcing” provisions of the EPA laws. Congress, when it designed the EPA statutes, feared that EPA might simply delay or fail to carry out the statutory commands. Accordingly, Congress generally provided deadlines for long lists of EPA actions, and likewise provided that citizens could sue the administrator to compel her or him to perform a “non-discretionary duty.”³ Environmental groups have taken full advantage of these provisions to require EPA to promulgate a similarly long list of statutorily-required regulations. EPA has never won such a deadline suit where the statute provided a definite time for acting. Although the courts have not held EPA literally to the deadlines in the law—generally long expired by the time the suit is filed—they have been decidedly unsympathetic to EPA’s views of what might be an equitable time for acting. Accordingly, EPA increasingly attempts to settle such cases with environmental groups.

In other statutes—primarily the 1984 RCRA Amendments—Congress has gone beyond the mechanism of “action forcing” through citizen suits and has specified so-called “hammer” provisions. Under these provisions, if EPA does not promulgate rules by a certain date, a congressionally-defined regulatory scheme—arguably far more onerous than any rule—automatically comes into effect.⁴ This has proven an even more effective mechanism than the citizen suit provision for forcing EPA to promulgate regulations on schedule.

Where no deadline is expressed in the statute, attempts to force EPA to act by litigation have generally been unsuccessful. Indeed, EPA has maintained a good record of defending against such actions in district court, relying on the argument that such claims do not implicate a “nondiscretionary” duty. Instead, EPA generally requires such requests for nondiscretionary action to be presented to it as a petition. The Agency acknowledges that it has a duty to act on that petition, and asserts that any final ruling on it constitutes a “final agency action,” which is generally reviewable in the court of appeals, and only on the administrative record that the Agency has created.⁵

The particular framework of EPA litigation has also helped encourage an increased interest in settling disputes by negotiation, in which EPA attempts to bargain out its deadline duties under citizen suits. On one past occasion, this led to

[Section 4:11]

¹See *Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d 375, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20642 (D.C. Cir. 1973); *International Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20133 (D.C. Cir. 1973).

²*Chemical Mfrs. Ass’n v. Natural Res. Def. Council, Inc.*, 470 U.S. 116, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20230 (1985); *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 14 Env’tl. L. Rep. (Env’tl. L. Inst.) 20507 (1984).

³Clean Air Act § 304, 42 U.S.C.A. § 7604; Clean Water Act § 505, 33 U.S.C.A. § 1365; RCRA § 7002, 42 U.S.C.A. § 6972; TSCA § 20, 15 U.S.C.A. § 2619.

⁴See, e.g., RCRA §§ 3004(d) to (h), 42 U.S.C.A. §§ 6924(d) to (h).

⁵This framework was first set out in *Oljato Chapter of the Navajo Tribe v. Train*, 515 F.2d 654, 5 Env’tl. L. Rep. (Env’tl. L. Inst.) 20481 (D.C. Cir. 1975).

Its most dramatic application to date was in bolstering the decision that EPA had no power to regulate greenhouse gases. The Supreme Court reversed this holding in *Massachusetts v. EPA*, 127 S. Ct. 1438 (2007).

a long and intricate consent decree that has been widely criticized as impermissibly binding the Agency so as to bar it from changing its mind on discretionary matters in future rulemakings.⁶ However, the far more common form of a consent decree simply requires the Agency to propose and promulgate the statutorily required rules by a date certain, without addressing the rules' content or imposing any further deadlines.

§ 4:12 Public participation

Many features of the EPA statutes can be traced back to a desire for broadening “public participation” in agency proceedings. The CWA and RCRA state, as guiding policy, that public participation in agency decisionmaking shall be encouraged.¹ Other statutes lack such an overarching statement, but contain their own measures encouraging public participation.

The most common examples are those requirements, discussed earlier, that call for a “public hearing” in connection with an agency decision.² RCRA takes this typical procedure a step further and requires any hearing on a RCRA permit to be advertised on local radio stations.³ Some statutes establish specific procedures by which members of the public can petition for rulemaking.⁴

Provisions that deny “trade secret” status to environmental information provided by industry are of the same nature. These provisions commonly state that no information about environmental effects, or about the nature of what is discharged into the environment, can qualify for “trade secret” protection.⁵

§ 4:13 Expert consultation

In 1978, Congress directed EPA to create a Science Advisory Board to provide such scientific advice as may be requested by the EPA Administrator and congressional committees.¹ Other expert advisory boards exist to advise the Agency, including those required by the CAA² and TSCA³ as well as those created by EPA under FACA, such as the National Environmental Justice Advisory Council.⁴

§ 4:14 Enforcement

⁶*Citizens for a Better Env't v. Gorsuch*, 718 F.2d 1117, 13 Env'tl. L. Rep. (Env'tl. L. Inst.) 20975 (D.C. Cir. 1983).

[Section 4:12]

¹CWA § 101(e), 33 U.S.C.A. § 1251; RCRA § 7004(a), 42 U.S.C.A. § 6974(a).

²*See* RCRA §§ 3001(a), 3002(a), 3003(a), and 3004(a), 42 U.S.C.A. §§ 6921(a), 6922(a), 6923(a) and 42 U.S.C.A. §§ 6921(a), 6922(a), 6923(a) and 6924(a) (almost all major RCRA regulations must be promulgated after “opportunity for public hearings”).

³RCRA § 7004(b), 42 U.S.C.A. § 6974(b).

⁴TSCA § 21, 15 U.S.C.A. § 2620; RCRA § 7004(b), 42 U.S.C.A. § 6974(b).

⁵Clean Air Act § 114, 42 U.S.C.A. § 7414 (“emissions data” may not be a trade secret); Clean Water Act § 308, 33 U.S.C.A. § 1318 (“effluent data” may not be a trade secret); TSCA § 14(b), 15 U.S.C.A. § 2613(b) (health and safety studies may not be a trade secret); FIFRA § 10, 7 U.S.C.A. § 136(h) (data on health and environmental effects cannot be a trade secret).

[Section 4:13]

¹Environmental Research, Development and Demonstration Authorization Act § 8; 42 U.S.C.A. § 4365.

²CAA § 109(d)(2); 42 U.S.C.A. § 7409(d)(2).

³FIFRA § 25(d); 7 U.S.C.A. § 136w(d).

⁴5 U.S.C.A. App. 2.

Enforcement *per se* is discussed elsewhere in this treatise.¹ However, it is worth devoting a word here to the administrative procedure aspects of this topic. A number of the EPA statutes allow EPA to assess civil penalties—sometimes quite large—against violators outside the federal court system.² Most of these cases are settled, and the hearings, when they occur, are of the standard courtroom variety, are held before an Administrative Law Judge (ALJ), and take place under standard courtroom-type rules.³

In addition, an increasing number of EPA statutes allow more minor penalties to be assessed by even less formal hearings.⁴

With these exceptions, judicial proceedings are the backbone of EPA's enforcement actions. However, even these proceedings have become "proceduralized" in three ways, with the third holding great significance.

First, some statutes explicitly require EPA to give Agency notice to a company before it may refer a case for prosecution. This is designed to give the Agency and the alleged violator time to work out their differences.⁵

Second, at the other end of the enforcement process, the Department of Justice follows a policy, originally adopted in antitrust cases, of making available all consent decrees for public comment before they are lodged with the court.⁶ A significant exception concerns proceedings under Superfund. CERCLA not only required EPA to begin hundreds of lawsuits, but also then placed the Agency under pressure to settle each one as best it can. The settlement process, in turn—often to the distress of the parties—has taken on some of the features of a regulatory proceeding. This has been a difficult object for EPA, in its primary role as a rulemaking and licensing agency, to digest.

EPA frequently issues "enforcement orders" without much process, stating its view that a party is violating a regulatory provision and ordering them to comply. Often, the issuance of such an order increases the possible penalties. In the case of *Sackett v. E.P.A.* a unanimous Supreme Court held that an order that increased penalties and had other adverse consequences was "final agency action" subject to judicial review.⁷ Since an order issued without process will be unlikely to withstand judicial review, this opinion will unquestionably reduce EPA's ability to use summary orders to compel compliance. In cases where a target does not settle voluntarily—as it often may—the Agency will have to choose between allowing some kind of public procedure before issuing the order, or going directly to court.

[Section 4:14]

¹See Ch 9.

²Clean Air Act § 120, 42 U.S.C.A. § 7420; RCRA §§ 3008(a) to (b), 42 U.S.C.A. §§ 6928(a) to (b); TSCA § 16, 15 U.S.C.A. § 2615; FIFRA § 14(a); 7 U.S.C.A. § 1361; Ocean Dumping Act § 105(a), 33 U.S.C.A. § 1415(a).

³The procedures for hearings under each of these statutory provisions are contained at 40 C.F.R. § 22.

⁴See, e.g., 42 U.S.C.A. § 7413(d) (Clean Air Act), 33 U.S.C.A. §§ 1319(g) and 1321(b) (Clean Water Act), and 42 U.S.C.A. § 11045 (EPCTRA).

⁵See § 9:5.

⁶28 C.F.R. § 50.7.

⁷*Sackett v. E.P.A.*, 566 U.S. 120, 132 S. Ct. 1367, 182 L. Ed. 2d 367, 73 Env't. Rep. Cas. (BNA) 2121 (2012).

APPENDIX 4A

Principal EPA Offices

Washington, D.C.

Ariel Rios Building
1200 Pennsylvania Avenue
Washington, D.C. 20460
EPA Online Staff Directory cfpub.epa.gov/locator.cfm
Office of the Administrator: 202-564-4700
Office of General Counsel: 202-564-8040

Region I

5 Post Office Sq., Suite 100
Boston, MA 02109-3912
Regional Administrator: 617-918-1111
Regional Counsel: 617-918-1091

Region II

290 Broadway
New York, NY 10007-1866
Regional Administrator: 212-637-3660
Regional Counsel: 212-637-3107

Region III

1650 Arch Street
Philadelphia, PA 19103-2029
Regional Administrator: 215-814-2900
Regional Counsel: 215-814-2683

Region IV

Sam Nunn Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, GA 30303-3104
Regional Administrator: 404-562-9900
Regional Counsel: 404-562-9542

Region V

Ralph Metcalfe Federal Building
77 W. Jackson Boulevard
Chicago, IL 60604-3507
Regional Administrator: 312-353-2000
Regional Counsel: 312-886-6666

Region VI

1201 Elm Street, Suite 500
Dallas, TX 75270-2102
Regional Administrator: 214-665-2200
Regional Counsel: 214-665-2110

Region VII

11201 Renner Blvd
Kansas City, KS 66219
Regional Administrator: 913-551-7006
Regional Counsel: 913-551-7227

Region VIII

1595 Wynkoop Street
Denver, CO 80202-1129
Regional Administrator: 303-312-6312
Regional Counsel: 303-312-6843

Region IX

75 Hawthorne Street
San Francisco, CA 94105
Regional Administrator: 415-947-8000
Regional Counsel: 415-972-3936

Region X

1200 Sixth Avenue, Suite 155
Seattle, WA 98101
Regional Administrator: 206-553-1200
Regional Counsel: 206-553-0464

APPENDIX 4B

EPA Regions



APPENDIX 4C

EPA Organizational Chart

EPA Organizational Structure

<u>Office of the Administrator</u>	
Headquarters offices	Regional offices (around the nation)
Office of Administration and Resources Management	Region 1 / Boston
Office of Chemical Safety and Pollution Prevention	Region 3 / Philadelphia
Office of Enforcement and Compliance Assurance	Region 5 / Chicago
Office of General Counsel	Region 7 / Kansas City
Office of International and Tribal Affairs	Region 9 / San Francisco
Office of Solid Waste and Emergency Response	Region 10 / Seattle
Office of Air and Radiation	Region 2 / New York
Office of the Chief Financial Officer	Region 4 / Atlanta
Office of Environmental Information	Region 6 / Dallas
Office of Inspector General	Region 8 / Denver
Office Research and Development	
Office of Water	

Chapter 5

Ethical and Economic Principles*

I. INTRODUCTION

- § 5:1 In general
- § 5:2 A grand vision

II. THE MORAL BASIS OF POLLUTION CONTROL LAW

- § 5:3 In general
- § 5:4 Compassion for the individual victim of pollution
- § 5:5 Rights and entitlements
- § 5:6 Cultural values
- § 5:7 A sense of community

III. SHOULD STANDARDS BE EFFICIENT?

- § 5:8 In general
- § 5:9 Should markets decide?
- § 5:10 The ethical basis of efficiency
- § 5:11 —Efficiency and utilitarianism
- § 5:12 —Should law satisfy personal preferences?
- § 5:13 —What is “welfare”?
- § 5:14 —Pollution control legislation and prosperity
- § 5:15 —Efficiency and consent
- § 5:16 Risks
- § 5:17 Regulatory review
- § 5:18 The role of cost-benefit analysis in regulation
- § 5:19 Alternatives to cost-benefit analysis

IV. ETHICAL PRINCIPLES IN CLIMATE CHANGE POLICY

- § 5:20 Climate change is not a collective action problem
- § 5:21 Corrective and distributive justice
- § 5:22 The Parfit paradox

V. INTEGRATING ETHICAL AND ECONOMIC APPROACHES TO ENVIRONMENTAL LAW

- § 5:23 In general
- § 5:24 Ends and means in pollution control law
- § 5:25 Supererogation in pollution control law

VI. PROTECTING THE NATURAL WORLD

- § 5:26 In general
- § 5:27 Ecological regulatory endpoints

*By Mark Sagoff.

- § 5:28 The Environmentalist Paradox
- § 5:29 Four obstacles to implementing a land ethic
- § 5:30 The concept of an ecological nuisance
- § 5:31 A Look Ahead

Research References

Primary Authority

United States Constitution, Article III, U.S. Const. Art. III
 Endangered Species Act, 16 U.S.C. § 1531
 Occupational Safety and Health Act, 29 U.S.C. § 651
 Clean water Act, 33 U.S.C. § 1251
 Civil Rights Act, 42 U.S.C. § 1981
 National Environmental Policy Act, 42 U.S.C. § 4321
 Clean Air Act, 42 U.S.C.A. § 7401
 Exec. Order No. 13563, 76 Fed. Reg. 3821
 Exec. Order No. 13610, 77 Fed. Reg. 28469

Additional References

Environmental Law Institute, <https://www.eli.org/>
 Council on Environmental Quality, <https://www.whitehouse.gov/ceq/>
 Declaration of Independence, <https://www.archives.gov/founding-docs/declaration-transcript>
 Ecomodernism, <http://www.ecomodernism.org/>
 Federal Communications Commission, <https://www.fcc.gov>
 Office of Management and Budget, <https://whitehouse.gov/omb/>
 Subcommission on Quaternary Stratigraphy, <http://quaternary.stratigraphy.org/workinggroups/anthropocene/>
 U.S.D.A. Economic Research Service, <https://www.ers.usda.gov/>
 U.S. Environmental Protection Agency, <https://www.epa.gov/>
 Energy & Environment, Jurisprudence & Encyclopedias, Texts & Treatises, <https://www.weslaw.com/SharedLink/fffd18fcbf7c470280e1d3fa08b3c2b3?VR=3.0&RS=cb1t1.0>
 Arnold W. Reitz Jr., Air Pollution Control Law: Compliance and Enforcement, Available at Environmental Law Institute, <https://www.eli.org/>
 Barry E. Hill, Environmental Justice: Legal Theory and Practice, 4th Edition, Available at Environmental Law Institute, <https://www.eli.org/>
 Benefit Staff Office of Planning and Evaluation, Benefit-Cost Analysis of Environmental Regulations Available at Environmental Law Institute, <https://www.eli.org/>
 Bud Ward & L. Jeremy Richardsom, Reporting on Climate Change: Understanding the Science, 4th Edition Available at Environmental Law Institute, <https://www.eli.org/>
 Holly Doremus & Dan Tarlock, Water War in the Klamath Basin: Macho Law, Combat Biology, and Dirty Politics Available at Environmental Law Institute, <https://www.eli.org/>
 Rachel Carson, Silent Spring Available at Environmental Law Institute, <https://www.eli.org/>
 Randall S. Abate, Climate Justice: Case Studies in Global and Regional Governance Challenges Available at Environmental Law Institute, <https://www.eli.org/>
 Richard Musgrave, Public Finance in Theory and Practice Available at Environmental Law Institute, <https://www.eli.org/>
 Ruth Greenspan Bell and Dianne Callan, More than Meets the Eye: The Social Cost of Carbon in U.S. Climate Policy, in Plain English Available at Environmental Law Institute, <https://www.eli.org/>
 Sarah Krakoff et. al., Beyond Zero-Sum Environmentalism Available at Environmental Law Institute, <https://www.eli.org/>
 Stephen M. Johnson, Economics, Equity, and the Environment Available at Environmental Law Institute, <https://www.eli.org/>
 Vrinda Manglik et. al., Comparative Federalism: Best Practices Analysis of Environmental Protection Authorities in Federal States Available at Environmental Law Institute, <https://www.eli.org/>

I. INTRODUCTION

§ 5:1 In general

On September 2, 2011, Cass Sunstein, then head of the Office of Information and Regulatory Affairs in the Office of Management and Budget, sent a letter to Lisa Jackson, Administrator of the Environmental Protection Agency (EPA), ordering her to withdraw EPA's proposed ambient air quality standard of 70 parts-per-billion (ppb) for ground level ozone, a precursor to smog and a contributor to many health problems.¹ EPA in its proposal had argued that 70ppb was the least stringent standard public safety and therefore the Clean Air Act would permit. During the George W. Bush administration, EPA's Clean Air Scientific Advisory Committee (CASAC) had recommended a standard set in the 60–70 ppb range. The Bush administration had proposed a compromise 75 ppb standard, but when the Obama administration came into office, the standard remained at an unhealthy 84 ppb set in 1997.

Environmental groups expected the Obama administration to push the standard down to 70 ppb or lower, in line with the CASAC recommendation. Instead, the Obama administration turned back the EPA proposal and promulgated the 75 ppb standard the Bush administration had approved and for which the electric power and other industries were prepared. The letter from Sunstein to Jackson speaks volumes about the ethical and economic principles of environmental law.

In his letter, Sunstein stated that “the relevant provisions of the Clean Air Act forbid EPA to consider costs in deciding on the stringency of national ambient air quality standards, both primary and secondary.” Public health and safety are the determinative goals or values set by the Clean Air Act. The ethical basis of environmental law, at least with respect to pollution, is the same as that of common law generally, that is, the protection of person and property from intrusion and harm. According to the CASAC this would require the 70 ppb standard. EPA had nevertheless prepared a lengthy (over 400-page), detailed, deeply researched, and well argued cost-benefit analysis (CBA) to show that a reduction to 70 ppb would also yield many billions of dollars in net benefits. Sunstein recognized that the CBA findings justified the lower standard in microeconomic terms.

Having acknowledged that 1) because of the ethical basis of the statute, costs and benefits could not be considered in enforcing the Clean Air Act, and 2) even if costs and benefits were considered, the 70 ppb standard would easily pass a cost-benefit test, Sunstein could not approve the EPA proposed standard. The reason was that it would cost jobs. An ozone standard that made energy significantly more expensive would affect inflation and unemployment—the “misery index”—and this did not appear compatible with administration hopes for reelection. Unemployment hovered at nearly 9 percent. Putting the standard at 70 ppb, in other words, could represent only a Pyrrhic victory for environmentalists if it aggravated unemployment. The standard would be soon rescinded by a Republican administration, backed by Tea Party conservatives who called for the abolishment of the EPA entirely. Does one make an ethical calculation, a cost-benefit calculation, or a political calculation when implementing the Clean Air Act and other environmental statutes? Sunstein wrote that the president had instructed him “to minimize regulatory costs and burdens, particularly in this economically challenging time.”

As economic conditions improved during the second Obama administration, so did political conditions for tightening the ozone standard. In November 2014, U.S. EPA proposed to lower the national ozone limit to between 65 and 70 ppb from the 75 parts per billion set in 2008 during the George W. Bush administration.²

The Sunstein 2011 letter illustrates three basic ethical and economic principles

[Section 5:1]

¹<http://www.whitehouse.gov/the-press-office/2011/09/02/letter-oira-administrator-cass-sunstein-epa-administrator-lisa-jackson-o>. See also <http://www.epa.gov/groundlevelozone/actions.html>.

²<http://www.epa.gov/glo/actions.html>.

governing environmental law at least in respect to pollution. First, Sunstein was correct in recognizing that the Clean Air Act forbids consideration of costs and benefits in setting standards. Environmental law generally seeks moral, ethical, and aesthetic goals—health and safety, for example—not microeconomic efficiency calculated in cost-benefit terms.

The second principle is this: If the economy is bad and jobs are scarce, employment will trump environment every time. In other words, the discussion of environmental values is very different in an economy in which unemployment stays near four percent than it is in an economy when unemployment sticks at nine percent. Politically, people need a kind of psychic ease to contemplate environmental restrictions and this is lacking when the “misery index”—a function of inflation and unemployment—is grim.

Third, CBA deals in microeconomic measurements—matters such as economic efficiency. Microeconomic efficiency, however, has no clear or demonstrated relationship with macroeconomic performance. One way to get the macroeconomy to function better—to provide more employment, for example—is to innovate some spectacular technology, like the Internet, that presents all kinds of new entrepreneurial opportunities. What would be particularly great for the environment would be the appearance of a cheap, clean, widely available form of energy. For this one needs inventors and engineers, not lawyers and economists. Environmental law cannot protect or improve the environment by itself, for example, by controlling externalities, that is, uncompensated third-party effects, of which pollution is the prime example. It also needs innovation of the kind that a prosperous and flourishing economy might provide. And innovation needs opportunity, ingenuity, investment, competition, and possibly luck.

In environmental law, as in other forms of social regulation, there are those who interpret legislation as an expression of public values and ethical principles and those who, instead, view legislation as a means to promote economic efficiency by regulating markets. This chapter describes these two approaches to pollution control legislation and analyzes the conflict between them. It also explains that the economic effects of regulation can be (and often are) measured in different ways. Most environmental economists take a cost-benefit approach which pursues efficiency in the sense that it regards regulations as justified insofar as they control externalities to the point at which the marginal costs of regulation are no greater than the benefits. The theoretical idea is suggested by a “Pareto frontier,” which individuals would themselves attain if they could exhaust all the benefits of trade. Some economists, however, concern themselves with what might be called the “production frontier,” which society can push forward through ingenuity, invention, innovation, and investment. These economists may worry more about the impact of regulations on macroeconomic measures such as the misery index—e.g., employment and inflation—rather than microeconomic measures such as benefits and costs.

This chapter begins by considering the microeconomic, cost-benefit, or “Pareto” approach to evaluating environmental regulations, which is to say, the “welfarist” strategy adopted by most environmental economists. The chapter then asks whether this approach can be “balanced” in some way with the view that environmental law seeks ethical goals—such as public safety and health—ahead of goals like economic efficiency. The chapter argues that these different ways of construing environmental law—i.e. “equity” vs. “efficiency”—cannot be “balanced” because efficiency has no merit or worth against which any ethical principle or value can be weighed. One reason for this is that “welfare” or “utility” or “benefit” cannot be measured. Instead, economists seek to measure willingness to pay (WTP) the relation of which to normative concepts such as benefit or welfare is often stipulated but is not testable and is open to many objections. The importance of the economic approach, however, lies in

helping policymakers take account of important constraints and realities, so that the ideal environment to which we aspire does not become a formidable enemy of the good environment we may actually achieve. This perspective leads to the second way of viewing the economic consequences of environmental policy, that is, its impacts on jobs and inflation or on economic prosperity. These do have to be balanced against moral imperatives such as public safety and health. This is the sort of tradeoff Cass Sunstein in his letter suggested motivated the president.

Statutes that limit or control pollution have often been justified in two distinct ways. First, many legal analysts interpret pollution-control policy in terms of common-law protections of the rights of person and property against assault and trespass. Second, many economists analyze pollution-control policy in terms of attempts to make markets efficient by “internalizing” the social (or “external”) costs of pollution into the prices of goods that pollute. The first approach sees pollution as an evil—albeit in some ways a necessary evil—to be minimized or tolerated until technology can do better. The second approach conceptualizes pollution as a cost or diseconomy to be optimized. The first sections of this chapter compare these very different and in some ways conflicting views principles of environmental law.

The chapter moves from examining the overall moral foundations and the economic theory of pollution-control law to consider the basis for “regulatory review” at the Office of Management and Budget at the White House. Typically Congress delegates to the heads of the regulatory agencies authority to promulgate rules that interpret and implement the relevant “enabling” statutes. The president, however, has many reasons to provide a “second opinion” on major rulemakings, to coordinate agency actions, and to bring regulatory policies within his or her political agenda insofar as the law allows. The principles that justify and limit White House review of regulations have been the subject of much discussion during the first Obama administration, which culminated in Executive Order 13,563 issued in 2011, which remained largely consistent with similar Executive Orders by previous administrations.

This chapter then considers the ethical grounds for policies intended to reduce “greenhouse” gases, particularly carbon dioxide, to reduce or limit the effects of global climate change. These gases are not pollutants in the conventional sense that they directly impair human health or damage property. Insofar as these gases do not themselves invade people or their property, they may not be subject to the familiar kinds of constraints that common law places on the emission of toxic and hazardous pollutants. On the other hand, calls for international efforts to reduce greenhouse emissions draw on prudential concerns as well as principles of justice. This chapter will review arguments that appeal to conceptions of social justice as grounds for reductions in greenhouse gas emissions as well as for allocating responsibility to make those reductions. Even if there were a philosophical agreement about the demands of justice in this context, however, this would not guarantee a political agreement about how to meet them. Indeed, there is no reason to suppose that in a divided and fractured world, where climate change produces winners and losers, any morally desirable outcome is politically possible.

This chapter concludes by considering those aspects of environmental law, many of which are now emerging, that seek to protect not human health or welfare but what may be called the integrity of the natural environment. Pollution-control statutes, insofar as they attempt to protect citizens from dangers that lurk in the air and water, may be said to protect people from the environment, while statutes such as the Endangered Species Act (1973) seek to protect the natural environment from people. The final section of this chapter examines the values and principles that may justify the attempt to keep nature “natural” or ecosystems “intact.” This section asks whether and why public policy should make the natural environment

itself an object of protection for reasons—religious, cultural, moral, or even patriotic—other than to protect the health or promote the welfare of human beings. This question becomes particularly vexing in the context of the Anthropocene, which is to say, the idea that human beings have become everywhere primary drivers of ecological change.³

This chapter ends by commenting on a novel intellectual movement that calls itself “ecomodernism” and which in 2015 issued a “Manifesto” (<http://www.ecomodernism.org/>) signed by 18 environmental activists and academics. According to *Nature* magazine, “The essay paints a hopeful picture of technological progress while placing importance on the kind of intensive development that has characterized humanity’s rise so far. Only by concentrating our impact within the urban, industrial and agricultural context can we achieve a ‘good Anthropocene,’ or age of human influence, the authors argue.”⁴

The techno-optimistic hope that humanity can at least to some extent “decouple” economic growth from environmental damage, for example, by using less material resources for the same or more economic output (as a cell phone combines many devices in a small package of materials) or by moving toward a less materials-intensive information economy, raises two fundamental doubts. First, have we or can we possess the ingenuity actually to use nature less—to “spare” it in ecomodernist terms—and still to raise standards of living worldwide? Second, why is it important to spare nature from human use, that is, to protect it, and what can be meant by “nature” on a planet in which places that are not affected, usually profoundly, by human agency or activity are no longer found?

§ 5:2 A grand vision

“Environmentalism at its inception was a grand vision,” William Ruckelshaus wrote in 1985, “one that nearly all Americans shared. Somehow, that vision of the essential unity of nature and of the need for bringing industrial society into harmony with it has been lost among the parts per billion, and with it we have lost the capacity to reach social consensus on environmental policy.”¹ Americans may continue to support and share the “grand vision” of the 1960s and the 1970s concerning environmental legislation.² They differ and disagree about the policies needed to achieve it and which are justified in view of costs. One problem may be that the nation, through “agency-forcing”³ and “technology-forcing”⁴ legislation, has made the

³Subcommission on Quaternary Stratigraphy, <http://quaternary.stratigraphy.org/workinggroups/anthropocene/>.

⁴Editorial, *Decoupling Ideals*, 520 *Nature* 407-408 (April 23, 2015).

[Section 5:2]

¹Ruckelshaus, *Risk, Science, and Democracy*, *Issues Sci. & Tech.*, Spring 1985, at 30. Ruckelshaus argued that risk assessment and management could not be distinguished since normative commitments influenced both. “It turns out that the experts don’t agree, so instead of an unimpeachable and disinterested consensus you get dissenting advocacy. Once again, experts have values too.” William D. Ruckelshaus, “Risk in a Free Society,” *Risk Analysis*, Vol. 4, No. 3, 1984, 159.

²For a survey of public opinion polls, see Mitchell, *Public Opinion and Environmental Politics*, in *Environmental Policy in the 1980s: Reagan’s New Agenda* 51 (N. Vig & M. Kraft eds. 1984). Relevant polls are also reported in U.S. Council on Environmental Quality, *Public Opinion on National Environmental Issues* (1980). According to the Gallup polls, environmental concern has diminished between the late 1980s and 2014, but remains significant. See “In U.S., Concern About Environmental Threats Eases,” Gallup Polls online at www.gallup.com/poll/182105/concern-environmental-threats-eases.aspx (Mar. 25, 2015).

³Many Americans at the time believed that the coming technological revolution (computers and biotechnology) would make pollution obsolete so that only temporary solutions—pollution control technologies—would be necessary. Thus, Gene Bylinsky, commenting in 1969 on the euphoric expecta-

easiest and least expensive gains.⁵ Environmental lawyers and professionals, therefore, have generally turned their attention from the principles and purposes underlying pollution control law, which they may take for granted or may even regard as boiler-plate,⁶ to the controversial and contested policies intended, sometimes obliquely and at uncertain costs, to carry them out.

The “grand vision” which underlies pollution control law comprises two basic approaches or attitudes which have become so familiar and gained such general acceptance that discussion of environmental legislation must begin with them. The first attitude is ethical and cultural; the second is prudential and economic.

Those who take the first approach resent pollution as an illegitimate form of exploitation of individuals and of the environment. They regard pollution with horror and distaste and call for a new environmental ethic to bring the nation into greater harmony with nature. Among those who call for regulation on ethical as opposed to economic grounds, Libertarians decry pollution as a kind of coercion.⁷ They regard pollution as a form of assault or trespass—an invasion of the rights of person

tions of the day, wrote:

To judge by the pronouncements from Washington, we can start looking forward to cleaner rather than ever dirtier rivers. The Administration has declared a “war” on pollution, and the Secretary of the Interior Walter J. Hickel says, “We do not intend to lose.” Adds Murray Stein, enforcement chief of the Federal Water Pollution Control Administration: “I think we are on the verge of a tremendous cleanup.”

Bylinsky, *The Limited War on Pollution*, in *The Environment: A National Mission for the Seventies* 19 (Editors of Fortune eds. 1970). Senator Muskie stated that the 1970 Clean Air Act, which he sponsored, would achieve clean air goals by directing officials to take specific actions by specific deadlines. 116 Cong. Rec. 32902 (1970) (remarks of Sen. Muskie).

⁴The Clean Air Act is described as “agency-forcing” in Ackerman & Hassler, *Beyond the New Deal: Coal and Clean Air Act*, 89 Yale L.J. 1466, 1470 (1980). Schoenbrod described the 1970 Act as “in the first instance, a law that regulates government rather than sources of pollution. It requires government—both federal and state—to take certain actions by certain dates.” Schoenbrod, *Goals Statutes or Rules Statutes*, 30 UCLA L. Rev. 740, 742 (1983). The term “agency forcing” is applied, for example, to the National Environmental Policy Act (NEPA) in *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 707 n.3, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20536, 20545 n.3 (Douglas, J., dissenting) (quoting Sen. Jackson); see also L. Caldwell, *Environment: A Challenge to Modern Society* 219 (1970).

⁵The Clean Air Act instructs EPA to set technology-based emission limits for new stationary sources and modifications of existing sources. 42 U.S.C.A. § 7411. These limitations in turn reflect “the degree of emission reduction achievable through the application of the best system of continuous emission reduction.” 42 U.S.C.A. § 7411(a)(1)(C). The Federal Water Pollution Control Act requires technology-based standards for new sources, 33 U.S.C.A. § 1316, and old sources. 33 U.S.C.A. § 1311. After 1977, existing sources were required to meet standards reflecting the “best practicable control technology currently available.” 33 U.S.C.A. § 1311(b)(1)(A). After 1983, the requirement rose to a level reflecting the “best available technology economically achievable.” 33 U.S.C.A. § 1311(b)(2)(A). A standard determined by reference to the “best available demonstrated control technology” was imposed on new sources. 33 U.S.C.A. § 1316(a)(1).

For a study of judicial review of the technology-forcing aspects of pollution control law, see *The Law of Environmental Protection* § 12:126–12:131, § 13:48–13:63 (Clean Air Act; Clean Water Act). For criticisms, mostly from an economic perspective, of technology-forcing provisions, see Dewees, *The Costs and Technology of Pollution Abatement*, in *Approaches to Controlling Air Pollution* 291 (A. Friedlander ed. 1978); La Pierre, *Technology-Forcing and Federal Environmental Protection Statutes*, 62 Iowa L. Rev. 771 (1977); Margat, *The Effects of Environmental Regulation on Innovation*, 43 Law & Contemp. Probs. 4 (1979); Note, *Technology-Based Emission and Effluent Standards and the Achievement of Ambient Environmental Objectives*, 91 Yale L.J. 91 (1982).

⁶See generally Henderson & Pearson, *Implementing Federal Environmental Policies: The Limits of Aspirational Commands*, 78 Colum. L. Rev. 1429 (1978). See also National Research Council, Committee on Environmental Decision Making, *Decision Making in the Environmental Agency* 5 (1977) (“Even the most ringing declaration of Congressional purpose to defend, maintain, and enhance environmental values must be read with caution. It is common legislative practice to include such declarations, but to impede their implementation with restrictive statutory language or procedures that make enforcement more difficult.”).

⁷For an excellent survey of Libertarian views of pollution, see Matt Zwolinski, “Libertarianism

and property. To be sure, society cannot eliminate all pollution without bringing the economy to a screeching halt. Nevertheless, the most ordinary concern for the rights of person and property requires that social policy seek to eliminate pollution down to de minimis levels or to the point at which the costs of further control—even with the best technology—become prohibitive.

Those who take the second approach regard pollution not as an invasion, trespass, or tort, but as an ordinary fact of life in an industrial society. The goal for public policy, according to this economic perspective, is to make sure pollution “pays its way” by providing benefits that offset its costs. On this approach, the government should force polluters to reduce their effluents and emissions just to the point that the cost of the next reduction would not equal the benefits. The determination of costs and benefits, of course, requires a great deal of expertise, and experts often disagree. Regulations are typically challenged in court, where decisions can turn on the arcana of statutory interpretation.⁸ This may add to the overall costs and generally retards the pace of regulation.

Each of these two attitudes is important and both have legitimate roles to play in the formation and justification of environmental policy. Both are found in the law. The conflicts of policies within environmental legislation can often be traced to the relative successes and failures these two sides have had in various legislative battles. The purpose here is not to retrace these legislative engagements; rather, it is to describe the contribution each point of view may make to the interpretation and implementation of federal pollution control law.

During the 1970s, Congress, responding to moral and cultural attitudes which had coalesced into a political consensus, enacted a series of major pollution control statutes. Those who demanded these statutes argued that, without them, corporations would neither develop nor install adequate pollution control technology. Pollution control statutes were intended in part, then, to improve corporate behavior as well as environmental quality, public safety, and health.

Americans blamed themselves, however, and not merely corporations for pollution; it was commonplace to quote *Pogo* to the effect that we are our own worst enemies. Editorial opinion, political rhetoric, and expert testimony condemned pollution as a symbol of national irresponsibility for which we would later dearly pay. The selfish, short-sighted, and greedy emphasis Americans placed on personal consumption, according to this perspective, had led the nation to trade its magnificent natural heritage for a mess of consumer porridge. Students of American history may hear in the rhetoric of the 1970s echoes of the jeremiads in which religious and political leaders centuries ago, speaking at awakenings and revivals, inveighed against the nation’s declension from its traditional moral and religious ideals and condemned the national pursuit of material things.⁹

A prominent scientist, writing in 1970, expressed “the certainty that . . . all over the world, technological civilization is threatening the elements of nature that are

and Pollution,” 32 *Philosophy and Public Policy Quarterly* 9-21 (Fall/Winter 2014).

⁸For a study of the many contending values that influence statutory interpretation by courts, see Robert Katzmann, *JUDGING STATUTES* (Oxford University Press, 2014).

⁹For a description and a history of these jeremiads, see P. Miller, *Nature’s Nation* 15-59, 90-133 (1967). The idea that the lust for material profit and prosperity has lured us from our basic ethical principles and brought us to the brink of disaster is at least as old as Calvinism and has been a staple of the environmental movement. Thus, a prominent Congregationalist minister told an Earth Day crowd that “[e]nvironmental rape is a fact of our national life only because it is more profitable than responsible stewardship of the earth’s limited resources.” *Earth Day—The Beginning* 74 (National Staff of Environmental Action ed. 1970) (quoting Channing Phillips).

essential to human life, and the values that make it worth living.”¹⁰ Another observer of the environmental “bandwagon” in 1971 commented that “[t]he environmental hysteria is, in essence, a symbolic protest of men against the encroaching grip of technology on the quality of individual life, a swing of the pendulum from the euphoric decades when science and technology were matters of national pride and utilitarian hope.”¹¹

Those who adopt an economic approach, in contrast, argue that “as important as technology, politics, law, and ethics are to the pollution question, all such approaches are bound to have disappointing results, for they ignore the primary fact that pollution is an economic problem.”¹² According to this view, the primary cause of pollution and the key to its control lie in the divergence between the social and private costs of production—the ability of polluters to “pass on” the costs of pollution to society as a whole, rather than themselves being forced to pay for and, therefore, to reflect those costs in the prices charged for what is produced. On this approach, if the costs of pollution could be “internalized” in markets and not “externalized” to society as a whole, pollution would not generally be a problem; polluters would have an incentive to reduce pollutants to levels at which any further reduction would cost more than it would benefit society as a whole. It is not our “unethical” reliance on markets, then, but the failure of markets to function properly which makes wasteful practices more profitable than responsible stewardship of the earth’s limited resources.¹³

The following pages explore analytically these two approaches to pollution control law. The chapter is divided into five parts. The first analyzes the ethical basis for pollution control law; the second discusses the economic basis for controlling pollution; the third explores the relationship between the two attitudes, and suggests a way of reconciling them. If “reconciling” is too strong a term, an argument is offered to support the view that society can be intelligent in the sense F. Scott Fitzgerald famously defined. Fitzgerald wrote, “The test of a first-rate intelligence is the ability to hold two opposed ideas in the mind at the same time, and still retain the ability to function.”¹⁴ The fourth section of this chapter considers the strengths and weaknesses of arguments centered on social justice for making and allocating reductions in greenhouse gas emissions. The final section explores those aspects of environmental law that are directed to the preservation of nature rather than simply to the protection of public health, safety, and welfare. The chapter as a whole argues that, while we are deeply of two minds about environmental protection, we can work within the important differences and, therefore, continue to share the “grand vision” on which federal environmental legislation rests.

II. THE MORAL BASIS OF POLLUTION CONTROL LAW

§ 5:3 In general

Senator Muskie, writing in 1969, captured the popular mood of the time:

We are confronted with a terrible prospect that the American dream of the good life may

¹⁰Dubos, *The Human Landscape*, Bull. Atom. Scientists, Mar. 1970, at 31.

¹¹King, *The Environmental Bandwagon*, in *Ecocide—And Thoughts Toward Survival* 189, 190 (C. Faidman & J. White eds. 1971).

¹²Ruff, *The Economic Common Sense of Pollution*, in *Pollution, Resources, and the Environment* 37 (A. Enthoven & A. Freeman eds. 1973).

¹³For a description of this approach, see W. Baumol & W. Oats, *The Theory of Environmental Policy* (1985); J. Dales, *Pollution, Property, and Prices* (1968); A. Freeman, R. Haveman & A. Kneese, *The Economics of Environmental Policy* (1973). For a good annotated bibliography of the literature, see Fisher & Peterson, *The Environment in Economics: A Survey*, 14 J. Econ. Literature 1 (1976).

¹⁴F. Scott Fitzgerald, *THE CRACK-UP* 69 (New York: New Directions, 1956).

turn out to be a nightmare. Our efforts to improve our lives have created hazards from which there is no escape. From this time forward we must devote as much energy and ingenuity to the elimination of man-made hazards to man as we have to the expansion of his ability to harness energy and materials to his desires.¹

Americans agonized over rivers catching fire, species becoming extinct, wildlife disappearing, oil spills, fish kills, detergents foaming in rivers and lakes, beach closings, and any number of horrors which led them to regard pollution as a menace gone out of control.² Moreover, when the astronauts returned from the moon with pictures showing North America covered with clouds of pollution, Americans felt ashamed as well as afraid. Titles of the books popular at the time reflected the ominous mood: *Silent Spring*,³ *Vanishing Air*,⁴ *This Endangered Planet*,⁵ *The Closing Circle*,⁶ *The Darkening Land*,⁷ *The Coming Dark Age*,⁸ *The Population Bomb*,⁹ *Famine 1975*,¹⁰ *Eco-Catastrophe*,¹¹ *Ecocide*,¹² *Murder of the Ecosystem and Suicide of Man*,¹³ and many others.¹⁴

The events of Earth Day, April 22, 1970, suggested the extent to which Americans engaged in political action and public demonstrations aimed at making the federal government control pollution and protect the quality of the natural environment.¹⁵ “The spontaneity, size, and intensity evident in the thousands of demonstrations across the land,” John Quarles wrote, “left no doubt that Americans were gripped by a new concern.”¹⁶ According to John Whittaker, “there is still only one word, *hysteria*, to describe the Washington mood on the environment in the fall of 1969. The words *pollution* and *environment* were on every politician’s lips.”¹⁷

Between 1969 and 1978, Congress enacted eight major pollution control statutes

[Section 5:3]

¹Senator E. Muskie, Statement, in *The Environment: A National Mission for the Seventies* 15, 16 (Editors of *Fortune* eds. 1970).

²See Erskine, *The Polls: Pollution and its Costs*, 36 *Pub. Opinion Q.* 120 (1972); see also Sills, *The Environmental Movement and its Critics*, 3 *Hum. Ecology* 1 (1975).

³R. Carson, *Silent Spring* (1962).

⁴J. Esposito, *Vanishing Air* (1970).

⁵R. Falk, *This Endangered Planet: Prospects and Proposals for Human Survival* (1972).

⁶B. Commoner, *The Closing Circle* (1971).

⁷W. Longgood, *The Darkening Land* (1972).

⁸R. Vacca, *The Coming Dark Age* (1973).

⁹P. Ehrlich, *The Population Bomb* (1968).

¹⁰W. Paddock & P. Paddock, *Famine 1975: America’s Decision, Who Will Survive?* (1975).

¹¹*Eco-Catastrophe* (Editors of *Ramparts* eds. 1970).

¹²King, *The Environmental Bandwagon*, in *Ecocide—And Thoughts Toward Survival* 189 (C. Faidman & J. White eds. 1971).

¹³P. Anderson, *Murder of the Ecosystem and Suicide of Man* (1971).

¹⁴Other examples include M. Bernarde, *Our Precious Habitat* (1970); G. Borgstrom, *The Hungry Planet: The Modern World at the Edge of Famine* (1967); J. Dorst, *Before Nature Dies* (1971); D. Meadows, J. Randers & W. Behrens, *The Limits of Growth* (1972); P. Ehrlich, *The End of Affluence* (1974). This literature prompted a significant backlash. See, e.g., J. Maddox, *The Domsday Syndrome* (1972); P. Beckman, *Eco-Hysterics and the Technophobes* (1973); C. Adler, *Ecological Fantasies: Death by Falling Watermelons* (1975).

¹⁵For an excellent study of the ethos of environmentalism in the 1970s, especially the concern then paramount about population growth, see Thomas Robertson, *THE MALTHUSIAN MOMENT: GLOBAL POPULATION GROWTH AND THE BIRTH OF AMERICAN ENVIRONMENTALISM* (Rutgers University Press, 2012).

¹⁶J. Quarles, *Cleaning Up America: An Insider’s View of the Environmental Protection Agency* 12-13 (1976).

¹⁷J. Whittaker, *Striking a Balance: Environmental and Natural Resources Policy in the Nixon-Ford Years* 27 (1976).

as part of a wave of environmental and civil rights legislation. These statutes answer to the moral aspirations of American society. “Only a Scrooge or a misanthrope,” Murray Weidenbaum observed,

would quarrel with the intent of the new wave of federal regulation—safer working conditions, better products for the consumer, elimination of discrimination in employment, reduction of environmental pollution, and so forth. And we must remember that the programs were deliberately established by Congress in response to a surge of rising public expectations about corporate performance.¹⁸

Public expectations have centered on four normative issues. The first springs from popular sympathy for or empathy with the victim of pollution—the worker, neighbor, homemaker, or child who is injured or dies as a result of exposure to a toxic substance in the workplace or in the environment.

The second concerns the protection of rights. Traditional forms of private law protection—tort remedies, for example—do not work in many cases involving injury and death caused by pollution.¹⁹ These private law remedies must therefore be supplemented, but not supplanted, by public law.²⁰

Third, Americans are concerned about pollution for cultural and patriotic reasons quite apart from the dangers which, from a scientific point of view, pollutants may pose to individuals. Americans are committed to the idea that America is and ought to remain beautiful: Smog filled air, polluted rivers, dead lakes, and fouled land offend our cultural values and our sense of national dignity and pride.

Fourth, while markets may help consumers to form and to satisfy personal preferences, democratic political institutions allow citizens to deliberate together to choose common goals and aspirations that they could not achieve or even imagine alone. Efforts to preserve our natural heritage and to reduce environmental pollution provide ways, both actual and symbolic, to build and to express a sense of national community without infringing on the freedom of each individual to pursue his own pleasures and live his own life.

This chapter now critically examines each of these ways of understanding the moral basis of federal pollution control law. It then turns to examine the alternative economic or market-based approach regulating pollution.

§ 5:4 Compassion for the individual victim of pollution

Since the time of the abolition movement, reformers in the United States have used federal law as a force for social improvement. Congress has ended child labor, improved unconscionable conditions in sweat shops, company towns, and mines, set a maximum workday and a minimum wage, relieved the suffering of the very poor, provided some form of public health care, and established other programs which may vindicate a nation’s claim to being a caring, compassionate community concerned about the health, safety, and well-being of the individual citizen. There

¹⁸M. Weidenbaum, *Business, Government, and the Public* 21 (2d ed. 1981).

¹⁹In many cases, however, they work well; tort law remains the primary defense individuals have against hazardous pollutants in the environment. See P. Broder, *Outrageous Misconduct* (1985).

²⁰Eads and Reuter conclude from their study of corporate responses to liability law and regulation that “product liability has the greatest influence on product design decisions.” G. Eads & P. Reuter, *Designing Safer Products: Corporate Responses to Product Liability Law and Regulation* vii (1983). Commenting on industries subject only to moderate regulatory pressure, specifically only to regulation by the Consumer Product Safety Commission, these authors state that “regulatory actions . . . may be perceived as important or unimportant depending primarily on their impact on a firm’s liability exposure.” G. Eads & P. Reuter, *Designing Safer Products: Corporate Responses to Product Liability Law and Regulation* vii (1983). The relationship between tort and public regulation of pollution is examined in § 5:8.

is, however, always more to do; nevertheless, pollution control takes its place in the history of legislation intended to improve the background conditions against which people make choices and live their lives. Pollution control statutes, therefore, taken in their most general terms, belong to a long tradition of humanitarian legislation intended to ameliorate man's inhumanity to man.

The National Environmental Policy Act of 1969 (NEPA) sets forth a national policy to "assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings."¹ In a series of pollution control statutes enacted during the 1970s, Congress attempted to make this policy operational and especially to protect the health and safety of individuals.

In 1970, Congress amended the Clean Air Act to require that the Administrator of the Environmental Protection Agency (EPA) set standards for air pollutants to assure an "adequate margin of safety" to protect the public health.² With respect to "hazardous" pollutants, Congress required an "ample" margin of safety.³ The Senate Subcommittee on Air and Water Pollution made it clear in its Report that EPA should protect the health of each American, including those in the most sensitive group.⁴ Congress has repeated this "margin of safety" requirement in other safety and health legislation.⁵

Legislators soon became aware—they may have been aware from the start—that safe "threshold" levels cannot be determined for many important pollutants.⁶ Accordingly, society must determine how safe is "safe enough." But the statutes by

[Section 5:4]

¹42 U.S.C.A. § 4331(b)(2).

²42 U.S.C.A. § 7409(b)(1).

³42 U.S.C.A. § 7412(b)(1)(B).

⁴The Senate Committee emphasized that "persons whose health should be protected by the ambient standard are particularly sensitive citizens such as bronchial asthmatics and emphysematics who in the normal course of daily activity are exposed to the ambient environment" are included in this group. Accordingly, "[i]n establishing an ambient standard necessary to protect the health of these persons, reference should be made to a representative sample of persons comprising the sensitive group." S. Rep. No. 1196, 91st Cong., 2d Sess. 10 (1970), *reprinted in* 1 Senate Comm. on Pub. Works, A Legislative History of the Clean Air Amendments of 1970, S. Rep. No. 18, 93d Cong., 2d Sess. 410 (1974) [hereinafter cited as Clean Air Act Legislative History].

For an overview of the relation of sensitive groups and pollution control policy, see R. Friedman, *Sensitive Populations and Environmental Standards* (1981).

⁵42 U.S.C.A. §§ 1381 to 1431 (supplemental security income); 21 U.S.C.A. § 349 (food additives). Critics often complain that the Clean Air Act, in its concern with the safety of every individual, appears "cost-oblivious." Rogers, *Benefits, Costs, and Risks: Oversight of Health and Environmental Decisionmaking*, 4 Harv. Envtl. L. Rev. 191, 201 (1980). The Act also appears to preclude a cost-benefit test of air quality standards. See R. Crandall, *Controlling Industrial Pollution: The Economics and Politics of Clean Air* 8-18 & 133-35 (1983); J. Krier & E. Ursin, *Pollution and Policy* 321-45 (1977); L. Lave & G. Omenn, *Clearing the Air; Reforming the Clean Air Act* 45-46 (1981); Currie, *Relaxation of Implementation Plans Under the 1977 Clean Air Act Amendments*, 78 Mich. L. Rev. 155, 158 (1979); Currie, *Direct Federal Regulation of Statutory Sources Under the Clean Air Act*, 128 U. Pa. L. Rev. 1389, 1460-63 (1980) (arguing that "[t]he statutory requirement of absolute health protection through source controls ought to be modified. The Agency should be authorized to take cost into consideration under Section 112(b)").

⁶Apparently, Congress knew when it passed the Clean Air Act that "safe" thresholds may be impossible to determine, but it nevertheless used the "margin of safety" language, and delegated to others the problem of making that language operational. Looking back seven years later on the events of 1970, Senator Muskie testified:

Our public health scientists and doctors have told us there is no threshold, that any air pollution is harmful. The Clean Air Act is based on the assumption, although we knew at the time it was inaccurate, that there is a threshold. We set standards, we understood that below the standard there would still be health effects. The standard we picked was simply the best judgment we had on the basis of the available evidence as to what the unacceptable health effects in terms of the country as a whole would be.

and large either ignore or paper over this problem. The Clean Water Act, for example, delegates the problem to EPA officials by requiring “a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.”⁷

Even if it is sometimes difficult, perhaps impossible, to determine “safe” levels for certain pollutants, however, it is often all too easy to determine that existing levels are unsafe.⁸ In 1975, for example, officials found twenty-four cases of angiosarcoma among vinyl chloride workers.⁹ Since this rare liver cancer is associated primarily with exposure to vinyl chloride, these workers knew how and where they had been injured. The public became concerned, first, because it could sympathize with these workers and their families; the victim might have been a neighbor, husband, or friend. Second, since vinyl chloride escaped into the environment and was also used as an aerosol in many consumer products, the public feared as well for itself. Public agencies, including EPA, quickly moved to control vinyl chloride exposure in the workplace and in the environment and took the dangerous products from grocery store shelves.¹⁰

When dozens, scores, or hundreds of people die as a direct and provable result of exposure to particular substances, such as asbestos and vinyl chloride, we have a clear consensus about the course to take. EPA and other agencies entrusted with protecting public health have no choice but to regulate the known causes of specific cancers in identifiable human beings. Besides, personal injury lawyers—common-law liability claims of the sort celebrated in Jonathan Harr’s *A Civil Action* (1996)—have concentrated the mind of industry. The list of corporations bankrupted as a result of damage awards—from Johns Manville to W.R. Grace—is truly impressive. To some extent, then, pollution-control law can be seen as the method statutory law uses to accomplish in a general and thus more effective way what private or common law might accomplish more haltingly, case-by-case, over the long run. Indeed,

Clean Air Act Amendments of 1977: Hearing Before the Subcomm. on Environmental Pollution of the Senate Comm. on Environment and Public Works (pt. 3), 95th Cong., 1st Sess. 8 (1977).

⁷33 U.S.C.A. § 1313(d)(1)(C).

⁸We may better grasp both the fundamental purpose and the fundamental problem of the Clean Air, Clean Water, and Safe Drinking Water Acts if we compare them to a statute such as the Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91-173, 83 Stat. 742 (codified as amended at 30 U.S.C.A. §§ 801 to 960). That statute requires that “every hoist . . . shall be equipped with . . . hoisting cable adequately strong to sustain the fully loaded platform, cage or other device; and have a proper margin of safety.” 30 U.S.C.A. § 874(a) (subchapter labeled an “Interim Mandatory Safety Standard,” but still in effect). The Mine Safety Act resembles pollution control legislation in that it intends to protect the health and safety of all those affected by its provisions—in this instance, those who operate hoists or work on or under hoisted platforms. The crucial difference which makes the Mine Safety Act so much easier to implement than the Clean Air Act is that it is possible to compute threshold levels at which cables will break under given loads; it is also easy and not very costly to manufacture cables to meet those requirements. Safe thresholds for pollutants are hardly as easy to determine, however, and they are certainly more costly to achieve. The Clean Air and Mine Safety Acts are alike in their principle and purpose: both seek to protect the safety of the individual. These laws differ primarily in the contingent problems which make it much more difficult to set and to satisfy safety standards for pollutants than for rope and cables. For a history of the “margin of safety” concept in federal legislation, see Thompson, *Margin of Safety as a Risk Management Concept in Environmental Legislation*, 6 Colum. J. Envtl. L. 1 (1979).

⁹J. Quarles, *Cleaning Up America: An Insider’s View of the Environmental Protection Agency* 12-13 (1976); Novick, *In Defense of Irrational Laws*, 3 Envtl. Forum, July 1984, at 10, 11.

¹⁰EPA set a 10 ppm limit on vinyl chloride emissions; at these levels, the risks are arguably *de minimis*. 40 Fed. Reg. 59432, 59535–36 (1975). Since no safe threshold for vinyl chloride has been determined, however, the 10 ppm standard would appear to violate the “margin of safety” requirement of the law. Under pressure from an Environmental Defense Fund suit, EPA proposed to make the standard increasingly more stringent. 42 Fed. Reg. 28154 (1977). Under pressure from industry, however, it reinstituted the 10 ppm standard. See 40 C.F.R. § 61.63.

Libertarians see in this connection between public and private law—between the statutory mandate and the private action—a basis on which to legitimate legislative power with respect to controlling pollution.

When we are uncertain of the degree of the hazard—when no safe threshold can be determined—we are no longer sure what to do. We wish to act as a caring, compassionate society, but we have no clear consensus about what that requires in this context. Several important books have considered quite deeply the extent to which virtues and principles, such as compassion and justice, extend to “statistical” lives rather than to identifiable individuals.¹¹ It makes some sense to think that insofar as it is a goal of environmental and other health-and-safety agencies to save lives, then these agencies should save the greatest number at the lowest cost. As a general rule, as economists will argue, agencies should equalize the marginal cost of saving a statistical life—the expense society incurs to save the “next” or “incremental” life—across programs and projects to maximize lives saved per dollars spent.¹² A given program may deviate from this general maximizing rule, but if so, this requires an explanation.¹³

When we consider pollutants which are not related to identifiable and peculiar diseases, we tend to speak in statistical terms; of percentages, not persons, of differences among populations, and not between individuals. We may ponder on representations of weighted hierarchical stepwise regressions and Ames microbial mutagenesis assays. Conversely, the image of a school child with asbestosis engages our moral conscience; a statistical increase in the incidence of the disease may not. We know what to do about asbestos and the school child, namely, to protect her or him and other children by eliminating the hazard. But our moral intuitions wobble when we are told, for example, that various studies show, while other studies fail to show, an association between trihalomethanes in drinking water and an increased incidence of cancers of the colon and bladder.¹⁴

Our moral intuitions may be conflicted by the knowledge that, in reducing some risks, we increase others.¹⁵ The trihalomethanes or haloforms associated with increased incidence of bladder cancer, for example, result from typical water treatment procedures which protect the public health.¹⁶ The “shutdown of an urban area’s electric service,” as Justice Powell observed, “could have a more serious impact on the health of the public than that created by a decline in ambient air

¹¹Three important books are: Frank Ackerman and Lisa Heinzerling, *Priceless: On Knowing the Price of Everything and the Value of Nothing* (New York: New Press, 2004); Cass Sunstein, *Risk and Reason: Safety, Law, and the Environment* (New York: Cambridge University Press, 2004); and Sheila Jasnoff, *Designs on Nature: Science and Democracy in Europe and the United States* (Princeton: Princeton University Press, 2005).

¹²See, e.g., Kip Viscusi, *Fatal Tradeoffs: Public and Private Responsibilities for Risk* (Oxford: Oxford University Press, 1992).

¹³For an analysis of the role of risk-benefit analysis in pollution control law, including cultural and ethical norms that may pre-empt it, see Cass Sunstein, *Cost-Benefit Analysis and the Environment*, 115 *Ethics* 351-385 (Jan. 2005).

¹⁴Cantor, Hoover & Mason, Association of Cancer Mortality with Halomethanes in Drinking Water, 61 *J. Nat’l Cancer Inst.* 979 (1978); Hogan, Chi & Heel, Association Between Chloroform Levels in Finished Drinking Water Supplies and Various Site-Specific Cancer Mortality Rates, 2 *J. Env’t, Pathology, Toxicology & Oncology* 873 (1979).

¹⁵This point is emphasized in Huber, *Exorcists vs. Gatekeepers in Risk Regulation*, Nov.-Dec. 1983, at 23. “The paradox of risk regulation is that too much of it makes life more dangerous. Not just more expensive but more dangerous.” *Exorcists vs. Gatekeepers in Risk Regulation*, Nov.-Dec. 1983, at 28. See also Huber, *Safety and the Second Best: The Hazards of Public Risk Management in the Courts*, 85 *Colum. L. Rev.* 2277 (1985).

¹⁶Rook, *Formation of Haloforms During Chlorination of Natural Waters*, 23 *Soc’y Water Treatment & Examination J.* 234 (1985).

quality.”¹⁷ Vinyl chloride, as the base material for a common plastic, is used in thousands of commercial products. One may wonder if these goods could be produced with materials which pose fewer risks to the public. Questions such as these may inhibit our ability to judge the moral dimensions of pollution at a glance.

Finally, uncertainties abound about the risks associated with various compounds especially when they have synergistic effects. Since experiments cannot—for legal and moral reasons—be practiced on human beings, the assessment of risk typically depends on extrapolation from experiments on laboratory animals. These tend to be open to a great deal of interpretation, for example, since different populations (mice, hamsters, etc.) respond differently and because high doses given to small populations of laboratory animals have to serve as surrogates for low doses of a pollutant to which any human being may be exposed. In a penetrating article, Ruckelshaus described how scientific experts make and must make all kinds of normative judgments in assessing and measuring risk. “It turns out that the experts don’t agree, so instead of an unimpeachable and disinterested consensus you get dissenting advocacy. Once again, experts have values too.”¹⁸

To summarize what has been said: During the 1960s and 1970s, Americans were moved by the plight of individuals, sometimes neighbors, associates, and friends, who suffered or died as a result of toxic pollutants. Rachel Carson’s *Silent Spring* (1962), among many other studies, described the destruction of wildlife by pesticides and showed the nation how negligent it had become in protecting its natural and ecological heritage. These tragic situations, which engaged the conscience of the nation, led the public, congressional district by congressional district, to demand legislation such as the Clean Air and Clean Water Acts, which are based primarily if not solely on the protection of health and the environment. In refining regulations to deal with less egregious instances of pollution, however, EPA and other agencies found that it is not always possible to take in the moral dimensions of the situation all at once. It might be comparatively easy to determine the right thing to do if “safe” thresholds could be established, if causal pathways could be traced, and if risks could be reliably assessed. Since the world is not that way, however, we have to rely on technical advice rife with uncertainty and advocacy and to learn from our mistakes before we can say what is ethical and what is not.

This is not to concede that the original social consensus has been lost among the parts per billion—public opinion has not much changed—it is just that engaged moral sentiments are insufficient in many instances, and we may need a more detached or theoretical perspective in order to make ethical decisions or at least to perceive what goes into making them. Later, this chapter will consider economic theory as a candidate for supplying this more detached perspective. At present, however, it considers the function of pollution control legislation in protecting the rights and defending the entitlements of individuals.

§ 5:5 Rights and entitlements

For centuries, common law courts have protected individuals from injuries of the sort typically caused by pollution. If the wastes from a person’s privy percolate through his wall and into his neighbor’s cellar, for example, common law will require

¹⁷Union Elec. Co. v. EPA, 427 U.S. 246, 272, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20570, 20576 (1976) (Powell, J., concurring). Justice Powell’s concurrence continued:

The result apparently required by this legislation [the Clean Air Act] in its present form could sacrifice the well-being of a large metropolitan area through the imposition of inflexible demands that may be technologically impossible to meet and indeed may no longer be necessary to the attainment of the goal of clean air. I believe that Congress, if fully aware of this draconian possibility, would strike a different balance.

¹⁸William Ruckelshaus, “Risk in a Free Society,” 159.

him to cease and repair the nuisance, for as an English court found in 1705, he is “bound of common right to keep his wall so his filth would not damnify his neighbor.”¹ In thousands of cases, some of which law students study in their first year, courts have enjoined and awarded damages for all sorts of nuisances and other torts involving pollution.

It might be argued that factories are likewise bound of common right to maintain their walls, scrubbers, filters, liners, drums, and stacks so that their emissions and effluents do not damage or harm their neighbors or the public. This seems to be a truism. The question arises, then, why private law does not suffice to protect the rights in question. What rights must public law protect because they are not protected in tort?

In the sizeable literature addressing this question, commentators have argued that many practical problems prevent common law from dealing adequately with large scale and long range wastes and pollutants.² First, a good deal of pollution, from automobiles, for example, affects millions of people, many of whom may feel aggrieved at this invasion of their person. The exhaust from any car, however, may not injure any individual enough to give him or her a cause of action against its owner. Moreover, the costs attendant to a suit are likely to prevent any individual from bringing a tort action against automobile owners or manufacturers, even if in the aggregate the damage automobile pollution inflicts on society as a whole is very high. What is more, many or most of us might be defendants and plaintiffs at the same time. Defendants, in this instance, may include everyone who drives; plaintiffs may include everyone who breathes. Accordingly, legislatures have enacted pollution control laws to clean up the air and water, in part because plaintiffs and defendants are too many and the injury any single individual causes the other is too small to allow progress to be made on a case-by-case rather than on an aggregate basis.

Second, notorious and hazardous pollutants—one thinks of agents like radon gas, asbestos, and dioxin—may affect the environment of large numbers of people, some of whom may be injured as a result, while other people who are also exposed may suffer no injury or the same kind of injury, but as a consequence of other causes.³ The synergistic effects of many sources of danger—the greater likelihood that some-

[Section 5:5]

¹Tenant v. Goldwin, 91 Eng. Rep. 314, 1 Salk 360 (1705).

²See, e.g., Rosenberg, The Causal Connection in Mass Exposure Cases: A “Public Law” Vision of the Tort System, 97 Harv. L. Rev. 849 (1984); Ginsberg & Weiss, Common Law for Toxic Torts: A Phantom Remedy, 9 Hofstra L. Rev. 859 (1981); Milhollin, Long-Term Liability for Environmental Harm, 41 U. Pitt. L. Rev. 1 (1979); Note, Hazardous Waste Disposal: Is There a Role for Common Law?, 18 Tulsa L. Rev. 448 (1983); Note, The Inapplicability of Traditional Tort Analysis to Environmental Risks: The Example of Toxic Tort Victim Compensation, 35 Stan. L. Rev. 575 (1983); Note, Environmental Health: An Analysis of Available and Proposed Remedies for Victims of Toxic Waste Contamination, 7 Am. J. L. & Med. 61 (1981).

³Since courts attend to the importance of the right that is alleged to be violated and not simply to the extent of the damage that is complained of, plaintiffs who can show only a slight degree of injury may nevertheless obtain standing to sue. In *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 688-89, 3 Env'tl. L. Rep. (Env'tl. L. Inst.) 20536, 20549-50 (1973), the Supreme Court found that the plaintiffs, a group of law students who used environmental resources (parks), to have asserted the “specific and perceptible harm” needed to distinguish them from purely ideological plaintiffs, even though the Court noted the “attenuated line of causation to the eventual injury of which [they] complained.” *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 688, 3 Env'tl. L. Rep. (Env'tl. L. Inst.) 20536, 20540 (1973). The Court did caution, however, that “pleading must be something more than an ingenious academic exercise in the conceivable.” *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 688, 3 Env'tl. L. Rep. (Env'tl. L. Inst.) 20536, 20540 (1973).

In *Sierra Club v. Morton*, 405 U.S. 727, 2 Env'tl. L. Rep. (Env'tl. L. Inst.) 20192 (1972), the

one who smokes may have less resistance to the carcinogenic effects of certain chemicals, for example—also muddles attempts to draw clear lines between causes and effects. “The question that plagues mass exposure cases,” one writer observed, “is specific causation: where there are alternative sources of the plaintiff’s injury, which source is actually responsible?”⁴ In some respects, tort law has expanded from the A’s-privy-damnifies-B’s-cellar model to accommodate cases in which a plaintiff cannot show a “but for” cause. In DES cases, for example, plaintiffs have been able to sue all DES manufacturers even if it cannot be shown which manufacturer caused their particular injury.⁵ In these cases, however, it is the defendant that is indeterminate. In toxic tort cases involving environmental hazards it is generally the plaintiffs who are indeterminate. We may know that a pollutant increased the incidence of cancer among the population exposed to it, without knowing which individuals in that population contracted cancer as a result of their exposure.

Third, statutes of limitations permit individuals only for a few years, at most, to sue in tort, but it often takes longer for toxic substances to migrate from where they are dumped to where they cause damage, for the exposure to manifest itself, for example, as a cancer, or for a person to acquire the information she needs to understand the nature of her injury. Moreover, by the time a victim becomes aware of the injury many potential defendants may have gone out of business or become insolvent. The insurer at the time of exposure may not be the insurer when the injury manifests itself. Even when a solvent defendant may be found, he may avoid paying damages by litigating the technical issues to the point of exhausting the plaintiff financially, or by declaring bankruptcy.

Fourth, when technological advance is swift, even revolutionary, it will create hazards and fears with which common law cannot keep pace; political action is therefore required to protect individuals and their property from harm. Large scale environmental and technological risks, such as were associated at least in the mind of the public with the malfunction of a nuclear reactor at Three Mile Island, are not comparable to the usual defendant’s-privy-damnifies-neighbor’s cellar situation.⁶ Where the harm is catastrophic and irreversible, but the probability of the harm is hard to measure and invites estimates that tend to be subjective, and especially where radioactive emissions from nuclear power plants are involved, political and technical questions arise which can hardly be settled by the incremental wisdom of common law courts.

Finally, even traditional environmental nuisances such as smoke and dust may

Supreme Court validated environmental injury as a basis for standing, establishing that “[a]esthetic and environmental well-being, like economic well-being, are important ingredients of the quality of life in our society, and the fact that particular environmental interests are shared by the many rather than by the few does not make them less deserving of legal protection through the judicial process.” *Sierra Club v. Morton*, 405 U.S. 727, 734, 2 Env’tl. L. Rep. (Env’tl. L. Inst.) 20192 (1972). In that case, the Court apparently attributed plaintiff’s calculated refusal to allege an injury, for example, its use of the Mineral King Valley, as an attempt to obtain a license to represent and defend the environment wherever threatened. *Sierra Club v. Morton*, 405 U.S. 727, 735-36 n.8, 2 Env’tl. L. Rep. (Env’tl. L. Inst.) 20192 (1972).

⁴Rosenberg, *The Causal Connection in Mass Exposure Cases: A “Public Law” Vision of the Tort System*, 97 Harv. L. Rev. 849, 855 (1984). The problem of establishing causal connections vexes attempts to establish interstate comity with regard to the airborne transport of pollutants, especially sulfur dioxide, across state lines. One issue is the inadequacy, not to say uselessness, of air transport models and the inadequacy of data. See Reed, *Jefferson County’s Lament: Clean Air Act Offers No Relief for Interstate Pollution*, 14 Env’tl. L. Rep. (Env’tl. L. Inst.) 10298, 10299 (1984).

⁵*Sindell v. Abbott Laboratories*, 26 Cal. 3d 588, 163 Cal. Rptr. 132, 607 P.2d 924, 2 A.L.R.4th 1061 (1980). See also Delgado, *Beyond Sindell, Relation of Cause-In-Fact Rules for Indeterminate Plaintiffs*, 70 Calif. L. Rev. 881 (1982).

⁶For a discussion of “environmental risks” posed by novel technologies, see Page, *A Generic View of Toxic Chemicals and Similar Risks*, 7 Ecology L.Q. 207, 208-214 (1978).

raise political and technical issues which strain the resources of the common law. An often cited case, *Boomer v. Atlantic Cement Company*,⁷ illustrates this point. There plaintiffs sought to enjoin a cement company “from emitting dust and raw materials” in the course of operating their plant.⁸ The trial judge found that Atlantic “created a nuisance insofar as the lands of the plaintiffs [were] concerned,” but refused to grant an injunction, noting the “defendant’s immense investment in the Hudson River Valley, its contribution to the Capital District’s economy,” as well as other tangible benefits generated by the existence of the cement plant.⁹ The trial court emphasized that the “company installed at great expense the most efficient devices available to prevent the discharge of dust and polluted air into the atmosphere,”¹⁰ and on that basis allowed the plaintiffs damages rather than the requested injunctive relief. An appellate tribunal, in upholding the lower court, also observed as a “relevant factor”¹¹ the company’s use of the “most modern and efficient devices to prevent offensive emissions and discharges.”¹² Atlantic had done all it technologically could to minimize the noxious effects of its industry while providing important economic benefits to the surrounding community. Common law precepts, so the judge reasoned, could demand no more.

During the 1960s and 1970s, the public became concerned about the general effect of pollution on public health and the environment. It worried that pollution could reach intolerable overall levels even when industries, under threat of tort action, installed the “most efficient devices available” to control emissions. These devices, in other words, were not good enough for the public even if they were good enough for the courts.¹³ Accordingly, public pollution control legislation tends to be technology-based and technology-forcing; it encourages industry to develop and install better-than-currently-available control technology for existing plants and to develop and install nonpolluting production technologies in new plants.¹⁴ In this way, a legislative insistence on technological improvement was needed to change the equation by which equities are balanced in common law courts.

By emphasizing safety and forcing the development of technology intended to minimize and eventually to eliminate hazardous pollution, public law, like private law, serves to prevent one person simply for his own advantage from harming or exploiting another. It does so, however, not by awarding compensation after the

⁷*Boomer v. Atlantic Cement Co.*, 55 Misc. 2d 1023, 287 N.Y.S.2d 112 (1967), *aff’d*, 30 A.D.2d 480, 294 N.Y.S.2d 452 (1968), *order rev’d*, 26 N.Y.2d 219, 309 N.Y.S.2d 312, 257 N.E.2d 870, 40 A.L.R.3d 590 (1970).

⁸*Boomer v. Atlantic Cement Co.*, 55 Misc. 2d 1023, 1024, 287 N.Y.S.2d 112, 113 (1967), *aff’d*, 30 A.D.2d 480, 294 N.Y.S.2d 452 (1968), *order rev’d*, 26 N.Y.2d 219, 309 N.Y.S.2d 312, 257 N.E.2d 870, 40 A.L.R.3d 590 (1970).

⁹*Boomer v. Atlantic Cement Co.*, 55 Misc. 2d 1023, 1025, 287 N.Y.S.2d 112, 114 (1967), *aff’d*, 30 A.D.2d 480, 294 N.Y.S.2d 452 (1968), *order rev’d*, 26 N.Y.2d 219, 309 N.Y.S.2d 312, 257 N.E.2d 870, 40 A.L.R.3d 590 (1970).

¹⁰*Boomer v. Atlantic Cement Co.*, 55 Misc. 2d 1023, 1024, 287 N.Y.S.2d 112, 113 (1967), *aff’d*, 30 A.D.2d 480, 294 N.Y.S.2d 452 (1968), *order rev’d*, 26 N.Y.2d 219, 309 N.Y.S.2d 312, 257 N.E.2d 870, 40 A.L.R.3d 590 (1970).

¹¹*Boomer v. Atlantic Cement Co.*, 30 A.D.2d 480, 482, 294 N.Y.S.2d 452, 453 (1968), *order rev’d*, 26 N.Y.2d 219, 309 N.Y.S.2d 312, 257 N.E.2d 870, 40 A.L.R.3d 590 (1970).

¹²*Boomer v. Atlantic Cement Co.*, 30 A.D.2d 480, 482, 294 N.Y.S.2d 452, 453 (1968), *order rev’d*, 26 N.Y.2d 219, 309 N.Y.S.2d 312, 257 N.E.2d 870, 40 A.L.R.3d 590 (1970).

¹³See J. Bonine, *The Evolution of “Technology-Forcing” in the Clean Air Act* (BNA Env’t Rep. Monograph No. 21, 1975).

¹⁴The Court of Appeals for the District of Columbia Circuit praised this “technology-forcing” strategy as evidence of EPA’s “commitment to the development of sound guidelines.” *Natural Resources Defense Council v. Train*, 510 F.2d 692, 712 n.105, 5 Env’tl. L. Rep. (Env’tl. L. Inst.) 20046, 20057 n.105 (D.C. Cir. 1974).

injury has occurred but by seeking to prevent the injury before it happens. Pollution control law, then, does not replace tort—it is not to be construed as an attempt to limit the rights of individuals to make claims—but is supplementary. Pollution control law attempts, in part, to eliminate or at least to reduce the sorts of harms to individuals and to their property that private law fails or may fail to deter.¹⁵ Thus, the insistence of public law on reducing risk may be seen as an extension of private law protections of the rights, dignity, and integrity of persons.¹⁶

Nevertheless, neither public nor private law can “concern itself with trifles, or seek to remedy all of the petty annoyances of everyday life in a civilized community.”¹⁷ Rather, the standard set should protect “the ordinary comfort of human existence as understood by the American people in their present state of enlightenment.”¹⁸ Public pollution control law expresses the “present state of enlightenment” concerning the importance of the safety and health of the individual as against the importance of registering new pesticides or expanding the nuclear power industry. The question with which society constantly wrestles is that of finding a moral basis for standards that stop short of preventing all but de minimis risk. It is fine as a matter of principle to analogize pollution—especially hazardous pollution—to trespass or assault and thus to call for its near elimination. This aspiration is consistent with some of the more precatory language of the laws. Nevertheless, society cannot provide injunctive relief for every nuisance—or prohibit all emissions—without bringing the economy to a halt. The forced closure of a cement company that provides jobs and anchors public welfare, for example, may cause far worse health effects than are associated with a modest amount of dust and fumes. What are the principles that tell us when a nuisance is to be tolerated, reduced, or enjoined?

Commentators on the history of nuisance law may cite Justice Scalia’s opinion for

¹⁵It is a commonplace criticism of utilitarian approaches to public policy that they do not treat individuals as persons but as locations at which preferences which then may be aggregated in the general social calculus. This objection, which goes back at least to F. Bradley, *Ethical Studies* 68, 160 (2d ed. 1927), has been forcefully argued in both Hart, *Between Utility and Rights*, 79 *Colum. L. Rev.* 828 (1979), and Sen & Williams, *Introduction*, in *Utilitarianism and Beyond* 1-2 (A. Sen & B. Williams eds. 1982) [hereinafter cited as *Utilitarianism and Beyond*]. “Essentially utilitarianism sees persons as locations of their respective utilities—as the sites at which such activities as desiring and having pleasure and pain take place Persons do not count as individuals in this any more than individual petrol tanks in the analysis of the national consumption of petroleum.” Sen & Williams, *Introduction*, in *Utilitarianism and Beyond* 2 (A. Sen & B. Williams eds. 1982).

¹⁶Libertarians argue from this premise for a complete proscription of pollution. Rothbard, for example, wrote:

From the beginnings of modern air pollution, the courts made a conscious effort not to protect, for example, the orchards of farmers from the smoke of nearby factories or locomotives. They said, in effect, to the farmers: Yes. Your private property is being invaded by this smoke, but we hold that “public policy” is more important than private property, and public policy holds factories and locomotives to be good things. These goods were allowed to override the defense of property rights—with our consequent headlong rush into pollution disaster. The remedy is both “radical” and crystal clear, and it has nothing to do with multibillion dollar palliative programs at the expense of taxpayers which do not even meet the real issue. The remedy is simply to enjoin anyone from injecting pollutants into the air, and thereby invading the rights of persons and property. Period. The argument that such an injunction would add to the costs of industrial pollution is as reprehensible as the pre-Civil War argument that the abolition of slavery would add to the costs of growing cotton, and therefore should not take place. For this means that the polluters are able to impose high costs of pollution upon those whose property rights they are allowed to invade with impunity.

Rothbard, *The Great Ecology Issue*, in 2 *The Individualist* 5 (1970). See also Hospers, *What Libertarianism Is*, in *The Libertarian Alternative: Essays in Political Philosophy* 15 (T. Machan ed. 1974); Machan, *Pollution and Political Theory*, in *Earthbound: New Introductory Essays in Environmental Ethics* 74, 97-8 (T. Regan ed. 1984) (showing the incompatibility between libertarian views about property and cost-benefit analysis).

¹⁷Prosser, *Law of Torts*, p. 577 (4th ed. 1971).

¹⁸Prosser, *Law of Torts*, p. 578 (4th ed. 1971) (quoting Joyce, *Nuisances* § 20 (1906)).

the majority in *Lucas v. South Carolina Coastal* (1992) to establish that just because a governmental agency or legislature declares something to be a nuisance does not automatically make it so. In announcing a test to decide whether compensation must be paid to a landowner whose land has lost all its economic value because of a regulation, Scalia declared compensation would be required unless the regulation imposed restrictions already implicit in a state's common law of private and public nuisances and other "background principles" of property law, for example, common expectations about how people ought to behave.¹⁹ As William Fischel points out, "in the ordinary nuisance case there is a more or less obvious 'subnormal behavior,' . . . a condition that ordinary people, *without the aid of the law*, can look at (or smell or listen to) and say, that party is not behaving as he ought to, at least at that place and time."²⁰

As our technology grows more complex and its consequences more diffuse, however, we might honestly disagree about what sorts of precautions are required or risks are acceptable. How do the "background principles" that guide property law respond to social, political, and technological challenges to them? These principles are not static or fixed. Legislation may change cultural values or expectations—or express changes that have taken place—as well as rest on norms that are already established. As society interprets statutes enacted in the 1970s, moreover, it may apply new conceptions of what is permissible and impermissible, socially acceptable and antisocial, reasonable and dangerous.²¹ As we shall later see, several professors of environmental law advocate an expansion the concept of a public nuisance to embrace ecological values.²² It is unclear to what extent environmental law is meant to reflect public values that are already established and to what extent it may serve as a catalyst to raise public consciousness.²³

§ 5:6 Cultural values

On college campuses during the 1970s, Hans Bethe, the eminent nuclear physicist, and Barry Commoner, the environmental activist, debated issues involved in nuclear power and pollution.¹ In one debate, when Commoner spoke of the depletion of natural resources, Bethe replied that there were no natural resources but only raw materials. This distinction is fundamental to understanding pollution control law.² For Commoner, natural objects come in natural kinds; form determines function. If boundaries are forced or crossed too often, as by an intrusive and incau-

¹⁹*Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1029 (1992).

²⁰Fischel, "The Law and Economics of Cedar-Apple Rust: State Action and Just Compensation in *Miller v. Schoene*," *Review of Law and Economics*, 3:2 (2007), at 133–95.

²¹For discussion, see Robert Katzmann, *JUDGING STATUTES* (Oxford University Press, 2015).

²²See, for example, Goldstein & Thompson, Jr., *Property Law: Ownership, Use, and Conservation*, 167–76 (2006). Law casebook coverage is also found, appropriately, in Nagle & Ruhl, *The Law of Biodiversity and Ecosystem Management*, 402–09 (2d ed. 2006).

²³For discussion, see Nagle, *Moral Nuisances*, 50 *Emory L.J.* 265 (2001).

[Section 5:6]

¹Debate between Hans Bethe and Barry Commoner, Cornell University, Ithaca, New York (Nov. 1977).

²The distinction is generally more important in applying environmental science to environmental law. Those who regard the environment in terms of natural history think of function as following form and form as being determined by the past. Hence, biology should be committed to describing the essences, taxa, classes, or natural kinds that evolution has produced and to understanding the relations or "equilibria" among them. Those who think of nature in terms of raw materials take a more "reductionist" approach. They argue that biologists should investigate systems and mechanisms with a view to controlling and manipulating them. These two approaches may be found in various sciences; in psychology, for example, Freudian and other therapeutic methodologies contend with Skinnerian behaviorism. For a discussion of these approaches, see Rorty, *Method, Science, and Social Hope*, in R.

tious use of technology, catastrophe will result. For Bethe, things do not have essences or forms determining their function. Rather, our cleverness in molding and manipulating materials to meet our needs determines what they are and the value they may have for us. Technology is the key to cornucopia, not the cause of catastrophe.

To understand the difference between “natural resources” and “raw materials,” it is useful to consider an analogy. Most of us divide our homes into various rooms, each with a particular form and function: a kitchen, bathroom, bedroom, or study. When we decorate, we keep these boundaries in mind; we might consider them natural—one place to eat, one to sleep—even though they are largely conventional. Other cultures do things differently, but nearly all societies have rules about how to greet strangers, conduct marriages, bury the dead, and entertain friends. Indeed, to have settled expectations in these matters—to therefore be able to engage in expressive and not simply in practical activity—is to have a culture and to be civilized. It might be said that it is basic to our humanity to have an image of how our surroundings, natural and personal, are to be organized and to conform our behavior to that image.

Now, it is also reasonable to regard nature, as Bethe might, as having no organization and imposing no boundaries other than those which are implied by the laws of chemistry and physics. Those who urge this view might argue that the compound H_2O , in a given quantity with a given force and direction, might serve as the basis of a biological system, as a liquid highway, as a sewer, or as one of many other uses; no particular function is implied by its being called a “river.” The way we traditionally divide nature into rivers, estuaries, meadows, forests, farmland, and so on is, according to this analysis, essentially arbitrary. The boundaries we envision are permeable to science and technology; these boundaries are the accidents of natural history or the artifacts of culture and convention.³

What has been said of the way we treat the environment might also be said of the way we conduct ourselves in other areas; for example, the way we decorate our homes, bear and raise the next generation, entertain friends, treat strangers, and bury the dead. There is nothing in the science of sanitation or biochemistry that distinguishes between civilian and military dead, friends and strangers, a chemical occurring naturally and the same substance a corporation has put in the air—yet we commonly make these types of distinctions. Likewise, pollution control legislation relies on the knowledge and the techniques of science and engineering. But the purposes of these laws, the goals they seek to achieve, such as “cleaning up America,” are not all definable in the mathematical languages of science.

One of the great challenges of our time is the invitation presented by various “reductionist” sciences to see ourselves apart from history, culture, and the

Rorty, *Consequences of Pragmatism* 197 (1982).

Consider, too, the introduction of bioengineered organisms into the environment. Researchers at the University of Maryland propose to alter bass, flounder, and other species so that they can survive in polluted bays and estuaries. Klausner, *University of Maryland Dives Into Biotechnology*, *BIO/Technology*, Mar. 1984, at 212, 213. Those who regard nature and the environment in relation to history are likely to oppose these introductions and to argue that we should clean up the nation’s waters, not alter species to make them better able to survive. Those who see ecosystems simply as efficient producers of economically useful materials, however, will argue that estuaries should be understood as mechanisms not as historical artifacts. They are likely to see bioengineering as improving the efficiency of natural systems and not to worry about the “essences” or “authenticity” of species.

³For a thorough analysis of the controversy over the question whether there exist “natural kinds” of things in ecology, for example whether “communities” or “systems” can be identified as the “same” through time and change or whether they exist only subjectively for the researcher, see Cooper, Gregory J. *The science of the struggle for existence: on the foundations of ecology*. Cambridge University Press, 2007, especially section 2.3.

framework of beliefs we usually rely upon in evaluating social events. According to Mary Douglas:

This is the invitation to full self-consciousness that is offered in our time. We must accept it. But we should do so knowing that the price is William Burrough's *Naked Lunch*. The day when everyone can see exactly what it is on the end of everyone's fork, on that day there is no pollution and no purity and nothing edible or inedible, credible or incredible, because all the classifications of social life are gone. There is no more meaning.⁴

Pollution control law requires standards to be set, insofar as possible, in precise mathematical and scientific terms. And yet the difference between purity and pollution, the edible and the inedible, the decent and the indecent are paradigmatically classifications of social life. The problem is not simply to determine when science is and is not appropriate for assessing and evaluating our environmental concerns. The problem is also to understand that science is many things, and that a careful, sympathetic, and historical understanding of social values and classifications can be scientific.⁵

Cultural factors strongly influence the risks we are willing to take as individuals and as a society. We tend to resent risks associated with pollutants, food additives, pesticides, and other products and by-products of economic activity. At the same time, we readily accept many greater hazards, such as those from naturally occurring substances, for which we may have no one but ourselves or nature to blame.⁶ The magnitude of a risk—the extent of the harm divided by the probability of its occurrence—may be less important than its meaning within a context of social, economic, and political relationships.⁷

We may perceive some hazards as more or less dangerous than they are because of the extent to which we resent or fear them.⁸ As well, we are likely to find some risks more acceptable than others—in spite of the “costs” and “benefits”—if they are assumed “voluntarily,” if the outcome depends on our own skill or care, if the harm will be eventual rather than immediate, or if the hazards are spread equitably over society as a whole.⁹ Moreover, much of the popular resentment of pollution may arise not from a perception of risks and hazards, but from a deep cultural aversion toward wastes and “unnatural” substances in what we breathe, eat, and drink and from a populist distrust of economically powerful actors.

To understand this aversion, consider an example. One swallows one's own saliva

⁴M. Douglas, *Implicit Meanings* 247 (1975) (footnote omitted).

⁵See Dretske, *Laws of Nature*, 44 *Phil. Sci.* 248 (1977); Glymour, *Social Science and Social Physics*, 28 *Behav. Sci.* 126 (1983); Scriven, *Explanation and Prediction in Evolutionary Theory*, 120 *Sci.* 477 (1959); see also Rorty, *Method, Science, and Social Hope*, in R. Rorty, *Consequences of Pragmatism* 197 (1982); Hirschman, *Paradigms as a Hindrance to Understanding*, in *Interpretive Social Science* 163 (P. Rabinow & W. Sullivan eds. 1979).

⁶See Ames, *Dietary Carcinogens and Anticarcinogens*, 221 *Sci.* 1249 (1983) (compiling evidence that “naturally” occurring pesticides which no one resents are often far more dangerous than additives which are illegal).

⁷Mary Douglas has developed a theory that the way societies think about pollution helps preserve relationships of power and statutes. See M. Douglas, *Purity and Danger: An Analysis of Concepts of Pollution and Taboo* (1966). In addition, she has written:

Pollution is the black [sic] side of Plato's good lie on which society must rest: it is the other half of the necessary confidence trick. We should be able to see that we can never ask for a future society in which we can only believe in real, scientifically proved pollution dangers. We must talk threateningly about time, money, God and nature if we hope to get anything done. We must believe in the limitations and boundaries of nature which our community projects.

Douglas, *Environments at Risk*, in *Implicit Meanings* 230, 245-6 (1975).

⁸See Slovic, Fishchhoff & Lichtenstein, *Facts and Fears: Understanding Perceived Risk*, in *Social Risk Assessment: How Safe is Safe Enough?* 181 (R. Schwing & W. Albers eds. 1980).

⁹W. Lowrance, *Of Acceptable Risk*, Ch. 3 (1976).

all the time, so it cannot be dangerous, yet no one would want to drink a glassful of the stuff kept chilled and sterile in the refrigerator. It does not contribute anything to say that spit is safe—or to pronounce on the safety of some industrial soup poured into a river—if people are disgusted by rather than afraid of it. Disgust can be as strong an emotion as fear, and it can bring us together equally well to support policies to control pollution.

The question then arises as to how we may properly take cultural, aesthetic, and symbolic factors into account in setting pollution standards. To an extent, current law does this by treating pollution as taboo and calling for its elimination. The alternative, the invitation of our time to “objective” and “value-free” analysis, would be to regulate pollutants simply by assessing the magnitude and severity of the risks they pose, regardless of their social context, symbolic significance, cause, or source. It is conceivable, however, that we might understand ourselves and appreciate our attitudes sufficiently to set priorities taking into account the meaning as well as the magnitude of various environmental hazards. This seems to be the hope expressed by NEPA in directing all agencies of the federal government to “utilize a systematic, interdisciplinary approach which will ensure the integrated use of the natural and social science . . . in planning and decisionmaking which may have an impact on man’s environment.”¹⁰ No one has been able to explain, however, what constitutes such an integrated, interdisciplinary approach.

Pollution control laws are motivated primarily by our moral principles and sentiments, including compassion and outrage, elicited by events which were all too common during the 1960s and 1970s, when pollution appeared to be a menace gone completely out of control. These laws are also needed to protect well established rights to person and property which, because of practical and other limitations, are not adequately protected in tort. Thus, pollution control statutes serve to meet the requirements of humanity and compassion as well as the demands of justice.

These statutes cannot be fully understood, however, without reference to the cultural background which to a large extent determines the risks we consider acceptable and which defines the boundaries, social and natural, which we may or may not cross. To be sure, the purpose of the laws is largely to protect safety and health. The way we identify threats to safety and health, however, and the relationship between society and the environment we consider appropriate depends to a large extent on the expressive conventions which determine the meanings we attach to events. As Stuart Hampshire observed:

Men are unavoidably born into both a natural order and a cultural order, and sexuality, old age, death, family and friendship are among the natural phenomena which have to be moralised by conventions and customs, within one culture or other, and that means within a very particular and specific set of moral requirements. The one unnatural, and impossible, cry is the consequentialist’s: “Away with convention; anything goes provided that it does not interfere with welfare or with principles of justice.”¹¹

§ 5:7 A sense of community

The Declaration of Independence emphasizes communitarian commitments—for example, the reference to “one nation” in the first sentence—and also individual rights—for example, rights to life, liberty, and the pursuit of happiness. American political history may be interpreted along similar dimensions: as an attempt to forge a sense of national community while at the same time protecting the ability of individuals to pursue their own conceptions of the good life and of the values that

¹⁰National Environmental Policy Act of 1969, § 102(2), 42 U.S.C.A. § 4332(2) (1982).

¹¹Hampshire, *Morality and Convention*, in *Utilitarianism and Beyond* 145, 156 (A. Sen & B. Williams eds. 1982).

enter that life.¹

Liberal political administrations in America, from Thomas Jefferson to Franklin D. Roosevelt, have favored what has been called the “national idea,” that is, the idea of national unity in pursuing public values and common ideals.² Liberal political theory, such as that articulated by Rawls, does not rule out such values and ideals by, for example, presupposing an economic conception of the person, a psychology of “possessive individualism,” or a preference-theory of the good.³ It requires only that the common purposes and aspirations contemplated by the laws be respectful of the various conceptions people might have of themselves as persons and the various beliefs they may be committed to in leading their personal lives.⁴

American patriotism is not founded on immemorial ties of blood and history; nor does it depend ultimately on market relationships or the idea of a commercial contract. The underlying principle of American patriotism, as William Sullivan perceived, is “the notion of civic covenant.”⁵ This means “that as citizens we make an unlimited promise to show care and concern for one another.”⁶ The compassion which contributes to the moral basis of pollution control law expresses an analogous sense of mutual trust which is basic to the American civic tradition. It is as familiar in American history as the pledge of loyalty which concludes the Declaration of

[Section 5:7]

¹For such an interpretation of American political history, see, e.g., D. Milnar, *Ideas and Politics: The American Experience* (1964).

²Beer, *Liberalism and the National Idea*, 5 *Pub. Int.* 70 (1966).

³Some commentators have read Rawls, and the liberal tradition generally, as presupposing the philosophical doctrine that the soul exists apart from or prior to its experiences—a view of the person as Economic Man “possessing” preferences. This reading is inaccurate and creates a straw man which communitarians may then criticize. See, e.g., A. Macintyre, *After Virtue* (1981); M. Sandel, *Liberalism and the Limits of Justice* (1982); R. Unger, *Knowledge and Politics* (1975). For criticism of this “straw man” interpretation of liberalism, see Gutmann, *Communitarian Critics of Liberalism*, 14 *Phil. & Pub. Aff.* 308; Sagoff, *The Limits of Justice*, 92 *Yale L.J.* 1065 (1982).

⁴Liberal political theory in America—the tradition which has run from Thomas Jefferson to John Rawls—has not opposed nationalizing ideas and communitarian goals but has only insisted that these collective efforts should be as neutral as possible on what may be called the question of the good life. See Dworkin, *Liberalism, in Public and Private Morality* 113 (S. Hampshire ed. 1978). The liberal theory of equality “supposes that the government must be neutral on what might be called the question of the good life [because it] supposes that political decisions must be, so far as possible, independent of any particular conception of the good life, or of what gives value to life.” Dworkin, *Liberalism, in Public and Private Morality* 127 (S. Hampshire ed. 1978).

Jefferson urged the importance of ridding the law of any preference concerning religion “to comprehend, within the mantle of its protection, the Jew and the Gentile, the Christian and the Mahometan, the Hindoo, and Infidel of every description.” T. Jefferson, *The Writings of Thomas Jefferson* 67 (1905). Rawls has extended this exclusion to include not only religious views of the soul but also philosophical conceptions of human nature and the meaning of life. Rawls stressed that modern democratic societies have their origins in social and historical conditions—“in the Wars of Religion following the Reformation and the subsequent development of the principle of toleration” Moreover, “[t]hese conditions profoundly affect the requirements of a workable conception of political justice: such a conception must allow for a diversity of doctrines and the plurality of conflicting, and indeed incommensurable, conceptions of the good affirmed by the members of existing democratic societies.” Rawls, *Justice as Fairness: Political not Metaphysical*, 14 *Phil. & Pub. Aff.* 223 (1985). For a comparison between Jefferson (applying the principle of toleration to religious doctrines) and Rawls (applying the same principle to philosophical doctrines and conceptions), see Rorty, *The Priority of Democracy over Philosophy* (unpublished manuscript).

⁵W. Sullivan, *Reconstructing Public Philosophy* 160 (1982).

⁶W. Sullivan, *Reconstructing Public Philosophy* 161 (1982). During the Great Recession of 2008, wealthier American through the TARP program among other relief measures did bail out those who were underwater in their mortgages. One could see that homeowners with bad mortgages in Nevada received help from those in other states via federal policies. The absence of such political bonds makes it more difficult for economically strong countries in Europe to bail out economically weaker ones.

Independence.

The general goals of pollution control legislation, while expressing mutual trust and loyalty to a common heritage, are at the same time completely consistent with the rights and liberties of individuals: No one, after all, has the right to pollute. The shared aspiration for a cleaner, safer, more “natural” environment, like the national effort to land a man on the moon, builds up a national sense of patriotism and pride while remaining utterly innocuous from the point of view of a liberal theory of rights.

The United States can take pride in its accomplishment in pollution reduction, however haltingly and inefficiently achieved, in the years since the passage of the Clean Air Act. According to the US EPA “Air Quality Trends” report, carbon monoxide concentrations in the atmosphere fell by 84% between 1980 and 2013—59% between 2000 and 2013. Ozone declined by 33%; lead by 92%; nitrogen dioxide by 60%; sulfur dioxide by 76%.

Change in Air Quality (percent)⁷

	1980 vs 2013	1990 vs 2013	2000 vs 2013
Carbon Monoxide (CO)	-84	-76	-59
Ozone (O ₃) (8-hr)	-33	-23	-8
Lead (Pb)	-92	-87	-60
Nitrogen Dioxide (NO ₂) (annual)	-58	-50	-40
Nitrogen Dioxide (NO ₂) (1-hour)	-60	-46	-29
PM ₁₀ (24-hr)	---	-34	-30
PM _{2.5} (annual)	---	---	-34
PM _{2.5} (24-hr)	---	---	-34
Sulfur Dioxide (SO ₂) (1-hour)	-81	-76	-62

Statutes enacted during the heyday of environmentalism have had an effect. Rivers no longer stink or catch fire; you can drink the water in the Great Lakes. Air quality has improved remarkably during the past three decades, in spite of economic growth. Gross domestic product increased in the United States by 187 percent between 1970 and 2004; vehicle miles traveled increased by 171 percent; energy consumption went up by 47 percent; and population grew by 40 percent. During the same period, according to an Environmental Protection Agency report, “total emissions of the six principal air pollutants dropped by 54 percent.” These emissions include nitrogen and sulfur dioxide, ozone, particulates, carbon monoxide, and lead. Between 1990 and 1999, emissions of 89 other toxic substances declined on average by 30 percent.⁸ Air pollution has fallen to the lowest level ever recorded in the United States.⁹

Laws such as the Clean Air Act reflect upon our self-respect and virtues as a society while remaining completely neutral on the question of the good life. In showing

⁷<http://www.epa.gov/airtrends/agtrends.html>.

⁸U.S. Environmental Protection Agency, Air Trends, “Air Emissions Trends - Continued Progress Through 2004,” available at <http://www.epa.gov/airtrends/2005/econ-emissions.html>; see also EPA’s 2008 Report on the Environment: Highlights of National Trends (ROE Highlights), at 5 (2008), available at http://www.epa.gov/eroeweb1/pdf/roe_hd_layout_508.pdf.

⁹Steven Hayward et al., Index of Leading Environmental Indicators 2005, at 5 (Pacific Research Institute for Public Policy, San Francisco, California and American Enterprise Institute for Public Policy Research, Washington, D.C., April 2005), available at http://www.pacificresearch.org/pub/sab/enviro/05_enviroindex/2005_Enviro_Index.pdf.

respect and concern for one another and in protecting the environment, Americans find a unifying political theme; we become more than “an assemblage associated by a common acknowledgement of right and community of interest,” as Cicero described civil society.¹⁰ The body politic becomes a nation or a people, which is, in Augustine’s phrase, “an assemblage of reasonable beings bound together by the objects of their love.”¹¹

Controversy concerning pollution control law begins when one moves, to borrow Winston Churchill’s phrase, “from the cloudland of aspiration to the ugly scaffolding of attempt and achievement.”¹² When one tries to set specific policy goals and enforce them, moral intuitions which were clear about generalities wobble with respect to specifics, and we look to more technical and theoretical frameworks for help. In the past decades, a group of academics, primarily policy analysts and resource economists, have offered one such framework. This chapter now considers the extent to which an economic approach to pollution control law can surmount the complexities and settle the controversies involved in social regulation.

III. SHOULD STANDARDS BE EFFICIENT?

§ 5:8 In general

Richard Musgrave, in *The Theory of Public Finance*, recognized three principal reasons which justify governmental intervention in the operation of markets. First, the government may legitimately transfer wealth to achieve greater equity in the distribution of income. Second, it may engage in various macroeconomic policies to even out business cycles, stabilize fluctuations, and otherwise promote prosperity and economic growth. Finally, the government may seek to correct market failures to increase economic efficiency in the allocation of resources.¹ Of these three goals, still widely recognized in economic theory,² the third appears most relevant to pollution control law and environmental policy.³

The second part of this chapter examines the relevance of the efficiency norm or

¹⁰St. Augustine ascribed this view to Cicero. See S. Augustine, *The City of God* 61-2 (M. Dods trans. 1950).

¹¹S. Augustine, *The City of God* 61-2, 706 (M. Dods trans. 1950).

¹²Ruckelshaus, *Risk, Science, and Democracy*, *Issues Sci. & Tech.*, Spring 1985, 24 (quoting Winston Churchill).

[Section 5:8]

¹R. Musgrave, *The Theory of Public Finance* 5 (1959) (discussing the “Three Objectives of Budget Policy”).

²Musgrave has articulated these goals as follows:

Economists distinguish three criteria for assessing performance: aggregate or macro-efficiency, measured principally in terms of total output, employment and price stability; micro-efficiency, or the degree to which the economic system meets manifold and constantly changing demands of individuals for public and private goods; and the distribution of income and wealth Most economic and social policies of government are interventions into the workings of the private market in an attempt to improve on one or more of these aspects of performance.

R. Musgrave, *The Theory of Public Finance* 5 (1959) (discussing the “Three Objectives of Budget Policy”).

³A few environmental factors, such as weather, are volatile enough to upset business cycles in, for example, agriculture, but these natural fluctuations are generally not the concern of environmental legislation. While there are many important ethical and cultural reasons for pollution control, none of these seems related in any consistent way to improving equity in the distribution of income or wealth. For discussion of the distributional aspects of pollution control policy, see Krieger, *Six Propositions on the Poor and Pollution*, 1 *Pol’y Sci.* 311 (1970); Peskin, *Environmental Policy and the Distribution of Benefits and Costs*, in *Current Issues in U.S. Environmental Policy* 144 (P. Portney ed. 1978). For an articulation of the argument that environmentalists are often the rich and the privileged attempting to protect their own backyards, see B. Frieden, *The Environmental Protection Hustle* (1979); W. Tucker, *Progress and Privilege* (1982).

criterion in relation to environmental protection. It is divided into four sections. The first section takes it as a premise that if clean air and water are treated as scarce resources they are to be allocated, insofar as possible, by free, competitive, fair, and informed markets. One may question, however, whether the efficiency criterion, which measures value in terms of willingness to pay, has any relationship to such markets, in which willingness to sell is necessary. Who sells the right to pollute? Moreover, even if markets are excellent institutions for allocating resources, this gives no argument for the efficiency norm in public policy since market allocations are desirable not necessarily because they allocate resources efficiently, but for other reasons entirely, for example, because they are voluntary or consensual. Even to know whether markets allocate resources efficiently, one would have to have to take a position outside them to observe what they do. Has anyone access to enough information to do this, given that markets are constantly adapting to new opportunities, tastes, and technologies? Arguments for a market allocation, therefore, are not necessarily arguments for an efficient allocation of resources. They may be arguments for the macroeconomic effects associated with market economies, such as prosperity, along with the consensual aspects of markets, rather than arguments based in microeconomic norms of efficiency.

The second section argues that the efficiency criterion has no ethical basis in utilitarianism since, first, it is not sufficiently related to any normative goal—such as happiness, pleasure, or prosperity—and, second, because it is concerned with expectations rather than with consequences. There is also no reason to believe, moreover, that the efficiency criterion in public policy, which is based on a particular view of moral psychology, has our consent—even our “hypothetical” or “counterfactual” consent.

The third section analyzes the concept of risk in the context of economic analysis. The fourth part discusses the standard for “regulatory review” at the Office of Management and Budget. Since 1981, cost-benefit analysis and with it the efficiency standard has been mandated by Executive Order as a test for regulations at least to the extent allowed by law. This final part considers the extent to which cost-benefit analysis (and with it the goal of maximizing net benefits) serves or substitutes for the overall ethical purposes of environmental law.

After briefly reviewing these central issues in economic analysis and pollution policy, we shall be in a position better to understand, in the final parts of this chapter, the relationship between ethical and economic approaches in implementing the goals of federal pollution control law and in responding to the problem of climate change. We shall then consider ethical and economic approaches to the protection of nature or the natural environment—as distinct from human health, safety, and welfare.

§ 5:9 Should markets decide?

The “concept of efficiency,” according to Arthur Okun, “implies that more is better, insofar as the ‘more’ consists of items that people want to buy.”¹ Many of those who joined the environmental movement of the 1960s and 1970s, however, disputed this claim. They argued that less is better—that “an American life style not based on material growth and consumption . . . would be pleasant and rewarding.”² They spoke of “simplicity” and of the “earlier virtues of frugality, prudence, and valuing

[Section 5:9]

¹A. Okun, *Equality and Efficiency* 2 (1975).

²Ehrlich & Ehrlich, *The Beginning of a Better Future*, in *The New Environmental Handbook* 5 (G. De Bell ed. 1980).

people over possessions.”³ And they argued that the convictions and beliefs on which an environmental ethic is based are often incommensurable with the wants and preferences which consumers pursue and which, to a large extent, advertisers create.⁴

After the Second World War many economists—Robert Solow⁵ and Joseph Schumpeter⁶ come to mind—argued that economic growth and with it prosperity, which produces more of the items people want to buy, depend far less on the efficiency of markets than on the advance of technology. The idea of economic efficiency is static in the sense that it takes as given the resources to be allocated. What resources are, how they may be used, and which products are made from them, however, depend largely on unpredictable technological changes, the way the Internet has changed everything. Economists thus speak of the “production frontier” that moves outward because of new technologies. The relation of the production frontier, which moves outward with new technologies, to the Pareto frontier, which is created by the efficient exchange of given resources, has been studied, but goes beyond the reach of this Chapter.⁷

During the 1960s and 1970s, Congress, responding to the environmental movement, enacted various pollution control laws which, as the first part of this Chapter suggested, were founded on ethical considerations and were intended to prevent harms and to protect rights. These laws generally refuse to treat air and water simply as resources, like iron ore and petroleum, to be allocated by the market. Rather, these laws tend to view the “ever growing pollution of the air and water” as “an evil that had to be stopped.”⁸

A regulatory agency could implement this approach by adopting a “knee-of-the-curve” strategy to control a given pollutant. To understand this strategy, imagine a graph in which the y-axis represents the cost of controlling pollution and the x-axis represents the amount of pollution-control or reduction. Since the first units of pollution are usually the cheapest to control or eliminate, one can assume that in general the cost of controlling the “next” or “incremental” unit will increase as pollution declines. The idea behind a “knee-of-the-curve” strategy is that society is morally

³Ehrlich & Ehrlich, *The Beginning of a Better Future*, in *The New Environmental Handbook* 5 (G. De Bell ed. 1980).

⁴For the “incommensurability” of “public” and “private” preference schedules, see, e.g., Maass, *Benefit-Cost Analysis: Its Relevance to Public Investment Decisions*, 80 *Q.J. Econ.* 208, 213–19 (1966); Marglin, *The Social Rate of Discount and the Optimal Rate of Investment*, 77 *Q.J. Econ.* 95, 98 (1963); see also E. Scattschneider, *The Semisovereign People* 27 (1960) (arguing that the difference between public values, as represented in legislation, and personal preferences as revealed in markets, is basic to political science). For the view that consumer preferences may be adaptive to advertising and other stimuli rather than expressive of autonomous values, see J. Galbraith, *The Affluent Society* ch. 11 (1958). For a more general consideration of the extent to which personal preferences express values which deserve social recognition, see Elster, *Sour Grapes—Utilitarianism and the Genesis of Wants*, in *Utilitarianism and Beyond* 1-2 (A. Sen & B. Williams eds. 1982); Gooding, *Laundering Preferences*, in *Foundations of Social Choice Theory* (J. Elster & A. Hylland eds. 1983).

⁵Robert Solow, “A Contribution to the Theory of Economic Growth,” *Quarterly Journal of Economics*; Robert Solow, “Technical Change and the Aggregate Production Function,” 39 *The Review of Economics and Statistics* 312-20; and Robert Solow “Sustainability: An Economist’s Perspective,” in R. Dorfman & N. Dorfman (eds.), *Economics of the Environment: Selected Readings* (1993).

⁶Joseph Schumpeter, *Capitalism, Socialism and Democracy* (3rd ed. 1950).

⁷For a brilliant analysis of the relation between the production and the Pareto frontiers, see Guido Calabresi, “The Pointlessness of Pareto,” 100 *Yale L. J.* 1211-1237 (Mar. 1991). Calabresi argues that since advances in technology change the trades available to people and the means of making them, it is conceptually impossible to distinguish between the two frontiers. This is what makes Pareto pointless.

⁸Richard Stewart, *Economics, Environment, and the Limits of Legal Control*, 9 *Harv. Envtl. L. Rev.* 1, 2 (1985). One would now not say that pollution is “ever-growing” at least in the United States.

bound to control pollutants to the “knee” of the cost curve, *i.e.*, to the point at which the curve looks as if it could go asymptotic because of the rapidly increasing costs of incremental reductions. The genius of technology-forcing statutes is to encourage industry to innovate in order to push the knee of the cost-curve as far as possible out along the pollution-reduction axis.⁹ At some point, further reductions are not required, because they would result in increases in the “misery index”—*i.e.*, unemployment and inflation far greater than any good they might do.¹⁰

Somewhat at cross purposes to the development of the law, a major tradition of academic writing arose which addressed pollution control as a problem in allocating scarce resources efficiently.

This approach, as Larry E. Ruff, then an economist at EPA, has written, regards pollution as “an economic problem, which must be understood in economic terms.”¹¹ From this standard economic perspective, pollution is to be managed as a misallocation of resources—a failure of the market to allocate resources to those who are willing to pay the most for them and thus (tautologically) a failure to maximize social welfare. There is “a very simple way,” Ruff explained, to bring private costs in line with social costs. “Put a price on pollution.”¹² According to Ruff, a Pollution Control Board (PCB) should place a tax on emissions. “Under such a system, anyone could emit any amount of pollution so long as he pays the price which the PCB sets to approximate the marginal social cost of pollution.”¹³ This “polluter pays” principle appealed to environmentalists. It seemed to enlist economic theory—which they might have assumed to be unfriendly—on their side.

The economic analysis of pollution puts the policy issue not in terms of harms or rights but in terms of correcting the failure of markets to allocate resources to those who are willing to pay the most for their use.¹⁴ This economic approach to environmental policy rests on an analogy between clean air and water, on the one hand, and any scarce resource, such as coal or timber, on the other. Society has just so much air to allocate among various uses, so the analogy goes, and the task of allocating it is like that of allocating any other scarce resource. This job of allocation is best done by free, fair, and informed markets. Policy analysts tend to assume,

⁹See Sidney A. Shapiro & Thomas O. McGarity, “Not So Paradoxical: The Rationale for Technology-Based Regulation,” 1991 Duke L.J. 729, 741-42 (arguing that the “willingness to pay” criterion does not provide the context for understanding the economic rationality of health-based environmental standards).

¹⁰Nicholas A. Ashford, “Understanding Technological Responses of Industrial Firms to Environmental Problems: Implications for Government Policy,” *Environmental Strategies for Industry* 282 (Kurt Fischer & Johan Schot. eds., Washington, DC: Island Press, 1993).

¹¹Larry Ruff, “The Economic Common Sense of Pollution,” 19 *The Public Interest* 69-85 (Spring 1970). Reprinted in Robert Dorfman and Nancy F. Dorfman, *Economics of the Environment: Selected Readings* 20-36 (3rd Ed., New York: Norton, 1993).

¹²Larry Ruff, “The Economic Common Sense of Pollution,” 19 *The Public Interest* 69-85 (Spring 1970). Reprinted in Robert Dorfman and Nancy F. Dorfman, *Economics of the Environment: Selected Readings* 29 (3rd Ed., New York: Norton, 1993) (*italics omitted*).

¹³Larry Ruff, “The Economic Common Sense of Pollution,” 19 *The Public Interest* 69-85 (Spring 1970), reprinted in Robert Dorfman and Nancy F. Dorfman, *Economics of the Environment: Selected Readings* 29 (3rd Ed., New York: Norton, 1993).

¹⁴“In the economic vision, it is only the prospect of overcoming the market’s failure to capture gains from trade that can justify, from the individual’s standpoint, the risks of exploitation inherent in majoritarian political institutions.” Michelman, *Politics and Values or What’s Really Wrong with Rationality Review?*, 13 *Creighton L. Rev.* 487, 489 (1979). Michelman continued by asking: “Would it not, then, make economic sense to include in the constitution a direction to the courts to nullify any majoritarian intervention which plainly cannot even make a pretense of being a solution to a market-failure problem?” Michelman, *Politics and Values or What’s Really Wrong with Rationality Review?*, 13 *Creighton L. Rev.* 487, 488-99 (1979). *See also* Michelman, *Constitutions, Statutes, and the Theory of Efficient Adjudication*, 9 *J. Legal Stud.* 431 (1980).

moreover, that a principal reason markets are desirable institutions is that under certain conditions they allocate resources efficiently. These analysts argue, therefore, that the government should often override markets to correct them when they fail to make that sort of allocation.¹⁵

While there is a strong consensus in this country in favor of using markets in allocating resources, different political groups have different reasons for joining in this consensus. Liberals tend to believe that markets are good things because they are neutral among preferences and are in that sense egalitarian.¹⁶ Libertarians like market because they are consensual. Conservatives tend to believe that markets are good things because they reward traditional virtues, such as thrift and hard work, while punishing vices like insobriety and indolence.¹⁷ Markets arguably preserve autonomy and make individuals responsible for their choices. Nearly everyone agrees that markets are advantageous insofar as they are impersonal and relieve the government of responsibility for the consequences of choices individuals make.¹⁸ And historically, market economies have far exceeded planned economies in their ability to provide social prosperity and peace. There are plenty of other reasons besides economic efficiency, in other words, that support free market institutions. Indeed, if one considers efficient allocation the chief virtue of markets, then one is open to the diktats of experts who would reallocate resources as they believe is necessary to “correct” market failures.

If we accept the analogy between clean air or water and other scarce resources, we might then agree that free and fair markets provide the best way by which to allocate these resources among those who compete for their use. As a first step, we might establish property rights in air and water by routinely awarding injunctive relief in nuisance cases. This would force corporations, before disposing of pollutants, to obtain the consent of those whose persons and property might be damaged as a result. Corporate and other polluters could then be allowed to bargain with individuals either to win their consent or to stop polluting.

Economic analysts, however, do not generally recommend letting markets function in this way. They tend to construe pollution not as an invasion of personal or property rights, but as a paradigmatic “spillover” or market “externality”—an uncompensated third-party effect of market transactions. Spillovers of this sort, we may agree, are unjust. It is one thing when an individual agrees to pay a price for a benefit he receives; it is another when a cost is simply imposed upon him and the benefit goes to someone else.¹⁹

There are three different ways we may respond as a society to this injustice.

¹⁵See, e.g., W. Baxter, *People or Penguins: The Case of Optimal Pollution* ch. 1 (1974). See also Exec. Order No. 12291, 2(b), 3 C.F.R. §§ 127, 128 (1982) (“Regulatory action shall not be undertaken unless the potential benefits to society . . . outweigh the potential costs to society.”).

¹⁶See Dworkin, *Liberalism*, in *Public and Private Morality* 112, 130 (S. Hampshire ed. 1978) (arguing that a market “may be expected to provide a more egalitarian division” of goods than some alternative arrangement, given an equitable division of wealth).

¹⁷See Posner, *Utilitarianism, Economic and Legal Theory*, 8 J. Legal Stud. 103, 124 (arguing that competition “encourages and rewards the traditional virtues (‘Calvinist’ or ‘Protestant’) associated with economic progress”).

¹⁸For a well-reasoned defense of markets as methods of collective choice, see C. Schultze, *The Public Use of Private Interest* (1977).

¹⁹Pollution represents a market “failure” in the sense that personal and property rights have not been protected and for that reason markets have failed to function. It is unclear how a market failure of this kind can be corrected by any means other than that of granting injunctive relief to protect those rights. A market failure of this sort cannot be corrected by taxing polluters to “internalize” the cost of the “externality,” since this does not address the cause of the failure, namely, the protection of the right in question. *But see* discussion of externalization versus internalization of costs as related to property use, *infra* this section.

First, we may simply allow one individual to make use of the person or property of another, without his consent, provided this use is efficient overall or the benefits to society as a whole outweigh the costs.²⁰ Second, we might let markets function by protecting property rights by, for example, systematically giving plaintiffs injunctive relief against polluters. This insistence on protecting property rights is associated not with economic analysis but with the political theory of libertarianism.²¹ Third, we may require, as much of our legislation does, that polluters make the fastest progress that is economically and technologically feasible, achievable, or practicable, toward reducing and eventually eliminating their emissions. It is useful to consider the conceptual relationships which hold among these alternatives.

Let us begin with the idea that the way to deal with pollution is to make sure it “pays its way” from the point of view of society as a whole.²² The idea has already been touched upon²³ that if the private and social costs of production diverge, markets are then unable “to allocate environmental resources efficiently—that is, to price their destructive use appropriately”²⁴ from the point of view of the general welfare, as economists understand that concept. The idea is that corporations and others should not be allowed to pollute unless they pay—or at least could pay and remain profitable—to compensate the victims of their pollution.²⁵ If, for example, Belchco, Inc. is able to “externalize” some of its production costs by casting its ef-

²⁰Once the social pie is made as big as possible by maximizing overall social wealth, victims can be compensated or wealth distributed in any way that seems fair. This approach—to allocate resources efficiently and then equitably redistribute wealth—is the approach policy analysts generally take: “Allocation programs include measures to affect relative prices and/or the allocation of resources in an economy, motivated by considerations of economic efficiency. Distribution programs consist of efforts to alter the distribution of incomes in society, motivated by considerations of distributive equity.” E. Gramlich, *Benefit-Cost Analysis of Government Programs* 13 (1981). These analysts generally argue that the two sorts of programs should be kept separate, viz., that fossil fuels should be allocated efficiently and then income redistributed so that poor people can afford heat. See Schelling, *Economic Reasoning and the Ethics of Policy*, 63 *Pub. Interest* 37 (1981).

²¹See discussion *infra* this section.

²²The notion that there is such thing as a “point of view of society as a whole” is not a tenet of liberal political theory but belongs to the communitarian theories of the far right and far left. In supporting that there is such a “point of view” contemporary “utilitarianism” adopts a communistic fiction about the oneness of society as the unity of its interest. This theory, in other words, assumes the existence of a common good—the general welfare—and that social policy should be directed toward achieving it. See generally G. Myrdal, *The Political Element in the Development of Economic Theory* 54 (1953). Democratic political theory does not rely on this fiction of the unity of society. It assumes that individuals will pursue incompatible and even incommensurable conceptions of the good but that they may from time to time form shifting majorities to achieve common goals and aspirations which they determine and which are not set beforehand by, for example, a theoretical vision (such as welfare or efficiency) of what the good is. In a liberal democracy, the power of majorities to legislate common goals is severely limited by the rights of individuals and minorities to be protected from the usual excesses of tyranny.

²³See W. Baumol & W. Oats, *The Theory of Environmental Policy* (1985); J. Dales, *Pollution, Property, and Prices* (1968); A. Freeman, R. Haveman & A. Kneese, *The Economics of Environmental Policy* (1973). For a good annotated bibliography of the literature, see Fisher & Peterson, *The Environment in Economics: A Survey*, 14 *J. Econ. Literature* 1 (1976) and King, *The Environmental Bandwagon*, in *Ecocide—And Thoughts Toward Survival* 189 (C. Faidman & J. White eds. 1971).

²⁴Kneese, *Environmental Policy*, in *The United States in the 1980s* 253, 259 (P. Dugan & A. Rabuska eds. 1980).

²⁵This is known as the Kaldor-Hicks compensation test for efficiency. Economists generally argue that the problem with this test is that it does not require compensation to be paid; it is only a test of potential, not actual, Pareto improvement. See E. Mishan, *Introduction to Normative Economics* § 41 (1981). It shall be argued here that there is, however, another problem; by setting up a compensation test, Kaldor-Hicks imagines property rights to be backed only by a liability rule. This, therefore, takes them out of the market, even if compensation is paid. The amount of compensation would not be set, as it is in markets, by the price the seller actually demands, but by an “objective” price, presumably set by economists working as consultants for the state.

fluents upon the public while forcing others to contain them, clean them up, or suffer losses, it can undersell its competitor, Cleanco, which disposes of its effluents properly or compensates those to whom they cause harm.

Companies like Belchco, then, will overproduce—and society will overconsume—their products, since the prices these companies charge for the products (private costs) need not reflect the full value to society (social costs) of the resources used to produce them. Companies like Cleanco, moreover, will underproduce their products, which they must sell at a higher price, and the general result will be that society will have a lot more products from Belchco than it wants relative to its desire for Cleanco's products and for pure air and water.

In the 1960s, economists began to apply to environmental issues the theory of market “externalities,” which had been developed, at least in outline, about thirty years earlier.²⁶ In 1969, two economists, Robert Ayres and Allen Kneese, argued that the disposal of residuals will constitute a serious technological external diseconomy unless “all inputs are fully converted into outputs, . . . and all final outputs are utterly destroyed in the process of consumption, or . . . property rights are so arranged that all relevant environmental attributes are in private ownership and these rights are exchanged in competitive markets.”²⁷

In order to understand this recommendation,²⁸ we need to ask whether Kneese, Bower, and like-minded resource economists believe that the government should apply a *property* rule or a *liability* rule in protecting privately held entitlements to environmental assets and attributes. There is an important difference. “An entitlement is protected by a property rule,” as Guido Calabresi and A.D. Melamed explain, “to the extent that someone who wishes to remove the entitlement from its holder must buy it from him in a voluntary transaction in which the value of the entitlement is agreed upon by the seller.”²⁹ If Mr. Boomer, for example, held an entitlement backed by a property rule to enjoy his land free of Atlantic's pollution, the court would have granted him the injunction he sought. Atlantic, then, would have to accommodate Boomer, either by not polluting his property or by paying him the amount he demanded. When an entitlement is backed by a property rule, the buyer meets the seller's price.

²⁶The notion of an “external economy” or an uncompensated third-party effect can be found in the literature of economics as early as 1898. See A. Marshall, *Principles of Economics* 345-400 (4th ed. 1898). The externality concept was apparently first applied to environmental disamenities by Pigou. See A. Pigou, *The Economics of Welfare* 159-161 (1932). Pigou also suggested that as a solution the government should place a tax on effluents. This tax would encourage companies to reduce their discharges up to the point at which it is cheaper for them to pollute rather than to pay the tax. The taxes they pay would then be passed on to the consumer, thereby making the private costs of products better reflect their social costs, including the costs of pollution. For a more contemporary development of this concept, see A. Kneese, *Water Pollution: Economic Aspects and Research Needs* (1962).

Analysis of the economic problem of pollution languished for about thirty years until the 1960s, when economists, together with society as a whole, became concerned about the state of the environment. In 1966, a popular article by Kenneth Boulding pointed out that the planet is a closed system in which “the outputs of all parts . . . are linked to the inputs of other parts.” Boulding, *The Economics of Coming Spaceship Earth*, in *Environmental Quality in a Growing Economy* 3 (H. Jarrett ed. 1966). This paper focused attention on the idea that residuals or pollutants do not disappear when putatively disposed of, but must instead be properly managed because they remain as part of the overall system.

²⁷Ayres & Kneese, *Production, Consumption, and Externalities*, 59 *Am. Econ. Rev.* 282, 283 (1969).

²⁸Kneese wrote that if markets are competitive and resources and assets fully owned, among other requirements, “the best social solution to the problem of allocating society's scarce resources is to limit the role of government to deciding questions of equality in income distribution, providing rules of property and exchange, enforcing competition, and allowing the exchange of privately owned assets in markets to proceed freely.” Kneese, *Environmental Policy*, in *The United States in the 1980s* 253, 257 (P. Dugan & A. Rabuska eds. 1980).

²⁹Calabresi & Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 *Harv. L. Rev.* 1089, 1092 (1972).

When an entitlement is protected by a liability rule, the result is different. The price is determined not by the seller but usually by a court with the aid of expert testimony. Boomer was forced to accept an amount the court found to be equal to what his property was “objectively” worth. “Whenever someone may destroy the entitlement if he is willing to pay an objectively determined value for it, an entitlement is protected by a liability rule.”³⁰ If the right-holder would rather keep his home or other thing of value, rather than go without it for a price, he does not have that choice in this kind of a “market.” The buyer must pay not the seller’s price but a price determined by, for example, an agency of the state.

Let us suppose that Kneese and like-minded resource economists take free markets and property rights seriously enough to let polluters and pollutees strike their own bargains, rather than having the government, by applying an interest-balancing or cost-benefit test, impose the bargains. What would be the result? Plaintiffs from coast to coast would refuse to take payment for damage to their person and property; they would go to court and get injunctive relief. We can infer this, first, from “the fact that the great majority of nuisance suits have been in equity, and concerned primarily with the prevention of future damage.”³¹ Second, environmentalists constitute a strong ideological faction in this country; it is not hard to imagine that they will prefer an injunction to selling out to a polluter at any price.³² Third, surveys suggest that a majority of Americans would refuse “being bought off to permit pollution,” and thus they would set a prohibitively high compensation value for their right to be free of other people’s wastes.³³ Finally, the history of urban redevelopment indicates that many people will refuse a money payment when they wish to keep their way of life instead.³⁴ When a person has to purchase an entitlement, moreover, he is limited by his budget and therefore may not bid very much for it. When a person is asked to sell that entitlement, however, the sky is the limit, since his ability to receive money vastly exceeds his ability to pay.³⁵

These arguments lead to the conclusion that if all relevant environmental attri-

³⁰Calabresi & Melamed, Property Rules, Liability Rules, and Inalienability: One View of the Cathedral, 85 Harv. L. Rev. 1089, 1092 (1972).

³¹Prosser, Law of Torts, p. 576 (4th ed. 1971).

³²A plurality of respondents to a major *Resources for the Future* poll of the general population thought that environmental protection is too important to consider costs. U.S. Council on Environmental Quality, Public Opinion on National Environmental Issues 3 (1980).

³³A group of economists from the University of Wyoming asked respondents to their survey how much they would demand in compensation (the “CS” or compensation value) to permit power companies to pollute a pristine area causing a loss of visibility simulated in photographs. These researchers reported:

The CS values . . . put the liability for maintaining visibility with the power companies and presupposes [sic] that the power companies will attempt to buy off consumers rather than cleanse the air. If respondents reject this concept of “being bought off to permit pollution” they might increase their compensation. Strategically, respondents may give large or infinite valuations as an indication that this concept is unacceptable. This is particularly supported in that slightly over one-half of the example required infinite compensation or refused to cooperate with the CS portion of the survey instrument.

Rowe, D’Arge & Brookshire, An Experiment on the Economic Value of Visibility, 7 J. Env’tl. Econ. & Mgmt. 1, 9 (1980).

³⁴M. Anderson, The Federal Bulldozer: A Critical Analysis of Urban Renewal, 1949-1962 (1964); D. Berman, Urban Renewal: Bonanza of the Real Estate Business (1969); B. Frieden, The Politics of Neglect: Urban Aid from Model Cities to Revenue Sharing (1975).

³⁵People are likely to demand much more to surrender than they would pay to acquire possessions. One reason for this is hysteresis—the feeling that things we grow accustomed to and then lose are much more valuable than things we have never had. “Men generally fix their attentions more on what they possess’d of, than on what they never enjoyed: For this reason, it would be greater cruelty to dispossess a man of any thing than not to give it him.” D. Hume, A Treatise of Human Nature bk. III, pt. 2, § 1 at 482 (L. Bigge ed. 1978). For a general discussion of hysteresis, see R. Hardin, Collective

butes were fully owned by individuals and freely exchanged in competitive markets, and if these entitlements were backed by a property rule, then polluters would either have to eliminate their effluents entirely or to reduce them to levels so insignificant that they arguably would not violate personal or property rights. If an efficient allocation is any allocation of resources reached by free, voluntary, and informed exchanges in competitive markets, where property rights are backed by property rules, therefore, then no pollution is the efficient solution. This is the same outcome as that envisioned by the more aspirational of our federal pollution control laws.

Those who take the economic approach, however, do not generally advocate a policy of protecting property rights with a property rule so that free, competitive markets can function to set the prices at which people are willing to accept the harm and risk of harm pollution imposes on them. Instead, we may do better, according to this approach, to determine prices for environmental attributes, personal safety, and other values not on the basis of how much people would actually demand to relinquish their entitlements, but on some more “rational” or “objective” basis. For any decision, a cost-benefit analysis might be commissioned, for example, or the kind of interest-balancing techniques which were actually employed by the court in *Boomer* might be used.

The cost-benefit approach to the allocation of environmental resources does not really have to consider property rights at all; economic analysis of this sort has little, if any, conceptual relation to free markets in which the buyer meets the seller's price. Rather, the analyst needs only to consider how much people in general or in unrelated markets are willing to pay for a marginal improvement in personal safety or environmental quality and compare that to the amount it would cost polluters to provide that much improvement.³⁶ However rights are distributed—or even if there are no rights and no free markets—those standards, policies, and decisions which passed that cost-benefit test would be deemed “efficient.”³⁷ Thus, one may argue that the “efficiency” test requires the creation of centralized scientific agencies capable of discovering the values of everyone in society and allocating resources to maximize the satisfaction of those values, given that markets nearly always create so many externalities or fail to meet the expectations economists have for them so routinely that we need a scientific authority rather than free exchange to determine the allocation of resources.

Free markets have been defended because they are voluntary, autonomous, neutral, reward virtue and punish vice, and for various other reasons. If markets

Action 82 (1982).

While there is nothing surprising about the gulfs which separate prices people demand versus prices they would pay to acquire the same rights, economists occasionally express surprise when their surveys reveal this disparity. *See, e.g.,* Kentsch & Sinden, Willingness to Pay and Compensation Demanded: Experimental Evidence of an Unexpected Disparity in Measures of Value, 99 Q.J. Econ. 508 (1984).

³⁶“In principle, the ultimate measure of environmental quality,” as one basic text in resource economics notes, “is the value people place on these . . . services or their willingness to pay.” A. Freeman, R. Haveman & A. Kneese, *The Economics of Environmental Policy* 23 (1973).

³⁷It is a commonplace criticism that the efficiency norm is meaningless because it is ambiguous between “bid” and “asked” prices: The efficiency approach depends necessarily on the Coasian view that when parties trade to an equilibrium, the same substantive allocation of resources will result, regardless of how property rights are distributed—or who is liable to whom—as long as there are no transaction costs. Coase, *The Problem of Social Cost*, 3 J.L. & Econ. 1, 2–8 (1960). The theorem will not hold, however, unless individuals are willing to sell or willing to pay nearly same amounts for the same resources. Since this is not the case—or anything like the case—notions of economic optimality or efficiency are meaningless since they are ambiguous between prices bid and asked. For a further articulation of this criticism, see Kelman, *Consumption Theory, Production Theory, and Ideology in the Coase Theorem*, 52 S. Cal. L. Rev. 669 (1979); Baker, *The Ideology of the Economic Analysis of Law*, 5 J. Phil. & Pub. Aff. 13 (1975).

are to function, however, the government must protect rights to person and property; this means, therefore, enjoining violations of those rights. But if individuals could acquire systematic injunctive relief against every polluter, a great deal of important economic activity might come to a halt. This would be too expensive a cost for society as a whole to bear. What, then, may be done? There are two possibilities: One is to implement legislation to move incrementally to reduce or to eliminate pollution; the other is to allocate air and water resources efficiently, viz., to those who are willing to pay the most for their use, assuming economists could identify who they are in a dynamic economy.

The first alternative, by responding to the pollution in terms of the violation of personal and property rights that make it a problem, remains in touch with the ideals of autonomy and freedom which are often cited as the moral basis of markets. Accordingly, these laws appear justifiable even if, for the sake of argument, we accept the analogy between clean air or water and other scarce resources presupposed by economic analysts.³⁸

The second alternative, which seeks to maximize consumer surplus, virtual profit, social wealth, potential Pareto improvement, or some other theoretical notion, has no obvious relation to property rights or to moral values, such as freedom and autonomy, which make markets attractive institutions of collective choice.³⁹ Insofar as we are concerned with an end state—allocatory efficiency—rather than a fair and open procedure, a centralized or planned economy run by cost-benefit analysts might succeed better than a free market economy in achieving that state.⁴⁰ The epistemic burden on scientific managers or central planners, however, would be mind-boggling. As F. A. Hayek has written, “The peculiar character of the problem of a rational economic order is determined precisely by the fact that the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contra-

³⁸See Slovic, Fishchhoff & Lichtenstein, Facts and Fears: Understanding Perceived Risk, in *Social Risk Assessment: How Safe is Safe Enough?* 181 (R. Schwing & W. Albers eds. 1980).

³⁹The objection here is not the one described in note 29. Rather, it is to point out that the arguments in favor of markets are not necessarily arguments in favor of efficiency. To think otherwise is to be taken in by a fallacious argument: (1) markets, when informed and competitive, are desirable methods of collective choices; (2) markets, when informed and competitive, allocate resources efficiently; (3) cost-benefit analysis allocates resources efficiently; (4) cost-benefit analysis is therefore a desirable method of collective choice. The argument is fallacious because it assumes enthymatically that the reason markets are desirable methods of collective choice is that they allocate resources efficiently. This assumption is false; it is neither required by logic nor validated in practice.

Another fallacy, that of the illicit minor, is involved in this argument: (1) markets which are competitive are desirable; (2) markets which are competitive allocate resources efficiently; therefore (3) allocating resources efficiently is desirable. The error contained in this analysis is aptly demonstrated by the following comparison: (1) beautiful rivers are good; (2) beautiful rivers occasionally drown people; therefore (3) occasional drownings are good. The fallacy in this *reductio* is obvious because we know that drowning people is not a reason that rivers are good. Absent an independent normative basis for allocative efficiency, it cannot be said that markets are good because they allocate resources efficiently.

⁴⁰The reasons to value markets are generally procedural: markets are voluntary and have other similar attributes. To the contrary, the reasons to adopt a cost-benefit approach have to do with outcomes; namely, allocatory efficiency, insofar as this can be considered desirable. It is a mistake to move from the premise that markets—under theoretical and abstract conditions—will allocate resources efficiently to the conclusion that any method of achieving the same allocation has the same virtues as markets. For an argument against cost-benefit approaches because of its procedural properties (it is dictatorial), see Cuyler, *The Quality of Life and the Limits of Cost-Benefit Analysis*, in *Public Economics and the Quality of Life* 141 (L. Wingo & A. Evans eds. 1977); Tarasovsky, *Cost-Benefit Analysis, Cherished Illusion and Anxiety: An Aspect of the Hickey Effect*, in *Frontiers in Economics* (G. Tullock ed. 1976).

dictory knowledge which all the separate individuals possess.”⁴¹

There are many reasons, among them fairness, impersonality, and neutrality, as well as their ability to gather dispersed and changing information, for which we value market transactions as fair procedures, whether or not markets happen to achieve a particular, e.g., an efficient allocation of resources. It is not clear, however, that any of these reasons justifies the government in overriding the functioning of free and fair markets whenever transaction costs or other bargaining problem inhibit the efficiency which a planned economy, run by cost-benefit analysts, might ideally achieve. Accordingly, arguments extolling the virtues of free and equitable markets as instrumentalities of collective choice, no matter how cogent, do not provide a basis for the efficiency norm in environmental policy or for a cost-benefit approach to pollution control law.

The idea that the bureaucrats can arrange an economically superior outcome to free markets is precisely the mistake economists attribute to socialism. Thus, Fred Smith, among others, characterized the Pigouvian approach as centralized planning. “In a world of pervasive externalities—that is, a world where all economic decisions have environmental effects—this analysis demands that all economic decisions be politically managed.”⁴² Two economists agreed: “To counter market failures centralized planning is seen as a way of aggregating information about social benefits in order to maximize the value of natural resources. Decisions based on this aggregated information are to be made by disinterested resource managers whose goal is to maximize social welfare.”⁴³

Why efficiency? Why should society hire experts to allocate resources efficiently—or in the way they determine a perfectly competitive market would allocate them? The reason cannot lie in the virtues, such as freedom, consent, accountability, and neutrality that make market exchange a better arrangement than centralized planning. Rather, efficiency must have some separate justification to explain why scientific managers should override market outcomes in its name or even claim to be able to do so. We might believe, for example, that efficiency in the allocation of resources promotes the welfare, happiness, or prosperity of society. If the efficiency criterion can be defended on any of these grounds, then we might argue for markets insofar as they allocate resources efficiently because efficiency can be shown to correlate with or cause some good thing, such as happiness.

§ 5:10 The ethical basis of efficiency

This section considers the supposition that, all other things being equal, a more efficient allocation of resources is better than a less efficient one.¹ One may argue, on the contrary, that an efficient allocation, *ceteris paribus*, is not better, for the

⁴¹F. A. Hayek, “The Use of Knowledge In Society” XXXV *American Economic Review*, 519-30 (Sept. 1945).

⁴²Fred L. Smith, Jr., *The Market and Nature*, 43(9) *The Freeman* 350, 352 (Sept. 1993).

⁴³Terry Anderson and Donald Leal, *Free Market Environmentalism* 9 (San Francisco: Pacific Research Institute, 1991).

[Section 5:10]

¹A sophisticated defense of preference-satisfaction as a basis for both common law and social policy may be found in R. Posner, *The Economics of Justice* (1983). Posner defines the “wealth” of society as “the aggregate satisfaction of those preferences (the only ones that have an ethical weight in a system of wealth maximization) that are backed up by money, that is, that are registered in a market.” R. Posner, *The Economics of Justice* 61 (1983).

For a good introduction to the concepts of efficiency, welfare, wealth, Pareto optimality, potential Pareto improvement, and other technical terms, see Michelman, *Norms and Normativity in the Economic Theory of Law*, 62 *Minn. L. Rev.* 1015, 1019–21 & 1032–34 (1978); Coleman, *Economics and the Law: A Critical Review of the Foundations of the Economic Approach to Law*, 94 *Ethics* 649 (1984).

word “better” has no meaning in this context.

This section covers four topics. First, it denies that the efficiency criterion in public policy can be based in the ethical theory of utilitarianism, since (a) it lacks any demonstrable conceptual or causal connection with “happiness”; and (b) it does not depend on the consequences of transactions, but only on the expectations on which they are based.

Second, one may question whether the satisfaction of personal preferences is an important objective of public policy: Having a preference gives the individual who has it a reason to try to satisfy it. This does not show, however, that the government—which is in business to protect rights, assure a fair basis for competition, and provide for the common defense—has a responsibility to satisfy personal preferences *per se* without regard to the values these preferences express.

Third, the question arises whether the efficiency criterion is justified by, or merely defined in terms of, “welfare,” “utility,” “better-offness,” and similar notions. Does any relation hold, moreover, between microeconomic efficiency and important macroeconomic goals? It is helpful to have as much empirical information as one can find to understand the limited and uncertain contingent relationship—there is no agreed upon theoretical relationship—between current pollution control legislation and economic prosperity.

Finally, we take up the claim that each of us, if rational, is a maximizer of his own welfare and therefore may be presumed to give a cost-benefit approach in public policy his or her “implicit” or “counterfactual” consent. This section will conclude that the efficiency criterion in regulatory policy has no basis in ethical or in political theory and therefore has no merit against which to weigh values—such as equity—with which it is thought to compete.

§ 5:11 The ethical basis of efficiency—Efficiency and utilitarianism

If the efficiency criterion had a normative basis in the ethical theory of utilitarianism it must (1) have a demonstrable connection with happiness or a related normative conception of the good; and (2) judge the value of actions and decisions according to their consequences. But the efficiency criterion and the theory of welfare economics from which it is developed meet neither of these conditions; therefore they have no justification in the ethical theory of utilitarianism.

Sophisticated economic analysts do not try to connect the efficiency norm with the classical utilitarianism of Bentham, Mill, and Sidgwick or with the goal of maximizing pleasure or happiness which those philosophers proposed.¹ “The most important thing to bear in mind about the concept of value” in the welfare economist’s sense, as Richard Posner correctly points out, “is that it is based on what people are willing to pay for something rather than the happiness they would derive from having it.”²

If economic value is a function of what people are willing to pay for something

[Section 5:11]

¹Sidgwick defines the value to be maximized not as consumer surplus but as “the surplus of pleasure over pain.” H. Sidgwick, *The Methods of Ethics* 413 (7th ed. 1907). No connection between these two concepts, conceptual or empirical, has ever been demonstrated.

For a standard account of the utilitarian basis of welfare economics, see, e.g., I. Little, *A Critique of Welfare Economics* 42 (2d ed. 1957); A. Pigou, *The Economics of Welfare* 20 (4th ed. 1932).

²R. Posner, *The Economics of Justice* 60 (1983). Posner is aware of the familiar objections against utilitarianism as an ethical theory. He believes reasonably that “normative” or welfare economics would benefit if it were not founded on classical utilitarianism. Posner, therefore, proposes economic analysis not as a consequence of utilitarianism but “as an alternative ethical theory.” R. Posner, *The Economics of Justice* 60 (1983).

rather than the happiness or well-being they would derive from having it, it is unsurprising that those willing to pay the most for goods derive the most economic value from them. The term “economic value” simply coincides with “willingness to pay” (WTP) and with terms such as “welfare” or “utility” that WTP both defines and measures. Those who advocate social efficiency—or maximizing net aggregate benefit—as a goal of environmental policy mean only that resources should flow to those willing to pay the most for them because they are willing to pay the most for those resources. These advocates suppose that this allocation will maximize the well-being or welfare of individuals collectively, *i.e.*, social welfare, only because they have stipulated that “welfare” or “well-being” is whatever WTP measures. The entire argument rests on a tautology—a tiny and trivial circularity. Normative terms such as “benefit,” “welfare,” or “well-being” are defined in terms of WTP and then WTP is used as a criterion for measuring and maximizing benefit, welfare, or well-being.

If one defines and measures benefit or well-being in terms of WTP, it takes neither knowledge of any experience, nor data from psychology, nor any experiment to show that society can maximize social well-being or benefit by providing the greatest net aggregate of goods and services for which people are willing to pay. If one measures well-being other than in terms of WTP, then it is possible to test whether well-being correlates with it. Is there any relationship between WTP and well-being other than a vacuous because stipulated one? Having a preference one is willing to pay to satisfy may give that person a reason—or at least a motive—to try to satisfy it. Few would question the platitude, moreover, that he or she should be free to pursue that preference under conditions or within institutions that guarantee the same freedom to others. Can one say, however, that it is better for that individual or for society that the preference be satisfied? How could one know without some information about the reasons for that preference, the information on which it is based, and the circumstances in which it arose?

There are some policy analysts who believe that the satisfaction of consumer and other personal preferences has a moral foundation as a policy goal because it leads to or produces satisfaction in the sense of pleasure or happiness.³ This belief rests on nothing more than a pun on the word “satisfaction.” Preferences are satisfied in the sense of being “met” or “fulfilled”; this is also the sense in which conditions and equations are satisfied. “Satisfaction” of this sort has no necessary connection with “satisfaction” in the sense of pleasure or happiness.

Does the satisfaction of preferences promote or cause satisfaction in the sense of happiness? Empirical research confirms what ordinary wisdom suggests:⁴ happiness depends more on the quality of our preferences and on how well we pursue them

³W. Baxter, *People or Penguins: The Case of Optimal Pollution*, argues that:

The first and most fundamental step toward the solution of our environmental problems is a clear recognition that our objective is not pure air or water but rather some optimal state of pollution. That step immediately suggests the question: How do we define and attain the level of pollution that will yield the maximum amount of human satisfaction?

W. Baxter, *People or Penguins: The Case of Optimal Pollution* 8–9 (1974).

⁴That efficiency, wealth, potential Pareto improvement and the like do not lead to happiness but, if anything, to its opposite is the burden of a number of important studies. *See, e.g.*, T. Scitovsky, *The Joyless Economy* (1976); F. Hirsch, *The Social Limits to Growth*; A. Hirschman, *Shifting Involvements: Private Interest and Public Action* (1982). For surveys and other empirical evidence that people do not become happier when they have more of the things they want to buy, but instead are frustrated by rising expectations or dissatisfied by those things, see A. Campbell, P. Coverse & W. Rodgers, *The Quality of American Life: Perceptions, Evaluations, and Satisfaction* (1976); Erskine, *The Polls: Some Thoughts About Life and People*, 28 *Pub. Opinion Q.* 517 (1964). These studies confirm the old saw of common wisdom that the way to achieve happiness is to overcome desires rather than to merely satisfy them.

than on the degree to which they are or are not satisfied.⁵ Moreover, it is useful to recognize that the kind of contemporary “utilitarianism” which current welfare economic theory represents is not a consequentialism; it is not concerned with actual utility or welfare, to wit, the things which happen to people as a result of the choices they make. It is concerned only with the beliefs and expectations revealed in those choices—the amount people are willing to pay for things—not with the actual consequences of those choices.

The ethical theory of utilitarianism is different. Utilitarians are less concerned about the conditions than about the consequences of transactions. Accordingly, utilitarians, to prevent what were unconscionable levels of death and injury, have supported humanitarian legislation to improve unsafe conditions in the nation’s mills and mines. Humanitarian legislation of this kind cannot be justified on an expected utility basis, for whenever workers voluntarily and knowingly take unsafe jobs, which they often do,⁶ the market operates efficiently to that extent, even if they all die as a result.⁷ The efficiency norm in public policy has no connection, other than an historical one, with the ethical theory of utilitarianism. To think otherwise is to confuse the satisfaction of preference, which many economists favor, with the utilitarian’s preference for satisfaction.

§ 5:12 The ethical basis of efficiency—Should law satisfy personal preferences?

If utilitarianism does not provide a normative basis for economic analysis or for the efficiency criterion, what does? Resource economists generally answer this question by referring to a central value premise. “The value premise is that the personal wants of the individuals in the society should guide the use of resources in production, distribution, and exchange, and those personal wants can most efficiently be met through the seeking of maximum profits by all producers.”¹

The question one needs to ask, then, is why the personal wants of individuals

⁵It is possible that the satisfaction of preferences leads often to frustration and disillusionment, as divorce statistics suggest, while the attempt to satisfy desires, as long as they remain unfulfilled, is often satisfying. See, e.g., J. Keats, *Ode on a Grecian Urn*, in *Complete Poems and Selected Letters* 352 (C. Thorpe ed. 1935).

⁶See C. Gersuny, *Work Hazards and Industrial Conflict* (1981). “War is safe compared to railroads in this country,” said one railroad worker early this century, when fatalities among railroad workers reached 28 per 10,000 per year and one in ten were seriously injured. C. Gersuny, *Work Hazards and Industrial Conflict* 20 (1981). See also L. White, *Human Debris: The Injured Worker in America* (1983).

⁷Kip Viscusi, recognizing that workers are generally aware of the extent of the hazards they face, argued that humanitarian workplace legislation, while “perhaps well intended . . . will necessarily reduce the welfare of the poorer workers in society, as perceived by them.” K. Viscusi, *Risk By Choice: Regulatory Health and Safety in the Workplace* 80 (1983). The welfare of workers “as perceived by them” refers to their expected utility which is determined entirely by their willingness to take the risky job at a particular wage. This kind of “welfare” or “utility” remains the same no matter what actually happens to these workers; according to this view, for example, it remains the same if they all die hideous deaths. This kind of “utility,” since it is determined independently of consequences, has nothing to do with utilitarian ethics.

Thomas Schelling falsely claims that “economic theory evaluates actions by their consequences and the way the consequences are valued by the people who benefit and suffer.” Schelling, *Prices and Regulatory Instruments*, in *Incentives for Environmental Protection* 3 (T. Schelling ed. 1983). Economic theory evaluates actions according to the preferences people reveal when they act; utilitarianism evaluates actions according to their consequences.

[Section 5:12]

¹A. Kneese & B. Bower, *Environmental Quality and Residuals Management* 4-5 (1979). This value premise is related to a free market economy only if it is assumed that corporate executives are concerned with maximizing long-run profits rather than, for example, promoting their own short-term personal interests. Were the latter true, a centralized, planned economy—a socialist one—if it makes use of cost-benefit analysis, might conform to the value premise better than would a capitalist economy.

should guide and, along with equity considerations, determine government policy with respect to the management of resources. The fact that someone has a preference for something gives him or her a reason to try to satisfy that preference. But why does it give the government a reason to try to satisfy it? Society may privilege some sorts of preferences—those related to basic needs, for example, or to certain kinds of excellence or merit. There are plenty of personal preferences—for narcotics, prostitutes, and gambling, as examples—which the government strives to keep people from satisfying. Why should it generally be the policy of the government, then, to satisfy personal preferences without regard to the values these preferences express?²

In posing this question, one may assume that the government generally should not interfere with the efforts citizens make to satisfy their own preferences, except insofar as necessary to protect the same right or freedom of others. One might insist that the government should guarantee citizens the background conditions of freedom and equality they need to have a fair basis on which to form and to compete to satisfy their personal wants. Freedom, equality of opportunity, autonomy, neutrality, care for children, safety, health—these are all important values. But why is efficiency in the allocation of resources a value?³ Why should the satisfaction of personal preferences *per se* be recognized as a goal of public policy?⁴

Environmental law as it stands is based on impersonal values which we have chosen, as a community, through the political process. These values have survived a process of public deliberation; on the merits, they have gained the respect of at least a majority of the legislature. In the political process, partisans offer reasons they suppose to be publicly or intersubjectively valid, they argue for impersonal or public values.⁵ These values, at least formally, address not what *I* want but what *we* should do; they take the community in general as their logical subject.⁶ They are logically different from purely personal preferences, which express only how the in-

²Those who believe that preference-satisfaction should be a goal of public policy are faced with the problem of ugly preferences, such as those that are racist, vicious, self-destructive, adaptive to circumstances beyond the agent's control, or simply stupid. To save the general policy goal, analysts have to invent *ad hoc* reasons for discounting or dismissing these various kinds of preferences which plainly do no merit societal respect. See Elster, *Sour Grapes—Utilitarianism and the Genesis of Wants*, in Sen & Williams, *Introduction*, in *Utilitarianism & Beyond* 219 (A. Sen & B. Williams eds. 1982).

³For an additional discussion of this question, see Dworkin, *Is Wealth a Value?*, 9 J. Legal Stud. 191 (1980); Dworkin, *Why Efficiency? A Response to Professors Calabresi and Posner*, 8 Hofstra L. Rev. 563 (1980).

⁴For excellent discussions of this question, see Daniel M. Hausman and Michael S. McPherson, "Preference Satisfaction and Welfare Economics," 25 *Economics and Philosophy* 1-25 (2009). These authors write, "Yet it is obvious that people's preferences are not always self-interested and that false beliefs may lead people to prefer what is worse for them even when people are self-interested. So welfare is not preference satisfaction, and hence it appears that cost-benefit analysis and welfare economics in general rely on a mistaken theory of wellbeing." For a useful response, see Alexander F. Sarch, "Hausman and McPherson on Welfare Economics and Preference Satisfaction Theories of Welfare: A Critical Note," 31 *Economics and Philosophy* 141-159 (2015).

⁵Public policy is to be argued in public terms—that is, from the point of view of what we stand for, desire, or believe in as a community, not from the point of view of personal wants or preferences. If Charleston Wilson, head of General Motors, said "What's good for General Motors is good for the country," even he recognized that public policy must be discussed in public terms, however self-serving the motivation. See E. Schattschneider, *The Semisovereign People* 27 (1960).

⁶Kant argued that in making a moral judgment, the individual legislates for all; the individual expresses a view about what any rational being would do in similar circumstances. The idea that moral imperatives distribute over the community as a whole—for Kant, the community of all rational beings—is derived from Rousseau. In environmental policy, the relevant community must be considered to be the nation; law then respects the views individuals defend concerning what we, as a nation, ought to do. This is different from the wants or preferences the individual has for himself and may reveal in markets. For a good discussion of these distinctions in their Kantian context, see W. Seelars,

dividual wants to live his own life, an agenda about which liberals believe the government should be as neutral as possible.⁷

Why should environmental policy strive to satisfy personal preferences rather than respond to these public values?⁸ Having a personal preference gives the individual who has it a reason to satisfy it. But why should the government try to satisfy that preference? One may reply that the government ought to try to satisfy personal preferences because this is what the people who have those preferences want. This reply would start an infinite regress if it were true; it is, however, mistaken. People want their preferences satisfied at the moment they have them, but they constantly reevaluate and revise their preferences and, over the long run, may regret that many were satisfied or be grateful that others were not. Besides, even if people want their preferences satisfied at the moment they have them, it by no means follows that they wish the government to adopt preference-satisfaction as a major policy objective. On the contrary, this goal has achieved credibility with hardly anyone beyond the academics who invented it.⁹

We are left, then, questioning the “value premise . . . that the personal wants of the individuals in the society should guide the use of resources.”¹⁰ Why is this a *value* premise? Markets, to be sure, are supposed to satisfy these preferences, and the government should guarantee individuals the liberty to pursue the satisfaction of their wants under conditions which are neutral among them and fair to all. It is also reasonable to assume that the government should seek to help people to satisfy certain of their preferences—those involving basic needs (according to a theory of justice), security (according to any political theory), and merit goods (if it wishes). But why should the government itself try to satisfy preferences taken as they come, bound by indifference and ranked by willingness to pay? We have yet to discover an answer to that question.

§ 5:13 The ethical basis of efficiency—What is “welfare”?

It might be stated that the government should try to maximize the satisfaction of personal wants and preferences because this will increase the welfare or utility of those whose preferences they are. This, however, states a definition, not a fact. The concepts of “welfare” and “utility,” as policy analysts use them, are simply defined

Science and Metaphysics § 7 (1968).

⁷For one version of the distinction between personal and impersonal preferences, see Dworkin, *Equality of Welfare*, 10 *Phil. & Pub. Aff.* 185 (1982). “[P]eople have what I shall call impersonal preferences, which are preferences about things other than their own or other people’s lives or situations. Some people care very much about the advance of scientific knowledge, for example, even though it will not be they (or any person they know) who make the advance, while others care deeply about the conservation of certain kinds of beauty they will never see.” Dworkin, *Equality of Welfare*, 10 *Phil. & Pub. Aff.* 192 (1982). Dworkin is correct here in distinguishing environmental values from personal (self-regarding) preferences from distributional considerations. To view all values as either personal preferences or distributional norms is to exclude the community-based or public values on which much of our environmental legislation rests. These values are consistent with a liberal theory of legislation because they concern conceptions of the good society rather than conceptions of the good life, about which liberal policy is to be neutral. See Dworkin, *Neutrality, Equality, and Liberalism*, in *Liberalism Reconsidered* 1, 8 (D. MacLean & C. Mills eds. 1983) (distinguishing between passive and active membership in a community).

⁸There exists immense literature on the distinction between personal (self-regarding) preferences and public (group-regarding) values. See, e.g., Marglin, *The Social Rate of Discount and the Optimal Rate of Investment*, 77 *Q.J. Econ.* 95, 98 (1963); Maass, *Cost-Benefit Analysis: Its Relevance to Public Investment Decisions*, 80 *Q. J. Econ.* 208, 216-17 (1966).

⁹See generally S. Kelman, *What Price Incentives? Economists and the Environment* (1981) (chapter three is especially pertinent to this point).

¹⁰A. Kneese & B. Bower, *Environmental Quality and Residuals Management* 4-5 (1979).

in terms of the satisfaction of preferences.¹ Thus, according to this approach, we should strive to maximize the satisfaction of personal preferences on a willingness-to-pay basis because this will increase overall social welfare or utility. Overall social welfare or utility in turn, is defined as the satisfaction of personal preferences on a willingness-to-pay basis over society as a whole.

Those who favor the efficiency norm in public policy often make the point that “not just one but both parties to an exchange are better off after the exchange is executed than they were before.”² What this means is that the *expected utility* of both parties is increased; this, again, is tautologically true, since this kind of utility is inferred as a logical consequence from the willingness of the parties to enter into the exchange. To break out of this circle, analysts must explain how satisfying preferences—and thus how allocating resources efficiently—makes people better off in some normative, non-tautological sense. This has never been accomplished.³

When confronted with the idea that markets, when well informed and free of externalities, increase or maximize welfare, we should remember the suffering which miners, railroad workers, and other laborers experienced, for example, in the period before and after the First World War and as late as the 1950s.⁴ We might remember the plight of children “hurrying” coal in the mines at the turn of the century. It is always possible to argue that workplace safety, consumer safety, child labor, and other humanitarian laws *decrease* the “expected” utility of workers, because these laws prevent them from making free and informed contracts of certain kinds.⁵ The relationship between these laws and real welfare—in other words, actual death and suffering—is a contingent not a conceptual one and must be

[Section 5:13]

¹The underlying Paretian standard holds that a move from state A to state B increases social welfare or utility if at least one person prefers B to A and no one prefers A to B. This standard is generalized to more complex cases by the Kaldor-Hicks principle which holds that A social welfare is increased if those who prefer B can compensate those who want A and still maintain their preference. Thus the notion of social welfare or overall utility is defined strictly in terms of the satisfaction of preferences insofar as these preferences are measured in terms of willingness to pay. It has no independent, normative significance. For a clear discussion of these concepts in relation to current regulatory concerns, see Coleman, *Economics and the Law: A Critical Review of the Foundations of the Economic Approach to Law*, 94 *Ethics* 649 (1984).

²W. Baxter, *People or Penguins: The Case of Optimal Pollution* 19 (1974).

³Contemporary economic theory assumes that if a preference of any individual is satisfied, then that individual, and society as a whole, is to that extent “better off” as a result. This, indeed, is the basis of the concept of a Pareto improvement—a change in social state that at least one person prefers and no one opposes. How is this an improvement in any normative sense? It is an improvement, if at all, from that individual’s point of view. There is no “point of view of society as a whole” from which it can be viewed as a social improvement.

Gunnar Myrdal observed in 1973 that contemporary “utilitarianism” resembles communism in presupposing a “harmony of interest” or a “communistic fiction” about the oneness of society. This fiction “amounts to the assertion that society can be conceived as a single subject” capable of having a single interest, called the general welfare or the common good, and consenting as one person to the policies that serve that interest. G. Myrdal, *The Political Element in the Development of Economic Theory* 53, 194-95 (1953).

⁴See L. White, *Human Debris: The Injured Worker in America* (1983). The periods in question were times of great prosperity, so one cannot argue that markets failed to operate because of some bargaining inequality. For an excellent critique of the use by economists of bargaining inequalities to save the efficiency analysis, see Kennedy, *Distributive and Paternalistic Motives in Contract and Tort Law, with Special Reference to Compulsory Terms and Unequal Bargaining Power*, 41 *Md. L. Rev.* 563 (1982) (arguing that compulsory terms in contract, unwaivable warranties in tort, and various public law constraints on markets, such as margin requirements in security exchanges, are motivated and justified by humanitarian and paternalistic considerations, rather than by efforts to make markets function more equitably by redressing bargaining inequalities).

⁵Apparently, Viscusi argues that workers (or, perhaps, their parents) should be permitted to

determined on the basis of empirical evidence.

A large literature stretching from the *Ethics of Competition* (1935) by Frank Knight to *Nudge* (2008) by Richard Thaler and Cass Sunstein have found little reason to favor preference taken as it comes. That people should be free to choose is a platitude; it does not follow, however, that the government is tasked with helping them get whatever it is that they want. On the contrary, the rule of public policy is to help people satisfy certain kinds of wants, for example, those associated with basic needs, security, health, or certain merit goods, such as education. The government knowing the common foibles of humanity and aware of the kinds of mistakes we commonly make may try to help us form better more rewarding or less self-destructive desires. According to Knight, “The chief thing which the common sense individual actually wants . . . is not satisfaction of the wants he has, but more, and better wants . . . True achievement is the refinement and elevation of the plane of desire, the refinement of taste.”⁶ Sunstein and Thaler remind us that the laissez-faire approach of a century or more ago produced unconscionable horrors. During the *Lochner* era people were free to contract without the paternalistic catalyst of regulation. It’s not as if the railway workers did not know the dangers of the work they did. The role of government may be more to educate and enlighten than to satisfy preference—or perhaps its role is principally to improve the institutional settings in which people form their interests. “The sheer complexity of modern life, and the astounding pace of technological and global change, undermine arguments for rigid government mandates or dogmatic laissez-faire. Emerging developments should strengthen, at once, the principled commitment to freedom of choice and the case for a gentle nudge.”⁷

§ 5:14 The ethical basis of efficiency—Pollution control legislation and prosperity

“The primary justification the Reagan administration gave for . . . regulatory relief,” according to two observers, “was that regulation was one of the principal factors responsible for the nation’s poor economic performance during the 1970s.”¹ Speculations on the amount that governmental regulations “cost” society, of course, are part of political campaigning. In 1975, for example, President Ford, speaking in New Hampshire, declared that “some estimates I have seen place the combined cost to consumers of Government regulation and restrictive practices in the private sector at more than the Federal Government actually collects in personal income taxes each year—or something on the order of \$2,000 per family—unbelievable.”² In the same year, the President’s Council of Economic Advisors announced that precise “estimates of the total cost of regulation are not available, but existing evidence suggests that this might range up to 1 percent of the gross national product, or ap-

make whatever bargains they like, as long as markets are efficient, for this is what will increase their expected utility. That many or even all might become diseased, stunted, or killed as a result seems not to matter, for actual utility has no place in the microeconomic theory. Viscusi’s argument might seem to be an example of the way adherence to a theory can freeze one’s emotions and atrophy one’s normal ethical sentiments and human feelings. See K. Viscusi, *Risk By Choice: Regulatory Health and Safety in the Workplace* 43 (1983).

⁶Knight, *The Ethics of Competition and Other Essays*, 22–23 (1935).

⁷Thaler and Sunstein, *Nudge: Improving Decisions About Health, Wealth, and Happiness*, 253 (2009).

[Section 5:14]

¹G. Eads & M. Fix, *Relief or Reform: Reagan’s Regulatory Dilemma* 17 (1984).

²White House Conference on Domestic Affairs and Inflation, the President’s Remarks at the Conference in Concord, New Hampshire, 11 Weekly Comp. Pres. Doc. 104 (Apr. 25, 1975) (also speculating that “the real costs are only a fraction of this amount”).

proximately \$66 per person per year.”³

When the Reagan Administration took office, one of its principal economic advisors, Murray Weidenbaum, estimated the then current social cost of governmental regulation, without regard to the benefits, at \$100 billion per year. The substantive accuracy of these estimates must be questioned. What part of the total cost of regulation is associated with the reduction and control of pollution? The question is not whether the benefits are worth the costs, but what the costs actually are.

Pollution control was costly during the first decade when there was the most pollution to control. Serious attempts to estimate the social costs of pollution control regulation, again without regard to the benefits, during the period between 1972 and 1980 were conducted by Chase Econometric Associates (Chase)⁴ and Data Resources Incorporated (DRI).⁵ These studies, according to an analysis of them, “are in agreement as to the apparent size of the impacts of pollution control,” namely that the cost of pollution control contributes between 0.2 and 0.6 percent to the inflation rate.⁶ Both the Chase and the DRI studies found that “the direct price, output, employment, and other macroeconomic effects of pollution control [were] relatively small.”⁷

The results of the Weidenbaum study appear to be roughly consistent with these earlier studies.⁸ Weidenbaum’s \$100 billion estimate covers not simply pollution control but most major areas of regulation, such as consumer, workplace, energy, and financial regulation. For regulation of “energy and the environment,” Weidenbaum estimates administrative costs, in 1976, at \$612 million (the budgets of the relevant agencies) and compliance costs at \$7.7 billion.⁹ The total represents a payment of less than \$40 per American. The total regulatory costs in 1976, on Weidenbaum’s estimate, came to \$66 billion, not the familiar \$100 billion figure.¹⁰ Of this total regulatory cost, paperwork costs accounted for approximately 40 percent.¹¹

The Environmental Protection Agency and the Council for Environmental Quality have sponsored studies of regulatory impact based on large-scale macroeconomic

³Economic Report to the President 159 (1975).

⁴For a detailed analysis of the 1976 Chase study, see Haveman & Smith, *Investment, Inflation, Unemployment, and the Environment*, in *Current Issues in U.S. Environmental Policy* 164 (P. Portney ed. 1978).

⁵Data Resources Inc., *The Macroeconomic Impact of Federal Pollution Control Programs: A 1978 Assessment* (1979) (report submitted to the Environmental Protection Agency and the Council on Environmental Quality).

⁶Portney, *The Macroeconomic Impacts of Federal Environmental Regulation*, in *Environmental Regulation and the U.S. Economy* 25, 47 (H. Pesking, P. Portney & A. Kneese eds. 1981).

⁷Portney, *The Macroeconomic Impacts of Federal Environmental Regulation*, in *Environmental Regulation and the U.S. Economy* 25, 47 (H. Pesking, P. Portney & A. Kneese eds. 1981).

⁸M. Weidenbaum & R. DeFina, *The Cost of Federal Regulation of Economic Activity* (1978).

⁹M. Weidenbaum & R. DeFina, *The Cost of Federal Regulation of Economic Activity* 2 (1978).

¹⁰The familiar \$100 billion figure is reached by an odd method. Weidenbaum notes that administrative costs would increase in 1979 from the 1976 figure and that, in 1976, the ratio between administrative and compliance costs ran roughly 20 to 1. “With administrative costs estimated at 4.8 billion, the estimated total costs of regulation would exceed \$100 billion.” Weidenbaum, *On Estimating Regulatory Costs*, *Regulation*, May-June 1978, at 17.

¹¹Weidenbaum and DeFina rely on figures generated by a Senate subcommittee which had studied paperwork costs in 1972. This figure was then adjusted to \$25 billion in 1976 dollars. M. Weidenbaum & R. DeFina, *The Cost of Federal Regulation of Economic Activity* 2 (1978). This figure suggests that society could save a lot more money by controlling and reducing paperwork than it might gain by cutting back on programs to control pollution. For a discussion of this and other aspects of the Weidenbaum study, see G. Eads & M. Fix, *Relief or Reform: Reagan’s Regulatory Dilemma* § 2 (1984).

models.¹² The results of these studies are generally consistent with one published by the Conservation Foundation in 1982.¹³ It found that pollution control programs, which are labor-intensive, decreased the GNP by a modest 0.2 percent but also decreased unemployment by 0.3 percent. Eads and Fix caution that these large-scale macroeconomic similarities “tell us *either* that regulation has relatively little impact on the variables that most economists watch as indicators of the health of the economy *or* that large-scale macromodels are not sensitive enough to reliably indicate the impact of such complex phenomena as a mass of individual programs that, when lumped together, might be called ‘regulation.’”¹⁴

In understanding these analyses, one should note that allocative efficiency is a microeconomic concept, while various desirable goals, such as growth and prosperity, are macroeconomic concepts. In general, economists recognize that macroeconomic problems have macroeconomic causes and solutions.¹⁵ They understand that there is no clear or straightforward relation between microeconomic efficiency and macroeconomic performance.¹⁶ In general, therefore, policy analysts have not urged prosperity, economic growth, or any such macroeconomic goal as a justification for a cost-benefit approach to public policy. For example, Edward Gramlich, in his basic text on cost-benefit analysis and government programs, acknowledges that “benefit-cost analysis of individual projects will for the most part not involve macroeconomic questions.”¹⁷

All arguments but one supporting efficiency as a goal or criterion in pollution control policy have been considered and found wanting. The final argument, which is discussed in the following section, is not based in economic but in political theory.

§ 5:15 The ethical basis of efficiency—Efficiency and consent

Some analysts, recognizing that the efficiency norm in public policy has no basis in utilitarianism, have argued that normative support may be found in the “hypothetical” or “counterfactual” consent of the community. Richard Posner, for example,

¹²For a discussion of these, see Portney, *The Macroeconomic Impacts of Federal Environmental Regulation*, in *Environmental Regulation and the U.S. Economy* 25, 39 (H. Pesking, P. Portney & A. Kneese eds. 1981).

¹³See generally *The State of the Environment in 1982: A Report from the Conservation Foundation* (1982).

¹⁴G. Eads & M. Fix, *Relief or Reform: Reagan’s Regulatory Dilemma* 41 (1984).

¹⁵There are two prominent exceptions to this general rule. First, “supply-side” economists, frustrated by the apparent failure of Keynesian demand management to keep down inflation and the apparent failure of monetary policy with respect to unemployment, have argued that microeconomic inefficiencies prevent full employment and maximum productivity. The supply-side argument does not attract many mainstream Ph.D. economists, but it has achieved a good deal of political attention, especially as formulated by George Gilder, who had no formal training in economics. See G. Gilder, *Wealth and Poverty* (1981).

Second, “rational expectations” economists also tie macroeconomic performance to microeconomic efficiency, but unlike the supply-side economists, they believe that markets quickly discount governmental policies, which therefore make little difference. The government therefore cannot really improve matters by implementing a monetary or other policy; indeed, rational expectationists see poor economic performance as caused by random shocks, mistakes, and failures of information which cannot be controlled. See Schoemaker, *The Expected Utility Model: Its Variants, Purposes, And Evidence*, 20 *J. Econ. Literature* 529 (1982) (survey). For a good assessment of these two schools, see L. Thurow, *Dangerous Currents: The State of Economics* §§ 5, 6 (1983).

¹⁶See *Microeconomic Efficiency and Macroeconomic Performance* (D. Shepherd, J. Turk & A. Silberston eds. 1983) (good collection of papers which argue that there is no clear relation between microeconomic efficiency and macroeconomic performance). “As the fundamental theorems point out, . . . Pareto efficiency is a property of equilibrium, not a guide to government intervention.” *Microeconomic Efficiency and Macroeconomic Performance* 3 (D. Shepherd, J. Turk & A. Silberston eds. 1983).

¹⁷E. Gramlich, *Benefit-Cost Analysis of Government Programs* 17 (1981).

proposed that consent “is the operational basis” of the efficiency norm and, therefore, “consent to efficient solutions can be assumed.”¹ Likewise, in discussing the regulation of risk, Herman Leonard and Richard Zeckhauser wrote: “Cost-benefit analysis . . . would gain the hypothetical consent of the citizenry. We know of no other mechanism for making [policy] choices which has this ethical underpinning.”²

The argument of these analysts is an ingenious one. First, the truth of a familiar, if metaphysical, view of human nature is assumed: What we are essentially, they believe, are self-interested maximizers intent on satisfying, insofar as possible, our interests and preferences. Leonard and Zeckhauser conclude: “What mechanism for making decisions would individuals choose if they had to contract before they knew their identities in society or the kinds of problems they would confront? Our answer is that, on an expected-utility basis, cost-benefit analysis would serve them best, and hence would be chosen.”³

It is important to separate the theoretical argument from its practical implementation. Leonard and Zeckhauser in the context of this argument bracket the practical issue of whether governmental agents can be wise, knowledgeable, and trustworthy enough to carry out the mind-boggling research needed to determine and weigh everyone’s preferences and find the most efficient way to satisfy them. Ronald Coase argued that when markets fail—when costs of production are “externalized,” for example, so that preference is not efficiently satisfied—it is usually better to let the externality exist than to trust government agencies to find a better allocation. According to Coase, “the costs involved in governmental action make it desirable that the ‘externality’ should continue to exist and that no government intervention should be undertaken to eliminate it.”⁴ Another commentator pointed out that state agencies, to reallocate around transaction costs, would be “obliged to carry out factual investigations of mind-boggling complexity, followed by a series of regulatory measures that would be both hard to enforce and valid only for a particular, brief constellation of economic forces.”⁵

If one puts these practical matters aside, one should recognize that the conclusion of the theoretical argument Leonard and Zeckhauser offer does follow from the premises. A group of persons, who are essentially self-interested maximizers and who do not know what their desires would be, would rationally choose a cost-benefit approach because it promises to maximize the satisfaction of desire across society as a whole. Accordingly, given the truth of this description of the essence or nature of persons, the cost-benefit approach in public policy has our implicit or hypothetical consent.

To see the flaw in this argument, imagine how a religious fundamentalist might alter the basic assumption. In his view, the essential nature of man is to be defined in religious rather than in economic terms. Man is essentially a creature of God meant to praise his Name and comply with His laws. Given this conception of human nature, it is easy to show that society gives its hypothetical or counterfactual

[Section 5:15]

¹Posner, *The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication*, 8 Hofstra L. Rev. 488 (1980).

²Leonard & Zeckhauser, *Cost-Benefit Analysis Applied to Risks: Its Philosophy and Legitimacy*, Working Paper, Center for Philosophy and Public Policy, University of Maryland 3 (June 1983) (to appear in *Values at Risk* (D. MacLean ed.) (forthcoming)).

³Leonard & Zeckhauser, *Cost-Benefit Analysis Applied to Risks: Its Philosophy and Legitimacy*, Working Paper, Center for Philosophy and Public Policy, University of Maryland 3 (June 1983) (to appear in *Values at Risk* (D. MacLean ed.) (forthcoming)).

⁴Coase, *The Problem of Social Cost*, J. of Law and Econ. 3 (1960): 1–44; quotation at 25–26.

⁵Kennedy, *Cost Benefit Analysis*, Stan. L. Rev. 33 (1981): 387–421, quotation at 397.

consent to fundamentalist religious precepts rather than to the principles of microeconomic theory.⁶

Likewise, a Marxist might argue that individuals, were they ignorant of their social identities, would base regulation on the principle “from each according to his abilities; to each according to his needs.” This is because people would recognize their communal nature and assume the truth of dialectical materialism as the accurate metaphysic of history. The Marxist might then argue that the “apparent” will of the citizenry, as expressed by its legitimate political representatives, can be ignored because it is corrupted by bourgeois ideology, irrationality, heresy, or stupidity. The “real” social will is known to those in the forefront of society who have the right philosophy, analysis, religion, social theory, ideology, or understanding of human nature.⁷

The Leonard-Zeckhauser “hypothetical consent” argument had been refuted well before it had been written by John Rawls, whose “veil of ignorance” technique it ironically parodies. The point of *A Theory of Justice*⁸ is that, in liberalism, justice is a political, not a metaphysical concept; it depends on a reflective equilibrium of values we bring to bear in politics partly as a result of our history, experience, and culture. The point of the Rawlsian approach is its independence from and neutrality among competing metaphysical views of history and of the person. Policy analysts, such as Leonard and Zeckhauser, by using the “veil of ignorance” argument as they have, replace a reflective equilibrium among normative principles with a metaphysical theory of the person, and thus they make the same mistake from the right as communitarian critics of Rawls make from the left.⁹

We may conclude that the efficiency criterion in environmental policy has no normative basis. It is a mistake to think that efficiency is to be “balanced” or “traded off” against some other value, such as equity, with which it unfortunately conflicts. Efficiency in the allocation of resources has no worth or merit to begin with against which such a value may be weighed. This is not to deny the commonsensical view that the benefits of any regulation should outweigh its costs to society as a whole. It is only to say that the efficiency criterion fails to measure—much less to maximize—benefits; the latter must be assessed through the political process and cannot be

⁶The underlying assumption has to do with how one believes the human being obtains true fulfillment. Many people of faith believe that the best way for humans to live and to obtain salvation is to follow particular laws or practices rooted in a holy scripture. Given this assumption, one can also assume as a corollary that people give their hypothetical or counterfactual consent to conversion even, if necessary, by the sword. Robert H. Nelson in *Reaching for Heaven on Earth: The Theological Meaning of Economics* (1993) has argued that economic theory represents a form of theology that preaches that economic scarcity is the root of all evil and that market efficiency by creating plenty will bring as close the Heaven as we can come. Whether one considers money the root of evil or the source of salvation is one’s own decision. It is another matter, however, to assume the hypothetical consent of everyone else to one’s own faith.

⁷It is to be emphasized that the “hypothetical consent” argument used by Posner and Zeckhauser has no connection whatsoever with the legitimate use of social contract theory found, for example, in J. Rawls, *A Theory of Justice* (1971). Rawls is concerned with establishing the basic structure of institutions within a just society in which rational individuals may legitimately pursue incommensurable conceptions of the good. Rawls, *The Basic Structure as Subject*, 14 *Am. Phil. Q.* 159 (1977). Posner and Zeckhauser, on the contrary, argue that there is a single conception of the good, to wit, preference-satisfaction, wealth-maximization, and so on, which all rational individuals would agree upon. These, therefore, may be assumed to have the hypothetical consent of the community. It is precisely because every ideologue, zealot, and academic-with-a-theory-of-the-common-good believes he is right and, therefore, that any rational and informed agent will necessarily agree with him—or not be rational or informed—that the Rawlsian argument is necessary. It aims at establishing social structures in which all these individuals, each with his own conception of what rationality and morality demand, can live peaceably together and secure the benefits of social cooperation.

⁸Rawls, *The Basic Structure as Subject*, 14 *Am. Phil. Q.* 159 (1977).

⁹See Rawls, *The Basic Structure as Subject*, 14 *Am. Phil. Q.* 159 (1977).

determined on the basis of individual willingness-to-pay. Thus, meaningful cost-benefit balancing is necessarily a result of, rather than a desideratum in, legislation and the larger political process, in which public officials at various levels deliberate over good and evil, right and wrong. This is a completely different process from anything that could take place within—or be inferred from—the theoretical analysis associated with welfare economics.

§ 5:16 Risks

Although pollution control law includes protections for the environment, its primary purpose is to protect public safety and health. Those who take an economic approach in understanding these statutes, therefore, confront the vexing problem of estimating the value of life in monetary terms. What price should be attached to a life saved or an injury avoided? This question is particularly difficult because life is usually considered as “priceless.” Life does not have a value; rather it is the necessary condition precedent for the value of anything else, since all values, as far as we know, are values of living human beings.

In the 1950s and 1960s, “the most common approach to the evaluation of life in the literature,” one economist wrote, “was the so-called productivity or human capital technique.”¹ This method measured the value of an individual’s life in terms of his “marginal productivity”; the amount he might expect to earn if he lived. This method had two advantages. First, it relied on free, voluntary markets to measure value, in this instance, by distributing income. Second, it was quantitative; it gave policy analysts numbers they could work with—numbers they could derive from markets. It also had drawbacks. Critics questioned the idea that persons, like livestock, should be valued principally for their contribution to the GNP. And the approach was unpopular with retired people, housewives, poor people, poets, philosophers, and other poorly-paid individuals whose lives might have little or even negative worth under this system of evaluation.

In 1969, T.C. Schelling wrote an influential paper which changed economic thinking about the evaluation of life and limb. Instead of trying to place a value on a particular individual’s life by estimating his or her contribution to the GNP, Schelling asked: “What is it worth to reduce the probability of death—the statistical frequency of death—within some identifiable group of people none of whom expects to die except eventually?”² Essentially, Schelling asks us how much we, as a society, are willing to pay to increase safety by a marginal amount necessary to save one life, when we do not know whose life it is. The loss of an actual life—a relative or friend, for example—engages strong moral sentiments, such as were discussed in the first part of this Chapter. By focusing attention instead on statistical lives, Schelling was able to provide a more detached and theoretical context for regulating public safety and health.

According to Martin Bailey, “[t]he most direct evidence of the amount people are willing to pay for their own safety comes from the job market, which offers a variety of working environments with various degrees of personal risk.”³ By dividing the extra annual wage for the risky job by the extra annual risk in the job, analysts have estimated what safety—or an increased chance of avoiding death—is worth to those who take dangerous jobs. “The value-of-life estimates,” Kip Viscusi has writ-

[Section 5:16]

¹A. Freeman, *The Benefits of Environmental Improvement* 169 (1979).

²Schelling, *The Life you Save May Be Your Own*, in *Problems in Public Expenditure Analysis* 127 (S. Chase ed. 1968).

³M. Bailey, *Reducing Risks to Life: Measurements of the Benefits* 31 (1980).

ten, “range[d] from \$500,000 to \$4 million” in 1980 dollars.⁴ These figures may be compared with the amounts industry spends per-life-saved to comply with federal pollution control legislation. Compliance costs which are far in excess of these averages, insofar as these costs per-life-saved can be determined, would arguably be inefficient. This method of evaluating safety in the workplace and in the environment has the same advantages as the marginal productivity approach since it provides numbers and it derives these numbers from markets. But it has theoretical as well as practical⁵ drawbacks.

First, data derived from labor and other markets do reflect what people pay for safety but this is largely a result of governmental regulation and jury awards in tort.⁶ The value-per-life-saved figure analysts derived from labor markets, for example, increased dramatically after the Occupational Safety and Health Act⁷ took effect.⁸ The derived values may reflect not the worker’s willingness to pay for safety, then, but the consequences legislation has had in forcing industry to improve safety conditions.

In order to derive a value-per-life-saved which is not biased by governmental regulation, labor markets as they were at the turn of the century may have to be considered. Railroad workers, miners, and others who labored under hazardous conditions were apparently aware of the risks they took; the dangers they faced, at any event, were part of the folklore which surrounded those jobs. If efficiency is our goal, we should not hesitate to derive value-per-life-saved, however low it may be, from unregulated markets such as these. And, of course, no matter how many workers die as a result, we may congratulate ourselves because their “expected” utility has been increased.⁹

Attitudes toward safety have changed since those early years, of course, but this, too, may largely be the result of governmental intervention.¹⁰ In all cases, however, a value-per-life-saved derived from data taken from labor markets which have long been regulated for safety will not necessarily indicate how to allocate resources more efficiently. Instead, this value will suggest how legislation so far has succeeded in making markets more humane, not more efficient.

⁴K. Viscusi, *Risk By Choice: Regulatory Health and Safety in the Workplace* 99, 101 (1983).

⁵This method of evaluation assumes that workers are aware of the risks they take so that they are able to consciously and knowledgeably “trade” safety for dollars. It cannot be determined that this assumption is satisfied, however, without extensive information about the extent of the risks and the extent of the knowledge, both of which are difficult to determine.

⁶For an excellent study of the effect of regulatory action and tort awards on consumer product safety, see G. Eads & P. Reuter, *Designing Safer Products: Corporate Response to Product Liability Law and Regulation* (1983). It is apparent that consumer willingness to pay for safety is less influential on product design than tort awards and (to a lesser extent) safety regulation.

⁷Occupational Safety and Health Act of 1970, Pub. L. No. 91-596, §§ 2 to 33, 84 Stat. 1590 to 1620, *codified as amended at* 29 U.S.C.A. §§ 651 to 678 (1982).

⁸Data collected by Thaler and Rosen before major regulations were promulgated by OSHA suggest a value of roughly \$500,000 per-life-saved in 1980 dollars. Thaler & Rosen, *The Value of Saving a Life: Evidence from the Labor Market*, in *Household Production and Consumption* (N. Terleckyj ed. 1973). In studies conducted by Viscusi in 1979 and 1981, in which data reflect the effects of OSHA regulation, the value rises to approximately \$3 and \$4 million in 1980 dollars. See K. Viscusi, *Risk By Choice: Regulatory Health and Safety in the Workplace* 99 (1983).

⁹K. Viscusi, *Risk By Choice: Regulatory Health and Safety in the Workplace* 80 (1983).

¹⁰Bernard Kleiman, a negotiator for the United Steel workers, pointed out that OSHA regulations raised the consciousness of both labor and management concerning safety issues: “Safety is a very tough thing to negotiate. There are so many levels of consciousness to it. Both sides have to be hit over the head a good deal before they develop the consciousness that permits them to move.” Bureau of National Affairs, *OSHA and The Unions: Bargaining on Job Safety and Health* 15 (1973).

Second, policy analysts, following Chauncy Starr,¹¹ generally concede that the “price” attached to an “involuntary” risk should be much higher—perhaps a thousand times higher—than the price attached to the same risk were it “voluntary.” Yet this distinction has not been successfully explained. Policy analysts concerned with the regulation of safety in the workplace often argue that “market-traded risks are the result of individual choices” and they conclude that if these risks are acceptable to the individual, they should be to society as well.¹² It would follow from this, however, that the government should not regulate any risk a person knowingly and voluntarily takes.

It might be argued that on this principle if you walk into the street aware of the odds that you might be hit by a drunk driver, the government should not be concerned by your death, for you could have stayed at home; the same might be said of the worker who is injured even though he was aware of the risks of employment. We encounter deaths on the highway as voluntarily as we encounter them in the workplace; we know the chances and we take them because we want the benefits and we hope the harm will not happen to us.

We do not, however, possess an analysis which tells us which risks are “voluntary” and which are not. We knowingly take certain risks, for example, when we cross the street. These risks are “voluntary” in the very thin sense that we knowingly take them. Presumably, the conception of “individual choice” and “voluntariness” which distinguishes market transactions is loftier or more meaningful than this. But no analyst has provided an explanation of this more edifying conception of “individual choice.” Until such an analysis is found, the government would seem equally justified in regulating danger in the workplace and in the marketplace as danger in the streets.¹³

Moreover, social and cultural factors, such as the familiarity, controllability, and history of a hazard, influence its acceptability; the social meaning of a risk is often more important to risk-takers than its actual magnitude.¹⁴ There are many distinctions which, like the difference between voluntary and involuntary, lead us to apply a different standard—or attach a different value—to lives saved in different situations and from different hazards and pollutants.

A value-per-life-saved may be a useful figure, however, even if it cannot be applied equally in all situations and to all risks and hazards. Attention to this “value” may help to explain large deviations in the amount spent per-life-saved to control pollution in various industries. Why do we control the risks associated with nuclear

¹¹Starr, *Social Benefit vs. Technological Risk*, 165 *Sci.* 1231, 1238 (1969) (argues that an “involuntary” risk should be priced 1000 times greater than a “voluntary” one).

¹²K. Viscusi, *Risk By Choice: Regulatory Health and Safety in the Workplace* 1 (1983).

¹³It may be replied that there is a common sense distinction to be made between the risk a worker voluntarily takes when he goes down into the mine and the risk a pedestrian takes when he crosses the street. The miner comes to the danger, while in the case of the pedestrian, the danger comes to him. This difference seems coincidental—we can imagine the pedestrian falling into a manhole—but it still may be instructive. Surely pollution involves risks and dangers which come to the victim. Yet the victim might have kept or moved away from the polluter; he might have taken iodine pills or worn a lead frock. Distinguishing which risk is voluntary and which is not is a question central to the analysis. The idea that a plaintiff cannot recover from an injury because he has “come to the nuisance” is not greeted with much in favor; nor, of course, must a person move away from a polluter or keep his doors closed to avoid pollution. See Prosser, *Law of Torts*, p. 611 (4th ed. 1971). Likewise, a person may be said to “assume” or “accept” a risk if he or she behaves recklessly, but not simply because he or she encounters a known danger in crossing a street, for example, but acts reasonably in a given situation. Prosser, *Law of Torts*, p. 610 (4th ed. 1971). The concept of “voluntary” and “involuntary” risk, it seems, has to be understood in the context and circumstances to which it is applied; there is no general way of understanding or applying this distinction.

¹⁴See Geertz, *Deep Play: Notes on the Balinese Cockfight*, in *Interpretive Social Science: A Reader* 181 (P. Rabinow & W. Sullivan eds. 1979).

power so strictly, while we allow millions to succumb to cancer caused by smoking? We may be justified in demanding more control of insidious and new than of ordinary and familiar risks, for example, but some discrepancies may be baffling. If they cannot be justified, then perhaps the policies attendant to them ought to be changed.

In spite of this modest usefulness as a management tool, the cost-benefit approach gives us no help in setting standards. Cost-benefit analysis, in its most acceptable form, cannot help us to determine how safe is “safe enough” because it is an effect or a result, not a condition, of the judgments we make to answer that question. The value to be put on life is not an independent preference, but a complex judgment which itself is the product of reflection and learning prior to regulation. It represents the perspective not so much of the consumer but of the citizen; it is not the expression of a market preference but of a public policy judgment.

This returns us to where we began. How are we to reconcile the ethical demands of the statutes with the practical constraints of the real world? What is the appropriate role of economic analysis in environmental law?

§ 5:17 Regulatory review

On January 30, 2009 (only a few days after assuming office), President Barack Obama issued a “Memorandum on Regulatory Review” in which he called for a reassessment of the methods with which the Office of Information and Regulatory Affairs (OIRA) at the Office of Management and Budget (OMB) had over more than two decades reviewed Federal regulations. While Congress typically delegates authority to interpret and implement the laws to regulatory agencies such as EPA and not to OMB, the need for regulatory review by experts at OMB is obvious and not in dispute. As President Barack Obama wrote in his Memorandum, “While recognizing the expertise and authority of executive branch departments and agencies, I also believe that, if properly conducted, centralized review is both legitimate and appropriate” Regulatory review at OMB is essential “to ensure consistency with Presidential priorities, to coordinate regulatory policy, and to offer a dispassionate and analytical ‘second opinion’ on agency actions.”¹

On May 10, 2012, the Obama administration issued Executive Order 13610, “Identifying and Reducing Regulatory Burdens,” which by-and-large kept intact a broadly cost-benefit approach to regulatory review, while remaining open to other arguments. Regulatory review at OIRA during the first Obama administration, as Sunstein’s letter to Administrator Jackson cited earlier suggests, is often used to curb the zeal of regulatory agencies which have a single mission, either by reconciling proposed regulations of one agency with those of another when they conflict, or by protecting the president against severe political losses.

What are the ethical and economic principles that should govern the review of regulation at OIRA or by the White House? These principles have been the subject of controversy since OIRA was created during the Reagan administration. This controversy reflects a long-standing disagreement about the broader role of government—and the relation between the White House and the administrative agencies—in regulating the economy. Here is the dilemma. On the one hand, most Americans agree with the idea that capitalism—the free market as Adam Smith celebrated it—presents the surest path to social prosperity. From this perspective, the role of government may be limited chiefly to defining and defending rights of person and property and to enabling exchange. Libertarians remind us of a lecture in

[Section 5:17]

¹The President, Memorandum of January 30, 2009, Regulatory Review: Memorandum for the Heads of Executive Departments and Agencies, Federal Register (Feb. 3, 2009) (Vol. 74, No. 21) (Presidential Documents), p. 5977.

which Adam Smith (as reported by his biographer Dugald Stewart) said, “Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism but peace, easy taxes, and a tolerable administration of justice: all the rest being brought about by the natural course of things.”²

On the other hand, reformers have called on the power of government to balance that of laissez-faire markets when they lead to unconscionable results. When the horrors of the industrial revolution challenged the faith in the utopian promise of capitalism, many people in America, Great Britain, and elsewhere demanded more governmental intervention in the economy. The “Progressives,” as the American reformers were called, advocated three different kinds of regulation. These reformers did not abandon the basic faith in “Invisible Hand” capitalism. They argued, rather, that the government must work together with—and sometimes push against—the private economy to keep that faith.

First, Progressives supported humanitarian laws, for example, to eliminate child labor and to set a maximum workday and a minimum wage. They also called for laws establishing safety standards for foods, drugs, and cosmetics. Laws of this kind, to be sure, constrain the kinds of trades individuals can make in markets and were at first overturned for that reason by the courts. Progressives justified hampering voluntary exchange—or freedom of contract—in this way to direct capitalism more toward humanitarian, utilitarian, or even paternalistic ends.

Second, Americans who associated themselves with Woodrow Wilson’s New Freedom believed that the concentration of economic power in industrial and financial monopolies or trusts had perverted competition and betrayed the American Dream. Louis Brandeis and many others called for laws like the Clayton Antitrust Act that sought to abolish what reformers saw as unfair practices that allowed monopolies to subvert competition and to control industry and trade.

Third, Americans who, as Herbert Croly did, supported the New Nationalism of Theodore Roosevelt saw the concentration of economic power as an inevitable result of mass production and technological development. They argued that the government should not try to restore the anachronistic ideal of Jeffersonian individualism but should follow the Hamiltonian course of managing big business in the public interest. “Whether the objective was to regulate monopoly or competition,” Arthur M. Schlesinger, Jr., wrote, “the method was to meet the power of business by expanding the power of government. The New Nationalism and the New Freedom alike affirmed the necessity of active intervention in economic life by the state.”³

Reformers of the 1930s and 1940s, having lived through the Depression, naturally saw the major national problems as economic—problems in stimulating markets to retrieve the American Dream. The reformers of the 1960s and 1970s, to whom we owe a tide of environmental, health-and-safety, and social regulation, lived, on the contrary, in prosperous times. The problems they addressed were social and political, having to do with segregation, racism, education, technology, armaments, and the environment. Early in the 1960s, protesters pressed for civil rights and environmental legislation to stop moral and societal abuses. The environmental movement did not base its arguments on a theory of markets or on a vision of utopian capitalism. It tried to build a better society by emphasizing the tranquil, the natural, the beautiful, and the very long run.

The generation of the New Frontier and the Great Society differed in outlook and experience from the generation of the New Deal; their political agenda differed as

²Stewart, Account of the Life and Writings of Adam Smith LL.D. (1793), from the Transactions of the Royal Society of Edinburgh, printed in the Collected Works of Dugald Stewart, Vol. 10, pp. 1–98, available at <http://www.adamsmith.org/smith/dugald-stewart-bio.pdf>.

³Schlesinger, Jr., *The Crisis of the Old Order: 1919–1933*, p. 33 (1957).

well. Whereas the New Deal had tried to salvage the ideal of utopian capitalism, the later generation largely ignored it. In the 1960s and 1970s, Congress set goals for society and the government to achieve by reforming themselves, for example, through civil rights legislation, rather than by correcting, stimulating, or directing markets. This generation assumed the existence of capitalism as a background condition but did not necessarily regard capitalism as the cause or the cure of our social and political ills.

Insofar as economic, as distinct from ethical and social, goals appeared in the political agenda of the 1960s and 1970s, they formed the basis of economic, not social, regulation. Economists like George Stigler argued persuasively that agencies that administered economic regulations after the New Deal often constrained competition in order to serve the interests of the industries they regulated. Newspapers carried stories about “revolving door” employment and other forms of agency “capture” and collusion. As a result, a political and scholarly consensus formed to cut back on economic regulations and to eliminate some of the agencies that administered them. The emphasis Brandeis had placed on restoring competition reasserted itself in the program of economic deregulation that the Ford and Carter administrations pursued actively and successfully (by deregulating the airlines, for example) and that continued during the Reagan administration.

When Ronald Reagan took office in 1981, the speedy and successful pursuit of economic deregulation under his predecessors created high expectations among his supporters that similar results could be achieved in the area of social deregulation. The Reagan administration viewed with alarm the bureaucrats in the Environmental Protection Agency and other regulatory agencies, many of whom had come into office during the Carter years, who drew their authority from very broad, vague, and aspirational statutes, such as the Clean Air Act. The Reagan administration sought to dampen the environmental agenda of the 1960s and 1970s. It followed OMB director David Stockman’s calls, in his 1980 “Dunkirk” memo, for a “dramatic, substantial *rescission* of the regulatory burden” and for a major “regulatory ventilation.”⁴ In this spirit, President Reagan issued Executive Order 12,291, which established a formal process for White House review of rulemaking and required major regulations to pass a cost-benefit test. “Regulatory action shall not be undertaken unless the potential benefits to society for the regulation outweigh the potential costs to society,” the Order stated; “Regulatory objectives shall be chosen to maximize the net benefits to society.”⁵

Commentators did not at first regard this requirement as substituting once conception of the purpose of legislation—the goal of social efficiency or welfare defined by WTP and measured by cost-benefit analysis—for the purposes expressed in the statutes, *e.g.*, a cleaner, more natural environment or a safer workplace. This criticism, namely that economists not Congress called for net or aggregate benefit maximization, came soon afterwards. Initially critics charged that cost-benefit analysis (CBA) appeared at first as a pretext or rationale the White House used to tamp down the regulatory agencies without enduring the political embarrassment of sacking an Administrator or Secretary. President Carter had earlier required CBA in order to stall and eventually halt some pork barrel projects he opposed. President Reagan appealed to CBA to add a layer of bureaucracy by which the White House could delay regulation, take *ex parte* comment on it, or simply return to the sender whatever rules it did not like.

The call for regulatory rescission during the Reagan years was more libertarian

⁴Stockman, “Avoiding a GOP Economic Dunkirk,” at 15 mimeograph (Dec. 1980), quoted in Eads and Fix, *Relief or Reform?: Reagan’s Regulatory Dilemma* 1–2 (1984).

⁵Exec. Order No. 12,291; 3 C.F.R. § 127 (1982).

than utilitarian. It had more to do with limiting the role of government than with improving the efficiency of markets. President Reagan saw CBA cynically but accurately, that is, as a procedural device to slow down or halt the flow of social regulation to make the government more friendly to industry. A widely cited article published in the *Harvard Law Review* during the Reagan years declared that “OMB control imposes costly delays that are paid for through the decreased health and safety of the American public.”⁶

During the Reagan years and thereafter, however, CBA began to develop an authority and life of its own. Economists built a philosophy of regulation based on CBA or on the idea that “Regulatory objectives shall be chosen to maximize the net benefits to society.” Following an innovative suggestion Paul Krutilla made in 1967 that social scientists could apply WTP to measure the “value” of moral, aesthetic, and political beliefs, which he called “non-use” or “non-consumption” values, economists developed methods of “contingent valuation” to determine WTP for goals, such as environmental protection, that people espoused for reasons other than what they thought would benefit them. In other words, economists argued that by measuring WTP they could assign a welfare-equivalent to values people held for reasons that even they believed had nothing to do with their welfare. Krutilla connected political, moral, or aesthetic commitments to measures of well-being by suggesting that environmentalists are pained when a species becomes extinct or a vista is lost.⁷ Jettisoning a thousand or more years of moral and political philosophy, economists discovered a scientific way to determine right from wrong at least in the area of environmental regulation. They felt the pain of environmentalists and with enormous encouragement from funding agencies developed techniques to “price” it.

The concept of WTP emerged as a criterion for valuation not simply at OMB or OIRA, where it might serve the sometimes necessary function of putting a “reality check” on the aspirations of legislation, but in environmental, natural resource, and other agencies, where the prospects of attaching high WTP to non-use and other “unpriced” values offered apparently scientific arguments for conservation (as Krutilla, a conservationist, had intended). Economists vied with lawyers to change the culture of regulation from one of implementing law to one of correcting markets. Where lawyers regard the courts as the appropriate rein on regulation—Louis Jaffe’s *The Judicial Control of Administrative Action* (1965) remains the classic expression of this reliance—economists see their own constructs, such as Pareto optimality, Kaldor-Hicks efficiency, or market equilibrium, as criteria that provide scientific, objective, and therefore legitimate limits to the administrative state. The battle over the function of CBA in regulatory review and, indeed, in the administrative agencies came to be understood in terms of the clash of two cultures—lawyers vs. economists. This is largely where matters stand today.

§ 5:18 The role of cost-benefit analysis in regulation

Historically, CBA draws on two influential philosophical traditions. The first, the tradition of Utilitarianism, recalls Jeremy Bentham (1748–1832) who argued that the government ought to seek to maximize the aggregate pleasure or happiness of its people. The second, the tradition of Progressivism and positivism, follows Auguste Comte (1798–1857) and Comte de Saint-Simon (1760–1825), who advocated a system of social physics in which experts, primarily economists, would manage society on the basis of their knowledge and authority as scientists.

⁶Krutilla, *Conservation Reconsidered*, Am. Econ. Rev. 57 (1967): 777–96 (describing environmentalists “and others to whom the loss of a species or the disfigurement of a scenic area causes acute distress and a sense of genuine relative impoverishment” p. 779).

⁷Morrison, *OMB Interference with Agency Rulemaking: The Wrong Way To Write a Regulation*, 99 Harv. L. Rev. 1059, 1064 (1986).

Today, few would agree with Bentham that experts can develop a “felicific calculus” by which to test the “happiness factor” of any action. With the downfall of the Soviet Union, fewer still would advocate that *apparatchiks* on the basis of a scientific theory of social well-being should occupy the “commanding heights” of government. Yet CBA in principle invokes the authority of science to prescribe an overall societal goal, namely, the maximum or aggregate net satisfaction of preference, preference weighed on the basis of WTP and taken as it comes. When used as a test for regulation, CBA draws on the still influential view that experts may maximize social utility through scientific analysis of societal values. This is the reason that critics of CBA regard it in principle as antagonistic to the deliberative processes of democratic governance and contrary to the constitutional processes that define the structure of our political institutions. This concern becomes especially poignant in relation to White House arrogation of authority that passes under the Constitution from Congress to the regulatory agencies without directly involving the president.¹

What role has cost-benefit analysis to play in environmental regulation and, specifically, in regulatory review by the White House? Many economists believe the answer is obvious. The goal of CBA is to tote up—and thus make transparent—the reasons for and against a regulatory proposal. A widely used textbook on CBA introduces the subject with a reference to a letter Benjamin Franklin wrote in 1772 advising a friend faced with a difficult decision to compare all the reasons pro and con a particular choice and see how they match up. The authors of the textbook interpret a weighing of reasons such as Ben Franklin advocated—which makes common sense—to entail “a systematic characterization of impacts as benefits (pros) and costs (cons), valuing in dollars (assigning weights) and then determining the *net benefits* of the proposal.”² By using the methods and techniques of CBA economists respond to President Reagan’s Executive Order, which stated, “Regulatory objectives shall be chosen to maximize the net benefits to society.” The maximization of net benefits—or aggregate WTP, which is the same thing—then becomes the single or at least the most salient reason for regulation.

One might think of many reasons for and against a proposal, for example, to regulate confined animal feedlot operations to keep them from dumping animal wastes in adjacent rivers. One might say, for example, that feedlots have no right to foul neighboring waters—that dumping wastes into public waterways offends the “common right” that requires each person to treat his wastes “so his filth will not damnify his neighbor.” Many people would argue that wild and natural rivers have a kind of sanctity or integrity that we ought to respect for aesthetic, moral, and even religious reasons. And many might believe that polluters—as we have seen in the case of *Boomer v. Atlantic Cement Company*—have a moral duty to employ the best pollution-control technology, even pressing what is economically feasible—rather than to trespass on public or private property. Background principles of property law and conceptions of normal or decent behavior should be taken into account. These are all the kinds of pros and cons that Ben Franklin might have expected policy makers to consider and even to list as reasons for a decision to regulate wastes coming from feedlots.

The approach of CBA, in contrast, considers none of these as reasons for a policy—not background principles of property law, not common expectations about socialized behavior. The purpose of regulation is not to honor any such principle, however

[Section 5:18]

¹For commentary, see Strauss, *Overseer or ‘The Decider’? The President in Administrative Law*, 75 Geo. Wash. L. Rev. 696 (2007).

²Boardman, Greenberg, et al., *Cost-Benefit Analysis: Concepts and Practice* 2 (1996).

basic to common law and social life, but to maximize benefits minus costs. What are “benefits”? Benefits are whatever WTP measures—so the point of environmental regulation or policy, on this approach, is to achieve outcomes for which people are willing in the aggregate to pay the most, whatever their reasons may be. But why maximize this? Why is an outcome right or good insofar as people are willing to pay for it, apart from the reasons that motivate or justify that willingness to pay?

Many economists adopt a “don’t ask, don’t tell” approach to this question. References to “welfare,” “benefit” or “utility,” as we have seen, add nothing to WTP itself, because economists use WTP to define and measure concepts such as these. The approach of CBA is to make the maximization of net WTP—a goal for which no clear reason can be given—the single or at least the most salient purpose of public policy. The term “benefit” sounds as if it has some normative content—it sounds as if it correlates with well-being, happiness, well-offness, or something of that sort. The term “benefit” in CBA, however, means nothing more than WTP itself and as we have seen correlates with no substantive idea of the right or the good. As we have said, for example, WTP (or income used as a surrogate for it) fails to correlate with subjective or felt well-being after basic needs are met. The goal of maximizing net or aggregate “benefit” defined and measured in terms of WTP has no normative basis that might plausibly be used to justify a regulatory policy. The chapter has argued, therefore, that the goal of efficiency has not value against one could balance or “trade off” a moral goal like justice or equity.

§ 5:19 Alternatives to cost-benefit analysis

Nevertheless, as the Obama Memorandum on Regulatory review states, regulatory review at OMB is essential “to ensure consistency with Presidential priorities, to coordinate regulatory policy, and to offer a dispassionate and analytical ‘second opinion’ on agency actions.” One may argue the CBA, at least if practiced humanely, might provide a context for making the reasons for and against regulation more transparent or at least for providing a look before one leaps. For this, however, better alternative methods exist. The alternatives to CBA are so well known and understood that to do more than mention them may try the patience of the reader. An annotated list should suffice.

(1) Cost-effectiveness analysis

In 1980, Michael S. Baram, who was then Director of the Program on Government Regulation at the Franklin Pierce Law Center, Concord, NH, explained the difference between cost-benefit and cost-effectiveness analysis this way. “Cost-benefit analysis . . . is used by the decision-maker to establish societal goals as well as the means for achieving these goals, whereas cost-effectiveness analysis only compares alternative means for achieving ‘given’ goals.”¹ According to Baram, the regulatory use of cost-benefit analysis in practice substitutes net or aggregate preference-satisfaction, whatever that means, for goals mandated by legislation and thus in practice stifles and obstructs legislated health, safety, and environmental objectives. Agencies should engage in cost-effectiveness analysis, which aids in determining the least costly means to designated goals, rather than cost-benefit analysis, which improperly determines regulatory ends as well as means.

(2) Risk-risk analysis

In limiting or preventing one risk, a regulation may produce another that is

[Section 5:19]

¹Baram, Cost-Benefit Analysis: An Inadequate Basis for Health, Safety and Environmental Regulatory Decision Making, 8 Ecol. L. Quarterly 473–531 (1980), quotation at p. 478.

greater. The dangers that may result from a regulatory decision should be understood and compared with those it is intended to prevent.

(3) A presumptive floor and ceiling (benchmark) for the cost of saving a statistical life or avoiding a statistical injury

If the goal of regulating risk were simply to avoid needless deaths or injuries, then it would make sense to equalize the marginal cost of lives saved or injuries avoided across programs. Because risks differ in their moral and social qualities—some are more dreadful, voluntary, familiar, etc. than others—deviations may be morally explicable or even praiseworthy. Reasons should be given to explain great deviations. As Cass Sunstein has written, “If an agency is going to spend (say) no more than \$500,000 per life saved, or more than \$20 million, it should explain itself.”²

A cost-benefit approach, in contrast, would draw a value per-life-saved or death-avoided from markets rather than from political reflection and legal practice. The CBA approach essentially returns to the theory that governed regulation a century ago, when workers chose to toil in conditions the dangers of which were known to them. Mining disasters claimed more than 3,000 lives in 1907 alone, but social welfare was maximized in the sense that markets functioned efficiently. Information was available and bargaining costs were low. When civic groups managed to get states to pass laws to regulate working conditions in mines, on railroads, and in sweat shops, the courts often invalidated those laws because they prevented people from contracting freely. Regulations by impeding exchange made markets less efficient; they would therefore fail an efficiency or cost-benefit test no matter how many lives they saved.

It is important to recognize that regulation serves as a social catalyst for change—for raising consciousness about risk—and is not simply a way to make market outcomes more efficient in view of “given” or “exogenous” preferences. Even in 1970, when Congress enacted the Occupational Safety and Health Act, it estimated that 14,000 Americans had died that year from job-related hazards. Almost 400,000 new cases of occupational diseases were reported.³ These horrors resulted from free and efficient markets. Bernard Kleiman, then a negotiator for the Steelworkers argued regulation was needed to make workers and employers more safety conscious. “Both sides have to be hit over the head a good deal before they develop the consciousness that permits them to move,” he said.⁴ The “value” for lives saved economists derive from labor markets today reflect the regulations of yesterday—not the kinds of contracts people would make and have made in the absence of regulation.

(4) Knee-of-the-curve analysis

As we saw in § 5:8, in many contexts, technology-forcing regulation can allow morally acceptable amounts of pollution. In many industries, initial gains to the environment are inexpensive; eventually the cost of controlling the “next” or “incremental” unit of pollution increases. At some given state of technology, one can often find an inflection point or “knee-of-the-curve”—a point at which the cost of controlling the next or marginal unit of pollution increases rapidly and returns to the environment rapidly diminish per dollar spent. One morally acceptable way to allow some pollution (for example, through “cap-and-trade” markets for pollution allowances) is continually to encourage or prod industry to improve its processes and technologies to move the knee of the curve—the point at which costs may go asymptotic—ever farther out along the pollution-control axis. To the extent the

²Sunstein, *Risk and Reason: Safety, Law, and the Environment* (2002), quotation at p. 111.

³See Smith, *The Occupational Safety and Health Act: Its Goals and Achievements*, Ch. 1 (1976).

⁴Bureau of National Affairs, *OHSA and the Unions: Bargaining on Job Safety and Health* (1973).

government can encourage industries, through incentives and threats, to invent environment-friendly technology it can assure environmental progress while allowing at a given stage of technology a minimum amount of pollution necessary for economic growth.

(5) Economic impact analysis

People care about the effect of regulation on the economy—on jobs, inflation, competitiveness, and the distribution of wealth. Cost-benefit analysis concerns microeconomic efficiency—something that interests welfare economists—but has no clear relation to the performance of the economy. It makes sense to ask how a major regulation will affect the “misery index”—*e.g.*, involuntary unemployment and inflation. The use of CBA relies on microeconomic theory and does not reach the indicators of macroeconomic performance that we have reason to care about.

(6) Heuristic accounting

It may well make sense that OMB ask agencies to provide rich or thick descriptions of the reasons for and against a policy given the alternatives. These explanations will be salutary. CBA in contrast represents a highly professionalized and technical kind of analysis that presupposes only one reason for regulation—the maximization of net benefits where these must be measured by adepts in what has become by now a quite technical—one might even say cabalistic—science. From a common sense point of view, it seems reasonable to ask agencies to carefully explain the costs and benefits, advantages and disadvantages, of regulations in view of alternatives. The problem is that in the profession of policy analysis “benefits” are construed in terms of WTP and thus to attempt a comparison of benefits and costs is in practice to issue a call to all economists to get on deck as consultants to measure WTP and sink the regulatory ship under the weight of technical and methodological controversies and conundrums.

IV. ETHICAL PRINCIPLES IN CLIMATE CHANGE POLICY

§ 5:20 Climate change is not a collective action problem

As the threat of global climate change worsens, the need to find clear ethical principles for addressing it becomes more urgent. These principles, however, have proven to be elusive. One reason is that greenhouse gases do not easily fit in the same moral category of “pollution” as toxic and hazardous emissions and effluents. It is relatively easy to see that a toxic or hazardous substance creates the kind of danger that one associates with a private nuisance. It is another matter to show that “greenhouse” gases, such as carbon dioxide, which are not dangerous to one’s health in any direct sense, can be considered pollutants. To be sure, the U.S. Supreme Court in *Massachusetts v. Environmental Protection Agency*, decided by a 5-4 majority that the U.S. EPA could regulate carbon dioxide and other greenhouse gases as pollutants.¹ Because the ill effects of climate change may not be felt until decades from today, however, it is difficult to see how anyone today could bring a private action in tort against emitters of greenhouse gases. This would distinguish these emissions from ordinary pollutants that harm people who breathe, drink, or otherwise encounter them.

A difficulty in conceptualizing the moral dimensions of global climate change arises because well understood principles of economic rationality and distributive equity that have been developed in the context of collective action problems such as

[Section 5:20]

¹Massachusetts v. EPA, 549 U.S. 497 (2007).

environmental externalities do not seem to apply as well to the problem of controlling greenhouse emissions. What makes the ethical analysis of climate change policy most difficult, indeed, may be the dissimilarities between traditional collective action problems and the challenge of slowing climate change.

In traditional collective action problems, all members of the affected group, more or less, will jointly benefit from cooperative action which adherence to individual rational self-interest defeats. In 1965, Mancur Olsen in *The Logic of Collective Action* showed that when each individual acts on self-interest, for example, to “free-ride” on the more socially motivated action of others, public goods will not be produced. Olson wrote “Unless the number of individuals in a group is quite small, or unless there is coercion or some other special device to make individuals act in their common interest, rational, self-interested individuals will not act to achieve their common or group interests.”² In a much-cited article popularizing this analysis, Garrett Hardin argued that the rational proclivity of each individual to except him or herself from cooperation (to “free ride” on the rest) made the destruction of public goods, such as a commons on which the graze cattle, the likely result of liberty. This path to ruin justifies coercion, according to Hardin. “The only kind of coercion I recommend is mutual coercion, mutually agreed upon by the majority of the people affected” to preserve or provide or manage a public good or resource.³

With global climate change it is different. First, in the typical collective-action problem, for example, managing a commons or preventing defections in a “prisoner’s dilemma” game, everyone will gain from cooperation and lose if each acts in his or her own personal self-interest. In the case of climate change, however, one group, that is, people alive today and through the next generation, will make significant sacrifices, for example, by forgoing the consumption of inexpensive fossil fuels. A completely different group, whom one might call “posterity,” will benefit. The coercion needed to solve a collective action problem is justified by the principle of the mutual reciprocity of advantage, that is, the idea that each person gains more by the restriction of the freedom of others than he or she loses by accepting that same restriction. In the context of climate change, however, the winners are completely different from the losers—so different, in fact, that those who make sacrifices (or accept restrictions on their freedom) may all be long gone before posterity appears to enjoy the fruits of the sacrifices they had made. Policy to protect the global climate aims to mitigate effects in the long run—when, as Lord Keynes famously said, those who exist today are all dead.

Second, people who live in areas that might benefit from global climate change are called upon to make sacrifices for people who will live in areas that will suffer from changes caused by a warming climate. For example, low lying islands and many coastal areas are likely to be flooded as oceans expand. Islands such as the Maldives, seven percent of Bangladesh, and coastal areas in Malaysia and India may be wiped out.⁴ On the other hand, inland areas in Canada, Russia, and the United States may gain as a result of warming particularly in the winter.

The question then arises what justifies—and what motivates—actions that will be necessary to slow or reduce climate when those who must take those actions, primarily in developed countries today, will not benefit from them. On the contrary, future generations in India and Africa, who are predicted to suffer the most from the effects of global climate change, will benefit the most from actions needed to stabilize the climate. One can rely on an appeal to enlightened self-interest to ar-

²Olsen, *Logic of Collective Action*, p. 2 (1965).

³Hardin, “The Tragedy of the Commons,” *Science* 162 (1968):1243–48.

⁴Intergovernmental Panel on Climate Change, Working Group 1, *Climate Change 1995—The Science of Climate Change* (1996).

range the cooperation needed to solve familiar collection action problems since cooperation benefits everyone. One cannot rely on an appeal to enlightened self-interest—through the mutual reciprocity of advantage—to justify coercive measures to deal with climate change because those who pay the costs today are not those who reap the benefits tomorrow. Indeed, those in wealthy parts of the world today will sacrifice the most income for benefits that will accrue largely to those in the least economically developed or poorest nations decades from today.

§ 5:21 Corrective and distributive justice

If one cannot appeal to a principle of enlightened self-interest (as one may in collective action problems) to justify an allocation of sacrifice to fend off climate change, perhaps one can appeal to a principle of justice. Some commentators have argued that a principle of corrective or retributive justice requires that those who owe their wealth in large part to emissions past ought to sacrifice the most wealth to avoid or reduce emissions in the future. Those of us today and in the past who have contributed to climate change by depending on fossil fuels stand accused of “conducting a gigantic scientific experiment with the planet, and the consequences could be disastrous.”¹ Although the United States has slowed its relative contribution to the “stock” of greenhouse gases in the atmosphere—China now emits more, for example—it has been the largest source in the past. Does the past performance or responsibility of the United States in causing the global climate problem lend credence to the idea that the United States should make the greatest sacrifices to abate global warming?

The intuition that the United States is more culpable for causing climate change and, therefore, more responsible for solving the problem encounters difficulties. First, those who produced energy by burning coal to support the economy through most of the Twentieth Century could not be accused of negligence since a scientific consensus about the problem of climate change did not emerge and gain public attention until the end of that century. Second, many Americans immigrated to the United States in recent years; they would seem to have little connection with what might have happened in the past century. Third, even if we limit our attention to the children or grandchildren of those who benefited from the industrialization of the United States, it is unclear that they are responsible for the “sins” of their fathers. On the contrary, those alive today are responsible only for the emissions they cause. As Eric Posner and Cass Sunstein have written, “The basic problem for corrective justice is that dead wrongdoers cannot be punished or held responsible for their behavior, or forced to compensate those they have harmed. Holding American today responsible for the activities of their ancestors is not fair or reasonable on corrective action grounds because current Americans are not the relevant wrongdoers; they are not responsible for the harm.”²

One might argue that American today benefit from the polluting activities that accompanied the industrialization of the United States and thus may be liable in some way to make greater reductions than others in their current emissions. Yet the industrialization of the United States did not equally benefit all Americans alive today; it did benefit many people in other countries. For example, in fighting and

[Section 5:21]

¹“Climate Change,” Earth Action Briefing (Sept. 1997), available at <http://www.earthaction.org/pr event-climate-change.html>.

²Posner and Sunstein, “Global Warming and Social Justice,” pp. 14–20 (Spring 2008), quotation at p. 18. For a fuller discussion, see Posner and Sunstein, *Climate Change Justice*, Univ. of Chicago Law & Economics (Aug. 2007), Olin Working Paper No. 354; Univ. of Chicago, Public Law Working Paper No. 177, available at <http://ssrn.com/abstract=1008958>.

defeating Nazism, Communism, and fascism in Europe and Japanese imperialism in Asia, the United States in the twentieth century no doubt emitted a great deal of carbon dioxide as well as other greenhouse gases. It would be impossible, however, to apportion the benefits of these emissions in any meaningful way.

Because a principle of corrective justice seems so difficult to apply in allocating responsibility for abating emissions, it is tempting to appeal to a principle of distributive justice instead. One could argue that since wealthy nations are wealthy—since they have the greatest means to take action or limit their emissions—they should bear most of the cost of abating emissions. After all, the emissions associated with production in America may provide luxury goods, like gas-guzzling SUVs, while emissions associated activities in developing countries, such as burning forests for agricultural land or swidden farming, while a big source of carbon loadings, may support subsistence.³ A principle of distributive justice that requires the rich to give to the poor might suggest that wealthier nations bear the burden of curtailing their emissions and of helping developing countries emit less.

To appeal to a principle of distributive justice—roughly the idea that the rich should help the poor—in the context of climate change, however, is puzzling. First, people who live in wealthy countries today are asked to make sacrifices (by forgoing some of their income) to benefit people who will exist generations from now in developing countries in Africa and the Indian subcontinent where climate change is predicted to have the severest impacts. Yet even if the world continues on a business-as-usual path, the people who live in these countries may be better off than they are now. Advances in medical, agricultural, communications, and many other technologies may improve the quality of life in the future in ways that far outweigh the consequences of climate change. Thomas Schelling, a Nobel economist, has written, “If both the developed and the developing worlds continue to grow in per capita consumption as they have done for the past 40 years, people in most countries are likely to be much better off in material welfare 50, 75 or 100 years from now than they are now.” By then diseases like malaria and polio—perhaps even many common forms of cancer—will be eliminated, for example. One could argue with equal merit that our great grandparents, who endured the scourge of smallpox and other plagues and could expect to live (if they survived childhood) little more than forty years, should have made sacrifices for us. As Schelling notes, advances in technology are likely to make people generations from now substantially better off than we are. “What we ought to feel we owe them is not the kind of ethical issue we have much practice with, because we are not used to thinking about making our own sacrifices, or imposing sacrifices on our contemporaries, for the benefit of those who are substantially better off.”⁴

If we accept the principle that the rich should help the poor, moreover, a sacrifice of income to slow global warming would seem an odd way to act on that principle. There are plenty of ways today for the rich to help the poor both at home and abroad, for example, through programs to improve access to education, public health, and agricultural and other technologies. One could plausibly argue that the best way to equip people in vulnerable countries to cope with global climate change is not to use available income today to reduce emissions. It would be to equip people with the education, technology, and social organization they need to improve their lives today and in the future even if they must adapt to climate change. As Schelling points out, helping hypothetical people who are distant in time may compete with or serve as a substitute for helping actual people who are distant in space. If

³For discussion, see Shue, *Subsistence Emissions and Luxury Emissions*, 15 *Law & Pol’y* 39 (1993).

⁴Schelling, “Intergenerational Discounting,” *Energy Policy* 23 (4/5), pp. 395–401, quotations at p. 398.

we take a principle of distributive justice seriously, we might feel obligated to use the income we can spare to help people who are now in need. It is unclear that we have a greater obligation to spend that income on abating climate change in order to benefit people who will exist far in the future.

§ 5:22 The Parfit paradox

Philosopher Derek Parfit has constructed an argument that comes to a paradoxical conclusion, namely, that whatever policy we adopt to deal with climate change will be the best possible policy—the most efficient and the most equitable—for future generations. The reason is that the policy will populate the future, that is, it will decide who exactly will be born and thus who will live. The reason is that conception is determined by a plethora of contingent accidents having to do with historical events. Which sperm meets which egg, in other words, is the result of who meets whom and under what conditions. Almost any major historical decision sends off cascades of consequences that will result in different conceptions and thus different people than some other historical decision.

Parfit argues that any policy we adopt today will make people born in the future better off than they would have been had we made some other decision. The reason is that these people would not even exist and, therefore, could not be better off, had we made the other choice.

To show this, Parfit describes two policies, which he calls “High Consumption” and “Low Consumption.” He then writes:

If we choose High rather than Low Consumption, the standard of living will be higher over the next century. . . . Given the effects of . . . such policies on the details of our lives, different marriages would increasingly be made. More simply, even in the same marriages, the children would increasingly be conceived at different times . . . this would in fact be enough to make them different children.

Return next to the moral question. If we choose High Consumption, the quality of life will be lower more than a century from now. But the particular people who will then live would never have existed if instead we had chosen Low Consumption. Is our choice of High Consumption worse for these people? Only if it is against their interests to have been born We can suppose that it would not go as far as this. We can conclude that, if we choose High Consumption, our choice will be worse for no one.¹

The idea is that whichever policy we choose, future generations will have nothing to complain about because but for that choice, different marriages would have been made and different children conceived. Whatever policy decision we make, therefore, determines who shall exist, and thus the policy we choose is better for those who will be born than any other policy would have been. Because these people will be all who exist, our choice will make no one worse off. Most people would agree that a policy that is the very best for all those it affects, and that makes no one worse off, is satisfactory from the point of view of distributive justice and efficiency. Thus, whichever policy we choose will be just and efficient with respect to the generations that come after us.

This argument leads to the repugnant conclusion that any policy we adopt toward global climate change will be responsible for creating the people who come after us and thus will be the best possible policy for them, since they could not have existed otherwise. This seems to rid us of any obligation to future generations beyond mak-

[Section 5:22]

¹Parfit, “Energy Policy and the Further Future,” working paper (Center for Philosophy and Public Policy, University of Maryland, Feb. 23, 1981). A slightly different version of the passage cited appears in Parfit, “Energy Policy and the Further Future: The Identity Problem,” *Energy and the Future* (1983), pp. 167–179, especially p. 173.

ing life barely tolerable for them. Although nobody—certainly not Parfit—accepts this conclusion, it follows from premises we do accept or at least have to acknowledge to be true. Philosophers have not yet found a way out of this argument and indeed have shown. it has other disturbing and perplexing consequences.²

V. INTEGRATING ETHICAL AND ECONOMIC APPROACHES TO ENVIRONMENTAL LAW

§ 5:23 In general

Regulation succeeds most easily when its purposes are either plainly economic or plainly ethical. Examples of economic regulations abound. The Federal Communications Commission, for example, has for years regulated the electromagnetic spectrum to prevent the ruinous competition which might otherwise destroy a common resource. Likewise, the Federal Deposit Insurance Corporation insures bank deposits, and the Federal Reserve Bank oversees interest rates. These regulatory activities are economic in nature and the values they involve may be adequately understood in purely economic terms.

Examples of ethical regulations are also easily located. Earlier in this century, nearly a million children worked in the nation's sweatshops and mines. Laws prohibiting child labor and statutes establishing a maximum workday and a minimum wage did not correct market failures, since the transactions involved arguably were informed and voluntary. These laws had an ethical, not an economic purpose; they intended not to make markets more efficient but more humane. Likewise, Title VII of the Civil Rights Act prohibits unions, employment agencies, and employers from discriminating on the basis of race, sex, or national origin. These statutes answer to basic moral principles, aesthetic norms, and cultural concerns which underlie our identity as a nation. Those who approve and disapprove of these statutes offer arguments *pro* and *con*; they do not simply reveal preferences. The laws are in principle the subject of ethical deliberation on the merits in Congress, not of marginal pricing on a willingness-to-pay basis in markets.

Classical liberals in the tradition of Adam Smith, Friedrich Hayek, and James Buchanan, have brilliantly advocated the role of exchange in producing wealth. That the government should encourage and facilitate investment, promote or at least not inhibit exchange, allow markets to discover and respond to prices, and avoid social betterment projects likely to have unintended and detrimental consequences, is the mantra of these classical liberals, who distinguish themselves from Progressives, who believe that experts can possess the knowledge that mark players to do have.¹ It is unclear, however, how classical liberalism, with its focus on exchange, deals with what may be called social evils, such as racism, homophobia, antisemitism, the subjugation of women, and so on. If environmentalism is analogized to social movements that combatted these forms of discrimination, then its relation to market exchange may not be clear.

Pollution control statutes, unlike laws prohibiting child labor or racial discrimination, however, stop short of giving the government a clear mandate to go after an acknowledged evil and eliminate it. This is true because pollution—unlike slavery, child labor, discrimination, segregation, poverty, illiteracy, etc.—is not simply an evil. It is a necessary evil, one which must be tolerated, at least to some extent, if

²For example, see Velleman, *The Identity Problem*, *Philosophy and Public Affairs*, 36 (2008), at 221–44, available at <http://ssrn.com/abstract=1032446>.

[Section 5:23]

¹J.M. Buchanan, "What Should Economists Do?" 30 *Southern Economic Journal* 213–22 (Jan. 1964). Peter Boettke, "Teaching Economics, Appreciating Spontaneous Order, and Economics as a Public Science," 80 *Journal of Economic Behavior & Organization* 265–74 (2011).

the economic activity we depend on is to continue and to flourish. The law of the land must be respected, but in controlling pollution, we must also recognize the law of diminishing returns. Pollution cannot, in the foreseeable future, be prohibited entirely—as was child labor—if our industrial economy is to comply and survive. By necessity, economic factors enter into the ethical equation; the costs must be taken into account. How is this to be done? How much purity can we afford? How safe is safe enough?

The balance of this chapter, which is divided into three sections, will discuss the relevance of economic factors in implementing and in determining pollution control goals and standards. The first section evaluates the distinction many commentators have emphasized between the ends declared in legislation and the means necessary to achieve those ends. On this approach the objective of pollution control law, like child labor law, is the elimination of an evil; it is an ethical objective which is not to be compromised by economic considerations. Regulators may take economic factors into account, however, in promulgating policies, setting deadlines, and signing consent decrees in order to incrementally achieve the objectives set out in legislation.

The second section argues that means and ends in environmental law, from the point of view of moral deliberation, have a more complex relationship than is sometimes acknowledged. The section argues that to some extent the means and ends of environmental law must be decided together, for “what is deliberation except weighing of various . . . end terms of the conditions that are the means of their execution, and which, as means, determine the consequences actually arrived at?”² Both means and ends should be deliberated over together, lest the goals become morally supererogatory given the resources we can commit to achieve them. The best may then become the formidable foe of the good, and the environmental utopia of our aspirations may become an obstacle to the morally adequate environment we may otherwise achieve in fact.

The third and final section explores goals of environmental policy that are not directly justified in terms of human health, safety, or welfare. These include the preservation of species, the restoration of wild and scenic rivers, the maintenance of wetlands, and the protection of less definable environmental goods, such as the “health” or “integrity” of ecosystems.

§ 5:24 Ends and means in pollution control law

The Clean Air Act, the Clean Water Act, and other pollution control statutes resemble laws that prohibit child labor, prevent discrimination, and combat poverty and illiteracy; environmental statutes, in short, stand squarely in the tradition of legislation that seeks to control and eliminate moral evils.¹ The Clean Air Act, for example, puts an ethical concern with public safety and health ahead of economic and commercial interests: It “does not allow economic growth to be accommodated

²J. Dewey, *Theory of Valuation* 23 (1939).

[Section 5:24]

¹The primary purpose of the Clean Air Act, “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare,” 42 U.S.C.A. § 7401(b)(1) (1982), is plainly moral both in a broad utilitarian sense and in the deontological sense of protecting safety as a matter of right. *Compare* 42 U.S.C.A. § 7401(b)(1) (1982) *with* Clean Water Act § 101(a), 33 U.S.C.A. § 1251(a) (1982) (“The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”). The Clean Air Act resists the introduction of economic and even technological factors as bars to pollution control. “After surveying the relevant provisions of the Clean Air Amendments of 1970 and their legislative history, we agree that Congress intended claims of economic and technological infeasibility to be wholly foreign to the Administrator’s consideration of a state implementation plan.” *Union Elec. Co. v. EPA*, 427 U.S. 246, 255, 6 *Env’tl. L. Rep.* (Env’tl. L. Inst.) 20570, 20573 (1976).

at the expense of public health.”² The courts have concurred that the protection of public health is the “paramount consideration” of the Act.³ “It is generally accepted that the Clean Air Act mandates a safety-first approach to investment in air quality.”⁴

Many of those who are concerned with the application of environmental law assimilate the distinction between the economic and the ethical, broadly speaking, to the difference between ends and means.⁵ On this view, pollution control legislation states categorical ethical ends, to wit, that pollution be controlled and reduced to levels at which the most sensitive groups are protected with an adequate margin of safety.⁶ It is then up to the relevant agency to take the costs into account and to otherwise balance economic factors by promulgating standards and rules on a problem-by-problem basis which will eventually achieve the overall ethical objectives of the law.⁷

In this way, pollution control statutes invite and sometimes require an interpretation which distinguishes between congressionally mandated goals—which are not to be compromised, at least over the long run, to accommodate economic or technological factors—and administrative policies which are to take these factors into account in attaining those goals. The Clean Air Act, for example, requires EPA to consider economic and technological feasibility in setting new stationary source⁸ and new automobile emissions standards.⁹ Economic and technological feasibility, however, are not allowed to affect the overall goals of the Act. Feasibility may “affect *when* the goals are met. The Act thus tries to use time to avoid either compromising its ideals or ignoring feasibility.”¹⁰

It is not surprising that many who are concerned with the environment view pollution control legislation in terms of a robust distinction between ethical ends and practical means envisioned by the law. First, this view generally conforms with

²41 Fed. Reg. 55527 (1976).

³Union Elec. Co. v. EPA, 427 U.S. 246, 272, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20570, 20576 (1976) (Powell, J., concurring).

⁴Barnes, Back Door Cost-Benefit Analysis Under Safety First Clean Air Act, 23 Nat. Resources J. 827, 828 (1983).

⁵For an apt discussion of “ends and means in environmental law,” see B. Ackerman & W. Hassler, Clean Coal/Dirty Air 121 (1981) (“‘ends-oriented’ agency-forcing does not require Congress to indulge in instrumental judgments beyond its capacity. Instead, it generates a process by which the ultimate aims of environmental policy can be clarified over time”).

⁶The Clean Air Act only once mentions the protection of sensitive populations in relation to national ambient air quality standards. 42 U.S.C.A. § 7408(f)(1)(C) (1982). The legislative history, however, does contain an oft-cited commentary by the Senate Committee on Public Works which states that primary air quality standards must be strict enough to protect more susceptible groups. S. Rep. No. 1196, 91st Cong., 2d Sess. 11 (1970), *reprinted in* 1 Senate Comm. on Pub. Works, A Legislative History of the Clean Air Amendments of 1970 411, S. Rep. No. 18, 93d Cong., 2d Sess. 410 (1974). For discussion of sensitive populations and environmental protection, see R. Friedman, Sensitive Populations and Environmental Standards (1981).

⁷For an expression of this general position, see Novick, In Defense of Irrational Laws, 3 Env'tl. Forum, July 1984, at 10. Novick pushes the analysis further:

When concern for the individual is given first priority, therefore, costs should be weighed, but only as the limit on the speed with which goals can be attained. Any delay in reaching the goal of zero pollution means lives will be lost, yet the government cannot simply leap across the intervening ground. Once the paramount concern for the injured person is acknowledged, other considerations must be consulted. How quickly can EPA achieve that person's protection?

Novick, In Defense of Irrational Laws, 3 Env'tl. Forum, July 1984, at 15.

⁸Clean Air Act § 111(a)(1), 42 U.S.C.A. § 7411(a)(1)(C) (1982).

⁹Clean Air Act § 202(a)(2), 42 U.S.C.A. § 7521(a)(2) (1982).

¹⁰Schoenbrod, Goals Statutes or Rules Statutes: The Case of the Clean Air Act, 30 UCLA L. Rev. 740, 759 (1983) (footnotes omitted).

legislative history.¹¹ Second, it provides an apparently strong—or at least an initially uncompromised—legal position with which corporations may reckon.¹² Senator Griffin described this aspect of the Clean Air Act as “the concept of brinksmanship.”¹³ Speaking on the subject of automobile emissions, he stated: “An industry pivotal to the U.S. economy is to be required by statute to meet standards which the committee itself acknowledges cannot be met with existing technology.”¹⁴

Third, a sharp distinction between means and ends preserves the ethical dimension of pollution control statutes while permitting economic constraints to enter at a different level. Environmentalists generally would exclude cost-benefit analysis as a technique of social policymaking since it substitutes a nonnormative goal—allocatory efficiency—for the ethical goals Congress has legislated. Yet, environmentalists may show their reasonableness by tolerating cost-effectiveness analysis at the level of implementation.¹⁵ “Cost-benefit analysis,” as Michael Baram pointed out, “is used by the decisionmaker to establish societal goals as well as the means for achieving these goals, whereas cost-effectiveness analysis only compares alternative means for achieving ‘given’ goals.”¹⁶

The principal reason those concerned with environmental quality distinguish sharply between the ethical concerns involved in setting goals and the economic and other constraints involved in implementing them, however, may be as follows: To think of the legislature as involved in principled moral deliberation, and therefore as setting the virtual elimination of pollution as a national goal, is to recognize that Congress does not simply balance interests, but considers public values and aspirations on their merits and on their own terms. By differentiating legislative and administrative activities in this manner, environmentalists connect public values with public policy and make unambiguous the rights and principles upon which pollution control legislation is ultimately based.¹⁷

The sharp dichotomy between moral ends and prudential or expedient means, however, has the unfortunate result of permitting greater and greater distance to

¹¹The 90 percent reduction requirements for automobile emissions under the Clean Air Act, 42 U.S.C.A. § 7521(a)(3)(A)(ii)(I) (1982), for example, represent what Congress believed necessary to protect the public health, not what it thought was economically or technologically feasible. See Grube, *The Clean Air Act and Mobile-Source Pollution Control*, 4 *Ecology L.Q.* 523, 526–28 (1975).

¹²The sponsors of the Clean Air Act considered the nonincremental aspect of the legislation an advantage. Thus, when Senator Griffin accused the sponsors of playing “economic roulette with millions of jobs in the automobile industry,” Senator Muskie replied, “I would rather play Russian roulette with automobile companies than with the trapped inhabitants of urban America. Their health is involved.” 116 Cong. Rec. 16097 (1970).

¹³116 Cong. Rec. 32080 (1970). Former EPA Administrator Ruckelshaus, speaking in 1974, recalled his use of brinksmanship in the early days of the agency:

I started out with a fairly arbitrary stance that must have appeared to be very unreasonable, if not irrational, to a lot of people I was regulating . . . [I]f some of the things I said struck them as just a little bit irrational, I thought that would stimulate them more than anything else I could do. So, I would purposely from time to time make statements that went over the edge.

Henderson & Pearson, *Implementing Federal Environmental Policies: The Limits of Aspirational Commands*, 78 *Colum. L. Rev.* 1429, 1459 (1978).

¹⁴116 Cong. Rec. 32080 (1970).

¹⁵For a discussion of the distinction between cost-benefit and cost-effectiveness analysis in water pollution control law, see Zener, *The Federal Law of Water Pollution Control*, in *Federal Environmental Law* 682, 696–702 (E. Dolgin & T. Guilbert eds. 1974).

¹⁶Baram, *Cost-Benefit Analysis: An Inadequate Basis for Health, Safety, and Environmental Regulatory Decisionmaking*, 8 *Ecology L.Q.* 473 (1980).

¹⁷Larry Wade observed that “politics is more than a struggle over the distribution of material values. It is also social process through which symbolic values, representing needs for self-esteem, dignity, and personal rectitude are distributed and validated.” L. Wade, *The Elements of Public Policy* 14 (1972).

develop between legislated goals and the policies promulgated to implement them.¹⁸ As this distance increases and becomes more and more evident—when inadequate implementation plans are approved, deadlines are allowed to slip, violations are left unmonitored, compromising consent decrees are signed, harmful pollutants are not listed, standards are set partly on economic grounds, scientific evidence is scanty and uncertain, and everything is held up indefinitely in litigation—the law itself, for all of its aspirational language, begins to lose touch with reality.¹⁹ Articles appear accurately describing the “deflation,”²⁰ “relaxation,”²¹ and “erosion”²² of the Clean Air Act and “back-door cost-benefit analysis” in safety-first legislation.²³ Critics often contend that pollution control legislation has eroded because it has overdelegated authority to the agencies to make the important regulatory decisions. “The problem with the goals statutes that broadly delegate decision-making authority is that they leave the key value choices to low visibility decisionmakers fearful of making controversial choices.”²⁴

Substantially the same point may be made, however, without embarking on the dark and stormy seas of the overdelegation argument.²⁵ It may be sufficient to say that when the ends of legislation are determined independently of the means of achieving them, the ends recede from attention, and all interest centers on specific administrative actions. As then-EPA Administrator Costle remarked in 1980, “the system is so cumbersome and problematical that it almost literally forces us to focus on the trees instead of the forest.”²⁶

The tendency of individual regulatory trees to obscure the legislative forest can be

¹⁸Early in the 1970s, critics of pollution control legislation argued that the statutes should be more incremental and less revolutionary since, however revolutionary they may be, they can be implemented only incrementally. *See, e.g.*, Schulman, Nonincremental Policy Making: Notes Toward an Alternative Paradigm, 69 Am. Pol. Sci. Rev. 1354 (1975); *see also* J. Pressman & A. Wildavsky, Implementation: How Great Expectations in Washington Are Dashed in Oakland (1973).

¹⁹Consent decrees worked out by EPA and industry reveal this general problem. These decrees typically contain two sections: the “Whereas” section, which refers to statutory requirements and the nature of the alleged violation, and the “Therefore” section, which lists steps which an emitter agrees to take to reduce or control its emissions. Anyone who reads a number of these documents may come away with the impression that the steps described in the second section are so tenuously related to the goals stated in the first that the word “Therefore,” traditional in these decrees, should be routinely changed to “Nevertheless.” These decrees sometimes represent, on a case by case basis, however, the best progress that can be expected at a particular time, given the difficulties of enforcing deadlines, determining compliance, and litigating agency actions.

²⁰Schoenbrod, Goals Statutes or Rules Statutes: The Case of the Clean Air Act, 30 UCLA L. Rev. 740, 766 (1983).

²¹Currie, Relaxation of Implementation Plans Under the 1977 Clean Air Act Amendments, 78 Mich. L. Rev. 155 (1979).

²²Walker & Storper, Erosion of the Clean Air Act of 1970: A Study in the Failure of Government Regulation and Planning, 7 Env'tl. Aff. 189 (1978).

²³Barnes, Back Door Cost-Benefit Analysis Under Safety First Clean Air Act, 23 Nat. Resources J. 827, 828 (1983).

²⁴Schoenbrod, Goals Statutes or Rules Statutes: The Case of the Clean Air Act, 30 UCLA L. Rev. 740, 753-54 (1983).

²⁵For an indication of the difficulties and perplexities which surround this issue, see *Industrial Union, AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607, 10 Env'tl. L. Rep. 20489 (1980) (commonly known as the *Benzene* case). An especially instructive analysis of this issue is contained in Justice Rehnquist's concurrence. *Industrial Union, AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607, 688, 10 Env'tl. L. Rep. 20489, 20510 (1980) (Rehnquist, J., concurring). For analysis of the overdelegation doctrine in the light of *Whitman v. American Trucking Ass'n*, 531 U.S. 457, 121 S. Ct. 903 (2001), see Mark Sagoff, Price Principle, and the Environment 118-20 (2004).

²⁶Schoenbrod, Goals Statutes or Rules Statutes: The Case of the Clean Air Act, 30 UCLA L. Rev. 740, 749 (1983) (quoting EPA Administrator Costle's remarks on June 23, 1980, at the Meeting of the Air Pollution Control Association in Montreal, Canada).

illustrated in many ways. Consider, for example, the National Ambient Air Quality Standards (NAAQS) called for by the Clean Air Act.²⁷ The goal of the Clean Air Act is not to promulgate these standards but “to protect the public health and welfare by improving the quality of the nation’s air.”²⁸ When considered in the context of the statute as a whole, as one commentator observed, “it becomes apparent that the NAAQS are not goals, with emissions control programs [the] means of implementing them; instead both the NAAQS and the emissions control programs are instruments for achieving the broader goal of controlling air pollution.”²⁹ In practice, however, the health, safety, and welfare goals of the Clean Air Act tend to get lost amid the byzantine negotiations—involving EPA, the states, corporations, and the courts—over the enforcement of the NAAQS.³⁰ “In this complex and politically explosive negotiating process,” George Eads wrote, “the NAAQS have, in fact, taken on a life of their own and, in doing so, have become very much like goals” of legislation.³¹

It may not be true that the NAAQS have become surrogate statutory goals; the situation may be worse than that. An array of particular decisions, such as whom to penalize for violations caused in part by the interstate transport of pollution, have become the central intellectual and regulatory foci presented by the Clean Air Act. Is it good or bad for public health that EPA require Indiana to change its implementation plan so that Pennsylvania can increase its pollution without violating NAAQS? Nobody asks—and no one could answer—this question.³² The connection between regulatory disputes and human health, safety, and welfare has in

²⁷42 U.S.C.A. § 7409(b)(1) (primary air quality standards); 42 U.S.C.A. § 7409(b)(2) (secondary standards).

²⁸American Petroleum Inst. v. Costle, 665 F.2d 1176, 1179 (1981) (citing 42 U.S.C.A. § 7401(b)), cert. denied, 455 U.S. 1034 (1982).

²⁹Eads, *The Confusion of Goals and Instruments: The Explicit Consideration of Cost in Setting National Ambient Air Quality Standards*, in *To Breathe Freely: Risk, Consent, and Air* 222, 226 (M. Gibson ed. 1985). This view contradicts that stated by Schoenbrod: “The goal is the attainment of the ambient standards.” Schoenbrod, *Goals Statutes or Rules Statutes: The Case of the Clean Air Act*, 30 UCLA L. Rev. 740, 785 (1983) (footnote omitted).

The difference between the NAAQS and the goals of the Clean Air Act was clear to the framers of the statute. “The establishment alone of air quality standards,” as the Senate Report noted, “has little effect on air quality. Standards are only the reference point for the analysis of factors contributing to air pollution and the imposition of control strategies and tactics.” S. Rep. No. 1196, 91st Cong., 2d Sess. 11–12 (1970), *reprinted in* 1 Senate Comm. on Pub. Works, *A Legislative History of the Clean Air Amendments of 1970*, 410–11, S. Rep. No. 18, 93d Cong., 2d Sess. 410 (1974). The NAAQS, in other words, were not to function as surrogate goals but as important referents for implementation plans intended to attain the goals of legislation. S. Rep. No. 1196, 91st Cong., 2d Sess. 12 (1970), 1 Senate Comm. on Pub. Works, *A Legislative History of the Clean Air Amendments of 1970*, 411, S. Rep. No. 18, 93d Cong., 2d Sess. 410 (1974).

³⁰Then-EPA administrator Douglas Costle explained:

The air program is probably the most intellectually thin program we’ve got and it is the most overbuilt in terms of the law and the structure and the size . . . That’s a program that really has a church history problem. Every single congressional battle and staff battle is relevant to understanding why you’re at the point you are now.

R. Melnick, *Regulation And the Court: The Case of the Clean Air Act* 24 (1983) (quoting EPA Administrator Costle).

³¹Eads, *The Confusion of Goals and Instruments: The Explicit Consideration of Cost in Setting National Ambient Air Quality Standards*, in *To Breathe Freely: Risk, Consent, and Air* 222, 227 (M. Gibson ed. 1985).

³²The problems of connecting the NAAQS to safety and health are overwhelming in themselves, given the lack of sound epidemiological evidence and the precarious usefulness of animal studies. *See, e.g.*, Mantel & Schneidernman, *Estimating “Safe” Levels, A Hazardous Undertaking*, 35 *Cancer Research* 1379 (1978); McGarity, *Substantive and Procedural Discretion in Administrative Resolution of Science Policy Questions: Regulating Carcinogens in EPA and OSHA*, 67 *Geo. L.J.* 729, 734 (1979); Schneidernman, Mantel & Brown *From Mouse to Man—Or How to Get from the Laboratory to Park Avenue and 59th Street*, 246 *Annals N.Y. Acad. Sci.* 237, 241 (1975).

many instances become hard to trace.

Insofar as students of environmental law emphasize the distinction between moral legislative ends and pragmatic regulatory means for achieving them, they must nevertheless be able to demonstrate a causal connection between administrative decisions and the protection of public safety and health. As regulatory deadlines are missed, draconian penalties not assessed, and pollutants not listed—all in the name of taking costs into account—this connection becomes harder and harder to describe.³³ The question arises whether we might not make more progress toward cleaning up the environment if the goals set by legislation had taken economic and related factors into account in the first instance.³⁴

Precisely because the economic and technological factors which were excluded from the purposes of the Clean Air Act have been so thoroughly accommodated in their implementation, the Act itself, according to Eads, “thus becomes what I would term a ‘policy fiction,’ and arguments, intense though they may be, about changing the structure of the act to reflect these accommodations become arguments, at least in part, over the value of maintaining this policy fiction.”³⁵ Many analysts and commentators who share this view argue that environmental quality could be improved more quickly and at less cost if the laws were more realistic, if the statutes set more attainable goals, or simply prescribed rules of conduct and behavior.³⁶

Certain aspects of some pollution control statutes have attained the status of fictions which may not be useful to maintain. The Clean Water Act, for example, declares “the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985.”³⁷ Similarly, the Marine Protection, Research and Sanctuaries Act (Ocean Dumping Act) of 1972 indicates that Congress hoped all dumping would be minimized or ended by 1977.³⁸ These directives have evaporated into vague aspirations which may attract less respect than scorn to the law.

³³The problem is not that an administration unsympathetic to environmental goals now administers pollution control statutes. The same difficulties of enforcement plagued pro-environment administrations:

Measures needed to achieve ambient air standards within the statutory time table included cutting gasoline use in the Los Angeles area by over 80%, eliminating 30-40% of the parking in the business areas of Manhattan, and prohibiting the construction of new plants whose emissions would cause or contribute to violations of the ambient air standards, even if the new plants would meet the New Source Performance Standards.

Schoenbrod, *Goals Statutes or Rules Statutes: The Case of the Clean Air Act*, 30 UCLA L. Rev. 740, 762 (1983) (footnotes omitted). The reason the law was not enforced in these and many other respects has, therefore, little to do with the political persuasion of the President.

³⁴See § 5:16.

³⁵Eads, *The Confusion of Goals and Instruments: The Explicit Consideration of Cost in Setting National Ambient Air Quality Standards*, in *To Breathe Freely: Risk, Consent, and Air* 222, 229 (M. Gibson ed. 1985).

³⁶See Schoenbrod, *Goals Statutes or Rules Statutes: The Case of the Clean Air Act*, 30 UCLA L. Rev. 740, 759 (1983) (footnotes omitted). “Statutes must be judged not only by the theoretical desirability of the duties they would impose, but also by the costs, feasibility, and fairness of the process for converting statutory language into enforced duties. Stating rules of conduct in the statute itself forces the legislature to make key decisions.” Schoenbrod, *Goals Statutes or Rules Statutes: The Case of the Clean Air Act*, 30 UCLA L. Rev. 740, 743-44 (1983). See also B. Ackerman & W. Hassler, *Clean Coal/Dirty Air* 121 (1981); L. Lave & G. Omenn, *Cleaning The Air: Reforming The Clean Air Act* (1981); Currie, *Relaxation of Implementation Plans Under the 1977 Clean Air Act Amendments*, 78 Mich. L. Rev. 155 (1979); Henderson & Peterson, *Implementing Federal Environmental Policies: The Limits of Aspirational Commands*, 78 Colum. L. Rev. 1429 (1978); Orloff, *Rethinking Environmental Law*, N.Y. Times, May 10, 1981, at F3, col. 1.

³⁷33 U.S.C.A. § 1251(a)(1) (1982).

³⁸The Act states that “[t]he Secretary of Commerce shall conduct . . . research, investigations, surveys, and studies for the purpose of determining means of minimizing or ending all dumping of materials within five years of the effective date of this Act.” Marine Protection, Research, and Sanctuaries Act of 1972, Pub. L. No. 92-532, § 203, 86 Stat. 1061. Congress extended the deadline to “as soon as

Conversely, draconian aspirational directives in the law sometimes give administrators the ammunition they need to confront corporate developers and polluters. This kind of “brinksmanship” has worked very well, for example, in the Endangered Species Act,³⁹ particularly in helping agency decisions survive court challenges.⁴⁰ The 1978 Amendments to the Endangered Species Act⁴¹ set up a high-level administrative review process with power to grant exceptions. This structure has served to resolve conflicts of interests through attempts to mitigate the effects of proposed projects.⁴²

Does “brinksmanship” work under the Clean Air Act? The answer, since it involves speculation on what might have otherwise been achieved, is unclear and depends upon the particular interpretation given to events. Generally, critics cite the imposition of emission controls on automobiles as an instance in which brinksmanship has not worked very well.⁴³ On the other hand, the uncompromising goals of the Clean Air Act have allowed the EPA, in refusing to relax the ozone standard any more than it did, to use “the threat of litigation by environmentalist groups to strengthen its position against opposition from within the executive branch.”⁴⁴

Environmentalists may have a very different reason, however, for favoring the idea that minimum health and safety requirements should be determined without consideration of their economic impact. They may point out that Congress wrote legislation this way “because of a moral judgment that efficiency considerations are inappropriate in some areas of regulation.”⁴⁵ An innocent man is not to be hanged for crimes he did not commit, after all, even if this would serve the public interest by deterring other crimes. Similarly, individuals are not to be condemned to die because the overall benefits of polluting activities exceed the costs. Moreover, environmentalists may hold to this position because they fear what might become of pollution control legislation if minimal health and safety requirements were explicitly made to be sensitive to costs. It is simple enough to write laws that instruct agencies to set “technologically feasible and economically practicable” goals and targets.⁴⁶ Yet agencies and even the courts are likely to interpret this vague language, *faute de mieux*, as mandating or permitting a cost-benefit test.⁴⁷

How can economic and other realities be taken into account in setting the goals of

possible after October 6, 1980.” 33 U.S.C.A. § 1443 (1982).

³⁹16 U.S.C.A. § 1536 (1982).

⁴⁰The directive of the Act is so clear that between 1973 and 1978 only four cases were litigated under it. *See Tennessee Valley Authority v. Hill*, 437 U.S. 153, 8 Env'tl. L. Rep. (Env'tl. L. Inst.) 20513 (1978); *Cappaert v. United States*, 426 U.S. 128, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20540 (1976); *Sierra Club v. Froehlke*, 534 F.2d 1289, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20448 (8th Cir. 1976); *National Wildlife Fed'n v. Coleman*, 529 F.2d 359, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20344 (5th Cir. 1976), cert. denied, 429 U.S. 979 (1976).

⁴¹Endangered Species Act Amendments of 1978, Pub. L. No. 95-632, 92 Stat. 3751 (codified as amended at 16 U.S.C.A. §§ 1532 to 1541 (1982)).

⁴²For a discussion of the activities of the Endangered Species Committee, see Liner, *The Endangered Species Act Amendments of 1978: Congress Responds to Tennessee Valley Authority v. Hill*, 25 Wayne L. Rev. 1327, 1339 (1979).

⁴³*See, e.g.*, R. Goodson, *Federal Regulation of Motor Vehicles: A Summary and Analysis* (1977); L. White, *The Regulation of Air Pollution Emissions From Motor Vehicles* (1982).

⁴⁴R. Melnick, *Regulation and the Courts: The Case of the Clean Air Act* 293 (1983).

⁴⁵Rodgers, *Benefits, Costs, and Risks: Oversight of Health and Environmental Decisionmaking*, 4 Harv. Env'tl. L. Rev. 191, 202 (1980).

⁴⁶*See, e.g.*, 42 U.S.C.A. § 6344(b)(2) (1982) (Energy Policy and Conservation).

⁴⁷This also happened with respect to the Energy Policy and Conservation Act. *See Rodgers, Benefits, Costs, and Risks: Oversight of Health and Environmental Decisionmaking*, 4 Harv. Env'tl. L. Rev. 191, 208 (1980). Rogers notes that courts generally have held that cost-sensitive statutes do not require formal cost-benefit analysis. “But vague statutory criteria for consideration of costs have

environmental law without thereby changing those goals from ethical into economic ones? The problem is that if legislated goals are to take costs into account—whether this “balancing” is performed by Congress or delegated to the agencies—the importance of the goal must somehow be compared to the costs involved in achieving it. How else may this comparison be made but in economic terms? The goal—human safety and health—may then be measured in terms of “benefits, such as risk reductions for which individuals are willing to pay. This amount will then be compared to the societal costs of controlling pollution.”⁴⁸ As a result, however, sight of the moral purposes of public law may be lost and allocatory efficiency may instead be legislated—a microeconomic concern which has no discernible ethical meaning or normative basis.

The problem may be put another way: Public law, arrived at through an open, deliberative political process, at least in theory represents the beliefs, aspirations, or will of the community, and not necessarily the wants and preferences of the sort individuals reveal and attempt to satisfy in markets.⁴⁹ Environmental law, in particular, may express what one court described as “the public conscience.”⁵⁰ To approach moral principles and public convictions as if these were “benefits” for which individuals are willing to pay is not comprehensible in this scheme; it is like thinking of the square root of two in terms of its color. The problem is not that attempts to “price” moral, aesthetic, and other principles as benefits may “dwarf soft variables,”⁵¹ but that such attempts commit a category mistake.⁵² Accordingly, environmentalists and others concerned with environmental policy are not necessarily opposed in principle to taking costs into account in determining the goals of environmental law. They tend to reject, however, the presumption that it is not the environment or public safety and health we care about, but allocatory efficiency or the maximization of benefits over costs. By making legislation cost-oblivious, what we do care about is kept in sight. To consider costs in setting pollution-control objectives, while not necessarily wrong in itself, is frightening because it allows the nose of the camel under the tent.

In order to properly take costs into account in determining long-term regulatory goals, it is necessary to employ a different conceptual framework than that which academic theories of welfare economics can provide. Moral problems must be deliberated in moral terms. The next section of this chapter offers a conceptual framework drawn from ethical theory in which it is appropriate to consider means—including costs—in determining the ends of legislation. What we seek to discover, on the approach proposed here, is the line that distinguishes between policies which duty

yielded notable differences of interpretation of identical statutory clauses.” Rodgers, *Benefits, Costs, and Risks: Oversight of Health and Environmental Decisionmaking*, 4 Harv. Envtl. L. Rev. 191, 209 (1980) (footnotes omitted).

⁴⁸The original ethical purposes of the statute might reappear as “citizen preferences” or “soft variables” to be assigned a “shadow price.” For criticism of this inventive method of treating moral and political concerns as data for economic science, see Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 Stan. L. Rev. 387 (1981).

⁴⁹For a good study of the relationship between private preferences and public values in American political life, see A. Hirschman, *Shifting Involvements: Private Interest and Public Action* (1982).

⁵⁰*Hill v. Tennessee Valley Authority*, 549 F.2d 1064, 1074, 7 Envtl. L. Rep. (Envtl. L. Inst.) 20172, 20176 (6th Cir. 1977), *aff’d sub nom. Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 8 Envtl. L. Rep. (Envtl. L. Inst.) 20513 (1978).

⁵¹Tribe, *Technology Assessment and the Fourth Discontinuity: The Limits of Instrumental Rationality*, 46 Calif. L. Rev. 617, 630-31 (1973).

⁵²One commits a mistake of this sort when one treats facts or concepts which belong to one logical type of category as though they belonged to another. For a technical explanation of this kind of error, see Ryle, *Categories*, in *Essays on Logic and Language* 65 (A. Flew ed. 1953). For a less technical account, see G. Ryle, *The Concept of Mind* 16-18 (1966).

requires of us in controlling pollution and policies which can reasonably be construed as supererogatory.

The next section concludes by arguing that there are strong ethical reasons for revising the Clean Air Act and other pollution control laws to make their goals less draconian, and therefore more achievable, or at least so that they at once contemplate environmental goals together with the means necessary and available to achieve them. Three reasons will be offered. First, all moral deliberation which rises above the level of mere incantation does consider and appraise ends in relation to the means by which they can be implemented. Second, if the goals set by current pollution control statutes are supererogatory, as they sometimes appear to be, it is morally permissible to relax them. Third, by continuing the “policy fiction” of a pollution free environment as our ultimate goal, the utopian environment to which we aspire may become the enemy of the good environment we can achieve in fact.

§ 5:25 Supererogation in pollution control law

Cleaning up America—like building the transcontinental railway and going to the moon—is a national effort. It is a project which involves citizens as citizens, not simply as individuals. The environment concerns us collectively, and in protecting it, we protect part of our history, part of our identity, and part of our idea of ourselves as a nation. The national ideal in public policy, as the late Sam Beer has written, is a doctrine of nation-building. “Its imperative is to use the power of the nation as a whole not only to promote social improvement and individual excellence, but also to make the nation more solidary, more cohesive, more interdependent in its growing diversity; in short, to make the nation more of a nation.”¹

There is an important difference between pollution control and other “nation-building” activities, such as the space program. People had a general idea of what would be necessary to beat the Russians to the moon. The costs were reasonable, the technology available, the political forces in place. When the nation declared a “war against pollution” in the 1960s, however, no one knew exactly what would be required to win. It was a moral crusade in which partisans were not always aware of the political, technological, and economic forces arranged against them.

A review of the battles fought over pollution during the past twenty years evidences how attempts to achieve set goals have been deeply affected, although sometimes unintentionally, by an appraisal of the means necessary to achieve them. Thirty years ago, this appraisal was hard to make, since no one really knew what economic, technological, and political opportunities and obstacles to expect. The mood then was to experiment with innovative methods and to see how far the environmental “revolution” would extend.² Many economic, technological, and political constraints have by now become apparent. Is there a method—within the boundaries of ethical deliberation—in which these constraints may be taken into account

[Section 5:25]

¹See Beer, *Liberalism and the National Idea*, 5 Pub. Int. 70 (1966).

²Speaking of his motives in 1970, Senator Muskie said:

We had a choice: we could continue, and try to improve, past initiatives or we could change course and experiment with innovative methods which might achieve results at a more rapid pace.

We had succeeded only 19 days before Earth Day in 1970 in obtaining enactment of major Federal oil pollution legislation. But that bill was lost in the fervor of environmental activism.

The Clean Air Act was a second attempt at this approach

The result was dramatic and rewarding. In history there have been few laws as important and far reaching as these. The real reward was in being able to fulfill the mandate imposed to an issue in the public interest and arrive at a result which was considerably more than an accommodation to the accumulated special interests.

Ingram, *The Political Rationality of Innovation: The Clean Air Act Amendments of 1970*, in *Approaches to Controlling Air Pollution* 12, 32 (A. Friedlander ed. 1978).

in revising the goals of pollution control legislation?

There is some reason to believe that we must take these constraints into account, insofar as we are cognizant of them, if we are to engage in ethical deliberation. Deliberation is, after all, the appraisal of ends in relationship to the means we are likely to use to achieve them and which, therefore, will lead to the outcomes we actually produce. To will the end, we must also will the means, and therefore some effort to assess ends in relation to the means required should be made. "There can be no control of the operation of foreseeing consequences (and hence of forming ends-in-view) save in terms of the conditions that operate as the causal conditions of their attainment."³ Moreover, the problem with values conceived of as intrinsically right or good is that, like all other interests and desires, they are subject to failure and defeat. Saying "we shall not lose" will not alter the fact that we may very well lose; in fact, we often do lose in the battle to abate pollution.

The difference between reasonable and unreasonable purposes and goals, as Dewey recognized, is precisely the difference between those which are formed without "consideration of the conditions that will actually decide the outcome and those which are formed on the basis of existing liabilities and potential resources."⁴ Our efforts to achieve a cleaner, safer, more beautiful environment are constrained, of course, by economic costs; "ought" implies "can." What we "can" do—or what we are willing to do—tests the importance of the ethical duty or principle at stake. How important, morally speaking, are duties and principles involved in controlling pollution? How far do we have to go in controlling pollution to remain consistent with those duties and principles?

The relationship proposed here between the ethical and the economic is familiar in the decisions we make both as individuals and as a society. How much shall we give to charity, for example, to relieve hunger in Africa? Economic factors are important. We need to know how much we can afford; one may be expected to give only "until it hurts." We might try to assess our "fair share" given the ability of others also to help. And it is useful to know which organizations direct contributions most effectively in providing famine relief. Someone may argue, however, that since charity is a virtue, we have a duty to give all we have to those less fortunate than ourselves. Such an argument would be preposterous: There are some duties which are absolute, such as the duty not to murder or enslave others. We must respect the duty not to murder even if, as a result, we forego a great benefit. Yet we are not required to observe the duty of charity to the point of self-improvement.

The distinction in ethical theory involved here is traditionally drawn between "perfect" and "imperfect" duties.⁵ A perfect duty, such as the duty not to take an in-

³J. Dewey, *Theory of Valuation* 23, 25 (1939).

⁴J. Dewey, *Theory of Valuation* 23, 29 (1939). Dewey's point is that learning from experience is a principal aspect of rationality. Moral reasoning, like other forms of reasoning, is experimental. Experiments with controlling pollution have made us aware of many facts: examples of these include the realization that "safe" thresholds for many pollutants do not exist; that scientific uncertainty surrounds most attempts at risk-assessment; that draconian measures are often unenforceable; and that in reducing some risks, other risks increase. Lessons such as these may—Dewey would say "must"—enter ethical deliberation over the ends of pollution control law.

⁵The distinction was formulated by Kant but probably had its origins in Medieval philosophy. The crucial distinction, as Kant formulated it, is that "[e]thical duties are of wide obligation, whereas juridical duties are of narrow obligation." The latter, being narrow or rigorous (as, for example, the maxim "thou shall not kill") is "perfect" because it "allows no exception in the interest of inclination." The former kind of duty admits of exceptions (as, for example, the duty to rescue is excused when one is an insecure swimmer) and is therefore "imperfect." Kant suggests the relation between this distinction and the concept of supererogation. "Imperfect duties, accordingly, are only duties of virtue. To fulfill them is merit (= + a); but to transgress them is not so much guilt (= - a) as rather mere lack of moral worth (= 0), unless the agent makes it a principle not to submit to these duties." I. Kant, *The*

nocent life, does not admit of exceptions in order to accommodate wants, interests, or inclinations. An imperfect duty, such as the duty to rescue a drowning stranger, may be overridden by conditions or constraints, for example, one's own ability or inability to swim. Kant correctly pointed out that imperfect duties, such as acts of benevolence, are duties of virtue, rather than duties of moral obligation or requirement. Actions in accordance with these duties are meritorious; actions not in accord with them are not necessarily wrong but may only lack moral worth.⁶

At this juncture it is appropriate to question whether the principles of pollution control law discussed in the first part of this chapter impose perfect or imperfect obligations. Plainly, polluters have a perfect obligation not to kill people; we are horrified to hear reports that a corporation willfully or even negligently vented toxic substances which killed identifiable individuals. The government, equally plainly, has an obligation to prohibit this sort of serious incident. We have seen, for example, that when deaths due to vinyl chloride were discovered, EPA moved swiftly to reduce exposure to that pollution.⁷ Where definite deaths can be attributed to particular exposures, society must honor the right of innocent individuals not to be killed.

With respect to background hazards and attenuated risks, however, the analysis is different. No one has a right to a completely risk-free environment or to be protected from *de minimis* hazards even when they are anthropogenically caused. The highways, for example, can hardly be perfectly safe, and while each of us has a perfect obligation not to drive recklessly we are not bound to drive at ten miles per hour, even if that would reduce traffic fatalities by many thousands. There is a point at which a duty of obligation shades into a duty of virtue; at that point, safety becomes more a matter of virtue than an ethical requirement.

A perfectly unpolluted environment is meritorious from a moral point of view, and a society acts virtuously in attempting to eliminate pollution, just as it acts virtuously in attempting to eliminate poverty. Yet a society which stops short of committing enormous resources to efforts of this kind does not necessarily violate moral obligations. Rather, such a society simply fails to rescue citizens who, because of a variety of synergistic causes—some of which involve industrial pollution—die before their time. A society that makes it a principle to fail in this way—a society, for example, that adopts an economic rather than a moral basis for policymaking—need not be violating a perfect duty. Its policy, however, has no moral worth.

Conversely, if a society sets out to rescue everyone, then its policy is morally praiseworthy, but as costs mount it goes further and further beyond the demand of duty. One might argue that we should not expect actions from the government which are far more noble and praiseworthy than we might expect of ourselves as individuals. The problem of taking costs into account in setting goals and standards for pollution, then, may be conceived as the problem of determining what we must do as a matter of duty and what, though it exceeds the call of duty, we may do as a matter of honor or virtue. Acting for moral reasons beyond the strictures of duty is

Metaphysic of Morals 49 (M. Gregor trans. 1979).

⁶I. Kant, *The Metaphysic of Morals* 49 (M. Gregor trans. 1979). For further discussion, see Chisholm, *The Ethics of Requirement*, 1 *Am. Phil. Q.* 147 (1964).

⁷EPA set a 10 ppm limit on vinyl chloride emissions; at these levels, the risks are arguably *de minimis*. 40 Fed. Reg. 59432, 59535–36 (1975). Since no safe threshold for vinyl chloride has been determined, however, the 10 ppm standard would appear to violate the “margin of safety” requirement of the law. Under pressure from an Environmental Defense Fund suit, EPA proposed to make the standard increasingly more stringent. 42 Fed. Reg. 28154 (1977). Under pressure from industry, however, it reinstituted the 10 ppm standard. See 40 C.F.R. § 61.63 (1985).

usually described as supererogation.⁸ The degree to which we engage in this kind of activity—for example, donations to charity—depends to a large extent on our circumstances. It may depend on what we can afford to do, the means at our disposal, and how we plan to distribute the costs.

In setting goals and standards in pollution control law, it should be recognized that ending pollution entirely may be so far beyond our means and abilities at this point that it lies well beyond the call of duty. This means that controlling pollution is ethically a good thing—just as rescuing a drowning person is a good thing—but the circumstances may render this action supererogatory. Of course, this does not permit levels of pollution the risks of which we know to be severe and which, as a consequence of exposure, will result in the death of innocent persons. Yet where thresholds are uncertain, risks conjectural, and epidemiological evidence absent, we arguably do not have a perfect duty to prevent deaths. Nonetheless, we are obliged to consider which policies are to be implemented because of their moral worth and which policies we can postpone as supererogatory, given the costs of achieving them.

That progress toward stated goals must be deliberate, but that it need not succeed all at once, is evident in court decisions which recognize that economic “feasibility” is a legitimate factor to be considered in protecting safety and health,⁹ that the law does not protect against insignificant risks,¹⁰ and that EPA need not insist upon every possible reduction if it determines such insistence is counterproductive.¹¹ The fundamental idea is to make progress in view of the circumstances, not to insist uncritically upon perfection.

VI. PROTECTING THE NATURAL WORLD

§ 5:26 In general

Environmental regulation traditionally has sought to protect human beings from the environment—from pollutants and other hazards—rather than to protect the environment from human beings.¹ Since at least the time of John Muir and the founding of the Sierra Club, however, preservationists have challenged the idea that environmental policy should permit all those changes that tame, domesticate, and transform nature for human purposes while minimizing or reducing just those changes in the environment that negatively affect human beings. Historically, the more vigorously Americans have transformed for economic reasons what they considered a natural wilderness, the more vehemently they have called on spiritual and ethical grounds for its preservation.² Muir recognized, for example, that damming the beautiful Hetch Hetchy valley made economic sense because there was no

⁸Surprisingly, there is only a relatively small amount of literature on this crucial ethical concept. See, e.g., D. Heyd, *Supererogation* (1982).

⁹See § 5:5.

¹⁰*Industrial Union, AFL-CIO v. American Petroleum Inst.*, 448 U.S. 607, 10 Env'tl. L. Rep. 20489 (1980).

¹¹*Natural Resources Defense Council v. Gorsuch*, 467 U.S. 837, 14 Env'tl. L. Rep. 20507 (Env'tl. L. Inst.) (1984).

[Section 5:26]

¹A. Dan Tarlock, *Is There a There There in Environmental Law?*, 19 J. Land Use & Env'tl. L. 213 (2004). Tarlock explains, “Environmental law, as now defined, is primarily a synthesis of pre-environmental era common law rules, [footnote omitted] principles from other areas of law, and post-environmental era statutes which are lightly influenced by the application of concepts derived from ecology and other areas of science, economics, and ethics.” A. Dan Tarlock, *Is There a There There in Environmental Law?*, 19 J. Land Use & Env'tl. L. 222 (2004).

²According to Perry Miller, the United States, even as it developed economically “could derive its inspiration from the mountains, the lakes, the forests. There was nothing mean or niggling about these, nothing utilitarian. Thus, superficial appearances to the contrary, America is not crass,

other way to supply San Francisco with water. He railed against the project nevertheless for spiritual reasons. “Dam Hetch Hetchy! As well dam for water-tanks the people’s cathedrals and churches, for no holier temple has ever been consecrated by the heart of man.”³

In response to a preservationist ethic, a host of federal laws enacted before the 1970s sought to protect wildlife, scenic areas, antiquities, and wilderness areas to maintain their intrinsic properties rather than primarily to promote human health, safety, or welfare. Even before Earth Day 1970, resource and wildlife law enacted before 1970 provided a great deal of protection to the natural environment.⁴ It is easy as a general matter to defend statutes of this sort by invoking the “the integrity, stability, and beauty of the biotic community,” to quote Aldo Leopold’s famous dictum.⁵ It is much more difficult, however, to explain what concepts such as these mean and to defend them against those who argue in favor of developing natural areas for the sake of the many economic interests to which they may be put.

The importance of maintaining land in its “natural” state was not apparent to the 120 Pilgrims who came to Plymouth in 1620, about half of whom died in their first winter of cold, starvation, and disease.⁶ Ever since then, Americans have found that survival—not just prosperity—required them to dam rivers, plough fields, build highways, plant cities and suburbs, alter genomes, and otherwise tame and domesticate the natural world. What is more, the concept of ecological preservation has proven elusive, since landscapes continually change; indeed change “is the normal course of events for most ecological systems.”⁷ How do we justify the preservation of natural areas, endangered species, and ecological communities as a matter of public policy? Plainly, economic arguments do not favor every and any change to nature, but can one find economic grounds or reasons to preserve—or restore—what may be considered “natural,” “pristine,” or “intact” biological systems? Indeed, can these terms even be defined?

§ 5:27 Ecological regulatory endpoints

In 1990, the Science Advisory Board of the Environmental Protection Agency (EPA) stated, “The value of natural ecosystems is not limited to their immediate utility to humans. They have an intrinsic, moral value that must be measured in its own terms and protected for its own sake.” The Board added with some regret that

materialistic: it is Nature’s nation, possessing a heart that watches and receives.” Perry Miller, *Nature’s Nation* 201 (Cambridge: Harvard UP, 1967).

³John Muir, “Hetch-Hetchy Valley,” *Sierra Club Bulletin*, Jan. 1908, at 220.

⁴For example, the Antiquities Act of 1906, the Migratory Bird Treaty Act of 1918, the National Park Service Organic Act of 1916, the Historic Sites, Buildings and Antiquities Act of 1935, the Bald and Golden Eagle Protection Act of 1940, the Refuge Protection Act of 1962, the Land and Water Conservation Act of 1964, the National Wildlife Refuge Administration Act of 1966, the National Historic Preservation Act of 1966, the Wilderness Act of 1964, and the National Wild and Scenic Rivers Act of 1968. For a discussion of these early statutes, see George C. Coggins and Robert L. Glicksman, *Public Natural Resources Law* Ch. 2.

⁵Aldo Leopold, *A Sand County Almanac with Sketches Here and There* 224-25 (New York: Oxford University Press 1949).

⁶See Benjamin W. Labaree, *Colonial Massachusetts: A History* 34 (1979).

⁷The Report of the Ecological Society of America Committee on the Scientific Basis for Ecosystem Management (1995), at <http://www.sdsc.edu/ESA/ecmtext.htm> (visited Nov. 14, 1996) (citing Joseph H. Connell & Wayne P. Sousa, On the Evidence Needed To Judge Ecological Stability or Persistence, 121 *Am. Naturalist* 789 (1983)). See also William Cronon, *Changes in the Land* (1991) (describing the ecological transformation of New England) and Joseph L. Sax, *Ecosystems and Property Rights in the Greater Yellowstone: The Legal System in Transition*, in *The Greater Yellowstone Ecosystem: Redefining America’s Wilderness Heritage* 77 (Robert B. Keiter & Mark S. Boyce eds. 1991) (providing Western examples).

EPA over its then 20-year history “has considered the protection of public health to be its primary mission, and it has been less concerned about risks posed to ecosystems.”¹ What are “risks posed to ecosystems”? Does EPA or any regulatory agency have an obligation to protect ecosystems from harm or risks? Does its obligation begin and end with the well-being or aggregate utility of human beings?

In its early years, EPA directly confronted the question whether its mission was to safeguard human health, particularly from carcinogenic chemicals, or also to protect from harm the natural world, including fish and birds with no known economic utility. This question arose in the early 1970s with the regulation of pesticides.² Environmentalists in the preservationist tradition argued that EPA had a mission to protect not only human beings but also wildlife and more generally the natural world. In response, William Ruckelshaus, founding administrator of EPA, in 1972 banned DDT and its derivatives aldrin and dieldrin. In the initial announcement, Ruckelshaus emphasized the adverse effects of these pesticides on fish, birds, and other wildlife; he barely referred to the risks that DDT and derivatives posed to human safety and health.³

One can understand why in the early 1970s EPA Administrator Ruckelshaus initially appealed to harms to nature rather than to human health as grounds to ban DDT and related pesticides. The study by Rachel Carson on the effects of insecticides on western grebes had shocked the national conscience.⁴ Critics argued that DDT, whatever its effects on birds, was safe for human beings—safer, anyway, than the insecticides likely to replace it.⁵ The carcinogenic effect of DDT on human beings was widely questioned.⁶

An Appeals Court in reviewing the DDT ban rebuked Ruckelshaus for giving only a cursory mention to the effects of the pesticide on human health and urged the agency to emphasize health risks, stating that “candor compels us to say that when the matter involved is as sensitive and fright-laden as cancer, even a court scrupulous to the point of punctilio in deference to administrative latitude is beset with concern when the cross-reference [to carcinogenicity] is so abbreviated.”⁷ In response, EPA embarked on a course of regulating pesticides in terms of their health effects, primarily carcinogenicity, and of avoiding ecological arguments. In its final and successful DDT brief, EPA listed nine principles by which it tested for carcinogenicity in pesticides. It then relied on these principles—not on ecological considerations—as well in cases against heptachlor, chlordane, and several other chemicals. Environmental historian Edmund Russell has written, “Ironically, pesticide cases that entered the legal process to prevent damage to birds emerged as efforts to protect humans from cancer, reducing EPA’s emphasis on ecological protection.” According to Russell, “Ecological damage and carcinogenicity were both matters of dispute within the scientific community. In the legal community, it had

[Section 5:27]

¹U.S. EPA SAB (U.S. Environmental Protection Agency Science Advisory Board), *Reducing Risk: Setting Priorities and Strategies for Environmental Protection*, SAB-EC-90-021 (1990), quotation at p. 9, available at [http://yosemite.epa.gov/sab/sabproduct.nsf/28704D9C420FCBC1852573360053C692/\\$File/REDUCING+RISK++++++EC-90-021_90021_5-11-1995_204.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/28704D9C420FCBC1852573360053C692/$File/REDUCING+RISK++++++EC-90-021_90021_5-11-1995_204.pdf).

²Quarles, *Cleaning Up America: An Insider’s View of the Environmental Protection Agency*.

³Russell, “Lost Among the Parts per Billion: Ecological Protection at the United States Environmental Protection Agency, 1970–1993,” *Environmental History* 2 (Jan.): 29–51.

⁴Cason, *Silent Spring* (1962).

⁵Dunlap, *DDT: Scientists, Citizens, and Public Policy*, p. 223 (1981).

⁶Schmeck, “Study Finds No Link Between Cancer Risk and DDT Exposure,” *New York Times*, Section C, p. 3, col. 1; Science Desk (Feb. 14, 1989).

⁷*Environmental Defense Fund v. EPA*, 465 F.2d 528, 538 (D.C. Cir. 1972).

become clear that judges feared human cancer more than dead birds.”⁸

President Ronald Reagan, who has been associated with the statement that trees cause smog, campaigned in part against those whom he called “environmental extremists” who favored “rabbits holes” and “birds nests” over jobs and economic growth.⁹ Anne Gorsuch, Reagan’s appointee to administer EPA, eliminated any program that might concern harm to nature itself rather than to human health or welfare. When Ruckelshaus returned in 1983 as EPA administrator, he continued its human health-and-welfare mission but invited discussion of the “impact of all this chemical loading over the years on the ecological systems in which human culture is embedded.” Ruckelshaus lamented that EPA had not addressed ecological impacts. “Indeed, it is odd how little time is spent at the upper levels of EPA thinking about such things and how much time is spent worrying about tiny increases in the risk of a single human disease [cancer].”¹⁰

Lee Thomas, who succeeded Ruckelshaus, made ecological protection an agency priority. First, he permitted his pesticide offices, under the leadership of Jack Moore and Steve Schatzow, to ban two chemicals, carbofuran and diazinon, on the basis of their effects on wildlife, a case EPA eventually won against the manufacturer, Ciba-Geigy, thus creating a precedent in pesticide litigation for defending nature—not just human health—against harm. The agency still had to traverse a great legal, political, and conceptual distance, however, to move from (1) the protection of particular populations of economic or iconic organisms (*e.g.*, oysters) from contaminants (*e.g.*, the use of tributyltin as an antifoulant on boats) to (2) the protection of ecosystem properties, such as diversity and resilience, from major economic projects, such as power plants and dams.

Second, Thomas convened seventy-five EPA professionals to opine on the goals of the agency. The group issued a report, *Unfinished Business*, that included ecology among the agency’s principal concerns.¹¹ Third, Thomas strengthened a program Ruckelshaus had begun at the Office of Research and Development (ORD) to fund efforts (initiated in 1981 by Glenn W. Suter and Lawrence W. Barnthouse at Oak Ridge National Laboratory) to develop methods of ecological risk assessment. During the 1980s and 1990s, the conceptual framework of risk assessment, first developed as a quantitative science for measuring carcinogenicity and other health effects (as in the “Red Book” prepared by the National Research Council in 1983).¹² was extended in a more qualitative form to ecological concerns, such as declines of populations of fish. Ecological risk assessment promised a way of “estimating the probability or likelihood of undesirable events such as injury, death, or decrease in the mass or productivity of game fish, wildlife, etc.”¹³

According to science historian Stephen Bocking, “For agencies like the EPA, it [ecological risk assessment] promised a means of wrapping its decisions in the clothing of science; as a product of objective science, these decisions were less likely to be overruled as arbitrary and capricious.”¹⁴ The agency also looked to scientific commit-

⁸Russell, “Lost Among the Parts per Billion,” p. 37.

⁹Quoted in Kenski, “The President, Congress, and Interest Groups: Environmental Policy in the 97th Congress,” *Public Policy and the Natural Environment*, p. 78 (1985).

¹⁰Ruckelshaus, “Risk, Science, and Democracy,” *Issues in Science and Technology* 1 (1985): 19–38, quotation at pp. 37–38.

¹¹U.S. EPA, “Unfinished Business: A Comparative Assessment of Environmental Problems” (1987).

¹²National Research Council, “Risk assessment in the Federal Government: Managing the Process” (1983).

¹³U.S. EPA, “Hazard Evaluation Division Standard Evaluation Procedure: Ecological Risk Assessment,” EPA-540/9-85-ool, at 1 (1986).

¹⁴Bocking, *Nature’s Experts: Science, Politics, and the Environment* (2004), quotation at p. 141.

tees for an objective process to guide political choices among competing uses of the environment. How can one move from the “is” of science to the “ought” of policy? Bocking warned that “developing a strictly scientific basis for action will be insufficient, even counterproductive.”¹⁵

Throughout the 1980s and 1990s, a collaboration between EPA research laboratories, the Oak Ridge National Laboratory of the Department of Energy, and the Risk Assessment Forum comprising agency scientists and academic researchers produced a series of studies to establish the methodology of ecological risk assessment (ERA), including among many related documents a “Framework”¹⁶ and “Guidelines.”¹⁷ In 2003, EPA published its guidance for “deciding which aspects of the environment will be selected for evaluation.” The agency included in its potential “set of generic ecological assessment endpoints” many properties deemed to have value at various scales—for example, at the level of the organism (*e.g.*, “courtship behavior”), the population (*e.g.*, “genetic diversity”), the community (*e.g.*, “trophic structure” “resilience”), and the landscape (*e.g.*, “contiguity or fragmentation”). The guidance document pointed out that environmental laws provided little direction or authority for determining regulatory endpoints. The document states, “Although nearly all environmental statutes refer to the environment as an entity to be protected, and many refer to more specific ecological entities such as fish, wildlife, and estuaries, few indicate an attribute to be protected or even the nature of the entity.”¹⁸ In 2006, EPA issued an “Ecological Benefits Strategic Assessment Plan” in what now seems to be a never-ending search for conceptual and normative ballast to steady ecological risk assessment.¹⁹

A 2006 workshop on ERA supported the warning that biological science will not suffice to determine what qualities of the natural environment are valuable and which should serve as endpoints for assessment and regulation.²⁰ Biologists lamented that they did not know—and did not have authority to determine—which risks to assess. EPA defines an “assessment endpoint” as “an explicit expression of the environmental value to be protected, operationally defined as an ecological entity and its attributes.”²¹ Who can say with authority which ecological entity is to be protected and why? Problems arise because of “the diversity of ecological entities and attributes that might be at risk,” the “remarkable diversity of species, ecological communities, and ecological functions from which to choose and because of statutory ambiguity regarding what is to be protected.”²²

At the 2006 workshop on ERA, participants conceded that assessments, even when carefully done, have had little effect on policy outcomes. Suter has written, “The most important critique of ERA is its relative lack of influence in USEPA deci-

¹⁵Bocking, *Nature’s Experts: Science, Politics, and the Environment*, 128 (2004).

¹⁶U.S. EPA, “Framework for Ecological Risk Assessment,” EPA/630/R-92/001 (1992).

¹⁷U.S. EPA, “Guidelines for Ecological Risk Assessment,” EPA/630/R-95/002F (1998). For a contemporary account of these events, *see* Bocking, *Ecologists and Environmental Politics: A History of Contemporary Ecology* (1997), especially Ch. 5.

¹⁸U.S. EPA, “Generic Ecological Assessment Endpoints (GEAEs) for Ecological Risk Assessment,” EPA/630/P-02/004B, p. 28 (2003).

¹⁹U.S. EPA “Ecological Benefits Assessment: Strategic Plan,” EPA-240-R-06-001 (2006).

²⁰*See* Biddinger, Newman, et al., “Enhancing the Ecological Risk Assessment Process,” *Integr. Envir. Assess. Man.* 4:306–313 (2008).

²¹U.S. EPA, “Generic Ecological Assessment Endpoints (GEAEs) for Ecological Risk Assessment,” EPA/630/P-02/004B, p. 1 (2003), citing U.S. EPA, “Guidelines for Ecological Risk Assessment,” EPA/630/R-95/002F (1998).

²²U.S. EPA, “Generic Ecological Assessment Endpoints (GEAEs) for Ecological Risk Assessment,” EPA/630/P-02/004B, p. v (2003). *See also* Suter, “Ecological Risk Assessment in the USEPA: A Historical Overview” *Integr. Envir. Assess. Man.* 4, pp. 285–89 (2008).

sion making.”²³ They noted that “human health risks dominate rule making, remedial actions, and other regulatory decisions.” They editorialized, “Although we are doing good risk assessments using a consistent framework, we have relatively little influence. Even when the effects are large, involve charismatic species, and are clearly related to the contaminants by extensive data and high quality models, decision makers often ignore ecological risk.”²⁴ They concluded that “the future success of ERA will depend more on making it more compelling to decision makers than on making it more technically sophisticated.”²⁵

In their superb study, *Water War in the Klamath Basin: Macho Law, Combat Biology, and Dirty Politics* (2008), Holly Doremus and Dan Tarlock meticulously show how in a dispute that has continued since the early 1990s, political, ideological, and economic forces (as the title of the books suggests) dominate ecological assessment. Interestingly these authors (p. 204) suggest that adaptive ecosystem management emerged as a hoped-for alternative to ecological risk assessment because it had failed to influence policy decisions. The question remains whether ecological risk assessment has failed to influence policy decisions because: (1) the science is inadequate, politicized, and conceptually confused; or (2) the science is good and available but is ignored except when it may be mobilized for a political or partisan purpose.

§ 5:28 The Environmentalist Paradox

In 2010, a group of ecologists published in *Bioscience* a provocative paper which observed that while ecological systems and the services they provide have been degraded over the past 50 years, human well-being has improved.¹ These authors wrote, “Although many people expect ecosystem degradation to have a negative impact on human well-being, this measure appears to be increasing even as provision of ecosystem services declines.”² As these authors explained, “The environmentalist’s expectation could be articulated as: ‘Ecological degradation and simplification will be followed by a decline in the provision of ecosystem services, leading to a decline in human well-being.’”³ Yet, “The Millennium Ecosystem Assessment paradoxically found that human well-being has increased despite large global declines in most ecosystem services.”⁴

The United Nations Development Programme publishes annually a *Human Development Report* and a Human Development Index (HDI) that use statistics, for example, about life expectancy, education, and income, to measure human well-being. According to these measures, across the world people have generally seen their life prospects improve over the last several decades, especially anywhere there is a semblance of the rule of law. According to the 2014 *Human Development Report*,

²³Suter, “Ecological Risk Assessment in the USEPA: A Historical Overview,” *Integr. Envir. Assess. Man.* 4, pp. 285–89 (2008), quotation at p. 288.

²⁴Suter and Cormier, “Revitalizing Environmental Assessment,” *Integr. Envir. Assess. Man.* 4, p. 385 (2008).

²⁵Suter and Cormier, “Revitalizing Environmental Assessment,” *Integr. Envir. Assess. Man.* 4, p. 385 (2008).

[Section 5:28]

¹Ciara Raudsepp-Hearne, Garry D. Peterson, Maria Tengö, Elena M. Bennett, Tim Holland, Karina Benessaiah, Graham K. MacDonald, and Laura Pfeifer. “Untangling the environmentalist’s paradox: why is human well-being increasing as ecosystem services degrade?” 60 *BioScience* 576-89 (2010).

²*Id.* at 576.

³*Id.* at 576.

⁴*Id.* at 576.

“Almost all countries have improved human development over the past few decades, and billions of people are now doing substantially better.”⁵ The 2013 *Human Development Report* found that in more than 40 developing countries, which comprise most of the world’s population, there were greater HDI gains than had seemed possible in 1990. Better nutrition, lower infant and child mortality, fewer deaths due to HIV/AIDS, higher educational levels, among other factors have improved and lengthened the lives of people in developing nations. While multidimensional poverty has been reduced, it still persists, however, particularly in those parts of the world cut off from trade by civil war, political oppression, or the breakdown of social order.

While human well-being has improved, ecological systems and the services they provide have deteriorated, according to many environmental scientists. In their view, “humanity’s global civilization—the worldwide, increasingly interconnected, highly technological society in which we all are to one degree or another, embedded—is threatened with collapse by an array of environmental problems.” These include “an accelerating extinction of animal and plant populations and species, which could lead to a loss of ecosystem services essential for human survival; land degradation and land-use change; a pole-to-pole spread of toxic compounds; ocean acidification and eutrophication (dead zones); worsening of some aspects of the epidemiological environment (factors that make human populations susceptible to infectious diseases); [and] depletion of increasingly scarce resources”⁶ From this perspective, “Humanity is threatened with dramatic environmental changes, possibly to an extent that could eliminate modern life as we know it. We are facing . . . a rapid depletion of natural capital.”⁷ According to these scientists, the collapse of civilization is at hand or cannot be stopped.⁸

How can standards of living have become so much better for the majority of the world’s people over the past several decades while ecosystems and the services they provide have become so much worse? Raudsepp-Hearne and co-authors offer among other hypotheses two dialectally opposed ways of answering this question. First, they hypothesize, “There is a time lag after ecosystem service degradation before human well-being is negatively affected. Loss of human well-being caused by current declines in services has therefore not yet occurred to a measurable extent.” We are in the calm before the storm. According to the opposing explanation, “Technology and social innovation have decoupled human well-being from the state of ecosystems to the extent that human well-being is now less dependent on ecosystem services.”⁹

Consider the hypothesis—again quoting Raudsepp-Hearne and co-authors—that “argues that we have yet to see global consequences to human well-being as a result of ecosystem service decline because of a time lag between the accumulating effects of human transformations of ecosystems and the impact of these changes on human well-being.”¹⁰ On this view, civilization is now experiencing a global “overshoot” that has allowed the human economy for a limited period to exceed the carrying capacity of the Earth. What may seem to be progress is therefore better described as a delayed feedback while humanity exceeds planetary limits. The Global Footprint

⁵United Nations Development Programme, *Human Development Report 2013: The Rise of the South: Human Progress in a Diverse World* (2013).

⁶Paul R. Ehrlich and Anne H. Ehrlich, “Can a collapse of global civilization be avoided?” 280 *Proceedings of the Royal Society B: Biological Sciences* 20122845 (2013).

⁷Fredrik Dalerum, “Identifying the role of conservation biology for solving the environmental crisis,” *Ambio* 1-8 (2014).

⁸Ehrlich and Ehrlich op. cit.

⁹Id. at p. 578.

¹⁰Id. at 578.

Network calculates annually the date at which humanity has exhausted nature's budget for that year. The date comes sooner every year; we are thus living on borrowed time. August 19 marked "Overshoot Day" in 2014. For the rest of the year, according to this analysis, humanity draws down and depletes nature's stocks and flows.¹¹

According to a group of prominent ecologists, "This overshoot can be expressed as the extent to which human area demand exceeds nature's supply: whereas humanity's load corresponded to 70% of the biosphere's capacity in 1961, this percentage grew to 120% by 1999."¹² Two environmental scientists have asserted "that humanity is in ecological overshoot, currently using at least 50% more of nature's goods and services than ecosystems regenerate." They noted that "humanity is at or beyond global carrying capacity for key categories of consumption, particularly agriculture."¹³ On this basis, prominent legal scholars have called for environmental statutes intended to protect nature even if to do so society must restrain or "degrow" the economy.¹⁴ This call sometimes asks that environmental impact assessments under National Environmental Policy Act¹⁵ take account of ecosystem services.¹⁶ More broadly, it suggests that the law of nuisance explicitly apply to losses to ecological systems and thus to the economic services they may provide.¹⁷ This possibility is described more fully in Section 5.30 below.

According to the USDA Economic Research Service, "Over the past 50 years, global gross agricultural output has more than tripled in volume, and productivity growth in agriculture has enabled food to become more abundant and cheaper. In inflation-adjusted dollars, agricultural prices fell by an average of 1% per year between 1900 and 2010, despite an increase in the world's population from 1.7 billion to nearly 7.0 billion over the same period."¹⁸ Many environmental scientists interpret the fact that people are doing better to mean that the collapse of civilization is getting nearer and thus that prosperity or affluence is the problem. They argue that increases in industrial and agricultural productivity along with the decline in prices for commodities reflect not the growing abundance of resources because of the contribution of technology but the increasing rapidity with which they are exhausted.¹⁹

¹¹Global Footprint Network; online at http://www.footprintnetwork.org/en/index.php/GFN/page/earth_overshoot_day/. This date is confirmed by the World Wildlife Fund. See <http://www.worldwildlife.org/pages/overshoot-day>.

¹²Mathis Wackernagel, Niels B. Schulz, Diana Deumling, Alejandro Callejas Linares, Martin Jenkins, Valerie Kapos, Chad Monfreda et al., "Tracking the ecological overshoot of the human economy," 99 *Proceedings of the National Academy of Sciences* 9266-71 (2002). See also Andrew K. Jorgenson and Thomas Dietz "Economic growth does not reduce the ecological intensity of human well-being," *Sustainability Science* 1-8 (2014).

¹³W.E. Rees and M. Wackernagel, "The Shoe Fits, but the Footprint is larger than Earth," *PLoS Biology* 11 (2013).

¹⁴See, for example, Christopher Stone, *Should Trees Have Standing? And Other Essays on Law, Morals, and the Environment* (1996); J.B. Ruhl, S.E. Kraft, and C.L. Lant, *The Law and Politics of Ecosystem Services* (2007); James Salzman & J.B. Ruhl, Currencies and the Commodification of Environmental Law, 53 *Stan. L. Rev.* 607 (2000).

¹⁵National Environmental Policy Act of 1969, 42 U.S.C. § 4332 (2012).

¹⁶See National Ecosystem Services Partnership, Integration of Ecosystem Services: Valuation Analysis into National Environmental Policy Act Compliance, Legal and Policy Perspectives 6 (2014), available at http://nicholasinstitute.duke.edu/sites/default/files/publications/frmes_lp_1_nepa.pdf.

¹⁷See J.B. Ruhl, Making Nuisance Ecological, 58 *Case W. Res. L. Rev.* 753, 763 (2008).

¹⁸Keith Fuglie and Sun Ling Wang, "New Evidence Points to Robust But Uneven Productivity Growth in Global Agriculture," United States Department of Agriculture Economic Research Service (Sept. 12, 2012), <http://www.ers.usda.gov/amber-waves/2012-september/global-agriculture.aspx#.VBjJtBaCE5w>.

¹⁹Herman E. Daly, *Steady-State Economics: With New Essays* (1991).

Many of those who identify themselves as ecological economists doubt that technology can relieve scarcity. According to one article, “This blind faith in technology may be similar to the situation of the man who fell from a ten-story building, and when passing the second story on the way down, concluded ‘so far so good, so why not continue?’”²⁰ Paul Ehrlich made this same point when he lost his famous bet with Julian Simon about whether the prices of basket of commodities would rise or fall over a decade. “The bet doesn’t mean anything. Julian Simon is like the guy who jumps off the Empire State Building and says how great things are going so far as he passes the 10th floor,” Ehrlich said.²¹

To be sure, the prophecies of the Malthusians of the 1970s failed to materialize on time. In 1970, Paul Ehrlich predicted that global food shortages would cause four billion people to starve to death between 1980 and 1989, 65 million of them in the United States.²² In *The End of Affluence*, Paul and Anne Ehrlich wrote that “before 1985 mankind will enter a genuine age of scarcity in which many things besides energy will be in short supply.”²³ Crucial materials would near depletion during the 1980s, the Ehrlichs predicted, pushing prices out of reach. “Starvation among people will be accompanied by starvation of industries for the materials they require.”²⁴

In a best-selling 1972 study, *The Limits to Growth*, the Club of Rome deployed a computer model that predicted (according to various reviews) that the world would effectively run out most resources by the 1990s, occasioning drastic price increases.²⁵ Similar warnings, representing what may have been the scientific consensus of the time, poured forth in widely-read studies, including *Small is Beautiful* (1971), the *Global 2000 Report* (1980), and the annual *State of the World* reports by Lester Brown and the Worldwatch Institute. The projections of resource depletion, ecological collapse, and with it the end of civilization as we know it were immensely popular especially on university campuses. The direr the prophecy the higher the lecture fee. Skeptics or “contrarians” were shunned.

According to the first way out of the paradox, the dire projections of the 1970s may take longer than was thought to materialize—the building from which we fall may be even more than 103 stories tall but the catastrophe is likely to accelerate and be more calamitous as a consequence. In 2004, a group of leading ecologists and economists ruefully observed, “resource scarcities have not bitten as yet.”²⁶ In *Limits to Growth: the 30-Year Update*, the Club of Rome team renewed its warning “that if a profound correction is not made soon, a crash of some sort is certain. And it will occur within the lifetimes of many who are alive today.”²⁷ In 2014, three scholars used a computer model—the HANDY model—to predict the likelihood of “overshoot/collapse.” They found, as did the Club of Rome four decades earlier, that under “scenarios most closely reflecting the reality of our world today . . . collapse is dif-

²⁰C. Folke, M. Hammer, R. Costanza, A. Jansson, “Investing in natural capital—why, what, and how?” in A. Jansson, M. Hammer, C. Folke, R. Costanza, eds., *Investing in natural capital: the ecological economics approach to sustainability* (1994).

²¹John Tierney, “Betting the Planet,” *New York Times Magazine*, 52 (Dec. 2, 1990).

²²Paul Ehrlich, “Looking backward from 2000 A.D.,” 34 *The Progressive* 23-25 (1970).

²³Paul Ehrlich and Anne Ehrlich, *The End of Affluence* at 33 (1974).

²⁴Id.

²⁵Donella Meadows, et al., *The Limits to Growth: A Report for the Club of Rome’s Project on the Predicament of Mankind* (1972).

²⁶Kenneth Arrow, Partha Dasgupta, Lawrence Goulder, Gretchen Daily, Paul Ehrlich, Geoffrey Heal, Simon Levin et al., “Are we consuming too much?,” *Journal of Economic Perspectives* 147-172 (2004).

²⁷Donella H. Meadows, Jorgen Randers, Dennis L. Meadows, *Limits to Growth: The Thirty-Year Update* at 1 (2004).

ficult to avoid.”²⁸

The belief that ecological Armageddon approaches and that we are deluded if we think otherwise cannot be refuted. Leon Festinger and co-authors explored years ago the ability of faith communities to cling to their certainties in the face of any amount of contrary evidence.²⁹ Once one posits that humanity depends on nature’s stocks and flows, and that these are in fixed supply, catastrophe is not just predicted but it is entailed by these assumptions. What is more, fear-mongering has always been the surest path to support. “The whole aim of practical politics is to keep the populace alarmed (and hence clamorous to be led to safety) by menacing it with an endless series of hobgoblins,” H. L. Mencken wrote.³⁰ One gets the impression that for many environmentalists the collapse of civilization is inevitable, even essential.³¹ Indeed, they would not have it any other way.

As a second approach to explain the environmentalist’s paradox, that is, the apparent correlation of gains in human well-being with losses to the natural environment, Raudsepp-Hearne and co-authors hypothesize that “ecosystem degradation does not affect human well-being because human ingenuity has decoupled us from our dependence on ecosystems.”³² To put the same point differently, advances in knowledge and in know-how, or in the application of knowledge to knowledge, continue to cut the causal bonds that at in earlier era tied human well-being to ecological systems. While many environmentalists insist that the integrity of ecological systems is the source of human well-being, a group calling themselves “ecomodernists” believe that the causal arrow could also point in the opposite direction.³³ When people have the advantages of the rule of law, access to trade, education, and improvements in transportation, energy efficiency, communication, biotechnology, and so on, they become wealthier. Ecomodernists believe that societies with these advantages can and should devote some of their wealth to placing nature outside the economy as an object of appreciation and contemplation rather than of use.

The economic theory of ecomodernism fits within the four corners of the neoclassical macroeconomics developed in the 1960s and 1970s by William Nordhaus, Robert Solow, and James Tobin, among other mainstream economists.³⁴ Solow wrote that “[h]igher and rising prices of exhaustible resources lead competing producers to

²⁸Safa Motesharrei, Jorge Rivas, and Eugenia Kalnay, “Human and Nature Dynamics (HANDY): Modeling inequality and use of resources in the collapse or sustainability of societies,” 101 *Ecological Economics* 90-102 (2014).

²⁹Leon Festinger, Henry W. Riecken, and Stanley Schachter, *When prophecy fails* (2013). [First published in 1956.]

³⁰H. L. Mencken, *Mencken Chrestomathy: His Own Selection of His Choicest Writing* at 29 (1982).

³¹Robert Solow has shown that the collapse of civilization is a necessary or essential consequence of the basic assumption that characterized the environmental movement of the time:

The basic assumption is that stocks of things like the world’s natural resources and the waste-disposal capacity of the environment are finite, that the world economy tends to consume the stock at an increasing rate (through the mining of minerals and the production of goods) . . . You hardly need a giant computer to tell you that a system with those behavior rules is going to bounce off its ceiling and collapse to a low level. . . . Imagine that the stock of natural resources were actually twice as big as the best current evidence suggests, or imagine that the annual amount of pollution could be halved all at once and then set to growing again. All that would happen is that the date of collapse would be postponed by T years, where T is not a large number. But once you grasp the quite simple essence of the models, this should come as no surprise. Robert M. Solow, “Is the End of the World at Hand?” *Challenge* 39-50 (1973).

³²Id. at 581.

³³See “An Ecomodernist Manifesto” at <http://www.ecomodernism.org>.

³⁴See, for example, William D. Nordhaus, *Invention, growth, and welfare: A theoretical treatment of technological change* (1969) and William D. Nordhaus and James Tobin, “Is growth obsolete?” in 5 *Economic Research: Retrospect and Prospect*, 1-80 (1972). Note that while ecomodernism can be situ-

substitute other materials that are more plentiful and therefore cheaper.” Solow observed that there have been and “there will be prolonged and substantial reductions in natural-resource requirements per unit of real output.” He asked, “Why shouldn’t the productivity of most natural resources rise more or less steadily through time, like the productivity of labor?”³⁵

Political economists Arnold King and Nick Schulz have written:

Economics 1.0 is about scarcity. To understand what we mean by that, consider that textbooks define economic as the study of the allocation of scarce resources among competing ends. So if a society wants to produce more guns, then it will have less labor, land, and equipment with which to produce butter. . . .

Economics 2.0 is about abundance, which arises from technical progress. Maybe there’s no free lunch, as the saying goes; but we do not have to work nearly as hard to put food on the table as we used to. Just two hundred years ago, over half of all Americans worked in agriculture. Today, the figure is less than two percent. Sixty years ago, a social studies teacher looking for a movie that would motivate students to sympathize with the plight of the unfortunate in America might have chosen “The Grapes of Wrath.” Today, it would be “Supersize Me.”³⁶

Ecomodernists, following mainstream macroeconomists, suggest in the spirit of Hans Bethe that ultimately there are only three resources: matter, energy, and ingenuity. Only the third of these is scarce. To the extent there are fixed bio-physical boundaries, they are so theoretical as to be functionally irrelevant.³⁷

More important is the primary productivity of the planet. Primary productivity—the amount of biomass the earth produces—is not fixed but is often the product of biotechnology. In industrial agriculture, for instance, ecosystem services play some role in maintaining productive soils, pollination in certain crops, pest control, and stable provision of clean water. The vast majority of the value of the output—food—is nonetheless accounted for by technology in the form of machines, synthetic fertilizers, purposely bred or genetically modified crop varieties, pesticides, irrigation systems, and so forth. If anything, agricultural productivity has increased as a result of deliberate simplification and sometimes even the outright elimination of ecosystem influences.³⁸ Increased food production in the past five decades—even in the past 10,000 years—has come about not as a result of increased provision of ecosystem services but as a result of the increased application of human technology.

Aquaculture presents a telling example of the substitution of industrial for natural means of production. A U.N. FAO report explains that “in the last three decades

ated in a way in the tradition of neoclassical macroeconomics, it has nothing whatsoever to do with neoclassical microeconomics or welfare economics and its pre-Coasian or Pigouvian infatuation with concepts of market failure, externality, willingness-to-pay, and all that. In other words, ecomodernism is concerned with the production frontier not with the Pareto frontier. For an excellent analysis of why only the former matters, see Guido Calabresi, “The pointlessness of Pareto: carrying Coase further,” *Yale L. J.* 1211-1237 (1991).

³⁵Robert M. Solow, “Is the End of the World at Hand?” in Andrew Weintraub, Eli Schwartz, and J. Richard Aronson, eds., *The Economic Growth Controversy* at 49 (1973).

³⁶Arnold S. Kling and Nick Schulz, *From Poverty to Prosperity: Intangible Assets, Hidden Liabilities and the Lasting Triumph Over Scarcity* (2009).

³⁷Herman Daly, who opposes the ecomodernist position, caricatures it in a way that does reveal its metaphysics. According to this caricature, “Useful structure is added to matter/energy (natural resource flows) by the agency of labor and capital stocks. That to which value is added is therefore inert, undifferentiated, interchangeable, and superabundant—very dull stuff indeed, compared to the value-adding agents of labor with all its human capacities, and capital that embodies the marvels of human knowledge.” Herman E. Daly “Consumption and welfare: two views of value added,” 53 *Review of Social Economy* 451-73 (1995).

³⁸Erle C. Ellis, “Anthropogenic transformation of the terrestrial biosphere,” 369 *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 1010-1035 (2011). See also E. Boserup, *The Conditions of Agricultural Growth* (1965).

(1980-2010), world food fish production of aquaculture has expanded by almost 12 times, at an average annual rate of 8.8 percent.”³⁹ Largely because of aquaculture, “World per capita food fish supply increased from an average of 9.9 kg (live weight equivalent) in the 1960s to 18.4 kg in 2009.” The report adds that “world aquaculture production in 2010 was 79 million tonnes, worth US\$125 billion.” In comparison, “Global recorded production [of wild marine fisheries] was 77.4 million tonnes in 2010.” According to the World Bank, “Aquaculture—or fish farming—will provide close to two thirds of global food fish consumption by 2030 as catches from wild capture fisheries level off.”⁴⁰ The pace at which aquaculture will underprice and outcompete capture fisheries, however, may depend on the further advances in biotechnology, for example, the rapidity with which biotechnologists can engineer or synthesize microbes able to convert cheap biomass into fish food.

Silviculture tells the same story. According to a recent account, “In the future the majority of wood will come from managed planted forests (plantations) and dependence on natural forests will decline. . . . Already 50 % of the entire world’s wood fibre comes from planted eucalyptus forests.”⁴¹ Biotechnology and genetic engineering have transformed and will continue to transform the commercial production of saw wood and wood fiber, offering such amazing feats as the restoration of heritage trees such as the American Chestnut.⁴²

Ecomodernists are plainly technological optimists, but we believe we must be for two reasons. The first is environmental; we believe that by making more intensive use of nature in some places, societies can ease the economic burden on the natural world in other places. This is the aesthetic or cultural purpose of decoupling economic production from ecological services. The second reason is moral. We believe that further advances in science and technology, particularly energy technology and biotechnology, are necessary to meet the aspirations of people in the developing world.

In the past, environmentalism has been associated with the belief that poverty, misery, and starvation in the developing world were necessitated by planetary limits that restrict the production of food and other goods. The message of environmentalism seems to have been, “If billions of people must starve, *why not them?*” This has been a brutal mistake because by identifying the limits nature sets as the causes of famine and other misfortunes, environmentalists deflected attention from the true sources of impoverishment, which involve political oppression, the lack of access to trade and information, and in general man’s inhumanity to man.

Unfortunately environmentalism in the 1970s had become an expression of that inhumanity. This has possibly contributed to public suspicion of environmental

³⁹Food and Agriculture Organization of the United Nations, “State of World Fisheries and Aquaculture 2012” (2012).

⁴⁰World Bank, *Fish to 2030: Prospects for Fisheries and Aquaculture* (Agriculture and Environmental Services Discussion Paper No. 3) (2013).

⁴¹Barry Gardiner and John Moore, *Challenges and Opportunities for the World’s Forests in the 21st Century* at 677-704 (2014). See also, FAO, *Global Forest Resources Assessment 2010: Main Report* (2010), available at <http://www.fao.org/forestry/fra/fra2010/en/>; and R.A. Sedjo, “The potential of high-yield plantation forestry for meeting timber needs,” 17 *New Forest* 339-359 (1999).

⁴²Douglass F. Jacobs, Harmony J. Dagleish, and C. Dana Nelson. “A conceptual framework for restoration of threatened plants: the effective model of American chestnut (*Castanea dentata*) reintroduction.” 197 *New Phytologist* 378-93 (2013). For a more popular account, see Rebecca Rosen, “Genetically Engineering an Icon: Can Biotech Bring the Chestnut Back to America’s Forests?,” *Atlantic* (May 31, 2013). For an overview of silvicultural biotechnology, see Hely Häggman, Alan Raybould, Aluizio Borem, Thomas Fox, Levis Handley, Magnus Hertzberg, Meng-Zu Lu et al. “Genetically engineered trees for plantation forests: key considerations for environmental risk assessment,” 11 *Plant Biotechnology Journal* 785-98 (2013).

statutes and the agencies that enforce them. The Malthusian approach, as Amartya Sen has written, leads to complacency because food production at the global level is and has been more than adequate. With such “misleading variables as food output per unit of population, the Malthusian approach profoundly misspecifies the problems facing the poor of the world,” which have to do with local conditions not with global constraints. Malthusianism, by misidentifying the causes of privation, “has actually killed millions of people,” according to Sen.⁴³

§ 5:29 Four obstacles to implementing a land ethic

In the United States, those who seek to protect the “the integrity, stability, and beauty of the biotic community” have confronted at least four obstacles to translating this “land ethic” into a legal and moral basis for regulation. First, Under Article III of the Constitution, as construed by the Supreme Court, no citizen has standing—the legal ability—to sue on behalf of the environment or to rectify harm to the environment *per se*. “The relevant showing for purposes of Article III standing . . . is not injury to the environment but injury to the plaintiff.”¹ Insofar as environmental law is construed as an extension of the common law of nuisance, it protects individuals—and the environment only indirectly—from injury. One commentator notes: “Under this formulation, the environment is relegated to a subordinate role within environmental jurisprudence. . . . The Court’s elevation of the plaintiff at the expense of the environment effectively turns the citizen suit provision into an extension of nuisance law.”²

Unlike the right to due process, the separation of church and state, or freedom of speech, environmental protection has no constitutional basis but must tag along under a broad reading of the Commerce Clause.³ An attempt during the 1970s by legal theorists and philosophers to provide an alternative framework that endows natural objects with legal or moral rights went nowhere; it could not provide a basis for making policy or for resolving disputes.⁴ Not since a famous dissent in 1972 by William Douglas has a Supreme Court Justice proposed a legal theory that makes the environment or nature itself an object of protection.⁵ Many commentators suggest that as a result, environmental protection has largely ceased to exist as a distinct field of law, as cases are settled on the basis of principles and precedents found in property, natural resource, wildlife, nuisance, and other areas of jurisprudence.⁶

Second, the concept of “harm to the environment” defies definition. Any change to

⁴³Amartya Sen, *Resources, Values and Development* at 524 (1984); see also Jean Dreze and Amartya Sen, *Hunger and Public Action* at 26-28 (1989).

[Section 5:29]

¹*Friends of the Earth, Inc. v. Laidlaw Env'tl. Servs. (TOC), Inc.*, 528 U.S. 167, 181, 120 S. Ct. 693 (2000).

²David N. Cassuto, *The Law of Words: Standing, Environment, and Other Contested Terms*, 28 *Harv. Env'tl. L. Rev.* 79, 93-94 (2004).

³For a survey of the extent of judicial willingness to accommodate environmental law by stretching the concept of the regulation of interstate commerce, see, e.g., Sam Saad, *Commerce Clause Jurisprudence: Has There Been a Change?*, 23 *J. Land Resources, & Env'tl. L.* 143 (2003).

⁴A. Dan Tarlock, *Is There a There There in Environmental Law?*, 19 *J. Land Use & Env'tl. L.* 213, 242 (2004), points out, “Even Leopold’s most passionate defenders recognize that the whole ‘project’ of environmental ethics has not succeeded in creating a convincing case for non-human rights and in developing substantive rules which are capable of making the inevitable choices among competing resource use options.”

⁵*Sierra Club v. Morton*, 405 U.S. 727, 741, 92 S. Ct. 1361 (1972) (Douglas, J., dissenting).

⁶“An environmental lawyer is likely to find the most important, most relevant precedent elsewhere, precisely because it is elsewhere.” Richard J. Lazarus, *Thirty Years of Environmental*

nature—even changes necessary for human survival—could be said to alter its spontaneous course and in that sense to “harm” it. Environmentalists associated with academic disciplines such as ecological economics, conservation biology, and ecology have sought to identify a level of organization in ecological communities and to argue that a flow of valuable economic services requires the protection of the integrity of these natural systems.⁷ While attributions of economic services to natural systems may argue against developing landscapes in particularly destructive or wasteful ways, they have not yet succeeded in providing a legal or political basis for preserving wild or natural areas.

Third, it seems undeniable that what John Muir wanted to preserve—nature direct from the hand of the Creator—has already been lost, if it even existed. Before Europeans arrived, aboriginal Americans, as environmental historians have shown, had transformed the landscape.⁸ Human-induced global changes, such as global warming and invasive species, have dramatically altered the ecological character of the most protected places. Nature, to be preserved, has to be maintained according to scientific protocols as to what may be “natural”—and this demands that scientists somehow determine which creatures to countenance as “native” and what to do about all the others; whether, when, and how to suppress forest fires, to re-introduce wolves and other predators, to combat invasive species, to manage “wild” populations that exceed carrying capacity, to allow hatchery-based fish, and so on. There may be no ecologically meaningful “baseline” at which the environment is “natural” because it is sufficiently cleansed of human influence.⁹

Fourth, economies develop by transforming the natural world by converting savannas to cities, forests to farms, meadows to malls, fields to factories, Arcadias to arcades, cozy copses to college campuses, dells to delis, and so on. Economic interests in development tend to trump aesthetic and spiritual motives that inspire preservation. As Richard Lazarus has written, “environmental interests are often not economic in character at all, but are instead based on a different moral vision regarding the proper relationship between humankind and the natural environment.”¹⁰ As a result, economic arguments for the protection of nature are often academic, abstract, and pretextual, while real-world economic interests exist contribute to the coffers of those who promote development.

For example, actions undertaken under the Endangered Species Act of 1973 (ESA), while popular in principle, have met ferocious political opposition in practice. Property owners vowed to “shoot, shovel, and shut up”—in other words, quickly to

Protection Law in the Supreme Court, 19 *Pace Env'tl. L. Rev.* 619, 633 (2002). In a series of articles, Lazarus shows by a detailed analysis of judicial opinions that the Supreme Court has stripped the concept of the environment from environmental law. *See also* Richard J. Lazarus, *Restoring What's Environmental About Environmental Law in the Supreme Court*, 47 *UCLA L. Rev.* 703-72 (Feb. 2000).

⁷*See, e.g.*, *Nature's Services: Societal Dependence on Natural Ecosystems* (Gretchen C. Daily ed., Washington, D.C.: Island Press 1997). *See also* A. Balmford et al., *Economic Reasons for Conserving Wild Nature*, 297 *Science* 950-53 (2002).

⁸*See, e.g.*, William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (20th anniversary edition, Hill & Wang, 2003).

⁹This point has been made many times. *See, e.g.*, G.P. Marsh, *Man and Nature: Or, Physical Geography as Modified by Human Action* (D. Lowenthal ed., Cambridge, MA: Harvard University Press, 1864, 1965); A.M. Riabchikov, *The Changing Face of the Earth: The Structure and Dynamics of the Geosphere, Its Natural Development and the Changes Caused by Man* (John Williams trans., Moscow: Progress Publishers 1975); Bill McKibben, *The End of Nature* (New York: Random House, 1989); Charles Mann, 1491, *The Atlantic Monthly*, Mar. 2000, at 41-53.

¹⁰Richard J. Lazarus, *The Making of Environmental Law* 40-41 (Chicago: University of Chicago Press, 2004).

rid their property of endangered species habitat before it could be discovered.¹¹ Rather than to allow the ESA to serve as an incentive to landowners to sanitize their property, the government has often failed to list species and has centered protection on publicly owned lands. Hard political experience led federal officials to design Habitat Conservation Plans to accommodate politically powerful owners of private property.¹²

Unlike the Civil Rights movement, the movement for environmental quality does not draw on a fundamental constitutional set of protections or build on a traditional political theory.¹³ Courts rarely take the aspirations of environmental stewardship seriously. Environmental lawyers often found that the best they could do was to negotiate settlements and “paper” transactions.¹⁴ By rebuffing the Kyoto protocol and other international “green” initiatives, moreover, Republican administrations added to the frustration of environmentalists. The remarkable reversal of political fortunes that came with the 2008 elections at once creates great opportunities for environmentalists to make progress but also great dangers if programs and policies become disruptive and cause a backlash.

§ 5:30 The concept of an ecological nuisance

To revitalize environmental law during the Obama administration—and to make it more relevant to ecological values and risks—many environmental advocates draw an analogy between prohibiting ecological losses, such as the extinction of a species, and preventing a public nuisance.¹ (The appeal to the concept of nuisance allows an exception to the demand for compensation for a “regulatory taking” under the Fifth Amendment of the Constitution.)² Professor Oliver Houck, for example, has argued that endangered species are “indicators of the health of the ecosystems

¹¹For discussion of the “shoot, shovel, and shut up” phenomenon among other political and constitutional constraints on the ESA, see, e.g., Mark Sagoff, *Muddle or Muddle Through? Takings Jurisprudence Meets the Endangered Species Act*, 38 Wm. & Mary L. Rev. 825 (1997).

¹²Interior Secretary Bruce Babbitt said, “We will continue to aggressively pursue a variety of reforms to make the [Endangered Species] Act less onerous on private landowners.” Secretary Babbitt Welcomes “Common Sense” Action of Supreme Court Species Ruling; Says It Will Not Alter His Flexibility Push, News Release, U.S. Dep’t of Interior, Office of the Secretary, 1995 WL 386054, at *1 (June 29, 1995) (quoting Secretary Babbitt). For a good survey of federal restraint in applying the ESA on private land, see J.B. Ruhl, *Biodiversity Conservation and the Ever-Expanding Web of Federal Laws Regulating Nonfederal Lands: Time for Something Completely Different?*, 66 U. Colo. L. Rev. 555 (1995).

¹³“Environmental law lacks a constitutional foundation because the distinctive features of it do not draw upon the philosophical, religious, and jurisprudential bases of the constitution, all of which are rooted in the enhancement of human dignity.” A. Dan Tarlock, *Is There a There There in Environmental Law?*, 19 J. Land Use & Envtl. L. 213, 224 (2004).

¹⁴Several analyses have noticed that negotiation and stakeholder negotiation has begun to supplant public law in environmental policy. This may indicate a profound shift from the regulatory to the “contracting” state. See, e.g., Jody Freeman, *The Contracting State*, 28 Fla. St. U. L. Rev. 155 (2000); Bradley C. Karkkainen, *Collaborative Ecosystem Governance: Scale, Complexity and Dynamism*, 21 Va. Envtl. L.J. 189 (2002). See generally Matthew A. Crenson & Benjamin Ginsburg, *Downsizing Democracy: How America Sidelined Its Citizens and Privatized Its Public* (2002).

[Section 5:30]

¹See, e.g., Hunter, *An Ecological Perspective on Property: A Call for Judicial Protection of the Public’s Interest in Environmentally Critical Resources*, 12 Harv. Envtl. L. Rev. 311, 323–24 (1988).

²See Meltz, *Where the Wild Things Are: The Endangered Species Act and Private Property*, 24 Envtl. L. 369 (1994); Shaheen, *Comment, The Endangered Species Act: Inadequate Species Protection in the Wake of the Destruction of Private Property Rights*, 55 Ohio St. L.J. 453 (1994). The Takings Clause states that “private property [shall not] be taken for public use, without just compensation.” U.S. Const. amend. V. The principle behind the nuisance exemption, as Professor Frank Michelman has formulated it “is that compensation is required when the public helps itself to good at private expense, but not when the public simply requires one of its members to stop making a nuisance of

that they inhabit.”³ Houck believes “that the protection of these species should trump private property rights in the same way that other indicators of pollution do: No one, no matter what one owns, has the right to go too far.”⁴

More generally, many environmentalists today seek to reinvigorate common law concepts such as that of a public nuisance to strengthen state power to restrict land use not just to preserve endangered species but to protect ecological goods and services more generally. Professor J.B. Ruhl in a recent article asserts his interest “in advancing the broad integration of natural capital and ecosystem service values into environmental decision making, only one implication of which may be to shrink the scope of categorical takings.”⁵ Ruhl observes that a growing interest in attaching economic values to “natural capital” and ecosystem services “has spawned a cottage industry in environmental law circles examining how nuisance and other common law property doctrines might develop toward more ecologically-minded values so as to deflect regulatory takings claims lodged against applications of ecologically-minded statutes.”⁶

Houck and Ruhl among other environmental lawyers seek to build a case for a “public nuisance” approach to the protection of the natural world to create a basis for stringent governmental control of those uses of property that may undermine natural processes but not affect any individual sufficiently to trigger a private action in tort.⁷ The longer than 800-year history of nuisance law provides the most straightforward justification for environmental protection when it aggregates what would otherwise be myriad actions in private law, that is, when the demand for regulation is rooted conceptually in the demands of private litigants rather than the expertise or authority of lawmakers. As one analyst has written, “private nuisance law raises fewer concerns than public nuisance law because private nuisance law depends upon the harms suffered by discrete landowners while public nuisance law invites speculation into the nature of the rights of the general public.”⁸

A lively debate has arisen between two groups who differ over the ethical basis of laws that protect instrumentally valuable aspects of the natural world—natural capital and ecosystem services—but that might not engage the interests of specific property owners to ground actions of private litigants. On the one side, legal scholars such as Christine Klein and Eric Freyfogle advocate a new theory of nuisance that expands the idea of externality to include a wide range of assaults on the natural

himself.” Michelman, *Property, Utility, and Fairness: Comments on the Ethical Foundations of ‘Just Compensation’ Law*, 80 Harv. L. Rev. 1165, 1196 (1967).

³Houck, *Why Do We Protect Endangered Species, and What Does That Say About Whether Restrictions on Private Property To Protect Them Constitute “Takings”?*, 80 Iowa L. Rev. 297, 302 (1995).

⁴Houck, *Why Do We Protect Endangered Species, and What Does That Say About Whether Restrictions on Private Property To Protect Them Constitute “Takings”?*, 80 Iowa L. Rev. 297, 302 (1995).

⁵Ruhl, *Common Law Environmental Protection: Making Nuisance Ecological*, 58 Case W. Res. 753, 760.

⁶Ruhl, *Common Law Environmental Protection: Making Nuisance Ecological*, 58 Case W. Res. 753, 760.

⁷The literature discussing a “public nuisance” standard for protecting ecosystem services and natural capital includes Klass, *Adverse Possession and Conservation: Expanding Traditional Notions of Use and Possession*, 77 U. Colo. L. Rev. 283 (2006) (discussing how adverse possession laws protect conservation practices); Ruhl, Kraft & Lant, *The Law and Policy of Ecosystem Services* (2007); Ruhl & Salzman, *The Law and Policy Beginnings of Ecosystem Services*, 22 J. Land Use & Envtl. L. 157 (2007); and Salzman, *Symposium: The Ecosystem Approach: New Departures for Land and Water: Review Essay: Valuing Ecosystem Services*, 24 Ecology L.Q. 887 (1997).

⁸Copeland Nagle *Symposium: Common Law Environmental Protection: From Swamp Drainage to Wetlands Regulation to Ecological Nuisances to Environmental Ethics*, 58 Case W. Res. 787, 801.

world, from filling wetlands to emitting gases that cause global warming.⁹ According to this group of scholars, “The essential premise of much environmental law is . . . that the physical characteristics of the ecosystem generate spatial and temporal spillovers that require restrictions on the private use of natural resources far beyond those contemplated by centuries-old common law tort rules.”¹⁰

On the other side, critics such as James Huffman believe that the economic use of private property reflects a right that is limited by the need to respect the similar right of others—principally, by liability in common law. He argues, “The genius of the common law rests in its derivation from the customs and practices of everyday life, not in the creativity of judges.”¹¹ Similarly, Todd Zywicki voices doubts about regulations that greatly restrict property rights to pursue the latest views of new disciplines such as ecological economics. The requirement that compensation be paid to the landowner functions primarily to preserve liberty. To be sure, liberty must respect social norms and shared expectations about what one person owes another—but these expectations are found in the ongoing cultural order of a society not in any social, ecological, or economic science. In devising a “nuisance” exception to the “just compensation” requirement, “the judge is little more than an expert trained in articulating the tacit beliefs and expectations that undergird the ongoing order of the community.”¹²

Each side in this debate appeals to appeals to the interconnectedness of the “nature” it values, whether it is the integrity of ecological systems or the integrity of personal freedoms and property rights. On the one side, many environmentalists propose that everything in the ecosystem is connected. As Barry Commoner summarized this view, “The more complex the ecosystem, the more successfully it can resist a stress . . . Like a net, in which each knot is connected to others by several strands, such a fabric can resist collapse better than a simple, unbranched circle of threads—which if cut anywhere breaks down as a whole.”¹³ According to this principle, the destruction of habitat on private land injures the public, and thus regulations protecting habitat, natural capital, and ecosystem services may be subsumed under the nuisance exemption to the Takings Clause of the Constitution. Michael Bean, a respected authority on wildlife law, has suggested that “restrictions aimed at protecting endangered wildlife are designed to keep the exercise of one property right (the landowner’s) from destroying another property right (the public’s).”¹⁴ Environmentalists are likely to applaud Justice Kennedy’s assertion that the “com-

⁹Klein, *The New Nuisance: An Antidote to Wetland Loss, Sprawl, and Global Warming*, 48 B. C. L. Rev. 1155 (2007). Freyfogle, *The Land We Share: Private Property and the Common Good* (2003).

¹⁰Lazarus, *The Making of Environmental Law* 121 (2004).

¹¹Huffman, *Background Principles and the Rule of Law: Fifteen Years after Lucas*, 35 Ecology L.Q. 1, 21 (2008).

¹²Zywicki, *A Unanimity-Reinforcing Model of Efficiency in the Common Law: An Institutional Comparison of Common Law and Legislative Solutions to Large-Number Externality Problems*, 46 Case W. Res. L. Rev. 961, 991 (1996).

¹³See Commoner, *The Closing Circle: Nature, Man, and Technology* 44 (1971). Commoner adds [A]ll this results from a simple fact about ecosystems—everything is connected to everything else: the system is stabilized by its dynamic self-compensating properties; that these same properties, if overstressed, can lead to a dramatic collapse; the complexity of the ecological network . . . determine[s] how much it can be stressed . . . without collapsing . . .” (pp. 34–35).

¹⁴Bean, *Taking Stock: The Endangered Species Act in the Eye of a Growing Storm*, 13 Pub. Land L. Rev. 77, 83 (1992) (noting that “[t]o date, American courts have not embraced the view that the Fifth Amendment protects a private right to destroy a publicly owned resource, nor could they without abandoning long settled principles”). Another commentator has described the legal basis of the assertion of public ownership rights in wildlife. Houck, *Why Do We Protect Endangered Species, and What Does That Say About Whether Restrictions on Private Property To Protect Them Constitute “Takings”?*, 80 Iowa L. Rev. 297, 311 (1995). Houck has noted that “Supreme Court opinions have characterized state ‘ownership’ of wildlife as a ‘legal fiction’ expressing the ‘importance to its people that a State have

mon law of nuisance is too narrow a confine for the exercise of regulatory power in a complex and interdependent society.”¹⁵

On the other side, many legal and political theorists who represent a Libertarian tradition see the essential problem as that of protecting the integrity of the rights of person and property. For them, the threat posed by the government to the liberty of the individual is far more worrisome than the threat posed by the landowner to the services of the ecosystem. As Richard Epstein has written, liberty and property are naturally inseparable. “A nation in which private property is protected contains independent, decentralized sources of power that can be used against the state, reducing thereby the possibility that any group will be able to seize control over the sources of information or the levers of political power.”¹⁶ Epstein summarized: “Property is defensive, not exploitive.”¹⁷

In asserting that property rights are inextricably connected to civil and political liberties, Epstein follows F.A. Hayek’s view that “the system of private property is the most important guarantee of freedom, not only for those who own property, but scarcely less for those who do not.”¹⁸ From this premise it is supposed to follow as a matter of moral and constitutional principle that when the government, for any purpose other than to prevent a harm that would be considered a nuisance at common law, limits the use of private property, for example, to provide “wildlife habitat or some other ‘public good, compensation should be paid.”¹⁹ Certainly, the government has the power of eminent domain to dedicate private land to public uses,²⁰ such as to maintain a natural commons or a refuge for wildlife. Those like Epstein who take property rights to be continuous with civil liberty generally believe the government must compensate landowners for the economic losses they bear when they lose the right to develop their property in ways that are not anti-social by typically permitted at common law. Which side in the debate one favors may depend on which risk one believes is greater. Those who seek to expand government power to regulate ecological risks as public nuisances see a great danger in the expansion of the economy at the expense of ecological stability and integrity. Those who seek to limit the power of the government to regulate only those risks that have some basis in a conception of private nuisance see a greater danger in the expansion of the government at the expense of personal liberty and autonomy.

Environmental statutes since 1969 have rested largely on the legal foundation of the common law of nuisance. The many successes of environmental regulation have been won primarily by policies of controlling the gross emissions of industrial and municipal polluters and of reducing less visible and often unquantifiable risks, for example, from small amounts of carcinogenic substances. Environmental science could usually identify the causes and consequences of gross emissions and effluents; scientists came to accept the importance of social, ethical, and other judgments in assessing and managing more chronic and less demonstrable dangers. Other areas of environmental law, such as the protection of wildlife, the control of land use to maintain water quality, the preservation of species, and the protection of wild and scenic places came to be understood in terms of distributional problems to be

power to preserve and regulate the exploitation of an important resource’.” *Id.* (quoting *Douglas v. Seafood Prods., Inc.*, 431 U.S. 265, 284 (1976) (citing *Toomer v. Witsel*, 334 U.S. 385, 402 (1948))).

¹⁵*Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1035 (1992) (Kennedy, J., concurring in the judgment).

¹⁶See Epstein, *Takings: Private Property and the Power of Eminent Domain* 138 (1985).

¹⁷Epstein, *Takings: Private Property and the Power of Eminent Domain* 138 (1985).

¹⁸Hayek, *The Road to Serfdom* 103–04 (15th ed. 1944).

¹⁹Adler, *Property Rights, Regulatory Takings, and Environmental Protection*, *Competitive Enterprise Inst.*, at 12 (Apr. 1996).

²⁰See, e.g., *U.S. v. Jones*, 109 U.S. 513 (1883).

adjudicated under established and familiar precedents in property, land-use, wildlife, and natural resources law. In the first decade of the 21st Century, especially in the shadow of the administration of President G.W. Bush, commentators wrote obituaries for environmentalism.²¹ Legal analysts have argued that environmental law has virtually disappeared as a distinct form of jurisprudence—or of professional interest—and the natural environment per se has lost most of whatever presence it might have had as an object of legal protection.²²

The public celebration that followed the reported rediscovery in eastern Arkansas of the Ivory-billed Woodpecker in 2005 suggests that Americans may still possess the values that in 1970 led 20 million of them to celebrate the first Earth Day. At the same time, the goal of protecting the natural environment—the “green” rather than “brown” project of environmental policy—remains inchoate. A rebirth of environmentalism will have to identify moral, spiritual, and aesthetic reasons or motives for keeping nature “natural” and for understanding what such a goal might entail at a time when humanity dominates nearly every ecosystem. The problem is to see how the underlying principles of environment law might shape an emerging effort to preserve and restore the spontaneous course of the natural world. The aesthetic, spiritual, ethical, and economic arguments for protecting the environment from human beings are only now being advanced and tested, even as a general consensus has become established about the reasons to protect human beings from the environment.

§ 5:31 A Look Ahead

Since the 1960s, it has been commonplace to see the economy as the problem for the environment. Economic activity, according to this perspective, degraded natural ecosystems, depleted natural resources, damaged human health, and defiled the water and the air. On this view regulation serves as a prophylactic on markets by keeping them from doing their worst. Economic activity is seen as a necessary evil—agriculture would be an example—that results from the exclusion of humanity from the Garden of Eden. The moral imperative, then, lies in maximizing the economic benefits of markets while minimizing the social costs.

It is fair to say this way of sizing up the situation is now intellectually exhausted. It is defunct. One proof is that cost-benefit analysis, thought to be the cornerstone of environmental policy making, has in fact had little or no influence on it. An important commentary by the environmental economist Robert Hahn makes this point. He has written, “The relationship between analysis and policy decisions is tenuous.”²¹ He added, “There is little evidence that economic analysis of regulatory decisions has had a substantial positive impact,” and argued that “the poor quality of analysis can help explain some of this ineffectiveness.”²²

But the poor quality of much cost-benefit analysis is arguably a function of the

²¹An influential paper to this effect is Michael Shellenberger and Tom Nordhaus, *The Death of Environmentalism. Global Warming Politics in a Post-Environmental World* (Pamphlet published by the Breakthrough Institute 2004), available at http://www.thebreakthrough.org/images/Death_of_Environmentalism.pdf and <http://www.grist.org/news/maindish/2005/01/13/doe-reprint/>.

²²Richard J. Lazarus, *Restoring What's Environmental About Environmental Law in the Supreme Court*, 47 UCLA L. Rev. 703, 706 (2000) (arguing that the Supreme Court regards environmental law as “merely an incidental factual context” and that the justices “have become increasingly skeptical over time” about the environment as a distinct object for protection).

[Section 5:31]

¹Robert W. Hahn, “An Evaluation of Government Efforts to Improve Regulatory Decision Making,” *International Review of Environmental and Resource Economics*, 2009, 3:245–298; at p. 245.

²Robert W. Hahn, “An Evaluation of Government Efforts to Improve Regulatory Decision Making,” *International Review of Environmental and Resource Economics*, 2009, 3:245–298; at p. 250.

fact that cost-benefit arguments are mostly invoked as a *façon de parler* to justify any sought-for governmental intervention. Advocates and policy makers, to borrow an old saw, use CBA like a drunk uses a lamppost: for support, not illumination. After Congressional committees, administrative agencies, and the courts tear through them, the political battles that CBA is supposed to inform are settled in terms of liability, responsibility, authority, and legality—not welfare maximization.

If CBA lacks an intellectual and legal basis and has only a tenuous regulatory effect, why is it done? One reason is that so many people can do it. As law professor Duncan Kennedy has explained, CBA or the compensation test it implies is “just as open to alternating liberal and conservative ideological manipulation” as is the political deliberation it is supposed to displace. However bad or mistaken cost-benefit accounting may be, it has a centrist effect, “supportive of liberalism and conservatism together, seen as a bloc in opposition to more left and right wing positions.” In other words, by engaging in CBA, experts form a scientific “centrist bloc” that agrees on “moderation, statism, and rationalism.”³

To say that the environment-vs.-economy model is defunct is also to say that CBA has lost its role even as a *façon de parler*. This is the essential message of the letter from Cass Sunstein to Lisa Jackson with which this Chapter began. To replace the Pigouvian or Paretian conceptual framework of CBA, neo-environmentalists or ecomodernists may propose a Hayekian or Austrian view of market activity. On this view, markets are more conduits of information—typically expressed in prices—than kinds of conflict or competition. Regulation is always necessary and appropriate to protect the rights of person and property—as in the form of common law (private law) and the statutes (public law) that do the work of common law on a larger scale to deal, for example, with the problem of mass torts. The basic role of government, however, is to act not as a prophylactic on markets but as a proponent of technological change. The answer to environmental problems is not always regulation but more often innovation. And technological innovation is what markets—especially if incentivized by government—do best.

The letter of environmental law has changed little since the 1990 Amendments to the Clean Air Act. Congress has been at such a standstill that it has hardly altered the statutory landscape since then. The spirit of environmental law, however, is always evolving. Courts, regulatory agencies, political forces and private actors work to make environmental law and policy a creative process. Yet this process continues to serve two overarching goals. First, it seeks to protect person and property from the harm and trespass involved in pollution at least to minimize that intrusions insofar as economic and technological realities allow. Second, it seeks to preserve and sustain a flourishing natural world that allows us to present the possibility of beauty and wonder and a sense of respect for the rest of the living world.

³Duncan Kennedy, *Law and Economics from the Perspective of Critical Legal Studies*, in *The New Palgrave Dictionary of Economics and the Law* edited by Peter Newman, Macmillan Reference Ltd., 1998.

Chapter 6

Basic Economic and Analytical Tools and Their Application in Environmental Analysis*

I. INTRODUCTION

§ 6:1 In general

II. DISCOUNTING AND NET PRESENT VALUE

§ 6:2 In general

§ 6:3 The mechanics of discounting

§ 6:4 —The one-period discounting problem

§ 6:5 —The multi-period discounting problem

§ 6:6 — —Estimating the present value of the first payment

§ 6:7 — —Estimating the present value of later payments

§ 6:8 — —Examining the solution

§ 6:9 —Competing multi-period investment alternatives

§ 6:10 —Perpetuities

§ 6:11 The discount rate

§ 6:12 —Real versus nominal discount rates

§ 6:13 —Risk and discount rates

§ 6:14 —The importance of discount rates

III. DECISION ANALYSIS

§ 6:15 In general

§ 6:16 Expected value

§ 6:17 How to think about uncertainty and decision analysis

§ 6:18 Applying expected value analysis to environmental problems

§ 6:19 —The no action option

§ 6:20 — —Determining the range of outcomes

§ 6:21 — —Estimating costs

§ 6:22 — —Estimating probabilities

§ 6:23 —Estimating the expected value of the study

§ 6:24 — —Probabilities affect expected value

§ 6:25 — —Why expected value may not represent a specific outcome

§ 6:26 — —Why expected value is the right answer

§ 6:27 —Evaluating post-study actions

§ 6:28 —Calculating the probabilities and expected costs of each outcome

IV. COST-BENEFIT ANALYSIS

§ 6:29 In general

§ 6:30 Basic analytical steps

§ 6:31 —Accepting or rejecting a single project

§ 6:32 —Selecting from a number of discrete alternatives

*By **Richard Lane White** and **Shameek Konar**; updated by James Barrett.

- § 6:33 —Selecting the scale of a project
- § 6:34 —Selecting from a number of discrete alternatives subject to resource constraints
- § 6:35 —Selecting optimal alternatives and scale subject to resource constraints
- § 6:36 Estimating costs and benefits
- § 6:37 —Defining the scope of the impacts
- § 6:38 —Uncertainty
- § 6:39 —Discounting
- § 6:40 —Metrics for measuring the impacts

V. COST ALLOCATION

- § 6:41 In general
- § 6:42 Basic terminology
- § 6:43 Sample cost allocation problems—Airline tickets
- § 6:44 —Video conferencing
- § 6:45 —Photocopiers
- § 6:46 Basic principles
- § 6:47 Application to environmental matters
- § 6:48 —Background on Superfund and allocation
- § 6:49 —Limited guidance on allocation
- § 6:50 —EPA's position on allocation
- § 6:51 —Cost causation and equitable factors
- § 6:52 —Cost allocation in Superfund cases
- § 6:53 — —Volumetric analysis
- § 6:54 — —Toxicity analysis
- § 6:55 — —Cost causation analysis

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I. INTRODUCTION

§ 6:1 In general

Economic and analytical tools are routinely used to evaluate environmental issues. This chapter examines the basic application of the core set of tools used repeatedly

by economists and consultants in the analysis of these issues. It focuses on the application of economic and analytical tools by examining why they are employed, how they work, and how environmental professionals should think about them. A tool is only useful if one knows how to use it, and the goal of this chapter is to provide a framework for thinking about environmental issues that need to be examined in a rigorous manner.

The application of a number of these economic and analytical tools is seen, firsthand, by a potentially responsible party (PRP) at a Superfund site. Each PRP faces the imposition of liability for uncertain, unknown future costs, and, at some level, PRPs need to be able to estimate the costs of remediating the site in today's dollars—whether for reserving purposes or simply to understand the scope of the problem.

Beyond costs, there is the issue of uncertainty. Remediation is a future event, and its success is uncertain. As a result, its costs are unknown. Whether a party should settle or seek contribution is a calculation that is made in part based on the evaluation of uncertainty in future events. Remedy selection is, at its core, a cost versus benefit analysis—a comparison of alternatives and their ability to meet certain objectives, hopefully in a cost-effective manner. This, again, is a cost question.

Finally, associated with almost any cost question is the issue of allocation. Although some costs are uniquely assignable to individual parties or activities, many costs are common—caused by more than one party or activity. These costs must be rationally allocated across activities or parties in some principled manner—another cost question.

This chapter focuses on the following four basic tools of economic analysis: (a) discounting, or the ability to evaluate future costs in present-day equivalents; (b) decision analysis, which enables the decision-maker to evaluate risk and uncertainty in future events; (c) cost-benefit analysis, a process by which comparative analysis of alternatives can be undertaken; and, finally, (d) cost allocation, the process by which common costs are allocated to activities or parties.

II. DISCOUNTING AND NET PRESENT VALUE

§ 6:2 In general

Decision-makers frequently find themselves examining projects for which costs and benefits accrue over multiple years. A piece of machinery purchased for a manufacturing plant that will save a company money by increased productivity over its life cycle is an example of a project with costs in one period and benefits over a number of periods. In many instances, it is difficult, if not impossible, to determine which project provides the greatest value unless the effects of time are somehow considered. What these decision-makers need is a method of evaluating these different costs and benefits that accrue across time as if they were incurred at the same point in time—today, for example.

To evaluate projects, or generally costs and benefits that accrue over time, a model should compare these future costs and benefits—usually measured as dollars—having adjusted for these timing effects. Discounting is just such a method. It allows a comparison of outcomes (e.g., cash flows) that occur over a span of time as if those actions occurred today. It in effect adjusts cash flows for the time value of money and thereby reduces future cash flows into a single equivalent number measured in today's dollars.

Mechanically, discounting is very similar to compound interest. In fact, many people think of discounting as *reverse* compound interest. So, before explaining the mechanics of discounting, a brief discussion of some of the basic financial concepts surrounding interest or return on investments may prove helpful.

Figure 6:1 shows the process by which compound interest, or return, accrues. \$100,000 invested in a bank at the beginning of the year accrues interest, or generates a return. At a 10 percent interest rate, for example, that investment generates \$10,000 in interest, or return. At the end of the year, there is \$110,000 in the account. Then, at the beginning of the next year, the process begins again. Only now, there is \$110,000 to invest as principal, and that higher principal accrues interest. At the end of the second year, there is \$121,000 in the account—the original \$100,000 in principal, interest on the principal, and interest on the accumulated interest, as well. The process continues until the principal and accumulated interest are withdrawn. Table 6:1 indicates the amount of interest and total investment that would be available at the end of one year if \$100,000 were invested at different interest rates. This process is simple enough, but it highlights one of the most basic principles of corporate finance: a dollar received today is worth more than the same dollar received a year from now.

Figure 6:1 How Investments Grow Over Time

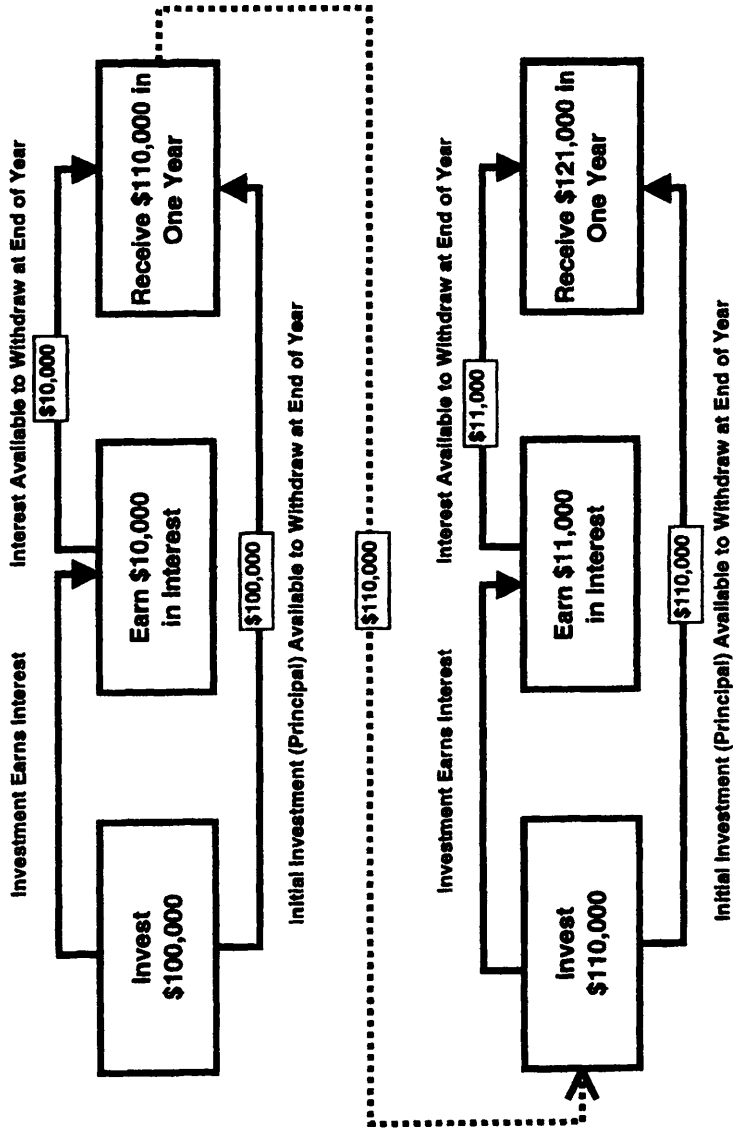


Table 6:1 Value of \$100,000 One Year Later Invested at Different Interest Rates

Principal Invested at Beginning of Year	Interest Rate	Return on Investment	Value at End of Year
\$100,000	0.0%	\$0	\$100,000
\$100,000	1.0%	\$1,000	\$101,000
\$100,000	2.0%	\$2,000	\$102,000
\$100,000	3.0%	\$3,000	\$103,000
\$100,000	4.0%	\$4,000	\$104,000
\$100,000	5.0%	\$5,000	\$105,000
\$100,000	6.0%	\$6,000	\$106,000
\$100,000	7.0%	\$7,000	\$107,000
\$100,000	8.0%	\$8,000	\$108,000
\$100,000	9.0%	\$9,000	\$109,000
\$100,000	10.0%	\$10,000	\$110,000
\$100,000	11.0%	\$11,000	\$111,000
\$100,000	12.0%	\$12,000	\$112,000
\$100,000	13.0%	\$13,000	\$113,000
\$100,000	14.0%	\$14,000	\$114,000
\$100,000	15.0%	\$15,000	\$115,000
\$100,000	16.0%	\$16,000	\$116,000
\$100,000	17.0%	\$17,000	\$117,000
\$100,000	18.0%	\$18,000	\$118,000
\$100,000	19.0%	\$19,000	\$119,000
\$100,000	20.0%	\$20,000	\$120,000

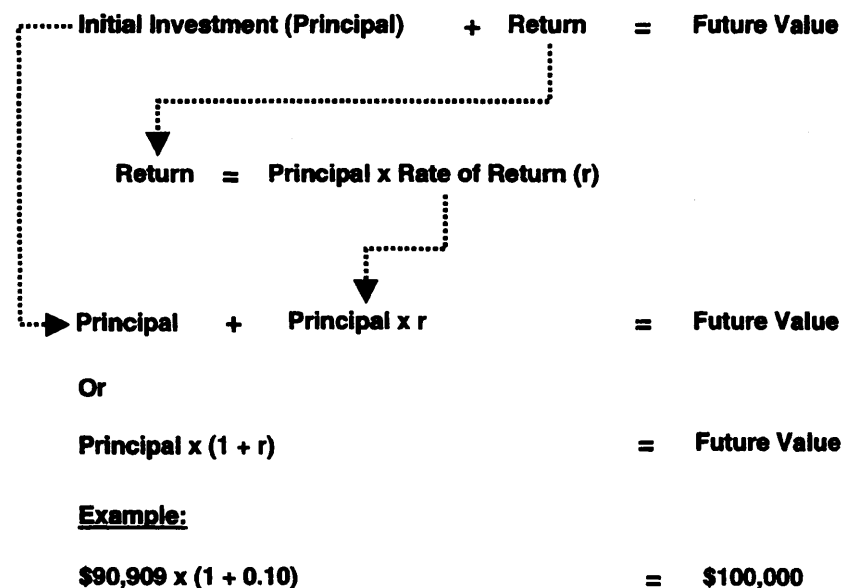
It is clear that timing affects the value of money. In fact, in every case—except when the interest rate is zero—money received now is worth more than the same amount of money received later. This is the simple but critical insight on which discounting is based.

Table 6:1 can be modified to answer the question “how much money must be invested now so that at the end of the year an investment will accumulate \$100,000?” The results are shown in Table 6:2. The value of the initial investment falls as the interest rate rises. The total of principal plus interest is what creates the \$100,000, and as the interest rate rises, interest displaces the need for principal. Table 6:2 is the essence of discounting. It shows the values that would be needed today to generate \$100,000 at the end of one year, at different interest rates—or discount rates. The key to discounting is value *today*. At a 10 percent discount rate, \$100,000 one year from now is worth \$90,909 today. This is a method of evaluating future cash flows as if they occurred today. Figure 6:2 demonstrates how the values in Table 6:2 are estimated. An initial amount of money (or principal) earns interest (or return). At the end of the year, the principal and the accumulated interest equal the future value. The return earned, however, is really a rate of return—like an interest rate—multiplied by the initial amount of the principal invested. That is, a percentage return is earned on the investment. So, the return earned is the initial investment multiplied by the rate of return. In other words, the future value obtained at the end of the year is the initial amount of the principal, multiplied by $1 + r$, where r is the rate of return. If this equation is tested with the results from Table 6:2, it is clear that an investment of \$90,909 for one year at 10 percent interest will equal \$100,000 at the end of the year.

Table 6:2 How Much to Invest to Obtain \$100,000 One Year Later Invested at Different Interest Rates

Principal Invested at Beginning of Year	Interest Rate	Return on Investment	Value at End of Year
\$100,000	0.0%	\$0	\$100,000
\$99,010	1.0%	\$990	\$100,000
\$98,039	2.0%	\$1,961	\$100,000
\$97,087	3.0%	\$2,913	\$100,000
\$96,154	4.0%	\$3,846	\$100,000
\$95,238	5.0%	\$4,762	\$100,000
\$94,340	6.0%	\$5,660	\$100,000
\$93,458	7.0%	\$6,542	\$100,000
\$92,593	8.0%	\$7,407	\$100,000
\$91,743	9.0%	\$8,257	\$100,000
\$90,909	10.0%	\$9,091	\$100,000
\$90,090	11.0%	\$9,910	\$100,000
\$89,286	12.0%	\$10,714	\$100,000
\$88,496	13.0%	\$11,504	\$100,000
\$87,719	14.0%	\$12,281	\$100,000
\$86,957	15.0%	\$13,043	\$100,000
\$86,207	16.0%	\$13,793	\$100,000
\$85,470	17.0%	\$14,530	\$100,000
\$84,746	18.0%	\$15,254	\$100,000
\$84,034	19.0%	\$15,966	\$100,000
\$83,333	20.0%	\$16,667	\$100,000

Figure 6:2 Calculation of Future Value



§ 6:3 The mechanics of discounting

Mechanically, discounting is quite simple. As mentioned before, it works like a reverse calculation of compound interest. Table 6:2 demonstrated the amount of

principal needed to generate, after accumulation of interest, a fixed amount of money one year into the future. Now think of cash flows and the discounting process as an investor would typically encounter it. He or she will generally know the future cash flows, and the question will be what their value is today. So, the investor needs to develop a process by which he or she can take a number—like the \$100,000—and determine at what point in the future it accrues. Well, if the investor knows that he or she will receive the \$100,000 one year from now, then the investor needs to determine what the value of \$100,000 received one year from now is, as if the investor had been given the equivalent value today.

While a reader could simply look at Table 6:2 to determine the equivalent value today of \$100,000 received one year from now at a discount rate of 10 percent, the next several examples develop a methodology by which an investor can estimate today's equivalent value.

§ 6:4 The mechanics of discounting—The one-period discounting problem

The next example demonstrates how to solve for the values observed in Table 6:2. Specifically, it will determine the discounted value of \$100,000 received one year from now at a discount rate of 10 percent. This example demonstrates how discounting works for a business considering the purchase of a piece of equipment.

A company wants to invest in a noise suppressor with a useful life of one year. At the end of the year the noise suppressor must be discarded. It has no useful life beyond one year, so it has no “scrap” value. By using the noise suppressor, the company will be able to use equipment that is now idle and will avoid using equipment that is more expensive to run. This substitution of one piece of equipment for another will save the company \$100,000, which, in this example, it receives at the end of the year. The noise suppressor, however, must be acquired today, at the beginning of the year. It will cost \$80,000. Should this company invest or not?

Before beginning any calculations, the company should distill the problem down to a few simple issues. First, the cost of the machinery is \$80,000. It creates a value of \$100,000, which is the reduced cost of switching back to the less expensive equipment. The savings of \$100,000 does not accrue until the end of the year, but the \$80,000 in cost must be made instantly. The investment only has value for one year. So, the question before the company is whether to make the investment or not.

Even without doing any calculations the company might conclude that the answer is yes. In this example, by spending \$80,000 today, the company receives \$100,000 one year from now—a 25 percent return on the investment. Given the alternatives of doing nothing or investing in this new noise suppressor, the company should choose to invest. But implicit in the decision to invest is a recognition that a 25 percent return is very high—an exceptionally high return on the investment. That is undoubtedly a better return on the investment than most companies will get for their routine purchases of plant and equipment. The company should not choose to invest simply because this purchase makes a positive return. Rather, it should invest because this project makes a return greater than alternative opportunities for investing that \$80,000 in capital. Not all investment decisions are as clear as this one.

To evaluate this investment decision the company needs to calculate the present value, or discounted value, of that \$100,000 that will be received as a benefit in one year. The company then needs to compare that result against the \$80,000 cost of purchasing the equipment that provides the benefit. For purposes of this discussion, assume that, in general, the business receives a 10 percent return on its investments—whether it puts that money in the bank, in equipment, or in other investment alternatives. What is the present value of the \$100,000 when the return available to the company is 10 percent?

Looking back at Figure 6:2, this number can be calculated easily. The principal invested at the beginning of the period multiplied by $(1 + r)$ is equal to the future value one year later. This relationship can be rewritten to solve for the amount of initial investment needed so that the company ends up with \$100,000 and the discount rate is 10 percent. This result is shown in Figure 6:3.

Figure 6:3 Calculation of Present Value

$$\begin{array}{rcl}
 \text{Principal} \times (1 + r) & = & \text{Future Value} \\
 \\
 \text{Principal} & = & \frac{\text{Future Value}}{(1 + r)} \\
 \text{So} & & \\
 \text{Present Value (PV)} & = & \frac{\text{Future Value}}{(1 + r)} \\
 \text{Example:} & & \\
 \$90,909 & = & \frac{\$100,000}{(1 + 0.10)}
 \end{array}$$

The amount of principal that the company would need to invest today is called the present value (PV). It represents the amount of money that would make the investor indifferent between a sum of money today and a sum of money in the future at a predefined interest rate, or discount rate. In this example the PV of \$100,000 received one year in the future can be estimated. It is \$90,909.

So, should the company invest? Well, the company has \$80,000 now. It can keep that money and invest it at 10 percent, or it can use it to buy a piece of equipment that will make \$100,000 in one year. That amount—\$100,000—is worth \$90,909 today. So the equipment is worth more today than the money it costs to purchase it. If the company's only choices are to buy the equipment or to do nothing, it should buy the equipment.

§ 6:5 The mechanics of discounting—The multi-period discounting problem

The problem, of course, is that the company probably has several alternative investments that can address this noise issue, and it must choose among them to determine which is best. Compounding the problem it faces is the fact that many investment opportunities have payouts that occur over multiple years and pay out in different ways. Each of these issues will be addressed later in this chapter. The next example examines an investment with cash flows over multiple periods of time.

The company has yet another business decision to make. It is considering installing a piece of equipment to help automate its production process. The equipment costs \$1 million, which must be paid immediately. The equipment will last for five years, with no scrap value. For each year of operation, there is a savings of \$300,000. This is a total of \$1.5 million in savings, or a net cost of \$500,000 over and above the initial cost of purchase. This equipment is the only alternative under consideration. Should the company choose to install this equipment?

The cost—the \$1 million—is paid out immediately, but the benefit—the \$300,000 per year—is received over time. If both occurred today, or at the same time, the answer would be obvious—the company would purchase the equipment because the benefits of \$1.5 million exceed the cost of \$1 million. But, because the cost is paid before the benefit is received, there is an opportunity cost to purchasing the equipment. If the company buys the equipment, it gets the benefit in the future, but it forfeits other uses for the money used to make the investment. For example, the company cannot invest that money in the bank and let it earn interest.

So, effectively the company is being asked to choose between two competing investment opportunities. One is worth \$1 million today. The other opportunity is worth \$1.5 million over the next five years, and the company needs to estimate what it is worth today. If the rate of return the company can earn on its investment is 10 percent annually, then how much money would it need to invest in the bank right now so that it could withdraw \$300,000 at the end of each of five years and have nothing left over? That, after all, is the choice the company is really making here. If that undetermined amount is less than \$1 million, then the \$1 million the company has now is the better opportunity, and it should not invest in the equipment. If, however, the amount the company would put in the bank today is greater than \$1 million, then the present value of the \$300,000 annual payments over the next five years is greater than \$1 million, and the company should invest in the equipment. The cash flows for this problem are shown in Table 6:3.

Table 6:3 Summary of Project Cash Flows

	Time Period					Total
	Now	1	2	3	4	5
Nominal Cash Flows	-1,000,000	300,000	300,000	300,000	300,000	300,000
						500,000

§ 6:6 The mechanics of discounting—The multi-period discounting problem—Estimating the present value of the first payment

How much money would the company need to put in the bank today, earning 10 percent interest, in order to have \$300,000 that it could withdraw at the end of one year? The calculation follows:

$$\text{Present Value} = \frac{\text{Future Value}}{(1 + r)} = \frac{\$300,000}{(1 + .10)} = \$272,727$$

This is the same equation from the previous example. If, today, the company places \$272,727 into a bank account that earns 10 percent annual return, in one year it will have the principal plus an additional \$27,273 in interest for a total of \$300,000. Put another way, the present value of \$300,000, received one year from now, at a discount rate of 10 percent, is \$272,727.

§ 6:7 The mechanics of discounting—The multi-period discounting problem—Estimating the present value of later payments

The next question is “what amount of money should the company put into the bank, at 10 percent interest, so that over *two* years, it will have \$300,000 (the second \$300,000 payment)?” The company already knows that if it puts \$272,727 in the bank, after one year it is worth \$300,000, so the amount to leave in there for two years must be less. In fact, the company needs to put in an amount that, one year from now, will be worth \$272,727, since that amount, if left for another year, will be worth the \$300,000 the company is trying to estimate. Table 6:4 demonstrates the amount of initial investment necessary to earn \$100,000 *two* years into the future.

Table 6:4 How Much to Invest to Obtain \$100,000 Two Years Later Invested at Different Interest Rates

Principal Invested at Beginning of First Year	Interest Rate	Return on Investment	Value at End of Year One	Interest Rate	Return on Investment	Value at End of Year Two
\$100,000	0.0%	\$0	\$100,000	0.0%	\$0	\$100,000
\$98,030	1.0%	\$980	\$99,010	1.0%	\$990	\$100,000
\$96,117	2.0%	\$1,922	\$98,039	2.0%	\$1,961	\$100,000
\$94,260	3.0%	\$2,828	\$97,087	3.0%	\$2,913	\$100,000
\$92,456	4.0%	\$3,698	\$96,154	4.0%	\$3,846	\$100,000
\$90,703	5.0%	\$4,535	\$95,238	5.0%	\$4,762	\$100,000
\$89,000	6.0%	\$5,340	\$94,340	6.0%	\$5,660	\$100,000
\$87,344	7.0%	\$6,114	\$93,458	7.0%	\$6,542	\$100,000
\$85,734	8.0%	\$6,859	\$92,593	8.0%	\$7,407	\$100,000
\$84,168	9.0%	\$7,575	\$91,743	9.0%	\$8,257	\$100,000
\$82,645	10.0%	\$8,264	\$90,909	10.0%	\$9,091	\$100,000
\$81,162	11.0%	\$8,928	\$90,090	11.0%	\$9,910	\$100,000
\$79,719	12.0%	\$9,566	\$89,286	12.0%	\$10,714	\$100,000
\$78,315	13.0%	\$10,181	\$88,496	13.0%	\$11,504	\$100,000
\$76,947	14.0%	\$10,773	\$87,719	14.0%	\$12,281	\$100,000
\$75,614	15.0%	\$11,342	\$86,957	15.0%	\$13,043	\$100,000
\$74,316	16.0%	\$11,891	\$86,207	16.0%	\$13,793	\$100,000
\$73,051	17.0%	\$12,419	\$85,470	17.0%	\$14,530	\$100,000
\$71,818	18.0%	\$12,927	\$84,746	18.0%	\$15,254	\$100,000
\$70,616	19.0%	\$13,417	\$84,034	19.0%	\$15,966	\$100,000
\$69,444	20.0%	\$13,889	\$83,333	20.0%	\$16,667	\$100,000

One way to estimate the value of \$300,000 two years into the future is to discount each year. Table 6:4 shows that the PV of \$100,000 two years into the future, at 10 percent discount rate, is \$82,645. So, the PV of \$300,000 at the same discount rate and at the same point in time should be triple that number, or \$247,934. This number can also be calculated with the following formula:

$$\text{Present Value} = \frac{\text{Future Value}}{(1 + r)^T} = \frac{\$272,727}{(1+.10)^2} = \$247,934$$

If the company invests \$247,934 into an account that returns 10 percent, in one year it will be worth \$272,727, and this \$272,727, if left in the bank for a year, will be worth \$300,000. So the PV of \$300,000 received two years from now is \$247,934.

While this step-wise approach works, it can certainly be cumbersome. There is, however, a generalized method for performing these calculations. When determining the PV of \$300,000 two years from now, the above calculations discounted that amount back one year, then discounted again that already-discounted amount. A simpler way of doing this is

$$PV_{t=2} = \frac{FV_T}{(1+r)^T} = \frac{\$300,000_{T=2}}{(1+.10)^2} = \$247,934$$

This equation is actually not as complicated as it looks. The t is a time subscript. Today would be $t = 0$. One year from now would be $t = 1$, two years from now $t = 2$, and so on. This formula is exactly the formula that was used in the previous examples, except the denominator is now raised to a power, and the power is the number of periods into the future that the future cash flow occurs.

So, for example, if the company wanted to know what the PV of a \$1 million payment, made fifty-five years from now, was worth in today's dollars at a 6 percent discount rate over the period, the equation would be:

$$PV = \frac{\$1,000,000}{(1+.06)^{55}} = \$40,567$$

So, the present value of \$1 million, received fifty-five years from now, is only \$40,567 at a 6 percent discount rate. If an investor placed \$40,567 into a bank account and let it grow and compound for the next fifty-five years, he or she would end up with a \$1 million bank account.

§ 6:8 The mechanics of discounting—The multi-period discounting problem—Examining the solution

This equation now provides a simpler method for determining the value of those five \$300,000 payments.

\$300,000 at $t = 1 = \$272,727$ (this has already been solved)

\$300,000 at $t = 2 = \$247,934$ (this has also been solved)

\$300,000 at $t = 3 =$

$$PV_{T=0} = \frac{\$300,000_{T=3}}{(1+.10)^3} = \$225,394$$

\$300,000 at $t = 4 =$

$$PV_{T=0} = \frac{\$300,000_{T=4}}{(1+.10)^4} = \$204,904$$

\$300,000 at $t = 5 =$

$$PV_{T=0} = \frac{\$300,000_{T=5}}{(1+.10)^5} = \$186,276$$

So, what is the value of five payments of \$300,000 at a discount rate of 10 percent? As it turns out, those payments have a PV of \$1,137,236. The equipment may cost \$1 million, but it has a PV of over \$1.1 million. Once the company deducts the initial \$1 million cost of that investment, it is still ahead by \$137,236. This result is shown in Table 6:5.

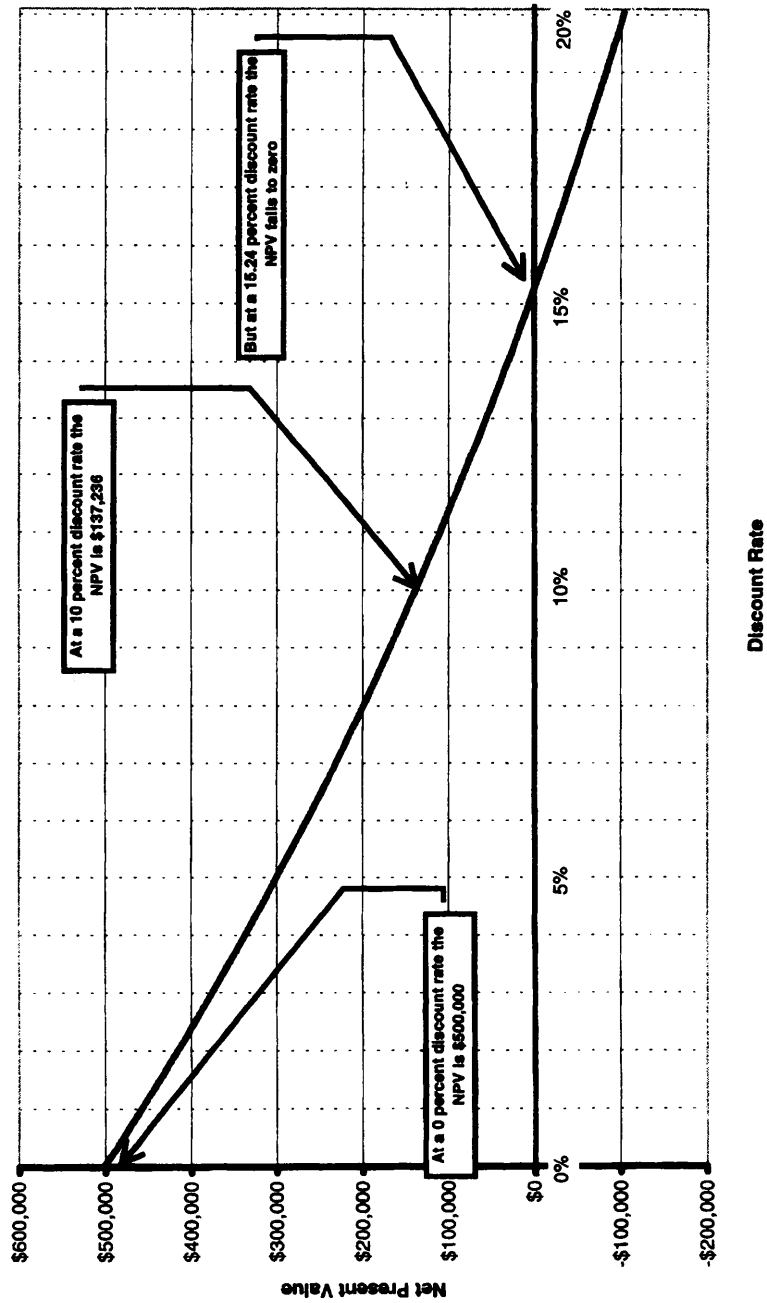
Table 6:5 refers to the *net* present value of this investment. So while the PV of the five \$300,000 payments is \$1,137,236, the net present value (NPV) of this investment is \$137,236. It is a measure of the net benefit, or cost, of the investment.

As this example demonstrates, the process of discounting is rather mechanical. An investor simply plugs in a future value, determines its point of accrual, assumes a discount rate, and calculates a present value. For any given investment decision, most of these factors are predetermined—most except for the discount rate itself. Although the discount rate will be discussed shortly, it is worth noting that as the discount rate changes, the present value of some predetermined future cash flow also changes. In fact, for the investment decision just discussed, the NPV was \$137,236 at a discount rate of 10 percent. What happens when the investor does not know the discount rate or is concerned that the estimate of that rate may not be very precise? Figure 6:4 plots the NPV against the discount rate to demonstrate how discount rates affect present value for this investment decision.

Table 6:5 The Net Present Value of Facility Improvements (Calculated at 10% Nominal Discount Rate)

	Time Period					Total
	Now	1	2	3	4	5
Nominal Cash Flows	-1,000,000	300,000	300,000	300,000	300,000	300,000
PV Calculation	-1,000,000	300,000	300,000	300,000	300,000	300,000
	$(1 + .10)^0$	$(1 + .10)^1$	$(1 + .10)^2$	$(1 + .10)^3$	$(1 + .10)^4$	$(1 + .10)^5$
PV Result	-1,000,000	272,727	247,934	225,394	204,904	186,276
						137,236 = NPV

Figure 6.4 Sensitivity of the Project NPV to Discount Rates



Although the project has an NPV of \$137,236 at 10 percent, its value is quite sensitive to the discount rate. As the discount rate falls, the value rises, and as the discount rate rises, the value shrinks. In fact, at any discount rate above 15.24 percent, this investment actually loses money on a time-adjusted basis.

§ 6:9 The mechanics of discounting—Competing multi-period investment alternatives

The previous example estimated the NPV of a company's decision to purchase a piece of equipment for its production process. This next example assumes that the company is evaluating two different options for equipment. The example just discussed was Option 1.

Option 2 is the alternative process under consideration. The company must select one of the two options or do nothing. Option 2 also has a life span of five years. It has an initial cost of \$1.5 million—higher than Option 1's \$1 million—but its benefits over the five years total \$2.25 million. However, unlike Option 1, which pays out its benefits in equal payments over five years, Option 2 pays out \$250,000 in each of the first two years, \$500,000 per year in each of the next two years, and \$750,000 in the fifth year of service. Its benefits are received disproportionately further out in the future. The two alternatives are shown in Table 6:6. For purposes of this evaluation, the company's discount rate is 10 percent.

The company already knows what Option 1 is worth. It has an NPV of \$137,236 when the discount rate is 10 percent. Option 2 requires more cost, but provides more benefits. Its benefits, however, occur further in the future. The calculation of the NPV for both processes is shown in Table 6:7. At a 10 percent discount rate, it is clear that Option 1 is preferable to Option 2 because Option 1 has a higher net present value than Option 2. If the company's choice is between selecting Option 1, selecting Option 2, and doing nothing, and if the discount rate is assumed to be 10 percent, then it should choose Option 1. Despite the fact that Option 2 provides a higher nominal net value (\$750,000), its benefits are provided disproportionately later than those of Option 1, and on a time-adjusted basis, Option 1 is preferable.

Table 6:6 The Cash Flows for Two Alternative Projects

	Time Period					Total
	Now	1	2	3	4	5
Option 1	-1,000,000	300,000	300,000	300,000	300,000	300,000
Option 2	-1,500,000	250,000	250,000	500,000	500,000	750,000

Table 6:7 Calculating the Net Present Value for the Cash Flows of Two Alternative Projects (Calculated at 10% Nominal Discount Rate)

	Now	Time Period					Total
		1	2	3	4	5	
Option 1	-1,000,000	300,000	300,000	300,000	300,000	300,000	500,000
PV Calculation	$\frac{-1,000,000}{(1 + .10)^0}$	$\frac{300,000}{(1 + .10)^1}$	$\frac{300,000}{(1 + .10)^2}$	$\frac{300,000}{(1 + .10)^3}$	$\frac{300,000}{(1 + .10)^4}$	$\frac{300,000}{(1 + .10)^5}$	
PV Result	-1,000,000	272,727	247,934	225,394	204,904	186,276	<u>137,236 = NPV</u>
Option 2	-1,500,000	250,000	250,000	500,000	500,000	750,000	750,000
PV Calculation	$\frac{-1,500,000}{(1 + .10)^0}$	$\frac{250,000}{(1 + .10)^1}$	$\frac{250,000}{(1 + .10)^2}$	$\frac{500,000}{(1 + .10)^3}$	$\frac{500,000}{(1 + .10)^4}$	$\frac{750,000}{(1 + .10)^5}$	
PV Result	-1,500,000	227,273	206,612	375,657	341,507	465,691	<u>116,739 = NPV</u>

§ 6:10 The mechanics of discounting—Perpetuities

A perpetuity is a fixed amount of money paid or received at a set interval, forever. A payment of \$100 each and every year, forever, is an example of a perpetuity. If an investor attempted to calculate the value of that cash flow stream on a payment-by-payment basis, he or she would be working for a very long time, an infinitely long time, to be exact. While this sounds like an impossible cash flow stream to estimate for purposes of calculating present value, it is actually one of the easiest cash flow streams to estimate. And its estimation provides some insight into how to think about discounting multi-period cash flows.

So, what is the PV of \$100 paid at the end of each and every year, forever, when the discount rate is 10 percent? The answer is \$1,000. This may not be obvious at first, but think of it as a bank account. An investor earns 10 percent annual return on a bank account, and this investor wants to earn \$100. How much does the investor have to put into the account to earn \$100 in interest when the bank pays 10 percent? The answer is \$1,000. Now, if the investor leaves the \$1,000 in the bank, but spends the interest every year, after thirty years, the investor has \$1,000 in the bank, and each and every year he or she has received \$100. In fact, as long as that \$1,000 stays in the bank, the investor will receive \$100 per year, forever. So, the value of a perpetuity of \$100 at a discount rate of 10 percent is \$1,000.

Of course, there is an equation that can demonstrate this, and in this case, at least, the equation is fairly simple. The relationship between the initial investment—the money put into the bank—and the return on that investment is represented as follows:

$$\text{Return} = (\text{Initial Investment}) \times (r)$$

The return is \$100 each year, and the rate of return (r) is 10 percent, so this equation can be turned around and solved for the amount of the initial investment:

$$\left(\frac{\text{Return}}{\text{Rate of Return}} \right) = \text{Initial Investment} = \left(\frac{\$100}{.10} \right) = \$1,000$$

This is a relatively simple, but extremely useful, equation. Investors will often encounter long-term cost streams that are measured in today's dollars. Discounting them may be time consuming, but will reveal the precise answer. As a benchmark, however, very long-term cost streams can be treated like perpetuities.

For example, if a company is involved in remediating a hazardous waste site, it may be asked to incur costs for long-term groundwater remediation. In addition to capital costs for pumps, piping, and related equipment, there are ongoing operation and maintenance (O&M) costs. As an example, if the company is asked to pay out \$600,000 per year for O&M, for thirty years, what is the present value of the O&M?

At a 10 percent discount rate, a perpetuity—\$600,000 per year, forever—would be \$6 million. A thirty-year payment stream must be less than \$6 million because the company does not have to make payments beyond the thirtieth year. So how much less becomes the question. A \$600,000 payment made thirty-one years from now would actually have a very small present value due to all those years of compounding. Payments far out into the future generally have a small present value, and the PV falls as the discount rate rises.

Actually, when a thirty-year O&M of \$600,000 per year at a 10 percent discount rate is calculated, that cash flow would have a PV of \$5.66 million. It is not precisely the \$6 million perpetuity, but sometimes close is close enough, and in those instances, thinking of long-term cash flows as perpetuities is a very handy rule of thumb.

§ 6:11 The discount rate

As a mechanical exercise, discounting is very straightforward. It is basically the process of calculating compound interest, reversed. Beyond understanding a few equations, discounting relies on the estimation of the discount rate. In all the examples so far, the discount rate has been assumed. Yet, as Figure 6:4 demonstrates, changes in the discount rate can turn profitable investment outcomes into non-profitable investment losers. This section focuses on several common issues related to the discount rate and highlights several problems that can arise in the discounting process.

§ 6:12 The discount rate—Real versus nominal discount rates

So far, the discussion of discounting and its analogy to earning a return on investments has simply ignored the impact of inflation. To the extent that inflation exists, there is a need to account for it in the context of discounting, and there are several ways to do this. One approach is to use the nominal discount rate and inflate future costs. Another common method is to adjust the discount rate for inflation and leave the dollars uninflated. This section discusses each of these alternatives.

Table 6:8 presents a hypothetical investment opportunity. The cost to purchase this opportunity—paid up front—is \$100,000. This investment returns a stream of benefits for the next five years. In each year the benefit is \$50,000, valued in constant dollars. However, since inflation (for purposes of this example) is 5 percent annually, cash flows in the future must be inflated. As a result, the benefit in year five, although measured today as \$50,000, will be \$63,814 when it actually occurs, and that is the number that should be discounted.

Although this is a hypothetical example, in the real world this very problem occurs quite frequently. For instance, in the O&M calculation above, the company was told that O&M would cost \$600,000 per year. However, that estimate was made in today's dollars, or constant dollars. Obviously, if inflation is 5 percent this year, then O&M will cost more—\$30,000 more next year, to be exact. A calculation of present value needs to take that into account.

Returning to the example, if the inflated cash flows are discounted at 10 percent nominal discount rate, the NPV is \$117,906, as shown in Table 6:9. The method of discounting used is the same as that previously employed. The only difference is that now the costs have been inflated. Certainly, this is one way to account for the effects of inflation.

There is another way to adjust for inflation, however, and that is to modify the discount rate itself and leave the cash flows in constant dollars. Rather than raising the costs by the inflation rate, this method reduces the discount rate by the rate of inflation. The inflation-adjusted discount rate is called a real (versus nominal) discount rate. The following equation demonstrates that adjustment:

$$\begin{aligned}\text{Real Discount Rate} &= \frac{1 + \text{Nominal Discount Rate}}{1 + \text{Inflation Rate}} - 1 = \frac{1 + .10}{1 + .05} - 1 \\ &= 0.0476 \text{ or } 4.76\%\end{aligned}$$

This calculation can be tested by returning to the hypothetical investment problem from Table 6:8 and 6:9. Instead of inflating the costs, a real (or inflation-adjusted) discount rate is used. With a nominal discount rate of 10 percent and inflation at 5 percent, the real discount rate is 4.76 percent. That real discount rate is now applied to the constant dollar cash flows from Table 6:8. The result is shown in Table 6:10, which compares the two inflation adjustment approaches just discussed.

Table 6:8 Current Dollar and Inflated Cash Flows for a Project (With Inflation at 5 Percent)

	Now	Time Period				Total
		1	2	3	4	5
Cash Flows (Constant Dollars)	-100,000	50,000	50,000	50,000	50,000	50,000
Inflation Factor	100.0%	105.0%	110.3%	115.8%	121.6%	127.6%
Cash Flows (Inflated)	-100,000	52,500	55,125	57,881	60,775	63,814
						190,096

Table 6:9 Calculating the NPV of Inflated Cash Flows for a Project (With Inflation at 5 Percent)

	Now	Time Period					Total
		1	2	3	4	5	
Cash Flows (Constant Dollars)	-100,000	50,000	50,000	50,000	50,000	50,000	150,000
Inflation Factor	100.0%	105.0%	110.3%	115.8%	121.6%	127.6%	
Cash Flows (Inflated)	-100,000	52,500	55,125	57,881	60,775	63,814	
PV Calculation	$\frac{-100,000}{(1 + .10)^0}$	$\frac{52,500}{(1 + .10)^1}$	$\frac{55,125}{(1 + .10)^2}$	$\frac{57,881}{(1 + .10)^3}$	$\frac{60,775}{(1 + .10)^4}$	$\frac{63,814}{(1 + .10)^5}$	
PV Result	-100,000	47,727	45,558	43,487	41,510	39,624	117,906 = NPV

Table 6:10 Calculating the NPV of Cash Flows for a Project Using a Real Discount Rate (With 10 Percent Nominal Discount Rate and Inflation at 5 Percent)

	Now	Time Period				Total
		1	2	3	4	5
Cash Flows (Constant Dollars)	-100,000	50,000	50,000	50,000	50,000	50,000
Inflation Factor	100.0%	105.0%	110.3%	115.8%	121.6%	127.6%
<u>With a Nominal Discount Rate and Inflated Costs</u>						
Cash Flows (Inflated)	-100,000	52,500	55,125	57,881	60,775	63,814
PV Calculation	$\frac{-100,000}{(1 + .10)^0}$	$\frac{52,500}{(1 + .10)^1}$	$\frac{55,125}{(1 + .10)^2}$	$\frac{57,881}{(1 + .10)^3}$	$\frac{60,775}{(1 + .10)^4}$	$\frac{63,814}{(1 + .10)^5}$
PV Result	-100,000	47,727	45,558	43,487	41,510	39,624
						117,906 = NPV
<u>With a Real (Inflation Adjusted) Discount Rate</u>						
Cash Flows (Constant Dollars)	-100,000	50,000	50,000	50,000	50,000	50,000
PV Calculation	$\frac{-100,000}{(1 + .0476)^0}$	$\frac{50,000}{(1 + .0476)^1}$	$\frac{50,000}{(1 + .0476)^2}$	$\frac{50,000}{(1 + .0476)^3}$	$\frac{50,000}{(1 + .0476)^4}$	$\frac{50,000}{(1 + .0476)^5}$
PV Result	-100,000	47,727	45,558	43,487	41,510	39,624
						117,906 = NPV

The results are exactly the same. Under either approach, this project has an NPV of \$117,906. While choice in selection of an approach to adjusting for inflation is a matter of personal preference, use of real, or inflation-adjusted, discount rates is very common in financial calculations because the process is somewhat easier. Whether an investor inflates costs or adjusts the discount rate for inflation, the discounting process should account for the effects of inflation.

§ 6:13 The discount rate—Risk and discount rates

As mentioned before, the previous examples have demonstrated the basic principle of finance that a dollar received today is worth more than a dollar received tomorrow. Another basic principle is that a safe dollar—one provided with certainty—is worth more than a risky or uncertain dollar—one that has risk associated with receiving it. The examples used so far have evaluated future costs and benefits as if they were known, or certain, but, in reality, these are just estimates. Individuals and businesses alike seek to avoid risk, particularly if they can do so without sacrificing the return they earn on their investments. Costs and benefits should really be thought of as expected costs and expected benefits. If two different investments—say two different machines—return the same expected benefit but one is riskier than the other, most investors will prefer the less risky option.

To compensate for risk, the discount rate should be adjusted up or down depending on the relative risk associated with a particular investment. For example, if a particular machine provides a well-defined, easily quantifiable return, that return may have little, or perhaps no, risk. Therefore, a discount rate based on a risk-free rate of return—something like government treasury bills, which have no risk associated with them—may be the appropriate opportunity cost. Treasury bill rates, which provide a fixed, safe return, are frequently used to measure the risk-free rate of return.

For investments that have more risk or uncertainty associated with them, a higher discount rate is appropriate. In finance, the stock market is used as a benchmark, and the study of stock returns can be used to calculate a market risk premium. Investors in the stock market have received this risk premium (the return in the stock market less the return on treasury bills) for placing their money in the market as opposed to treasury bills.

Discount rates for any particular investment are generally benchmarked against the stock market. Are their returns more or less risky than returns in the stock market? This evaluation of risk affects the calculation of the discount rate. Riskier investments demand a higher discount rate. For example, two investment choices may each provide an expected return of \$100,000, but one process may be riskier than the other. Consequently, most investors would prefer the less risky option. These two investment choices may have the same future value, but their discounted value—their value today—is not equivalent. There is clearly a preference for the less risky investment. In order to obtain a lower PV, it must be associated with a higher discount rate.

In order to make the two investments seem equivalent, a premium would need to be added to the future value of the riskier investment. One alternative is to put that premium into the payout. Another alternative, analogous to the method employed to modify the discount rate for inflation, is to place a risk premium into the discount rate itself.

Placing the risk premium into the discount rate is the commonly preferred method for accounting for risk, in part because cash flows are what they are. Investors do not usually have the ability to modify future cash flows, so they are left to evaluate risk and adjust the discount rate accordingly.

This section does not address all the nuances of accounting for risk or estimating

a firm's cost of capital, but any investor should recognize that discount rates need to reflect the relative risk of the cash flows they are used to discount. Cash flows with no risk—costs that have already been incurred—are frequently cited as examples of riskless costs and will have a lower discount rate than cash flows for riskier opportunities.

§ 6:14 The discount rate—The importance of discount rates

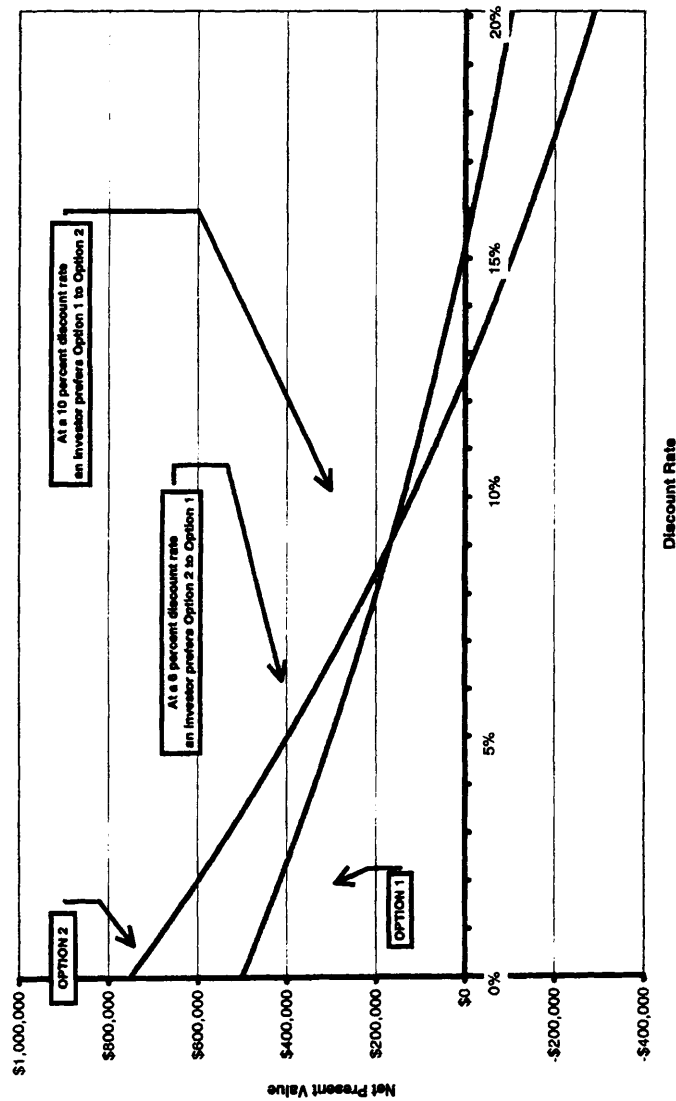
This next section revisits an earlier example. Table 6:7 examines two alternative investments. An evaluation of Option 1 found that a 10 percent discount rate had an NPV of \$137,236. However, further evaluation revealed that its value was sensitive to the discount rate. A comparison of Option 1 and Option 2 at a 10 percent discount rate revealed that Option 1 was preferable to Option 2, despite the fact that Option 2 paid out more net dollars. It was all in the timing. Discounting is all about timing, too. Table 6:11 shows the results of re-evaluating that decision using a 6 percent nominal discount rate. Although the NPV has risen for both options, at a 6 percent discount rate an investor's preference switches from Option 1 to Option 2. This is because Option 2 has the higher NPV at a 6 percent discount rate.

Figure 6:5 shows a graph of the NPV for each process over a range of discount rates. The NPV lines cross each other, which explains why an investor would prefer Option 2 at a low discount rate, Option 1 at a higher discount rate, and neither at a discount rate exceeding 15.2 percent.

Table 6:11 Calculating the Net Present Value for the Cash Flows of Two Alternative Projects (Calculated at 6% Nominal Discount Rate)

	Now	Time Period					Total
		1	2	3	4	5	
Option 1	-1,000,000	300,000	300,000	300,000	300,000	300,000	<u>500,000</u>
PV Calculation	$\frac{-1,000,000}{(1 + .06)^0}$	$\frac{300,000}{(1 + .06)^1}$	$\frac{300,000}{(1 + .06)^2}$	$\frac{300,000}{(1 + .06)^3}$	$\frac{300,000}{(1 + .06)^4}$	$\frac{300,000}{(1 + .06)^5}$	
PV Result	-1,000,000	283,019	266,999	251,886	237,628	224,177	<u>263,709 = NPV</u>
Option 2	-1,500,000	250,000	250,000	500,000	500,000	750,000	<u>750,000</u>
PV Calculation	$\frac{-1,500,000}{(1 + .06)^0}$	$\frac{250,000}{(1 + .06)^1}$	$\frac{250,000}{(1 + .06)^2}$	$\frac{500,000}{(1 + .06)^3}$	$\frac{500,000}{(1 + .06)^4}$	$\frac{750,000}{(1 + .06)^5}$	
PV Result	-1,500,000	235,849	222,499	419,810	396,047	560,444	<u>334,648 = NPV</u>

Figure 6:5 Investment Preferences Switch as Discount Rates Change



This example highlights several key issues. First, while the mechanics of discounting may be straightforward, decisions rely on the estimation of the discount rate. And, as demonstrated here, decisions can be very sensitive to the choice of a discount rate. Second, testing the sensitivity of a decision to different discount rates is usually a prudent step. Even if an investor is confident in the choice of a discount rate, it is usually useful to know whether the investment choice is sensitive to the discount rate employed. And third, an investor should not assume that a preference for one alternative or another is the same regardless of the discount rate employed. Different rates can affect the relative value of projects.

III. DECISION ANALYSIS

§ 6:15 In general

Every manager in any business knows that forecasting future events is an essential function. Developing reasonable estimates of future costs and liabilities is required for a multitude of business functions ranging from business decision-making to compliance with regulatory requirements. Obviously, quantifying future liabilities or costs that are uncertain is a complicated process that does not lend itself to easy solutions. While some organizations have developed their own forecasting methods (the Securities and Exchange Commission, for example, has its own set of guidelines with regard to when and how future liabilities should be estimated and disclosed), the process itself has been largely subjective.¹

Lately, however, how these forecasts are made has come under scrutiny and, in some cases, criticism. Companies have been chastised for “burying their heads in the sand” in response to the inherent uncertainty related to future events. The methods employed to estimate future liabilities have also been criticized because they do not always provide relevant or valuable information.

To address some of these issues, the American Society for Testing and Materials (ASTM) has recently proposed new estimating standards.² The ASTM’s proposal is specifically designed to address the wide range of circumstances that require estimating future environmental liabilities. The method it endorses is expected cost analysis, based on a decision-analysis evaluation of future events. This section focuses on the expected cost methodology itself and demonstrates through examples how decision analysis and expected cost analysis work, and how these analytical tools can be applied to the estimation of future environmental costs.³

§ 6:16 Expected value

The expected value is a probability-weighted average based on a range of potential outcomes. For example, in a situation where all of the possible outcomes have the same likelihood of occurring (so the probability of each is the same), a probability-weighted average is identical to a simple average. For example, if you open your wallet, which you know contains one \$5 and one \$10 bill, and pull out a bill, you are equally likely to pull out either one. The simple average of the bills is $[(\$10 + \$5) /$

[Section 6:15]

¹The prime directive for accounting for loss contingencies under the Generally Accepted Accounting Principles has been provided by the Financial Accounting Standards Board. Financial Accounting Standards Board, Statement No. 5, Accounting for Contingencies (1975).

²ASTM Committee E51 on Environmental Risk Management Sub-Committee.05 on Reserves, Standard Practice for Estimating Environmental Costs and Liabilities (1997).

³For more information on decision analysis, see Richard Lane White & Shameek Konar, Proposed New ASTM Standards for Estimating Environmental Liabilities Signal a Preference for the Use of Decision Analysis and Expected Cost Analysis, 1 Strategic Env’tl. Mgmt. 185 (1999).

2)] \$7.50. The probability-weighted average is also [$\$10 \times 50\% + \$5 \times 50\%$] or \$7.50.

Expected value really “works” when different outcomes have different likelihoods of occurring. For example, you have a \$5 bill and a \$10 bill in your wallet, but you always put the larger bills in the back. This time, when pulling out a bill, you reach for the back. Unless you make a “mistake” (and you do 10 percent of the time) you will pull out a \$10 bill. Now a simple average [\$7.50] does not adequately reflect the future. It’s clear, after all, that there’s a very high likelihood that you are about to pull out a \$10 bill.

§ 6:17 How to think about uncertainty and decision analysis

One common method used to develop expected value estimates is decision analysis, or the development of decision trees and the use of decision theoretic modeling. This approach evaluates the different outcomes at each critical point in the process, forces the development of cost estimates for different outcomes, and makes an investor think about the probabilities of occurrence of these different outcomes. The calculation results in an expected value, a probability-weighted average. In addition, it can be used to develop a probability distribution of various potential outcomes. There are five steps in developing a decision tree model:¹

1. Identify the potential outcomes/scenarios likely to occur in the future and identify their timing.
2. Develop a decision tree or simulation model of all potential event outcomes.
3. Estimate the costs associated with each potential outcome.
4. Determine the likelihood of each item.
5. Compute the distribution of potential costs and the expected value.²

In some cases, historical data are available, or comparables can be evaluated to estimate either cost estimates or probabilities for specific events necessary for steps 3 and 4. The remainder of this section develops a sample decision tree to demonstrate the concepts of uncertainty and the computation of expected values.

If you flip a coin, will you get heads or tails? If you say heads or, likewise, tails, you are guessing. If you say there is a 50/50 chance of getting one or the other, you are right, but you did not answer the question. The question did not ask for the likelihood or probability of getting heads or tails, it asked which one you would get. Of course, you don’t know because the event has not occurred yet, and the outcome is not certain. You know what it *can* be, but you don’t know what it *will* be. That is uncertainty.

Although you may not know the answer—as to what a flip of the coin will produce—you do have some key pieces of information. You know, for example, that it will either be heads or tails (the coin won’t rest on its edge), so you know all of the potential reasonable outcomes. This is useful information. You also know the likelihood of each outcome. After all, you have a 50 percent chance of getting heads and a 50 percent chance of getting tails. There are really no other options besides these. With this in mind, consider the following question:

Using a fair coin, with a 50/50 chance of getting heads when it is flipped, what is the

[Section 6:17]

¹These steps are based on the outline provided by the draft ASTM standards. How the information necessary to develop the inputs goes into the decision theoretic models will be described in later sections of this chapter.

²In situations where the number of potential outcomes from the decision tree approach become too numerous to compute individually, simulation models can be used to estimate the distribution of outcomes and the expected value.

likelihood that if you flip the coin twice you will get heads both times? (A hint . . . it's *not* 50 percent!)

Well, what are the potential outcomes? (And, by the way, whether you draw out the options on a piece of paper or figure them in your head, you are evaluating uncertainty using decision analysis.) You could get two heads; but you could also get two tails. Moreover, you could get one of each. So, is the likelihood of heads both times one third? No, it is 25 percent, as demonstrated in Figure 6:6. The first time you flip the coin, there is a 50/50 chance of getting heads. But in order to get heads both times, you have to get a head on this first flip. So, half of the time the game will be over after the first flip, because half the time you'll get tails on the first flip.

Now, if you were fortunate enough to get heads on the first flip, you then have to get heads on the next flip, which is completely independent of the first. When you flip that coin a second time, there is, once again, a 50/50 chance of getting heads. That is, only half of the time the first flip will produce heads, and then only half of the time the second flip will do the same. The probability or likelihood of getting heads both times is 25 percent.

To determine the likelihood of any given outcome, you follow its path and multiply the probabilities. The likelihood of getting heads twice is the likelihood of getting heads the first time (50 percent) *multiplied* by the likelihood of getting heads the second time (50 percent), which is 25 percent. You *multiply* probabilities.

This example demonstrates that it is possible to estimate the likelihood of future events. By determining all the possible outcomes for each flip of the coin, you know what the outcome might be. By knowing the probabilities associated with those specific outcomes, you can then estimate the likelihood of occurrence. But likelihood isn't "expected value," and in order to embrace the concept of expected value it is important to really understand uncertainty. The following problem modifies the example in Figure 6:6.

Each time you flip that coin and get heads, a friend will pay you \$10, but you can only flip it twice. Your friend will pay nothing for tails. But your friend is not entirely generous and is unwilling to play a game in which "winning" for him or her means not losing any money with no chance of coming out ahead. To make it fair, you offer to pay for the right to play the game. What is the maximum amount you should be willing to pay?

If you are unlucky and you flip two tails, you will not win any money. On the other hand, you might win \$20. Or you might end up somewhere in the middle. Considering the probabilities you should expect to win \$10 from this game and should be willing to pay no more than that for the right to play. It is the expected value of what your friend is about to lose and what you are about to win.

Figure 6:7 shows the initial decision tree with the different outcomes of two coin flips. Only this time it notes what your friend expects to pay at each result. After the first flip of the coin, your friend will pay you \$10 if you get heads and nothing if you get tails. If you get heads again, your friend will pay you another \$10. But, if your second flip produces tails, your friend will pay you only \$10 for the successful flip and nothing for the second flip. Figure 6:7 shows the payouts for the "tails-first" paths. Notice that while probabilities are *multiplied*, costs are *added* at each event.

Figure 6:6 Results of Flipping a Coin Twice

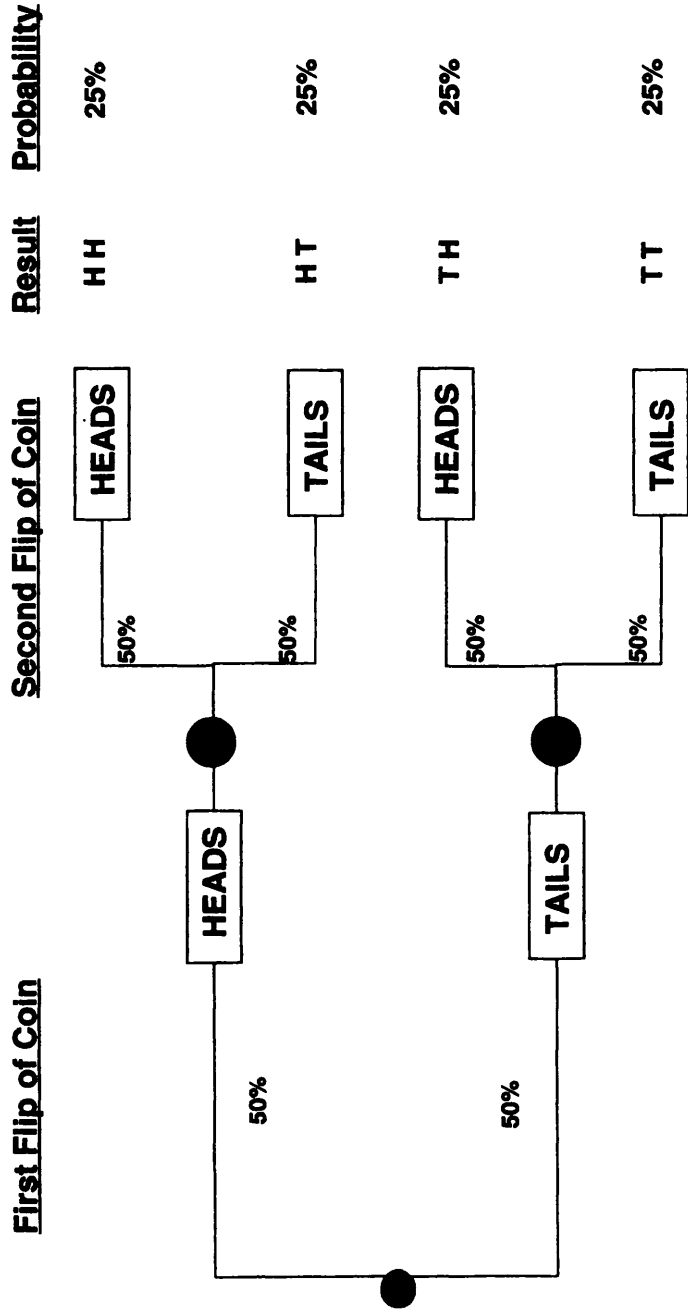
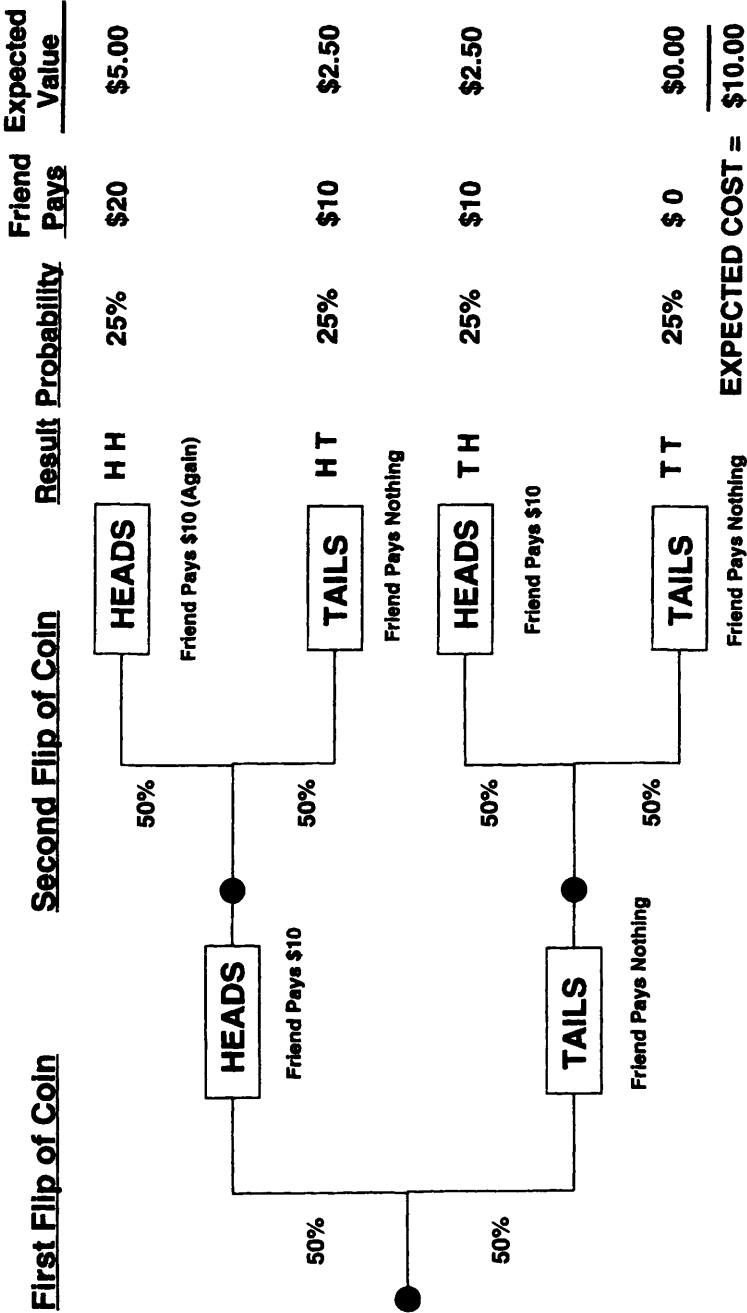


Figure 6:7 The Expected Value of Flipping a Coin Twice



The right-hand columns reproduce the outcomes—what your friend will have to pay if you end up with that outcome. The table also lists the likelihood or probability that each outcome will occur. Your friend will pay \$20 for two heads, \$10 for heads then tails, \$10 for tails then heads, and, finally, nothing for two tails. The chart also indicates the expected value of each path, the probability-weighted outcome, and, at the bottom, the expected value of your flipping two coins—what your friend expects to pay for this future uncertain activity. This number is estimated by adding each of the individual expected values (for each outcome) together.

Notice that although your friend will pay you \$20 for two consecutive heads, there is only a 25 percent chance that you will accomplish that feat. The “probability-adjusted” payout, or the expected value, of that path is \$5, which is \$20 multiplied by the probability that you actually get that outcome. Likewise, if you get one head and one tail, in that order, your friend will pay you \$10. But, again, since the likelihood of that event is 25 percent, its expected value is \$2.50. Your friend can do this for each of the four potential outcomes, and when your friend is finished, he or she adds up all those expected value numbers. The result—the sum of the expected values from the different paths—is the expected value of the activity itself. In this case, when your friend adds the expected values together, the total is \$10. That is the amount your friend expects to lose to you. That number is not always “right.” Sometimes your friend will pay you nothing, and sometimes your friend will pay you \$20. However, \$10 is what your friend should expect to pay.

Developing Figure 6:7 requires your friend to determine the range of possible outcomes, the probabilities for the different events, and the costs or payments that would be made for different events. When those pieces of information are known, there is relatively less uncertainty. If there is uncertainty in those pieces of information, the decision analysis process still works in the same way, but one would simply need to incorporate more variables to evaluate. For example, if the coin could also land on its edge, the diagram would be somewhat more complicated, but it would still be possible to draw the diagram and to use it to evaluate the various outcomes.

§ 6:18 Applying expected value analysis to environmental problems

It is one thing to model how a coin can be flipped twice. After all, the possible outcomes (heads and tails) and the key probabilities (50/50) are known. And your friend told you the costs or payouts he or she would make under certain conditions. Unfortunately, the real world—particularly in regard to future environmental liabilities—seldom provides such a clear roadmap for analysis.

The following example uses information concerning an environmental site.

A manufacturing facility sits on an area that was formerly a waste disposal staging area. The site has not been tested, and the regulators are not currently evaluating this site. In fact, the site might never be addressed. If an environmental study is required, it is likely that some remediation work will be required. However, it may be the case that the study will find no need for further work. Based on the company’s knowledge of the site, if work is undertaken, it would be limited to soil remediation. However, the quantity of soil that potentially would be treated is uncertain, and there are several different soil remediation alternatives.

How does the company begin to quantify or get a handle on the potential cost of remediating this site? There are so many uncertainties that *determining* the cost of remediation is impossible. At this point there is no single future cost of remediation. However, while uncertainty prevents the company from determining the cost of remediation, it does not prevent it from *estimating* the cost of remediation.

§ 6:19 Applying expected value analysis to environmental problems—The no action option

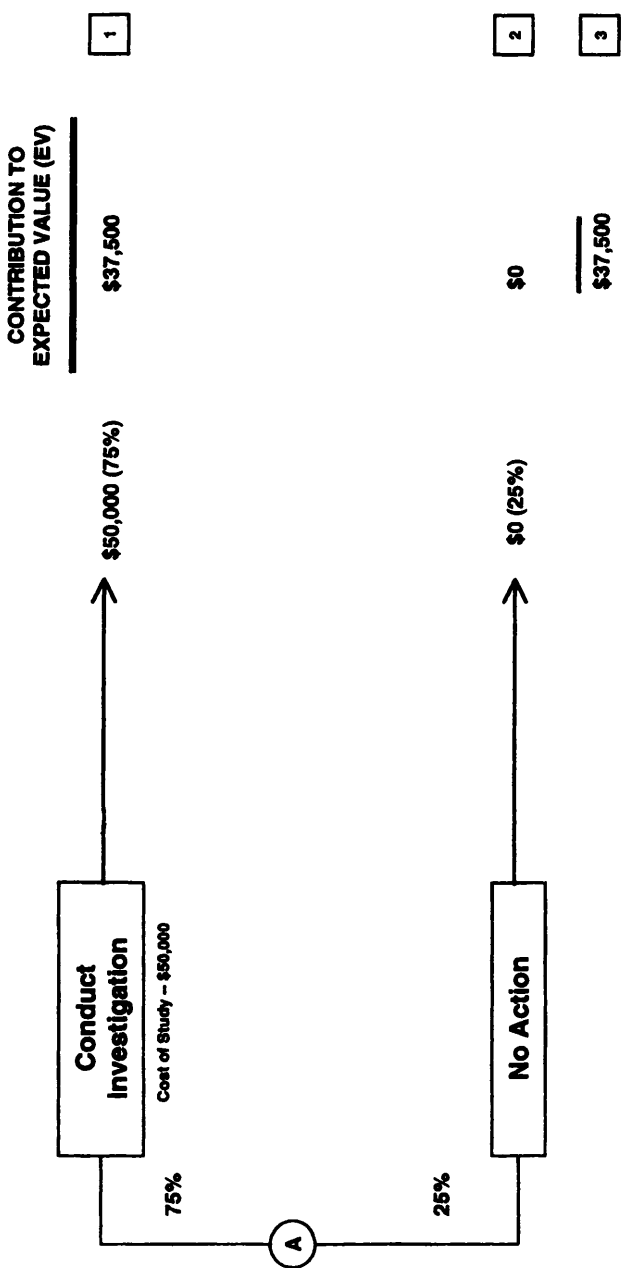
Currently, regulators are not evaluating the site, and the company has no plans to undertake an evaluation. The problem may just go away. That is, it may require no further action and have a future cost of \$0. Is that likely? No, not really, but there is a chance this will happen.

§ 6:20 Applying expected value analysis to environmental problems—The no action option—Determining the range of outcomes

The first uncertainty to evaluate is the possibility that the problem will go away without any further action. The cost of that outcome is \$0. What is the alternative? That is, what activity will occur at the site if the problem does not go away? In all likelihood, some study or evaluation of the site will occur, either performed voluntarily or at the behest of the regulators. But, before the company digs up any of that soil, it will study it.

This means that at some future point the company is going to either “study” or “not study” the site. Not studying in this case means that, once again, the site goes away. The two alternatives the company faces in the future are shown in Figure 6:8. A dot shows where these two options come together in the diagram to indicate uncertainty—the company does not know which path to choose.

Figure 6:8 The “Study or No Study Required” Options



§ 6:21 Applying expected value analysis to environmental problems—The no action option—Estimating costs

If no one compels the company to study or evaluate the site, it then goes down the “no action” path and is finished. The cost for that outcome is also \$0. The alternative is a study or evaluation of the site. While that cost might be uncertain, the company will assume that a study would cost \$50,000. Now the company knows what its first area of uncertainty looks like, but it does not know what the outcome will be—it has a range of outcomes. This is just like “heads or tails,” only now it is “study or no study required.”

§ 6:22 Applying expected value analysis to environmental problems—The no action option—Estimating probabilities

When it came to coins, the likelihood of getting either heads or tails was obvious—50 percent. When it comes to “study or no study required,” the likelihood is uncertain, but there are ways to estimate it. For example, it may be the case that the company has many other sites just like this one. Thus, it has some sense of what the regulators are likely to require here. Or, there may be similar sites in this area, and the company can evaluate how the regulators have responded to those. Even if the company cannot determine that the likelihood is some precise number (e.g., exactly 50 percent), it can still collect information in order to make an estimate of the likelihood.

If the company had four of these sites, would the regulators make it study two, three, or four of them? For purposes of this discussion, assume that the regulators will make the company study three out of four of the sites. This means that 75 percent of the time (three of four times) the company will go down the “conduct investigation” path, and 25 percent of the time it will go down the “no action” path. Now all of the information the company needs to develop Figure 6:8 is complete. The company knows the possible outcomes, the associated costs, and the probabilities assigned to each path.

§ 6:23 Applying expected value analysis to environmental problems—Estimating the expected value of the study

Assuming that this is all there is to the remediation—the company either studies (and then does nothing else) or it does nothing at all—the study will cost \$50,000, and there is a 75 percent chance that the regulators will require a study. What is the expected cost? As shown in Figure 6:8, it is \$37,500.

The analysis of this problem answers several questions. First, what happens if the company is not very confident in its probabilities? How does that affect the expected value? Second, how does the expected value (\$37,500 in this example) compare to the different outcomes? And third, why is \$37,500 the right number for the expected value?

§ 6:24 Applying expected value analysis to environmental problems—Estimating the expected value of the study—Probabilities affect expected value

To arrive at the estimated \$37,500 expected value, the company used a probability of 75 percent that the regulators would make it conduct a study. If a different probability was used, the resulting estimate would also differ. For example, if the likelihood was only 50 percent, the expected value would have been \$25,000 (i.e., \$50,000 × 50%). The expected cost is sensitive to the probabilities that are assigned to specific outcomes. Sometimes, however, a great deal of uncertainty is tied to very little cost, meaning that the uncertainty has no significant impact on the

cost estimate. There are ways to test the impact of uncertainty in probability estimates, but the key point here is that the process of evaluating future costs using decision analysis does work.

Sometimes a company is less interested in a specific answer than in other relevant information about a future cost. For example, a company may have a great deal of uncertainty over the likelihood that a study will be required. Although it decides the probability is 75 percent, the company is just not confident that this is a very solid number. Besides, what the company wants to know is not simply the expected value of the study/no study option, but also, for budgeting purposes, whether that option is going to cost at least \$10,000 next year. It's a simple yes or no question. Is this uncertain event expected to cost \$10,000 (or more) at some point in the future?

Decision analysis can help answer that question. If the company assumes that the outcome (*i.e.*, the expected value) will cost \$10,000, then what is the corresponding probability? The answer is 20 percent. That is, if there is a 20 percent likelihood of a \$50,000 study, then the expected value is \$10,000. So, the company still may be uncertain as to whether the probability is 75 percent, but if it is trying to determine whether a study will cost at least \$10,000, the answer is yes (if the likelihood is 20 percent or higher).

**§ 6:25 Applying expected value analysis to environmental problems—
Estimating the expected value of the study—Why expected value
may not represent a specific outcome**

When the company calculated the expected value of the study to be \$37,500, the only outcomes that were available were “pay nothing” and “pay \$50,000.” However, because there is a probability weighting to these outcomes, the expected value is \$37,500. This can be confusing. Sometimes people want to know which path results in the expected value, but there is no \$37,500 path. It is simply a weighted average of the two identified paths.

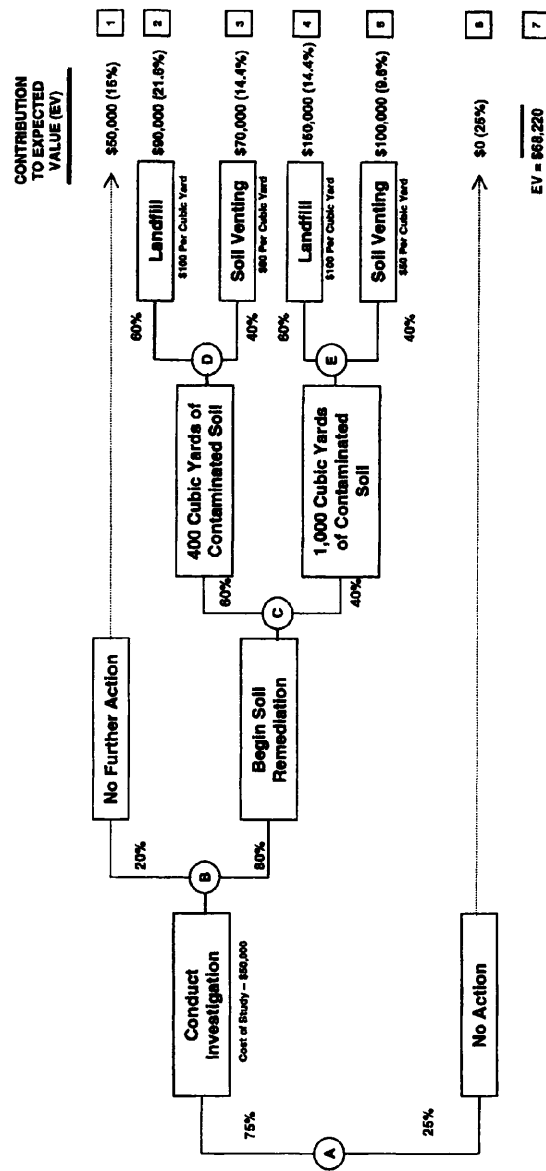
**§ 6:26 Applying expected value analysis to environmental problems—
Estimating the expected value of the study—Why expected value is
the right answer**

If a study is required, the company will spend \$50,000. But, if the company has four identical sites, the odds are that it will only study three sites (*i.e.*, $.75 \times$ four sites). That will cost a total of \$150,000 ($\$50,000 \times$ three sites). So, the cost related to studying four sites, when the company actually studies three of them, is \$150,000, or \$37,500 per potential site. If the company had budgeted \$50,000 per site, it would be implicitly assuming that each of the four sites definitely will be studied, even though the company had previously concluded that the odds of this occurring were only 75 percent. An expected value gives a company the correct estimate of the future cost.

**§ 6:27 Applying expected value analysis to environmental problems—
Evaluating post-study actions**

If the regulators do require a study, the company may find that soil remediation is unnecessary. On the other hand, it may find out that some soil cleanup has to be done. How does a company address this in the expected cost analysis? It simply adds another node (a point where different decisions or events occur) to the decision tree and evaluates the options. Figure 6:9 shows this result.

Figure 6:9 Hypothetical Decision Tree for Site Remediation



This node is somewhat more complicated than the one shown in Figure 6:8 because it actually links several nodes together. Now that the study is complete, there are five subsequent options. Once again, there is an option for “no further action” following the study. If that option is not selected, then the regulators will require soil remediation. However, the quantity of soil and the remedy remain uncertain. The company has identified two potential soil volumes, and under each one, two methods of treatment have been identified. As a result, there are four soil treatment options. Thus, as this node is drawn, there are only five possible outcomes after the study is conducted.

**§ 6:28 Applying expected value analysis to environmental problems—
Calculating the probabilities and expected costs of each outcome**

At each decision point, a number of options may occur, and probabilities are assigned to each option. At each point, these probabilities must, by definition, equal 100 percent. In other words, either the company studies or it doesn't. There are no other options. And, if the company studies, it either takes no further action or it conducts one of four soil remedies. Again, there are no other options.

For example, in Figure 6:9, each node is labeled “A” through “E.” Likewise, each outcome is numbered “1” through “6” (with “7” being the sum of the individual paths' expected values). So, if the company wants to calculate the probability associated with remediating 400 cubic yards of soil using soil venting treatment, it looks at Outcome 3. The probability of that outcome is calculated as follows:

A 75 percent chance of a site study is multiplied by an 80 percent chance that, when the study is completed, soil remediation will be required. This is then multiplied by a 60 percent chance that the quantity of soil, given the need for remediation, will be 400 cubic yards. That number is multiplied by a 40 percent chance that the remedy selected for those 400 cubic yards would be soil venting. This results in a 14.4 percent likelihood of that event occurring (*i.e.*, $75\% \times 80\% \times 60\% \times 40\%$).

The company could also calculate the cost associated with that event. If the company ends up at Outcome 3, it means that it did undertake the study, thus spending \$50,000. It would also mean that once the study was completed, it was determined that remediation of 400 cubic yards of soil was required. Finally, it would mean that the selected remedy was soil venting. Since soil venting costs \$50 per cubic yard, and the number of cubic yards is 400, the cost of treatment would be \$20,000 (*i.e.*, $\$50 \times 400$). Thus, the cost of this path would be the study cost (*i.e.*, \$50,000) plus the cost of the treatment (*i.e.*, \$20,000) for a total of \$70,000. Since the likelihood that this path would be taken is 14.4 percent, the probability-weighted contribution is \$10,080 (*i.e.*, $.144 \times \$70,000$). If the company follows each path and estimates its likelihood, its cost, and its contribution to total expected cost, and then sums the contribution of each path, it will find that the expected value of the future remediation cost for this site is \$68,220.

This very uncertain future event has been estimated. Many, if not most, future events can be estimated using these decision analysis techniques. In general, the greater the uncertainty, the less confidence there will be in the estimate and, frequently, the more sensitive the estimate will be to changes in underlying assumptions. Often, this uncertainty is reflected in the decision tree by displaying a number of options at any node. But the process itself (*i.e.*, developing decision trees and estimating expected values) can be a powerful tool in evaluating future events.

Although it may not be able to solve every future cost estimation problem, decision analysis is an incredibly powerful tool that can be used in many circumstances to estimate future costs or evaluate future events. Decision analysis requires more work and more information collection than other methods do, but it also provides more information about future events. It provides an estimate of future costs and of

minimum and maximum costs as well, and, perhaps most important, it provides a measure of the distribution of possible outcomes and the ability to evaluate the relative uncertainty behind the forecast itself.

For environmental managers, however, decision analysis is more than just a tool for estimating expected value and supporting some estimate of future costs. It is the *process* of developing the decision tree that is often most useful. The act of developing the decision tree forces participants to focus on specific remedial factors and to develop a range of outcomes at each critical point in the process. It then compels participants to quantify the impact of these outcomes and evaluate the likelihood that any outcome will occur. It imposes structure on uncertainty; it shows the participants what may unfold without proactive intervention. As a result, proactive environmental managers can use decision analysis as a tool for evaluating future environmental liabilities and as a roadmap to the steps necessary to manage the future effectively.

IV. COST-BENEFIT ANALYSIS

§ 6:29 In general

Cost-benefit analysis is the principal technique employed by individuals, corporations, and government agencies to facilitate decision-making by providing a tool to evaluate alternative courses of action. When making choices or decisions in our daily lives, each of us employs the fundamental principles of cost-benefit analysis. For example, when purchasing a car, a consumer weighs the various pros and cons associated with different models in order to try to get the best value.¹ Similarly, when corporations evaluate different investment opportunities, they are essentially conducting a form of cost-benefit analysis where the profits associated with each option are the benefits and the costs constitute the investment that is required. The corporation would then go on to select the alternative that has the greatest net profit (*i.e.*, profit less cost).

Cost-benefit analysis is perhaps the primary analytical tool used by governments in making public policy choices. Governments typically are faced with budget constraints and have to make choices between a variety of different programs to fund. For example, when the government is faced with the decision of how to spend a budget surplus, various alternatives are put forward—from new educational programs, to increased health care benefits, to increased defense spending. The government must consider the net benefits to society and the country that each of these programs is likely to result in prior to making its decision.

Core decision-making at all levels either explicitly or implicitly uses cost-benefit analysis. This section provides a formal generic framework that may be utilized by decision-makers in different fields to aid their decision-making. The following section will begin with a discussion of the characteristics of the cost-benefit analysis tool and the fundamental rules that must be followed in its application. Following this, alternative formulations of problems where cost-benefit analysis may be used are addressed using examples. This will be followed by a discussion of the methodology that may be used to estimate the costs and benefits associated with a particular project and the potential pitfalls associated with the use of cost-benefit analysis as a tool for decision-making.

[Section 6:29]

¹To put this example in the cost-benefit analysis framework, the price associated with various models the consumer is considering is the cost, and the potential usefulness derived from the car and its various features would constitute the benefits. In making the final choice an individual would typically select the car that has the largest net benefit (*i.e.*, total benefit less total cost).

§ 6:30 Basic analytical steps

In theory, cost-benefit analysis provides an objective and rigorous analytical framework for decision-making. This approach simply requires a systematic enumeration of the costs and benefits associated with a particular decision or a group of possible alternatives. On estimating these potential benefits and costs, the alternative that provides the maximum net benefit (*i.e.*, benefit less cost) should be selected. This is an *ex ante* analysis and is in many ways similar to the *ex post* profit and loss analyses conducted by business entities.¹

Individuals and other entities often use cost-benefit analysis to help them decide between a number of alternatives available to them. The rationale behind cost-benefit analysis is one of economic efficiency in that it attempts to put resources to their most beneficial use. Using the car analogy again, in buying the best car he or she can afford out of a number of alternatives, the consumer is putting his or her resources to the best possible use. Similarly, cost-benefit analysis is also used by governments, for example, to determine the type of pollution control system that should be put in place to control the spread of a contaminant in ground water or to decide between a group of alternative poverty alleviation measures.

The following five-step process may be followed to conduct cost-benefit analyses.

- *Identify all of the alternatives.* This step involves the identification of all of the alternatives that may potentially be undertaken. For example, the first step when a consumer is interested in buying a car is for the consumer to identify all of the models he or she is interested in. Similarly, for a corporation interested in investing money, the identification of all feasible investment opportunities would constitute the first step in conducting a cost-benefit analysis. And, in the case of a government attempting to clean up the environment, the identification of all the possible programs that it may undertake (*e.g.*, reduction in sulfur dioxide emissions, controlling perchloroethylene releases from unregulated business, or controlling non-point source pollution from agricultural sources) would be the first step in conducting such an analysis.

- *Determine all potential impacts.* The favorable, as well as the unfavorable, impacts associated with all of the potential projects must be determined, both in the present as well as in the future. In doing this, it is important to evaluate these impacts from the correct perspective (*i.e.*, from the perspective of the decision-making principal). For example, a company considering the release of a new product into the market should only account for factors that affect its own costs and benefits (profits). This company does not necessarily need to include in its analysis the impact of this product on the profitability of other businesses. On the other hand, in the case of a government making a public policy decision, it must try to evaluate the effect the policy is likely to have on society in general and should include in its analysis the likely impact on a much larger universe of constituents.

- *Assign values to these impacts.* The favorable impacts may be viewed as benefits and the unfavorable impacts as costs. The assignment of values is critical to bringing all of the alternatives to a common denominator that facilitates comparison. Typically, benefits, and the costs associated with different projects, are expressed in dollar terms.

- *Calculate the net benefit.* The net benefit for a project is computed as the total

[Section 6:30]

¹An *ex ante* analysis is conducted prior to the event actually taking place and, hence, is a predictive analysis. There is a significant amount of uncertainty associated with this type of analysis. An *ex post* analysis is conducted after the event has taken place. Profit and loss, for example, are *ex post* concepts. Expected return, however, is an *ex ante* concept.

benefit minus the total cost.

- *Select the best alternative.* The fundamental rule for conducting a cost-benefit analysis is selecting the project that has the highest net benefit.

Cost-benefit analysis is indeed a very powerful tool for use in decision-making, but at the same time it may involve extremely complicated analysis in order to correctly quantify the problem at hand. The application of the cost-benefit analysis to solve problems of varying degrees of complexity is probably best understood in the context of examples. This section considers five potential situations that encompass most of the different scenarios where cost-benefit analysis would typically be applied.

§ 6:31 Basic analytical steps—Accepting or rejecting a single project

This example analyzes the simplest of all situations. It evaluates a single project and either accepts or rejects it. This example is based on the assumption that there are no constraints in terms of the amount of resources that can be spent on this project.

A company that manufactures widgets generates a certain amount of pollution as a part of its manufacturing process. It is faced with costs associated with permitting and with the disposal of the pollutant. Additionally, there is a significant amount of potential future liability from the disposal of this product, given regulatory uncertainties. For example, the product may become a listed waste in the future in which case the company is likely to be required to clean up its disposal sites and would also face potential toxic tort liability. The company has decided that it would like to mitigate the current costs and the potential future liability resulting from the release of the pollutant by adopting pollution prevention technology. The cost of installing the system is estimated to be \$100,000. The net benefits to the company from cost savings over the years in terms of disposal costs and permitting is estimated to be \$75,000. In addition, the reduction in future liability (both from a reduced likelihood of being required to clean up the pollutants in the future and a reduction in potential toxic torts) is estimated at \$50,000.¹ The net benefit to the company from installing this pollution prevention technology is calculated as

$$\$75,000 + \$50,000 - \$100,000 = \$25,000$$

In this case the decision is a simple yes/no decision without any constraints. Based on the above calculations, the net benefit from adopting the pollution prevention technology is \$25,000. On the other hand, in the situation where this technology is not adopted, negative net benefit numbers result from the permitting and disposal costs as well as from the potential future liability. Thus, following the fundamental principle of cost-benefit analysis, the net benefits are maximized by installing the pollution prevention system.

§ 6:32 Basic analytical steps—Selecting from a number of discrete alternatives

If there are eight alternative proposals presented to the company for the abatement of the pollution resulting from the manufacturing process, the company has to select one of them. Each of these eight methods has different implementation costs and is effective to different degrees in terms of abating the release of the pollutant. Figure 6:10 lists the costs and the potential benefits associated with each of the

[Section 6:31]

¹Developing future cost estimates for both cleanup costs and toxic tort liability is a very complicated task and would require a large amount of detailed and complex analysis. Tools such as decision trees and discounting should be employed to accomplish this.

technologies.

System A is the cheapest, and System H is the most expensive. As system price increases, so does the effectiveness in controlling emissions levels, which results in increasing benefits. The net benefit from each alternative is computed in the final column on Figure 6:10. Based on a comparison of the net benefits, the company realizes that System E has the highest net benefit of \$250,000 and should be the system selected to prevent the release of the pollutant.

§ 6:33 Basic analytical steps—Selecting the scale of a project

The systems described in the previous example were mutually exclusive, and a single system had to be selected from the group. Alternatively, companies are often faced with situations where they have to select the scale of a project instead of selecting between several projects. A common example is the case of the addition of fertilizers to increase agricultural productivity. In this case a farmer needs to determine the optimal level of fertilizer that may be used on a tract of land for the production of corn. Historical productivity data on the impact of fertilizers on the corn yield can be used to solve the farmer's problem. The benefits from the use of fertilizers (in terms of the value of the increased corn output), and the costs of buying the fertilizer are presented in Figure 6:11.

Figures 6:12 and 6:13 depict the data from Figure 6:11 graphically and show the total benefits and total costs resulting from fertilizer use.

Figure 6:10 Alternative Pollution Control Systems (\$000)

Pollution Control System	System Cost	Benefits			Net Benefit
		Savings from Permitting and Disposal	Savings from Future Liability Reductions	Total Benefit	
A	100	100	50	150	50
B	300	250	250	500	200
C	150	175	150	325	175
D	500	300	400	700	200
E	350	250	350	600	250
F	250	200	200	400	150
G	200	175	200	375	175
H	700	300	550	850	150

Figure 6:11 Net Benefits from the Use of Fertilizers (\$'000)

Tons of Fertilizer [1]	Total Benefit [2]	Total Cost [3]	Net Benefit [4]	Marginal Benefit [5]	Marginal Cost [6]	Marginal Net Benefit [7]
0	0	0	0.00	0.00	0.00	0.00
5	4.5	1	3.47	0.37	0.20	0.17
10	6.3	2	4.32	0.28	0.20	0.08
15	7.7	3	4.75	0.24	0.20	0.04
20	8.9	4	4.94	0.21	0.20	0.01
25	10.0	5	5.00	0.19	0.20	-0.01
30	11.0	6	4.95	0.18	0.20	-0.02
35	11.8	7	4.83	0.16	0.20	-0.04
40	12.6	8	4.65	0.15	0.20	-0.05
45	13.4	9	4.42	0.14	0.20	-0.06
50	14.1	10	4.14	0.13	0.20	-0.07
55	14.8	11	3.83	0.13	0.20	-0.07
60	15.5	12	3.49	0.13	0.20	-0.08
65	16.1	13	3.12	0.12	0.20	-0.08
70	16.7	14	2.73	0.12	0.20	-0.08
75	17.3	15	2.32	0.11	0.20	-0.09
80	17.9	16	1.89	0.11	0.20	-0.09
85	18.4	17	1.44	0.11	0.20	-0.10
90	19.0	18	0.97	0.10	0.20	-0.10
95	19.5	19	0.49	0.10	0.20	-0.10
100	20.0	20	0.00	0.10	0.20	-0.10
105	20.5	21	-0.51	0.10	0.20	-0.11
110	21.0	22	-1.02	0.09	0.20	-0.11
115	21.4	23	-1.55	0.09	0.20	-0.11
120	21.9	24	-2.09	0.09	0.20	-0.11
125	22.4	25	-2.64	0.18	0.20	-0.02

- (1) Tons of fertilizer used for the project.
 (2) Total benefits from the fertilizer resulting from an increase in corn productivity.
 (3) Total cost of the fertilizer.
 (4) = [2] - [3]
 (5) Increase in benefits per additional ton of fertilizer.
 (6) Increase in costs per additional ton of fertilizer.
 (7) = [5] - [6]

Figure 6:12 Total Costs and Benefits from Fertilizer Use

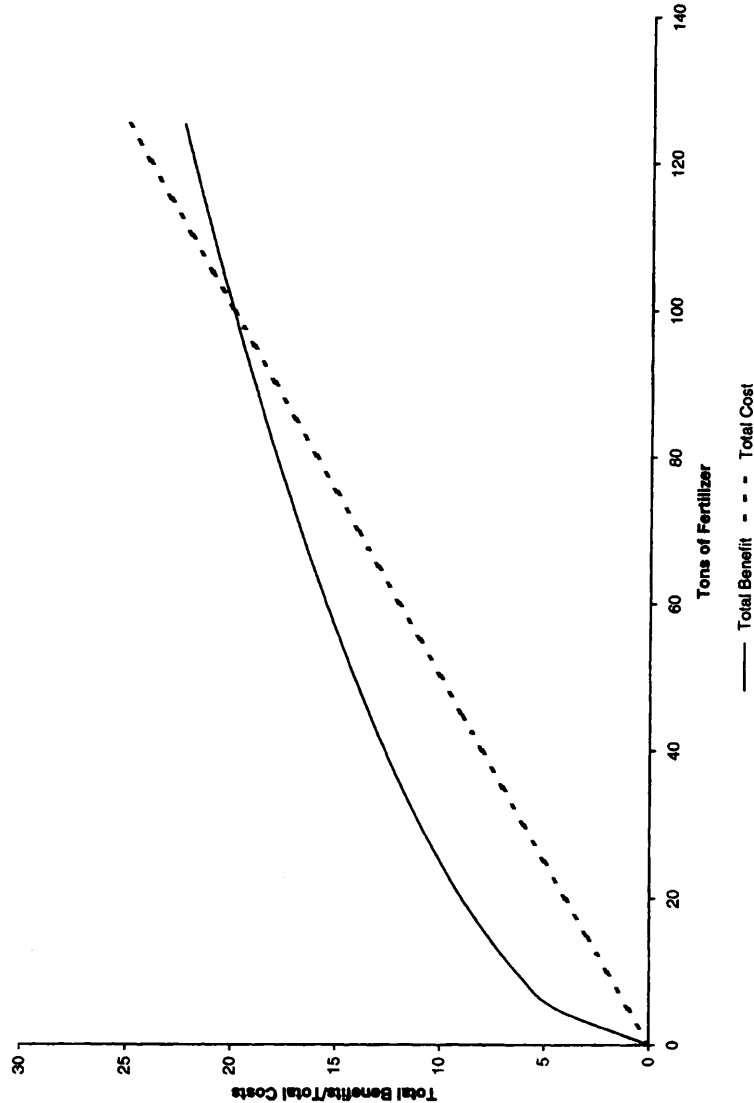
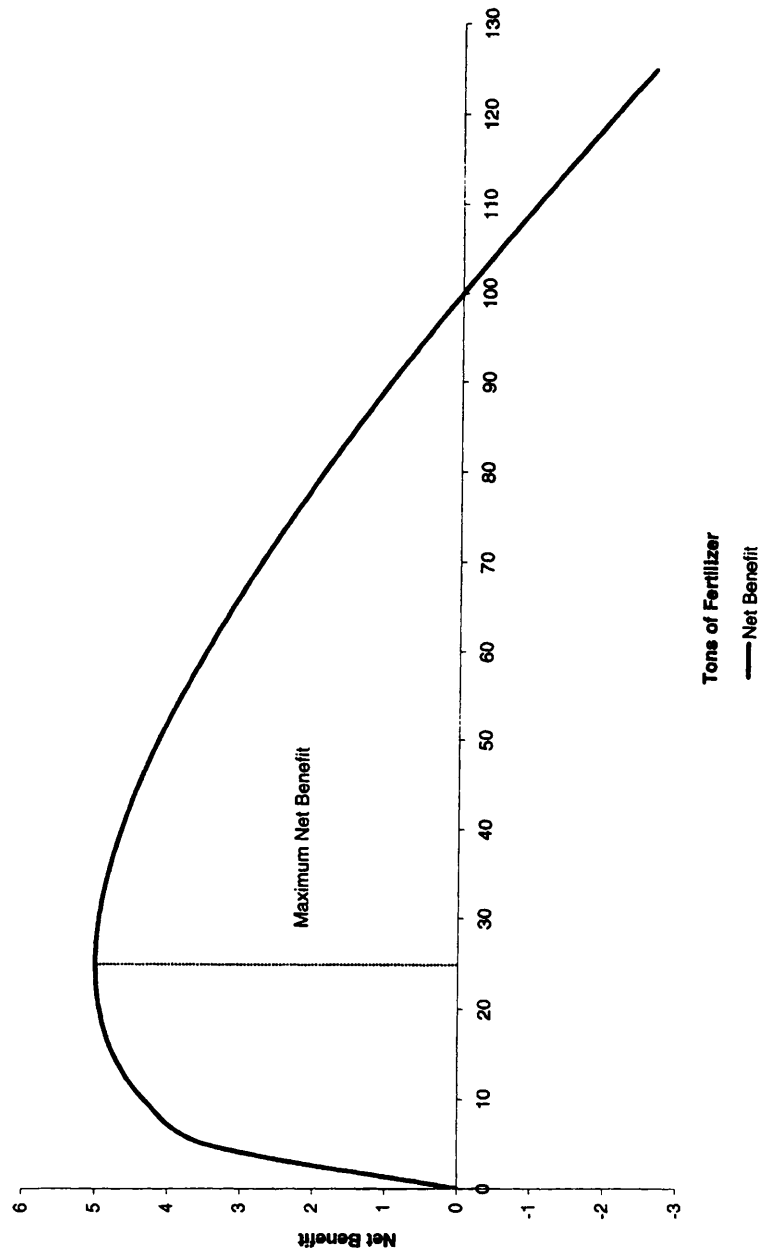


Figure 6:13 Net Benefits from the Use of Fertilizers



In this case, as before, the objective is to use the amount of fertilizer that maximizes the net benefit (*i.e.*, total benefit minus total costs) for the farmer. Net benefits for all of the levels of fertilizer use have been calculated in Figure 6:11. Figures 6:11 and 6:13 demonstrate that the net benefit from fertilizer use reaches its maximum when the farmer uses twenty-five tons of fertilizer. By going through this exercise, the farmer has determined the optimal scale for the project, or the amount of fertilizer that should be used to generate maximum returns.

Selecting the scale of projects is an issue that is frequently encountered in conducting environmental cleanups. Consider a situation where a company is faced with a groundwater contamination problem at an environmental site. This contamination problem may be mitigated by using systems that pump the water out of the ground and treat it. The scale of the project, or the rate at which the water should be extracted from the ground, will need to be determined so that the benefits from this process are optimized. Cost-benefit analysis comes in handy in such a situation. The company would typically compare the costs at different pumping rates to the impact that these pumping rates would have on the level of contamination (benefits) to determine the net benefits. Finally, the pumping rates resulting in the highest net benefit will be selected.

This example provides an alternate version of the fundamental decision rule, which is based on maximizing net benefits. The optimal scale for a project may also be determined by continually increasing the scale of the project to the point where the increase in the benefit from a single unit increase in the input (marginal benefit) is equal to the cost of that unit of input (marginal cost). If the company increases the scale of the project beyond the point where the marginal costs equal the marginal benefits, then the costs of each additional unit become greater than the benefit that we derive from it, and the additional unit is no longer optimal. In the fertilizer example, this point is demonstrated in Figure 6:11. The marginal benefit almost equals the marginal cost at twenty-five tons of fertilizer use.¹ To reach this point the farmer continues adding fertilizer to the point where the additional benefit from a ton of fertilizer is equal to the cost of that ton of fertilizer. An alternative way of expressing this rule is that the optimal level of inputs is defined by the point where the marginal net benefit is zero.

A crucial assumption embedded in this principle for determining the optimal scale of a project is that there will eventually come a point at which the marginal benefit from a ton of fertilizer will be less than its marginal cost. This assumption is formally referred to in economics as the *law of diminishing returns*. While it is not necessarily the way all physical phenomenon work, it is more often than not an accurate description of the real world.

§ 6:34 Basic analytical steps—Selecting from a number of discrete alternatives subject to resource constraints

Companies are often constrained by the amount of money they can spend on projects. In the next example, the projects outlined in § 6:32 are not mutually exclusive, and the company has eight widget manufacturing facilities for which it must consider the installation of pollution prevention systems. The company has received bids from contractors for the installation of the systems at the eight facilities and has calculated the potential benefits from each system based on its effectiveness. However, the company only has \$800,000 to spend on these systems

[Section 6:33]

¹Since discrete increments are used to indicate the amounts of fertilizer, the marginal cost is not exactly equal to the marginal benefit from the fertilizer at twenty-five tons, but it is approximately the point at which the benefits become lower than the costs.

and is faced with the problem of deciding which of the facilities will get these systems.

In order to do this most effectively, the company needs to select a group of projects that would maximize the net benefits for an outlay of \$800,000. The company could try to find a solution to this problem by using the trial and error method. For this method, the company would select groups of projects that would, in total, cost \$800,000 or less and then compare the net benefits across all of the groups until it was satisfied that it had selected the best group. This could be a very tedious process, especially if there are a large number of potential alternatives.¹

There is a far more systematic way of tackling such problems. Since, in this case, it is the initial outlay, or the costs of the project, that constrain the company, it is useful to compute the net benefit from each project per dollar spent on the project. These values for the alternatives described in § 6:32 (Figure 6:10) are represented in Figure 6:14. The systems are ranked from the highest net benefit per dollar to the lowest, and a cumulative total outlay for these systems is computed in the last column of Figure 6:14. System C has the highest net benefit per dollar followed by systems G and E. When determining the systems to install, the company should begin with the system that provides the highest net benefit per dollar and continue with progressively lower ranked units until it exhausts its resource constraint.

[Section 6:34]

¹If, for example, the company had eight alternative pollution abatement systems that it could fund at different manufacturing facilities, then it can actually create 2^8 potential groups (since with each system the company would have two choices, to either accept or to reject it), which it would have to evaluate. To begin with, the company would have to select the groups that satisfied the resource constraint. After this, it would have to compare the net benefits for the selected groups to determine the optimal combination of systems.

Figure 6:14 Alternative Pollution Control Systems (\$000)

Pollution Control System	System Cost [1]	Total Benefit [2]	Net Benefit [3]	Net Benefit/Cost [4]	Cumulative Cost [5]
C	150	325	175	1.167	150
G	200	375	175	0.875	350
E	350	600	250	0.714	700
B	300	500	200	0.667	1000
F	250	400	150	0.600	1250
A	100	150	50	0.500	1350
D	500	700	200	0.400	1850
H	700	850	150	0.214	2550

[1] Total costs of system implementation.

[2] Total benefits from the installation of systems.

[3] = [2] - [1]

[4] = [3]/[1]

[5] Cumulative system costs starting with the system that has the highest net benefit per dollars.

In this case, the company would select the top three systems in terms of the net benefits per dollar. These are systems C, G and E, for a total cost of \$700,000. Unfortunately, the next system (system B) is too expensive for the company to adopt. Given the indivisibility of these systems, the company would continue down the ranks of the systems until it found one that it could afford. In this example, that would be system A. The resulting net benefits from the selected systems (C, G, E, and A) would amount to \$650,000 and would maximize the company's net benefits for its initial outlay of \$800,000.

§ 6:35 Basic analytical steps—Selecting optimal alternatives and scale subject to resource constraints

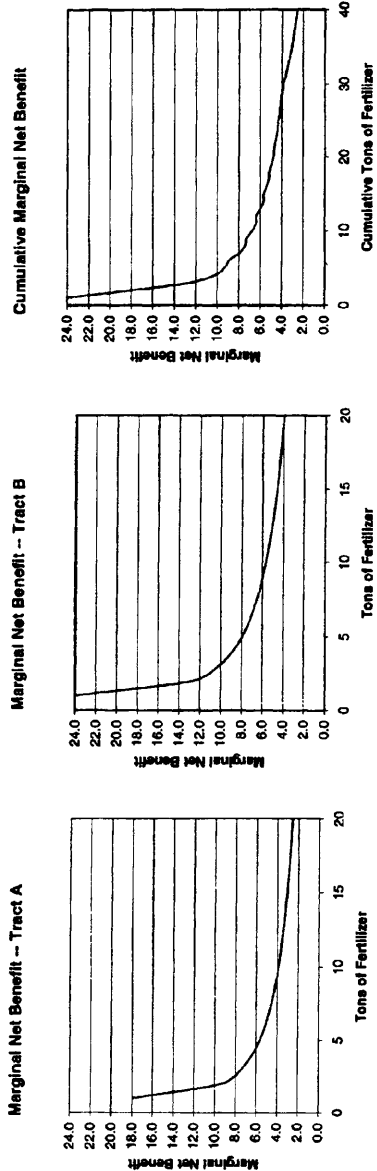
This final example discusses a scenario that is really an amalgamation of all of the alternatives discussed in this section. In this case, the company will be simultaneously determining the scale of a number of projects subject to a resource constraint. If there were no resource constraints, then this decision would be straightforward. The company would essentially determine the optimal scale for each project individually by using the procedure outlined in § 6:33. But, the company is subject to resource constraints, and it will need to optimize the net benefits across the projects.

For the next example, the farmer now has two tracts of land to which he is adding fertilizers for different crops. It is not very hard for the farmer to convince himself that the marginal net benefit at both the tracts of land should be equal at the optimum level of resource allocation between these two tracts. For example, if the farmer is faced with determining to which tract he would like to apply the next additional ton of fertilizer, the obvious answer is that it should be applied "to the tract that produces a higher marginal benefit for the additional ton." And, the farmer is likely to continue adding fertilizer to that tract until he comes to the point where the marginal benefit from the additional ton of fertilizer to that tract is the same as it is at the other tract of land. In theory, this rule is applicable regardless of the number of different projects that the farmer is simultaneously addressing. The optimal solution in terms of the allocation of resources across these projects would have to be one that equalizes the net marginal benefits from all the projects.

In practice, the way this is achieved is to create a cumulative marginal net benefit curve that sums the tons of fertilizers across the two tracts of land at each specific level of marginal net benefit. For example, if the amount of fertilizer required to obtain a marginal net benefit of \$100 per ton of fertilizer is 50 tons for the first tract and 75 tons for the second tract, then the cumulative marginal net benefit curve would have a point that defines a marginal net benefit of \$100 at 125 tons (*i.e.*, 75 tons plus 50 tons) of fertilizer. The farmer would compute such a curve at all the different marginal net benefit levels to create the cumulative marginal net benefit curve.

Figure 6:15 contains the marginal net benefit curves for two individual tracts of land A and B. The cumulative marginal net benefit curve in Figure 6:15 has been determined by summing the number of tons required at each tract of land for any given level of marginal net benefit. If, for example, the farmer had a resource constraint of 30 tons of fertilizer, based on the cumulative marginal net benefit curve on Figure 6:15, the farmer would have a marginal net benefit of \$4,000 per ton of fertilizer. Given the initial principle of equating the marginal net benefits across the different projects, this would result in 10 tons of the fertilizer being allocated to Tract A and 20 tons to Tract B in order to optimize the net benefits from the two projects.

Figure 6:15 Cumulative Marginal Net Benefit Curves



Most people make decisions similar to this one on a daily basis. Many people are faced with situations where they have to allocate time between multiple projects and tasks that need to be completed, and they are restricted by the total amount of time that they have to devote to these projects. People make intuitive scaling decisions between projects and tasks. Similarly, governments and corporations are frequently involved in such decision-making and do so with the help of the tools described in this section.

§ 6:36 Estimating costs and benefits

The decision rules described in the previous section as means of selecting between the different alternatives and project scales subject to constraints constitute the easy part of cost-benefit analysis. The far more difficult problem faced when conducting cost-benefit analyses is the estimation of the costs and the benefits associated with these projects. Typical issues encountered in the estimation of these costs and benefits include (1) defining the scope of the impacts; (2) uncertainty; (3) discounting; and (4) metrics for measuring the impacts.

§ 6:37 Estimating costs and benefits—Defining the scope of the impacts

In determining the costs and the benefits associated with a particular decision, it is critical to identify all of the potential impacts resulting from the implementation of the strategy. This is especially a problem in situations where the government evaluates the impacts associated with different public policy decisions. These evaluations are difficult because the universe of potentially impacted entities is so large. For example, in determining the costs and benefits associated with a hydroelectric power project, the government would have to account for a number of different impacts (both good and bad) including direct project costs, ecological costs, health effects, commercial impacts, recreational impacts, distributional impacts (*i.e.*, which section of society benefits from the project), option and existence values (*i.e.*, value associated with the option/ability to benefit from the use of a resource, *e.g.*, value associated with saving the whales or the bald eagle), and so on. In order to accurately reflect the costs and benefits from different projects, it is important to conduct a comprehensive analysis of the potential impacts of the projects.¹ The government must also keep in mind that there will invariably be side effects that are completely neglected. For example, the use of catalytic converters, while reducing carbon monoxide and hydrocarbon emissions, may have led to an increase in sulfate emissions.

§ 6:38 Estimating costs and benefits—Uncertainty

Since cost-benefit analysis is typically conducted *ex ante*, investors have to predict both the costs and the impacts associated with the projects being considered. Accurate prediction of these impacts would require investors to capture uncertainties in the future resulting from changes in regulation, government, commercial and economic conditions, policy effectiveness, and so on. This is a hard problem to solve, and decision analysis is a good tool to use in such situations to predict future impacts and characterize uncertainty. A recent proposal by the ASTM identifies decision analysis as potentially the best method for the prediction of future costs, es-

[Section 6:37]

¹It is, however, important to not get carried away with the estimation of second and third order impacts, especially if they do not constitute a significant proportion of the total costs and benefits.

pecially in the case of unrealized environmental liabilities.¹ In conducting decision analysis to capture future uncertainty, the analyst would have to make a number of different assumptions with regard to both alternative scenarios that may occur in the future and the likelihood of their occurrence. These assumptions must be formulated with caution to ensure that they accurately reflect currently available information on the potential future states of the world.

§ 6:39 Estimating costs and benefits—Discounting

Since all of the costs and benefits from projects being evaluated are likely to be incurred at some point in the future, analysts need to account for the time value of money. The future costs and benefits need to be discounted at risk adjusted discount rates to bring them to a common denominator for comparison purposes. In order to do this, the analyst would have to make assumptions with regard to the timing of these impacts (*i.e.*, when these impacts are likely to be felt) as well as the discount rates that may be used.

§ 6:40 Estimating costs and benefits—Metrics for measuring the impacts

Developing metrics for measuring the impacts may actually be the biggest challenge from the perspective of measuring the costs and the benefits associated with certain projects. A number of benefits, especially, are in non-market commodities, and it is difficult to assign them a value. An example would be the difficulty in valuing the improved air quality resulting from emissions reductions as a result of EPA's sulfur dioxide permit trading program. Since air is not typically bought or sold in the market, it is difficult to value it. Similarly, health, ecological, and reputational impacts are difficult to evaluate.¹ The next problem is that all of the impacts—both costs and benefits—need to be reduced to the same common denominator, typically in present value dollar terms. At times, it is possible to conduct cost effectiveness studies when the benefits are difficult to estimate in dollars. For example, in the case of emissions reductions, analysts may use a measure, such as the tons of emissions reduced per dollar expenditure on control. This, however, does not include the second order impacts, such as the environmental and health benefits from the cleaner air.

Cost-benefit analysis in some form or another is probably the primary tool used by individuals, corporations, and governments to aid decision-making. The principal framework for decision-making under a cost-benefit analysis framework is straightforward, as described in the examples above. The hard part about conducting these analyses is the estimation of the costs and the benefits themselves. In doing this, the analyst has to make a number of different assumptions. The old adage that an analysis is as good as its underlying assumptions definitely holds true here, and a lot of careful thought should be put into the formulation of the assumptions underlying the estimation of the costs and the benefits. This tool may also be used at a more aggregate level (without necessarily estimating all of the second order impacts) to eliminate certain alternatives that are not competitive at all in terms of being a potential solution. This would help narrow the potential alternatives that would need careful analysis.

[Section 6:38]

¹See ASTM Committee E51 on Environmental Risk Management Sub-Committee .05 on Reserves, Standard Practice for Estimating Environmental Costs and Liabilities (1997).

[Section 6:40]

¹The use of techniques such as contingent valuation, which is based on determining people's willingness to pay for certain amenities, is sometimes used to estimate the values associated with non-market commodities.

V. COST ALLOCATION

§ 6:41 In general

Evaluating the costs associated with a project, activity, or investment is an action that people and businesses perform routinely. Very few of these activities, however, are so well defined that analysts can assign the costs related to those activities without some method of cost allocation. For many activities, businesses have identified mechanisms to assist in cost allocation. For example, in many businesses, photocopies must be assigned to project numbers, which identify clients or department billing codes. This assists in the allocation of photocopy costs among those who use photocopy-related equipment and supplies. Undoubtedly, there are a number of activities in daily life where allocation of costs or resources takes place.

Cost allocation is inherently difficult because there is no unique solution. Compounding this is the fact that some of the competing theories of cost allocation will systematically favor one group of users over another, leaving groups of users to support competing, sometimes conflicting, cost allocation approaches. This section will address some of the basic cost allocation issues, examine several cost allocation approaches, and hopefully leave the reader with a better understanding of how to examine and address cost allocation questions.¹

§ 6:42 Basic terminology

Cost allocation is an area of cost accounting complete with its own terminology. This section will not turn readers into cost accountants, but an understanding of the basic terms used in cost accounting, as they apply to cost allocation questions, will be useful. To place these terms in some context, consider a hypothetical Superfund site with three potentially responsible parties (PRPs). Two PRPs sent solvents to the site, and the remaining PRP sent solid waste to the site. The two types of waste were not commingled, but were disposed of in distinct areas at the site. The solid waste will be excavated and hauled off to a landfill. The remedy designed to address the solvent disposal will be groundwater pump-and-treat. Definitions of some of the basic cost allocation terms follow.

- A *cost object* (or *cost objective*) is an activity or process that an analyst wishes to cost. In the example, the groundwater treatment is an example of a cost objective because analysts will want to allocate the costs related to that activity among those who should share its costs.
- *Cost allocation* is the assignment of common, indirect, or joint costs to different products, parties, or activities. Developing a method to link solvent-related remedy costs to the two solvent-generator PRPs in the example is a cost allocation because these remedy costs cannot be uniquely assigned to a specific party, although they can be linked to a specific group of parties.
- A *direct cost* is a cost that can be assigned uniquely back to an individual party, specific activity, or cost object in some manner.
- A *common cost* (or *indirect cost*) is a cost that is shared or created by two or more users, products, or activities.
- An *indirect cost* (or *common cost*) is a cost that cannot be traced back to a unique party, activity, or product.
- *Joint costs* are the costs of inputs and processes that yield multiple outputs or products simultaneously, typically in fixed proportions.

[Section 6:41]

¹For a more detailed analysis of cost allocation issues, see Richard Lane White and John C. Butler III, Applying Cost Causation Principles in Superfund Allocation Cases, 28 Env'tl. L. Rep. (Env'tl. L. Inst.) 10067 (1998).

Although there are more cost allocation terms, these are sufficient for a discussion of the following problems.

§ 6:43 Sample cost allocation problems—Airline tickets

An environmental consultant has been asked to attend two meetings this week. One meeting, this Wednesday, is in Los Angeles. The other meeting, this Thursday, is in Chicago. The consultant lives in Boston. One option is for the consultant to fly to Los Angeles Tuesday evening for the Wednesday morning meeting and catch the afternoon flight back to Boston, arriving Wednesday night. That flight will cost \$1,200 round trip. Of course, then the consultant would need to catch another flight on Thursday morning for the meeting in Chicago. That round trip flight would cost another \$800. Alternatively, the consultant could make one trip, flying first to Los Angeles, then to Chicago, and then back to Boston. That flight would cost only \$1,500. This analysis assumes that there are no other costs involved.

The consultant decides to book the combined trip for \$1,500. However, when it is time for the consultant to submit an expense report, he or she needs to allocate the cost of that trip between these two meetings. How should the consultant allocate that \$1,500 ticket?

There are numerous ways to allocate that ticket and no “right” answer. That is what makes cost allocation so difficult: there is no one right answer to the cost allocation problem. Several possible solutions follow.

- Split the cost evenly. There were two meetings, and there would have been two flights, so split the cost on a per-meeting basis. Each business meeting would be assigned \$750 in cost.
- Assign the Los Angeles meeting its full cost, \$1,200, and assign the remainder to the Chicago meeting, which would be \$300.
- Alternatively, assign the Chicago meeting its full cost, \$800, and assign the remainder to the Los Angeles meeting, which would be \$700.
- Total up the cost of the two individual trips, which would be \$2,000, and assign the \$1,500 combined trip to each meeting based on the ratio each individual trip would have cost on its own. That would result in Los Angeles being assigned 60 percent of the \$1,500 ticket, or \$900, and Chicago being assigned 40 percent, or \$600.

While there are undoubtedly many other alternatives available, there are some bounds to this allocation problem. For example, while, theoretically, the consultant could assign the Los Angeles meeting the full \$1,500 and the Chicago meeting nothing, the Los Angeles client would be foolish to pay such a charge. The client would argue that the consultant could have flown out to the Los Angeles meeting for \$1,200, so, at most, that client should pay \$1,200. Likewise, the Chicago client would argue that it should pay no more than the cost of flying only to Chicago, or \$800.

Also, notice that while there are numerous ways to allocate these costs, some are, on their face, more equitable than others. The consultant can split the costs equally among the two trips, but that ignores the fact that one trip is more expensive than another. If the consultant charges one meeting its full cost, the other meeting receives a deep discount over the cost that it, on its own, would have to bear. Answering the cost allocation question is clearly complicated.

§ 6:44 Sample cost allocation problems—Video conferencing

As the consultant is about to book the ticket for a combined trip to Los Angeles and Chicago—under the costs and conditions previously described—the Chicago client calls to say that a video conference call will suffice. While that is certainly one

possibility, the consultant realizes that there are costs involved with that action as well. The cost to set up the video conference would be \$300 from either Los Angeles (where the consultant is on Wednesday) or from Boston (where the consultant will be on Thursday after flying back from Los Angeles). The cost of the Los Angeles trip, by itself, is still \$1,200.

The consultant calls the Chicago client and tells it that while the cost of the video conference is \$300, alternatively he or she can show up at the office in Chicago by simply adding another \$300 to the Los Angeles ticket. The client agrees, and the consultant purchases the combined ticket. Now how does the consultant allocate the cost between the Los Angeles meeting and the Chicago meeting?

Most people would probably allocate the \$1,500 as \$1,200 to the Los Angeles meeting, and \$300 to the Chicago meeting. After all, the Chicago client originally asked for a video conference, which would have cost \$300. The consultant flew to Chicago simply because it was the same cost. Nevertheless, the cost allocation problem is fundamentally similar to the one examined in the previous example.

What is different here is the alternative to the joint travel. In the first example, the alternative was a Chicago-only flight, at a cost of \$800. In this second example, the alternative is the \$300 video conference. To many, these but-for alternatives affect the allocation of the combined ticket cost. But again, the cost allocation problem is complicated.

§ 6:45 Sample cost allocation problems—Photocopiers

The report production department of a law firm is considering the lease of a new hi-tech photocopier, with all the latest features. Not only is it faster and more efficient than the previous photocopier, it will also copy in either black and white or in color. Every time someone uses the photocopier, he or she has to enter a project code number for billing purposes. The photocopier is routinely used for a variety of projects around the firm. The firm leases photocopiers on a monthly basis.

The monthly lease for this machine would be \$1,000. Although the production department is evaluating the lease of the color/black and white version of the photocopier, the firm could also lease one with the same features, with the exception of its color copying capability, for \$500 per month. A color-only copier would cost \$800 per month. Supplies related to the photocopying process (*i.e.*, ink and paper) are \$0.02 per sheet for black and white copying and \$0.50 per sheet for color copying. Each month a number of projects use the black and white copying feature, making an average of 10,000 copies per month. In addition, several specialized projects use the color copying feature, making an average of 1,000 copies per month. Which photocopier should be leased? How should the copying costs be allocated (or charged) among the various users?

Table 6:12 shows a calculation of the average cost for making a copy. One option, of course, is simply to charge each user this average cost. If the firm simply counts copies, there are 11,000 copies per month. The machine costs \$1,000 per month, and the supplies, in total, are another \$700, for a total of \$1,700 per month, or \$0.155 per copy.

However, users of the black and white copy features may argue that this price is too high. After all, they could go rent the same machine, except for the color features, and produce their own copies for only \$0.07 per page. They might also point out that the color copies cost, at a minimum, \$1 per copy. If the firm does not charge the black and white users less than \$0.07 per page, they might just go get their own copier. The costs for black and white copies, and for color copies, are shown in Table 6:13.

Table 6:12 The Average Cost Per Copy from a Combined Machine

Type of Copy	Number of Copies	Cost of Supplies		Equipment Cost	Total Cost	Average Cost Per Page
		Per Page	Total			
Black and White	10,000	\$ 0.02	\$ 200.00			
Color	1,000	\$ 0.50	\$ 500.00			
Total	11,000		<u>\$ 700.00</u>	\$ 1,000	\$ 1,700	\$ 0.155

Table 6:13 The Average Cost Per Copy from Separate Machines

Type of Copy	Number of Copies	Cost of Supplies		Equipment Cost	Total Cost	Average Cost Per Page
		Per Page	Total			
Black and White	10,000	\$ 0.02	\$ 200.00	\$ 500	\$ 700	\$ 0.070
Color	1,000	\$ 0.50	\$ 500.00	\$ 800	\$ 1,300	\$ 1.300

Here, equity would seem to dictate that the stand-alone cost—the cost to one group of people, on their own—would serve as a reservation price, in this case a ceiling on what can be allocated to that group. If the firm charges this group more than they would pay for the service on their own, they just may go get that service on their own. This limits the firm's ability to use one group to subsidize another.

At the same time, however, the firm cannot charge the color copy users too much, or they too will go out and procure their own copier. They also have a reservation price. If the firm charges them more than \$1.30 per page, they can obtain their own copier.

The range of reservation prices creates a range around which the firm can price the copies. If the firm charges the full reservation price to the black and white copies (\$0.07 per copy), then it can charge as low as \$1 per page for color copies and still cover costs. Alternatively, if the firm charges the full reservation price for color copies (\$1.30 per page), then it can lower the black and white copy price to \$0.04 per page. Outside that range, the two groups will not work together.

Within that range, the firm can choose any combination. There are no hard-and-fast cost allocation rules that tell the firm what the right answer should be. Two alternative approaches that can be evaluated here, however, are incremental cost and stand-alone cost.

Using an incremental cost allocation approach, the firm would first determine which use, black and white, or color, was the default or primary purpose. Users in that group would pay the cost as if they were the only users. Additional users would then be assigned the incrementally greater costs. If, for example, the firm determined that black and white copying was the primary purpose for the machine, it might allocate the \$500 base cost per month for the machine to the black and white users, resulting in a per-page cost of \$0.07 per page. Color users would then pay the incremental cost to lease the machinery, and their cost would be \$1 per page. Of course, if the firm reversed the primary users, it would get a very different answer. This is why incremental cost analysis is often subject to the criticism of “gaming the system” by participants—each has an advantage in being perceived as the incremental user.

An alternative approach is to estimate the costs each group would incur were they to purchase their own copy machines—their so-called stand-alone cost. This result is shown in Table 6:14. The stand-alone cost for black and white copying is \$700 per month, and the stand-alone cost for color copying is \$1,300 per month. By leasing a machine that provides both services, the costs are reduced from \$2,000 (the cost of buying both services separately) to only \$1,700 (a savings of \$300 per month). Under a stand-alone approach, both groups benefit. In addition, the benefits are shared in proportion to what each group would pay on its own, and each group pays the same fraction of its stand-alone cost. In this case, each group pays 85 percent of the cost it would have incurred on its own.

Table 6:14 The Allocation of the Common Photocopier Costs Using Stand-Alone Cost Allocation Method

Type of Copy	Total Cost If Purchased Separately	Ratio of Stand Alone Costs	Total Cost of Combined Photocopier	Allocation of Combined Photocopier	Allocated Share of Cost	Share of Stand Alone Cost Allocated to Each Party	Savings by Using Combined Photocopier	Share of Savings
Black and White	\$ 700	35.0%		\$ 595	35.0%	85.0%	\$ 105	35.0%
Color	\$ 1,300	65.0%		\$ 1,105	65.0%	85.0%	\$ 195	65.0%
Total	\$ 2,000	100.0%	\$ 1,700	\$ 1,700	100.0%	85.0%	\$ 300	100.0%

Equity issues aside—and there are some very basic equity issues that could be used to argue in favor of a stand-alone cost approach to allocation—the stand-alone approach does not depend on the interaction of the groups being examined; each group is examined in isolation. It also avoids the pitfall of “gaming,” which can occur with other methods, since the stand-alone alternatives can be estimated whether there are other parties involved or not. Finally, these stand-alone estimates are themselves the reservation prices within which most allocations must occur. Since the allocator should know the range under which he or she can develop an acceptable allocation, one might as well make further use of that information to actually develop the allocation.

§ 6:46 Basic principles

All costs can be broken down into one of two groups: a direct cost or a common cost. For purposes of this chapter, a common cost is one that is related to more than one party, process, or activity. Cost terminology aside, what this means is that a cost is either direct—in which case it can be uniquely assigned to a specific party or activity—or it is common—in which case it cannot be uniquely assigned.

The video conference the consultant had with the Chicago clients is a direct cost. It can be directly assigned to the Chicago client, and no one but that client should be asked to bear that cost. The combined plane ticket taking the consultant to both Los Angeles and Chicago is not a direct cost because it cannot be assigned uniquely. It is assignable to both the Los Angeles client and the Chicago client. It is a common cost.

Cost allocation is all about allocating common costs. The assignment of direct costs to those people or activities that cause them is not cost allocation, per se, because there is nothing to allocate. Direct costs should, without exception, be assigned to those who cause them. There is a one-to-one relationship between a direct cost and its cause. Other activities or parties should not be assigned a direct cost to which they have no relationship. There is a well-defined rule of assignment for direct costs, and any assignment short of assignment to the cause of a direct cost is seen as inappropriate.

Common costs, on the other hand, defy easy assignment because they relate to more than one activity or more than one party. Nevertheless, the group of activities or the group of parties that is responsible for a common cost should be held accountable for that cost. In the video conferencing example, the Chicago client’s video costs are a direct cost—costs caused by that client and that client alone. There is no question about assignment, and there is no need for allocation short of direct assignment. The combined plane ticket, however, is a common cost. While there are a number of ways to allocate the cost of that ticket between the Los Angeles client and the Chicago client, it is clear that they, collectively, should bear that cost.

§ 6:47 Application to environmental matters

Although cost allocation occurs routinely, even in a variety of environmental matters, perhaps its most common application is in Superfund cases, where remediation costs are allocated among responsible parties, or PRPs. Allocation in the Superfund context is prescribed by statute, and courts are authorized to allocate remediation costs among PRPs.

§ 6:48 Application to environmental matters—Background on Superfund and allocation

When the Comprehensive Environmental Response, Compensation, and Liability

Act (CERCLA)¹ was passed by Congress in 1980, it was designed to address remediation of the nation's worst hazardous waste sites. Though amended and reauthorized in 1986, the fledgling Superfund program still left a number of key issues unaddressed. Probably the single most contentious issue facing those involved in Superfund sites was—and continues to be—the allocation of cleanup costs.

The allocation issue is contentious for a variety of reasons. First, four broad categories of parties face liability. Second, the standard for disposal—hazardous substances—is so broad that nearly everything sent for disposal meets the standard. Third, there is no causality requirement. Fourth, liability is strict, so negligence is not an issue. Fifth, liability is joint and several. And sixth, liability is retroactive. When these factors are combined with expensive site cleanup costs, the result is a very contentious allocation problem.

§ 6:49 Application to environmental matters—Limited guidance on allocation

CERCLA is noticeably quiet when it comes to crafting an approach for allocating liability among various PRPs. Liability is strict, so issues such as volume of waste, toxicity of waste, relative fault of the parties, and causation have no place in determining liability.

However, these factors—volume, toxicity, fault, and causation—are all the type of factors one might consider when doing an allocation. Allocation of Superfund cleanup costs has been assigned, by statute, to the courts, which “may allocate response costs among the liable parties using such equitable factors as the court determines are appropriate.”¹ But, beyond using “equitable factors,” the statute is silent as to the actual approach to take in allocating response costs. As a result, courts and allocators have been left to determine what equitable means and what factors are relevant or appropriate in developing equitable allocations of response costs.

§ 6:50 Application to environmental matters—EPA's position on allocation

Although EPA does not generally play a central role in Superfund cost allocation, it has addressed issues of liability and allocation from time to time. For example, EPA has published guidance documents on issues such as developing waste-in lists, settling with *de minimis* and *de micromis* PRPs, and developing nonbinding allocations of responsibility (NBARs). And over the past several years, EPA has attempted to address the issues of liability and allocation for parties involved with municipal solid waste (MSW).

EPA's NBAR guidance describes its approach to developing allocations among PRPs. While many of the NBAR examples are discussed in terms of volume, the NBAR guidance clearly identifies cost causation as the primary tool for allocating costs among responsible parties. As the NBAR guidance notes, “where it is possible to do so, waste types and volumes that necessitate particular remedial activities will be fully attributed to the appropriate contributors.”¹ And as other commentators have noted, “EPA has consistently—if obliquely—articulated the need to connect a party's allocation to costs which its wastes cause since EPA adopted its Interim Policy on

[Section 6:48]

¹42 U.S.C.A. §§ 9601 to 9675, ELR Stat. CERCLA §§ 101 to 405.

[Section 6:49]

¹42 U.S.C.A. § 9613(f)(1), ELR Stat. CERCLA § 113(f)(1).

[Section 6:50]

¹52 Fed. Reg. 19919-20 (May 28, 1987).

Nonbinding Preliminary Allocations of Responsibility.”²

Most recently, EPA has adopted controversial guidance on MSW generators and transporters.³ Although purportedly addressing liability, it actually focuses on addressing allocation of response costs for parties associated with MSW wastes. EPA proposes to cash out MSW generators and transporters at a cost that, in its view, “reflects a reasonable approximation of the cost of remediating MSW.”⁴ The appropriate cost to assign to a party, in EPA’s view, is the cost that reasonably approximates what damage that party caused. Allocation approaches based on toxicity, by comparison, were rejected by EPA because “toxicity is usually causally related to the cost of the cleanup for only a few substances.”⁵

§ 6:51 Application to environmental matters—Cost causation and equitable factors

Courts search for a nexus between cost causation—the underlying principle to cost allocation—and equity in the allocation process. Courts have been granted wide latitude to use equitable factors in developing an allocation of response costs at Superfund sites. Courts have been assigned the task of allocating not harm, in and of itself, but of allocating response costs, or remediation costs. Further, while given wide latitude in crafting these allocations, courts have been directed to develop allocations based on *equitable* factors. At the conclusion of the allocation process, the court should develop an allocation of costs using the tools of cost allocation and should make sure that the allocation is equitable in its distribution of costs among the parties.

Cost causation is not one of the oft-cited Gore Factors,¹ but it is an amalgam of several Gore factors and other equitable factors. For example, volume, or amount of material contributed, is a Gore factor. Why is volume of material relevant to an allocation? Because we do not measure frequency of disposal—whether one party used the site more than another. Instead, we measure how much material each party sent to the site. Implicitly, at least, we assume that the amount of material is related to the remedial activities for which the PRPs are being asked to pay.

Why do we measure toxicity, which is yet another Gore factor? Is it simply because those parties who sent more toxic or more hazardous materials should pay more, or is it that more toxic and more hazardous materials disproportionately affect the need for and the level of the remediation? What is it that allocators and courts are trying to address? Whether a pound of solvent (*e.g.*, trichloroethylene) is worse than a pound of arsenic, or whether an allocation should consider how different wastes give rise to different costs?

Stepping back from the Gore factors themselves and examining other equitable factors used by courts, one can repeatedly see that courts turn to the interrelated concepts of causation and relative fault. What exactly is causation? In the context of Superfund cost allocation, it is the remediation costs that have been caused by the

²See B. Dougals Bernheim et al., Comments of Air Products and Chemicals, Inc.; Lucent Technologies; Mack Trucks, Inc.; Pennsylvania Power & Light Company; Raytheon Appliances, Inc.; Tarkett, Inc.; GAF Corporation; General Electric Company; and Ingersoll-Rand Concerning The United States Environmental Protection Agency’s Municipal Solid Waste Settlement Proposal, 6 (August 1997).

³See EPA Proposal for Municipal and MSW Liability Relief at CERCLA Co-Disposal Sites, 62 Fed. Reg. 37321 (July 11, 1997).

⁴52 Fed. Reg. 37321, 37233 (July 11, 1977).

⁵52 Fed. Reg. 19919-20 (May 28, 1987).

[Section 6:51]

¹These are a set of six factors delineated in the unsuccessful amendment to CERCLA proposed by then-Rep. Albert Gore (D-Tenn.).

disposals and actions of various PRPs. A party may dispose of a waste stream containing a hazardous substance, but the real question is: does that waste stream cause any problem or contribute to the need for a remedial action by itself or in combination with other waste streams?

Cost causation—an examination of how costs are created and who or what parties are responsible for specific costs—addresses each of these equitable factors. The amount of material (volume) and its characteristics (toxicity or hazardousness) are evaluated in tandem, not in isolation. The allocation exercise is not about allocating pounds or toxic pounds. It is about allocating costs. A causation analysis is designed to distinguish the contributions to cost of one party from another. The interplay of causation and relative fault becomes a central focus of cost causation. So while cost causation is not specifically delineated in the Gore factors, it is central to an examination of equitable factors in the context of CERCLA cost allocation.

§ 6:52 Application to environmental matters—Cost allocation in Superfund cases

The following hypothetical will assist in the evaluation of cost allocation problems.

Party A dumps five drums of waste solvent onto a parcel of property. Party B simultaneously dumps ten drums of waste solvent onto the same parcel of property. A third party, C, dumps an additional five drums of waste solvent onto the same parcel of property. Later, the site must be remediated as a national priorities list site with a single distinct area of contamination. Had either Party A or Party C been the only party at the site, their individual contributions would have caused the need to remediate 100 cubic yards of soil, which would have been sent to a Resource Conservation and Recovery Act (RCRA) landfill. Had Party B been the only party at the site, its individual contribution would have caused the need to remediate 200 cubic yards of soil, which again, would have been sent to a RCRA landfill. The actual remedy at the site calls for 300 cubic yards of soil to be excavated and taken to a RCRA landfill. According to the remediation contractor, the cost associated with this remediation is estimated at \$80 per cubic yard plus a \$12,000 setup fee for any volumes less than 50,000 cubic yards. There are no other costs to allocate between the three parties.

Analysis of this scenario will examine three different methods that PRPs employ for allocating costs—volumetric, toxicity, and cost causation analyses. Two of the methods relate to waste characteristics, but only indirectly relate to the cost of disposal. These approaches do not result in cost-causation based allocation of remedy costs. The volumetric, toxicity-based, and cost causation allocations do not provide the same answer.

§ 6:53 Application to environmental matters—Cost allocation in Superfund cases—Volumetric analysis

Party A contributed five drums of waste solvent, Party B contributed ten drums of waste solvent, and Party C contributed five drums of waste solvent. The total quantity of waste solvent at the site is twenty drums of waste. In a volumetric allocation, Party A would be assigned 25 percent of the cost, Party B would be assigned 50 percent, and Party C would be assigned the remaining 25 percent. This result is shown in Table 6:15.

Table 6:15 Allocation Results

Responsible Party	Quantity of Material (Gallons)	Share (%)	Cost of Remediation (\$)	Share (%)
Party A	275.0	25.0%	\$ 20,000	29.4%
Party B	550.0	50.0%	\$ 28,000	41.2%
Party C	275.0	25.0%	\$ 20,000	29.4%
Total	1,100.0	100.0%	\$ 68,000	100.0%

§ 6:54 Application to environmental matters—Cost allocation in Superfund cases—Toxicity analysis

Although the parties sent different quantities of material to the site, the type of material that each sent to the site is identical. A toxicity weighted volumetric allocation should produce identical results: 25 percent to Party A, 50 percent to Party B, and 25 percent to Party C.

§ 6:55 Application to environmental matters—Cost allocation in Superfund cases—Cost causation analysis

In this example, the entire cleanup cost is a common cost because the costs are caused by more than one party. No direct or uniquely identifiable costs can be assigned to a particular party. Although each party is contributing the same type of material, the costs associated with remediating the waste are not directly volume variable, so the first step is to estimate the costs associated with addressing each party's waste, as well as the cost for remediating the entire site itself.

Both Party A and Party C contributed five drums of waste solvent, and each disposal, on its own, would have required remediation of 100 cubic yards of contaminated soil. The cost to remediate that quantity of soil is \$20,000. Party B, which sent twice as much waste and contaminated twice as much soil, would need to spend \$28,000 if it were the only party at the site. The site itself, which has 300 cubic yards of contaminated soil, will cost \$36,000 to remediate, and this is the cost that is to be allocated among the three parties.¹

Table 6:16 shows how to allocate this \$36,000 site cost using the stand-alone cost estimates for each of the three parties. In this example, the total of the three stand-alone costs is \$68,000—nearly twice the cost of the actual remediation. There are “economies of joint action” from the joint disposal and joint cleanup of this site because the cost of remediation, on an average cost per cubic yard basis, falls as the amount of material to be remediated rises.

The shares assignable to each party are calculated as the ratio of that party's stand-alone cost relative to the sum of all stand-alone cost estimates. Party B's 41.2 percent share is calculated as $\$28,000 / (\$20,000 + \$28,000 + \$20,000)$. These allocated shares can then be applied to the actual site remedy to determine each party's cost contribution. The wastes in this example were commingled, so the site is not geographically divisible. The cost causation allocation is not dependent on whether the site is divisible. The allocation does not suddenly change depending on whether wastes are commingled or are geographically separated.

In this example, economies of joint action result in a savings of \$32,000. At the

[Section 6:55]

¹For Party A and Party C the cost is calculated as $\$12,000 + (100) \times (\$80) = \$20,000$. For Party B the cost is calculated as $\$12,000 + (200) \times (\$80) = \$28,000$. The cost to remediate the site as it now exists is calculated as $\$12,000 + (300) \times (\$80) = \$36,000$.

same time, each party is actually allocated a cost that is proportionately less than its stand-alone cost estimate. Since the premise of Superfund cost allocation is to equitably distribute the response costs, it is worth noting two results that flow from using stand-alone cost estimates to allocate these common costs. First, each party in this case is paying only a fraction of its stand-alone cost, but each party is paying the same fraction of its stand-alone cost. Second, in this example, there is a benefit from joint action. That benefit is distributed among the parties on the same basis as their relative liability. Both of these results can be seen in Table 6:17.

Table 6:16 Cost Causation Shares for Each Party Using Stand Alone Cost Estimates

Responsible Party	Stand Alone Cost Estimate	Share of Total (%)	Actual Site Cost (\$)	Assigned Cost (%)
Party A	\$ 20,000	29.4%		\$ 10,588.2
Party B	\$ 28,000	41.2%		\$ 14,823.5
Party C	\$ 20,000	29.4%		\$ 10,588.2
Total	<u>\$ 68,000</u>	<u>100.0%</u>	\$ 36,000	<u>\$ 36,000.0</u>

By definition, cost allocation is not a process that leads to unique right or wrong answers. Cost allocation is a process of allocating common costs—costs caused by more than one party or process—and there is no unique method for assignment. Nevertheless, there are ways to define boundaries for the cost allocation problem. Recognition that parties have reservation prices—prices at which they will choose to take independent action—will often define boundaries for the cost allocation process.

It is equally important to note that while there are various processes for allocating costs, the underpinnings of the cost allocation process are aimed at linking the costs being allocated back to those parties or activities that created the costs. In the photocopier example, it is clear that copy paper should be assigned back to those who use it. In the Superfund context, it is equally clear that allocation should not be focused on characteristics of waste streams in and of themselves, but rather on the costs that these wastes incur as part of the remediation process.

Finally, it is important to realize that not all cost allocation processes are created equally. While some are technical solutions to the cost allocation problem, they suffer when examined for equity considerations. Other approaches to cost allocation appear to be designed primarily to address equity considerations. Depending on the objective of the cost allocation, one approach may prove much more responsive than another.

Table 6:17 Cost Causation Shares for Each Party Using Stand Alone Cost Estimates

Responsible Party	Stand Alone Cost Estimate	Allocated Share of Actual Cost (\$)	Assigned Cost (\$)	Share of SAC Actually Assigned (%)	"Benefit" Received (\$)	Share of Total Benefit (%)
Party A	\$ 20,000	29.4%	\$ 10,588.2	52.9%	\$ 9,411.8	29.4%
Party B	\$ 28,000	41.2%	\$ 14,823.5	52.9%	\$ 13,176.5	41.2%
Party C	\$ 20,000	29.4%	\$ 10,588.2	52.9%	\$ 9,411.8	29.4%
Total	\$ 68,000	100.0%	\$ 36,000.0	52.9%	\$ 32,000.0	100.0%

Part C

FUNCTIONAL PROGRAMS

Research References

Additional References

Environmental Law Institute, <https://www.eli.org/>

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Chapter 7

State Environmental Law and Programs*

I. THE IMPORTANCE OF STATE ENVIRONMENTAL LAW

- § 7:1 Introduction
- § 7:2 Sources of state environmental law—State statutes
- § 7:3 —State constitutional provisions
- § 7:4 —State common law

II. THE STATE-FEDERAL ALLOCATION OF RESPONSIBILITIES

- § 7:5 Introduction
- § 7:6 Federal approval of state programs
- § 7:7 Indian Tribes and Treatment as States
- § 7:8 Federal oversight of state programs
- § 7:9 Federal preemption

III. THE OPERATION OF ENVIRONMENTAL LAW IN THE STATES

- § 7:10 Substantive provisions—Statutory prohibitions of pollution
- § 7:11 —State criminal laws
- § 7:12 —State “NEPAs”
- § 7:13 —State “transactional” environmental laws
- § 7:14 State climate change laws
- § 7:15 Procedures and institutions
- § 7:16 Conclusion

Appendix 7A. Table of Acronyms

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*By James M. McElfish, Jr.

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I. THE IMPORTANCE OF STATE ENVIRONMENTAL LAW**§ 7:1 Introduction**

Environmental law is primarily state law. Long before the advent of the now-familiar federal programs, most states had enacted laws and regulations aimed at controlling or abating pollution. During and after the “environmental decade” of the 1970s, the states continued to develop their own environmental laws. Sometimes

this development and state legislative action was in direct response to the new federal programs, which provided for the submission of state plans and for federal approval of state programs.¹ In other cases, state law developed to address particular environmental concerns, or in response to the emergence of a state constituency favoring increased environmental protection.²

Indeed, most environmental law in the United States remains *state* law. Every state has adopted detailed laws governing air pollution, water pollution, waste disposal, and resource management. These laws affect more people, more decisions, and more interests than the oft-discussed federal laws. In many states, the federal programs are essentially implemented entirely by state law; that is, a facility's specific compliance obligations under the Clean Air Act (CAA), the Clean Water Act (CWA), and other statutes, are defined by state law, state regulations, and state permits.³ While many of these state laws track the federal statutes nearly verbatim,⁴ others provide for significant variation. Sometimes, this variation reflects the preexistence of established state programs.⁵ Other times, it reflects conscious efforts by state legislators to address environmental problems in a specific manner.⁶

The almost total emphasis on federal environmental law found in treatises, law review articles, and popular publications is due only in part to the importance of federal law in defining the national environmental agenda and in prescribing the means of implementation. A major reason for the predominately federal focus has been the sheer magnitude and variability of state environmental laws, regulations, procedures, and institutions. State law must be viewed as a major set of inter-related programs in order to understand the breadth and scope of environmental law. As environmental law reaches maturity, practitioners and scholars have recognized that much of the "action" is really occurring in state law. For example, on the matter of hazardous waste, California's "Proposition 65" and New Jersey's Environmental Cleanup Responsibility Act were among the more influential laws of the 1980s to attract national attention.⁷ In the groundwater area, several states are far out in front of the federal statutory effort,⁸ and in the rapidly developing arena of climate change mitigation, California was among the first jurisdictions to regulate greenhouse gas emissions from automobiles. Many states have also adopted laws aimed at reducing the industrial use of toxic substances; these laws employ public reporting, facility assessment and planning, and goal-setting techniques to accomplish what has come to be known as "pollution prevention."⁹ Countless other state laws, while less well-known nationally, are no less important in their impact

[Section 7:1]

¹See § 4:9.

²*E.g.*, § 7:3.

³See § 7:5.

⁴Some state legislatures essentially have adopted the federal programs by reference. *E.g.*, Minn. Stat. Ann. § 115.03 (NPDES); Vt. Stat. Ann. § 6604 (RCRA).

⁵*E.g.*, Pa. Stat. Ann. tit. 35, §§ 691.1 et seq. (Clean Streams Law); N.Y. Env'tl. Conserv. Law, ch. 71 (Environmental Enforcement Provisions).

⁶*E.g.*, New Jersey's Environmental Cleanup Responsibility Act (ECRA), N.J. Stat. Ann. 13.1K-6 et seq. (closure or transfer of "industrial establishment" requires cleanup of hazardous substances on site or "negative declaration"; penalty for noncompliance includes voidability of transaction). ECRA was amended in 1993 and renamed "Industrial Site Recovery Act." See 1993 N.J. Laws 139, amending N.J. Stat. Ann. 13.1K-1 et seq.

⁷Cal. Health & Safety Code §§ 25249.1 et seq.; N.J. Stat. Ann. 13.1K-6 et seq.

⁸See, *e.g.*, Ariz. Rev. Stat. Ann. §§ 49-201 et seq.; Conn. Gen. Stat. ch. 446K, §§ 22a-416 et seq.; Iowa Code Ann. §§ 455E.1 et seq.; Wis. Stat. Ann. §§ 160.001 et seq.

⁹See, *e.g.*, Massachusetts Toxics Use Reduction Act (TURA), Mass. Gen. Laws Ann. ch. 21(I), §§ 1 to 23. TURA reduces industrial use of toxics through mandatory planning approaches. Oregon also

on human and institutional behavior.¹⁰ State laws addressing non-point source water pollution, for example, are tackling a significant problem not fully addressed by the federal CWA.¹¹

As businesses maintain operations in more than one state, and law practices themselves become more national in scope, environmental lawyers are finding that they must be familiar not only with the major federal programs, but also with numerous and varied state laws. Critical to modern environmental practice is the recognition that “the states” are not a monolith, nor do their programs function like “mini-EPAs.” It is not safe to assume that state law is essentially like federal law, nor that environmental practice in one state is much like that in another.¹²

Perhaps the most critical point to recognize about state environmental law is its independence from federal authority. While many state laws are patterned on the federal laws, and may even operate as federally “authorized” state programs, the basis for state environmental regulation actually lies in the states’ police power—the inherent authority (or constitutional authority) of the sovereign to protect the health, safety, and welfare of its citizens. State laws are based upon the police power, not upon a federal “delegation” of the commerce power. In short, the federal statutory overlay does not “empower” the states to do anything. Rather, it enlists the states to exercise *their* inherent authority to enact laws regulating activities that affect the environment.¹³ All of the state laws operate *ex proprio vigore*—from their own force. Thus, state environmental law is not simply a vestige operating with respect to federal environmental law. Nor does state law operate solely to “fill in the blanks” set out in federal law.¹⁴ Rather, state law ordinarily sets out a full program of regulation that may include not only those elements needed for federal “authorization,” but also numerous additional elements. A few notable examples include state water pollution laws regulating nonpoint sources and discharges to groundwater, laws requiring siting approval for solid and hazardous waste disposal facilities, or laws requiring state permits for “interim status” RCRA facilities that require no federal permit. Unless it is affirmatively preempted, state environmental law operates whether or not there is a federal “authorization” of a given state program.¹⁵

In short, the preponderance of modern environmental law practice in the U.S. is the practice of *state* law, often as influenced by federal requirements. Aggregate state budgets for environmental issues surpass the federal budget commitment, and state and local government employees working on environmental regulatory issues vastly outnumber their federal counterparts. Thus, environmental law, which began

uses a planning approach. See Or. Rev. Stat. Ann. §§ 465.003 to 465.037. Nearly a dozen other states have toxics use reduction laws.

¹⁰*E.g.*, Cal. Bus. & Prof. Code § 17508.5 (prohibiting commercial use of terms “biodegradable,” “ozone friendly,” “photodegradable,” “recyclable,” or “recycled,” unless the goods meet statutory definitions). A First Amendment challenge to this law was rejected in *Association of Nat. Advertisers, Inc. v. Lungren*, 44 F.3d 726, 25, 22 Media L. Rep. (BNA) 2513, 25 Env’tl. L. Rep. 20183 (9th Cir. 1994).

¹¹*See, e.g.*, James M. McElfish, *State Enforcement Authorities for Polluted Runoff*, 28 Env’tl. L. Rep. (Env’tl. L. Inst.) 10181 (1998) (collecting state regulatory and enforcement-oriented laws dealing with non-point pollution from agriculture, forestry, and other land-disturbing activities).

¹²Some significant variations among states are discussed in § 7:9. Among these are differences in substantive law, in procedures (including the effectiveness of administrative “orders” in various states), and in institutional organization.

¹³Some would say it “conscripts” the states. *See, e.g.*, Pederson, *Federal/State Relations in the Clean Air Act, the Clean Water Act, and RCRA: Does the Pattern Make Sense?* 12 Env’tl. L. Rep. (Env’tl. L. Inst.) 15069 (1982).

¹⁴For example, by prescribing the water quality standards called for by section 303 of the Clean Water Act, 33 U.S.C.A. § 1313.

¹⁵*See* § 7:8.

as a creature of state law, continues to have a strong state focus even after several decades of federal activism and legislation.

§ 7:2 Sources of state environmental law—State statutes

The first state environmental statutes were generally enacted in response to serious perceived public health risks.¹ Over time, state statutes began also to respond to potential risks and to environmental damages. The effectiveness of the early statutes was often limited; the Health Departments and other responsible state agencies were generally granted very limited enforcement powers, and there were frequently mandatory conference and conciliation provisions in the statutes.² Moreover, the composition of state pollution control boards often, by law, included a high number of representatives of the regulated industries.³ Nevertheless, as public environmental awareness increased in the states, and comprehensive federal legislation was enacted, state statutes became a significant factor in achieving environmental objectives.

Today, state environmental statutes, policies, and institutions reflect not only the outlines of the well-known federal programs, but also the states' diverse ecosystems, political history, and economic dependencies. In many substantive areas, the states have served as "laboratories" for the development of new and innovative approaches to environmental problems. In some cases, these approaches led to the subsequent adoption of national laws and policies drawing on the experiences of a few leading states.⁴ In other cases, state laws, institutions, or policies impeded environmental protection efforts despite federal "oversight."⁵

An understanding of the antecedents of state environmental law can be more difficult to achieve than for federal law. Until recently, in many states, the legislative process generates only a minimal legislative history. This can leave both state courts and lawyers with little guidance as to the meaning of various program components. Interpretation of state law is typically governed by practices of the bureaucracy, and in the courts by traditional principles of statutory construction and precedent.

State environmental statutes generally include both standard setting and enforcement provisions.⁶ Federal requirements have not entirely overtaken state standard setting, although flexibility in such standard setting has been somewhat constricted

[Section 7:2]

¹See §§ 2:3, 2:4. Pennsylvania, for example, passed its first "clean streams law" in 1905 following outbreaks of typhoid fever. Act of April 22, 1905, P.L. 260, No. 182. Its scope was limited. For example, the coal industry was exempt from many of its provisions until 1965. Act of August 23, 1965, P.L. 372, No. 194, Pa. Stat. Ann. tit. 35, § 691.315.

²See § 2:4. Vestiges of these continue even in some current state laws (and in recently enacted laws). For example, several states require that upon discovery of a violation, the responsible state agency must engage in "conference, conciliation and persuasion" with the violator before it may issue an order or commence a judicial action. *E.g.*, Ga. Code Ann. § 12-8-71; Wyo. Stat. Ann. § 35-11-701(c). Other states have similar provisions.

³See Vaughn, *Air Pollution Control Boards*, 1972 *Env'tl. L. Rev.* 141, 149-54.

⁴One example of this phenomenon is the federal Surface Mining Control and Reclamation Act of 1977, 30 U.S.C.A. §§ 1201 et seq., which was substantially modeled on the Pennsylvania Surface Mining Conservation and Reclamation Act. Pa. Stat. Ann. tit. 52, §§ 1396.1 et seq. See 123 Cong. Rec. 12,872 (1977). Comprehensive groundwater protection laws in a number of states could inform any future federal lawmaking aimed at linking groundwater quality to protection of surface waters. See, *e.g.*, Ariz. Rev. Stat. Ann. §§ 49-201 et seq.; Conn. Gen. Stat. ch. 446K, §§ 22a-416 et seq.; Iowa Code Ann. § 455E.1 et seq.; Wis. Stat. Ann. § 160.001 et seq.

⁵See § 7:9.

⁶The earliest state air pollution standard setting involved smoke abatement; violations were

by federal law;⁷ each of the major federal environmental laws contains nonpreemption provisions. State standard setting continues in vitality and importance where: (1) it is not less stringent than applicable federal standards; (2) federal law expressly looks to state standards (e.g., state water quality standards); or (3) federal law is absent or silent (e.g., state groundwater standards). For example, the CAA provides that it shall not “preclude or deny the right of any state or political subdivision thereof to adopt or enforce: (1) any standard or limitation respecting emissions of air pollutants; or (2) any requirement respecting control or abatement of air pollution” so long as the state standards are not “less stringent” than those set forth in the federally-approved state implementation plan.⁸ The CWA, in nearly identical language, preserves state effluent limitations and requirements for control or abatement of pollution that are not “less stringent” than the federal requirements.⁹ The CWA also specifically recognizes water quality standard setting as a state function.¹⁰ The Resource Conservation and Recovery Act likewise preserves state “requirements” that are not “less stringent” than federal requirements.¹¹

In most states, standard setting has been legislatively delegated to the administrative agencies.¹² In some cases, public “commissions” with memberships representing various governmental, industry, and public constituencies are assigned this function.¹³ In a number of states, legislatures grant agencies broad authority to promulgate rules in order to protect the environment. The Texas Commission on Environmental Quality, for example, has “the powers to perform any acts, whether specifically authorized by [the Water Code] or other laws, necessary and convenient to the exercise of its jurisdiction and powers,” and the power to “adopt any rules necessary to carry out its power and duties under this code and other laws of this state.”¹⁴ Kentucky’s Department of Natural Resources and Environmental Protection is authorized to promulgate “any rule or regulation pertaining to the prevention, abatement, and control of existing or threatened air or water pollution, control

frequently determined in the 1960s with reference to the “Ringelmann Chart.” Smoke emissions exceeding certain levels of opacity, as determined by a trained state or local “smoke reader,” were prohibited. *See, e.g., City of Portland v. Lloyd A. Fry Roofing Co.*, 3 Or. App. 352, 472 P.2d 826 (1970); *see also* § 2:3.

⁷*See* § 12:8 (Clean Air Act) and § 13:15 (Clean Water Act).

⁸Clean Air Act § 116, 42 U.S.C.A. § 7416. State setting of new motor vehicle emission standards is, however, preempted; however, the EPA Administrator is authorized to grant a waiver to California and to other states adopting California standards. Clean Air Act § 209(a), (b), 42 U.S.C.A. § 7543(a), (b).

⁹Clean Water Act § 510, 33 U.S.C.A. § 1370.

¹⁰Clean Water Act § 303, 33 U.S.C.A. § 1313. In *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology*, 511 U.S. 700, 114 S. Ct. 1900, 24, 128 L. Ed. 2d 716, 38 Env’t. Rep. Cas. (BNA) 1593, 152 Pub. Util. Rep. 4th (PUR) 190, 24 Env’tl. L. Rep. 20945 (1994), the Supreme Court upheld state instream flow requirements imposed under Clean Water Act § 401, 33 U.S.C.A. § 1341, rejecting claims that states lack jurisdiction to impose such requirements or that such action conflicts with the Federal Power Act.

¹¹Resource Conservation and Recovery Act § 3009, 42 U.S.C.A. § 6929.

¹²In Maine, however, rules adopted by the Board of Environmental Protection must be legislatively enacted in order to have validity. *See* Me. Rev. Stat. Ann. tit. 38, §§ 367, 584.

¹³*E.g.,* Pennsylvania Environmental Quality Board, Pa. Stat. Ann. tit. 71, § 180-1 (twelve *ex officio* members, four legislators, five citizens); Nevada Environmental Commission, Nev. Rev. Stat. § 445.451 (director of department of wildlife, state forester fire warden, state engineer, director of department of agriculture, director of department of minerals, member of state board of health, and four citizens including one “engineering contractor”); Iowa Environmental Protection Commission, Iowa Stat. § 455A.6 (three livestock and grain farmers; one manufacturer; one person in finance or commerce; four citizens with interest in and knowledge of air, water and waste management).

¹⁴Tex. Water Code Ann. §§ 5.102, 5.103.

of noise, or the use of air, land, or water resources, or strip mining and reclamation.”¹⁵ Similar delegations of authority exist in other states.¹⁶

State enforcement responsibilities are generally carried out by administrative agencies, with or without the assistance of the state attorney general. Every state possesses the ability to issue administrative compliance orders to enforce air pollution standards.¹⁷ Most states also use administrative orders for water and hazardous waste violations. The availability of administratively assessed penalties varies; more than half the states can assess administrative civil penalties against hazardous waste violators.¹⁸

Much state environmental enforcement occurs through the courts, rather than through administrative processes. In some instances, this is because the administrative enforcement provisions and sanctions are relatively weak, or even nonexistent.¹⁹ In many instances, however, the leverage provided by a civil injunction, judicial penalty, contempt sanction, or criminal prosecution is simply preferable to a routine “compliance order” approach.²⁰ State statutory provisions affecting enforcement differ significantly from state-to-state.²¹

§ 7:3 Sources of state environmental law—State constitutional provisions

In the early 1970s, a substantial number of states adopted constitutional amendments aimed at protecting the environment.¹ These amendments were generally stated in terms of declaring the policy of the state, of establishing a “public trust” over the environment, or creating environmental “rights” for the citizens of the state. One of the first of these provisions was that adopted by New York in 1969.² The New York provision declared it the “policy of the state” to “conserve and protect its natural resources and scenic beauty and encourage the development and improvement of its agricultural lands,” and instructed the legislature to include “adequate provision for the abatement of air and water pollution.”³

In general, these constitutional provisions have had very little observable impact

¹⁵Ky. Rev. Stat. Ann. § 224.045(6)(b).

¹⁶*E.g.*, Conn. Gen. Stat. Ann. §§ 22a-2 et seq.; N.Y. Env'tl. Conserv. Law § 3-0301.

¹⁷*E.g.*, Ariz. Rev. Stat. Ann. § 49-434; Nev. Rev. Stat. § 445.526; N.C. Gen. Stat. Ann. § 143-215.110; N.Y. Env'tl. Conserv. Law § 19-0505.

¹⁸These states are Alabama, Arkansas, California, Connecticut, Delaware, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, and Washington. This total does not include those states that have no ability to assess an administrative penalty unilaterally, but that may obtain penalties through settlement in connection with administrative resolution of a violation.

¹⁹*E.g.*, Idaho Code Ann. §§ 39-108, 39-109.

²⁰In general, the states and state administrative agencies have much better access to the state courts than does EPA to the federal courts. There are fewer layers of review than occur in the EPA Region to EPA headquarters to Department of Justice referral process. *See* § 9:1. Moreover, state attorneys general frequently handle both administrative cases and civil cases, and so can elect the preferable approach with greater ease.

²¹*See* § 7:9.

[Section 7:3]

¹Alaska Const. art. VIII; Fla. Const. Art. II, § 7; Ga. Const. Art. III, § 6 para. 2(a)(1); Hawaii Const. art. XI, §§ 1, 9; Ill. Const. art. XI; La. Const. art. X; Mass. Const. art. XLIX; Mich. Const. art. IV, § 52; Mont. Const. art. IX, § 1; N.Mex. Const. art. XX; N.Y. Const. Art. XIV, § 4; N.C. Const. Art. XIV, § 5; Pa. Const. Art. I, § 27; R.I. Const. amend. 37; Tex. Const. art. XVI, § 59(a); Va. Const. art. XI, § 1.

²N.Y. Const. Art. XIV, § 4 (adopted November 4, 1969, eff. January 1, 1970).

³N.Y. Const. Art. XIV, § 4 (adopted November 4, 1969, eff. January 1, 1970). The provision also placed limits on the disposition of state-owned park land.

on the environmental laws and policy of the states that adopted such provisions. A number of state courts, in ruling upon early attempts to use these provisions in litigation, have found them to be essentially hortatory. A major issue has been whether or not these constitutional provisions are self-executing—that is, are they effective and directly applicable of their own force without the necessity of implementing legislation? Several courts have answered this question in the negative.⁴

Those constitutional provisions that declare public policy and expressly direct the legislature to act appear to require implementing legislation by their own terms.⁵ Such provisions are generally found not to be self-executing. Nevertheless, there may be enforceable public rights created by such provisions even absent implementing legislation. For example, New York's constitutional provision primarily declares state policy, and expressly directs the declaration at the legislature. This would suggest that the drafters contemplated the need for implementing legislation in order to create an enforceable public right. Interestingly, however, the amendment was added to a state constitutional article that already provided that “a violation of any of the provisions of this article may be restrained at the suit of the people,”⁶ or “with the consent of the supreme court in appellate division, on notice to the attorney-general at the suit of any citizen.”⁷ Thus, it is not clear whether the New York provision is self-executing. Hawaii's “environmental rights” provision has been found not to create new substantive rights, but rather to improve the basis for standing of citizens seeking to vindicate rights otherwise defined.⁸

The Louisiana environmental constitutional provision states:

The natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety and welfare of the people. The legislature shall enact laws to implement this policy.⁹

While the last sentence appears to be classically non-self-executing, the first sentence has nevertheless been held by the Louisiana Supreme Court to create an enforceable “public trust” obligation. In *Save Ourselves, Inc. v. Louisiana Environmental Control Commission*,¹⁰ the court reviewed the state's grant of permits to construct and operate a proposed \$84 million hazardous waste treatment facility, which was to be built along the Mississippi River. The court remanded the permit decision, requiring the state agency to provide evidence to show that the state agency had carried out its duties to protect the environment. Specifically, the court found that the agency is “duty bound to demonstrate that it has properly exercised” its constitutional functions, including showing that the adverse impacts of the proposed facility had been minimized or avoided to the maximum extent possible,

⁴See, e.g., *Robb v. Shockoe Slip Foundation*, 228 Va. 678, 324 S.E.2d 674 (1985); *Delta County v. Michigan Dept. of Natural Resources*, 118 Mich. App. 458, 325 N.W.2d 455 (1982) (abrogated by *Livingston County v. Department of Management and Budget*, 430 Mich. 635, 425 N.W.2d 65, 27 Env't. Rep. Cas. (BNA) 2250 (1988)).

⁵E.g., Mich. Const. art. IV, § 52.

⁶That is, upon suit by the Attorney General on behalf of the people of New York.

⁷N.Y. Const. Art. XIV, § 5.

⁸*County of Hawaii v. Ala Loop Homeowners*, 123 Haw. 391, 235 P.3d 1103, 258 Ed. Law Rep. 794 (2010) (abrogated by *Tax Foundation of Hawai'i v. State*, 144 Haw. 175, 439 P.3d 127 (2019)) (interpreting Art. XI, § 9).

⁹La. Const. art. IX, § 1.

¹⁰*Save Ourselves, Inc. v. Louisiana Environmental Control Com'n*, 452 So. 2d 1152, 14, 20 Env't. Rep. Cas. (BNA) 2214, 14 Env'tl. L. Rep. 20790 (La. 1984).

and that the balance had been weighed in favor of the environment.¹¹

The Pennsylvania constitutional provision is one of the most explicit statements of a public trust approach:

The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic, and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.¹²

The Pennsylvania courts have found this provision to be self-executing.¹³ In 2017, the Pennsylvania Supreme Court for the first time adopted a rigorous public trust analysis in a decision holding that the state legislature's diversion of oil and gas royalties from public lands to the general fund for non-conservation purposes violates Pennsylvania's Constitution. These funds must, the court held, be expended to conserve and manage the public's natural resources for the benefit of the people.¹⁴ Proceeds from the public trust must be returned to benefit the public and used for conservation and maintenance of public natural resources. The phrase "for the benefit of all the people" in the Amendment "does not confer upon the Commonwealth a right to spend proceeds on general budgetary items."¹⁵ The majority opinion built on and expanded the analysis of a prior influential plurality opinion in 2013, that had

¹¹*Save Ourselves, Inc. v. Louisiana Environmental Control Com'n*, 452 So. 2d 1152, 1160, 20 Env't. Rep. Cas. (BNA) 2214, 14 Env't. L. Rep. 20790 (La. 1984). The court drew heavily on the reasoning and language of *Calvert Cliffs' Coordinating Committee, Inc. v. U. S. Atomic Energy Commission*, 449 F.2d 1109, 1, 2 Env't. Rep. Cas. (BNA) 1779, 91 Pub. Util. Rep. 3d (PUR) 12, 1 Env't. L. Rep. 20346, 17 A.L.R. Fed. 1 (D.C. Cir. 1971), an early case under the federal National Environmental Policy Act of 1969 (NEPA), 42 U.S.C.A. §§ 4321 et seq. Calvert Cliffs had suggested a "substantive" environmental balancing requirement under the federal NEPA, a concept since discarded under subsequent federal decisions. See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 8, 98 S. Ct. 1197, 55 L. Ed. 2d 460, 11 Env't. Rep. Cas. (BNA) 1439, 8 Env't. L. Rep. 20288 (1978); *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 10, 100 S. Ct. 497, 62 L. Ed. 2d 433, 13 Env't. Rep. Cas. (BNA) 2157, 10 Env't. L. Rep. 20079 (1980).

¹²Pa. Const. Art. I, § 27; see also Hawaii Const. art. XI, § 1 ("All public natural resources are held in trust by the State for the benefit of the people."); *Morimoto v. Board of Land and Natural Resources*, 107 Haw. 296, 113 P.3d 172 (2005) (agency actions reviewed for compliance with statutes and constitutional obligation). Hawaii Const. art. XI, § 7 has been interpreted as codifying the public trust in water. In re *Water Use Permit Applications*, 94 Haw. 97, 9 P.3d 409 (2000).

¹³*Pennsylvania Environmental Defense Foundation v. Commonwealth*, 640 Pa. 55, 161 A.3d 911, 84 Env't. Rep. Cas. (BNA) 1838 (2017). See also *Payne v. Kassab*, 11 Pa. Commw. 14, 312 A.2d 86 (1973), decision aff'd, 14 Pa. Commw. 491, 323 A.2d 407 (1974), decision aff'd, 468 Pa. 226, 245, 361 A.2d 263, 6 Env't. L. Rep. 20796 (1976) and (rejected by, *Pennsylvania Environmental Defense Foundation v. Commonwealth*, 640 Pa. 55, 161 A.3d 911, 84 Env't. Rep. Cas. (BNA) 1838 (2017)) "No implementing legislation is needed to enunciate these broad purposes and establish these relationships; the amendment does so by its own *ipse dixit*."

¹⁴*Pennsylvania Environmental Defense Foundation v. Commonwealth*, 640 Pa. 55, 161 A.3d 911, 84 Env't. Rep. Cas. (BNA) 1838 (2017).

¹⁵*Pennsylvania Environmental Defense Foundation v. Commonwealth*, 640 Pa. 55, 161 A.3d 911, 84 Env't. Rep. Cas. (BNA) 1838 (2017). The court also completely repudiated the longstanding *Payne v. Kassab* test articulated by Pennsylvania's Commonwealth Court in 1973 and used since then by Pennsylvania's courts to interpret the Environmental Rights Amendment. *Payne v. Kassab*, 11 Pa. Commw. 14, 312 A.2d 86 (1973), decision aff'd, 14 Pa. Commw. 491, 323 A.2d 407 (1974), decision aff'd, 468 Pa. 226, 361 A.2d 263, 6 Env't. L. Rep. 20796 (1976) and (rejected by, *Pennsylvania Environmental Defense Foundation v. Commonwealth*, 640 Pa. 55, 161 A.3d 911, 84 Env't. Rep. Cas. (BNA) 1838 (2017)), had established a three-part test requiring the decisionmaker to determine: (1) whether there was compliance with all rules and regulations relevant to the protection of the Commonwealth's natural resources; (2) whether the record demonstrates a "reasonable effort to reduce environmental incursion to a minimum"; and (3) whether the environmental harm from the challenged action "so clearly outweighs the benefits that to proceed further would be an abuse of discretion." In *Pennsylvania Environmental Defense Foundation v. Commonwealth*, 640 Pa. 55, 161 A.3d 911, 84 Env't. Rep. Cas.

interpreted the Environmental Rights Amendment but which did not have a majority of the court supporting the analysis.¹⁶

In 2013, and for the first time, the Pennsylvania Supreme Court distinguished the two parts of the constitutional provision as stating a civil right (environmental right) in the first sentence, and defining a public trust in the second and third sentences. A plurality of Justices (three of the six participating) relied on the constitutional provision to strike down multiple sections of a law preempting local land use regulations affecting the location and conduct of unconventional oil and gas development, while a fourth concurred in the judgment, using a substantive due process analysis to strike the same provisions. The court seemed particularly offended by the asymmetry of some of the provisions of the state legislation. These voided provisions entitled oil and gas developers to variances upon submittal of a plan, while allowing—but not requiring—the regulatory agency to “consider” comments of municipalities. The unconstitutional provisions also barred municipalities from appealing permits, and shifted the burden of justifying environmentally protective conditions to the regulatory agency.¹⁷

The Montana Supreme Court has held the state’s constitutional protections for the environment to be self-executing. The state’s Declaration of Rights guarantees every citizen the “right to a clean and healthful environment,”¹⁸ and a corresponding constitutional provision provides that “the state and every person shall maintain and improve a clean and healthful environment in Montana for present and future generations.”¹⁹ In a 1999 opinion, the court ruled these provisions provided a basis for citizen litigation challenging a state statute that created a blanket authorization for discharges of water produced from exploration wells without a nondegradation review. In *Montana Environmental Information Center v. Department of Environmental Quality*,²⁰ the court held that the constitutional right to a clean and healthful environment is a “fundamental right” subject to “strict scrutiny analysis.” Meeting this standard mandates showing that a “compelling state interest” required the state to infringe the right and that the legislature had chosen the least onerous path that could be taken to achieve the state objective. The court held that, to the extent the statute in question excluded certain activities from nondegradation review “without regard to the nature or volume of the substances being discharged,” it violated the state constitution. It reversed and remanded a lower court decision that had entered judgment for the state.

In August 2023, the right to a clean and healthful environment as guaranteed by the Montana Constitution garnered a great deal of attention in *Held v. Montana*. In that case, a group of youths challenged a provision of the Montana Environmental Policy Act that prohibited state agencies from considering greenhouse gas (GHG) emissions in environmental reviews. The court ruled that by prohibiting consideration of climate, GHG emissions, and how additional GHG emissions will contribute to climate change, the provision violated the youths’ constitutional “right to a clean and healthful environment,” which included climate as part of the environmental life-support system. It declared unconstitutional and permanently enjoined the

(BNA) 1838 (2017) the Pennsylvania Supreme Court held that the *Payne* test “strips” the Environmental Rights Amendment of its meaning.

¹⁶Robinson Tp., Washington County v. Com., 623 Pa. 564, 83 A.3d 901, 181 O.G.R. 102 (2013).

¹⁷Robinson Tp., Washington County v. Com., 623 Pa. 564, 83 A.3d 901, 181 O.G.R. 102 (2013).

¹⁸Mont. Const. art. II, § 3.

¹⁹Mont. Const. art. IX, § 1.

²⁰*Montana Environmental Information Center v. Department of Environmental Quality*, 1999 MT 248, 296 Mont. 207, 988 P.2d 1236, 49 Env’t. Rep. Cas. (BNA) 1402 (1999).

provision.²¹

Each of the self-executing constitutional provisions has provided a basis for judicial review of state actions. While courts have overturned few actions based on state constitutional provisions, these provisions can be and have been effective in shaping state administrative responses and actions affecting the environment.

§ 7:4 Sources of state environmental law—State common law

An extremely important source of state environmental law is the common law of public nuisance. Once the workhorse of early environmental law (prior to enactment of most state and federal environmental statutes), public nuisance law has enjoyed a recent resurgence in the states.

Public nuisance law must be distinguished from its similarly-named cousin—private nuisance. Private nuisance is a tort, and is subject to familiar tort principles, including negligence, fault, and causation; and the grant of injunctive relief requires a balancing of the equities.¹ In contrast, public nuisance is not founded upon tort, but rather upon the police powers of the state to provide for the protection of public health, welfare, and safety. As a result, it is not subject to tort defenses and principles. Additionally, while private nuisance actions are usually limited to damage to property, and to injury already suffered, public nuisance actions may be used by the state to protect public health, safety, and welfare, and may reach even *prospective* threats to these interests.²

Public nuisance liability is based entirely upon the existence of the “nuisance” condition, regardless of the existence or absence of fault.³ Nuisance abatement is governed by strict liability because it constitutes an “offense” against the state. Historically, a public nuisance could either be criminally prosecuted or be subject to an equity action by the state for abatement. The abatement action is what survives in most jurisdictions today.⁴

The abatement action may include the recovery of monies spent by the state to abate the public nuisance. In effect, this is the common law precursor of modern

²¹Held v. Montana, No. CDV-2020-307 (Mont. 1st Jud. Dist. Aug 14, 2023) (Seeley, J.).

[Section 7:4]

¹Private nuisance law in the environmental area is exemplified by such cases as *Boomer v. Atlantic Cement Co.*, 26 N.Y.2d 219, 309 N.Y.S.2d 312, 257 N.E.2d 870, 1 Env’t. Rep. Cas. (BNA) 1175, 40 A.L.R.3d 590 (1970) (injunction against polluter granted, but to be dissolved where damages available), and *Spur Industries, Inc. v. Del E. Webb Development Co.*, 108 Ariz. 178, 494 P.2d 700, 2, 4 Env’t. Rep. Cas. (BNA) 1052, 2 Env’tl. L. Rep. 20390, 53 A.L.R.3d 861 (1972) (injunction granted, conditioned on indemnification by party “coming to the nuisance”). Private nuisance actions include both actions where a tortious injury to use of one’s land is alleged, and “public nuisance” claims brought by private individuals (rather than the state) for a “particular damage” suffered by the private plaintiff as a result of the public wrong. See Prosser, *Private Action for Public Nuisance*, 52 Va. L. Rev. 997, 999 (1966).

²*E.g.*, *Village of Wilsonville v. SCA Services, Inc.*, 86 Ill. 2d 1, 55 Ill. Dec. 499, 426 N.E.2d 824, 837, 16 Env’t. Rep. Cas. (BNA) 1105, 11 Env’tl. L. Rep. 20698 (1981) (a “prospective nuisance [is] . . . a fit candidate for injunctive relief [as] . . . it is only the damage which is prospective”); *Wood v. Picillo*, 443 A.2d 1244, 12, 17 Env’t. Rep. Cas. (BNA) 1386, 12 Env’tl. L. Rep. 21000 (R.I. 1982) (hazardous waste leaking from dump will at some point in future injure humans and wildlife, and may be abated as public nuisance).

³*E.g.*, *Board of Health of City of Yonkers v. Copcutt*, 140 N.Y. 12, 35 N.E. 443 (1893) (owner of dam liable for abatement of pollution of waters that accumulated in impoundment although pollution caused by others); *State of N.Y. v. Shore Realty Corp.*, 759 F.2d 1032, 1051, 22 Env’t. Rep. Cas. (BNA) 1625, 15 Env’tl. L. Rep. 20358 (2d Cir. 1985) (developer found “liable for maintenance of a *public* nuisance irrespective of negligence or fault”) (emphasis in original).

⁴*E.g.*, Colo. Rev. Stat. Ann. § 16-13-305(e) (pollution abatable as “Class 3 public nuisance”).

statutory actions for cost recovery.⁵ In such public nuisance actions, the monetary recovery is “limited to the reasonable costs for abatement, not necessarily the amount expended, and does not extend to future costs.”⁶ Most public nuisance actions, however, involve injunctive relief to compel the property owner itself to abate the nuisance.⁷

The grant of injunctive relief in a public nuisance action is not subject to the usual equitable balancing requirement. If the state can show the existence of a public nuisance, it need not demonstrate irreparable harm or the lack of an adequate remedy at law in order to obtain an abatement injunction.⁸ The injunction properly issues as an exercise of the police power. Indeed, because the injunction issues as a result of the “condition” that constitutes the nuisance, nuisance law is a powerful enforcement tool for the states.⁹ Where a state or federal permit, statute, or regulation might provide an inadequate basis for leverage to obtain abatement, state nuisance law can fill the void.

The leading case of *Commonwealth v. Barnes & Tucker Co* offers an illustration of the power of the states’ public nuisance authority.¹⁰ In that case, a coal mining company had operated an underground coal mine for over 30 years on a site which had been previously mined by its predecessors. The mining had occurred in conformance with state law and applicable permits, and the mine was finally closed and sealed in 1969 in accordance with standard mining practices. Approximately one year later, acid waters that had naturally accumulated in the mine workings began flowing out into the Susquehanna River. The Commonwealth of Pennsylvania sued to force the company to engage in a perpetual pump and treat regime (*i.e.*, lowering the water level in the mine and treating the pumped outflow). The company denied fault, and also mounted a defense on the basis of its compliance with all statutory and permit obligations. The Pennsylvania Supreme Court found a basis for statutory liability; more importantly, the court also found the company liable under common law public nuisance. The court observed: “The absence of facts supporting concepts of negligence, foreseeability or unlawful conduct is not in the least fatal to

⁵*E.g.*, CERCLA § 107, 42 U.S.C.A. § 9607.

⁶*State v. Schenectady Chemicals, Inc.*, 117 Misc. 2d 960, 459 N.Y.S.2d 971, 13, 13 Env’tl. L. Rep. 20550 (Sup 1983), order *aff’d* as modified, 103 A.D.2d 33, 479 N.Y.S.2d 1010 (3d Dep’t 1984).

⁷A state nuisance action may also reach beyond the current property owner. *E.g.*, *State v. Ole Olsen, Ltd.*, 35 N.Y.2d 979, 365 N.Y.S.2d 528, 324 N.E.2d 886 (1975) (developer liable for failure of sewage systems even though no longer property owner).

⁸When the state “brings an equity action to abate a public nuisance its right to relief is not restricted by any balancing of equities.” *Com. v. Barnes & Tucker Co.*, 472 Pa. 115, 371 A.2d 461, 467, 10 Env’t. Rep. Cas. (BNA) 1559, 7 Env’tl. L. Rep. 20394 (1977).

⁹This tool is not available to the federal government. While it previously appeared that a federal common law of nuisance might be available, *see Illinois v. City of Milwaukee, Wis.*, 406 U.S. 91, 2, 92 S. Ct. 1385, 31 L. Ed. 2d 712, 4 Env’t. Rep. Cas. (BNA) 1001, 2 Env’tl. L. Rep. 20201 (1972), *disapproved* in later proceedings, 451 U.S. 304, 101 S. Ct. 1784, 68 L. Ed. 2d 114, 15 Env’t. Rep. Cas. (BNA) 1908, 11 Env’tl. L. Rep. 20406 (1981), it is now evident that the major federal environmental statutes have displaced any federal common law remedy. *City of Milwaukee v. Illinois and Michigan*, 451 U.S. 304, 11, 101 S. Ct. 1784, 68 L. Ed. 2d 114, 15 Env’t. Rep. Cas. (BNA) 1908, 11 Env’tl. L. Rep. 20406 (1981) (FWPCA preempts federal common law remedy for water pollution). *American Elec. Power Co., Inc. v. Connecticut*, 564 U.S. 410, 131 S. Ct. 2527, 180 L. Ed. 2d 435, 72 Env’t. Rep. Cas. (BNA) 1609 (2011) (Clear Air Act displaces federal common law for emission of greenhouse gases from stationary sources.). Indeed, damage remedies under federal common law are not available if federal common law has been displaced. *Native Village of Kivalina v. ExxonMobil Corp.*, 696 F.3d 849, 75 Env’t. Rep. Cas. (BNA) 1289 (9th Cir. 2012).

¹⁰*Com. v. Barnes & Tucker Co.*, 455 Pa. 392, 319 A.2d 871, 4, 6 Env’t. Rep. Cas. (BNA) 1406, 4 Env’tl. L. Rep. 20545 (1974).

a finding of the existence of a common law nuisance.”¹¹ The operator was held liable because of the adverse *condition* resulting from the mine, even though the mine had been properly operated in accordance with the law, and there was no way to have prevented the natural conditions that led to the acid water “breakout.” States use similar nuisance concepts to address solid and hazardous waste management and cleanup situations.¹²

State common law nuisance remedies may be available to aggrieved individuals, even where there is comprehensive federal legislation, under statutory savings clauses preserving state remedies. In its 1987 *International Paper Co. v. Ouellette* opinion, the Supreme Court found that the CWA does not bar nuisance claims based on the laws of the pollutant source state.¹³ Courts have applied similar analysis under the CAA, upholding tort claims based on the savings clause in the Act.¹⁴ However, state tort claims that are entirely dependent on federal regulatory standards to define the standard of care may be more problematic under federal case law.¹⁵

In recent years, states, local governments, and even private plaintiffs have brought cases in state courts against emitters of greenhouse gases, basing their causes of action on state nuisance, common-law duties to abate hazards, failures to warn, strict liability, and other state claims. In most of these cases, the defendants have removed the actions to federal court, characterizing the claims as really founded upon federal law including CAA or federal common law claims. However, in a large number of these cases, the federal courts have returned the cases to state courts, characterizing the claims as chiefly state law in nature and not subject to removal.¹⁶

The availability of such common law remedies to the states underscores the importance of understanding environmental law as more than simply the outgrowth of major federal programs. The states often have substantially more enforcement leverage and flexibility than does the federal government. Further, citizen litigants may resort to state nuisance remedies, even where a federal or state regulatory scheme is in place.

II. THE STATE-FEDERAL ALLOCATION OF RESPONSIBILITIES

¹¹Com. v. Barnes & Tucker Co., 455 Pa. 392, 410, 319 A.2d 871, 4, 6 Env’t. Rep. Cas. (BNA) 1406, 4 Env’t. L. Rep. 20545 (1974).

¹²A number of states use public nuisance law in the hazardous waste context. The Texas Commission on Environmental Quality has even expressly codified common law public nuisance principles in its industrial solid waste and hazardous waste regulations. 31 Tex. Admin. Code § 335.4.

¹³*International Paper Co. v. Ouellette*, 479 U.S. 481, 497, 107 S. Ct. 805, 93 L. Ed. 2d 883, 25 Env’t. Rep. Cas. (BNA) 1457, 17 Env’t. L. Rep. 20327 (1987). Similar analysis applies to the Clean Air Act.

¹⁴*Bell v. Cheswick Generating Station*, 734 F.3d 188, 77 Env’t. Rep. Cas. (BNA) 1395 (3d Cir. 2013).

¹⁵In *Board of Commissioners of Southeast Louisiana Flood Protection Authority-East v. Tennessee Gas Pipeline Company, L.L.C.*, 850 F.3d 714 (5th Cir. 2017), the court upheld defendants’ removal to federal court of plaintiffs’ tort claims for damage to wetlands, levees, and exposure to flood risk on the grounds that the standard of liability for defendant oil and gas companies’ actions was entirely dependent on issues of federal law relating to dredging and actions in waterways. The court then upheld dismissal of the claims for failure to state a claim upon which relief could be granted under state law, as the federal laws did not create a duty of care as recognized by Louisiana law. The court observed that, while there are federal savings clauses in the environmental laws involved, they save only claims that are valid under state law.

¹⁶U.S. courts of appeal recently sustained the remand of many of these cases to state courts for trial under state law. *See, e.g., City of Oakland v. BP PLC* (9th Cir. May 26, 2020) (vacating district court’s denial of remand); *County of San Mateo v. Chevron* (9th Cir. May 26, 2020) (affirming district court’s order of remand); *Baltimore v. BP PLC* (4th Cir. Mar. 6, 2020) (affirming remand). Cases are pending in the First Circuit, Second Circuit, and Tenth Circuit, presenting the same issues.

§ 7:5 Introduction

Environmental law operates in the United States most frequently as an admixture of federal and state standards, goals, requirements, limitations, and enforcement authorities. This federal-state combination has been described in various ways. Frequently, the federal Environmental Protection Agency (EPA) speaks of the state-federal “partnership.” Others refer to the same relationship as “cooperative federalism,” the “new federalism,”¹ or simply “federalism.” The federal role is often described as “oversight”—with connotations, to some, of the “overseer.” The state role, which is to carry on the direct application of the law under most of the federal statutes,² is variously described as state “primacy,”³ state “authorization,”⁴ program “approval,”⁵ or “delegation.”⁶ Congress itself has not always been consistent in its terminology—even within a single statute or program within a statute. The Underground Storage Tank Program under Subtitle I of RCRA, for example, provides for “approval of state programs” on the one hand, and for “withdrawal of authorization” on the other.⁷

The use of various terms reflects the organic and changing quality of federal and state responsibilities under the major federal environmental programs. The terms are often used interchangeably, or to describe specific features of the state-federal interface as perceived at a given time. For purposes of legal analysis, however, it is most useful to focus upon the allocation of powers and responsibilities. The terminology—including statutory terminology—may be misleading. Specifically, despite the common use of the term “delegation” by EPA and practitioners and its appearance in the CAA, none of the federal statutes effectively delegates any federal power to the states. Rather, the federal government relies on the states’ own inherent and constitutional powers to carry out environmental implementation responsibilities, and, upon recognition of a state’s programs, refrains from exercising federal powers to their fullest in that state. Likewise, withdrawal of federal “authorization” from a state, or failure to grant such “authorization,” does not mean that the state lacks power to make and enforce laws addressing the subject matter of the authorization (*e.g.*, water pollution or hazardous waste). Lack of “authorization” in a state simply means that the federal government must promulgate and implement a full-blown federal effort in that state in addition to whatever independent efforts the state might make.⁸

Thus, the actual division of responsibilities between the federal government and

[Section 7:5]

¹This term became popular in the first term of the Reagan Administration. *See* Symposium, The New Federalism in Environmental Law: Taking Stock, 12 *Envtl. L. Rep.* (Envtl. L. Inst.) 15065 (1982).

²*See* § 4:9; § 9:3.

³Although the language of § 503 of the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C.A. § 1253, speaks of state program “approval,” regulators and lawyers commonly refer to state “primacy” under this law in situations when a state regulatory program has been approved. This practice probably resulted from Congress’ use of the term “primary” authority in SMCRA §§ 101(f), 522(a)(1), 30 U.S.C.A. §§ 1201(f), 1272(a)(1).

⁴RCRA § 3006, 42 U.S.C.A. § 6926.

⁵Clean Air Act § 110, 42 U.S.C.A. § 7410; Clean Water Act § 402, 33 U.S.C.A. § 1342.

⁶Clean Air Act §§ 111(c), 112(d), 42 U.S.C.A. §§ 7411(c), 7412(d). This is the only express use of the term “delegate” in federal environmental law. *See also* § 8:34.

⁷RCRA §§ 9004(a), (e), 42 U.S.C.A. §§ 6991c(a), (e).

⁸“If state residents would prefer their government to devote its attention and resources to problems other than those deemed important by Congress, they may choose to have the Federal Government rather than the State bear the expense of a federally mandated regulatory program, and they may continue to supplement that program to the extent state law is not preempted.” *New York v. U.S.*, 505 U.S. 144, 168, 112 S. Ct. 2408, 120 L. Ed. 2d 120, 34 *Env’t. Rep. Cas.* (BNA) 1817, 22 *Envtl.*

the states is significant. The ability of the federal government to persuade (or coerce) states to seek and maintain authorization under each program is also important, as this affects allocation of both federal and state resources. Finally, the federal government's oversight and "residual" enforcement activities in approved or authorized states represent a continuing contact between federal and state officials that significantly influences the actions of state officials and hence also the response of the regulated industry.

§ 7:6 Federal approval of state programs

Most of the major federal environmental statutes provide for the submission of state plans or programs for approval by the federal government.¹ The basic theory of these statutes is that the states should take the lead in implementation and enforcement subject to baseline (*e.g.*, minimum) national standards set by the federal government, and to federal oversight of the adequacy of the state effort. If a state elects to not submit a plan or to assume the statutory responsibilities, however, the only consequence is that the federal government must do so in its stead. The federal government must, in effect, induce the states to "take" the environmental programs. Sometimes, the possibility of a heavy federal presence is itself a sufficient inducement for a state to act. In other instances, the federal government offers the "carrot" of funding of state employees to carry out the programs under state control, or proffers other financial inducements.² A state legislature's potential embarrassment at having the federal government administer a program in a given state also can provide an incentive for a state to seek program "approval" or "authorization."

Where a state is neither troubled by the possibility of a federal program, nor induced financially to seek state program approval, there may be little incentive to take on the responsibilities. Generally, however, combination of federal pressure, public opinion, and financial inducements has resulted in substantial state participation under the CAA, CWA, and RCRA. The underground storage tank program created by the 1984 amendments to RCRA presented a different situation, however.³ That program called for states to submit programs for EPA approval in order to operate "in lieu of" the federal program. Unfortunately, Congress did not appropriate significant funds to offer the states as an inducement to administer the program. Nor did the threat of an intrusive federal program in a given state appear likely, given the limited funding available to the federal regulators contrasted to the size of the underground storage tank universe—about 1.4 million regulated tanks operated by over 500,000 different facilities.⁴ Congress also missed a potential inducement by failing to link the states' participation in the proceeds of the Leaking Underground Storage Tank Trust Fund to the submission of an approvable state program for the

L. Rep. 21082 (1992). For example, a number of states lack authorization to operate the NPDES permit program under the Clean Water Act: District of Columbia, Massachusetts, New Hampshire, New Mexico and Puerto Rico. The Corps of Engineers authorized only two states—Michigan and New Jersey—to operate the section 404 dredge and fill permit program under the Clean Water Act, although several others have similar authority under the terms of the Corps' "state program general permits," which define when state permit activities will be deemed to satisfy Corps requirements.

[Section 7:6]

¹See § 4:9.

²Under § 405(c) of the federal Surface Mining Control and Reclamation Act of 1977, 30 U.S.C.A. § 1235(c), for example, state control over the expenditure of federally-collected abandoned mine land (AML) reclamation funds is contingent upon whether the state has an approved "regulatory" program.

³See § 14:79.

⁴See 52 Fed. Reg. 12662 to 12786 (1987).

regulation of underground storage tanks under RCRA.⁵ The result was a weak federal baseline program allowing a great deal of flexibility to states in obtaining state program approval. This demonstrates the importance of how federal leverage, available under each of the statutes, is important in defining the nature of the state-federal relationship.⁶

The federal government ordinarily relies on the states accepting primary responsibility for implementation and enforcement precisely because of the lack of sufficient federal resources to carry out the program in all states. Accordingly, when there is friction between the federal EPA and a state over the administration of an approved program, the federal government's threat to revoke the state's approval may be more than balanced by the *state's* threat to return the program to the federal government.

While the relationship between the federal government and state governments varies under the several statutes, it is solidly ingrained in U.S. environmental law. The rationale for this duality of implementation is based upon the recognition that most pollution problems are interstate in character, or at least have impacts on interstate commerce (for example, by making a polluter's goods generally cheaper than those of a competitor that must incur pollution control expenses). Furthermore, upwind and upstream states may have limited incentive to impose pollution controls, absent a federal framework. At the same time, the states are perceived to have advantages for enforcement, including the recognition of local problems and the efficient application of resources. It is unclear whether these state advantages are real or are primarily received as articles of faith. Nevertheless, given both the inadequacy of federal resources to perform the entire job of environmental regulation and the states' willingness to participate—as evidenced by their efforts predating the federal programs—the issue is probably moot.⁷

Given the interstate nature of pollution problems and the checkered history of state regulation, federal baseline requirements are necessary.⁸ Federal oversight is then a concomitant in order to assure uniform state implementation and

⁵RCRA § 9003(h), 42 U.S.C.A. § 6991b(h) (as added by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. No. 99-499, 100 Stat. 1613).

⁶Such leverage may be considerable. The CAA is linked to federal highway dollars, a significant inducement for states to prepare adequate state implementation plans (SIPs). *See Com. of Va. v. Browner*, 80 F.3d 869, 26, 42 Env't. Rep. Cas. (BNA) 1353, 26 Env'tl. L. Rep. 21245 (4th Cir. 1996), amended, (Apr. 17, 1996) and amended, (May 9, 1996) (upholding EPA disapproval of Virginia's SIP for failure to provide adequate citizen standing to challenge permit decisions, and rejecting constitutional challenges to the linkage to highway funds).

⁷President Reagan's Exec. Order No. 12612, entitled "Federalism," 52 Fed. Reg. 41685 (1987) stated, in part: "With respect to national policies administered by the states, the national government should grant the states the maximum administrative discretion possible Executive departments and agencies shall . . . [r]efrain, to the maximum extent possible, from establishing uniform, national standards for programs and, when possible, defer to the states to establish standards." The Order required the federal agencies to prepare "federalism assessments" for all proposed policies and regulations with potential effects upon states, and granted the Office of Management and Budget the power to oversee federal agency compliance. Exec. Order No. 12612 was replaced by a President Clinton's Exec. Order No. 13122, 64 Fed. Reg. 43255 (Aug. 10, 1999), which maintained the required federalism assessment, while modifying the standards language.

⁸Sometimes the federal baseline becomes the *de jure* maximum. In 1987, for example, the Utah legislature enacted legislation requiring the Utah Solid and Hazardous Wastes Committee to eliminate all state hazardous waste regulations that were more stringent than the federal regulations unless the state agency could, after hearing, make a formal written finding (based on public health and environmental studies) that the federal regulations are not adequate to protect public health and the environment. Utah Code Ann. § 19-6-106(1). *See also* S.D. Codified Laws § 1-40-4.1 (rules may not be more stringent than EPA rules). For a collection of state laws limiting the stringency of state regulation to the federal minimum standards, *see* James M. McElfish, Jr., *Minimal Stringency: Abdication of State Innovation*, 25 Env'tl. L. Rep. (Env'tl. L. Inst.) 10003 (Jan. 1995). For an updated look at such

enforcement.

§ 7:7 Indian Tribes and Treatment as States

In a number of instances, federally recognized Indian tribes are treated in a similar manner as states for purposes of approval to implement federal environmental laws. Absent such approval, EPA usually operates as the regulatory and permitting authority in Indian country. For convenience, recognition of tribal authority to implement federal environmental programs is referred to as “treatment as a state” (TAS).

Federal relationships with tribal governments on environmental regulatory issues are guided by a number of policies in addition to explicit statutory authority. Recognizing a long history of treaty rights, trust responsibilities, and sovereignty characteristics, in 1984 EPA adopted a formal policy for the administration of environmental program on tribal lands.¹ In addition to this policy document, Executive Order 13175, issued in 2000, defines many of the commitments and obligations of federal agencies to consult with Indian tribes, to avoid imposition of unfunded mandates, and to use particular care in intergovernmental consultation when adopting “rules, policies, and guidance documents” with tribal implications.² The order defines “tribal implications” to include substantial direct effect on one or more tribes, on relationships between the federal government and tribes, or on the distribution of authority and responsibility between the federal government and tribes. Rules that impose costs on tribes, unless required by statute, cannot be adopted without early consultation and/or provision of funding support for direct compliance costs; any that preempt tribal law require consultation. All major federal rules, subject to review under E.O. 12866, must include a certification that the federal agency has fulfilled its consultation obligations to affected tribes. EPA has adopted its own policy for carrying out these consultation requirements.³

Apart from these policies and administrative undertakings, recognition of tribal environmental programs of standard setting, permitting, and enforcement is founded on statutory authority for TAS. The CAA, CWA, and Safe Drinking Water Act (SDWA) each contain statutory provisions authorizing the Administrator to treat tribes as states for purposes of these laws.⁴ In general, TAS is available where the tribe is federally recognized, has a governing body carrying out substantial governmental duties, has the ability to administer the program, and has clearly defined the geographic jurisdiction within which the tribal program will operate. EPA has by policy also extended TAS status to tribes under TSCA, and notes that CERCLA § 126(a) treats tribes “substantially” like states. Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) § 23 authorizes EPA to enter into cooperative agreements with tribes, as with states, for cooperative enforcement and

limitations affecting state protection of wetlands and waters, see Environmental Law Institute, *State Constraints: State-Imposed Limitations on the Authority of Agencies to Regulate Waters Beyond the Scope of the Federal Clean Water Act* (2013).

[Section 7:7]

¹EPA, Policy for the Administration of Environmental Programs on Indian Reservations (EPA Indian Policy), November 8, 1984. The Indian Policy was formerly reaffirmed in writing by EPA’s Administrator as recently as April 3, 2019.

²Exec. Order No. 13175, “Consultation and Coordination with Indian Tribal Government,” 65 Fed. Reg. 67249 (Nov. 9, 2000).

³EPA, Policy on Consultation and Coordination with Indian Tribes (May 4, 2011).

⁴Clean Air Act § 301(d), 42 U.S.C. § 7601(d), Clean Water Act § 518(e), 33 U.S.C. § 1377(e), Safe Drinking Water Act, § 1451, 42 U.S.C. § 300j-11.

implementation of that statute.⁵ EPA has adopted rules to govern TAS under each of the relevant statutes.⁶

Under U.S. law, generally tribes and tribal courts have authority only over Indians—of any tribe—on Indian lands, with certain exceptions for non-Indian activity with direct effects on political integrity, economic security, or the health and welfare of the tribe.⁷ However, Congress may authorize broader jurisdiction by statute, as it has in the TAS and related provisions. Thus, non-Indian persons and businesses must comply with lawfully adopted water quality standards, safe drinking water requirements, and other provisions administered by authorized tribes. Uptake of TAS authority has varied; nearly 70 tribes have EPA-approved water quality standards programs, for example, while to date only the Navajo Nation has assumed primacy to administer the SDWA.⁸

§ 7:8 Federal oversight of state programs

The main feature of the federal-state relationship under the major federal environmental laws is the federal “oversight” of the state effort. This function includes evaluation of the state laws and regulations for continuing “consistency” with the federal program, evaluation of the state’s current permitting, inspection, and enforcement efforts, and federal decisions about taking direct federal enforcement action against violators.¹

Whatever its form, federal oversight involves the potential for state program withdrawal, federal “assumption of enforcement,” cuts in state grant funds, or direct federal enforcement against individual violators without either program withdrawal or programmatic federal assumption of enforcement. Under the CWA’s National Pollutant Discharge Elimination System (NPDES) program, RCRA, the Underground Storage Tank program, and the SDWA, the EPA may withdraw a state’s “approval” or “authorization” if a state is not adequately carrying out its program obligations.² Under the CAA, EPA may promulgate a Federal Implementation Plan if a state fails to make a required submission or finds that a State Implementation Plan (SIP) does not meet required criteria; the agency also has the power to assume enforcement of the SIP itself.³ The sanction of program withdrawal has only once been exercised by EPA under any of the statutes providing for such action.⁴ Nevertheless, there are many petitions by citizen groups and others for EPA to consider

⁵7 U.S.C. § 136u.

⁶E.g., Clean Air Act, 63 Fed. Reg. 7254 (Feb. 12, 1998); Clean Water Act, 81 Fed. Reg. 30183 (May 16, 2016) (revised interpretation of Clean Water Act Tribal Provision), Clean Water Act TMDL and 303(d) rule, 81 Fed. Reg. 65901 (Sept. 26, 2016).

⁷Montana v. U. S., 450 U.S. 544, 101 S. Ct. 1245, 67 L. Ed. 2d 493 (1981).

⁸See EPA data at <https://www.epa.gov/tribal/tribes-approved-treatment-state-tas>.

[Section 7:8]

¹These oversight functions are discussed in greater detail from the EPA enforcement perspective at § 9:34.

²Respectively, these provisions are found at Clean Water Act § 402(c)(3), 33 U.S.C.A. § 1342(c)(3); RCRA § 3006(e), 42 U.S.C.A. § 6926(e); RCRA § 9004(e), 42 U.S.C.A. § 6991c(e); SDWA § 1422(b)(3), 42 U.S.C.A. § 300h-1(b)(3). EPA’s duty to withdraw program authorization may not be discretionary once a state’s noncompliance has been determined. *See* National Wildlife Federation v. U.S. E.P.A., 980 F.2d 765, 23, 35 Env’t. Rep. Cas. (BNA) 1905, 23 Env’t. L. Rep. 20440 (D.C. Cir. 1992) (EPA must withdraw state primacy under Safe Drinking Water Act once it has determined that a state is out of compliance).

³Clean Air Act §§ 110(c), 113, 42 U.S.C.A. §§ 7410(c), 7413.

⁴In 1987, EPA commenced proceedings to withdraw the authorization of North Carolina’s RCRA program, charging that a recent amendment to state law had rendered it no longer “consistent” with the federal statute. 52 Fed. Reg. 43903 (1987). Oddly, the action that provoked this first attempt to exercise EPA’s withdrawal power was not a state failure to administer or enforce, but rather a state

such withdrawal.⁵

Federal “assumption of enforcement” is provided for under both the CAA and the CWA.⁶ This type of oversight provision contemplates that the Administrator of EPA may take over a state’s enforcement function wholesale if SIP or NPDES permit violations are “widespread” and result from a state’s failure to enforce. This is a more drastic version of EPA’s “residual” authority, under each of the major environmental statutes, to exercise enforcement on a case-by-case basis in the authorized states.⁷ Oversight, therefore, is tied closely to federal enforcement goals and standards.

Such oversight has produced significant acrimony between EPA and the states. EPA’s enforcement priorities are often not the same as those of the states, and federal enforcement tools (such as civil penalties) are often favored by EPA over state preferences (which may include permit revocation actions or criminal remedies). The entire oversight process requires a substantial amount of paperwork and accounting, thus diverting resources from both federal and state government away from direct environmental protection. These inefficiencies appear to be inevitable consequences of a federal-state system. Nonetheless, there have been few moves toward a wholly federal or entirely state approach to addressing environmental problems.

The federal government arguably might best confine its activities to standard setting and technical research and development, while leaving all implementation to the states. Apart from the obvious problem of assuring uniformity of enforcement in such a system (*i.e.*, preventing the occurrence of pollution havens absent serious federal oversight), there is also another serious drawback to such a plan. The drawback is based in the concept that standard setting should be tied to enforcement. Standard setting is weakest when it operates in isolation from day-to-day enforcement problems. By splitting standard setting and enforcement between two governmental levels, the nation would risk the promulgation and maintenance of unenforceable standards, or standards that are essentially irrelevant to many activities. EPA’s successes in standard setting have, in part, relied on substantial input from its Regions and enforcement personnel, particularly in fine-tuning the federal regulations. The retention of significant residual enforcement authority at the federal level is probably appropriate for this reason, as well as for state enforcement quality control purposes.

In sum, the federal-state oversight scheme adopted under the major federal programs probably has had a mixed effect on the quality of regulatory performance. While close federal scrutiny may have prompted traditionally “bad” states to perform better in environmental regulation, it has also arguably exerted a negative effect on

law that was arguably more stringent in regulating hazardous waste facilities by restricting their siting. EPA acted at the petition of a commercial waste disposal operator and a trade association. In 1990, EPA decided not to withdraw North Carolina’s RCRA authorization. The U.S. Court of Appeals for the D.C. Circuit upheld this decision in *Hazardous Waste Treatment Council v. Reilly*, 938 F.2d 1390, 21, 33 Env’t. Rep. Cas. (BNA) 1699, 21 Env’t. L. Rep. 21228 (D.C. Cir. 1991).

⁵For example, EPA lists the status and current disposition of all such petitions under the Clean Water Act. Environmental Protection Agency, NPDES State Program Information—State Program Withdrawal Petitions, at <https://www.epa.gov/npdes/npdes-state-program-information>.

⁶Clean Air Act § 113, 42 U.S.C.A. § 7413; Clean Water Act § 309(a)(2), 33 U.S.C.A. § 1319(a)(2).

⁷See § 9:1. Direct federal enforcement against violators in approved or authorized states under the Clean Air Act, Clean Water Act, RCRA, the Underground Storage Tank Program, and the Safe Drinking Water Act is of the approved *state* program. Such enforcement of the state program by the federal government may, however, occur in federal court. *E.g.*, *Union Elec. Co. v. E.P.A.*, 515 F.2d 206, 211, 7 Env’t. Rep. Cas. (BNA) 1697, 6 Env’t. L. Rep. 20259 (8th Cir. 1975), judgment *aff’d*, 427 U.S. 246, 96 S. Ct. 2518, 49 L. Ed. 2d 474, 8 Env’t. Rep. Cas. (BNA) 2143, 6 Env’t. L. Rep. 20570 (1976) (SIP requirements enforceable by EPA in federal court).

“good” state efforts. The latter effect results from: (1) the diversion of significant state resources to the resource demands of federal oversight reporting and review; (2) the diversion of state resources to respond to particular enforcement actions targeted as federal priorities, even though the state may place higher priorities on other environmental actions; and (3) federal emphasis on the use of particular enforcement tools and approaches that are easy to measure for oversight purposes and that have clear federal analogues.⁸ States are encouraged to stick to the federal model for implementation. The federal-state scheme thus produces a general leveling effect.

§ 7:9 Federal preemption

There is generally little preemption of state environmental law by federal law. Although a substantial amount of environmental legislation on the federal level touches on the same subject matter as state legislation, preemption is generally disfavored unless Congress has expressly preempted the subject matter, or the federal law cannot be given effect without the state law yielding.¹

Recently, there has been substantial controversy relating to the express preemption provisions of the CAA with respect to mobile sources. In general terms, the Act expressly preempts state emissions standards for new motor vehicles in order to ensure a uniform target for manufacturers to meet. Yet a notable exception, in existence from the statute’s enactment, permits California to adopt different standards to address its concerns, given the state’s history of pollution regulation. The Act further authorized other states to adopt the “California” car.² In practice, this has meant that, for many decades, EPA granted California approval for its standards (the California waiver), and many other states followed that lead. Consequently, manufacturers have conformed to the stricter standard.

Over the years, California has been granted over 100 waivers. In 2009, EPA granted a waiver to California for its greenhouse gas emissions standards for vehicles. In 2012, the Obama Administration promulgated federal corporate average

⁸For example, EPA places substantial emphasis on state administrative orders and civil penalties. These are relatively easy to “count,” and they are the tools that EPA itself most often uses. This emphasis may discourage a state from using a “permit bar,” contractor debarment, or resource intensive permit revocation case to address a violation or exercise settlement leverage, even though the latter may be the more environmentally protective course. It is “easier” to issue an order and assess a civil penalty in most cases.

[Section 7:9]

¹*See, e.g.*, Clean Air Act § 209(a), 42 U.S.C.A. § 7453(a) (expressly preempts state emission standards for new motor vehicles); Toxic Substances Control Act § 18, 15 U.S.C.A. § 2617 (expressly preempts, with limited exceptions, state regulation of chemical substances acted on by EPA); Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) § 24(b), 7 U.S.C.A. § 136v(b) (expressly preempts state requirements for labeling or packaging that are different from or addition to federal requirements); *Engine Mfrs. Ass’n v. South Coast Air Quality Management Dist.*, 541 U.S. 246, 124 S. Ct. 1756, 158 L. Ed. 2d 529, 58 Env’t. Rep. Cas. (BNA) 1193, 34 Env’tl. L. Rep. 20028, 7 A.L.R. Fed. 2d 707 (2004) (certain aspects of California’s fleet vehicle rules preempted by § 209(a) of the Clean Air Act); *see also Exxon Corp. v. Hunt*, 475 U.S. 355, 16, 106 S. Ct. 1103, 89 L. Ed. 2d 364, 23 Env’t. Rep. Cas. (BNA) 2057, 16 Env’tl. L. Rep. 20396, 57 A.F.T.R.2d 86-1593 (1986) (holding that CERCLA § 114(c), as enacted in 1980, partially preempted the New Jersey Spill Act, N.J. Stat. Ann. 58:10-23.11 et seq., although CERCLA § 114(c) was repealed in 1986 following this decision); *cf. Wisconsin Public Intervenor v. Mortier*, 501 U.S. 597, 111 S. Ct. 2476, 115 L. Ed. 2d 532, 21, 33 Env’t. Rep. Cas. (BNA) 1265, 21 Env’tl. L. Rep. 21127 (1991) (FIFRA does not preempt town’s ordinance regulating the use of pesticides either explicitly or implicitly or by virtue of an actual conflict). *Compare Manor Care, Inc. v. Yaskin*, 950 F.2d 122, 22, 34 Env’t. Rep. Cas. (BNA) 1001, 22 Env’tl. L. Rep. 20320 (3d Cir. 1991) (CERCLA does not preempt New Jersey’s use of its Spill Act for cost recovery even though costs were incurred at federal CERCLA site).

²42 U.S.C. § 7543.

fuel economy (CAFE) and EPA greenhouse gas emissions standards addressing climate change. In 2013, California was granted a waiver for its emissions standards. Those waiver standards, by agreement with EPA and car manufacturers, were consistent with the national standards. However, in 2018, the Trump Administration proposed to roll back the federal standards for the 2021-2026 model years and to revoke California's waiver. California sought to ensure higher standards, prevailed, and struck a deal with four major car manufacturers. In September 2019, the National Highway Traffic Safety Administration (NHTSA) issued a final rule "preempting" any state vehicle regulations, such as California's, addressing carbon dioxide or setting zero emission vehicle requirements.³ EPA on the same day finalized its revocation of California's 2013 waiver and disallowed other states from following California's lead.⁴ Litigation was brought by 24 states, the District of Columbia, and the nation's two largest cities, as well as environmental organizations; a separate case was launched in U.S. district court, challenging NHTSA's preemption rule.

The law of preemption is too complex to cover here in any depth, but a number of important issues and rulings in the environmental area merit attention. Preemption will continue to be a major issue, as more states legislate broadly on environmental issues not addressed by, or addressed differently in, federal environmental laws.⁵

The threshold issue in any preemption determination is establishing whether Congress intended to preempt state law. Congress may preempt state law in a number of ways. First, preemption may arise when Congress uses explicit preemptive language in the federal statute. Such broad preemption is more common in areas of law other than the environment, but may affect states' abilities to adopt and enforce environmental requirements.⁶ Most of the major environmental statutes that provide for state program approval by federal authorities expressly require that the state law be consistent with the federal law as a condition for such approval. At the same time, a state's authority to regulate "more stringently" is expressly preserved.⁷ Consequently, where a state law is more stringent than its federal counterpart, the state law is expressly *not* preempted. A more difficult question arises

³84 Fed. Reg. 51312 (September 27, 2019).

⁴84 Fed. Reg. 51350 (September 27, 2019).

⁵Much of the debate over the Oil Pollution Act of 1990, Pub. L. No. 101-380, 104 Stat. 484, 33 U.S.C.A. §§ 2701 to 2761, focused on whether state liability schemes would be preempted by Congress; they were not. However, the Act's savings clause was construed narrowly by the U.S. Supreme Court, which struck down Washington state regulations on the outfitting and operation of oil tankers in state waters. *U.S. v. Locke*, 529 U.S. 89, 120 S. Ct. 1135, 146 L. Ed. 2d 69, 50 Env't. Rep. Cas. (BNA) 1097, 2000 O.S.H. Dec. (CCH) P 32038, 2000 A.M.C. 913, 30 Env'tl. L. Rep. 20438, 153 O.G.R. 565 (2000); *see also* CSX Transp., Inc. v. Williams, 406 F.3d 667, 60 Env't. Rep. Cas. (BNA) 1321 (D.C. Cir. 2005) (CSX Transport would likely succeed on its claim that a District of Columbia Act banning hazardous shipments by rail or truck travel within 2.2 miles of the capitol building was preempted by the Federal Railroad Safety Act.); *Green Mountain R.R. Corp. v. Vermont*, 404 F.3d 638, 35 (2d Cir. 2005) (Interstate Commerce Commission Termination Act expressly preempts pre-construction permit requirement of Vermont's environmental land use statute.); *Skull Valley Band Of Goshute Indians v. Nielson*, 376 F.3d 1223, 34, 58 Env't. Rep. Cas. (BNA) 2099, 34 Env'tl. L. Rep. 20064, 198 A.L.R. Fed. 741 (10th Cir. 2004) (Energy Policy Act preempts Utah's statutes regulating the storage, licensing, and transportation of spent nuclear fuel.); *Northern Natural Gas Co. v. Iowa Utilities Bd.*, 377 F.3d 817, 34 Env'tl. L. Rep. 20071, 161 O.G.R. 403 (8th Cir. 2004) (Iowa's land restoration statutes regulating the environmental effects of natural gas pipelines are preempted by the Natural Gas Act and FERC regulations.).

⁶*See, e.g., American Trucking Associations, Inc. v. City of Los Angeles, Cal.*, 569 U.S. 641, 133 S. Ct. 2096, 186 L. Ed. 2d 177, 43 (2013) (striking down portions of the Port of Los Angeles's program to reduce air pollution from trucks serving the port because these provisions are preempted by the Federal Aviation Administration Authorization Act's preemption of state "law, regulation, or other provision having the force and effect of law related to a price, route, or service of any motor carrier").

⁷*See, e.g., Resource Conservation and Recovery Act (RCRA) § 3009*, 42 U.S.C.A. § 6929 (state or

when a state law or program either has not been approved, or has been specifically disapproved by EPA for lack of consistency with the federal program. In general, the state law or program is not preempted, but the resolution of a preemption issue may depend on the nature of the inconsistency.⁸

In the absence of express language, preemption may arise in one of two ways. Conflict preemption arises where a state law stands as an obstacle to the accomplishment and execution of the federal legislation.⁹ But the fact that the federal government has regulated a subject area does not always require a finding of preemption, particularly where the state law or regulation aims at a different aspect of behavior or a different interest.¹⁰ Finally, implied preemption may be found where federal legislation is sufficiently comprehensive to make the reasonable inference that Congress has left no room for supplementary state regulation.¹¹

The primary area of environmental preemption litigation involves the so-called “dormant Commerce Clause,” a form of implied preemption. The U.S. Constitution authorizes Congress to legislate concerning interstate commerce,¹² and federal courts have been particularly careful to assure that Congress’ silence or inaction in a given area is not interpreted as authorization for the states to enact laws that might impair interstate commerce. The absence of federal legislation in a given area of interstate commerce may, in fact, reflect Congress’ settled judgment that there should be no provisions—state or federal—regulating such commercial activity. In such an instance, congressional silence will be given preemptive effect over state attempts at regulation.

local government may impose more stringent requirements).

⁸For example, California continued to operate its hazardous waste program throughout the 1980s even though it was not fully consistent with RCRA. RCRA does not expressly preempt “inconsistent” laws, only those that are “less stringent.” See RCRA § 3009, 42 U.S.C.A. § 6929. In contrast, the federal Surface Mining Control and Reclamation Act of 1977 expressly preempts “inconsistent” state laws. SMCRA § 505, 30 U.S.C.A. § 1255.

⁹*Clean Air Markets Group v. Pataki*, 338 F.3d 82, 33, 56 Env’t. Rep. Cas. (BNA) 1941, 33 Env’tl. L. Rep. 20247 (2d Cir. 2003) (Title IV of the Clean Air Act Amendments preempts a New York law requiring that the New York State Public Service Commission charge an air pollution mitigation offset when a utility sold or traded allowances to one of 14 upwind states.); *Northern Plains Resource Council v. Fidelity Exploration and Development Co.*, 325 F.3d 1155, 33, 56 Env’t. Rep. Cas. (BNA) 1289, 33 Env’tl. L. Rep. 20171 (9th Cir. 2003) (Clean Water Act preempts Montana’s law exempting Fidelity from obtaining an NPDES permit for the discharge of unaltered groundwater produced in association with methane gas extraction.); *Boyes v. Shell Oil Products Co.*, 199 F.3d 1260, 30, 49 Env’t. Rep. Cas. (BNA) 2025, 30 Env’tl. L. Rep. 20268 (11th Cir. 2000) (RCRA citizen suit provision preempts Florida law limiting suits against underground storage tank owners.).

¹⁰See, e.g., *Air Conditioning and Refrigeration Institute v. Energy Resources Conservation and Development Com’n*, 410 F.3d 492, 35 (9th Cir. 2005) (Energy Policy and Conservation Act does not preempt California’s appliance regulations requiring manufacturers to submit data to state energy commission, mark their appliances with basic information such as energy performance, and be subjected to related compliance and enforcement rules), cert. denied, 126 S. Ct. 2887, 165 L. Ed. 2d 916 (2006); *Oxygenated Fuels Ass’n Inc. v. Davis*, 331 F.3d 665, 33, 56 Env’t. Rep. Cas. (BNA) 1577, 33 Env’tl. L. Rep. 20212 (9th Cir. 2003) (Clean Air Act’s reformulated gasoline (RFG) program does not preempt California’s ban on the fuel additive MTBE); *Chemical Specialties Mfrs. Ass’n, Inc. v. Allenby*, 958 F.2d 941, 22, 34 Env’t. Rep. Cas. (BNA) 2000, Prod. Liab. Rep. (CCH) P 13142, 22 Env’tl. L. Rep. 20822 (9th Cir. 1992) (FIFRA and federal Hazardous Substances Act do not preempt California Proposition 65’s requirement for point of sale warnings); *LaFarge Corp. v. Campbell*, 813 F. Supp. 501, 23, 36 Env’t. Rep. Cas. (BNA) 1343, 23 Env’tl. L. Rep. 20896 (W.D. Tex. 1993) (RCRA does not preempt state statute prohibiting burning of waste-derived fuel within one-half mile of an established residence); *Welch v. Board of Sup’rs of Rappahannock County, Va.*, 860 F. Supp. 328, 25, 25 Env’tl. L. Rep. 20467 (W.D. Va. 1994), judgment aff’d, 888 F. Supp. 753, 40 Env’t. Rep. Cas. (BNA) 2135, 26 Env’tl. L. Rep. 20171 (W.D. Va. 1995) (Clean Water Act does not expressly or impliedly preempt county ordinance that prohibits the application of sewage sludge on agricultural lands.).

¹¹*Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230, 67 S. Ct. 1146, 1152, 91 L. Ed. 1447 (1947).

¹²U.S. Const. Art. I, § 8, cl. 3.

The leading case applying the dormant Commerce Clause power to environmental legislation is *Philadelphia v. New Jersey*,¹³ in which the Supreme Court held that New Jersey could not ban the importation of out-of-state waste. The Court set forth the test to be employed in determining whether a state law violates the Commerce Clause. Once a statute has been shown to have a discriminatory effect on out-of-state commerce, “[t]he crucial inquiry . . . must be directed to determining whether [the law being challenged] is basically a protectionist measure, or whether it can fairly be viewed as a law directed to legitimate local concerns, with effects upon interstate commerce that are only incidental.”¹⁴

In contrast, if a statute “regulates evenhandedly to effectuate a legitimate local public interest, and its effects on interstate commerce are only incidental, it will be upheld unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits.”¹⁵ The “market participant” exception to the dormant Commerce Clause, for example, applies when a state or local government is engaged in a market as a proprietor rather than as a regulator.¹⁶ In such instances, the state or local government has more leeway in making its decisions.

Recent applications of dormant Commerce Clause analysis have included consideration of when state renewable portfolio standards do and do not discriminate in the acquisition of renewable energy certificates.¹⁷ A substantial number of decisions, including Supreme Court decisions, have struck down state laws and

¹³*City of Philadelphia v. New Jersey*, 437 U.S. 617, 98 S. Ct. 2531, 57 L. Ed. 2d 475, 11 Env’t. Rep. Cas. (BNA) 1770, 8 Env’t. L. Rep. 20540 (1978).

¹⁴*City of Philadelphia v. New Jersey*, 437 U.S. 617, 624, 98 S. Ct. 2531, 57 L. Ed. 2d 475, 11 Env’t. Rep. Cas. (BNA) 1770, 8 Env’t. L. Rep. 20540 (1978). “A state statute that clearly discriminates against interstate commerce is therefore unconstitutional ‘unless the discrimination is demonstrably justified by a valid factor unrelated to economic protectionism.’” *Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dept. of Natural Resources*, 504 U.S. 353, 359, 112 S. Ct. 2019, 20-23, 119 L. Ed. 2d 139, 34 Env’t. Rep. Cas. (BNA) 1728, 22 Env’t. L. Rep. 20904 (1992), citing *New Energy Co. of Indiana v. Limbach*, 486 U.S. 269, 274, 108 S. Ct. 1803, 100 L. Ed. 2d 302 (1988). *See, e.g., South Dakota Farm Bureau, Inc. v. Hazeltine*, 340 F.3d 583, 33, 33 Env’t. L. Rep. 20260, 125 A.L.R.5th 665 (8th Cir. 2003) (amendment to South Dakota Constitution that prohibited corporations and syndicates, subject to certain exemptions, from acquiring land used for farming and from otherwise engaging in farming in South Dakota is motivated by a discriminatory purpose and violates the dormant commerce clause).

¹⁵*Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142, 90 S. Ct. 844, 25 L. Ed. 2d 174 (1970). The result in many dormant Commerce Clause cases turns on whether the test applied is strict scrutiny, as in *Philadelphia v. New Jersey*, or the *Pike* balancing test. *See, e.g., Chambers Medical Technologies of South Carolina, Inc. v. Bryant*, 52 F.3d 1252, 41 Env’t. Rep. Cas. (BNA) 1195, 25 Env’t. L. Rep. 20972 (4th Cir. 1995) (remanding decision upholding state limit on the amount of infectious waste that may be incinerated based on the estimated amount of such waste generated in South Carolina, for a determination of which test should apply). *See also Rocky Mountain Farmers Union v. Corey*, 730 F.3d 1070, 77 Env’t. Rep. Cas. (BNA) 1077 (9th Cir. 2013) (finding California Air Resources Board regulation of lifecycle carbon intensity of fuels does not facially discriminate against out-of-state ethanol, and remands for determination of whether standard discriminates in purpose or in practical effect, or only incidentally, triggering respectively either strict scrutiny or the *Pike* balancing test).

¹⁶*Hughes v. Alexandria Scrap Corp.*, 426 U.S. 794, 96 S. Ct. 2488, 49 L. Ed. 2d 220 (1976); *see Olympic Pipe Line Co. v. City of Seattle*, 437 F.3d 872, 36, 36 Env’t. L. Rep. 20033, 162 O.G.R. 15 (9th Cir. 2006) (Pipeline Safety Improvement Act (PSA) preempts municipality’s attempt to impose safety standards on a hazardous liquid pipeline. However, City may require safety tests if acting as a proprietor rather than a regulator.); *SSC Corp. v. Town of Smithtown*, 66 F.3d 502, 25, 41 Env’t. Rep. Cas. (BNA) 1241, 25 Env’t. L. Rep. 21513 (2d Cir. 1995) (Town’s flow control ordinance requiring use of a particular incinerator does not qualify as market participant, but town’s garbage hauling contract is act of market participant.).

¹⁷*Allco Finance Limited v. Klee*, 861 F.3d 82 (2d Cir. 2017), cert. denied, 138 S. Ct. 926, 200 L. Ed. 2d 203 (2018) (upholding Connecticut’s recognition of only RECs from the northeast in meeting its renewable portfolio standard). The court found that the RECs are different because they don’t meet the same needs and are hence different products treated in a nondiscriminatory fashion, applying the *Pike* test.

regulations that limit or prohibit the interstate transport or disposal of waste.¹⁸ Waste fees and other differentially imposed limitations, such as licensing and bonding requirements, have also been struck down as Commerce Clause violations.¹⁹ Waste handling laws that are facially neutral but have effects on interstate commerce have met varying fates.²⁰ In 1994, the Supreme Court struck down a “flow

¹⁸See, e.g., *Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dept. of Natural Resources*, 504 U.S. 353, 112 S. Ct. 2019, 22, 119 L. Ed. 2d 139, 34 Env’t. Rep. Cas. (BNA) 1728, 22 Env’tl. L. Rep. 20904 (1992) (limitation on acceptance of out-of-county waste, applicable to out-of-state waste, violates Commerce Clause); *Waste Management Holdings, Inc. v. Gilmore*, 252 F.3d 316, 31, 52 Env’t. Rep. Cas. (BNA) 1818, 31 Env’tl. L. Rep. 20753 (4th Cir. 2001) (Virginia limitations on amount of out-of-state waste violates Commerce Clause); *In re Southeast Arkansas Landfill, Inc.*, 981 F.2d 372, 23, 23 Env’tl. L. Rep. 20499 (8th Cir. 1992) (Arkansas law prohibiting certain disposal of waste from outside waste planning district violates Commerce Clause); *Environmental Technology Council v. Sierra Club*, 98 F.3d 774, 27, 43 Env’t. Rep. Cas. (BNA) 1353, 27 Env’tl. L. Rep. 20295 (4th Cir. 1996) (striking down South Carolina laws requiring facilities to reserve space for in-state waste and capping out-of-state waste, requiring show of in-state need to justify permit, and blacklisting waste generated in states without treatment or agreements for treatment); cf. *National Solid Wastes Management Ass’n v. Meyer*, 63 F.3d 652, 25, 41 Env’t. Rep. Cas. (BNA) 1705, 25 Env’tl. L. Rep. 21473 (7th Cir. 1995) (striking down Wisconsin statute that barred disposal of recyclables in Wisconsin landfills unless generator was located in community with an “effective recycling program”); *National Solid Wastes Management Ass’n v. Meyer*, 165 F.3d 1151, 29, 29 Env’tl. L. Rep. 20459 (7th Cir. 1999) (striking down successor statute with similar extraterritorial prescriptions). The same preemption applies to limitations and prohibitions on receipt of foreign waste. See *Chemical Waste Management, Inc. v. Templet*, 967 F.2d 1058, 22, 35 Env’t. Rep. Cas. (BNA) 1414, 14 Int’l Trade Rep. (BNA) 2015, 22 Env’tl. L. Rep. 21531 (5th Cir. 1992) (striking down Louisiana ban on disposal of waste originating in foreign countries), cert. denied, 113 S. Ct. 1048 (1993).

¹⁹See *Oregon Waste Systems, Inc. v. Department of Environmental Quality of State of Or.*, 511 U.S. 93, 114 S. Ct. 1345, 24, 128 L. Ed. 2d 13, 38 Env’t. Rep. Cas. (BNA) 1249, 24 Env’tl. L. Rep. 20674, 73 A.F.T.R.2d 94-1603 (1994) (striking down higher surcharge on disposal of out-of-state waste than in-state waste). But see *American Trucking Associations, Inc. v. Michigan Public Service Com’n*, 545 U.S. 429, 125 S. Ct. 2419, 162 L. Ed. 2d 407 (2005) (Michigan’s imposition of a flat \$100 annual fee on trucks engaging in intrastate commercial hauling was valid exercise of state’s police power and did not violate dormant Commerce Clause). See also *American Trucking Associations, Inc. v. State*, 180 N.J. 377, 852 A.2d 142 (2004) (holding that hazardous waste transporter registration fee discriminated against interstate commerce by charging a flat fee unrelated to the transporter’s level of activity in the state and placed an undue burden on interstate commerce); *Chemical Waste Management, Inc. v. Hunt*, 504 U.S. 334, 112 S. Ct. 2009, 22, 119 L. Ed. 2d 121, 34 Env’t. Rep. Cas. (BNA) 1721, 22 Env’tl. L. Rep. 20909 (1992) (striking down differential waste fee for disposal of out-of-state wastes); *Government Suppliers Consolidating Services, Inc. v. Bayh*, 753 F. Supp. 739, 21, 32 Env’t. Rep. Cas. (BNA) 1554, 21 Env’tl. L. Rep. 20584 (S.D. Ind. 1990) (striking down fee on out-of-state waste); *Government Suppliers Consolidating Services, Inc. v. Bayh*, 975 F.2d 1267, 23, 35 Env’t. Rep. Cas. (BNA) 1622, 23 Env’tl. L. Rep. 20042 (7th Cir. 1992) (striking down reenacted and new provisions, including prohibitions on backhauling, sticker and vehicle registration requirements, additional tipping fees on out-of-state waste, and surety bond requirements for out-of-state haulers).

²⁰*Eastern Kentucky Resources v. Fiscal Court of Magoffin County, Ky.*, 127 F.3d 532, 45 Env’t. Rep. Cas. (BNA) 1463, 28 Env’tl. L. Rep. 20251, 1997 FED App. 0305P (6th Cir. 1997) (upholding Kentucky requirement that local waste management plans identify capacity for disposing of “out-of-area” waste), cert. denied, 118 S. Ct. 1512 (1998); *Kleenwell Biohazard Waste and General Ecology Consultants, Inc. v. Nelson*, 48 F.3d 391, 25, 40 Env’t. Rep. Cas. (BNA) 1289, 25 Env’tl. L. Rep. 20867 (9th Cir. 1995) (upholding, against challenge by interstate transporter, Washington State requirement for certificate of public convenience and necessity to collect, transport, or dispose of waste in state), cert. denied, 115 S. Ct. 2580 (1995); *Chambers Medical Technologies of South Carolina, Inc. v. Bryant*, 52 F.3d 1252, 25, 41 Env’t. Rep. Cas. (BNA) 1195, 25 Env’tl. L. Rep. 20972 (4th Cir. 1995) (striking down refrigeration requirement for infectious waste because exemption for waste that could be transported within 24 hours meant that requirement burdened only out-of-state generators and nondiscriminatory alternatives exist); *SDDS, Inc. v. State of S.D.*, 47 F.3d 263, 25, 40 Env’t. Rep. Cas. (BNA) 1102, 25 Env’tl. L. Rep. 20967 (8th Cir. 1995) (striking down referendum disapproving large-scale municipal solid waste facility; although language was facially neutral, evidence showed that it had been drafted and campaign had been conducted on the basis that it would keep out a specific enterprise that was designed to handle out-of-state waste); *National Solid Waste Management Ass’n v. Williams*, 877 F. Supp. 1367, 26, 40 Env’t. Rep. Cas. (BNA) 2024, 26 Env’tl. L. Rep. 20484 (D. Minn.

control” ordinance designed to ensure use of a designated transfer station by all waste generated within a municipality’s borders.²¹ The Court held that the ordinance discriminated against out-of-state waste handlers who might want to compete in the market.²²

1995) (striking down because of discriminatory impacts facially neutral statute imposing certain fee and indemnification requirements for choice of landfilling over waste processing).

²¹*C & A Carbone, Inc. v. Town of Clarkstown, N.Y.*, 511 U.S. 383, 114 S. Ct. 1677, 24, 128 L. Ed. 2d 399, 38 Env’t. Rep. Cas. (BNA) 1529, 24 Env’t. L. Rep. 20815 (1994).

²²Other flow control litigation has ensued. *United Haulers Ass’n, Inc. v. Oneida-Herkimer Solid Waste Management Authority*, 261 F.3d 245, 31, 52 Env’t. Rep. Cas. (BNA) 1877, 31 Env’t. L. Rep. 20873 (2d Cir. 2001), judgment aff’d, 550 U.S. 330, 127 S. Ct. 1786, 167 L. Ed. 2d 655, 64 Env’t. Rep. Cas. (BNA) 1129, 41 A.L.R. Fed. 2d 601 (2007) (reversing and remanding district court decision striking down ordinance requiring use of appropriate sites), on remand, 438 F.3d 150, 36 Env’t. L. Rep. (Env’t. L. Inst.) 20041 (2d Cir. 2006) (upholding counties’ flow control ordinances requiring all waste generated within counties be delivered to publicly owned corporate facilities for processing); *IESI AR Corp. v. Northwest Arkansas Regional Solid Waste Management Dist.*, 433 F.3d 600, 36, 61 Env’t. Rep. Cas. (BNA) 1737, 2006-1 Trade Cas. (CCH) ¶ 75134, 36 Env’t. L. Rep. 20004 (8th Cir. 2006) (upholding, under the Pike balancing test, a flow control ordinance requiring that the disposal of solid waste occur either in the district in which the ordinance was enacted or in out-of-state landfills); *Southern Waste Systems, LLC v. City of Delray Beach, Fla.*, 420 F.3d 1288 (11th Cir. 2005) (city’s waste hauling contract does not violate the dormant commerce clause because it does not discriminate against out-of-state interests in favor of local interests); *National Solid Waste Management Ass’n v. Pine Belt Regional Solid Waste Management Authority*, 389 F.3d 491, 34, 59 Env’t. Rep. Cas. (BNA) 1376, 34 Env’t. L. Rep. 20132 (5th Cir. 2004) (upholding flow control ordinance under the Pike balancing test because regional waste management authority had legitimate local purpose of ensuring economic viability of its landfill and the ordinance did not have a disparate impact on interstate commerce; the burdens imposed on the interstate contracts of companies that collected, processed, and disposed of solid waste were no greater than the burdens imposed on intrastate contracts); *Maharg, Inc. v. Van Wert Solid Waste Management Dist.*, 249 F.3d 544, 31, 52 Env’t. Rep. Cas. (BNA) 1417, 31 Env’t. L. Rep. 20609, 2001 FED App. 0152P (6th Cir. 2001) (upholding county rules cutting off landfills that do not agree to sign agreement providing for a fee to the county); *U & I Sanitation v. City of Columbus*, 205 F.3d 1063, 30, 50 Env’t. Rep. Cas. (BNA) 1065, 30 Env’t. L. Rep. 20382 (8th Cir. 2000) (striking down ordinance requiring use of city-owned transfer station for solid waste destined for in-state disposal); *Huish Detergents, Inc. v. Warren County, Ky.*, 214 F.3d 707, 30, 50 Env’t. Rep. Cas. (BNA) 1617, 30 Env’t. L. Rep. 20595, 2000 FED App. 0182P (6th Cir. 2000); *United Waste Systems of Iowa, Inc. v. Wilson*, 189 F.3d 762, 30, 49 Env’t. Rep. Cas. (BNA) 1155, 30 Env’t. L. Rep. 20088 (8th Cir. 1999) (upholding requirement that city or county designate only one in-state landfill for solid waste disposal, while not prohibiting contract with out-of-state landfill); *Waste Management, Inc. of Tennessee v. Metropolitan Government of Nashville and Davidson County*, 130 F.3d 731, 28, 45 Env’t. Rep. Cas. (BNA) 1582, 28 Env’t. L. Rep. 20243, 1997 FED App. 0330P (6th Cir. 1997) (striking down requirement that all residential waste be sent to county-owned facility and requirement imposing fees on other locally generated wastes not disposed of at that facility), cert. denied, 118 S. Ct. 1560 (1998); *Atlantic Coast Demolition & Recycling, Inc. v. Board of Chosen Freeholders of Atlantic County*, 112 F.3d 652, 27, 44 Env’t. Rep. Cas. (BNA) 1481, 27 Env’t. L. Rep. 21099 (3d Cir. 1997), opinion amended, 135 F.3d 891 (3d Cir. 1998) (holding New Jersey flow control laws violate Commerce Clause and vacating district court stay of its injunction); *SSC Corp. v. Town of Smithtown*, 66 F.3d 502, 25, 41 Env’t. Rep. Cas. (BNA) 1241, 25 Env’t. L. Rep. 21513 (2d Cir. 1995) (town ordinance requiring use of a particular waste incinerator, with criminal penalties for nonuse, violates Commerce Clause; however, town contract requiring town-hired hauler to use particular incinerator does not violate Commerce Clause, because town is acting as market participant rather than as regulator); *USA Recycling, Inc. v. Town of Babylon*, 66 F.3d 1272, 25, 41 Env’t. Rep. Cas. (BNA) 1254, 25 Env’t. L. Rep. 21522 (2d Cir. 1995) (ordinance requiring commercial disposers to use town-hired hauler to collect all garbage does not violate Commerce Clause, because town is merely contracting out a government service in acting as market participant); *Sal Tinnerello & Sons, Inc. v. Town of Stonington*, 141 F.3d 46, 28, 46 Env’t. Rep. Cas. (BNA) 1403, 28 Env’t. L. Rep. 21141 (2d Cir. 1998); *Houlton Citizens’ Coalition v. Town of Houlton*, 175 F.3d 178, 29, 48 Env’t. Rep. Cas. (BNA) 1443, 29 Env’t. L. Rep. 21086 (1st Cir. 1999) (upholding flow control ordinance where both in-state and out-of-state operators could bid for exclusive right and use any disposal site); *United Waste Systems of Iowa, Inc. v. Wilson*, 189 F.3d 762, 49 Env’t. Rep. Cas. (BNA) 1155, 30 Env’t. L. Rep. 20088 (8th Cir. 1999) (upholding Iowa’s solid waste program requiring designation of only one in-state landfill, but not prohibiting out-of-state disposal); *Ben Oehrleins and Sons and Daughter, Inc. v. Hennepin County*, 115 F.3d 1372, 28, 44 Env’t. Rep. Cas.

Even state laws and regulations that differ marginally from comprehensive federal regulatory schemes have been challenged where they may have a differential effect on in-state and out-of-state articles of commerce.²³ Laws that use regulatory proscriptions to favor use of in-state resources are constitutionally suspect.²⁴ So are laws that attempt directly to control out-of-state commercial conduct (viz. extraterritorial regulation).²⁵ Product bans that do not discriminate between in-state and out-of-state products are generally not violative of the Commerce Clause, so long as there is a legitimate state interest in the resultant burden.²⁶

Claims based on state common law tort principles may also give rise to preemption issues. Where there is a federal regulatory scheme, civil claims based on failures to label, to warn, or to use in accordance with a label, may be vulnerable to the argument that the federal regulation preempts any common law duty. In *Bates v. Dow Agrosciences LLC*, the Supreme Court narrowed the scope of federal preemption and ruled that, while the FIFRA continues to expressly preempt any state law, regulation, or tort action that would impose labeling requirements different from those of federal law, FIFRA's prohibition of state requirements for labeling or packaging does not encompass claims for defective design, defective manufacture,

(BNA) 2058, 28 Env'tl. L. Rep. 20048 (8th Cir. 1997) (striking down ordinance limiting ability of out-of-state facilities to receive locally-generated waste, but remanding such limitations as to other in-state facilities for consideration under the *Pike* balancing test), cert. denied, 118 S. Ct. 629 (1997); *Harvey & Harvey, Inc. v. County of Chester*, 68 F.3d 788, 26, 41 Env't. Rep. Cas. (BNA) 1577, 26 Env'tl. L. Rep. 20018 (3d Cir. 1995) (reversing and remanding two district court judgments upholding one flow control ordinance and striking down another).

²³See, e.g., *National Solid Wastes Management Ass'n v. Alabama Dept. of Environmental Management*, 910 F.2d 713, 20, 31 Env't. Rep. Cas. (BNA) 1793, 20 Env'tl. L. Rep. 21316 (11th Cir. 1990), opinion modified on denial of reh'g, *National Solid Wastes Management Ass'n v. Alabama Dept. of Environmental Management*, 924 F.2d 1001, 32 Env't. Rep. Cas. (BNA) 1717, 21 Env'tl. L. Rep. 20637 (11th Cir. 1991) (finding Supremacy Clause violated by land disposal regulations that failed to adopt variances promulgated by EPA, and finding Commerce Clause violated by preapproval requirements that placed an impermissible burden on interstate commerce), vacated and remanded in part, 924 F.2d 1001, 21 Env'tl. L. Rep. (Env'tl. L. Inst.) 20637 (mootness), cert. denied, 111 S. Ct. 2800 (1991). But see *Old Bridge Chemicals, Inc. v. New Jersey Dept. of Environmental Protection*, 965 F.2d 1287, 22, 34 Env't. Rep. Cas. (BNA) 2049, 22 Env'tl. L. Rep. 21142 (3d Cir. 1992) (upholding state's definition of hazardous waste, including materials not defined by EPA as hazardous waste under RCRA, and finding state requirements neither preempted by RCRA nor violative of the Commerce Clause when applied to out-of-state waste).

²⁴See *Alliance for Clean Coal v. Craig*, 840 F. Supp. 554, 24, 148 Pub. Util. Rep. 4th (PUR) 575, 24 Env'tl. L. Rep. 20739, 128 O.G.R. 469 (N.D. Ill. 1993), judgment aff'd, 44 F.3d 591, 39 Env't. Rep. Cas. (BNA) 2025, 159 Pub. Util. Rep. 4th (PUR) 208, 25 Env'tl. L. Rep. 20510, 130 O.G.R. 445 (7th Cir. 1995) (striking down Illinois law requiring utilities to install scrubbers so they can use Illinois coal instead of switching to low-sulfur coal), aff'd sub nom. *Alliance for Clean Coal v. Miller*, 44 F.3d 591, 25, 39 Env't. Rep. Cas. (BNA) 2025, 159 Pub. Util. Rep. 4th (PUR) 208, 25 Env'tl. L. Rep. 20510, 130 O.G.R. 445 (7th Cir. 1995); see also *Alliance For Clean Coal v. Bayh*, 888 F. Supp. 924, 26 Env'tl. L. Rep. 20546 (S.D. Ind. 1995), judgment aff'd, 72 F.3d 556, 41 Env't. Rep. Cas. (BNA) 2083, 166 Pub. Util. Rep. 4th (PUR) 206, 26 Env'tl. L. Rep. 20557 (7th Cir. 1995) (striking down Indiana law requiring utility regulatory commission to consider effects of utilities' Clean Air Act compliance plans on the Indiana coal industry and restricting plan approval on such grounds), aff'd, No. 95-2065 (7th Cir. 12-22-95).

²⁵*Healy v. Beer Institute, Inc.*, 491 U.S. 324, 109 S. Ct. 2491, 105 L. Ed. 2d 275, 43 (1989). The Ninth Circuit found that California's establishment of carbon-intensity fuel standards did not violate this limitation on regulation of extraterritorial conduct, even though this applied to fuels originating outside of California and intended for sale and use in California. *Rocky Mountain Farmers Union v. Corey*, 730 F.3d 1070, 77 Env't. Rep. Cas. (BNA) 1077 (9th Cir. 2013).

²⁶See *Aseptic Packaging Council v. State*, 637 A.2d 457, 38 Env't. Rep. Cas. (BNA) 1514 (Me. 1994) (ban on juice boxes that are not recyclable in Maine does not violate Commerce Clause); cf. *Cotto Waxo Co. v. Williams*, 46 F.3d 790, 25, 25 Env'tl. L. Rep. 20781 (8th Cir. 1995) (reversing summary judgment that upheld state statute prohibiting sale in Minnesota of petroleum-based cleaning products; although statute does not have extraterritorial reach or discriminate between in-state and out-of-state businesses, it indirectly burdens interstate commerce and must be subjected to balancing test).

negligent testing, and breach of express warranty.²⁷ In *Wyeth v. Levine*, the Supreme Court held that drug-labeling requirements under the Food, Drug, and Cosmetic Act did not preempt a state law tort claim based on a duty to warn, absent express preemption in that Act and the option of the manufacturer to seek a stronger label.²⁸ Certain other federal regulatory schemes may preempt toxic tort cases.²⁹

As noted above, tort claims based on state nuisance law are usually not preempted by federal environmental regulatory schemes.³⁰ However, federal statutory interpretations may complicate the issue of whether a state action is preempted. In 2020, the U.S. Supreme Court held that CERCLA's express prohibition of federal court jurisdiction to hear various state law damage and remedy claims relating to Superfund did not divest state courts of jurisdiction to hear such claims.³¹

In summary, while preemption is an important issue, in most instances state laws will be upheld against challenges based on preemption, due to the independent police power of the states and federal statutory provisions preserving the states' authority to enact laws more stringent than the federal baseline programs. However, where state laws facially differentiate between in-state and out-of-state commerce, including inhibitions on the movement of commerce among political subdivisions of a state, the likelihood of Commerce Clause preemption is much greater. In those instances, the state must meet a substantial burden to justify the distinction. In cases in which the state or local law is facially neutral and the burden on interstate commerce is only incidental to the primary object of the law, the law will be upheld unless the burden is excessive in view of the local benefits. Finally, where the federal government has adopted a comprehensive labeling scheme, state common law claims based on such labeling may be preempted by the Commerce Clause.

III. THE OPERATION OF ENVIRONMENTAL LAW IN THE STATES

§ 7:10 Substantive provisions—Statutory prohibitions of pollution

Nearly all states have generic prohibitions on the pollution of water and air. A few, like Nebraska, established broad provisions making the causing of "pollution" a

²⁷*Bates v. Dow Agrosciences LLC*, 544 U.S. 431, 125 S. Ct. 1788, 161 L. Ed. 2d 687, 60 Env't. Rep. Cas. (BNA) 1129, 35 Env'tl. L. Rep. 20087 (2005); *Wuebker v. Wilbur-Ellis Co.*, 418 F.3d 883, 35, 35 Env'tl. L. Rep. 20167 (8th Cir. 2005) (following *Bates*, farmers' state law liability claims for design defect, breach of implied warranty of merchantability, and recklessness were not preempted because these claims do not relate to the labeling or packaging requirements imposed by FIFRA); *Oken v. Monsanto Co.*, 544 U.S. 1012, 125 S. Ct. 1968, 161 L. Ed. 2d 845 (2005); *Hardin v. BASF Corp.*, 397 F.3d 1082, 59 Env't. Rep. Cas. (BNA) 2025, Prod. Liab. Rep. (CCH) P 17330 (8th Cir. 2005), reh'g granted, judgment vacated, (June 29, 2005) (both cases remanded for further consideration in light of *Bates*).

²⁸*Wyeth v. Levine*, 555 U.S. 555, 129 S. Ct. 1187, 173 L. Ed. 2d 51, Prod. Liab. Rep. (CCH) P 18176 (2009).

²⁹*In re WTC Disaster Site*, 414 F.3d 352 (2d Cir. 2005) (under conflict and express preemption, the Air Transportation Safety System Stabilization Act of 2001 preempts state law remedies for damages claims relating to respiratory injuries suffered by rescue workers as a result of exposure to toxins and other contaminants in the aftermath of 9/11).

³⁰*Bell v. Cheswick Generating Station*, 734 F.3d 188, 77 Env't. Rep. Cas. (BNA) 1395 (3d Cir. 2013). See also *Merrick v. Diageo Americas Supply, Inc.*, 805 F.3d 685, 81 Env't. Rep. Cas. (BNA) 1493 (6th Cir. 2015) (state common law claims against distillery for ethanol emissions not preempted by Clean Air Act); *Little v. Louisville Gas & Elec. Co.*, 805 F.3d 695, 81 Env't. Rep. Cas. (BNA) 1565, 92 Fed. R. Serv. 3d 1551 (6th Cir. 2015) (state common law claims against power plant for ash, dust, and coal combustion byproducts not preempted).

³¹*Atlantic Richfield Co. v. Christian*, 590 U.S., No. 17-1498 (U.S. April 20, 2020) (CERCLA § 113(h) does not divest Montana courts of jurisdiction over landowner claims in nuisance, trespass, and strict liability under state law in connection with Superfund site). However, the court did hold that while the claims are not preempted, landowners would, as potentially responsible parties, nevertheless still need EPA's approval in order to take any remedial action, under § 122(e)(6).

violation of state law.¹ More common, however, is a provision prohibiting the “discharge” of any “pollutant” into the “waters of the state” without a permit.² Similar state law provisions prohibit the unpermitted release of pollutants into the air.³

Many of the no-discharge provisions of the state water pollution laws are even broader than those contained in the federal CWA. The definitions of “pollutant” or “discharge” are typically very inclusive. For example, Pennsylvania defines “industrial waste,” for purposes of its law, to encompass “any liquid, gaseous, radioactive, solid or other substance, not sewage, resulting from any manufacturing or industry, or from any establishment, as herein defined and [various mining-related wastes] ‘Industrial waste’ shall include all such substances whether or not generally characterized as waste.”⁴ Maryland defines “pollutant” as any waste or wastewater discharged from a publicly owned treatment works or industrial source and “any other liquid, gaseous, solid or other substance that will pollute any waters of this state.” “Pollution” is defined as “contamination or other alteration of the physical, chemical, or biological properties” of the waters of the state, harmful or detrimental to public health, safety, welfare, or to wildlife or any beneficial use.⁵ Many of the states’ provisions have been drafted to address even discharges that have not yet reached the waters of the state. The strongest of these provide a basis for regulators to take action to control or abate nearly any release before actual contamination has occurred. Texas, for example, proscribes unpermitted discharges “into or adjacent to” the waters of the state.⁶ Louisiana defines unpermitted discharge to include not only the placing or releasing of pollutants to the “air, waters, subsurface water, or ground,” but also the placing of pollutants where such “leaking, seeping, draining or escaping of the pollutants can be reasonably anticipated.”⁷ New Jersey defines “discharge” as “the releasing, spilling, leaking, pumping, pouring, emitting, emptying or dumping of pollutant into the waters of the state or onto land or into wells from which it might flow or drain into said waters.”⁸ Oregon prohibits placement of wastes where they are “likely” to be carried into the waters of the state.⁹ The term “waters of the state” nearly always is defined as to expressly include groundwater—a significant distinction from the federal CWA.¹⁰ Many of the states have not, however, used these water pollution provisions to address

[Section 7:10]

¹*E.g.*, Neb. Rev. Stat. Ann. § 81-1506.

²Virtually every state has a provision of this type. *See, e.g.*, Ala. Code § 22-22-1; Colo. Rev. Stat. Ann. § 25-8-501(1); Mich. Comp. Laws Ann. § 3.527; N.J. Stat. Ann. 58:10a-6(a); N.Y. Env’tl. Conserv. Law §§ 17-0505, 17-0803; Pa. Stat. Ann. tit. 35, §§ 691.301, 691.307; Tex. Water Code Ann. § 26.121. Unlike most other states, Minnesota does not appear to have in its law a general “prohibition” on the discharge of pollutants to the waters of the state without a permit. Its water pollution permit provision simply renders it unlawful to “construct, install or operate a disposal system” without a permit. Minn. Stat. § 115.07. Minnesota reaches the same result, however, through a provision imposing on “every person” the duty to *notify* the state agency immediately of any discharge of any substance “which, if not recovered, may cause pollution of the waters of the state” and to take immediate action to recover the substance and minimize or abate the pollution. Minn. Stat. § 115.061.

³*E.g.*, Md. Code Ann., Envir., § 2-401; Pa. Stat. Ann. tit. 35, § 4006.1; Ohio Rev. Code Ann. § 3704.05.

⁴Pa. Stat. Ann. tit. 35, § 691.1. “Establishment,” as defined in the law, includes virtually every type of process or industry. “Sewage” is regulated under other provisions of the law.

⁵Md. Code Ann., Envir., § 9-101.

⁶Tex. Water Code Ann. § 26.121.

⁷La. Rev. Stat. Ann. § 30:1054(10).

⁸N.J. Stat. Ann. 58:10a-3.

⁹Or. Rev. Stat. Ann. § 468.720.

¹⁰*E.g.*, Tex. Water Code Ann. § 26.001(5) (“groundwater, percolating or otherwise”); N.J. Stat. Ann. 58:10a-3 (“ground water”); Pa. Stat. Ann. tit. 35, § 691.1 (“underground water”). Rhode Island was an

groundwater contamination. Those states that do use the provision for groundwater protection generally do so not for permitting, but to add a “count” to an enforcement action, or as the basis for enforcement where another cause of action is not available to remedy contamination that has occurred in the past.¹¹

In general, state water pollution laws have served as a significant source of authority for addressing hazardous and solid waste issues that transcend federal RCRA authorities (and their state analogues in approved waste programs). State air laws, in contrast, have remained closely tied to the federal CAA system.

§ 7:11 Substantive provisions—State criminal laws

Criminal enforcement of environmental laws is becoming increasingly important as a significant area of development in the environmental laws of many states. The growing interest in state criminal enforcement, particularly in the hazardous waste area, means that many violations previously pursued as civil or administrative cases now may be criminally prosecuted. Substantial numbers of state statutes now set forth environmental crimes.

Some state legislatures have enacted numerous criminal laws in the environmental area.¹ Others have done very little.² Indeed, several states have erected significant barriers to the use of their criminal environmental laws in enforcement, either by imposing substantial *scienter* requirements or by authorizing only minimal sanctions. For example, Wisconsin’s hazardous waste criminal law requires the state to prove the “intentional” commission of offenses in order to convict, and has criminalized only a few types of conduct.³ At least one state legislature has provided no prison term for hazardous waste criminal violations, and a maximum criminal fine only marginally higher than its civil penalties.⁴ In contrast, a number of states provide for strict liability criminal offenses,⁵ and for offenses with fines of up to \$200,000 or \$500,000 per day and prison terms of up to 15 or 20 years.⁶

Those states that provide for multiple charging options, a range of fines and prison terms, and *scienter* requirements that facilitate successful prosecution can achieve credible deterrence. The enactment of environmental criminal laws continues to be an area of activity in the states.⁷

§ 7:12 Substantive provisions—State “NEPAs”

exception until 1983, when it specifically amended its law to include groundwater. R.I. Gen. Laws § 46-12-28.

¹¹A notable exception is New Jersey, which has an aggressive program of groundwater permitting, including *involuntary* permitting of contamination sources as a means of exercising closer control over their operations and obtaining corrective action. N.J. Stat. Ann. 58:10a-6(a); N.J. Admin. Code tit. 7, § 14A-6.1(a).

[Section 7:11]

¹*E.g.*, California (Cal. Health & Safety Code §§ 42400 et seq., §§ 25189 et seq., Cal. Water Code §§ 13261, 13268, 13387); New York (N.Y. Env’tl. Conserv. Law §§ 71-2105, 71-1933, 71-2705 et seq.).

²Colorado, for example, has criminal fines for some air pollution violations, but no incarceration. Colo. Rev. Stat. Ann. § 25-7-122.1.

³Wis. Stat. Ann. §§ 144.74(3) to (4).

⁴Utah Code Ann. § 26-14-13 (maximum fine of \$15,000).

⁵*E.g.*, Pa. Stat. Ann. tit. 35, §§ 6018.606(a) to (c), and (f); Mich. Comp. Laws Ann. § 299.548(2).

⁶*E.g.*, N.Y. Env’tl. Conserv. Law § 71-2714; Pa. Stat. Ann. tit. 35, § 6018.606(g).

⁷Sometimes, however, the revision of existing state environmental criminal laws has not kept pace with changes in the corresponding civil and administrative sanctions and remedies. This can produce anomalies. For example, criminal prosecutions for violation of underground injection well provisions in Texas require the state to prove “knowing or intentional” violations, and the maximum fine is only \$5,000 per day (with no prison term). Tex. Water Code Ann. § 27.105. The same offense, if handled *administratively*, requires no proof of intent and carries a civil penalty of up to \$10,000 per day. Tex.

In the wake of the National Environmental Policy Act (NEPA),¹ a number of states enacted laws requiring the state to conduct review of the environmental impacts of proposed state actions. These “little NEPAs” have provided a basis for environmental considerations to be recognized and addressed in the decisionmaking process. Fifteen states, Puerto Rico, and the District of Columbia have enacted such legislation.² New Mexico enacted such a law in 1971, but repealed it in 1974.³ Several states have adopted “little NEPAs” by executive order.⁴ A few states have also adopted environmental impact analysis requirements that are limited to specific programs.⁵

The California Environmental Quality Act of 1970⁶ (CEQA) was the first of the state NEPAs. It has been the subject of considerable litigation and subsequent amendment. CEQA requires all public agencies (including counties, cities, regional agencies, and other political subdivisions) to prepare Environmental Impact Reports (EIRs) for projects which “may have a significant effect on the environment.” In an early case, subsequently ratified by legislative amendment, the California Supreme Court held that the EIR requirement covers private activities subject to public permitting or approval.⁷ Most of the subsequent state NEPAs expressly covered permitting activities. New York’s State Environmental Quality Review Act (SEQRA),⁸ enacted in 1975, covers projects or activities directly undertaken by an agency; projects or activities funded or otherwise supported by an agency through grants, contracts, subsidies, loans or other forms of assistance; projects or activities involving issuance of a lease, permit, license, certificate or other entitlement; and “policy, regulations and procedure-making.”⁹

There is a substantial body of case law interpreting state NEPA provisions. Much of the case law follows federal decisions on the federal NEPA statute.¹⁰ However, a number of the state provisions have substantive aspects unique to the state statutes

Water Code Ann. § 27.1011.

[Section 7:12]

¹Pub. L. No. 91-190, 83 Stat. 852 (1970), *codified at* 42 U.S.C.A. §§ 4321 to 4347. *See* Ch 10.

²Cal. Pub. Res. Code §§ 21000 to 21176; Conn. Gen. Stat. Ann. §§ 22a-1 to 22a-7; D.C. Code § 6-981 et seq.; Ga. Code Ann. §§ 12-16-1 to 12-16-8; Haw. Rev. Stat. §§ 343-1 to 343-8; Ind. Code Ann. §§ 13-1-10-1 to 13-1-10-8; Md. Code Ann., Nat. Res. §§ 1-301 to 1-305; Mass. Gen. Laws Ann. ch. 30, §§ 61 et seq.; Minn. Stat. Ann. §§ 116D. to 116D.07; Mont. Code Ann. §§ 75-1-101 to 75-1-324; N.Y. Envtl. Conserv. Law §§ 8-0101 to 8-0117; N.C. Gen. Stat. Ann. §§ 113A-1 to 113A-10; P.R. Laws Ann. tit. 12, §§ 1121 et seq.; S.D. Codified Laws §§ 34A-9-1 to 34A-9-13; Va. Code Ann. §§ 10-107 et seq., §§ 10-177 et seq.; Wash. Rev. Code Ann. §§ 43.21C.010 et seq.; Wis. Stat. Ann. § 1.11.

³N.M. Stat. Ann. §§ 12-20-1 et seq., *repealed*, 1974 N.M. Laws Ch. 46 § 1.

⁴These states are Michigan, New Jersey, Texas, and Utah.

⁵*E.g.*, Del. Code Ann. tit. 7, §§ 7001 et seq. (coastal zone); Nebraska Dep’t of Roads Action Plan (1973), as amended; Tenn. Code Ann. § 13-18-103 (major energy projects). A number of these are collected in Robinson, SEQRA’s Siblings: Precedents from Little NEPA’s in the Sister States, 46 Alb. L. Rev. 1155 (1982).

⁶Cal. Pub. Res. Code §§ 21000 et seq.

⁷*Friends of Mammoth v. Board of Supervisors*, 8 Cal. 3d 247, 104 Cal. Rptr. 761, 2, 502 P.2d 1049, 4 Env’t. Rep. Cas. (BNA) 1705, 2 Envtl. L. Rep. 20673 (1972) (disapproved of by, *Kowis v. Howard*, 3 Cal. 4th 888, 12 Cal. Rptr. 2d 728, 838 P.2d 250 (1992)).

⁸N.Y. Envtl. Conserv. Law §§ 8-0101 to 8-0117.

⁹N.Y. Envtl. Conserv. Law § 8-0105. Other states have exempted permitting and licensing from EIS requirements. *E.g.*, Ind. Code Ann. § 13-1-10-6. “Little NEPAs” have other limitations in states such as Virginia (exempts highway projects) and the District of Columbia (exempts projects in the downtown sector).

¹⁰*E.g.*, *Friends of Mammoth v. Board of Supervisors*, 8 Cal. 3d 247, 104 Cal. Rptr. 761, 2, 502 P.2d 1049, 4 Env’t. Rep. Cas. (BNA) 1705, 2 Envtl. L. Rep. 20673 (1972) (disapproved of by, *Kowis v. Howard*, 3 Cal. 4th 888, 12 Cal. Rptr. 2d 728, 838 P.2d 250 (1992)); Wisconsin’s Environmental Decade,

favoring selection of the environmentally preferable alternatives.¹¹

Certain of the state NEPAs have affected the development of federal NEPA law. For example, Massachusetts first developed “scoping” of its required environmental impact reports as a means of identifying and focusing efforts on the most important issues.¹² The Council on Environmental Quality, drawing on this experience, subsequently adopted regulations making “scoping” an integral part of the federal Environmental Impact Statement (EIS) process under NEPA.¹³

§ 7:13 Substantive provisions—State “transactional” environmental laws

Beginning in the 1980s, it became evident to some states that the approach of regulatory standard setting, inspection, and government enforcement would not reach all instances of environmental degradation. This was a period of increased awareness of the contamination of lands due to past activities that were lawful when conducted, and one of growing recognition that state government would be unable to identify and remedy all of these problems single-handedly. Several states consequently enacted laws requiring private enterprises to disclose and remedy environmental harms when conducting transactions involving industrial or other property, where degradation might have occurred. These laws are unlike the standard regulatory programs, in that they rely on private transactions rather than on the discovery of “violations” or “imminent danger” conditions as triggers for action. They instead involve the private sector as the primary instrument for discovering environmental degradation.

The first and most comprehensive of these laws was the New Jersey Environmental Cleanup Responsibility Act (ECRA), which became effective January 1, 1984.¹ ECRA required any “industrial establishment” closing, selling, or transferring operations to give the state notice of the transaction and to submit either a “negative declaration” or a “cleanup plan” for the site. Industrial establishments were defined as places at which hazardous substances or hazardous wastes are handled and which fall within a long list of industries identified by their Standard Industrial Classification (SIC) numbers. Terminations, sales, and transfers of operations include events such as corporate mergers and acquisitions, sales of assets, real property sales, leases, financial reorganizations, bankruptcies, permanent cessations of operations, and temporary cessations of operations for more than two years.

A negative declaration is a statement that there has been no discharge of hazardous wastes or substances, or that any such discharge has been cleaned up in accordance with procedures established by the state. The state must review and approve a negative declaration prior to the transfer. If a cleanup plan is required, it must also be approved by the state, and the owner/operator must supply financial security sufficient to guarantee performance. Notwithstanding any other law, the

Inc. v. Public Service Commission of Wisconsin, 69 Wis. 2d 1, 230 N.W.2d 243, 6 Env'tl. L. Rep. 20192 (1975).

¹¹*E.g.*, Polygon Corp. v. City of Seattle, 90 Wash. 2d 59, 578 P.2d 1309, 8, 11 Env't. Rep. Cas. (BNA) 1689, 8 Env'tl. L. Rep. 20561 (1978); Save a Valuable Environment (SAVE) v. City of Bothell, 89 Wash. 2d 862, 576 P.2d 401, 8 Env'tl. L. Rep. 20379 (1978); Application of City of White Bear Lake, 311 Minn. 146, 247 N.W.2d 901 (1976); *cf.* Laurel Hills Homeowners Assn. v. City Council, 83 Cal. App. 3d 515, 147 Cal. Rptr. 842, 8, 8 Env'tl. L. Rep. 20714 (2d Dist. 1978) (feasible mitigation required, but not selection of most superior environmental alternative).

¹²Mass. Gen. Laws Ann. ch. 30, §§ 61 to 62H.

¹³Council on Environmental Quality, 1978 Annual Report 396, 398. *See* 40 C.F.R. § 1501.7.

[Section 7:13]

¹N.J. Stat. Ann. 13:1K-6 et seq. ECRA was replaced by the Industrial Site Recovery Act (ISRA) in 1993. *See* 1993 N.J. Laws 139, amending N.J. Stat. Ann. 13:1K-1 et seq. As discussed later in this section, ISRA retains many of the primary features of ECRA.

transfer of an industrial establishment was contingent upon compliance. Absent a negative declaration or cleanup plan, or in the event of a false negative declaration, the transaction was voidable by the transferee, and the transferor (or owner or operator of a closing establishment) would be held strictly liable for all cleanup costs and damages and for civil penalties of up to \$25,000 per day of violation. The state could void the transaction if the negative declaration or cleanup plan is not submitted.

ECRA resulted in a substantial amount of “environmental auditing” of facilities involved in triggering events, and—because of the transaction voidability and strict liability features—involved the financial industry and corporate and real property bars in environmental issues to a greater extent than most environmental statutes. New Jersey viewed ECRA as an important adjunct to its traditional regulatory programs and “superfund” cleanup programs due to: (1) the level of private resources devoted to detecting and attempting to remedy environmental contamination; and (2) the fact that cleanups were achieved without state enforcement litigation. Because the cleanups are driven by parties’ desires to complete their intended business transactions, the incentive is to comply with what the state wants rather than to delay and contest actions, as is often the case with traditional regulatory enforcement.

The law occasioned considerable controversy in the business and financial communities, partly because of the long delays in obtaining approval of negative declarations or cleanup plans. Although the initial backlog was substantially reduced when New Jersey devoted more staff to ECRA, the process was, nevertheless, time-consuming. In order to allow many transactions to close in a timely fashion, New Jersey authorized parties to sign administrative consent orders to perform the cleanups after the transactions. In every instance, these orders required the posting of substantial financial security for cleanup performance.

Apart from issues of delay, ECRA was also criticized on several theoretical grounds. First, it potentially distorted economic decisions by compelling parties to maintain skeleton work forces in order to avoid “closing” and to defer any cleanup. In addition, it placed upon the present owner the entire cost of cleaning up past contamination, even though the contamination may have been caused by former owners or operators. In this respect, ECRA was somewhat more draconian than CERCLA, which at least distributes liability among numerous “potentially responsible parties” that conducted past activities at a given site. Further, the sites addressed under ECRA were not selected according to environmental or health priorities. ECRA’s approach was not “worst-first” or otherwise risk-based; it captured whichever sites encountered a triggering event and did not address contamination on others. Finally, the law was not self-enforcing, but required substantial state staff involvement. New Jersey financed the program by imposing substantial filing fees upon businesses submitting the required ECRA notifications. Given the monies devoted to certifying negative declarations and issuing determinations of nonapplicability, the law may have been less “efficient” than some hypothetical alternative approaches. Nonetheless, by harnessing the considerable resources of many industrial establishments and utilizing the “pressure point” of transfer—when incentives to contest state requirements are lowest—New Jersey achieved a significant and quantifiable number of environmental improvements through an innovative approach to lawmaking.

Responding to many of the criticisms of ECRA, the New Jersey Legislature amended the law in 1993, retitling it the “Industrial Site Recovery Act” (ISRA).² ISRA retains the basic approach of ECRA, linking the cleanup obligation to a

²1993 N.J. Laws 139, amending N.J. Stat. Ann. 13:1K-1 et seq.

transfer or closure of an industrial site. Failure to comply with ISRA makes the transfer voidable by the transferee or the state, but the transferee must give the transferor reasonable notice and an opportunity to cure the defect. ISRA also simplified the practice, that had arisen under ECRA, for completing transactions based on binding agreements to conduct the cleanup after the transaction's closing, by substituting agreements for administrative consent orders. ISRA also allows the cleanup obligation to be deferred if three conditions have been satisfied: (1) the site has been assessed; (2) the industrial use by the transferee will not change substantially; and (3) the ability to pay for eventual cleanup is certified. The purpose of this amendment was to obviate the need for cleanup of industrial sites that would essentially remain in operation, but under different ownership. Finally, ISRA directed the state's environmental agency to develop and promulgate cleanup standards. Pending adoption of these standards, the law prescribed the use of a risk-based standard of one additional cancer per million persons exposed to the site for 70 years. This stringent default cleanup standard was, in part, the price of the compromise to change some of the other provisions of ECRA.

In 1985, Connecticut enacted a similar law, popularly known as the "Transfer Act."³ The statute covers the "transfer" of any establishment that handles hazardous waste. The term "establishment" includes any business that generated more than 100 kilograms per month of hazardous waste on or after May 1, 1967, or that transported, treated, recycled, disposed of, stored, or otherwise used hazardous waste generated by another, as well as dry cleaners, furniture strippers, auto body repair shops, and paint shops regardless of the quantity of hazardous waste generated. The term "transfer" is broadly defined, but does not include cessation of operations. If an establishment is subject to the law, either it must submit to the state a negative declaration (stating that there has been no discharge of hazardous waste on site or that any such discharge has been cleaned up), or either party to the transaction must submit a certification that cleanup will occur in accordance with procedures approved by the state agency. Unlike New Jersey, Connecticut need not approve the cleanup plan prior to the transfer. Also unlike ISRA, the Transfer Act does not make the transaction voidable for failure to comply. Instead, the transferor remains strictly liable for cleanup costs and damages, and the state may assess a civil penalty of up to \$100,000 against any noncomplying party. Because of minimal staffing, Connecticut has not reviewed negative declarations during the first several years under the Transfer Act.

Several other states have enacted laws premised more on disclosure than on cleanup. In 1988, Illinois enacted the Responsible Property Transfer Act (RPTA), effective November 1, 1989, and applicable to transactions closing on or after January 1, 1990.⁴ The RPTA, unlike the Transfer Act and ISRA, appears to focus simply on real property transfers rather than encompassing corporate acquisitions or changes in control. It also does not apply to changes in leasehold interests unless the term of the lease, including all options, exceeds 40 years. The RPTA applies to transfers of real property upon which are sited facilities required to report under § 312 of the federal Emergency Planning and Community Right-to-Know Act of 1986 or facilities with underground storage tanks. The RPTA requires notice from the transferor to the lender and transferee concerning: (1) the latter's potential liability under Illinois law for costs related to the release of hazardous substances; (2) information about activities by the transferor on the property that might create such liability; and (3) minimal information on the activities of previous owners. The disclosure statement is supplied prior to the closing; the law allows a party to void the pending transaction within 10 days after demand for or receipt of the disclosure statement if it

³Conn. Gen. Stat. Ann. §§ 22a-134 to 22a-134d.

⁴Ill. Rev. Stat. ch. 30 §§ 901 to 907.

discloses “environmental defects” previously unknown to that party, or if it is not provided. The disclosure statement must be permanently recorded in local deed records within 30 days after the closing, and must also be submitted to the Illinois EPA. The state agency has no obligation to review the statement, however, and no cleanup obligations are associated with the disclosure filing. It is intended simply to alert the parties to potential liabilities and thereby to encourage voluntary cleanups to avoid them. The RPTA provides for civil penalties for failure to comply.

The influence of these disclosure statutes and the impact of CERCLA’s retroactive liability have led to a substantial increase in site audits—an “environmental due diligence” in connection with transactions. In 1993, the American Society for Testing and Materials (ASTM), a private, voluntary standard-setting organization, which is widely recognized and influential, issued its “Standards on Environmental Site Assessment for Commercial Real Estate.”⁵ The ASTM subcommittee charged with developing the standards had a two-fold mandate: (1) to attempt to define the practices necessary to qualify for the innocent landowner defense to federal Superfund liability;⁶ and (2) to outline prudent business practices for environmental assessment of properties involved in commercial real estate transactions. ASTM standards, while voluntary, are frequently influential in determining the customary and standard practices in use in a variety of applications and industries.

Several other states have enacted disclosure statutes.⁷ These are likely to proliferate for a number of reasons. First, they are more palatable to industrial and financial interests than mandatory cleanup statutes tied to business transactions. Second, they serve to alert parties (and particularly lenders) to possible environmental liabilities, thus providing an additional layer of protection beyond customary “due diligence” practices. Third, by their very provisions, such statutes helped to define the scope of “due diligence” obligations, providing greater assurance to parties with fiduciary obligations that they have done what is needful. The state disclosure statutes enhance the operation of the scheme of environmental improvement that is built around environmental audits and private “regulation” of activities potentially having impacts on the environment.⁸

§ 7:14 State climate change laws

In recent years, states have exercised leadership in enacting laws that directly address greenhouse gas emissions, planning for climate change, and re-working their energy systems to address climate change.¹ As with other state action, this presents substantial opportunities to experiment with innovative types of regulation, unconstrained by national law, which may inform future federal action, while spurring similar action in other states.

⁵In fact, two ASTM standards were developed: “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” (ASTM Standard E 1527-93) and “Standard Practice for Environmental Site Assessments: Transaction Screen Process” (ASTM Standard E 1528-93).

⁶See CERCLA § 101(35)(B), 42 U.S.C.A. § 9601(35)(B) (requiring the defendant to undertake, “at the time of acquisition, all appropriate inquiry into the prior history and uses of the property consistent with good commercial or customary practice in an effort to minimize liability”).

⁷See, e.g., Cal. Health & Safety Code § 25359.7 (transferors of nonresidential real property required to notify transferees of releases of hazardous substances on property); Cal. Civ. Code § 1102.6 (sellers of residential real property required to notify purchasers of environmental hazards). Indiana enacted a Responsible Property Transfer Law modeled on the Illinois RPTA in 1989. Ind. Code Ann. § 13-7-72.

⁸See Ch 8 and § 3:24.

[Section 7:14]

¹These types of laws are discussed only briefly here. For more detailed analysis, see Ch. 24. —

These efforts included not only comprehensive laws like California's, originally enacted in 2006, but also recently-enacted laws in other states incorporating "climate justice" principles. One example is New York's 2019 Climate Leadership and Community Protection Act, which set statewide greenhouse gas limits and requires development of regulations and plans, including renewable energy programs to achieve zero emissions from electric power by 2040, setting a social cost of carbon, and creating programs for "just transition" and environmental justice. An even more recent state effort is Virginia's 2020 Clean Economy Act. This statute commits the Commonwealth to reduce carbon emissions from electric power generation to zero by 2050 (2045 for most of the state), and set goals for energy efficiency, solar, and onshore wind and energy storage, in addition to a commitment to offshore wind energy. The Virginia legislature at the time also enacted the Clean Energy and Community Flood Preparedness Act to establish a CO₂ cap-and-trade program and provide climate resilience funding.

§ 7:15 Procedures and institutions

State procedures and institutional structures have a profound effect on the implementation of environmental laws. These are important issues, spanning which court reviews the decisions of the administrative agency, whether review is on the record or *de novo*, whether administrative orders are stayed pending review, and how the administrative agency is structured. Each of the states must be examined programmatically in order to assess the significance of these features for implementation and enforcement. Nevertheless, general observations can be made.

Nearly every state has adopted provisions for the issuance of emergency administrative orders without hearing; such orders are followed by a hearing immediately thereafter, either automatically or upon request.¹ Ordinarily, these orders are available only where the state has found "imminent danger" to human health or the environment.²

The states also possess non-emergency order authorities. In general, the states fall into two groups with respect to the procedures for non-emergency orders. The first group follows the usual federal approach of issuing an order/complaint,³ which becomes final and effective only if the alleged violator fails to request a hearing, or if the order is upheld by an administrative law judge, board, or agency director after a hearing.⁴ The majority of states have adopted this approach.

The second group of states provides for immediately effective orders, issued by the responsible state agency.⁵ These orders must be complied with, even when a request for hearing has been made and review is pending, unless the alleged violator can make an affirmative showing sufficient to obtain a stay. In these states, the law presumes that the agency has properly evaluated the situation and has exercised its

[Section 7:15]

¹*E.g.*, Alaska Stat. §§ 46.03.290, 46.03.820; Ark. Stat. Ann. § 82-4208; Conn. Gen. Stat. Ann. § 22a-7; La. Rev. Stat. Ann. § 30:1073C; Mich. Comp. Laws Ann. § 299.547; N.Y. Env'tl. Conserv. Law § 71-0301; S.C. Code Ann. § 48-1-290; Va. Code Ann. § 62.1-44.15.

²A few states have provisions for emergency *oral* orders which must be complied with immediately; such orders must be reduced to writing thereafter. *See, e.g.*, Pa. Stat. Ann. tit. 35, § 6018.602(d).

³*See* 40 C.F.R. Pt. 124.

⁴*E.g.*, Ark. Stat. Ann. § 82-4204; Fla. Stat. Ann. § 403.121; 415 Ill. Comp. Stat. Ann. sec. 5/31 (replacing Ill. Rev. Stat. ch. 111-1/2, § 1031); Mich. Comp. Laws Ann. §§ 299.548, 3.527; N.Y. Env'tl. Conserv. Law §§ 71-2703, 71-2705, 71-2727, 71-1709(7), 19-0505; Va. Code Ann. §§ 10-310, 62.1-44.15.

⁵*E.g.*, Colo. Rev. Stat. Ann. §§ 25-8-404(4), 25-8-607; Pa. Stat. Ann. tit. 71, § 510-21; W. Va. Code Ann. §§ 20-5E-14, 20-5A-11. Several other states have orders that are immediately effective.

informed judgment in issuing the order. While the recipient of the order is entitled to review, the legislature has determined that it is in the interest of the public that the order remain in effect pending review.

The burden of obtaining a stay in the latter group of states rests upon the alleged violator. This shift in the initial burden provides the state environmental agency with considerable enforcement leverage. An alleged violator may be more inclined to reach a settlement, particularly if its stay petition is denied. Stay standards vary, however, and political considerations also can lead to weaker or stronger interpretations of even the same stay standards.⁶

Some statutory stay standards are fairly strong. For example, an Ohio statute provides that if a stay is *granted*, the ultimate appeal must be decided by the Environmental Board of Review “immediate[ly] without interruption by continuances, other than for unavoidable circumstances.”⁷ This provision places a premium on the order remaining in effect or, if stayed, coming back into effect as early as possible for the benefit of the public if the order is upheld.⁸ Moreover, the Ohio Board’s procedural rules provide that, “except for compelling reasons justifying a stay, a stay shall be denied.”⁹ Several other states have strong provisions requiring the order recipient to show its entitlement to a stay pending administrative review.¹⁰ In Pennsylvania, the violation of a solid or hazardous waste order that has not been stayed is expressly punishable as a direct *judicial* contempt (even though administrative review on the merits may be pending).¹¹ A significant number of states—nearly all of them among those states whose administrative orders are not immediately effective—have adopted statutory preconditions to the initiation of enforcement actions. These preconditions may include requirements of “grace” periods for negotiation, preliminary notification of violations and provision of an “opportunity” to cure, and elaborate civil referral processes. These occur in a variety of media-specific state statutes, but some examples from the hazardous waste area will illustrate the concept. For example, in Delaware, before the Department of Natural Resources and Environmental Control may issue an order under the state’s hazardous waste management act, the Secretary must first give notice of the violation and provide 30 days to correct the violation. Only if the violator fails to correct the violation within this period may the Secretary issue an order, which is then

⁶For example, the West Virginia Water Resources Board may grant a stay of an administrative order only upon a showing of “unjust hardship to the appellant.” W. Va. Code Ann. § 20-5A-15(b). Reportedly, most stay applications presented to the Board have been granted.

⁷Ohio Rev. Code Ann. § 3745.04.

⁸The Ohio Supreme Court has taken a narrow view of what constitutes “unavoidable circumstances” allowing a continuance if a stay has been granted. *See, e.g.*, *State ex rel. Republic Steel Corp. v. Environmental Bd. of Review*, 48 Ohio St. 2d 38, 2 Ohio Op. 3d 131, 356 N.E.2d 494 (1976).

⁹Ohio Admin. Code § 3746-5-13(A). The Board may impose conditions on a stay including, where appropriate, the filing of a bond or other security. Ohio Admin. Code § 3746-5-13(B).

¹⁰*E.g.*, Pa. Stat. Ann. tit. 71, § 510-21(d); *see also* Me. Rev. Stat. Ann. tit. 38, § 1304(12); Ind. Code Ann. § 4-21.5-3-6. The stay standards in these states, developed under administrative and judicial cases, are a showing by the appellant of the likelihood of success on the merits, irreparable injury to the alleged violator absent a stay, and no significant injury to the public if a stay is granted. Absent a stay, the order is enforceable. *Com., Dept. of Environmental Resources v. Bethlehem Steel Corp.*, 469 Pa. 578, 367 A.2d 222, 9 Env’t. Rep. Cas. (BNA) 2014, 7 Env’tl. L. Rep. 20213 (1976). In Washington, the stay standards are somewhat different. The appellant may make a *prima facie* case to the Pollution Control Board for a stay by showing *either* a likelihood of success on the merits *or* irreparable harm. On such a showing, the Board must grant the stay *unless* the Department of Ecology can show either: (1) a substantial probability of success on the merits; or (2) a likelihood of success on the merits and an overriding public interest justifying denial of the stay. Ecology Procedures Simplification Act, 1987 Wash. Laws ch. 109, § 7.

¹¹Pa. Stat. Ann. tit. 35, § 6018.603.

itself subject to administrative appeal.¹² New Mexico and Wisconsin adopted similar provisions. Moreover, in these two states, the agency is also barred from filing a civil judicial action until after the continuation of the violation beyond the thirtieth day after issuance of the notice, except in cases of “imminent and substantial danger.”¹³ In Idaho, the agency must issue a notice of violation and afford the violator 15 days to request a conference for the purpose of negotiating an agreed administrative consent order; the agency lacks authority to issue a unilateral order. If the agency requests conference, it is barred from instituting civil judicial proceedings until 60 days after the notice of violation.¹⁴ Several other states require the agency, under various environmental programs, to afford time for “conference, conciliation, or persuasion” before issuance of an order.¹⁵

A few states adhere to unusual formal processes for the referral of enforcement cases to the attorney general for civil action. For example, both the Texas Commission on Environmental Quality and the Missouri Hazardous Waste Management Commission follow public processes for referring enforcement cases. The enforcement staff or agency presents a petition to the Commission for referral, and the alleged violator is permitted to oppose the petition for referral in public session. In each case, these procedures have occurred largely as a result of agency practice, rather than through statutory requirement.

The institutional organization of review in the states is also of significance. A leading institutional difference among the states concerns who makes the final decision upon administrative review of enforcement actions. There are several models, as follows:

- **ALJ/Secretary Model**—*The agency director or secretary makes the final decision after a hearing before an administrative law judge results in a recommended decision* (e.g., Maryland, Michigan, New York).¹⁶ Advantages include efficiency, control over the timing of review, and the fact that the ultimate decision is made by an official who is publicly charged with enforcement and protection of the environment as part of his or her official public duties. The vulnerability of such a system includes perception of it as unfair or “stacked” against the regulated community, because the authority issuing the order is also responsible for passing upon its validity. As a result, courts reviewing such a decision (even if an administrative evidentiary hearing has been held) may give the administrative decision less deference than they otherwise might even if the courts purport to apply the usual “substantial evidence” judicial review standard for review of agency decisions.
- **Agency Final/Board Review Model**—*The agency action is immediately effective, but an independent review board or commission hears the administrative appeal and renders a decision* (e.g., Ohio, Pennsylvania, West Virginia). This system replicates the advantages of the ALJ/Secretary Model, but is insulated from the perception of unfairness (and from judicial second-guessing) by the availability of an independent forum for review. These states also avoid the disadvantages of agency subservience to the independent board, as under the Illinois system or the Agency/Board Model (as discussed below), because of the

¹²Del. Code Ann. tit. 18, § 6309(a).

¹³N.M. Stat. Ann. §§ 74-4-10, 74-4-13; Wis. Stat. Ann. §§ 144.73, 144.72.

¹⁴Idaho Code § 39-4413.

¹⁵E.g., Ga. Code Ann. § 12-8-71 (hazardous waste); Mo. Rev. Stat. § 260.410.4 (hazardous waste); Or. Rev. Stat. Ann. § 468.090 (water pollution); Wyo. Stat. § 35-11-701(c) (environmental violations other than surface mining); see also 415 Ill. Comp. Stat. Ann. sec. 5/31 (replacing Ill. Rev. Stat. ch. 111-1/2, § 1031(d)) (opportunity to “resolve the conflicts” required).

¹⁶Approximately half the states use this approach. Some do not use administrative law judges but simply have the agency director make the final decision.

ability to act by issuing an immediately effective final order.

- **Agency/Board Model**—*The agency issues an order that is not final or effective during the pendency of administrative review by an independent board (e.g., Wyoming Missouri). This system possesses some of the advantages of the first two groups, but is disadvantaged by its dependence upon the board to act promptly. This model may also be disadvantaged to the extent that the reviewing board membership by law represents various interest groups or takes a different view of enforcement than that of the agency.*
- **Board Control Model**—*The agency itself is headed by a board or commission, which renders a decision based on the evidence presented before it or before an administrative law judge who renders a recommended decision (e.g., Texas, Virginia, Alabama). This system shares some of the advantages and disadvantages of the first three groups. However, it lacks the flexibility of agency director-headed review, while not providing the “independence” of the independent board.*
- **“Illinois Model”**—*The agency may not issue an order, but rather must apply to an independent board for an order; the order may be issued by the independent board only after an administrative evidentiary hearing at which the agency must prove its case.*¹⁷ The unique Illinois system is problematic. There, the agency is entirely dependent for orders upon an independent board, which has no enforcement function itself. The agency is unable to act, or even to settle a case upon consent with a violator without approval and entry of an order by the board. This affords the agency even less enforcement flexibility than systems that rely entirely upon judicial enforcement, or that rely solely on injunctions to enforce administrative orders (e.g., those that lack administrative civil penalties). The agency must constantly calculate whether it can persuade the board to act, to act quickly, and to sustain the proposal to take an action. The board, for its part, is entirely free to give no deference to the agency.¹⁸

The ability of a state to ensure that review of administrative enforcement actions occurs in a single designated court appears critical for effective enforcement. In the majority of states, administrative enforcement actions are judicially reviewable in the local court—usually the trial court, although sometimes the regional appellate division—for the county where the violation was committed or where the violator maintains its place of business.¹⁹ This provision for judicial review in the local court occurs in many states, even where the administrative hearing conducted by the administrative law judge, the agency director, or the independent hearing board is not local. Even where the administrative review process may be conducted centrally, judicial review often reverts to the local court. These local courts ordinarily hear very few hazardous waste, air pollution, or water pollution enforcement cases, or

¹⁷Delaware adopted a hybrid system. There the agency order is subject to review by an administrative law judge, with final review by the agency director (the Secretary). The Secretary's *final* decision, however, is itself reviewable by the Environmental Appeals Board rather than in court. *See* Del. Code Ann. tit. 18, § 6008.

¹⁸One commentator, curiously, argues that Illinois has the best institutional system because of the total independence of the board from any enforcement function, and the total dependence of the agency upon its persuasive powers to obtain relief from the board through formal presentation of evidence. Currie, *Enforcement Under the Illinois Pollution Law*, 70 Nw. U.L. Rev. 389, 444-49 (1975); Currie, *State Pollution Statutes*, 48 U. Chi. L. Rev. 27, 69 (1981). Essentially, this “administrative review” system has all of the disadvantages of a court, and provides few advantages since its decisions are themselves reviewable in a county court.

¹⁹*E.g.*, 415 Ill. Comp. Stat. Ann. sec. 5/41 (replacing Ill. Rev. Stat. ch. 111-1/2, § 1041); Mich. Comp. Laws Ann. § 3.560(203); N.Y. Civ. Prac. Law and Rules §§ 506, 7804; Wash. Rev. Code Ann. §§ 43.21B.180, 43.21B.190.

environmental violations of any type. As a result, in each instance the state agency, or attorney general, must educate the court on several matters, such as the reasons underlying the system of regulation, the basis for the violation, and the unusual strict liability concepts often applied to environmental violations. For example, a release of pollutants into the environment is a “violation” in most states, irrespective of whether there was “fault” on the part of the party responsible for the release. These concepts and their applications are unfamiliar to many of the judges, and consequently the local courts often borrow on their experiences with other—quite inapplicable—types of cases of administrative review, such as zoning appeals or liquor license revocations.²⁰ In addition, the fact of a local forum may work in favor of a violator that either is, or is associated with, a major employer in the community. In contrast, administrative enforcement decisions appear less likely to be second-guessed when judicial review is conducted by a single court.²¹ The central venue and experience of the reviewing court can be extremely important to an enforcement effort.²²

Whether the reviewing court is a trial court or an appellate court appears to make far less difference than the venue. In either court, review of administrative actions is generally conducted in most states by a judge who reviews the existing administrative record and does not hold a trial or take new testimony.²³ It is possible, however, that the state agency might be better off in an appellate court even for such record review, because appellate judges are arguably more accustomed to applying judicial deference to decisions under review. Moreover, the violator may be less likely to appeal an adverse decision rendered by an appellate court because the next appeal is to the state supreme court, rather than simply to an intermediate appellate court as would be the case if initial judicial review were in the trial court.²⁴

Other judicial review provisions may provide cause for concern to enforcement programs seeking to achieve finality. In Iowa, for example, a person who has complied with a hazardous waste order issued by the agency may, in addition to taking a direct appeal, seek relief from the order in a local court within six months “on the grounds that the requirements imposed by the order are excessive, that the benefits to society are not commensurate with the costs of complying with the order and that society can be protected in a less costly manner.” The court may modify or vacate an order “[u]pon a finding that the requirements imposed by the order are

²⁰By way of example, the penalties associated with environmental violations are far higher than those associated with many other types of conduct (including willful or directly injurious behavior). Local courts are often reluctant to uphold such penalties, based on their experiences with other types of administrative cases. *See, e.g., Archer Daniels Midland Co. v. Illinois Pollution Control Bd.*, 119 Ill. App. 3d 428, 75 Ill. Dec. 93, 456 N.E.2d 914, 14, 14 Env'tl. L. Rep. 20338 (4th Dist. 1983) (reversing and remanding \$40,000 penalty that used EPA-type penalty policy); *see also City of East Moline v. Pollution Control Bd.*, 136 Ill. App. 3d 687, 91 Ill. Dec. 296, 483 N.E.2d 642 (3d Dist. 1985) (\$30,000 penalty reduced by court to \$10,000 because environmental penalty should not be punitive).

²¹This is the situation with, for example, Pennsylvania's Commonwealth Court, which hears all appeals from the Environmental Hearing Board. *See Harman Coal Co. v. Com., Dept. of Environmental Resources*, 34 Pa. Commw. 610, 384 A.2d 289, 292 (1978) (deference to hearing board).

²²The designation of a venue for judicial review is not evidently controlled by the size of the state. For example, California requires that judicial appeals be in a local court, while Texas appeals are heard centrally.

²³There are some exceptions. North Carolina offers appellants *de novo* judicial review of administrative cases. N.C. Gen. Stat. §§ 130A-22, 130A-24, 143.215.5. Kansas provides for *de novo* judicial review of administrative decisions revoking hazardous waste permits. Kan. Stat. Ann. § 65-3439.

²⁴This second point has less significance in those few states that have only a two-tiered judicial system.

excessive.”²⁵ The venue for *direct* judicial enforcement actions is also an important institutional feature of state enforcement. In almost every state, the violator may be sued only in the county where the violation occurred or where it maintains its place of business.²⁶ The state will thus often be litigating before a trial court that lacks experience in the regulatory scheme. Such courts, as noted above, may be reluctant to impose the strict “violation” standard as the basis for granting an injunction, and may be unsympathetic to stringent state penalty schemes. In addition, there may be wide disparity in the results of enforcement cases brought in different counties. Several states have attempted to overcome these difficulties by authorizing the agency to file suit in a single court. Pennsylvania’s Commonwealth Court, for example, serves not only as an appellate court for the review of all administrative cases, but also as the trial court for any case brought by the state (or against the state).²⁷ Connecticut environmental cases may be brought, by the state agency, either in the superior court for Hartford, or in the local superior court.²⁸

Institutional issues are also important in the jurisdictional provisions that apply to direct state enforcement actions in state courts. Important enforcement advantages flow from the ability of a state to control the selection of the forum and to prevent the defendant from doing so. In Michigan, for example, judicial enforcement cases may be brought, at the option of the state, in either the circuit court for Ingham county (*i.e.*, a central forum) or in the county where the defendant resides or does business.²⁹ In Indiana, the state may bring suit in any court for a county where the state agency maintains an office (*i.e.*, a central court), or in the county of the violation or the residence or place of business of the defendant. Each party, however, has the chance to change the venue to any adjacent county. Thus, the defendant may engage in some forum shopping—but the state may do so in return.³⁰ In Wisconsin, normal venue rules allow the state to file either in a central court or where the violation occurred. However, the law is more restrictive for hazardous waste enforcement, with the legislature providing that the state must file its action in the county of the violation; the case may be transferred to a central court only if both parties agree.³¹ These venue provisions affect state strategies in choosing whether to handle cases administratively, to settle, or to initiate direct civil enforcement in the courts. The variation from state to state is partly reflected in differing preferences for use of available enforcement tools.

§ 7:16 Conclusion

State environmental laws and regulations are “functional programs” that practitioners must consider. They help define the context within which federal environmental laws operate. This includes evaluation of federal enforcement and implementation strategies.

State laws reflect state priorities, concerns, biases, and interests. The link to political concerns may be very strong. For example, historic mistrust of state governmental power may be reflected in conciliation provisions, or in requirements

²⁵Iowa Code Ann. § 455B.421.

²⁶This local venue provision is found even in several states that require judicial review of administrative *appeals* to be conducted in a central court, such as Texas, Missouri, and Louisiana.

²⁷The Pennsylvania DEP has the *option*, however, to file suit against a violator in a county Court of Common Pleas if it so desires. This judicial scheme allows the state, and not the defendant, to pick the most hospitable forum for a given case.

²⁸Conn. Gen. Stat. Ann. §§ 22a-430(d), 22a-432, 22a-435, 22a-123.

²⁹*E.g.*, Mich. Comp. Laws Ann. § 299.548(9).

³⁰Ind. Code § 4-21.5-5-6; Ind. R. Trial Pro. 76.

³¹Wis. Stat. Ann. § 144.73(4).

that the state agency seek enforcement only in the courts and not through the imposition of administrative sanctions. Concern with representing a variety of interests may result in agency review boards comprising traditional, or particularly powerful, state constituencies (industry, agriculture, others). Experience with particular historical environmental problems may lead to solutions to new environmental problems being modeled upon prior approaches to the longstanding problems.¹

Various procedural and institutional factors influence state implementation. Thus, any analysis of an environmental law problem that is based on a presumed similarity of state procedures and institutions to federal counterparts, will necessarily be insufficient—and misleading. State environmental law can be quite complex. Part of the complexity is due to the propensity of many states to rely on unwritten customs and procedures rather than on regulations for carrying out processes under state statutes. State regulations typically provide only part of the necessary information.

In every state, the interaction of substantive law, procedures, and institutions is complex. To identify the key differences among states, as well as to understand these interactions within a given state, requires a willingness by the practitioner to set aside the federal model as the initial basis of analysis. Rather, one should first come to understand how a state views its own program, and the state goals, antecedents, and institutional influences that lie behind the functioning of that program. Then the relationship of the federal component, framework, or program becomes relevant. Approaching an issue from the other direction—solely federal—can lead one to miss important distinctions in state law by fitting state provisions into the wrong federal “box,” or by missing state provisions that have no direct federal counterpart. State environmental law covers a broader range than does federal law, and it functions quite differently—even under many of the familiar federal statutory programs.

[Section 7:16]

¹For example, in Pennsylvania, much surface mining and hazardous waste environmental law derives from its Clean Streams Law. Pa. Stat. Ann. tit. 35, §§ 691 et seq.

APPENDIX 7A

Table of Acronyms

Table of Acronyms	
ASTM	American Society for Testing and Materials
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CWA	Clean Water Act
ECRA	Environmental Cleanup Responsibility Act (NJ)
EPA	United States Environmental Protection Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
ISRA	Industrial Site Recovery Act (NJ)
NEPA	National Environmental Policy Act
NHTSA	National Highway Traffic Safety Administration
NPDES	National Pollutant Discharge Elimination System
RCRA	Resource Conservation Recovery Act
RPTA	Responsible Property Transfer Act (IL)
SDWA	Safe Drinking Water Act
SIP	State Implementation Plan
SMCRA	Surface Mining Control and Reclamation Act
TAS	Treatment as a State
TSCA	Toxic Substances Control Act

Chapter 8

Environmental Audits/Assessments*

I. INTRODUCTION

§ 8:1 In general

II. ENVIRONMENTAL AUDIT/ASSESSMENTS

§ 8:2 In general

§ 8:3 Elements of an audit/assessment program—Description of the company

§ 8:4 —Environmental policy

§ 8:5 —Environmental categorization of facilities

§ 8:6 —Internal procedures for reporting environmental matters

§ 8:7 —Internal procedures for required recordkeeping

§ 8:8 —Internal procedures for conduct of inspections or visits by external authorities

§ 8:9 — —Planning for an inspection

§ 8:10 — —Guidelines to follow during an inspection

§ 8:11 — —Follow-up after an inspection

§ 8:12 —Training and education programs

§ 8:13 —Long-range strategies and goals

§ 8:14 — —Issues with unascertainable aspects

§ 8:15 Facility audits/assessments

§ 8:16 —The audit/assessment team

§ 8:17 —Frequency of site audits/assessments

§ 8:18 —Conducting the audit/assessment

§ 8:19 Program review

III. BENEFITS FROM AN ENVIRONMENTAL AUDIT/ASSESSMENT PROGRAM

§ 8:20 Minimizing civil and criminal liability

§ 8:21 Determining and assuring compliance—In general

§ 8:22 —Certifications

§ 8:23 —SEC disclosures

§ 8:24 Other benefits

IV. ENVIRONMENTAL EVALUATIONS FOR ACQUISITIONS AND DIVESTITURES

§ 8:25 Introduction

§ 8:26 Identification of potential liabilities—Site and facility audits/assessments

§ 8:27 —Review of licenses and permits

§ 8:28 —Regulatory history and current status

§ 8:29 —Prior ownership and operations

*By **Frank B. Friedman** and **David A. Giannotti**; §§ 8:1 to 8:47 updated by **Frank B. Friedman**.

- § 8:30 —Potential off-site liabilities
- § 8:31 —Insurance coverage
- § 8:32 Possible risk-mitigation mechanisms
- § 8:33 —Structure of the transaction
- § 8:34 —Contract provisions
- § 8:35 —Prior agreements with regulatory authorities
- § 8:36 —Insurance coverage

V. ENVIRONMENTAL AUDITING AND ENVIRONMENTAL MANAGEMENT

- § 8:37 Management systems
- § 8:38 Management role
- § 8:39 Auditing goals
- § 8:40 Addressing legal concerns
- § 8:41 Summary

VI. ENVIRONMENTAL AUDITING—EPA POLICY

- § 8:42 Introduction
- § 8:43 The 1986 policy statement
- § 8:44 The 1995 interim policy statement
- § 8:45 The 1996 voluntary disclosure, audit policy, and subsequent EPA documents
- § 8:46 Elements of an effective environmental auditing program

VII. INTERNATIONAL ENVIRONMENTAL REVIEW

- § 8:47 In general

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I. INTRODUCTION

§ 8:1 In general

Environmental protection law places significant responsibilities and demands on business. Compliance with environmental laws and regulations is central to the continuance of business. An environmental audit/assessment or “audit” program can ensure responsible monitoring, early detection of problems, remedial actions, cost estimates, and prompt reporting of any adverse environmental conditions, either through the company structure or the appropriate government agencies, or both.

Environmental audit/assessment provides other benefits in addition to ensuring compliance. These benefits include financial planning, assistance with Securities and Exchange Commission (SEC) reporting requirements for publicly traded

companies, personnel development, improved public and employee relations, expansion planning, legislative and regulatory strategy development, assistance in evaluating acquisitions and divestitures, and Sarbanes-Oxley requirements for disclosure.¹ The environmental audit/assessment program also constitutes an integral part of a general management system to assist a company to organize and manage effective environmental programs. If organized and implemented properly, it is the most effective instrument to assure compliance. Environmental audits/assessments can also be valuable in ensuring compliance with company policies and programs, which can save costs in the long run.

This chapter covers the following topics:

- The significant elements that should be included in an environmental audit/assessment program and the benefits that may be derived from such a program
- Guidelines for investigating environmental issues in acquisitions and divestitures that can be used whether or not the company (or asset) to be acquired has its own environmental audit/assessment program
- Use of an auditing program in general as applied to environmental management as well as the revised Board of Environmental, Health and Safety Auditing Standards (BEAC)
- Review of the U.S. Environmental Protection Agency (EPA) policy on environmental auditing programs (as reflected in EPA's December 1995 final policy statement on environmental auditing and self-disclosure as amended in 2000, as well as the 2008 Interim Approach to Applying the Audit Policy to New Owners)
- The e-disclosure initiative and environmental review in the international context.²

II. ENVIRONMENTAL AUDIT/ASSESSMENTS

§ 8:2 In general

This Part discusses the benefits and risks of environmental auditing/assessments, the significant elements that should be included in an environmental auditing/assessment program, and general information about areas of controversy in state, national, and international auditing/assessment policy.

The term “assessment” may be preferable to “audit” in most instances because, unlike a financial audit, in a self-monitoring environmental assessment program to ensure compliance or a more formal environmental review that follows auditing standards, there are fewer specific standards against which to audit. If there are detailed protocols and “independence” of the reviewers, then the term “audit” is more appropriate.¹ The process is more of an “assessment,” on the other hand, if it is less formal and relies more on individual judgments rather than detailed protocols.

[Section 8:1]

¹Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (July 30, 2002).

²60 Fed. Reg. 66706 (Dec. 22, 1995). 65 Fed. Reg. 19618 (April 11, 2000). Additional revisions applied to new owners have also been promulgated. 73 Fed. Reg. 44991 (Aug. 1, 2008). Notice of eDisclosure Portal Launch: Modernizing Implementation of EPA's Self-Policing Incentive Policies AGENCY: Environmental Protection 80 Fed. Reg. 76476 (December 9, 2015). New Owner Audit Program Agreement for Oil and Gas Exploration and Production Facilities, U.S. EPA, available at: <https://www.epa.gov/enforcement/new-owner-clean-air-act-audit-program-oil-and-natural-gas-exploration-and-production> (March 20, 2019) (last visited Jan. 26, 2022).

[Section 8:2]

¹See Board of Env'tl., Health & Safety Auditor Certifications, Performance & Program Standards for the Prof. Prac. of Env'tl., Health & Safety Auditing, p.13 (2008) [hereinafter BEAC Standards] (stating that “EH&S auditors shall be objective and independent of the activities they audit, free of conflict

Nevertheless, it should also be carried out in an independent manner. The chapter uses the combined term audit/assessment because, in most instances, the aspects of the program are the same.

While the nature of the business areas within a company may be diverse and no standard audit/assessment program will apply to all divisions, there are some principles common to establishment of any environmental audit/assessment program. The elements should be consistent through all divisions, even if the procedures differ. The format for developing an audit/assessment program document should be consistent, and the definitions and terms used in audits/assessments and compliance activities should be used uniformly.

An audit/assessment program should provide for an ongoing process. Events occur that require updates, revisions, or modifications to procedures, such as personnel changes or new responsibilities, new regulations, or acquisition of new facilities. An up-to-date program maintains its effectiveness, and also creates a real-time awareness of the environmental status of all operations and reduces the potential for undesirable surprises.

§ 8:3 Elements of an audit/assessment program—Description of the company

The audit/assessment program document should begin with a description of the company's major characteristics. It should be detailed enough to provide a clear picture of the overall organization, products, and business areas. For a company with only one or two facilities, this description could be limited to a facility description; however, the intent of this section should be to provide an overview of the whole company from a headquarters perspective, by division if appropriate, and not merely a facility-by-facility accounting.

§ 8:4 Elements of an audit/assessment program—Environmental policy

The key to a successful audit/assessment program is top-level management support, which is reflected in a formal company policy,¹ and an organization with clear and effective responsibilities and reporting relationships.² The environmental policy statement should clearly affirm company support of environmentally sound business practices and operations.³ In turn, each division should establish a policy consistent with the company's policy and maintain an organization to handle environmental matters. The diversity and size of the business areas will dictate the structure of the organization, which should be uniquely tailored to the characteristics of each division.

§ 8:5 Elements of an audit/assessment program—Environmental categorization of facilities

of interest in any specific situation, and not influenced by internal or external pressure to modify their findings contrary to their professional judgment"); see also Ridgway M. Hall, Jr., Quality Assurance in EHS Audits and Audit Programs: The New BEAC Standards, 39 ELR 10594 (July, 2009). BEAC is now part of the Institute for Internal Auditors. (IIA) and the Board of Environmental Auditor Certifications® (BEAC®) is a member of the Council of Engineering and Scientific Specialty Boards (CESB) <https://www.cesb.org/useful-links/15-library-documents/documents/24-marketing-certification-establishing-value-for-the-credential.html> (last visited June 8, 2022).

[Section 8:4]

¹Frank B. Friedman, Practical Guide to Environmental Management 167 (11th ed. 2011).

²Because the lines between environment, safety (including process safety/risk management), and health have become increasingly vague, the same manager should oversee these functions.

³See Frank B. Friedman, 60s Activism and 80s Realities—We've Come A Long Way, 2 Env'tl. F., (July 1983).

The company and its divisions should have a procedure for categorizing facilities with respect to potential environmental impact and risk.¹ Key factors and evaluation criteria for categorizing facilities can include the following:

- (1) geography (domestic and foreign locations)
- (2) the function of the facility, such as processing, storage, and waste disposal
- (3) the operating status of past, present, and future sites
- (4) ownership status (e.g., whether the facility is owned or operated)
- (5) the history of violations and pollution incidents
- (6) the type and quantity of material processed, stored, and disposed
- (7) past operations or practices
- (8) proximity to environmentally sensitive areas
- (9) sensitive local or community factors
- (10) the presence or absence of environmental staff at the site.

A ranking system can then be developed for classification of facilities from those with the highest potential for problems to those with none.

The schedule for visits (audits/assessments) and overall attention can then be established.²

§ 8:6 Elements of an audit/assessment program—Internal procedures for reporting environmental matters¹

The company should establish internal policies and procedures for reporting significant environmental issues, regulatory activities, and legal actions. There should also be a process to capture the equivalent of near misses that could lead to significant environmental issues as part of the risk management process. In turn, each division should establish internal policies and procedures to facilitate compliance with company requirements and ensure timely division management notification of significant matters. The procedures should provide for multipath reporting to the environmental and legal departments and to the finance department to account for capital, operating, and maintenance expenditures for environmental projects.

Such a reporting procedure ensures prompt and complete reporting for appropriate review at all levels of the company and provides that all legal and environmental departments are using the same database. It can also provide management with the opportunity to seek legal review at the earliest possible opportunity, which in turn can assist in the attorney's effective use of attorney-client and work product privileges in investigating an issue where possible noncompliance exists.²

Most companies will manage by exception, and will require prompt reports of a variance in environmental standards or requirements affecting facilities or operations, adverse publicity or adverse community relations, notices of violation or advisory actions by regulatory agencies regarding environmental control matters or

[Section 8:5]

¹Frank B. Friedman and James K. Vines, Teaching the Business Case, 31 *Envtl. F.*34 (Nov./Dec. 2014) which discussed the importance of a risk-based regime integrated into the corporate culture.

²See § 8:17.

[Section 8:6]

¹Frank B. Friedman, *Practical Guide to Environmental Management* 237 (11th ed. 2011).

²A company should make available to all levels of company management appropriate guidelines on how to request legal advice and how to handle information to ensure the creation of and maximum protection by a privilege.

permit compliance, and similar matters.³ If a company is publicly held, there must be company-wide internal reporting procedures to ensure collection and review of environmental proceedings for timely and accurate reporting to the SEC.

§ 8:7 Elements of an audit/assessment program—Internal procedures for required recordkeeping

Permits, monitoring reports, corporate policy statements, and other records are key documents in an effective environmental management program. Orderly maintenance and ready access to these documents will facilitate the day-to-day management of the environmental program, and will ensure that both the needs of the company and the requirements under various statutes and regulations are met. Therefore, the company and all of its divisions should develop internal procedures for the establishment and maintenance of an effective and efficient recordkeeping system. Each division should design a system tailored to its individual needs and operations.

Environmental record files should be kept in a central file at each facility and contain all documents essential to managing the facility's environmental program, or equivalent documentation should be immediately available electronically. These documents should include copies of laws, regulations, permits, corporate policy statements, and other guidelines applicable to the business line of the facility or division; copies of important correspondence related to the environmental management program; and records of monitoring and inspection activities. Additional documentation may be included as dictated by the structure or function of the division.¹ However, as today's ease of use and availability has increased, subject to security and regulatory limitations, internet, intranet and "cloud" capabilities allow most of these data and documents to be kept electronically. However, some agency requirements for "hard copy" have not been updated in this electronic age. Additionally, a variety of commercially available software programs allow tracking of compliance with specific reference to statutory and regulatory provisions.

In general, records should be kept at least as long as required by law, regulation, permit, or corporate policy—whichever requires the longest retention. On the other hand, obsolete records and other documents should not be allowed to clutter the environmental file, whether electronic or hard copy. Companies should establish a procedure for identifying the appropriate retention times for generic classes of documents and for determining specific disposition schedules for individual records.

Environmental records are important to the continued operation of every facility and to the avoidance of corporate liability, making it prudent to assign responsibility for their safekeeping to a member of the environmental management staff or to a qualified records manager. Periodic reviews of the records file should be made by

³Other significant matters include: legal actions, either by or against the company; identified risks to the environment; interference with continued production or marketing of any product because of environmental considerations; substantial incremental expenditures or loss of business related to events or situations caused by environmental considerations; problems where a technical solution exists or that would impose a significant burden threatening the financial viability of the facility or operation; and problems for which the staff cannot identify either remedial technology or the cost of correction.

[Section 8:7]

¹A more complete listing of record categories includes (1) laws and regulations affecting the facility (local, state, and federal); (2) permits in effect and pending applications; (3) regulatory agency contacts; (4) facility layout and process descriptions; (5) air emissions; (6) waterborne effluents, outfalls, and monitoring data; (7) solid waste descriptions, disposal methods and monitoring data (including manifests); (8) past practice descriptions; (9) water supply descriptions; (10) spill control plans; (11) emergency response and disaster plans; (12) pertinent correspondence; (13) company and division policies and procedures; and (14) reports to government agencies (both routine and nonroutine).

an individual other than the custodian to ensure adherence to established policies and standards. Reviewing electronic records is necessary, but of growing difficulty as more records are in digital format and downloaded throughout a company.

Integrity of the environmental records file is necessary to ensure that all essential records are intact and readily available. Access to the file and release of information must be controlled. Therefore, the company and all divisions should promulgate a policy, (particularly to maintain appropriate security) on access to environmental records and release of information.²

§ 8:8 Elements of an audit/assessment program—Internal procedures for conduct of inspections or visits by external authorities

Virtually all federal environmental laws authorize EPA (or its contractors) to enter and inspect facilities. All facilities that need permits or are otherwise regulated can anticipate undergoing environmental inspections. Preparation and preplanning govern to a great extent the degree to which inspections can be of assistance, rather than a burden. Accordingly, policies and procedures should be established on preparing for and following up on inspections. The policies and procedures should include a process to allow the inspection under circumstances that protect the company's rights (for example, providing for copies of authorization letters, provisions for sample splitting, provisions for copies of all reports prepared by the agency, and confidentiality agreements). Although EPA has the authority to enter and inspect a facility, the facility's owners and operators may have the right to refuse entry to agency inspectors in the absence of a valid search warrant. The procedure for an inspector to secure a warrant is not rigorous, however, and EPA can quickly and easily acquire a warrant. A general policy should be adopted as to whether or not, or under what circumstances, the company will require the inspectors to have a warrant. The policy should then be communicated to all company locations and incorporated into inspection procedures.¹

A related issue is the right of an agency's third-party contractor to inspect a facility. If a company adopts a general policy to allow inspections without a warrant by employees of the agency, the same policy could be applied to third-party contractors. On the other hand, the policy could require a case-by-case review, depending on factors such as if third-party contractors accompany agency employees or conduct the inspection alone, or if their entry is not authorized by statute.² Such a review could cover information such as the purpose of the inspection, its scope, the identity of the contractor, the nature of the facility, or the extent of proprietary or confidential technology or information at the site. The policy should specify whether a secrecy agreement from the third-party contractor is required.

The Superfund Amendments and Reauthorization Act of 1986, which amended the Comprehensive Environmental Response, Compensation, and Liability Act

²All records removed from the active environmental file because they are no longer current or needed should be reviewed for appropriate disposition (archives, retention, return to originator, or destruction). A need may exist for individual environmental staff members to maintain working files containing copies of documents in the central file related to their function or more likely, electronic copies. The same standards with regard to access, release of information, and records disposition must be applied, and the environmental file custodian should have a record of all environmental working files.

[Section 8:8]

¹A detailed discussion of the advantages and disadvantages of requiring a search warrant is beyond the scope of this chapter. Counsel should be consulted as refusal to give entry to government inspectors is controversial, raises questions as to the "good faith" of the company, and often leads to government retaliation.

²See, e.g., Resource Conservation and Recovery Act § 3007, 42 U.S.C.A. § 6927 (inspections).

(CERCLA), expanded EPA's authority for access to private property.³ CERCLA section 104(e)(3) specifies that EPA may enter a "vessel, facility, establishment, or other place or property where any hazardous substance or pollutant or contaminant may be or has been generated, stored, treated, disposed of, or transported from."⁴ Access may be authorized for sample taking and testing, and for other purposes, including preliminary site investigation, removal action, remedial investigation/feasibility study activities, and remedial actions. In addition, access is not limited just to the actual site where the release or threatened release is occurring. EPA is authorized to have access to any property where any hazardous substance or pollutant or contaminant has been transported from and any property onto which such a substance has been released.⁵ CERCLA also authorizes access to any other place or property "where entry is needed to determine the need for response or the appropriate response or to effectuate a response action."⁶

EPA has issued a policy memorandum on this statutory authority.⁷ Under this policy, EPA will always attempt to obtain entry to property by consent; however, if such consent is conditional in that it restricts or impedes the manner or extent of an inspection or response action, imposes indemnity or compensation obligations on EPA, or operates as a release of liability, EPA may choose to obtain a warrant or a court order for immediate entry, or may issue an administrative order after notice and comment. If the party being inspected seeks confidentiality protection as a condition, the Agency's position is that adequate protection is provided by CERCLA section 104(e)(7), and the policy states that EPA should enter into no further agreements.

Warrant entry is generally used for short-term and nonintrusive activities, and can be obtained on an *ex parte* basis. According to the policy, EPA will generally seek a court order via a civil action in situations involving long-term or intrusive access. Alternatively, EPA may issue an administrative order directing compliance with a request for entry under CERCLA § 104(e)(5)(A). An administrative order is subject to judicial review (based on the administrative record) and provides for penalties of up to \$25,000 per day against any party that unreasonably fails to comply with such an order.⁸

In addition to policies and procedures on inspections, a specific checklist should be formulated to ensure that all essential actions are taken by facility personnel prior to, during, and after the inspection.

§ 8:9 Elements of an audit/assessment program—Internal procedures for conduct of inspections or visits by external authorities—Planning for an inspection

Planning for an inspection is important because, even though EPA generally gives prior notification of an inspection, no advance notice is specifically required. If a company does receive notice that EPA will conduct an inspection, particularly a broad-based multimedia inspection, the company should assemble a team to assist the plant, both in preparing for and during the inspection. Plant management should have a clear understanding of:

³Pub. L. No. 99-499, 100 Stat. 1613 (1986) (amending 42 U.S.C.A. §§ 9601 to 9675).

⁴42 U.S.C.A. § 9604(e)(3).

⁵CERCLA §§ 104(e)(3)(A), (B), (C), 42 U.S.C.A. §§ 9604(e)(3)(A), (B), (C).

⁶CERCLA § 104(e)(3)(D), 42 U.S.C.A. § 9604(e)(3)(D).

⁷Memorandum from Thomas L. Adams Jr., Ass't Administrator, Office of Enforcement and Compliance Monitoring, to EPA Regions I-X (June 5, 1987).

⁸CERCLA § 104(e)(5)(B), 42 U.S.C.A. § 9604(e)(5)(B).

- (1) the objective and scope of the inspection
- (2) the authority under which the inspection is being made and the motivation for *this* inspection visit
- (3) the composition of the inspection team
- (4) the protocol and planned schedule of the inspection
- (5) the nature of the closing conference or report to be provided to facility management
- (6) the legal significance of the inspection and potential need for legal counsel
- (7) the identity of process, records, or other confidential information or trade secrets, and the need to be sure inspectors are advised prior to inspection as appropriate
- (8) the identity, scope and status of any matters in litigation at the facility to ensure appropriate legal assistance

Plant management should also determine:

- (1) the identity of primary and alternate staff members to greet the inspectors
- (2) the identity of primary and alternate staff members to escort and take part in the inspection
- (3) how findings will be handled
- (4) what notification must be made to upper management and legal counsel
- (5) what limitations should be placed on the inspection team, such as an enumeration of safety procedures or whether photographs should be allowed

In addition, a review should be conducted of past inspection reports, the status of action items, the general plant situation or appearance (i.e., maximum capacity, changeover, and internal construction), and its relationship to the overall impression that will be made on the inspectors. If time is available, a meeting of key company participants should be held to review all pertinent items prior to the inspection.

§ 8:10 Elements of an audit/assessment program—Internal procedures for conduct of inspections or visits by external authorities—Guidelines to follow during an inspection

Generally, all facility management and employees should understand that the inspection should be limited to the agreed-upon area and to its purpose. Management and employees should not volunteer information, but neither should they lie or mislead the inspectors,¹ nor guess at the answers to questions when all the facts are not known. Facility personnel accompanying the inspectors should have clearly defined directions with regard to

- (1) verifying the identification of the inspectors and recording the names, positions, office addresses, and telephone numbers
- (2) Holding an opening conference to confirm the purpose and scope of the inspection
- (3) attitude and protocol toward the inspectors
- (4) how to respond to deficiencies uncovered
- (5) Keeping notes during the inspection
- (6) Limits of authority to disclose information or make commitments
- (7) Identity or types of reviewable and confidential records
- (8) Accompanying inspectors at all times

[Section 8:10]

¹Misleading an inspector may constitute a felony. 18 U.S.C.A. § 1001.

- (9) Taking concurrent readings and photographs, splitting samples, making duplicate copies of any records given to the inspectors, and keeping detailed lists of all readings, photographs, samples, or records taken or given
- (10) Requesting a copy of any report prepared by the inspector

Facility management should ensure that they are available for a closing conference. They should also identify all confidential or trade secret information to avoid inappropriate disclosure to the inspectors; secure a secrecy agreement and take all measures to assert and preserve claims of confidentiality on any data given; and obtain a receipt for confidential information given to the inspector, which includes language acknowledging that the inspector understands the nature of the information and the request that it be kept confidential.

§ 8:11 Elements of an audit/assessment program—Internal procedures for conduct of inspections or visits by external authorities—Follow-up after an inspection

A number of actions are necessary to close out an inspection properly after the inspection team departs. Upper management and legal counsel should be promptly advised of the results of the inspection and its significance. A memorandum to legal counsel should be prepared requesting legal advice on the findings of the inspection and the proposed or possible subsequent actions on any issues cited, such as deficiencies or compliance problems. A response plan, both for the short and long term, should also be developed. Any distribution of the report should be at the direction of counsel. Key facility personnel will then hold a session to disseminate and discuss what was learned from the inspection, but only to the extent that any attorney-client or work product privilege is not lost.

The report, whether to legal counsel, management, or both, should at a minimum contain the following:

- (1) The name and title of each person present at the inspection
- (2) A summary of any preinspection communication (copies of correspondence may be attached), including the purpose of the inspection and a summary of the pre-inspection conference
- (3) A description of the areas examined and information requested
- (4) Duration of the inspection
- (5) Any testing or sampling carried out
- (6) Any permits examined
- (7) Any follow-up action requested by the agency or recommended or taken by facility management
- (8) Any violations or other problems noted, together with any recommended corrective action

§ 8:12 Elements of an audit/assessment program—Training and education programs

The development and maintenance of a strong environmental management program depends in large part on the continued awareness of the current status and trends in environmental management and technology, as developed by regulatory agencies, policy makers, scientists, engineers, and industry peers. This awareness is achieved through a continuing program of education and training addressing the various needs of hourly employees, supervisors, environmental specialists, audit/assessment team members, division management, community residents, and

local community officials.¹ One specialized training program should be directed to members of the individual facility audit/assessment teams.²

§ 8:13 Elements of an audit/assessment program—Long-range strategies and goals¹

Long-range strategies and goals are an integral part of both company and division audit/assessment programs. Long-range goals are here defined as objectives that will occur more than one year in the future, typically within three to five years. Strategies and goals are considered objectives that, if accomplished, will provide:

- (1) Compliance with existing or future regulations
- (2) Maintenance of existing environmental programs
- (3) Resolution of issues that have technical, factual, or legal uncertainties
- (4) Environmental activities that improve the environment, such as reducing the company's environmental footprint (including its supply chain) and activities related to sustainable development,² and that also will enhance the company's public image
- (5) Identification of procedures needed for developing timely information required for new products, facilities, or permits

The long-range strategies or goals program should include:

- (1) A long-range "objectives statement" reflecting the environmental goals of the company or division and company policy
- (2) Specific objectives for the divisions and facilities to be accomplished within a five-year time frame
- (3) A description of the method by which objectives will be monitored for completion
- (4) A description of environmental research and development activities that will be conducted for environmental compliance programs or will further the state-of-the-art in specific areas of interest
- (5) A description of the method by which progress made toward satisfying these long-range strategic objectives will be reported

§ 8:14 Elements of an audit/assessment program—Long-range strategies and goals—Issues with unascertainable aspects

The term "unascertainable" here refers to issues where uncertainty as to the nature and extent of the problem exists because of a lack of sufficient factual, technological, or legal data. On occasion there may be a number of unascertainable issues, or issues with unascertainable aspects, identified at a company's facilities. This category covers issues for which the total dimensions of the problem are not

[Section 8:12]

¹To ensure that personnel are kept at a high degree of environmental awareness, segments of training and education programs might include environmental awareness and compliance policies, supervisory responsibilities, corporate liabilities, environmental technology updates, working with regulatory agencies, community support needs, emergency response plans, and the impact of new legislation and regulations.

²See § 8:16.

[Section 8:13]

¹See Frank B. Friedman, *Managing and Resolving Corporate Environmental Issues*, 3 Env'tl. F., Feb. 1985, at 28.

²See Frank B. Friedman, *Practical Guide to Environmental Management*, (Environmental Law Institute, 11th ed. 2011, pp. 52–56).

known. For example, monitoring wells may detect the presence of potential toxic materials below the site of a facility, but the extent and severity of any risk to health or the environment as well as the technological options and costs for treatment are unknown. Another example is environmental issues for which no present-day remedial technology is known or for which existing technologies are inadequate. A third involves new environmental laws or regulations for which the implementation is unclear. Also included in this category are regulations that have been promulgated but are presently in litigation, as well as regulations that have been proposed or are otherwise under consideration. Finally, environmental issues requiring detailed engineering studies to develop solutions and to estimate ultimate costs of compliance present additional problems. To the extent that a company has unascertainable issues, their inclusion in an audit/assessment program indicates that the company is at least cognizant of the issues it faces. The objective in addressing existing unascertainables, as well as those that may develop as a result of future audits/assessments, is to identify clearly and plan the resolution of those issues.

§ 8:15 Facility audits/assessments

Central to any audit/assessment program is the conduct of individual site reviews by an audit/assessment team. Site audits/assessments determine the status of the company's compliance with federal, state, and local regulations, as well as with company policies and programs, on a facility-by-facility basis.

§ 8:16 Facility audits/assessments—The audit/assessment team

Audits/Assessments of individual facilities should be carried out by an audit/assessment team, operating with the full support and authority of management. The team performs the audit/assessment and prepares the report that is the basis for measuring progress toward environmental objectives and action plans. The audit/assessment team is the heart of the operations phase of the company and division environmental audit/assessment programs. The size and composition of an audit/assessment team depends on the size of the facility, the complexity of the environmental issues, and the amount of time elapsed since the last audit/assessment. Accordingly, the team must have broad knowledge of applicable environmental regulations, policies, and company operations, as well as an understanding of the individual facility operation, and be independent of the facility being reviewed. Whether “independence” requires use of outside consultants and counsel is the subject of ongoing controversy.¹ Similarly, there has been continuing discussion about whether individuals engaged in environmental auditing should be certified and about the requirements such certification should entail.²

There are specific instances where the audit/assessment should be conducted

[Section 8:16]

¹See Frank B. Friedman, *Practical Guide to Environmental Management* 238–240 (Environmental Law Institute, 11th ed. 2011).

²See Frank B. Friedman, *Practical Guide to Environmental Management* 240–244 (Environmental Law Institute, 11th ed. 2011); James W. Conrad Jr., *Sliding Scale or Slippery Slope? The New ASTM's Standard Practices for Environmental Site Audits/Assessments*, 23 *Envtl. L. Rep. (Envtl. L. Inst.)* 10181 (Apr. 1993) <https://www.elr.info/articles/elr-articles/sliding-scale-or-slippery-slope-new-astms-standard-practices-environmental>. EPA has determined that ASTM standard E1527-05 is in “full compliance” with the requirements for conducting assessments specified in EPA's final rule governing Standards and Practices for All Appropriate Inquiries applicable to the innocent-landowner defense under CERCLA. See *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, ASTM E1527-05, available at <http://www.astm.org/Standards/E1527.htm> (last visited July 9, 2020); EPA's final rule for Standards and Practices for All Appropriate Inquiries is codi-

under the direction and control of an attorney.³ These instances usually arise where enforcement action or litigation exists or is reasonably contemplated, or where a government agency has requested information. Some companies have attorneys control the entire program. The audit/assessment program described here, however, is not run by attorneys, but would allow for it if special circumstances existed. Nevertheless, the program should be structured so as to have an attorney on or advising each team. It is important in all cases that the attorney participates by ensuring that the team understands its responsibilities, including:

- (1) its charter and obligations
- (2) its operating procedures
- (3) How to address matters that are areas in litigation or potentially in litigation

fied at 40 C.F.R. pt. 312. See also ASTM E2107-20 Standard Practice for Environmental Regulatory Compliance Audits <https://www.astm.org/e2107-20.html> The rules were recently updated (November 1, 2021) <https://newsroom.astm.org/astm-international-revises-standard-practice-environmental-site-assessments>. The press release indicates that the key substantive changes are:

- **Key terminology revisions:** The terms “Recognized Environmental Condition” (REC); “Controlled Recognized Environmental Condition” (CREC); and “Historical Recognized Environmental Condition” (HREC) have been strengthened to reduce misclassifications of known or likely hazardous material and petroleum product releases affecting subject properties. The revisions are further supported by a new appendix that provides guidance on the REC/HERC/CERC decision process, a flow chart, and representative examples of each.
- **New definitions:** The terms “Property Use Limitation” (PUL); and “Significant data gap” are now formally defined to provide important clarification of existing concepts.
- **Historical records:** The historical records review section was restructured and updated to reflect good commercial and customary practice. The revisions clarify subject and adjoining property identification, use, and research objectives; and new parameters were established for the use of standard historical sources.
- **Site visits:** Detailed site reconnaissance requirements were added to reinforce existing good commercial and customary practice.
- **New report requirements:** Revised report requirements were added to strengthen the deliverable, including consistent use of the term “subject property”; identification of RECs, CRECs, and significant data gaps in the Conclusion section; photos of site reconnaissance items; and a site map.
- **Updated appendices:** Include an extensively revised legal appendix; new REC/HREC/CREC guidance; revised report outline; and updated discussion of business environmental risks including emerging contaminants.

ASTM also developed a CRCLA standard ASTM E2790 20-Standard Guide for Identifying and Complying With Continuing Obligations. Section 4.1 states “This guide is intended for use on a voluntary basis primarily by parties who desire to satisfy *continuing obligations* at *commercial real estate* or at forestland or rural properties. As such, this guide provides information and suggested procedures that could be useful to persons who wish to establish *one of the CERCLA LLPs* or similar liability protections offered under state law.” “Recent actions by EPA and the American Society for Testing and Materials (ASTM) make PFAS [perfluoroalkyl or polyfluoroalkyl substances] a real issue for conducting commercial real estate due diligence. These new measures are notable in that they give stakeholders a choice between compliance with two different ASTM Phase I Environmental Site Assessment (ESA) standards—the old and the new.” Jack L. Ross, EPA and ASTM Incorporate PFAS Due Diligence into Environmental Site Assessments, *Marten Law* (April 26, 2022) <https://www.martenlaw.com/news-and-insights/epa-and-astm-incorporate-pfas-due-diligence-into-environmental-site-assessments>.

³One possible form of protection for environmental audit documents is attorney-client privilege, which generally protects communications between attorneys and clients made in confidence for the purpose of obtaining legal advice. Establishing attorney-client privilege for environmental audits generally requires that a lawyer direct the audit process and that the engagement letter lays out in detail the scope of the attorney’s work in that regard. It is not enough just to have a lawyer sign off on or review a document prepared by other employees or consultants. See generally *Upjohn Co. v. United States*, 449 U.S. 383 (1981). In-house lawyers, who often wear both a business hat and a legal hat, must take particular care to ensure that their actions in connection with the audit are viewed as providing legal advice. *Id.* Accordingly, it is strongly recommended to engage outside counsel to direct the environmental audit process if it appears necessary to maximize the possibility of protecting communications through attorney-client privilege, particularly for sensitive issues.

- (4) What items are to be written down and how to compose reports
- (5) Procedures to follow when potential violation exists
- (6) Agreement on basic definitions, such as what constitutes a violation, an excursion, and compliance

In addition, the attorney should review copies of the preliminary reports from the team before they are issued in final form to ascertain that items that are or should be subject to attorney-client or work product privileges are adequately protected. The attorney then should be sure a follow-up system is in place so that she or he can work with both the audit/assessment team and management to resolve any identified issues.

§ 8:17 Facility audits/assessments—Frequency of site audits/assessments

This will necessarily vary, depending on the number of facilities, how they are categorized, and resources available to conduct the site visit. Each division should develop its own plan that suits its own particular requirements.

The previous frequency suggestions can be extended depending on the scope of other environmental safeguards and programs in place, such as a successful self-assessment program. For example, facilities categorized as posing little or no environmental problem still need to be reviewed periodically, perhaps once every three years or whenever a significant change in the condition, a process, or status of the facility occurs. Facilities categorized as having a low, but definite potential for environmental problems could be assessed at least once every two years. On the other hand, facilities with potentially serious environmental problems that could present significant liabilities if they are not reviewed periodically could be assessed approximately once every 12 to 18 months. However they are grouped, facilities in the highest category for potential environmental liability, because of the nature of process, operating conditions, wastes, or perception by regulatory authorities or the general public, should be assessed frequently.

Once facilities are categorized according to their relative environmental significance, the business must develop a plan which specifies how often a site visit should be conducted. If a successful self-assessment program is developed at a facility, or other safeguards are in place, corporate audits can be conducted less frequently.

§ 8:18 Facility audits/assessments—Conducting the audit/assessment

Over time, there will be many staff members who could be part of audit/assessment teams. Given the constantly changing makeup of the teams, it is mandatory that formal procedures be in place to ensure that audits/assessments are conducted consistently and properly.

The following list details basic operational steps to standardize the conduct of the audits/assessments. Legal counsel should be sought throughout the process, particularly in situations where compliance judgments must be made.

(1) *Select and Notify the Team.* The team should be selected in accordance with company procedures.

(2) *Notify the Facility.* The facility should normally be notified of the impending visit; there is usually little to be gained by surprise visits and such visits often result in adversary positions that are unproductive.¹ The time of the advance notice may vary, but sufficient time must be provided to allow the facility to prepare, col-

[Section 8:18]

¹The rare exception may be if there is a question that a facility is hiding or may be hiding a potentially significant issue that could be concealed if it knows that an audit/assessment is imminent.

lect data, and ensure staff availability. For large facilities, a previsit questionnaire may be used to prepare the site environmental manager and the audit/assessment team for the visit. Use of the questionnaire helps to keep disruptions to a minimum by requesting that, prior to the visit, major environmental issues be identified, certain files be made available, and key personnel be scheduled for interviews.

(3) *Review Background Material.* The audit/assessment team should review the pertinent information on the facility, including the response to the previsit questionnaire, if used, and the results of previous audits/assessments, if any were conducted. If the company utilizes compliance assurance letters, such letters should provide critical data as to significant environmental issues.² These reviews should be done with an eye toward identifying potentially significant issues. In the absence of a completed previsit questionnaire or past audit/assessment results, to become familiar with site operations, the team could review the following: (a) facility identification; (b) environmental contact at the facility; (c) topographical maps or line drawings of the plant and environs, including all vents and waste collection points, existing intake and discharge structures, all buildings and structures and their uses, the location of any existing monitoring facilities, nearby water bodies, wetlands, and springs, and all drinking water wells on facility property and in the vicinity; (d) existing environmental permits issued to the facility by federal, state, or local authorities, and copies of pending applications for environmental permits; (e) compliance schedules, consent orders, judgments, waivers, or variances related to compliance with any environmental program; (f) elements at the facility subject to citation or fine for violation of environmental requirements or the subject of criminal or civil suit; and (g) a list of regulated substances used at the facility, including location of storage, processing, and disposal of each substance. As noted previously, in many companies most of the detailed compliance data is available electronically and visits to the facility itself can concentrate on specific site issues that require visual inspections, one on one interviews and data discrepancies noted in the data review.

(4) *Hold a Team Meeting.* The audit/assessment team should meet to discuss the background data received and to identify key areas to be highlighted during the site visit.

(5) *Meet with Site Management.* The audit/assessment team should meet first with the division and facility management staff deemed appropriate by the site's environmental manager to discuss the overarching audit/assessment concept, a brief description of the site's operations, an overview of the facility's organization, the major environmental concerns, training, public relations, and the anticipated regulatory requirements.

(6) *Tour the Facility.* During the tour, the team should observe and evaluate general operating practices and interview the site operators. The following topics may be appropriate for review: an internal audit/assessment program; training and education; attitude towards compliance; awareness of regulations; housekeeping; compliance with regulations and new issues such as greenhouse gas (GHG) control; communications to company headquarters' environmental staff; response to spills; unit shutdown and startup notification; unit modifications and expansions; analytical quality assurance; environmental policies and procedures; environmental programs; bypass procedures; terms of permits; spill prevention plans; episode plans; present emissions and effluent limits; awareness of hazards; and potential PFAS contamination.

²Facilities and divisions complete lists of key issues and indices of performance and how they are addressing these issues and indicators. They are certified by the facility managers and division heads and presented to senior management and the Board of Directors. See, Frank B. Friedman, *Practical Guide to Environmental Management* 174-175 (11th ed. 2011).

(7) *Conduct Interviews and Review Files.* The audit/assessment of the site's operations will consist of two components: interviews and record inspections. Guidelines on protocol and methodology for conducting the audit/assessment should be adopted. Protocol requires that the visit be conducted in a constructive, nonadversarial fashion because of the sensitive nature of the audit/assessment. Discretion should be allowed in developing audit/assessment methodology based on the variety of operations within the company. A variety of approaches may be appropriate. One approach is to ask a comprehensive list of yes/no questions centered on the requirements of the regulations, which leaves the team little flexibility and limits the opportunity for operational improvement. A second approach is to pose a series of more general questions to determine the general status of the facility. A third approach could involve listing areas of review and leaving the question and response format up to the team, which works best with an experienced team. This last approach also helps maximize the integration of environmental issues into a company's culture, a "we just do it" attitude that takes the importance of compliance for granted.

(8) *Develop an On-site Report.* Although observations should be discussed during the conduct of the audit/assessment, the team should meet to develop its list of findings more formally before presenting any preliminary results. This session should result in a consensus on the potential weak points of the facility's compliance program, which will comprise the draft on-site report. The on-site report, with preliminary conclusions, would be used to brief the facility's management of findings before the audit/assessment team leaves. This report then would serve as a working paper for the team in preparing the final report.

(9) *Develop and Distribute the Off-site Report.* The off-site or final report should be written by the team within one or two weeks after the audit, and the facility's manager should be provided an opportunity to comment on the final report.

§ 8:19 Program review

In large corporations, health, environment, safety, and risk engineering (HESRE) programs tend to be compartmentalized.¹ The management of the individual functional areas is generally the responsibility of corporate officers. Basic program management issues can go unnoticed. A "Program Management Review" can be used to show how the company's HESRE programs are integrated;² how they compare with corporate policies, procedures, and guidelines; and how they attain their stated intent.

There are three stated purposes of a program review. The first purpose is to determine if the division's HESRE programs are consistent with corporate policies, procedures, guidelines, and—in some companies—corporate directives and company standards. The next purpose is to evaluate these programs relative to their stated intent. Finally, the review provides an opportunity to capitalize on identified improvements.

Audit/Assessment programs are often facility specific. They review the performance of the facility's implementation of HESRE programs. However, it is important to focus periodically on the broader-range management issues that affect the quality of the HESRE performance. To accomplish this, a program review can be initiated. A program review will assist in identifying specific program element deficiencies, implementation inconsistencies, and inconsistent management criteria and

[Section 8:19]

¹Risk engineering is often referred to as process safety.

²See Frank B. Friedman, *Practical Guide to Environmental Management* 144-151 (11th ed. 2011) on the importance of integration.

execution. In other words, such a review can aid in identifying the root causes of problems, including common management deficiencies that decrease the effectiveness of efforts to comply with policies, procedures, and regulations. Generally, a broader and integrated valuation of HESRE programs can provide senior management valuable information that can positively affect the corporation's future performance and profitability.

Such reviews can also be effective in testing the adequacy of a corporate program. One may identify issues relating to quality control that need to be addressed in a corporate program.

It is important to keep such reviews as unbiased and nonjudgmental as possible. The critical point is not what occurred in the past or what is occurring now, but rather to determine if appropriate and necessary management systems are in place and functioning; if adequate resources are provided to ensure the systems' continuation and effectiveness; and if appropriate measures are executed to measure the quality of program performance, including the means to meet future challenges. Additionally, reviews may need to extend beyond HESRE components and include ongoing business management systems. Integration of HESRE into business decisionmaking may be critical for continued success of the program.

A program review should begin with a "desk top" review of existing written documents (*i.e.*, policies, standards, procedures, guidelines, directives, principles, and audit/assessment reports). The documents can provide a framework for understanding the management and operating infrastructure of divisions and where HESRE accountability resides. There is a tendency in business to place *all* HESRE accountability at the plant level. Clearly, the plant manager should have the primary responsibility for ensuring compliance with the laws and company policies, but senior management should share that accountability and responsibility.

Adequate funding and resources are critical elements of a review. A program review can clarify how a company commits resources to HESRE issues. An examination of accountability would include a review of HESRE function descriptions, job descriptions, assignment of responsibility and accountability for functions to various line managers, requests for and approval of funding, and human resources, as well as maintenance and operating performance and practices.

A significant part of the initial desk-top review addresses program quality control and quality assurance.³ This review covers description documents; management of change and management support and commitment to audit/assessment programs; third-party audits/assessments; action plans; followup and documentation of quality control and quality assurance measures; and activities built into HESRE programs, policies, and procedures. This last provides an opportunity for action by division management and staffs to explain quality assurance and quality control as applied to their HESRE efforts. The document review should not be limited to headquarters. The review should cover documentation at all levels of management, including the facility level.

Interviews with appropriate personnel are necessary to gain a true understanding of how the management systems and staff view and fulfill their responsibilities with respect to environment, health, and safety.

Facility visits are another critical element of a program review. By participating and conducting facility visits, trends may emerge in HESRE performance and implementation that may not have been obvious. The program review needs to go beyond traditional audit/assessment reviews to ensure that there is more to an organization's efforts than a book of procedures.

³See Vincoli, Total Quality Management and the Safety and Health Professional, 36 Professional Safety, June 1991, at 97.

As previously stated, the program review should also consider operations, risk management, preventive and predictive maintenance, management of change and capital issues. In times of lower profits, there can be a tendency to change operating practices and reduce preventive maintenance more than is appropriate. These trends, if specifically looked for, should show up in a program review, particularly after a variety of personnel interviews and facility visits. A close review should also be made of the capital expenditure process. For example, the written process may show that capital will always be found for compliance, but the problem may be that decisions regarding compliance expenditures are made too late in a given situation, or that decisions are made at an inappropriate level within an organization. Such requests, particularly when made late in the budget process, may not be viewed favorably by high-level management and will be deferred. Here, again, the issue of management accountability is important. The decisions concerning HESRE issues should not be left solely with facility managers. All levels of management are accountable and should be held responsible for their part in making HESRE decisions.

All of the HESRE areas should be reviewed in a manner integral with all other management functions as part of a risk-based process.⁴ HESRE should be integrated into the operating business processes. If such reviews are thorough and complete, management and operational problems can be identified and remedied at the appropriate levels of management.

Besides being an excellent management tool, program review also helps provide an important additional safeguard. The ability to respond to new Department of Justice (DOJ) Guidelines on Criminal Prosecution,⁵ which makes it possible to avoid criminal prosecution, and U.S. Securities and Exchange Commission (SEC) regulations and policies on disclosure and materiality (discussed subsequently) should also be considered as major benefits of an audit/assessment system. Language from a previous DOJ policy is also relevant.

On July 1, 1991, the Department of Justice issued its policy to limit the use of information developed in environmental audits and other voluntary compliance efforts in criminal prosecutions under environmental statutes.⁶ The following extract from that statement indicates that the audit and compliance program must be comprehensive and broad based to secure any form of consideration:

The attorney for the Department should consider the existence and scope of any regularized, intensive, and comprehensive environmental compliance program; such a program may include an environmental compliance or management audit. Particular consideration should be given to whether the compliance or audit program includes sufficient measures to identify and prevent future noncompliance, and whether the program was

⁴Frank B. Friedman and James K. Vines, Teaching the Business Case, 31 *Env'tl. F.* 34 (Nov./Dec. 2014).

⁵U.S. Department of Justice Criminal Division Evaluation of Corporate Compliance Programs (Updated June 2020). <https://www.justice.gov/criminal-fraud/page/file/937501/download> (last visited Feb. 10, 2022). The document states: "The 'Principles of Federal Prosecution of Business Organizations' in the Justice Manual describe specific factors that prosecutors should consider in conducting an investigation of a corporation, determining whether to bring charges, and negotiating plea or other agreements." *Id.* at 1 (citing JM 9-28.300). These factors include "the adequacy and effectiveness of the corporation's compliance program at the time of the offense, as well as at the time of a charging decision" and the corporation's remedial efforts "to implement an adequate and effective corporate compliance program or to improve an existing one." *Id.* (citing JM 9-28.300) (citing JM 9-28.800 and JM 9-28.1000). It also notes (at p. 11). "Prosecutors should evaluate whether 'internal audit functions [are] conducted at a level sufficient to ensure their independence and accuracy,' as an indicator of whether compliance personnel are in fact empowered and positioned to 'effectively detect and prevent misconduct.'" *Id.* at 11 (citing JM 9-28.800).

⁶Factors In Deciding on Criminal Prosecution of Environmental Violations in the Context of Significant Voluntary Compliance or Disclosure Efforts by the Violator <https://www.justice.gov/enrd/select-ed-publications/factors-decisions-criminal-prosecutions>. DOJ July 1, 1991, p. 394.

adopted in good faith in a timely manner.

Compliance programs may vary but the following questions should be asked in evaluating any program: Was there a strong institutional policy to comply with all environmental requirements? Had safeguards beyond those required by existing law been developed and implemented to prevent noncompliance from occurring? Were there regular procedures, including internal or external compliance and management audits, to evaluate, detect, prevent and remedy circumstances like those that led to the noncompliance? Were there procedures and safeguards to ensure the integrity of any audit conducted? Did the audit evaluate all sources of pollution (i.e., all media), including the possibility of cross-media transfers of pollutants? Were the auditor's recommendations implemented in a timely fashion? Were adequate resources committed to the auditing program and to implementing its recommendations? Was environmental compliance a standard by which employee and corporate departmental performance was judged?

In July 2020, the DOJ released its Evaluation of Corporate Compliance Programs in Criminal Antitrust Investigations.⁷ The Anti-Trust Division issued guidance concerning changes in its incentive policies for antitrust compliance for criminal investigations. For the first time, DOJ announced its investigators and prosecutors will consider compliance programs at the charging stage in criminal antitrust investigations and provide incentives to companies that have effective compliance programs in place.

In announcing the new policy, the Assistant Attorney General stated, in part, that “The Antitrust Division is committed to rewarding corporate efforts to invest in and instill a culture of compliance. . . . Crediting compliance at charging is the next step in our continued efforts to deter antitrust violations and reward good corporate citizenship.”

The DOJ guidance sets forth nine factors to be considered in evaluating any corporate program, which are similar to those in the broader Criminal Division policy mentioned above. It is clear that this action is intended to reward companies with effective compliance programs. The factors are:

- (1) the design and comprehensiveness of the program
- (2) the culture of compliance within the company
- (3) Responsibility for, and resources dedicated to, antitrust compliance
- (4) Antitrust risk assessment techniques
- (5) Compliance training and communication to employees
- (6) Monitoring and auditing techniques, including continued review, evaluation, and revision of the antitrust compliance program
- (7) Reporting mechanisms
- (8) Compliance incentives and discipline
- (9) Remediation methods

These questions are the same as those asked to determine the scope of a company's program. Notice that they deal with accountability, quality assurance, quality control, resources, and management audits. It is unfortunate that these standards, which are a solid basis for judging the adequacy of an environmental program, are now part of the criminal law process, rather than simply goals of an environmental audit/assessment program. They do, however, provide an effective starting point for examining HESRE programs. The policy is also an excellent tool to integrate HESRE into senior management's focus and business decisions. Strategic business advantage may be realized by using audits/assessments as a management tool.

The program review also needs to check on the overall implementation, com-

⁷U.S. DEPT OF JUST., ANTITRUST DIV., Evaluation of Corporate Compliance Programs in Criminal Antitrust Investigations (2019), <https://www.justice.gov/atr/page/file/1182001/download> (last visited Feb. 10, 2022).

munication, supervision, monitoring, and enforcement of company policies. The policies should have, as one of their requirements, compliance with the law and a program to ensure that every employee will be able to report a violation of the policy in a confidential manner and without fear of retribution. The employee should be able to report throughout the chain of supervision or, if the employee believes that such a report would be ineffective under the particular circumstance, to a designated corporate compliance officer. A corporate hot line is also effective. However, the primary responsibility for compliance should rest on the chief executive officers of the divisions, and not on a designated corporate compliance officer. The divisions need to develop and document appropriate programs to ensure that all current and proposed facilities, equipment, products, and procedures comply with the policy. They should also take prompt action as may be required, develop and document reporting procedures, and develop and document a timetable for implementing the programs. A review of these programs is obviously a part of the corporate program review, but periodic reports to the corporate environmental department are also helpful.

In many cases, depending on the culture of the company, it is probably better to have the designated corporate compliance officer outside the normal chain of command in the environmental area. If that officer is in the chain of command, it might be argued that although the corporate environmental department needs to provide guidance and interpretation of the policy requirements and review all programs and reports for compliance, there is no outside check and confirmation on the performance. It is, therefore, probably preferable to have the compliance officer in senior-level management, although sometimes the chief environmental, safety and health officer is part of senior management. The principal responsibilities of the compliance officer will be to provide a means, when necessary, for any policy violation to be reported directly to the corporation and to maintain consistent standards for the enforcement of the policy. Some companies have senior-level compliance committees to address all compliance issues. These committees often help with integration of compliance issues. This person should, of course, be backed up by counsel, and it seems advisable to appoint compliance counsel to address the legal issues. Thus, the primary responsibility for compliance rests on the actual operations, but at the same time means are developed for maintaining compliance with the policy and with laws and regulations at the corporate level. This technique also has another advantage by providing another vehicle for understanding environmental issues at senior levels of management and for communicating their importance.

III. BENEFITS FROM AN ENVIRONMENTAL AUDIT/ASSESSMENT PROGRAM

§ 8:20 Minimizing civil and criminal liability

Application of Criminal Liability to Corporations and Corporate Officers

Virtually all environmental statutes provide sanctions for noncompliance like civil penalties, criminal fines and imprisonment, injunctive actions, permit or registration suspension or revocation, and methods of enforcement such as citizens' suits. Environmental law applies to persons, and a corporation is considered a person under the law. Corporations act through people, and thus can violate a law by the actions of one of those people. This means that the environmental laws (both civil and criminal) also apply to the corporation's directors, officers, managers, and all

employees.¹ This holds true for both civil and criminal liability.²

The danger of criminal sanctions cannot be overemphasized. Criminal penalty provisions apply to the person in the corporation who commits a violation. An individual can be held criminally liable, even if he or she did not actually participate in the act, if that individual approved of the conduct or negligently or knowingly failed to prevent the violation.³ Thus, a corporate officer can be held vicariously liable for the conduct of subordinate employees.

The corporation itself may be subject to criminal sanctions as a result of an act or failure to act by its management or employees.

Many states sanction corporations criminally only for the acts of management. By contrast, federal courts have adopted a broadly defined doctrine of imputed liability that permits the criminal conviction of a corporation for acts of its low-level employees or outside agents. A corporation can be convicted of federal crimes even if its employees and agents act without management's knowledge or approval and even if management has specifically prohibited the offensive conduct and taken reasonable steps to prevent it.⁴

It is also vital to recognize that:

in today's enforcement climate, no one, not even those remotely responsible for environmental compliance, is immune from criminal prosecution. One must also understand that one does not have to *be* bad when it comes to environmental crimes. The "black heart" requirement commonly associated with other criminal activity is not necessary to sustain a criminal conviction.⁵

Moreover, even a failure to act may result in criminal liability.

A purposeful failure to investigate, or deliberate ignorance, has been interpreted to impute knowledge of the violation for purposes of criminal liability.⁶ Section 113(c)(5)(B) of the Clean Air Act, for example, suggests potential criminal liability for "knowing endangerment" if an executive purposefully tries to shield herself from knowledge.⁷ The government's position on what is "knowing" and "willful" is suggested as follows in the case of *United States v. Protex*:⁸

In the context of public welfare offenses, courts have repeatedly held that "knowingly"

[Section 8:20]

¹The definition of "owner" or "operator" is extremely broad. See *Joslyn Corp. v. T.L. James & Co., Inc.*, 696 F. Supp. 222, 19 Env'tl. L. Rep. 20518 (W.D. La. 1988), judgment aff'd, 893 F.2d 80, 30 Env'tl. Rep. Cas. (BNA) 1929, 20 Env'tl. L. Rep. 20382 (5th Cir. 1990). See also Murphy & Samson, Corporate Responsibility for Environmental Damages, *White & Case Insights*, Apr. 1990, at 23.

²For a comprehensive discussion of sanctions, see § 9:1.

³Note that the need to prove intent may also be required for environmental crimes by the Supreme Court. See *Elonis v. United States*, 135 S.Ct. 2001 (2015) and *McDonnell v. U.S.*, 136 U.S. 2355 (2016), although the specific issue of environmental crimes was not before the Court.

⁴Giuffra, Sentencing Corporations, *Am. Enterprise*, May/June 1990, at 85. Corporate criminal liability is based on the theory that if the shareholders are beneficiaries of illegal behavior, they should pay for the consequences. See Etzioni, Getting Down to Business on Corporate Crime, *Legal Times*, May 21, 1990, at 23; *Wash. Post*, Apr. 1, 1990, at C3.

⁵Starr & Kelly, Environmental Crimes and the Sentencing Guidelines: The Time Has Come . . . and It is Hard Time, 20 Env'tl. L. Rep. (Env'tl. L. Inst.) 10096 (Mar. 1990).

⁶See, e.g., *U.S. v. Johnson & Towers, Inc.*, 741 F.2d 662, 21 Env't. Rep. Cas. (BNA) 1433, 14 Env'tl. L. Rep. 20634 (3d Cir. 1984); RCRA § 3008(f), 42 U.S.C.A. § 6982(f) (setting forth special rules for establishing criminal liability for a knowing endangerment violation).

⁷42 U.S.C.A. § 7413(c)(5)(B). Note also that this Act limits liability significantly for the actual operator, focusing instead on managers, including officers and directors.

⁸*U.S. v. Protex Industries, Inc.*, 874 F.2d 740, 29 Env't. Rep. Cas. (BNA) 1593, 19 Env'tl. L. Rep. 21061 (10th Cir. 1989), cited in McAllister, Trial of the Criminal Environmental Laws, *A.L.I./A.B.A.*, Apr. 1990, at 252. See generally Barber, Fair Warning: The Deterioration of Scierter Under

requires only that one act voluntarily, with knowledge of one's actions. It does not require knowledge of the law or a specific intent to break the law. Willfully is viewed similarly, as not requiring or denoting specific intent or evil purpose.⁹

The use of criminal prosecution to enforce environmental protection requirements under federal law has expanded over the past 50 years, particularly with the development of the federal Environmental Crimes Program—a coordinated effort among the DOJ, U.S. attorneys' offices, the Federal Bureau of Investigation, and the Coast Guard—which has “roughed out functional policies for determining when criminal prosecutions should be initiated, devised sensible enforcement priorities, and achieved a series of court victories that have created an effective deterrent against serious violations of environmental law. The Program also has enjoyed consistent public support.” As former Attorney General Richard Thornburgh stated in 1990 and which still holds true today: “Criminal enforcement is one of the most radically expanding areas of environmental law, with the use of criminal sanctions becoming one of the most effective means of deterring deliberate non-compliance.”¹⁰

Ambitious state and local district attorneys are also looking for cases . . .

Besides the various federal environmental statutes,¹¹ which all contain criminal penalty provisions, there is a broad scope of the criminal side of state statutes addressing environmental issues. State and local officials have also increased their time and resources devoted to criminal enforcement.

Various transportation, storage, and disposal activities are now punishable as felonies under the California Health and Safety Code.¹² In addition, any violation of California hazardous waste laws and regulations and any related “permit, rule, standard or requirement” is punishable as a misdemeanor.¹³ New Jersey enacted a statute, one adapted from a European law designed primarily to protect against fires and avalanches. This statute has very broad language, including criminal penalties for any person who “purposely or knowingly unlawfully causes an explosion, flood, avalanche, collapse of a building, release or abandonment of poison gas, radioactive or any other harmful or destructive substance.”¹⁴

It is important for today's environmental manager to recognize that one does not have to be a “bad person” to be prosecuted and, in terms of intent, “deliberate” can also mean willful ignorance or purposely attempting to avoid knowledge. Criminal liability may have serious personal consequences for environmental managers and corporate officials, as well as major financial consequences for companies. The environmental laws apply to “persons,” which legally include both corporations and individuals acting for corporations, including directors, officers, managers, and all employees. Moreover, an employee's knowing act may subject both the employee and the corporation to criminal fines. An individual who did not actually participate in an act may also be held criminally liable if that individual approved of the conduct, or negligently or knowingly failed to prevent the violation. Thus, there have been instances in which corporate officers were held vicariously liable for the

Environmental Criminal Statutes, 26 Loy. L.A. L. Rev. 105 (1992); Smith, No Longer Just a Cost of Doing Business: Criminal Liability of Corporate Officials for Violations of the Clean Water Act and the Resource Conservation and Recovery Act, 53 La. L. Rev. 119 (1992).

For a discussion of scienter, see § 9:30.

⁹McAllister, Trial of the Criminal Environmental Laws, A.L.I./A.B.A., Apr. 1990, at 252.

¹⁰Sandy Moretz, *The Rising Cost of Environmental Crime*, OCCUPATIONAL HAZARDS, Mar. 1990, at 38.

¹¹See Nicholson, Criminal Provisions in Federal Environmental Statutes, A Compilation, (Congressional Research Service, Oct. 5, 1989).

¹²Cal. Health & Safety Code §§ 25189.5 to 25192.

¹³Cal. Health & Saf. Code § 25190.

¹⁴N.J. Stat. Ann. 2C:17-2.

conduct of subordinate employees. Purposeful failure to investigate or “deliberate ignorance” has been interpreted as “knowledge” for purposes of criminal liability.¹⁵

Federal Sentencing Guidelines

Sentencing for both corporations and individuals held liable for environmental crimes is a key concern.¹⁶ The U.S. Sentencing Commission Guidelines Manual includes a category separately identified as environmental offenses.¹⁷ In cases involving environmental crimes, the Guidelines Manual [Chapter 8] instructs the sentencing judge to “determine the appropriate fine by applying the provisions of 18 U.S.C. §§ 3553 and 3572.”¹⁸ In what was once a highly subjective process, the rules remove nearly all discretion that judges have traditionally enjoyed at the sentencing stage. Sentencing for most judges thus became a matter of making mathematical computations.¹⁹

The federal sentencing guidelines for corporations went into effect on November 1, 1991. These guidelines do not pertain to crimes relating to the environment, export controls, product safety, food and drugs, and national defense. However, they do remain directly relevant to sanctions for crimes related to the environment, as clarified below.²⁰

The guidelines further provide, however, for a reduction in the potential penalties for corporations which have in place a comprehensive and effective compliance program to detect and deter criminal violations.²¹

Fines may be as high as \$300 million. Aggravating factors which raise the

¹⁵See, e.g., 42 U.S.C. § 6928(f), ELR STAT. RCRA § 3008(f) (setting forth special rules for establishing criminal liability for a knowing endangerment violation); see also *United States v. Rothrock*, 806 F.2d 318, 323 (1st Cir. 1986) (“The purpose of the willful blindness theory is to impose criminal liability on people who, recognizing the likelihood of wrongdoing, nonetheless consciously refuse to take basic investigatory steps.”); *Illinois EPA v. Citizens Utils. Co.*, No. 79-142 (Ill. Pollution Control Bd. Jan. 12, 1984) (holding that knowledge element is fulfilled when major equipment and operational failures are due to operator’s ignorance of plant design and failure to investigate); Frank Friedman, *Environmental Management for the Future: Environmental Auditing Is Not Enough*, 12 CARDOZO L. REV. 1314, 1324-25 (1991).

¹⁶See § 9:33.

¹⁷United States Sentencing Commission, Guidelines Manual, § 2Q (Nov. 2011), updated (2016) <https://www.ussc.gov/guidelines/2016-guidelines-manual>.

¹⁸Federal Sentencing Commission-Quick Facts (2017) https://www.ussc.gov/Sites/Default/Files/Pd/f/Research-And-Publications/Quick-Facts/Organizational-Offenders_Fy16.Pdf. See also Uhlmann, Supplemental Materials, Sentencing Guidance In Environmental Prosecutions Including The Use Of Supplemental Sentencing Measures, Sentencing Guidance In Environmental Prosecutions Including The Use Of Supplemental Sentencing Measures, <https://republicans-judiciary.house.gov/wp-content/uploads/2016/04/Uhlmann-Supplemental-Material.pdf>. Latest Guidance Manual (2017) <https://www.ussc.gov/guidelines/2016-guidelines-manual>.

¹⁹Starr & Kelly, *Environmental Crimes and the Sentencing Guidelines: The Time Has Come . . . and It Is Hard Time*, 20 Env’tl. L. Rep. (Env’tl. L. Inst.) 10096 (Mar. 1990).

²⁰See generally U.S.S.G. § 2Q1.1 for guidelines applicable to individuals. “The Sentencing Guidelines list six different types of offenses with respect to environmental crimes, all dealing with the sentencing of individuals, not organizations. The Sentencing Guidelines allow downward departures from the guideline sentence if the environmental offense was negligent rather than knowing. However, upward departures may be appropriate if the offense involved highly hazardous substances or there are substantial cleanup expenses. Additionally, adjustments common to all crimes, not just those environmental in nature, apply. ‘The sentence can be adjusted upwardly if the defendant was an organizer or leader in the offense, or impeded the investigation, prosecution, or sentencing of the offense, or downwardly, if the defendant accepts responsibility.’ Environmental Criminal Enforcement, Ritchie, Davis, Johnson and Stovall <https://www.rdjs.law/05/environmental-criminal-enforcement/#:~:text=The%20Sentencing%20Guidelines%20list%20six%20different%20types%20of,crimes%2C%20not%20just%20those%20environmental%20in%20nature%2C%20apply>.

²¹Under the Guidelines, mandatory fine ranges are determined using a “base fine” and a “culpability score.” The base fine is calculated on the basis of which will be greater:

“culpability” score include a corporation’s prior criminal record and the level of personnel involved in the criminal conduct. Mitigating factors include self-reporting, cooperation with the government, acceptance of responsibility, and—most significantly—the corporation’s implementation of an “effective program to prevent and detect violations of the law.”²²

*Summary of Sentencing Guidelines Revisions*²³

The Federal Sentencing Guidelines determine the sanctions that will be imposed in federal criminal cases, whether or not they are environmentally based. However, it is widely known that the Guidelines serve a much broader function in the area of corporate compliance programs.

The Guidelines have, since 1991, provided a concrete financial benefit to companies that implement compliance programs by allowing judges to show leniency to such companies at sentencing. The leniency is based on whether or not the company’s compliance plan passed muster with the Guidelines’ criteria for an “effective program to prevent and detect violations of law.”

In 2004, the U.S. Sentencing Commission revised Chapter Eight of the Guidelines.²⁴ Chapter Eight is dubbed the “Organizational Guidelines,” and governs the sentencing of companies. This chapter also sets forth the requirements for an ef-

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- i) the amount of the offense level table (all federal crimes have been assigned numerical offense levels), ii) the pecuniary gain to the organization from the offense (either in revenue or cost savings), or iii) the pecuniary loss caused by the offense to the extent the loss was caused intentionally, knowingly, or recklessly.

Miller & Kritz, *New Developments in Corporate Criminal Liability: The Benefits and Risks of Compliance Programs*, Morrison & Foerster, Feb. 1992, at 4. If there is an effective corporate compliance program to prevent and detect violations, the maximum fine can be “below the minimum fine for the very same offense committed by an organization without such a program.” Miller & Kritz, *New Developments in Corporate Criminal Liability: The Benefits and Risks of Compliance Programs*, Morrison & Foerster, Feb. 1992, at 5.

A compliance program must be “effective” to merit a reduced culpability score. It is not sufficient that the policy is in writing and distributed to all relevant employees. Due diligence, the “hallmark” of an effective program, requires at a minimum that the organization must:

- 1) establish standards and procedures to be followed by its employees and other agents;
- 2) assign oversight responsibility to “specific individual(s) within high level personnel”;
- 3) use due care not to delegate substantial discretionary authority to individuals who the corporation should have known had a propensity to engage in criminal activities;
- 4) effectively communicate its standards and procedures to all employees and agents;
- 5) utilize monitoring and auditing systems to detect criminal conduct and a reporting system that effectively eliminates fear of retribution;
- 6) consistently enforce disciplinary mechanisms; and
- 7) respond appropriately to detected offenses and take steps to prevent further similar offenses.

Chapter Eight Fine Primer: Determining the Appropriate Fine Under the Organizational Guidelines, Prepared by the Office of General Counsel U.S. Sentencing Commission (March 2013) https://www.ussc.gov/sites/default/files/pdf/training/primers/Primer_Organizational_Fines.pdf.

Note that the Guidelines and “mandatory disclosure” statutes such as California Penal Code Section 387 put company executives in a difficult position by requiring or encouraging disclosure of the criminal conduct to the government. Note also that, while the sentencing guidelines do not cover environmental crimes directly, they indirectly affect probation issues.

²²See generally, *Federal Sentencing, The Basics*, U.S. Sentencing Commission (November 1918) https://www.ussc.gov/sites/default/files/pdf/research-and-publications/research-projects-and-surveys/miscellaneous/201811_fed-sentencing-basics.pdf and Aisling O’Shea, Nicolas Bourtin, and Anthony Lewis, DOJ Updates Guidance on the Evaluation of Corporate Compliance Programs, SULLIVAN & CROMWELL LLP, (June 20, 2020) <https://corpgov.law.harvard.edu/2020/06/20/doj-updates-guidance-on-the-evaluation-of-corporate-compliance-programs/>.

²³See Steven Solow, *Environmental Management Systems: Not Just for Environmental Compliance Anymore*, *Executive Couns.*, Oct. 2004, at 39. The following on the Sentencing Guidelines revisions are primarily excerpted from that article with permission of the author.

²⁴See discussion at § 8:23. The changes to the Organizational Guidelines were made partly in re-

fective compliance plan.

The revised provisions now require new efforts expected of a company, which are considered by the government in determining whether a corporate compliance plan is “effective” in preventing and detecting violations of law. The amendments require corporate directors and executives to take on far greater responsibility and an expanded oversight role in the design and implementation of compliance plans. For the first time, companies must demonstrate that they have taken steps to promote an “organizational culture” that encourages a commitment to compliance. While the Supreme Court ruled, in 2005, that federal judges may consider the Guidelines to be only “advisory” in nature,²⁵ its opinion did not diminish the importance of the Guidelines to organizations. This particularly the case when it comes to a judge’s discretion in examining a company’s compliance program and whether that program was completed and implemented in good faith.

The Guidelines’ criteria for sentencing quickly became the criteria to determine which cases were selected for enforcement, and how seriously a particular violation may be viewed.²⁶ Simply put, companies with compliance plans that did not meet the basic Guidelines requirements in the view of government personnel were almost automatically viewed as outliers seeking to avoid the legal responsibilities imposed by government regulations.

The environmental management system (EMS) and those charged with its implementation should consider these changes and determine whether or not the existing program satisfies these requirements. Simply put, even a fairly well-functioning EMS will be considered suspect in the event of a violation, if it does not address each of the new Guidelines provisions.

Federal Sentencing Guidelines Chapter Eight (revised)

- Require the organization to “promote an organizational culture that encourages ethical conduct and a commitment to compliance with the law”
- More specifically define the term “standards and procedures” as “standards of conduct and internal controls that are reasonably capable of reducing the likelihood of criminal conduct”
- Replace the general requirement that high-level individuals be assigned overall responsibilities with more specific requirements that clarify the roles and reporting responsibilities of an organization’s compliance authorities
- Require more aggressive efforts by an organization to determine when an employee with substantial authority over a compliance area has a history of engaging in illegal activities or other conduct inconsistent with an effect compliance and ethics program
- Require training for and the dissemination of training materials to all levels of an organization’s employees and agents, including upper level management
- Mandate the use of auditing and monitoring systems designed to detect criminal conduct
- Require a periodic evaluation of the compliance program
- Require that organizations provide a means, which may include the use of anonymous or confidential reporting, to enable employees and agents “to seek guidance regarding the potential or actual criminal conduct without fear of

sponse to the new requirements imposed by SarbanesOxley. The U.S. Sentencing Commission is the quasi-legislative body responsible for drafting the Guidelines.

²⁵See discussion at § 8:23. The changes to the Organizational Guidelines were made partly in response to the new requirements imposed by SarbanesOxley.

²⁶See Steven Solow, *Environmental Management Systems: Not Just for Environmental Compliance Anymore*, Executive Couns., Oct. 2004, at 39.

retaliation”

- Enforce compliance stands through “appropriate incentives,” in addition to disciplinary actions

Department of Justice Evaluation of “Adequate Resources” Invested into Corporate Compliance

The Department of Justice recently updated the guidance used by its prosecutors when evaluating corporate compliance departments.²⁷ The new guidelines “bring a more exacting focus to whether compliance teams are ‘adequately resourced.’ . . .”²⁸ The DOJ guidelines examine if there have been “times when requests for resources by compliance and control functions have been denied, and if so on what grounds?”²⁹ For example “if a company has made cuts all along [in] its operations, the audit committee should be looking at whether compliance is getting what they need, or if they are getting disproportionate cuts.”³⁰

Thus, if there are cutbacks, the question becomes how reasonable the cutbacks are. It was noted that budget reductions need to be proportional to risks. “If an oil and gas company significantly cuts back on operations, for example, it may also reduce risk.”³¹ But “[c]ompliance reductions in a business that increases its risk profile, on the other hand, will be a more difficult scenario for the DOJ to grapple with.”³² As a practical matter, once the budget for compliance is significantly reduced, a company will find it difficult to restore previously levels of activity even after otherwise returning to normal operations.³³

To illustrate, a recent survey found that 23% of respondents found that compliance funding had been “reduced somewhat,” 57% that their budgets had not been changed significantly and 13% said they had been reduced a “great deal.”³⁴ “[E]thics and compliance professionals reported notable concerns about both budgetary pres-

²⁷U.S. Department of Justice, Criminal Division Evaluation of Corporate Compliance Programs (Updated June 2020) <https://www.justice.gov/criminal-fraud/page/file/937501/download> (last visited July 29, 2020).

²⁸Jennifer Williams-Avarex, *Compliance Budgets Squeezed With No Pass From Government*, *Agendaweek* (July 20, 2020) p. 1. As noted previously, the issue of compliance resources should be a major focus of a program review.

²⁹U.S. Department of Justice, Criminal Division Evaluation of Corporate Compliance Programs (Updated June 2020) <https://www.justice.gov/criminal-fraud/page/file/937501/download> (last visited Feb. 10, 2022).

³⁰U.S. Department of Justice, Criminal Division Evaluation of Corporate Compliance Programs (Updated June 2020) <https://www.justice.gov/criminal-fraud/page/file/937501/download> (last visited Feb. 10, 2022). “[T]he guidance from the Justice Department gives top compliance professionals something to point at showing DOJ is watching,” and there is adequate resources devoted to compliance. If nothing else, the guidance gives a corporation and a point for EHS professionals to justify a broad based review that will look beyond procedures and programs and determine what is actually working. “The new guidance basically says, ‘Were going to look under the hood [procedures and programs] if you get in trouble to make sure there is a substance beyond compliance.’ ”

³¹U.S. Department of Justice, Criminal Division Evaluation of Corporate Compliance Programs (Updated June 2020) <https://www.justice.gov/criminal-fraud/page/file/937501/download> (last visited Feb. 10, 2022).

³²U.S. Department of Justice, Criminal Division Evaluation of Corporate Compliance Programs (Updated June 2020) <https://www.justice.gov/criminal-fraud/page/file/937501/download> (last visited Feb. 10, 2022).

³³U.S. Department of Justice, Criminal Division Evaluation of Corporate Compliance Programs (Updated June 2020) <https://www.justice.gov/criminal-fraud/page/file/937501/download> (last visited Feb. 10, 2022).

³⁴Jennifer Williams-Avarex, *supra*, note 7. Note that the same survey indicated that 67% of the participants felt that the risk of compliance failures increased “somewhat” because of the virus and 10% felt that the risk “greatly” increased.

tures and increased compliance failures because of the guidelines.”³⁵

Department of Justice Policy on Waiver of Attorney-Client and Work Product Protections

On December 20, 2003, Larry Thompson, then Deputy Attorney General, issued a revised policy memorandum on criminal prosecution of corporations.³⁶ That memorandum states:

One factor the prosecutor may weigh in assessing the adequacy of a corporation’s cooperation is the completeness of its disclosure including, *if necessary*, a waiver of the attorney-client and work product protections, both with respect to its internal investigation and with respect to communications between specific officers, directors and employees and counsel. . . . They are often critical in enabling the government to evaluate the completeness of a corporation’s voluntary disclosure and cooperation.³⁷

The exception, “if necessary,” appears to have been ignored in many cases.³⁸

The Thompson memorandum was superseded by a memorandum from Paul J. McNulty on December 12, 2006, entitled Principles of Federal Prosecution of Business Organizations.³⁹ That memorandum does not abandon the concepts in the Thompson memorandum, but rather centralizes the decisions by requiring that “when federal prosecutors seek privileged attorney-client communications or legal advice from a company, the U.S. Attorney must obtain written approval from the Deputy Attorney General.”⁴⁰

Current Developments in Criminal and Civil Enforcement

The Obama Administration emphasized the significance of enforcement and, as of this edition, the Biden Administration also appears to be doing the same, which contrasts with the preceding Trump Administration.⁴¹ However, EPA budgets are in a state of flux, both as a result of the sequester and other political pressures. Strong

³⁵Jennifer Williams-Avarex, *supra*, note 7. Note that the same survey indicated that 67% of the participants felt that the risk of compliance failures increased “somewhat” because of the virus and 10% felt that the risk “greatly” increased.

³⁶Memorandum from Larry D. Thompson, Deputy Attorney General-Principles of Federal Prosecution of Business Organizations (Jan. 30, 2003), available at https://assets.corporatecompliance.org/Portals/1/754_0_thompson_memo012003.pdf.

³⁷Memorandum from Larry D. Thompson, Deputy Attorney General, Principles of Federal Prosecution of Business Organizations, at 5 (emphasis supplied).

³⁸See also Richard M. Cooper, *Privilege Under Fire*, Nat’l L.J., March 14, 2005, at 12.

³⁹Memorandum from Paul J. McNulty, Deputy Attorney General, Principles of Federal Prosecution of Business Organizations (Dec. 12, 2006), available at: https://www.justice.gov/sites/default/files/dag/legacy/2007/07/05/mcnulty_memo.pdf.

⁴⁰Ashby Jones, *Thompson Memo Out*, McNulty Memo In, Wall Street Journal (blog posted Dec. 12, 2006), available at: <https://www.wsj.com/articles/BL-LB-2918>; “The new memorandum also instructs prosecutors that they cannot consider a corporation’s advancement of attorneys’ fees to employees when making a charging decision. An exception is created for those extraordinary instances where the advancement of fees, combined with other significant facts, shows that it was intended to impede the government’s investigation.”

⁴¹David M. Uhlmann, “New Environmental Crimes Project Data Shows That Pollution Prosecutions Plummeted During the First Two Years of the Trump Administration.” *Environmental Crimes Project* (2020): 1-16. “With the increasing focus on environmental protection and regulation, criminal cases will increase” “Organizations subject to environmental regulations and facing environmental risks will be targeted for investigation and prosecution for violations of laws including the Clean Air Act, Clean Water Act and Resource Conservation & Recovery Act.” *DOJ likely to increase environmental crimes enforcement*, InsideEPA.com (April 14, 2021) citing an article by Michael Volkov CEO of the Volkov law group. *Facing OIG Criticism, Biden EPA Budget Prioritizes ‘Just’ Enforcement*, InsideEPA.com (June 1, 2021). “Facing criticism that its past declines in enforcement have harmed human health, EPA proposed \$11.2 billion budget request for fiscal year 2022 includes plans to elevate enforcement of environmental laws, promising to hold bad actors accountable for their violations with

enforcement pressures persist, but the number of cases opened does not match assumptions made by the administration.⁴² One trend at the EPA is a movement toward risk based measures.⁴³ The Agency is looking for metrics, such as quantifying exposure-based enforcement mandates. EPA is pursuing environmental justice related actions, and is utilizing air toxics data to calculate reduction in cancer risk to maximally exposed individuals.⁴⁴

In the present circumstances of limited budgetary resources, EPA's "next generation" approach is one that, rather than stressing numbers of cases or actions (which, notwithstanding EPA's denial, remains significant inside the Agency and with congressional budget authorizations), emphasizes regulation and permit design, innovative advanced enforcement monitoring, and electronic transparency reporting.⁴⁵

In describing statistics such as these, Roger Marzulla, former Assistant Attorney General in the Environment and Natural Resources Division of the Department of Justice, notes that EPA and the Justice Department measure the success of the environmental enforcement program, not on the basis of environmental improvements made, but rather on the number of convictions and the size of penalties obtained. These statistics are, in turn, used to justify annually increasing environmental enforcement budgets. Consequently, "new hires" must create still more prosecutions, feeding the vicious cycle that leads to next year's enforcement report and budget request.⁴⁶

As indicated by a former chief of the Environmental Crimes Section, "there is now a machine and the machine must be fed."⁴⁷

§ 8:21 Determining and assuring compliance—In general

To avoid civil and criminal liability, it is critical that a method exists for determining compliance or at least whether potential noncompliance problems exist. An environmental audit/assessment program, such as that set forth above, provides a method for determining compliance. It focuses on how to ensure the early identification of actual or potential compliance problems, how to make sure that management

a particular focus in communities with multiple pollution sources." OECA is to "receive an additional \$31.9 million to incorporate EJ into all phases of work without displacing other enforcement efforts." "OECA is touting its first year accomplishments including a major shift in focus to environmental justice (EJ) communities, an administration priority." *Biden EPA Touts First Year OECA Accomplishments Including EJ Focus*, InsideEPA.com (January 20, 2022).

⁴²Note that "a new report shows that federal enforcement over environmental crimes has continued to drop during the first 10 months of fiscal 2021. . ." "According to this report, Department of Justice (DOJ) data shows 182 new environmental prosecutions opened across all agencies during the period assessed. If that pace continues, criminal enforcement will decline 7.6 percent compared to the prior fiscal year, which would be a 44.5 percent drop from five years ago." *Criminal enforcement continues to drop*, InsideEPA.com (August 25, 2021).

⁴³For enforcement statistics and initiatives, see generally the EPA enforcement Web site <https://www.epa.gov/enforcement>. See also Office of Enforcement and Compliance Assurance National Program Manager Guidance, FY 2016-2017. https://www.epa.gov/sites/production/files/2015-02/documents/oecas_draft_fy_2016-2017_national_program_manager_guidance_february_19_2.pdf.

⁴⁴EPA Eyes Cancer Metric to Address Likely Enforcement Decline, Environmental Policy Alert, July 15, 2009, p. 33.

⁴⁵See Regulation and Permit Design Innovative Advanced Enforcement Monitoring Electronic Transparency Reporting, <https://www.epa.gov/sites/production/files/2014-09/documents/next-gen-compliance-strategic-plan-2014-2017.pdf>, Next Generation Compliance: Strategic Plan 2014-2017.

⁴⁶Roger J. Marzulla, Testimony Before the Judiciary Comm. of the House Subcomm. on Commercial and Administrative Law 19 (May 2, 1996).

⁴⁷Judson Starr, Oral remarks at the A.B.A. Section of Natural Resources, Energy & Environmental Law's Annual Conference on Environmental Law, Keystone, Colo. (Mar. 15-18, 1990) cited in Frank B. Friedman, *Practical Guide to Environmental Management*, Environmental Law Institute 11th ed. 2011 at p. 24.

is aware of the status of operations, and how to ensure the appropriate resolution of problems. The risk of inadvertent violations and enforcement are therefore reduced.

§ 8:22 Determining and assuring compliance—Certifications

An audit/assessment may provide the basis for a certification by a company official on the accuracy and completeness of a permit application. Some of the environmental statutes requiring permits, such as the Clean Water Act and the Resource Conservation and Recovery Act (RCRA), provide criminal penalties for making false statements on permit applications, and provisions in the federal criminal code can also apply.¹

§ 8:23 Determining and assuring compliance—SEC disclosures

Publicly held companies must also identify environmental problems to ensure timely and accurate reports under the securities and exchange laws and SEC regulations. An SEC finding that a company failed to disclose environmentally related matters, thereby deceiving investors, could jeopardize the company's ability to raise capital through new stock offerings or debt instruments. It can also result in SEC initiation of costly and time-consuming administrative proceedings. Any such action by the SEC can give rise to shareholders' class actions and derivative suits. Thus, SEC enforcement of environmental laws and regulations, although indirect, is potentially more powerful than that of direct agency enforcement of environmental laws and regulations. Included within the scope of required SEC reporting are environmentally related matters, such as:

- (1) Two-year estimates of capital expenditures for environmental compliance, or for a longer period if such estimates have been developed and a failure to disclose would be misleading
- (2) Particular types of environmental proceedings¹
- (3) Circumstances under which companies must disclose their policies or approaches concerning environmental compliance

With respect to proceedings, any governmental administrative or judicial proceeding arising or known to be contemplated under any federal, state, or local provisions regulating the discharge of materials into the environment or otherwise relating to the protection of the environment must be disclosed if any one of three conditions exist. First, any private or governmental proceeding that is material to the business or financial condition of the corporation must be reported.² Second, any private or governmental proceeding for damages, potential monetary sanctions, capital expenditures, deferred charges or charges to income is reportable if the amount involved (exclusive of interest and costs) exceeds 10% of the current assets of the corporation.³ And third, any governmental proceeding must be reported if monetary sanctions (exclusive of interest and costs) will or reasonably are expected to exceed

[Section 8:22]

¹See, e.g., 18 U.S.C.A. § 1001.

[Section 8:23]

¹Although special rules apply to environmental proceedings, in all cases any legal proceeding material to the business or financial condition of the company, whether it arises from an environmental claim or otherwise, must be disclosed. See 17 C.F.R. § 229.103; Securities Act of 1933 Release No. 6130, Securities Exchange Act of 1934 Release No. 16224 (Sept. 27, 1979), 18 SEC Docket 453.

²17 C.F.R. § 229.103(5)(A). A material proceeding is one to which a reasonable investor is substantially likely to attach importance in determining whether to purchase any security of the corporation. 17 C.F.R. § 230.405.

³17 C.F.R. § 229.103(5)(B).

\$100,000.⁴

It is important to remember that environmentally related proceedings are not limited to those initiated by an agency or private individual, but include actions initiated by the corporation alone, with another company, or as a named party in a proceeding initiated by an industry trade association, if the result of the action meets any of the reporting conditions. This would include actions such as a rule challenge of a request for an administrative hearing.

Although not required, any disclosure or comments by the company concerning its environmental policy must be accurate. If the company's policy is likely to result in enforcement actions and fines, however, the policy and an estimate of the fines must also be disclosed.

The SEC's May 1989 interpretative release concerning the disclosure required in Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) in SEC filings further details the scope of disclosure.⁵ The MD&A release states that "once management knows of a potentially material environmental problem, it must disclose it unless it can determine that the problem is not reasonably likely to cause a material effect, either because the event is not likely to happen or if it does happen, the effect is not likely to be material."⁶ Thus, in preparing SEC filings, data developed during routine audits/assessments and audits/assessments made for acquisition and sale of properties becomes important. "Registrants should be careful not to make admissions of liability in documents prepared to facilitate decision-making regarding SEC filings." Consultants and internal departments prepare cost estimates during due diligence reviews, such as for acquisition and refinancing or when preparing documents associated with the MD&A release. Documents are also prepared during inside or outside investigation of environmental problems. Many if not all of these documents may be discovered—even if privileged—based on the facts they may contain. Thus, in preparing SEC filings, data developed during routine audits/assessments and assessments made for acquisition and sale of properties become important.

In 2010, the SEC issued interpretative guidance on how existing risk-disclosure rules apply to disclosures of climate-change-related risks,⁷ which the list now reevaluating. Climate change disclosure by public companies did not change significantly after the 2010 guidance was issued. On February 24, 2021, Allison Herren Lee, Acting Chair of the SEC in the "statement on the Review of Climate-Related Disclosure" directed the Division of Corporation Finance "to enhance its focus on climate-related disclosure in Public company filings."⁸ On March 4, 2021, the SEC announced the creation of the "Climate and [Environmental, Social, and

⁴Stated another way, such an environmental proceeding need not be reported if there is a reasonable belief that the proceeding will result in fines of less than \$100,000 and is not otherwise material to the business or financial condition of the company.

⁵54 Fed. Reg. 22427 (May 24, 1989). For a detailed discussion of this release and SEC reporting in general, see Archer et al., SEC Reporting of Environmental Liabilities, 20 Env'tl. L. Rep. (Env'tl. L. Inst.) 10105 (Mar. 1990).

⁶54 Fed. Reg. 22427 (May 24, 1989).

⁷Securities and Exchange Commission, *Commission Guidance Regarding Disclosure Related to Climate Change* (17 CFR PARTS 211, 231 and 241; Release Nos. 33-9106; 34-61469; FR-82), available at <http://www.sec.gov/rules/interp/2010/33-9106.pdf> SEC, COMMISSION (last visited July 7, 2020); *SEC Indicates it Will Not Modify Climate Change Disclosure Criteria*, National Law Review (February 18, 2020), p. 1 available at <https://www.natlawreview.com/article/sec-indicates-it-will-not-modify-climate-change-disclosure-criteria> (last visited July 7, 2020); see also Dustin Till, *SEC Issues Interpretative Guidance on Climate Change Disclosure Requirements for Public Companies*, Feb. 3, 2010, available at <http://www.martenlaw.com/newsletter/20100203-climate-change-disclosures> (last visited July 7, 2020).

⁸Gibson Dunn, Considerations for Climate Change Disclosure in SEC Reports, <https://www.gibsondunn.com/considerations-for-climate-change-disclosures-in-sec-reports/> March 1, 2021, p. 1. This

Governance] ESG Task Force” on the SEC’s Division of Enforcement.⁹

On March 21, 2022, the SEC issued proposed rules “modeled in part on the recommendations of the Task Force.”¹⁰ The proposed rules would require:

- New and detailed narrative disclosures included in annual reports and prospectus¹¹
- New disclosures included in the audited notes to annual financial statements¹²

article addresses the changes in detail, including explanations of its following recommendations “in light of Acting Chair Lee’s Climate Change Statement and its emphasis on compliance with existing SEC regulation including the 2010 Climate Change Guidance.” These recommendations include:

1. As part of the company’s disclosure controls and procedures, review the existing process for assessing the materiality of climate change matters to the company and determine whether any additional climate change disclosures should be included in their SEC filings.
2. Assess the company’s other public climate change disclosures (e.g., state- and EPA-mandated disclosures, voluntary disclosures in sustainability reports and to third-party organizations like the CDP, and disclosures on websites and in investor presentations).
3. Evaluate whether additional disclosure controls are needed around the company’s other public climate change disclosures, particularly with respect to voluntary disclosures.
4. Monitor regulatory and legislative developments on greenhouse gas and climate change matters at the international, Federal, state, and regional levels, and assess the potential impact of such developments on the company’s business.
5. Prepare for additional SEC disclosure requirements related to climate change and ESG matters.

⁹Press Release, SEC, SEC Announces Enforcement Task Force Focused on Climate and ESG Issues (Mar. 4, 2021) https://www.sec.gov/news/press-release/2021-42?utm_medium=email&utm_source=govdelivery. This release and its implications are discussed in detail in Elizabeth Ising, *Ronald Mueller & Hillary Holmes*, SEC Announced Enforcement Task Force Focused on Climate and ESG Issues, GIBSONDUNN (Mar. 4, 2021) <https://www.securitiesregulationmonitor.com/Lists/Posts/Post.aspx?ID=440>.

¹⁰*SEC Proposes Extensive Climate Change Disclosure Regulations*, Latham & Watkins, March 22, 2022, Number 2945 <https://m.lw.com/thoughtLeadership/sec-proposes-extensive-climate-change-disclosure-regulations>. Some of the specific requirements in the proposed rule include:

- The oversight and governance of climate-related risks by the registrant’s board and management, including details on how the board and management exercise their oversight and engage on the setting of climate-related targets and goals, as well as disclosure regarding climate-related expertise;
- How climate-related risks, including physical and transition risks, identified by the registrant have had or are likely to have a material impact on its consolidated financial statements;
- Business operations, or value chains, which may manifest over the short-, medium-, or long-term; How any identified climate-related risks have affected or are likely to affect the registrant’s strategy, business model, and outlook, including how any identified impacts are considered as part of the registrant’s business strategy, financial planning, and capital allocations.
- Any analytical tools, such as scenario analysis, that the registrant uses to assess the impact of climate-related risks on its business and consolidated financial statements, or to support the resilience of its strategy and business model in light of foreseeable climate-related risks;
- If, as part of its net emissions reduction strategy, a registrant uses carbon offsets or renewable energy credits or certificates (RECs), the role that carbon offsets or RECs play in the registrant’s climate-related business strategy, and the potential costs and risks associated with such offsets or RECs;
- If a registrant uses an internal carbon price, details regarding the carbon price, how it is set and used, and the rationale for its use;
- The registrant’s process for identifying, assessing, and managing climate-related risks and whether any such processes are integrated into the registrant’s overall risk management system or processes;
- GHG emissions data for the registrant’s most recently completed fiscal year and for the historical fiscal years.

¹¹Gibson Dunn, Considerations for Climate Change Disclosure in SEC Reports, <https://www.gibsondunn.com/considerations-for-climate-change-disclosures-in-sec-reports/> March 1, 2021, p. 1.

¹²Gibson Dunn, Considerations for Climate Change Disclosure in SEC Reports, <https://www.gibsondunn.com/considerations-for-climate-change-disclosures-in-sec-reports/> March 1, 2021, p. 1.

- New attestation report pertaining to quantitative disclosures on GHG emissions, drafted by an independent third party expert (for certain companies)¹³
- New disclosures on the final impacts of climate-related events (e.g., extreme weather events) and transition activities¹⁴

The rules will be phased in with the earliest applicability for “large accelerated filers” for fiscal year 2023 (filed in 2024), accelerated filers and non-accelerated filers (fiscal year 2024, filed in 2025) and smaller reporting companies (fiscal year 2026, filed in 2026).¹⁵ The proposed rules are very detailed and will require close analysis for compliance.

The SEC is currently expected to issue proposed rules surrounding ESG disclosures sometime in 2022, with any new regulations expected to take effect no sooner than 2023.¹⁶ The SEC clarified its views as to ascertaining “unascertainables” in its Staff Accounting Bulletin No. 92.¹⁷ That bulletin notes that paragraph 8 (“Accounting for Contingencies”) of the Statement of Financial Accounting Standards No. 5, commonly known as SFAS 5, states that “an estimated loss from a loss contingency shall be accrued by a charge to income if it is probable that a liability has been incurred and *the amount of the loss can be reasonably estimated*.”¹⁸ Determining what can “reasonably be estimated” is a difficult area and the SEC has indicated in this bulletin that an environmental liability should be evaluated independently from any potential claim for recovery. Thus, the SEC now requires that contingent liabilities be disclosed on the face of the balance sheet and separate from the amount of claims for recovery from insurance carriers or other third parties. Notes to a balance sheet must include “information necessary to an understanding of the material uncertainties affecting both the measurement of the liability and the realization of recoveries.”¹⁹

The SEC gives some very general guidance with respect to quantifying the extent of environmental or product liability, methods of remedy, and amounts of related costs when such estimates “frequently prove to be different from the ultimate outcome.”²⁰ The SEC’s response is that the measurement of liability “should be based on currently available facts, existing technology, and presently enacted laws and regulations, and should take into consideration the likely effects of inflation and other societal and economic factors.”²¹ If management is able to determine that the amount falls into a range and there is no better estimate within the range, then the “registrant should recognize the minimum amount of the range.”²²

The basis for measuring environmental liability is very important and is worth

¹³Gibson Dunn, Considerations for Climate Change Disclosure in SEC Reports, <https://www.gibsondunn.com/considerations-for-climate-change-disclosures-in-sec-reports/> March 1, 2021, p. 1.

¹⁴Gibson Dunn, Considerations for Climate Change Disclosure in SEC Reports, <https://www.gibsondunn.com/considerations-for-climate-change-disclosures-in-sec-reports/> March 1, 2021, p. 1.

¹⁵Gibson Dunn, Considerations for Climate Change Disclosure in SEC Reports, <https://www.gibsondunn.com/considerations-for-climate-change-disclosures-in-sec-reports/> March 1, 2021, p. 1.

¹⁶Gibson Dunn, Considerations for Climate Change Disclosure in SEC Reports, <https://www.gibsondunn.com/considerations-for-climate-change-disclosures-in-sec-reports/> March 1, 2021, p. 1.

¹⁷This paragraph and the four paragraphs following it are taken from Friedman, Accounting for Unascertainables, Corp. Envtl. Strategy, Oct. 1993, at 60–61. See also Lisa J. Sotto, Companies That Fail to Make Adequate Disclosure of Potential Liabilities Have Become the Objects of Increased SEC Scrutiny, Nat’l L.J., Dec. 4, 1995, at B5.

¹⁸SEC, Staff Accounting Bulletin No. 92, June 8, 1993, at 6.

¹⁹SEC, Staff Accounting Bulletin No. 92, June 8, 1993, at 6.

²⁰SEC, Staff Accounting Bulletin No. 92, June 8, 1993, at 8.

²¹SEC, Staff Accounting Bulletin No. 92, June 8, 1993, at 8.

²²SEC, Staff Accounting Bulletin No. 92, June 8, 1993, at 8.

quoting in detail.

In measuring its environmental liability, a registrant should consider available evidence including the registrant's prior experience in remediation of contaminated sites, other companies' cleanup experience, and data released by the Environmental Protection Agency or other organizations. Information necessary to support a reasonable estimate or range of loss may be available prior to the performance of any detailed remediation study. Even in situations in which the registrant has not determined the specific strategy for remediation, estimates of the costs associated with the various alternative remediation strategies considered for a site may be available or reasonably estimable. While the range of costs associated with the alternatives may be broad, the minimum clean-up cost is unlikely to be zero.²³

The trend is toward increasing disclosure of environmental liability. Note that "[m]ost insurance carriers have modified their standard Directors and Officers (D&O) liability insurance policies to include a broad pollution exclusion that expressly *denies coverage for claims under securities law alleging inadequate environmental disclosure.*"²⁴ On June 30, 1995, the American Institute of Certified Public Accountants issued a draft statement of position titled "Environmental Remediation Liabilities" for public companies. The draft statement presumed an unfavorable outcome with respect to challenges to strict liability and took the auditor "through every aspect of an efficient audit" under CERCLA.²⁵ This approach does not recognize, as do environmental professionals, that CERCLA's "monolithic uniformity breaks down in the face of facts peculiar to the particular problem to be addressed."²⁶ On October 10, 1996, the Institute published its final statement of position (SOP 96-1) on environmental liabilities. This statement was approved by the Financial Accounting Standards Board and became effective for fiscal years beginning after December 1, 1996.²⁷ The statement indicates that "the 'reasonably estimable' criterion is met when a *range* of loss can be reasonably estimated"²⁸ and "expenses associated with a particular phase or component of the overall cleanup must be accrued at the time they become individually estimable."²⁹ This document should be examined closely.

In 2003, the SEC reiterated its 2001 advice "Cautionary Advice Regarding Disclosure About Critical Accounting Policies." As one commentator noted at the time: "The advice reminded companies that SEC rules governing the Management Discussion & Analysis filing require disclosure about 'trends, event, or uncertainties' that could have a material impact on reported financial information. Environmental uncertainties are cited as an example."³⁰ "The SEC review of Fortune 500 disclosures [in 2003] found specifically that environmental exposures and li-

²³SEC, Staff Accounting Bulletin No. 92, June 8, 1993, at 9. For a detailed discussion on disclosure, see Armao and Griffith, *The SEC's Increasing Emphasis on Disclosing Environmental Liabilities*, 11 Nat. Resources & Env't 31 (1997).

²⁴Tom McMahon, *Forget Past: Disclosure Is Inevitable Wave of Future*, Env'tl. F., Sept./Oct. 2004, at 22 (emphasis in original).

²⁵Thomas M. Skove, *Proposed Accounting Guidance for Environmental Remediation Liabilities*, 26 Env't Rep. (BNA) 1980-81 (Feb. 9, 1996).

²⁶Thomas M. Skove, *Proposed Accounting Guidance for Environmental Remediation Liabilities*, 26 Env't Rep. (BNA) 1980-81 (Feb. 9, 1996).

²⁷For a detailed description, see *Recent Developments in Accounting Rules Concerning Environmental Cleanup Liabilities*, in *Environmental Practice Briefing*, Shearman & Sterling Client Publication (Spring 1997).

²⁸*Recent Developments in Accounting Rules Concerning Environmental Cleanup Liabilities*, in *Environmental Practice Briefing*, Shearman & Sterling Client Publication (Spring 1997), at 2.

²⁹*Recent Developments in Accounting Rules Concerning Environmental Cleanup Liabilities*, in *Environmental Practice Briefing*, Shearman & Sterling Client Publication (Spring 1997), at 2.

³⁰Tom McMahon, *Forget Past: Disclosure Is Inevitable Wave of Future*, Env'tl. F., Sept./Oct. 2004,

abilities were frequently deficient.”³¹

Companies should ensure that their environmental management staff identifies potentially material environmental exposures and develops objective quantitative estimates of potentially material environmental exposures and objective quantitative estimates of potential financial impacts under reasonable alternative scenarios. Companies should include senior environmental affairs managers in the development and review of disclosure statements. The audit function should ensure that systems are in place to produce adequate information regarding known material environmental exposures and that such information is delivered to senior management and properly disclosed.³²

Sarbanes-Oxley

As many others have noted, the Sarbanes-Oxley Act of 2002 is primarily about disclosure,³³ imposing enhanced responsibility for disclosures upon top corporate officials.³⁴ The law puts increased pressure on corporate accountants and attorneys to push information “up the chain” It requires CEOs and CFOs to certify, among other things, that the company has adequate “disclosure controls and procedures.” Sarbanes-Oxley also requires CEOs and CFOs to evaluate disclosure controls every 90 days and disclose to the company’s auditors and to the board’s audit committee all significant deficiencies and weaknesses in the design or operations of the controls.

These new obligations are placed on top of the more than 20-year-old SEC requirements regarding the disclosures of environmental liabilities. Three existing SEC regulations and one financial accounting standard require the disclosure of “material” environmental liabilities. However, the SEC has never expressly delineated the matters it considers “material” to the financial condition of a company, and Sarbanes-Oxley has not provided such a definition either. Rather, the SEC relies on case law holding that a fact is “material” if a reasonable investor would take it into account in making an investment decision.³⁵

The U.S. Supreme court has twice ruled on the issue. In a 1976 case, it concluded that an omission would be material if there is a substantial likelihood it would be viewed by a reasonable investor “as having significantly altered the ‘total mix’ of information made available.”³⁶ Similarly, in a 1988 case, the Court declined to establish a bright-line rule for materiality, finding that it “will depend at any given time upon a balancing of both the indicated probability that the event will occur and the anticipated magnitude of the event in light of the totality of the company activity.”³⁷

“Materiality” of an environmental liability may be affected by several factors. The size of the company may carry significant weight; the failure to process an environmental complaint would be viewed quite differently at a large company that

at 22.

³¹Robert Repetto, *Are Companies Coming Clean?*, *Envtl. F.*, Sept./Oct. 2004, at 19, 27.

³²Robert Repetto, *Are Companies Coming Clean?*, *Envtl. F.*, Sept./Oct. 2004, at 27.

³³Pub. L. No. 107-204, 116 Stat. 745, June 30, 2002.

³⁴See Steven Solow, *Environmental Management Systems: Not Just for Environmental Compliance Anymore*, *Executive Couns.*, Oct. 2004, at 39. A substantial portion of the following on Sarbanes-Oxley is primarily excerpted from that article with permission of the author. See also Caroline B.C. Hermann, *Corporate Environmental Disclosure Requirements*, 35 *ELR* 10308 (May 2005) and Jeffrey Gracer and Lawrence Schnapf, *Special Committee on Environmental Disclosure 2004 Annual Report The Year in Review 2004*, at 156–59, *ABA Section of Environment, Energy and Resources Law* (2005).

³⁵SEC, *Staff Accounting Bulletin No. 92*, June 8, 1993, at 6.

³⁶*TSC Industries, Inc. v. Northway, Inc.*, 426 U.S. 438, 449, 96 S. Ct. 2126, 48 L. Ed. 2d 757, *Fed. Sec. L. Rep. (CCH) P 95615* (1976).

³⁷*Basic Inc. v. Levinson*, 485 U.S. 224, 108 S. Ct. 978, 99 L. Ed. 2d 194, *Fed. Sec. L. Rep. (CCH) P 93645*, 24 *Fed. R. Evid. Serv.* 961, 10 *Fed. R. Serv.* 3d 308 (1988).

processes 100 such complaints each year, than at a small company that typically processes only two. Other factors may include whether the matter involves a regulatory compliance issue, or whether the matter involves concealment of an unlawful act. As summarized by legal scholar and practitioner Caroline Hermann:

In general, information is material if there is a substantial likelihood that a reasonable investor would find the information important to make a well-informed business investment decision. Determinations of materiality require 'delicate audits/assessments of the inferences a reasonable shareholder would draw from a given set of facts and the significance of these inferences to him.' Materiality, as defined, is murky at best. Attempts to quantify materiality have used a rule of thumb, for example, to disclose claims equaling \$100,000 or more, or 10% of a company's assets in a current or pending legal proceeding. However, the SEC cautions against relying solely on such benchmarks because they have no basis in law or in accounting standards. Instead 'evaluation of materiality requires a registrant and its auditors to consider *all* the relevant circumstances, and that there are numerous circumstances in which misstatements below 5% could well be material'³⁸

Professor Mitch Crusto discusses the issues of "materiality" in detail.³⁹ He includes a proposal presented by the American Society of Testing and Materials (ASTM) "which would require a cumulative audit/assessment of the financial importance of all environmental liabilities for 'materiality.'"⁴⁰ and concludes that "while SarbanesOxley does not expressly address corporate environmental disclosure, large economic entities, including publicly traded corporations and the federal government, should adopt the ASTM CMS [Common Minimum Standards] over voluntarily published green reports."⁴¹ "[I]t would be another important means of promoting investor confidence and facilitating a full evaluation of the true cost of environmental compliance and remediation. In addition to private enterprises, CMS would also be a useful tool for the federal government to evaluate and manage its enormous environmental liabilities."⁴²

Note that the issue of financial disclosure and materiality is further complicated by an interpretation by the Financial Accounting Standards Board (FASB). Its standard, FAS 143, became effective in December 2003, which "treats accounting for asset retirement obligations (AROs)."⁴³ "In a nutshell, FAS 143 requires companies to recognize the fair value of an ARO in the period in which it is incurred, if a reasonable estimate of fair value can be made. A company's property, plant and equipment are all examples of long-lived assets that may be subject to so-called retirement obligations, which includes abandonment, recycling and disposal."⁴⁴ Companies tried to avoid FAS 143 by arguing that FAS 143 "did not apply to 'conditional' asset retirement obligations (so-called CAROs), that is obligations for which the timing or

³⁸Caroline B.C. Hermann, Corporate Environmental Disclosure Requirements, 35 ELR 10308 (May 2005) (emphasis in original) (citations omitted).

³⁹Mitchell F. Crusto, Endangered Green Reports: "Cumulative Materiality" in Corporate Environmental Disclosure After Sarbanes-Oxley, 35 ELR 10666 (Oct. 2005).

⁴⁰Mitchell F. Crusto, Endangered Green Reports: "Cumulative Materiality" in Corporate Environmental Disclosure After Sarbanes-Oxley, 35 ELR 10666, 10674-75 (Oct. 2005).

⁴¹Mitchell F. Crusto, Endangered Green Reports: "Cumulative Materiality" in Corporate Environmental Disclosure After Sarbanes-Oxley, 35 ELR 10666, 10674-75 (Oct. 2005).

⁴²Mitchell F. Crusto, Endangered Green Reports: Cumulative Materiality" in Corporate Environmental Disclosure After Sarbanes-Oxley, 35 ELR 10666, 10678 (Oct. 2005).

⁴³Jeffrey A. Smith, New Standards for Financial Reporting of Environmental Liabilities: Introduction and Overview, ABA Special Comm. on Env'tl. Disclosure Newsletter, Oct. 2005, at 2-3. That newsletter contains a variety of other articles that deal in detail with conditional asset retirement obligations.

⁴⁴Jeffrey A. Smith, New Standards for Financial Reporting of Environmental Liabilities: Introduction and Overview, ABA Special Comm. on Env'tl. Disclosure Newsletter, Oct. 2005, at 4.

method of the retirement was dependent on a future event out of the company's control."⁴⁵ The response of the FASB was to issue "interpretation No. 47 (FIN 47) which became effective for fiscal years ending after December 15, 2005. FIN 47 makes it clear that liability recognition for CAROs includes a broad swath of environmental conditions, and that recognition is appropriate if the fair value of liability can reasonably be estimated."⁴⁶

Sarbanes-Oxley has made the process of determining whether environmental costs and liabilities are "material" a matter of potentially ruinous personal liability for the highest level of corporate officers. Under the provisions of that law, anyone who certifies a periodic report that does not comport with all applicable requirements is subject to fines and imprisonment—up to a \$1 million fine and 10 years of imprisonment for a "knowing" offense, and up to a \$5 million fine and 20 years of imprisonment for a "willful" offense.

In addition, Sarbanes-Oxley contains criminal provisions that are not limited to SEC-related matters. A new whistle-blower protection law provides for fines and prison sentences for retaliation against an informant who provides information relating to the possible commission of any federal offense. A second provision prescribes up to 20 years of imprisonment for destroying documents in order to obstruct a federal investigation, or even in anticipation of a federal legal proceeding. Importantly, this broad new provision allows individuals to be prosecuted even if no official proceeding had begun, as long as the government can prove that the person destroyed records in contemplation of some official proceeding in the future. Note the importance of conducting a careful review of a company's records management program, above and beyond the EMS, given that it creates the potential for criminal liability for the destruction of documents in the ordinary course of a company's business.

Sarbanes-Oxley has also spawned a new era of cooperation between the U.S. Environmental Protection Agency and the SEC, as previously discussed. In July 2004, the Government Accountability Office (GAO) published a report,⁴⁷ stating "that there is inconsistency in reporting among companies, even among those in the same industry group. The report is unclear about whether this inconsistency results from significantly different circumstances for individual companies or if companies are applying the disclosure requirements differently. Consequently, investors cannot easily evaluate an organization's environmental risks."⁴⁸ The Report does find that "[w]ithout more compelling evidence that environmental disclosure is inadequate, the need for changes, guidance or increased monitoring and enforcement is unclear."⁴⁹ However, the Report also recommended that the SEC and EPA

⁴⁵Jeffrey A. Smith, *New Standards for Financial Reporting of Environmental Liabilities: Introduction and Overview*, ABA Special Comm. on Env'tl. Disclosure Newsletter, Oct. 2005, at 4.

⁴⁶Jeffrey A. Smith, *New Standards for Financial Reporting of Environmental Liabilities: Introduction and Overview*, ABA Special Comm. on Env'tl. Disclosure Newsletter, Oct. 2005, at 4.

⁴⁷United States Government Accountability Office, "Environmental Disclosure: SEC Should Explore Ways to Improve Tracking and Transparency of Information," GAO-04-808 (July 2004).

⁴⁸The Sarbanes-Oxley Act: What Else Will This Change for Environmental Staff, *Managing Environmental Performance*, Oct. 2004, at 3, available at <http://www.trinityconsultants.com>. See also Jeffrey Gracer and Lawrence Schnapf, *Special Committee on Environmental Disclosure 2004 Annual Report The Year in Review 2004*, at 159, ABA Section of Environment, Energy and Resources Law (2005).

⁴⁹Jeffrey Gracer and Lawrence Schnapf, *Special Committee on Environmental Disclosure 2004 Annual Report The Year in Review 2004*, at 159, ABA Section of Environment, Energy and Resources Law (2005). Stephenson, John B. GAO4-1019R. *Environmental Disclosure: SEC Should Explore Ways to Improve the Tracking and Transparency of Information* 18. Jul. 2004 Environmental Disclosure Briefing on GAO Findings and Recommendations, <https://www.gao.gov/assets/gao-04-1019r.pdf>.

“improve[] coordination between SEC and EPA on environmental disclosure.”⁵⁰ This provides the basis for environmental disclosures in SEC filings to face increased scrutiny from the SEC, EPA, and the GAO.⁵¹

The disclosure requirements and penalties of Sarbanes-Oxley, along with heightened government and shareholder attention to environmental liabilities, have prompted many companies to consider whether their EMS is providing an acceptable level of compliance and whether it is pushing information necessary for SEC filings up the corporate ladder. “No longer can companies subjectively determine whether an environmental matter materially affects earnings. Now, under the Sarbanes-Oxley Act, companies must go beyond a mere baseline requirement, and consider material known trends as well as uncertainties for inclusion in annual and quarterly reports.”⁵²

In short, managers can no longer be satisfied if their EMS provides only compliance controls. They must also be confident that the EMS will allow the company’s top managers to certify that adequate “disclosure controls and procedures” are in place regarding potential and actual material environmental liabilities.

This tightening interpretation of what financial information must be disclosed greatly increases the potential liability exposure for failure to disclose or properly accrue. Legal involvement is critical as these issues are examined.

EPA and the SEC have a cooperative agreement that allows the SEC access to EPA data to audit, in essence, the adequacy of the data a company releases. Under the agreement, the SEC has offered to perform “full disclosures” of any corporation for EPA and EPA allows the SEC access to various EPA files. EPA has agreed to provide the SEC with six categories of information on a quarterly basis. The types of information to be provided are:

- (1) Names of parties receiving Superfund notice letters identifying them as potentially liable for the cost of a Superfund cleanup (source: Superfund enforcement tracking system)
- (2) List of all filed (but not concluded) RCRA and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cases (source: Consolidated Enforcement Docket)
- (3) List of all recently concluded civil cases under federal environmental laws (source: Consolidated Enforcement Docket)
- (4) List of all filed criminal cases under federal environmental laws (source: Criminal Enforcement Docket)
- (5) List of all facilities barred from government contractors under the Clean Water Act
- (6) List of all RCRA facilities subject to cleanup requirements (source: Corrective Action Reporting System)

In exchange, the SEC stated it would “consider targeting Environmental

PowerPoint Presentation.

⁵⁰Stephenson, John B. GAO4-1019R. Environmental Disclosure: SEC Should Explore Ways to Improve the Tracking and Transparency of Information 19. Jul. 2004 Environmental Disclosure Briefing on GAO Findings and Recommendations, <https://www.gao.gov/assets/gao-04-1019r.pdf>. PowerPoint Presentation.

⁵¹Stephenson, John B. GAO4-1019R. Environmental Disclosure: SEC Should Explore Ways to Improve the Tracking and Transparency of Information 19. Jul. 2004 Environmental Disclosure Briefing on GAO Findings and Recommendations, <https://www.gao.gov/assets/gao-04-1019r.pdf>. PowerPoint Presentation.

⁵²Caroline B.C. Hermann, Corporate Environmental Disclosure Requirements, 35 ELR 10308, 10309 (May 2005).

Disclosures” for its enforcement efforts, according to an EPA source.⁵³

§ 8:24 Other benefits

Ensuring compliance is one of the most important and useful purposes of an environmental audit/assessment program, but the results of audits/assessments provide other benefits as well. Environmental considerations can play a significant role in a company’s business planning, including financial planning, new product lines and expansions, and risk management.¹ An environmental audit/assessment program provides both corrective and preventive assistance by identifying potential problem areas or new requirements that may require immediate or long-term capital or operating expenditures. A company’s considerations for modifying or expanding current operations or going into new business lines also benefit from the audit/assessment program. New products may be subject to current or proposed regulations that may affect the cost of production and ability to market. For example, a new chemical substance may be subject to a Toxic Substances Control Act § 5(e) order limiting the substance’s use or requiring very extensive safety requirements on its manufacture or processing, which would have to be factored into the company’s economic considerations.

A modification to or expansion of an existing operation can trigger significant environmental issues. The location of a facility in an attainment or nonattainment area may require extensive preconstruction review under the Clean Air Act. Similarly, a location on or near a former waste disposal site can result in expensive and long-term remedial measures at the site.

With the increasing importance of and difficulty in obtaining liability insurance, an environmental audit/assessment program can assist risk management decisionmaking for the amounts and types of insurance coverage needed. For example, RCRA requires “financial assurance” from owners or operators of hazardous waste treatment, storage or disposal facilities to cover closure and post-closure care, as well as liabilities arising from accidents. The audit/assessment program can provide the information necessary to secure such financial assurances, either through insurance, bonds, or other methods acceptable to the agencies.

Audits/assessments can raise the consciousness of the employees to the importance of compliance and the risk of noncompliance. This increased awareness can result in better environmental performance. Also, the employees’ performance in assuring and maintaining compliance can be used as a factor in evaluating that employee for salary increases and promotions. A clearly identified and implemented environmental program also can help employee morale and recruitment.

An audit/assessment program can provide the basis for positive public relations where no problems exist or for situations where problems are found, but are being promptly and effectively corrected. A company will also have the ability to respond promptly to the media in the case of an emergency or crisis arising from an environmental incident because it will have readily available information from the audit/assessment program. While a public relations effort will not itself solve any environmental problem, it can help address the problem of a bad image that results from an actual or perceived poor environmental compliance record. A bad image can result in unwanted press and media attention, tie up management time responding to inquiries, and adversely affect the business sales and stock values.

⁵³Harrelson, EPA Agrees to Information Exchange with SEC, Inside EPA Superfund Report, Mar. 28, 1990, at 2. See discussion of Sarbanes-Oxley in this section.

[Section 8:24]

¹Frank B. Friedman and James K. Vines, Teaching the Business Case, 31 Env’tl. F. 34 (Nov./Dec. 2014).

Related to general business planning, environmental considerations are an important factor in acquisitions and divestitures. By helping to identify and evaluate environmental contingencies, the audit/assessment can provide information on which assets of the company should be sold or whether to buy all or part of another company. A more detailed discussion and guidelines on this topic are contained in § 8:25.

Finally, environmental audits/assessments provide information about a company's operations, including problems and compliance status, that can be of great help in evaluating the impact of new environmental laws and regulations. This can enable the company to comment effectively on, or even challenge, the constant stream of laws and regulations proposed and enacted.

IV. ENVIRONMENTAL EVALUATIONS FOR ACQUISITIONS AND DIVESTITURES

§ 8:25 Introduction

The following sets forth guidelines for identifying and resolving environmental issues raised by the acquisition of real property or facilities, including the acquisition of all or part of a company that owns or leases such property, or did so in the past. Specifically, the guidelines assist in identifying potential environmental liabilities that could be incurred due to acquisition, and will help minimize those risks. A company planning to divest operations can use these guidelines for the same purpose as a company planning to acquire: the identification and resolution of environmental problems. The review can also assist the divesting company in avoiding inaccurate representations about its assets.

The guidelines provide an outline of the process involved and address the actions to be considered in all cases. Not all of the outline actions may be required in a particular case; conversely, a case may present circumstances requiring additional actions. In all cases, however, an action plan should be developed from the guidelines and then implemented.

Note that the following are “guidelines.” It may be difficult to obtain the suggested information because of reluctance to disclose (including potential additional liability exposure) and/or deadline pressures. There are usually more “unknowns” than legal counsel or her client would prefer in developing appropriate data for an acquisition.

§ 8:26 Identification of potential liabilities—Site and facility audits/assessments

A critical step before acquiring any property, facility, or company that owns property or facilities is to conduct a physical site audit/assessment of all sites at which present or past operations could conceivably have caused environmental contamination. Such audits/assessments are essential to identify potential liabilities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and other federal and state laws. Such site audits/assessments should be conducted at every facility that is to be acquired. If an entire company is being acquired, each facility it owns should be assessed; each facility it leases or operates should be assessed as well, and each facility it has owned, leased, or operated in the past should also be assessed, if possible.

Preferably, physical site audits/assessments should be performed by both legal and technical experts. Experience and expertise are needed to judge whether a facility requires physical audit/assessment, and if so, how that audit/assessment should be accomplished and what it should examine.

Certain information should be obtained from the company or facility management prior to the actual visit. This includes general identifying information (for example, facility name and location), a description of the principal operations, and copies of all relevant environmental policies, procedures, and guidelines. A list of all specific federal, state, and local environmental regulations, including standards or guidelines applicable to the facility's operations, should also be acquired. The actual site audit/assessment could include sampling and analysis of groundwater, soil, the physical structures themselves, and, where applicable, an analysis of the surface waters and sediment, ambient air, or specifically permitted emission sources.

Preliminary site audits/assessments may be carried out early in the investigation. A final site audit/assessment, including sampling analysis, should not be undertaken until the review of records and permits has been completed. These document reviews are essential aids in locating possible contaminated areas on the property. The location of such areas, in turn, is a major factor in planning and executing the actual sampling and analysis program.

§ 8:27 Identification of potential liabilities—Review of licenses and permits

It is important to review and evaluate the licenses and permits both possessed and required by facilities. Any pending application for environmental permits or licenses should also be included. The review must consider not only existing requirements but also impending or potential future requirements. The review of permits and licenses should include (as applicable): RCRA, National Pollutant Discharge Elimination System, underground injection control, Clean Air Act, underground storage tank, and pretreatment requirements.

In addition to identifying what permits exist or are required, consideration should be given to whether their limitations are achievable and acceptable. Relevant questions are:

- (1) Whether permit limits will allow expansions or modifications of operations, and if so, whether more stringent parameters will be imposed
- (2) Identification of federal, state or local hurdles
- (3) Whether the permits can be transferred or whether the new owner or operator must apply for new ones
- (4) Ascertainment of applicable public notice, comment, and hearing procedures
- (5) Whether new permit programs are likely to apply soon
- (6) Whether "interim program permits" are likely to become more stringent or costly in the future, or whether they might lapse altogether

§ 8:28 Identification of potential liabilities—Regulatory history and current status

For facilities that are subject to one or more regulatory authorities, it is important to determine the history of compliance. The facility's own management and files should be reviewed, and contact should be made with all regulatory authorities that have jurisdiction over the facility. The review should include an audit/assessment of:

- (1) Any permit violations, with or without fine or penalties
- (2) Exceedances or excursions above applicable parameters, such as in monthly discharge monitoring reports
- (3) Discharges that do not exceed daily maximums or monthly averages, but are at or near the limit
- (4) Management practices.

Is the facility well-managed and well-run, for example, as against RCRA, Depart-

ment of Transportation, (OSHA), or Mining Safety and Health Administration standards? Or is it just fortunate that the facility has not been inspected? Are all required programs in place, such as RCRA groundwater monitoring, OSHA hazard communication, and spill prevention plans? Are these programs well designed? In general, it should be determined how the facility is regarded by applicable regulatory authorities. If the facility is viewed as a problem, will the authority be pleased to see new ownership, or is the activity or operation *per se* unwelcome in that area? It is important to know whether a new owner will receive a fresh start from the regulatory authorities.

Other appropriate questions concern whether the facility is the object of local citizen or environmental group attention. If so, is the attention favorable or unfavorable? This issue has become increasingly important.¹

Have there been any citizen or employee complaints within the last three years concerning environmental activities at the facility? If so, what is their current status? Are movements afoot to close or restrict the facility's operations? Does the facility generate air or water emissions that expose the local population? If so, is there evidence of local sensitivity? In general, what is the facility's standing in its community?

A number of other topics should also be included in evaluating the compliance history. All applicable recordkeeping and reporting requirements should be reviewed and compared to actual practice at the facility. The review should include all information on the current status and copies of relevant documents on any of the following for the immediately preceding five years:

- (1) Orders, citations, notices of violation or similar administrative actions, or civil or criminal actions filed against the company with respect to any facility not being in compliance with regulations, standards or permits
- (2) Threatened or known to be contemplated enforcement actions
- (3) Compliance schedules, consent orders, judgments, waivers, or variances related to compliance with any environmental program
- (4) Fines or penalties levied or paid for any of the above matters

Information on the last federal, state, or local agency inspection that included environmental matters should be reviewed, including the date, a copy of any reports, whether any action was required of the company, and, if so, its current status. This list is not all inclusive; therefore, it must be recognized that there are many other areas for which data can be included or is appropriate in the compliance history and

[Section 8:28]

¹The Biden Administration has promised significantly more funds (although, as of publication, it remains to see what will be able to be accomplished in the next few years) and very significantly increased concern and emphasis on environmental justice. "Environmental justice (EJ) proponents are faulting as insufficient President Joe Biden's 'Justice 40' initiative to ensure that 40 percent of the benefits from federal infrastructure and climate funding goes to minority and low-income areas, launching a bid for a greater share of such benefits for tackling pollution in the overburdened communities." Dawn Reeves, *EJ Proponents Eye Federal Budget Benefits Above Biden's 40 Percent Goal*, INSIDEEPA.COM (Apr. 13, 2021). OECA is to "receive an additional \$31.9 million to incorporate EJ into all phases of work without displacing other enforcement efforts" and the agency "is touting its first year accomplishments including a major shift in focus to environmental justice (EJ) communities, an administration priority." *Biden EPA Touts First Year OECA Accomplishments Including EJ Focus*, Inside EPA.com (Jan. 20, 2022), Environmental Policy Alert, Vol. XXXIX (January 26, 2022). The increased involvement of virtually every cabinet office in both environmental justice and climate change will require considerable time to work out who has responsibility for what ("turf" issues) and implementing appropriate remedies. These uncertainties are likely to have a considerable effect on infrastructure and general industrial permitting. Determining what is appropriate will be contentious with so many new players.

current status review.

§ 8:29 Identification of potential liabilities—Prior ownership and operations

For any facility that is or ever was used for operations that could have caused environmental contamination, it is important to reconstruct a chain of title for the past history of the site. This history should include a determination of the operations performed at the site during each period, and by whom (owner or lessee) those operations were performed. This historical survey should seek both evidence that contamination may exist and the identities of companies responsible for such contamination. Those companies might still exist and might be co-responsible for any contamination.

§ 8:30 Identification of potential liabilities—Potential off-site liabilities

Under RCRA and CERCLA, the facility (or its corporate or individual owner) may have liability at every site where the facility's wastes were ever disposed. Thus, it is essential to compile as complete a list as possible of all the wastes ever generated at a site, and of all the sites to which such wastes were shipped. Moreover, some products as well as wastes can lead to off-site RCRA or CERCLA liability. These products include recyclable materials, electrical transformers, and certain pesticide manufacturing equipment. Documentation of such items should be sought, and if found, should be tracked. Sources of pertinent records include: the facility's customer lists and billing files, shipping files, hazardous waste manifests, and state and federal hazardous waste manifest files obtained through the Freedom of Information Act. Customer lists, and more particularly lists of recyclers and waste disposal sites, should be reviewed carefully. Present or future Superfund sites may appear on these lists.

§ 8:31 Identification of potential liabilities—Insurance coverage

All of the company's or facility's insurance policies should be compiled, retroactively to as many years into the past as possible. Any previous owner's insurance coverage should also be identified if possible. Such insurance coverage information is very important as a possible defense to potential site-contamination, toxic tort, and offsite Superfund liabilities. Unfortunately, most companies have very poor files on past insurance policies and insurance companies themselves are almost never willing to help. Insurance agents and brokers should be consulted, but although they will sometimes help, they tend to protect the insurance companies, who are their real clients. State and federal government files are useful for required insurance coverages. Sometimes local attorneys or court files will reveal leads to the identity of insurance companies providing coverage in the past. Such policies, when located, should be analyzed for coverages, exclusions, limits, and terms. As much of an historical overview as possible should be constructed.

§ 8:32 Possible risk-mitigation mechanisms

Depending on the particular circumstances of each case, and upon the nature of the potential liability in question, there are a number of mechanisms that can be employed to reduce risks, or to at least spread risks among several parties.

§ 8:33 Possible risk-mitigation mechanisms—Structure of the transaction

The consummation of an acquisition can in some cases be tailored to reduce risks. There is a nearly infinite variety of forms of acquisitions, but all have risks as well as benefits. If, for example, a company's physical assets are what is desired, a

purchase of assets only may be possible. In some states a company that purchases all the assets of another and carries on its same business is considered to have succeeded to its liabilities, just as with a stock purchase. Counsel should be consulted, and individual state laws must be reviewed on this and related issues.¹

§ 8:34 Possible risk-mitigation mechanisms—Contract provisions

Contract clauses, such as warranties, indemnifications, and specific allocations of future liabilities resulting from past activities or preexisting contamination should always be considered and if appropriate used in any acquisition or sale. Such contract clauses, assuming they can be bargained for, can provide 100% coverage against risks—but with two enormous provisos: (1) Such contractual arrangements never bind the government, and are unlikely to affect the rights of private third parties who may be injured. At most, such clauses give the party sued by the government or a private plaintiff an action over and against the other party to the contract; and (2) Such clauses are only as good as the financial soundness of the other party. An ironclad, 100% indemnification agreement by a defunct or insolvent company is worthless. Note that it is also important to understand the scope of the warranty offered and notice requirements. Nonetheless, except where it is clear that the buyer or seller is judgment proof, an effort should always be made to address environmental conditions and liabilities in the purchase contract and to apportion them in an agreed-upon manner.

In addition to the use of various contract clauses in appropriate cases, every acquisition should be accompanied by written representations made by the seller and his or her attorneys and accountants concerning the condition of the property, the compliance status of the facility, and existing or threatened environmental litigation. These representations will form the basis for any necessary future discussions or negotiations of environmental liabilities. In extreme cases, these representations can also serve as a basis for an effort to void the transaction for fraud or misrepresentation.

§ 8:35 Possible risk-mitigation mechanisms—Prior agreements with regulatory authorities

For business reasons, there may be cases in which it is desirable to purchase a facility that is having some degree of difficulty with a regulatory authority or permit program. For example, permit revocation may be threatened or a facility may be hopelessly behind schedule under a consent order. In such cases, an effort should be made prior to purchase to obtain agreements from the appropriate authorities that a new schedule will be set. The purchaser will then have a fresh start with an achievable schedule. Similarly, an agreement could be sought concerning a cleanup plan that would satisfy the authorities for sites that have existing contamination.

The regulatory authority may be willing to be quite flexible in such matters as the alternative will often be that the seller will close its doors. This, in turn, would leave the government with a contaminated site that it would have to clean up, or would close a source of employment that is important to the locality. In any event, such advance discussions are invaluable for letting the would-be buyer know what

[Section 8:33]

¹In some cases, a variety of subsidiaries and related corporate structures can be used to accomplish acquisitions with some risk-reducing effect. For instance, “A Corp.” could spin off “B Corp.” (previously a division of “A Corp.”) as a wholly owned subsidiary for the purpose of acquiring “C Corp.” or a specific asset of “C Corp.” There can be both pros and cons to such arrangements, depending on the facts of each potential transaction from both business and liability standpoints, and they should be considered in detail.

burdens it would be assuming.

§ 8:36 Possible risk-mitigation mechanisms—Insurance coverage

Finally, insurance can provide significant protection against both site cleanup (onsite and off-site) and toxic tort liabilities. The purchasing company itself should have appropriate coverage with adequate limits. The acquired company's own insurance coverages, however, are almost equally significant because "occurrence based" policies can provide coverage for present or future liabilities where the "occurrence"—an act of disposal, or a manufacturing operation that caused site contamination or slow-developing personal injuries—happened years earlier under the previous ownership.

V. ENVIRONMENTAL AUDITING AND ENVIRONMENTAL MANAGEMENT

§ 8:37 Management systems

"Auditing" is only one aspect of responsible environmental management. There has been a great deal of focus on auditing as a means to reduce EPA inspections and ensure legal compliance.¹ Some advocate exhaustive facility reviews as part of the audit. This would involve a large team² and extensive checklists and record reviews. Clearly, if there is an audit system, facility reviews are necessary, and these reviews should be management-system oriented.³ Massive reviews can be reserved only for the exceptional case, or at the initiation of a program to understand the basic problems at a facility. A number of companies focus on systems and the determination of major flaws. This approach allows the more frequent use of the audit on a more cost-effective basis. Once the basic role of facilities is established and understood in the environmental area, the facility audit is merely a cross-check to determine that the systems are performing adequately. Thus, to focus on auditing alone, without other strong programs and procedures, is an error. Auditing can provide only limited control and awareness of potential issues. It is merely a snapshot of existing controls at a facility at the time of the audit. Without other management systems, particularly a strong integrated risk management program,⁴ the audit is a very limited part of modern environmental management.

§ 8:38 Management role

Environmental auditing has generally not been like financial auditing, which is conducted under formal procedures pursuant to rules and standards allowing for

[Section 8:37]

¹EPA has published a bibliography of articles on auditing and environmental management. The Annotated Bibliography on Environmental Auditing (Mar. 1988) is available from EPA's Office of Enforcement and Compliance Assurance. While the list is somewhat out of date, the basic principles are still valid.

²See Friedman, *Managing and Resolving Corporate Environmental Issues*, Env'tl. F., May 1985, at 40, 58.

³See Friedman, *Managing and Resolving Corporate Environmental Issues*, Env'tl. F., May 1985; Kent, *Internal Environmental Review Programs—Pitfalls and Benefits*, J. Water Pollution Control Fed'n, Mar. 1985, at 191.

⁴Frank B. Friedman and James K. Vines, *Teaching the Business Case*, 31 Env'tl. F. 34 (Nov./Dec. 2014).

comparisons and judgments of compliance,¹ although there is increasing pressure, particularly with the advent of Sarbanes-Oxley, to consider more specific and detailed standards. The “standards” for environmental auditing (as well as safety and health), developed by the Board of Environmental, Health and Safety Audit Certifications (BEAC) in 1999,² were extensively revised in 2008. They are much more detailed, and the revisions considered many of the concepts in Sarbanes-Oxley.³ This structured approach, which is more akin to a financial “audit,” is not always necessary. Environmental regulations are not always specific and vary considerably both by location and industry. In some cases, it is not clear whether certain regulations even apply to a certain facility. While there may be times when an outside contractor or lawyer-controlled “audit” may be necessary, it should not be viewed as a “full employment” program for either group. Indeed, these programs can usually be handled in house by relatively small corporations and can be done effectively with proper initial guidance.

§ 8:39 Auditing goals

To be an effective management tool—which should be the purpose of environmental auditing—auditing must be examined in the context of responsible management. Management goals should include the following:

- (1) The development and implementation of corporate-wide policies, programs, and guidelines to provide independent assurances that the corporation is properly addressing environmental concerns. “Independent” does not mean that there must be certification by outside counsel or auditors; the whole purpose of auditing and other management programs is to ensure that the corporation is responding quickly and effectively to environmental issues and concerns. If the reviews and controls are provided by staff groups not directly involved in operations, this

[Section 8:38]

¹See Friedman, *Managing and Resolving Corporate Environmental Issues*, Env'tl. F., May 1985; Kent, *Internal Environmental Review Programs—Pitfalls and Benefits*, J. Water Pollution Control Fed'n, Mar. 1985, at 191.

²ISO 19011:2018 is now the ISO environmental auditing standard. <https://www.iso.org/standard/70017.html>. The version as of time of publication is the third edition, issued in 2018. The main differences compared to the second edition are as follows: (1) addition of the risk-based approach to the principles of auditing; (2) expansion of the guidance on managing an audit programme, including audit programme risk; (3) expansion of the guidance on conducting an audit, particularly the section on audit planning; (4) expansion of the generic competence requirements for auditors; (5) adjustment of terminology to reflect the process and not the object (“thing”); (6) removal of the annex containing competence requirements for auditing specific management system disciplines (due to the large number of individual management system standards, it would not be practical to include competence requirements for all disciplines); and (7) expansion of Annex A to provide guidance on auditing (new) concepts such as organization context, leadership and commitment, virtual audits, compliance and supply chain. ISO19011:2018 p. iv.

³“[I]n response to the Sarbanes Oxley Act of 2002, boards of directors and senior management are relying on the completeness and professional competence of EH&S audits just as they do with respect to their financial audits.” Introduction to the revised Performance and Program Standards for the Professional Practice of Environmental, Health & Safety Auditing at viii, available at THE INSTITUTE OF INTERNAL AUDITORS SOUTH AFRICA, ONLINE STORE: ONLINE BOOKSTORE: COMPLIANCE, STANDARDS FOR THE PROFESSIONAL PRACTICE OF ENVIRONMENTAL, HEALTH AND SAFETY AUDITS, <https://www.iiasa.org.za/store/ViewProduct.aspx?id=1671672> (last visited Mar. 30, 2022). The rule of certifying environment and safety professional auditors is now accomplished by the Board for Global EHS Credentialing. See CREDLY, BOARD FOR GLOBAL EHS CREDENTIALING, <https://www.credly.com/organizations/board-for-global-ehs-credentialing/badges>. International Standards for the Professional Practice of Internal Auditing (last visited Mar. 30, 2022) were updated in 2017 by the Institute of Internal Auditing <https://www.theiia.org/en/content/guidance/mandatory/standards/international-standards-for-the-professional-practice-of-internal-auditing/>.

normally will provide the necessary independence.¹

(2) A system for prompt identification of problems and advice to management on the issue and the approach being taken to solve the problem.

(3) The maintenance of a system for independently determining the status of compliance with environmental requirements by all facilities and subsidiaries of the corporation and for ensuring that any required actions are taken.

(4) The development and implementation of mechanisms to identify emerging and future environmental issues, as well as for coordinating planning for responses to such issues where more than one division is involved.

(5) The minimization of liability exposure of the corporation, its officers, and employees.

Whether one uses the term “audit” or “assessment” (as discussed previously, an “assessment” is less formal and relies more on individual judgment but should also be “independent”), the basic criteria for judging the quality of a program are “top management support; an audit manager or team independent of production responsibilities; a structured program with written audit procedures; a system for reporting audit findings to senior management; and a corrective action program.”²

§ 8:40 Addressing legal concerns

In practice, the biggest barrier discouraging some companies from conducting audits/assessments and implementing other management programs that document problems is fear of legal exposure. The smoking gun is every attorney’s nightmare, but smoking guns are only a problem if uncorrected. The decision to have such programs is also the decision to do something about the problems discovered. While initial auditing/assessment programs and other information-based management programs should be developed cautiously, the benefits of review in reducing present and future liabilities can far outweigh potential legal risks. However, as discussed in § 8:44, there are unfortunately too many instances in which agencies have attempted to use audits for enforcement purposes.

Nevertheless, the experience of many companies with audit/assessment programs indicates that significant legal problems rarely arise. Usually, these legal risks can be handled easily if counsel ensures that the audit/assessment team understands its responsibilities, such as its charter, obligations, operating procedures, scope of review of matters that may be or may be in litigation, what items are to be written down and how to write reports, what procedures to follow when potential violations exist, and agrees on basic definitions.¹ The reports do not always need to be reviewed by lawyers in an effort to create an attorney-client privilege or attorney work prod-

[Section 8:39]

¹Occidental Petroleum Corporation has a unique dual relationship of the Vice President for Health, Environment and Safety reporting to an Executive Vice President and an Environmental Committee of its Board of Directors. At Elf Atochem, North America, Inc. (now Arkema), the Senior Vice President for Health, Environment and Safety reported directly to the President and Chief Executive Officer, and was a member of the Executive Committee, which was the highest governing body of the company’s U.S. affiliate.

²See K. Blumenfeld & M. Haddad, *Beyond the Battleground: A (Non) Regulatory Perspective on Environmental Auditing* (EPA Draft 1983), reprinted in *Environmental Auditing Handbook: A Guide to Corporate and Environmental Risk Management* (L. Harrison ed., 1984).

[Section 8:40]

¹See Giannotti, *Compliance With EPA’s Laws and Regulations, Organizing Corporate Compliance Efforts for Corporate Counsel Seminar* (June 9–10, 1983) (a paper from an ABA National Institute sponsored by Section of Corporation, Banking and Business Law, and the Section on Litigation); see also Gibson & Fahrenthold, *New Perspectives on Corporate Risk and Ways to Reduce It* (pts. 1 & 2), *Envtl. F.*, Mar. 1983, at 39–41, Apr. 1983, at 37–44.

uct (although a company should not rule out audits/assessments under attorney-client privilege if there is potential for significant legal exposure). The primary concern is to have these documents as a management tool and to avoid the potential “that the Law Department could become a bottleneck, and thus impede corrective action.”² Note that many of these programs are designed to deal with matters that are required by law to be reported to agencies, such as permit excursions.³ Consequently, additional legal exposure is usually quite limited. There are sound reasons for utilizing audits/assessments: They are an excellent management tool for ensuring compliance. The value in having such a system “will be the fact that the corporation will be less apt to be prosecuted criminally and less apt to be subjected to punitive damages when sued by private parties.”⁴ This is an important consideration, especially in light of the potential for criminal prosecution.⁵ In addition, there is substantial precedent indicating that corporate officers can be held vicariously liable for the conduct of subordinate employees, and a purposeful failure to investigate or deliberate ignorance has been interpreted to be “knowledge” for purposes of criminal liability.⁶

There is also a trend to expand tort liability laws throughout the country to approximate “absolute liability” regardless of fault for injuries from products and exposure to allegedly hazardous or carcinogenic substances. Thus, the potential exposure in the law for businesses certainly increases the need for awareness and the necessity to develop strong compliance programs.

§ 8:41 Summary

Both from a liability exposure perspective and from the need to develop good management systems, some audit/assessment system should be implemented even in a small organization to ensure that management is made aware of potential

²Kent, *Internal Environmental Review Programs—Pitfalls and Benefits*, J. Water Pollution Control Fed’n, Mar. 1985, at 192.

³“Excursion” is defined in Occidental Petroleum Corporation procedures as:

[A]ny emission, discharge, or other release of material which is outside the parameters established in an agency-issued permit which limits the amount of such materials which can be discharged. This includes releases determined to be excursions based on measurements by official test procedures and reported to the agency. Excursions recorded by other means and which are not reported to the agency should be separately identified and reported.

Friedman, *Managing and Resolving Corporate Environmental Issues*, Env’tl. F., May 1985, at 45.

In addition, “significant matters” must also be reported under Occidental procedures. Events or situations may be considered significant if they may result in capital expenditures or potential costs exceeding a certain dollar amount. Any legal action by or against the company, any adverse publicity or adverse community relations, any identified risk to the environment, or any problems for which a remedial technology or cost of correction cannot be identified all can be significant, regardless of potential costs and liabilities. A significant matter arising from an accident or an incident must be reported immediately to corporate headquarters, while any other significant matter must be reported as soon as possible during working hours. The corporate department then makes a recommendation to the division and advises corporate management of the item and the recommended action. Friedman, *Managing and Resolving Corporate Environmental Issues*, Env’tl. F., May 1985, at 43.

⁴Kent, *Internal Environmental Review Programs—Pitfalls and Benefits*, J. Water Pollution Control Fed’n, Mar. 1985, at 193.

⁵See generally Frank Friedman, *Is This Job Worth It?*, Env’tl. F., May/June 1991, at 20; Greenhouse, *Responsibility for Job Safety*, N.Y. Times, June 25, 1985, at 30, col. 1.

⁶See, e.g., *U.S. v. Johnson & Towers, Inc.*, 741 F.2d 662, 21 Env’t. Rep. Cas. (BNA) 1433, 14 Env’tl. L. Rep. 20634 (3d Cir. 1984); RCRA § 3008(f), 42 U.S.C.A. § 6982(f) (setting forth special rules for establishing criminal liability for a knowing endangerment violation); see also Restatement Second, Torts § 288(c) (1977). The Restatement has adopted the view that “compliance with a legislative enactment or administrative regulation does not prevent a finding of negligence where a reasonable man would take additional precautions.” Restatement Second, Torts § 288(c) (1977). While the Restatement view is not necessarily the view of many states, it does indicate potential additional exposure.

environmental problems and is committed to solving them. Immediately taking care of such problems, using an environmental review or audit program as part of an overall system, is both cost effective and will reduce long-term liability and environmental cost.

VI. ENVIRONMENTAL AUDITING—EPA POLICY

§ 8:42 Introduction

In order to fully understand EPA's audit policy and its implementation, as well as the broader legal and policy implications of disclosure described subsequently (see § 8:46 Legal and Policy Concerns as to Disclosure under the Audit Policy), it is important to first trace the policy's history since its inception. EPA issued its original policy statement on environmental auditing in July 1986.¹ The policy was summarized by EPA as follows:

It is EPA policy to encourage the use of environmental auditing by regulated entities to help achieve and maintain compliance with environmental laws and regulations, as well as to help identify and correct unregulated environmental hazards

This policy statement specifically:

- (1) Encourages regulated entities to develop, implement and upgrade environmental auditing programs.
- (2) Discusses when the Agency may or may not request audit reports.
- (3) Explains how EPA's inspection and enforcement activities may respond to regulated entities' efforts to assure compliance through auditing.
- (4) Endorses environmental auditing at federal facilities.
- (5) Encourages state and local environmental auditing initiatives.
- (6) Outlines elements of effective audit programs.²

The Agency cautioned, however, that "the existence of an auditing program does not create any defense to, or otherwise limit, the responsibility of any regulated entity to comply with applicable regulatory requirements."³

§ 8:43 The 1986 policy statement

EPA's 1986 policy statement was the first formal endorsement of environmental auditing programs. While providing its definition of an environmental audit,¹ and the many benefits that can derive from such a program, the Agency was quick to point out that audits do not replace other activities required by law (for example, emissions monitoring) or regulatory agency inspections.

In encouraging the use of auditing, EPA specifically stated that it would not interfere with or dictate environmental management practices; auditing should be a voluntary practice. EPA's 1986 policy did not rule out the possibility that the Agency would request audit reports, although it acknowledged that routine requests would

[Section 8:42]

¹51 Fed. Reg. 25004 (July 9, 1986). The interim policy statement was published at 50 Fed. Reg. 46504 to 46508 (Nov. 8, 1985).

²51 Fed. Reg. 25004 (July 9, 1986).

³51 Fed. Reg. 25004 (July 9, 1986).

[Section 8:43]

¹EPA defines environmental auditing as "a systematic, documented, periodic, and objective review by regulated entities of facility operations and practices related to meeting environmental requirements." 51 Fed. Reg. 25004, 25006 (July 9, 1986). The term "regulated entities" includes private firms and public agencies, as well as federal, state, and local agencies. 51 Fed. Reg. 25004, 25006 (July 9, 1986).

inhibit auditing programs. Thus, under the 1986 policy, audit reports would be requested only on a case-by-case basis.² The standards EPA used to determine whether an audit report would be requested in a particular case, as articulated in the policy statement, was “where the Agency determines it is needed to accomplish a statutory mission, or where the government deems it to be material to a criminal investigation.”³ Specific examples of audits that would be requested would be those conducted under consent decrees or other settlement agreements; where a company has placed its management practices at issue by raising them as a defense; or where a state of mind or intent are a relevant element of inquiry, such as during a criminal investigation.⁴

EPA also stated that an audit program would not result in any agreement not to conduct inspections, reduce enforcement, or provide as a basis for any other incentives. The Agency did indicate, however, that because an audit program would aid an entity in improved compliance, the program would improve environmental performance.⁵ Inasmuch as the Agency’s enforcement policy considered efforts to avoid and promptly correct environmental problems, “EPA may exercise its discretion” as to an entity’s implementation of an audit program that aids in those goals [e.g. enforcement activities and compliance actions]⁶

EPA also stated that auditing generally would not be mandated, but the policy statement provided for exceptions. Specifically, EPA could require auditing as part of a settlement.⁷ According to the 1986 policy, mandated auditing was most likely to result from situations in which a pattern of violations could be attributed to the absence or poor design of an environmental management system, or where the type or nature of violations indicated that similar problems may exist or were likely to occur.⁸

EPA’s 1986 policy statement also applied to federal agencies, which were encouraged to implement auditing programs. It was noted, however, that the Freedom of Information Act would govern any disclosure of audit reports or audit-generated information requested from federal agencies by the public.⁹ Finally, EPA stated that its policy was not intended to preempt or preclude states from developing other approaches to environmental auditing.¹⁰

§ 8:44 The 1995 interim policy statement

In April 1995, EPA issued an interim policy on voluntary auditing and disclosure, effective March 31, 1995.¹ The 1995 interim policy was widely recognized as an improvement over its predecessor because it addressed several of the key concerns industry expressed over the years regarding EPA’s 1986 environmental auditing policy. However, there were many issues that EPA either did not address or failed to address adequately.

²51 Fed. Reg. 25004, 25007 (July 9, 1986).

³51 Fed. Reg. 25004, 25007 (July 9, 1986).

⁴51 Fed. Reg. 25004, 25007 (July 9, 1986).

⁵51 Fed. Reg. 25004, 25007 (July 9, 1986).

⁶51 Fed. Reg. 25004, 25007 (July 9, 1986).

⁷51 Fed. Reg. 25004, 25007 (July 9, 1986).

⁸51 Fed. Reg. 25004, 25007 (July 9, 1986).

⁹51 Fed. Reg. 25004, 25008 (July 9, 1986).

¹⁰51 Fed. Reg. 25004, 25008 (July 9, 1986).

[Section 8:44]

¹EPA, Voluntary Environmental Self-Policing and Self-Disclosure Interim Policy Statement, 60 Fed. Reg. 16875 (Apr. 3, 1995).

Some background might be helpful to understand the shortcomings of the 1995 interim policy. The significant concerns that industry, states, and others raised regarding EPA's prior policy have been the subject of much discussion and will not be repeated here.

The 1995 interim policy was intended to ensure that proactive companies with voluntary self-auditing programs would not be penalized for undertaking such activities. Under the interim policy, EPA would have substantially reduced civil penalties for entities that voluntarily disclosed and promptly corrected violations identified through self-evaluations, if they met other stated conditions. EPA would have, in most cases, eliminated the "gravity" (punitive) component of the penalty if there was "full cooperation" (as interpreted by EPA). The Agency, however, would have continued to seek the economic benefit, if any, derived from the noncompliance. Moreover, cases involving severe harm to public health or the environment were not eligible for reduced penalties.

Similarly, EPA would not recommend that the Department of Justice bring criminal cases against regulated entities that voluntarily disclosed and promptly corrected violations identified through self-evaluations, if they satisfied certain other conditions. EPA ordinarily will not request voluntary audit reports to trigger civil or criminal investigations unless it has other, independent information that indicates that a violation may have occurred. This, in essence, is a restatement of its 1986 policy.

Notwithstanding EPA's considerable efforts to address concerns regarding its prior auditing policy in the 1995 interim policy, significant questions were raised.

First, although a step in the right direction, it is questionable whether penalty mitigation is an adequate substitute for environmental audit protection and the presumption of immunity. Transactionally, the initiation of an enforcement action, even if the penalty amount is greatly reduced, causes a company to incur considerable costs, e.g., adverse publicity and legal fees, many of which can be difficult to quantify.

Second, the definition of "environmental audit report" in the interim policy was too narrow. It expressly excluded the "factual information underlying or testimonial evidence relating to such information." The breadth of this exclusion could eviscerate the effect of the policy.

Third, the interim policy did not appear to protect violations that are legally required to be self-reported, but would otherwise not have been discovered in the absence of the audit. Because the universe of violations falling into this category is open-ended, this could act as a real deterrent to voluntary auditing.

Fourth, the interim policy was apparently developed by EPA's enforcement staff, with little or no formal involvement by other policy offices. It begs the question, however, why EPA did not previously solicit the views of other program offices.

Fifth, the policy was intended only as guidance. As such, EPA enforcement staff would not be required to follow it, and many in the regulated community feared that, in fact, they would not.

Sixth, the interim policy did not protect against suits by private litigants (due to the lack of privilege), nor did it protect individuals or a company (due to lack of immunity). EPA believes that granting a privilege runs counter to opening up environmental decision making and that a privilege can be used to shield bad actors.² However, EPA reaffirmed a commitment to review provisions in states with privilege laws in connection with its approval of delegated Resource Conservation

²EPA has taken a negative view of most state environmental auditing laws, however, contending that they "often conflict with federal delegating requirements and, consequently, present issues that have to be addressed in the context of program approvals, modifications and withdrawals," Memo on

and Recovery Act, Clean Water Act, and Clean Air Act programs. The tenor of this reaffirmation ran completely counter to the movement to delegate more enforcement authority to the states.

Thus, although the interim policy represented progress, the consensus at the time apparently was that EPA's work was nowhere near finished. From industry's standpoint, penalty mitigation is not enough; an audit policy needs to include a presumption of immunity. The concern was that the guidance would leave too many opportunities for overzealous officials and prosecutors to render ad hoc decisions for all the wrong reasons. Moreover, because state privilege laws are not about to disappear, EPA needs to understand the bases for industry's concerns and recognize that the only reason these state laws are on the books is the perception that EPA dropped the ball. There may be evildoers who go unpunished—this happens now and will occur under any system—but overall compliance and protection of the environment will increase.

§ 8:45 The 1996 voluntary disclosure, audit policy, and subsequent EPA documents¹

On December 22, 1995, EPA published its Final Policy Statement on environmental audits and self-policing, effective January 22, 1996.² The final policy offered incentives, primarily in the form of penalty reductions, to encourage corporations and public agencies to conduct voluntary environmental compliance audits and to correct and report any violations they discover as a result. It did not, however, adequately address many significant concerns (see § 8:46). EPA issued the policy as guidance, and not a binding rulemaking. EPA asserted, however, that Agency personnel will be expected to follow the policy in settlement agreements and that EPA “will take steps to assure national consistency.”³

To benefit from the incentives, a company had to meet most or all of the following nine conditions:

- (1) it must discover the violation either through an “environmental audit” or “due diligence” (an entity’s systematic efforts to prevent, detect, and correct violations through a broadly defined environmental management system.)
- (2) discovery and reporting must be “voluntary.”
- (3) discovery must be followed by prompt, written disclosure within 10 days of discovery or any shorter period required by law.
- (4) the company must discover and report the violation before commencement of

Addressing State Audit, Immunity Laws and Legislation (Nov. 10, 1997), *cited in* ENVIRONMENTAL AUDIT TASK FORCE, ABA NAT. RESOURCES, ENERGY, AND ENVTL. L. SEC., ANNUAL REPORT 198 (1997) [hereinafter ENVIRONMENTAL AUDIT TASK FORCE]; see also Nancy K. Stoner & Wendy J. Miller, *National Conference of State Legislatures Study Finds That State Environmental Audit Laws Have No Impact on Company Self-Auditing and Disclosure of Violations*, 29 ELR 10265 (May 1999). See also 51 Fed. Reg. at 25004. EPA alleges that “state laws that immunize serious violations fail to protect the environmental and public health adequately and discourage companies from making the investment in pollution control necessary to prevent such violators.”

[Section 8:45]

¹The following discussion is taken, in large part, from the 1995 Annual Report of the Special Committee on Corporate Counsel of the American Bar Association’s Section on Natural Resources, Energy, and Environmental Law, contributed by Gary Rovner and edited by Pamela A. Lacey of Cofield Ungaretti & Harris, with assistance from Charlotte H. Copperthite of Minerals Technologies, Inc., Paul W. Herring of Maxus Energy Corp., and Frank B. Friedman, originally published in XII Natural Resources, Energy, and Environmental Law 1995: The Year in Review 377–78 (1996) (Vol. XII) Copyright © 1996 by The American Bar Association. Reprinted by permission.

²60 Fed. Reg. 66706 (Dec. 22, 1995).

³60 Fed. Reg. 66706, 66710 (Dec. 22, 1995).

- any government investigation, citizen suit, third-party complaint, or “imminent discovery of the violation by a regulatory agency.”
- (5) the company must correct the violation within 60 days of discovery or notify EPA that remediation will take longer.
 - (6) the company must agree to take steps to prevent recurrence of the violation, including improving its audit system.
 - (7) the company must not have had the same or a closely related violation within the past three years at the same facility, or a company-wide pattern of similar violations at the parent level over the past five years (which, in effect, gives no credit for significant upgrades or improvements in company-wide environmental management systems and compliance during that time.)
 - (8) the violation must not have violated a judicial or administrative order or consent agreement, or resulted in or threatened an imminent and substantial endangerment.
 - (9) the company must cooperate with EPA by providing access to company employees and documents.

If a company met *all* of the above conditions, EPA would not seek gravity-based penalties. If a company met *all but the first* condition, EPA would reduce the gravity-based penalty by 75%. However, EPA retained discretion to recover any economic benefit of the noncompliance to preserve a “level playing field.”⁴

The “pattern of violations” issue is an area of major concern to the regulated community. EPA’s Office of Enforcement and Compliance Assurance will target a company as a “national violator” if the company, based on Agency records, is having similar problems in different facilities in several states.⁵ This could be an “apples and oranges” situation, depending on how closely the violations are defined. In one matter before the EPA Environmental Appeals Board, the Agency has taken the position that a continuing violation not previously discovered by a corporation was a “repeat” violation and, therefore, not subject to the policy.⁶

The final policy also stated that EPA will not recommend to the Department of Justice that criminal charges be brought against any company, provided: (1) the company meets all nine conditions above; (2) there is no evidence of “a prevalent management philosophy or practice that concealed or condoned environmental violations”; and (3) high-level managers were not consciously involved in or willfully blind to the violations. The policy also expressly reserves EPA’s power to prosecute responsible individual managers and officers.

From industry’s standpoint there were still many areas of concern. The policy indicated that a company must “fully disclose a specific violation within ten days (or such shorter period provided by law) after it has *discovered* that the violation has occurred or *may have occurred* in writing to EPA.”⁷ The catch-22 is determining both what is “discovered” or “may have occurred.” Determining when that timeline begins—particularly when there is a need to carry out some preliminary investigating—is tricky. Reporting too early and setting the regulatory engine in motion is not advisable, but reporting too late may prevent use of the policy. The Agency had

⁴60 Fed. Reg. 66706, 66712 (Dec. 22, 1995).

⁵EPA Enforcement Office Targets Companies with Recurring Violations, Env’tl. Pol’y Alert, Jan. 31, 1996, at 39.

⁶In re Harmon Elec., Inc., RCRA Appeal No. 94-4 (EPA Env’tl. Appeals Bd. May 1, 1996); see EAB Hears Arguments in Audit Policy Case; Company Argues Actions Merit Penalty Decrease, 27 Env’t Rep. (BNA) 232–33 (May 10, 1996).

⁷60 Fed. Reg. 66706, 66711 (Dec. 22, 1995) (emphasis added).

indicated that it “may” accept late disclosures, but that still gave “little comfort.”⁸ “One plausible explanation for this apparent contradiction was that EPA would insist on disclosure within 10 days where the uncertainty has to do with interpreting regulatory requirements (a realm within which ‘definitive determinations’ often are made by regulatory authorities), while greater delays will be tolerated where the uncertainty has to do with factual circumstances requiring investigation by the entity.”⁹

A significant ambiguity in the policy was its exclusion of violations that “may have presented an imminent and substantial endangerment to human health or the environment.”¹⁰ Federal statutes such as RCRA contain imminent and substantial endangerment language. Noting that “[j]udicial decision interpreting [such] provisions have been interpreted broadly,”¹¹ private attorney James Stewart also claims:

[S]uch broad and liberal interpretations of the imminent and substantial endangerment language may have some justification under RCRA or other substantive environmental provisions. The use of such language in the Final Environmental Audit Policy, however, gives EPA almost unfettered discretion to classify a violation as one that may have presented an imminent and substantial endangerment so as to be outside of the protections of the Policy. This ambiguity and broad discretion adds to the uncertainty of whether any particular violation discovered in an environmental audit and self-reported to EPA will fall within the Final Environmental Audit Policy’s protection.¹²

On the bright side, a major improvement in the policy was the Agency’s willingness to accept “due diligence” as a basis for penalty mitigation. Because of their importance and the fact that *all* of these measures must be complied with to obtain a 75% reduction of the gravity element of the total penalty, it is important to know what constitutes due diligence under the policy:

“Due Diligence” encompasses the regulated entity’s systematic efforts, appropriate to the size and nature of its business, to prevent, detect, and correct violations through all of the following:

- (a) Compliance policies, standards, and procedures that identify how employees and agents are to meet the requirements of laws, regulations, permits, and other sources of authority for environmental requirements;
- (b) Assignment of overall responsibility for overseeing compliance with policies, standards, and procedures, and assignment of specific responsibility for assuring compliance at each facility or operation;
- (c) Mechanisms for systematically assuring that compliance policies, standards, and procedures are being carried out, including monitoring and auditing systems reasonably designed to detect and correct violations, periodic evaluation of the overall performance of the compliance management system, and a means for employees or agents to report violations of environmental requirements without fear of retaliation;
- (d) Efforts to communicate effectively the regulated entity’s standards and procedures to all employees and other agents;

⁸Final EPA Policy on Voluntary Audits Draws Praise, Criticism From Attorneys, 20 Chem. Reg. Rep. (BNA) 1251 (Jan. 26, 1996).

⁹James T. Banks, EPA’s New Enforcement Policy: At Last, A Reliable Roadmap to Civil Penalty Mitigation for Self-Disclosed Violations, 26 Env’tl. L. Rep. (Env’tl. L. Inst.) 10227, 10234 (May 1996). This article does an excellent job of describing and analyzing the policy in detail.

¹⁰60 Fed. Reg. 66706, 66712 (Dec. 22, 1995).

¹¹James Stewart, Environmental Audits and Voluntary Disclosure Issues, Remarks at the A.B.A. Section on Natural Resources, Energy, and Environmental Law’s 25th Annual Conference on Environmental Law, Keystone, Colo. (Mar. 21–24, 1996).

¹²James Stewart, Environmental Audits and Voluntary Disclosure Issues, Remarks at the A.B.A. Section on Natural Resources, Energy, and Environmental Law’s 25th Annual Conference on Environmental Law, Keystone, Colo. (Mar. 21–24, 1996).

- (e) Appropriate incentives to managers and employees to perform in accordance with the compliance policies, standards, and procedures, including consistent enforcement through appropriate disciplinary mechanisms; and
- (f) Procedures for the prompt and appropriate correction of any violations, and any necessary modifications to the regulated entity's program to prevent future violations.¹³

EPA further announced that it would continue its policy to refrain from routinely requesting voluntary audit reports. However, if EPA has independent evidence of a violation, it may seek an audit report to support its enforcement action.¹⁴ In the preamble to the policy, EPA asserted that its review of the criminal docket “did not reveal a single criminal prosecution for violations discovered as a result of an audit self-disclosed to the government.”¹⁵ Yet, in some cases, EPA has used self-disclosed audit reports to expand and support criminal enforcement actions. EPA also indicated that it remains strongly opposed to federal and state audit privilege legislation and reserves its rights to bring independent actions against regulated entities in states with privilege laws.¹⁶

§ 8:46 Elements of an effective environmental auditing program

EPA's 1986 policy statement sets forth seven elements the Agency has identified as those most likely to result in an effective program. These elements are set out in an Appendix to the 1986 policy and remain valid as of publication:

- (1) Explicit top management support for environmental auditing and commitment to follow up on audit findings
- (2) An environmental auditing function independent of a financial audit
- (3) Adequate team staffing and auditor training
- (4) Explicit audit program objectives, scope, resources, and frequency
- (5) A process that collects, analyzes, interprets and documents information that is sufficient, reliable, relevant, and useful to achieve audit objectives
- (6) A process that includes specific procedures to promptly prepare candid, clear, and appropriate written reports on audit findings, corrective actions, and schedules for implementation
- (7) A process that includes quality assurance procedures to assure the accuracy and thoroughness of environmental audits.¹

The audit/assessment program outlined in § 8:2 above meets and exceeds in all categories the program EPA has outlined as being “effective.”

¹³60 Fed. Reg. 66706, 66710 to 66711 (Dec. 22, 1995).

¹⁴It may be possible to protect environmental audit reports under the attorney-client privilege in some circumstances. In addition, some courts have recognized a limited self-evaluative privilege as a matter of federal common law. See, e.g., *Reichhold Chemicals, Inc. v. Textron, Inc.*, 157 F.R.D. 522, 39 Env't. Rep. Cas. (BNA) 1328, 29 Fed. R. Serv. 3d 1153, 25 Env'tl. L. Rep. 20307 (N.D. Fla. 1994).

¹⁵60 Fed. Reg. 66706, 66708 (Dec. 22, 1995).

¹⁶Indeed, several EPA regions as well as headquarters weighed removing delegated authority from certain state air programs, claiming a lack of authority by the states to enforce them fully. See EPA Weighs Blocking Air Permit Delegation to States With Audit Laws, Env'tl. Pol'y Alert, Mar. 27, 1996, at 16; State Immunity Laws for Audits Could Hurt Program Delegation, Official Says, 26 Env't Rep. (BNA) 2253 (Mar. 29, 1996). EPA has decided to approve state air programs in states with such legislation on an “interim” basis. EPA to Okay Interim Permit Programs Despite Audit Privilege Laws, Env'tl. Pol'y Alert, Apr. 10, 1996, at 15.

[Section 8:46]

¹51 Fed. Reg. 25004, 25008 to 25009 (July 19, 1986).

On May 17, 1999, EPA proposed revisions to the audit policy.² The proposal would have extended the period for reporting from 10 days to 21 days after a discovery by an “employee.”³ An interesting question is whether this should be after disclosure to a responsible manager. EPA stated it would also consider expanding this deadline to allow for additional facilities to be audited.

EPA also indicated that full cooperation under the proposed revisions would not require a waiver of all legal right. However, on a close reading, there is no clear statement as to which rights are not waived. EPA, in this proposal, retains its exclusion for multi-violators (regardless of when previous violations occurred) and violations that may cause imminent and substantial hazards. An additional preclusion is if a company is subject to an EPA multi-facility review, regardless of whether the company knows about the review, although this is somewhat modified in the revised final policy.⁴

On August 1, 2008, EPA published an Interim Approach to Applying the Audit Policy to New Owners.⁵ Among the improvements, from the perspective of new owners, is the availability of a 45-day period after closing to disclose violations discovered pre-closing, or up to 21 days after discovery of the violation, whichever is longer.⁶ The policy provides any new owner who may be concerned about its inability to meet these “prompt disclosure” deadlines the opportunity, within nine months of acquiring the new facility, to enter into an audit agreement with the EPA to “stop the clock” and readjust deadlines based on the entities’ individual circumstances.⁷

EPA also indicated that full cooperation does not require a waiver of all legal rights, but, as before, it is difficult to locate in the proposed policy language stating which rights are not waived. EPA retains its exclusion for multi-violators (regardless of when previous violations occurred) and violations that may cause imminent and substantial hazards. An additional preclusion is if a company is subject to an EPA multi-facility review, regardless of whether the company knows or does not know about the review. As discussed subsequently, EPA’s eDisclosure initiative does not address these concerns.⁸

Legal and Policy Concerns as to Disclosures under the Audit Policy

The previous discussion analyzed in detail the specific language of the Audit Policy and some EPA policy pronouncements. However, the practical implementation of the Policy and the risks involved in disclosure are also critical in determining whether and what to disclose under the Policy. Because of EPA’s over-emphasis on its enforcement statistics (explained immediately below), there are numerous widely recognized risks and uncertainties inherent in audit policy disclosures. As a result, “[the Audit Policy] needs to be used very carefully and under the right

²Evaluation of “Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations” Policy Statement, 64 Fed. Reg. 26745 (May 17, 1999).

³64 Fed. Reg. 26745, 26753 (May 17, 1999).

⁴64 Fed. Reg. at 19622.

⁵73 Fed. Reg. 44991 (Aug. 1, 2008); EPA Audit Policy Changes Ease Industry Fears Over Merger Impacts, *Env’tl. Pol’y Alert*, Dec. 3, 2008, at 45.

⁶The interim policy provides: “For violations discovered pre-closing, prompt disclosure to EPA would have to be made within 45 days after the transaction closing to be considered for new owner incentives. For violations discovered post-closing, the new owner would have to disclose violations within 21 days after discovery or within 45 days after the transaction closing, whichever time period is longer.” 73 Fed. Reg. at 45001.

⁷73 Fed. Reg. at 45001.

⁸EPA, *EPA’s eDisclosure*, <https://www.epa.gov/compliance/epas-edisclosure> (last visited Feb. 14, 2022).

circumstances.”⁹ It is widely known in industry that when making disclosures pursuant to the Audit Policy, the disclosing company risks losing control of the process and EPA will begin to act in an enforcement capacity, ordering that the company undertake significant and costly remedial measures that well exceed compliance. The inherent risks in audit policy disclosures have been the subject of a considerable number of publications by respected environmental lawyers and regulators:

EPA’s present system for evaluating the successfulness of its enforcement work is based on a set of numerical indicators. EPA officials keep a record of the number of administrative orders, civil referrals and criminal referrals issued or made by the agency over the course of a fiscal year, as well as the total amounts of administrative and civil penalties it has assessed against environmental violators. These figures, which play a role in EPA’s internal allocation of resources, are then made available to the Congress and interested members of the public. This system, which has been widely referred to as ‘bean counting,’ has been subject to extensive and sometimes heated criticism, both from within the agency and from outside it.¹⁰

There is no guarantee that auditing companies will receive any benefit for th[eir auditing and disclosure] efforts. Given the bean-counting mindset, there is clearly an incentive to use the information generated in an audit report for an easy enforcement score. For those reasons, and the apparent reliance on enforcement quotas, industry groups maintain that the EPA’s efforts [to offer penalty reductions in connection with its audit policy] are mostly cosmetic.¹¹

If requested audit results disclose violations not previously suspected or investigated by EPA, it is unclear whether the agency will use these audit results to enforce the previously uninvestigated violations.¹²

[A] responsible company that does a thorough audit and discloses noncompliance from which it achieved some speculative economic benefit is more likely to get penalized than a company that did not audit at all. Often the noncompliance is obscure, complex or otherwise hard to discover. In such instances the responsible company ends up worse off than had it not conducted the audit in the first place, or conducted it and corrected the noncompliance without disclosing it to the Agency. While EPA’s approach of recovering ‘ill-gotten gains’ has superficial appeal, in our experience it only serves as a disincentive to disclosure.¹³

[T]he threat of criminal prosecution, which is to be made indirectly and artfully, also can be used as leverage to facilitate civil settlements.¹⁴

In the supplementary information provided by EPA in the Federal Register addressing the background and goals of the 2008 Interim Approach, EPA itself discussed common industry perceptions about the risks inherent in audit policy disclosures:

[T]he Agency’s experience with implementing the Audit Policy, especially with regard to corporate auditing agreements, suggests that one of the major reasons a company may be hesitant to self-audit and disclose under the Audit Policy is uncertainty about how the Agency will treat such self disclosures. EPA is currently [in 2008] making an effort to provide greater overall certainty and consistency in the Audit Policy’s

⁹See Friedman, *Practical Guide to Environmental Management*, 7th ed. (1997) at 214, 8th ed. (2000) at 228, 9th ed. (2003) at 277, 10th ed. (2006) at 305 11th ed. (2011) at 249.

¹⁰See Joel A. Mintz, *Enforcement at the EPA—High Stakes and Hard Choices*, (1995).

¹¹See Marty, *Moving Beyond the Body Count and Toward Compliance: Legislative Options for Encouraging Environmental Self-Analysis*, 20 Vt. L. Rev. 495, 497–98 (1995).

¹²See Marty, *Moving Beyond the Body Count and Toward Compliance: Legislative Options for Encouraging Environmental Self-Analysis*, 20 Vt. L. Rev. 495, 519–21 (1995).

¹³See Bruce Adler, *Response Of The General Electric Company To EPA’s May 14, 2007 Request For Comments On Enhancing Environmental Outcomes From Audit Policy Disclosures Through Tailored Incentives For New Owners*, EPA-HQ-OECA-2007-0291 (2007), at 6.

¹⁴See Friedman, *Practical Guide to Environmental Management*, 5th ed. (1993) at 45.

implementation.¹⁵

The Agency recognizes that post-transaction demands may make it difficult to focus corporate attention on an immediate evaluation of environmental compliance issues, especially when the company would have to make a potentially expensive commitment to conduct audits and address noncompliance. The Agency believes that requiring such potentially high-stakes decision-making too quickly after the transaction, before the new owner has had the chance to operate its facility, would mean that fewer new owners would come forward, notwithstanding that, given more time for consideration and analysis of the situation, some would have indeed used the Audit Policy. Since EPA's intent is to encourage new owners to audit and disclose, and work with the Agency to correct problems, it seems advisable to provide sufficient time for decision making.¹⁶

The result of the above-described agency mentality is a very well-known phenomenon that may be described as the "no take back rule." The "no take-back rule" is a short-hand description of the well-known EPA and DOJ enforcement culture and tactics that emphasize and measure continuing improvement in enforcement through increases in enforcement statistics ("bean counting") and provide strong internal incentives to take punitive action even in cases of self-reporting.¹⁷ Throughout its history, EPA has believed that both its reputation with the public and its share of congressional budget allocations rest on its enforcement statistics. It has zealously guarded its ability to show continued improvement in those statistics and attempts to avoid any actions that will reduce those statistics.

Companies making disclosures under the EPA Audit Policy are wise to consider the implications of the previously described EPA culture and tactics. Once a proposal or disclosure is made to EPA, it is very difficult for a company to "take back" such proposal or disclosure. As one commentator puts it:

[A]n inexperienced auditor may often make conclusory statements concerning problems, rather than merely report the existence of a problem. In the light of subsequent information, this may prove to be a harmful and expensive indulgence. For example, if an 'audit' indicates that a certain type of expensive pollution control equipment should be installed, it may have the effect of carving that solution in stone, even if a less expensive approach would be effective to solve the problem.¹⁸

Similarly:

On the one hand, EPA enforcement policy encourages environmental auditing and self-

¹⁵Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,944 (Aug. 1, 2008).

¹⁶Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,007 (Aug. 1, 2008).

¹⁷See Frank Friedman, *Practical Guide to Environmental Management* 24 (11th ed. 2011) ("The formal, legalistic nature of EPA's enforcement efforts is reflected in the agency's system for measuring and publicizing enforcement success. It is also evident in the EPA's sizeable legal staff, the high volume of cases it regularly refers to the Justice Department for civil action or criminal prosecution, the monetary value of the civil and administrative penalties it has assessed against violators, and the large body of enforcement policies, guidance documents, and studies it has issued therefore require or urge the use of formal enforcement methods."); Joel A. Mintz, *Enforcement at the EPA-High Stakes and Hard Choices* 102 (University of Texas Press, Austin, 1995). See also Jonathan H. Adler, *Bean Counting for a Better earth-Environmental Enforcement at the EPA*, (Regulation (Spring 1998)) 46. Roger Marzulla, former Assistant Attorney General, Environment and Natural Resources Division stated "EPA and Justice Department measure the success of the environmental enforcement program not on the basis of environmental improvements made, but rather on the number of convictions and the penalties obtained." Testimony Before the Judiciary Committee of the House of Representatives, Subcommittee on Commercial and Administrative Law (May 2, 1998). See also Judson Starr, former chief of DOJ's Environmental Crimes Section, "[t]here is now a machine and the machine must be fed." Address to the Am. Bar Assoc., Section of Natural Resources, Energy and Environmental Law, 19th Annual Conference (May 15-18, 1990) Friedman, *supra* 45 at p. 21.

¹⁸Daniel Riesel, *Environmental Enforcement-Civil and Criminal*, Law Journal Press, New York, New York, Release 29, 2011, originally published 1997, 8.04 [2], p. 8-25.

policing and recognizes their essential importance in improving compliance rates. On the other hand, if a company self polices, uncovers noncompliance and eliminates the problem, there is a significant likelihood that it will still be punished, and the very information developed in its self-policing efforts will be utilized as evidence Even when corporate behavior has been indisputably well-intentioned, some enforcement officials have neither hesitated to use audit information nor refrained from criminal prosecution. The result is the creation of a substantial disincentive to the implementation of auditing and other self-policing programs.¹⁹

The obvious corollary is that industry takes great care in making proposals and/or disclosures knowing that EPA will create extraordinarily significant obstacles in the event that a company seeks to retract its proposals or disclosures, or any portion thereof. Accordingly, it is widely recognized by industry that environmental auditing must be done carefully to avoid unnecessary costs and liabilities, particularly if the results of the auditing and/or the audits themselves are disclosed to governmental agencies.

The implications of disclosure are very significant. Even a relatively routine matter can lead to further investigation by an agency and potential escalation of remedies and costs. Moreover, disclosures under the Agency's New Owner Program tailored to companies that have newly acquired assets can result in seven-figure penalties and injunctive relief totaling hundreds of millions of dollars, not to mention the difficulty and cost in managing what is often a variety of additional requests for information, site inspections, and potential longer-term oversight. Thus, despite enhanced benefits for "new owners," constraints on the Agency's tailored policy for new acquisitions potentially dampen a more robust use of the New Owner Policy.²⁰

It is therefore important to assure that a company understands the facts surrounding the disclosure and the implications of the disclosure **prior to contacting the appropriate agency or agencies**. Whether a company has conducted a reasonable investigation prior to disclosing is of primary importance. Whether the disclosure qualifies for Audit Policy protection is of secondary importance. Indeed, a company may disclose under the auspices of the Audit Policy, or may determine to disclose outside the auspices of the Audit Policy if it needs more than 21 days to complete a thorough investigation.

Scope of Investigation Prior to Disclosure to the Government

Prior to making any disclosure to the government, whether under the Audit Policy or otherwise, a company should carry out the following steps for a thorough investigation and review prior to deciding whether, when, and if so, how to disclose:

- a. Identify and interview the relevant personnel to determine the history of the alleged non-compliance. This involves identifying process engineers with percipient knowledge of the potential compliance issue, even if the relevant personnel have retired, changed employers, or remained with a prior owner in the context of an acquisition.
- b. Determine what types of relevant documentation exist.
- c. Conduct a records search. If critical documents are initially unavailable, expand the search as appropriate to find them.
- d. Determine if the compliance issue is discrete or part of a larger pattern or

¹⁹See James G. Moore, Protection Will Increase Compliance, The Environmental Forum, Jan.-Feb. 1992, at 39, 40.

²⁰The New Owner program is set forth in the "Interim Approach to Applying the Audit Policy to New Owners," 73 Fed. Reg. 44,991 (Aug. 1, 2008). The Agency recognized that its "experience with implementing the Audit Policy, especially with regard to corporate auditing agreements, suggests that one of the major reasons a company may be hesitant to self-audit and disclose under the Audit Policy is uncertainty about how the Agency will treat such selfdisclosure." 73 Fed. Reg. at 44,944 (Aug. 1, 2008).

practice. A single disclosure may raise the question of whether similar situations exist at other facilities or if potential violations of one regulation trigger violations of another regulation. If the company knows of a potential pattern or practice, it should understand the scope and extent thereof prior to disclosing a discrete issue. Similarly, if the government can be assured that there is no pattern or practice from the outset, potential exposure can be limited.

If the regulated entity's investigation remains incomplete within 21 days of discovery, it must weigh the risks of: (a) making wrong or incomplete disclosures to obtain the benefits of disclosing under the Audit Policy, against (b) waiting to disclose until an investigation is complete.

Typically, if there are potentially significant compliance concerns or capital costs involved with the disclosure of a potential compliance issue, the benefits offered under the Audit Policy are not worth the risk of rushing a disclosure. While EPA touts three incentives for making disclosures pursuant to its Audit Policy—again: no gravity-based penalties or the reduction of gravity-based penalties by 75%; no recommendation for criminal prosecution; and no routine request for environmental audit reports—industry typically views these benefits with skepticism, particularly when it comes to disclosing potentially serious violations of law:

Regulated industries do not find the EPA's audit policy so filled with incentives. For one, while most qualifying firms can be assured that the EPA will not refer their case to the Justice Department, the EPA will not guarantee that Justice will not prosecute on its own. Further, the EPA is adamantly opposed to granting audit immunity. Moreover, the EPA's policy is purely discretionary. There is no guarantee that auditing companies will receive any benefit for the efforts. Given the bean-counting mindset, there is clearly an incentive to use the information generated in an audit report for an easy enforcement score.²¹

As recognized by EPA, "More than half of [the Audit Policy] disclosures have been of reporting and recordkeeping violations, and while it is important that such violations be corrected, EPA wants to increase the direct pollutant reductions that result from the correction of violations disclosed under the Audit Policy."²² It is likely that the scope of these reports will also be the same under the new "simplified" electronic reporting initiative.²³ Historically, typical disclosures have been described as "less-

²¹Adler, *supra* note 5, at 44–45.

²²Summary of EPA's Interim Approach to Applying the Audit Policy to New Owners, *available at* <http://www.epa.gov/compliance/incentives/auditing/newowners-incentivessummary.html>.

²³80 Fed. Reg. 74676 (Dec. 9, 2015). This is a streamlined online reporting tool, which will make it easier to report routine matters, but will not address deal with the fundamental issues relating to the Audit Policy previously discussed. So-called Tier1 disclosures include most EPCRA violations, subject to them meeting providing they meet all conditions of the audit policy and not providing significant environmental benefit as defined by EPA. Tier 2 disclosures cover all other violations, including certain chemical release reporting violations under EPCRA. Companies will receive an acknowledgement of receipt, although EPA will not determine if the submission qualifies for penalty mitigation until it decides whether to pursue enforcement action. Tier 2 functions as a screening device for more serious violations. See also Industry Backs EPA Self-Audit Update Despite Fears of Delay, Disclosure, 32 Env. Policy Alert 10, June 24, 2015. With eDisclosure, electronic Notices of Determination are automatically issued for certain qualifying EPCRA disclosures (Category 1 Disclosures). All other disclosures receive an electronic acknowledgment letter (Category 2 Disclosures), including: (1) EPCRA/CERCLA chemical release reporting violations; (2) EPCRA violations with significant economic benefit; (3) violations under all other statutes; and (4) violations where discovery was not systematic. Category 2 disclosed violations will be considered for Audit Policy eligibility only if the EPA elects to take an enforcement action at a later time. The EPA has indicated that "new owners" may still submit disclosures outside of the eDisclosure system and negotiate audit agreements. All other disclosures must "generally" be submitted through eDisclosure.

than-earth-shaking corrections to registrations, reports, manifests and the like.”²⁴ Most recently, the Office of Enforcement and Compliance Assurance issued its draft National Program Manager (NPM) Guidance for fiscal year 2013 and, citing minimal environmental benefit and the lack of high-priority disclosures associated with the audit policy, announced that it intends to cut back its oversight of the Audit Policy so it will have only a “minimum national presence.”²⁵

For all these reasons, industry takes great care in assessing what, when, whether and how to disclose, including a decision concerning whether: (a) to disclose under the auspices of the Audit Policy within the 21-day time period set forth thereunder; (b) to disclose outside the auspices of the Audit Policy, if additional time for investigation and evaluation is necessary; or (c) a disclosure is necessary at all if the issue can be corrected without EPA involvement.

The Texas Audit Act

The federal audit policy may be compared to the Texas Audit Act. The Texas audit program, approved by EPA, affords penalty relief for administrative and civil penalties associated with self-disclosed violations that comply with the Texas statute. To receive penalty relief under the Texas act, the disclosure must be voluntary (meeting several conditions) and be preceded by a “Notice of Audit” (as defined in the law). There are several exceptions under Texas law. The Texas Council on Environmental Quality (“TCEQ”), the agency implementing the Texas Audit Act, retains authority to seek appropriate injunctive relief and enforce compliance.

The conditions for a voluntary disclosure under the Texas law that receives penalty relief are:

- Disclosure made promptly after discovery.
- Disclosure made in writing by certified mail to TCEQ.
- Violation not independently detected, or investigation of violation not initiated before disclosure was made in writing.
- Violation noted and disclosed as the result of a voluntary audit.
- Appropriate efforts to correct noncompliance initiated, pursued, and completed within reasonable time.
- Disclosing person cooperates in the investigation of issues identified in disclosure.
- Violation lacks injury or imminent and substantial risk of injury.
- Disclosure not required by an enforcement order or decree.

However, the Texas program includes several limitations on full penalty relief, which include:

- Violation intentionally or knowingly committed
- Violation recklessly committed
- Violation resulted in a substantial economic benefit giving company a clear advantage over its business competitors
- Court or administrative judge finds pattern of disregard of environmental or health and safety laws within a three-year period at same facility

Comparing the Federal and State Voluntary Disclosure Experience, the twin benefits offered by state programs such as the Texas Audit Act—not found in the EPA’s Audit Policy—are:

²⁴Judson W. Starr and Yvette D. Williams, *The Process and Pitfalls of the EPA/DOJ Voluntary Disclosure Program*, National Association for Environmental Management’s Environmental Management Forum, San Antonio, Texas, Oct. 17, 2001, at 2–3, available at www.venable.com/files/Publication/e6392c58-e030-11d0-8000-000000000000/507.pdf.

²⁵FY2013 OECA NPM Guidance at 14.

- Demanding economic benefit in more narrow circumstances (i.e., a violation results in a “substantial economic benefit which gives the violator a clear advantage over its business competitors,” Texas Audit Act § 10(d)(5)); and
- Deeming an audit report privileged and inadmissible as evidence and not subject to discovery in a civil action or an administrative proceeding, unless waived or certain exceptions apply (i.e., including when privilege is asserted for a fraudulent purpose and there is failure to promptly achieve compliance with reasonable diligence).

As a precondition to receiving these full penalty benefits under the Texas program, parties must first file a “Notice of Audit” with the state indicating the intention to undertake an audit and disclose potential noncompliance.

Juxtaposing the benefits of the EPA’s Audit Policy with state programs such as the Texas law suggests areas for examination when considering how EPA’s program may be altered to further enhance compliance benefits, by offering full penalty relief in most circumstances.

A comparison of the disclosure numbers from the EPA Audit Policy and the Texas program is striking. The majority of the disclosures under the EPA Audit Policy involve minor violations under the Emergency Planning and Community Right-to-Know Act (EPCRA). In Texas, Clean Air Act disclosures predominate; these generally involve more complex and costly injunctive relief.

VII. INTERNATIONAL ENVIRONMENTAL REVIEW

§ 8:47 In general

Most major corporations have overseas facilities and/or markets and are therefore undertaking increased scrutiny of their international operations. There was a growing recognition, before the Bhopal toxic gas tragedy, that safety and environmental issues associated with international operations could subject a corporation to potential liability; Bhopal brought this recognition to the forefront for senior management. Many, if not most, major companies have extended their domestic EHS audit/assessment programs to their international operations. In completing these audits/assessments, corporations have found that it does not pay to make significant distinctions between the standards demanded of domestic facilities and those required of international facilities. Attention paid to international operations has stepped up as more and more manufacturing operations have closed down in the United States and relocated elsewhere. Domestic EHS managers are spending increasing amounts of time assuring responsible EHS management in overseas operations and improving senior management’s recognition of the importance of these concerns.¹

In the mid-1980s, approximately 15 U.S. companies with international interest joined in an effort known as the Global Environmental Management Initiative (GEMI). This effort, undertaken jointly with the International Chamber of Commerce and United Nations Environmental Programme, is designed to develop guidelines for international business and to promote, assemble, and create worldwide critical thinking on environmental management techniques, systems, and results, and to share this thinking with the public.²

[Section 8:47]

¹Frank B. Friedman, *Practical Guide to Environmental Management*, Environmental Law Institute 11th ed. 2011 at p. 115.

²A coalition of environmental, church, and environmentally concerned investment organizations

In a growing number of instances, there is little if any difference between domestic and foreign laws and regulations. The European Union (EU) has adopted strict air and water quality standards, and disposal of hazardous waste is also heavily regulated in most European countries. In many South American and Asian countries, the laws and regulations are rapidly changing to approximate U.S. standards closely. Enforcement has not yet caught up with the laws and regulations in many of those countries, but when enforcement occurs, it will usually be against foreign-owned facilities.

Above all, and regardless of the legal requirements, a corporation should be guided by the simplistic principle established in a once popular commercial for an oil filter: “Pay me now or pay me later.” If the laws or regulations will eventually require retrofitting, it is appropriate to make the necessary changes *now*, rather than to spend much more later on.

The best means of avoiding these future problems is to establish an international policy in which the standard of protection for human health and the environment is the equivalent to that which the company maintains at its home locations. Such a policy does not mean a slavish copying of all U.S. or European (EU) laws and regulations, as there is ample evidence with respect to some of these laws and regulations (particularly those that are technology based) that there are equivalent means that will just as adequately protect human health and the environment. If, however, control requirements or procedures are or will be inconsistent with those followed in the United States or EU, a responsible expert (either in house or outside) should document for the permanent records of the corporation why the inconsistent requirements or procedures afford equivalent protection and are compatible with the corporation’s environmental policy.

In most instances with respect to this request for documentation, an interesting phenomenon will take place: The number of requests for an “exception” to such a policy will be minimal. Most environmental controls do not necessarily involve large and expensive equipment installations but rather consist of tighter practices and procedures. Even where equipment is involved, it may result in sufficient savings in terms of reducing loss of product, raw material, and so on, that it is good business in simple economic terms. In other instances, although difficult to quantify, the actual cost of equipment and installation is substantially less than in the United States. This is not because the actual hardware costs less, but rather that extensive administrative costs (including technical consultants, lawyers, and prolonged paperwork endemic in the United States) are much less prevalent in international operations. In addition, most U.S. companies include basic pollution control as part of their normal design and, in many instances, it is easier to use off-the-shelf design rather than redesign purposely to eliminate pollution control devices.

As for personnel safety, in reviewing operations for guarding and personnel protection, all the incentives are to demand the best levels of protection. Industrial hygiene in some instances suffers because of the lack of suitable testing equipment and of local personnel capable of completing the appropriate monitoring. However, in most instances this is not a major problem.

In the environmental arena, the development of the program needs to include a system, usually as part of the regular environmental audit or audit/assessment, that includes prompt follow-up and action with respect to any issues identified, and

also published a set of principles designed “to encourage companies ‘to make a public accounting of the planet’s ecological problems—and to pledge to do better.’” See generally Berz, *Keep Risk Reduction Decisions in the Board Room*, *Envtl. F.*, Mar./Apr. 1990, at 32. These principles, developed by the Social Investment Forum and its Coalition for Environmentally Responsible Economies Project (CERES), were known as the Valdez Principles (named after the massive oil spill resulting from a tanker accident in Valdez, Alaska) and are now known, after revision, as the CERES principles.

a reporting procedure and timetable for implementing the program.

In developing an international environmental program, one potentially useful approach would be to establish the following milestone steps:

1. *List local standards for discharges to all media.* In many cases, no numerical local standards exist, and a company must establish standards on a site-by-site basis through interpretation and discussion with local officials.

2. *Determine typical U.S. or EU standards for discharges to all media.* In many cases, no single “typical U.S. or EU standard” exists. Standards for water are normally based on the capabilities of technology. Air emission standards are usually based on ambient air quality.

3. *Formulate equivalent standards using professional expertise.* Use the local and typical U.S. or EU standards to develop equivalent standards. If local standards are more demanding, they will govern. If typical U.S. or EU standards are more demanding and are scientifically sound, they will govern. It is vital to document the logic you use in setting equivalents. In this regard, it is helpful to identify the intent of the U.S. or EU standards.

4. *Establish equivalent standards with the plant, considering site-specific conditions.* Once equivalent standards are formulated, the plants must review and agree to the numbers, just as a U.S. or EU plant does in negotiating a permit with a U.S. or EU agency. In most instances there is little room for negotiation, but the plant may raise factors that would make compliance with a particular standard unnecessary. The basis for such variances should be documented. Similarly, plants will often need to carry out sampling and analysis, perhaps on a seasonal basis, before they can determine whether they can meet particular standards. Sampling and analysis requirements, too, should be in line with U.S. or EU practices. Note that “impossibility” is not an acceptable argument when the discharge would result in an unacceptable adverse environmental or health effect.

5. *Develop sampling/analytical protocols for the equivalent standards.* Even when a plant has agreed to equivalent standards, sampling or analytical procedures must be established. For example, for a parameter as simple as pH, the frequency and type of measurement (*e.g.*, continuous versus daily/weekly grab sampling) must be resolved and the necessary procedures established. Remember that if the procedures that would ordinarily be used are sophisticated EPA or state procedures, the required equipment may not be readily available to service the foreign locations.

6. *Monitor and report against the equivalent standards.* Although monitoring and reporting should be routine, it does take time to collect meaningful data, and it should be expected that some monitoring will show exceedances of equivalent standards. When this occurs, corrective action should be considered and documented.

7. *Where necessary, establish and track to completion action plans to correct exceedances of equivalent standards.* It may take some time, possibly several years, to complete the engineering design, preparation of authorizations for expenditures, equipment purchase, construction, and start-up necessary to achieve compliance.

Developing and implementing such a program does not occur overnight. It is usually easier in the safety area to maintain high standards than in the environmental area, although constant vigilance is necessary in areas where, for example, local customs do not normally include wearing hard hats, safety glasses, respiratory masks, safety shoes, and other safety equipment. In addition, local customs or religions sometimes include fatalistic or “macho” attitudes, such as children wandering around construction sites where their parents are working, unfamiliarity with safety shoes and goggles, and failure to understand longer-term effects of certain chemical exposures, must also be overcome in improving safety awareness. While people in the United States are commonly familiar with mechanical equipment and

vehicles, moving from a simple agrarian economy to one handling sophisticated equipment or vehicles creates major problems of training and awareness.

In some instances in the environmental area, there is no ready solution. For example, many parts of the world lack hazardous waste disposal areas that environmental professionals deem acceptable in the long term.

In summary, the minimum and overriding consideration in determining equivalence is that any operation, activity, or product, when properly handled should not cause a significant or permanent adverse effect on human health and the environment. Where adverse effects are foreseen or do result, ameliorative action must be taken to avoid or correct the adverse effects.

The previously discussed principles for health, safety, and environmental policies, although difficult in themselves, are much easier to implement when your company is the sole owner and operator of the facility. There is no easy way to implement such policies in joint ventures, particularly when the partner is a host state or state-controlled quasi corporation with a significant minority or even a controlling interest.

There are arguments for not entering joint ventures where there could be a substantial amount of liability exposure if your company cannot adequately control potential harmful exposure to workers and the surrounding public. This kind of leveraging factor on a business decision is not common, but it should not be ignored. However, the usual situation is convincing either a governmental or private joint venture partner that a company's domestic health, environment, and safety policies should be implemented. The easiest way is to establish that policy as part of the basis for the joint venture. As noted earlier, tying it to a company policy protecting environment, health and safety rather than to direct compliance with U.S. laws avoids offending local sensibilities and nationalism (*e.g.*, perceived insults to local laws and regulations).

Sophisticated local private investors may be persuaded by the "pay me now or pay me later" concept and indeed that specific language (which the author has personally used) can be an effective sales tool to demonstrate the cost effectiveness of such a policy. It also helps mitigate the perceived resentment of other corporations in host states who are unwilling to adopt more stringent internal regulation. The gradual introduction of certain health and safety concepts sometimes helps in their acceptance, as may the use of examples of practices in plants in similar climates, such as the use of hard hats and safety shoes in tropical climates.

Many countries impose criminal penalties for injuries and fatalities. In such instances, it is particularly important, when the joint venture is a government entity, to document in the permanent records of the corporation requests for improved safety practices and programs to the recalcitrant partner, in the event that the refusal by the partner to approve implementation leads to an unfortunate accident.

Some Conclusions

Legal, management, and policy issues come together in understanding and evaluating environmental audits/assessments. Environmental audits/assessments have progressed over the years—from limited use and understanding as to their value, to a generally accepted way of doing business in medium to larger sized companies. The growth of multi-national companies and adoption of world-wide standards of practice and the systems to ensure practices and following up on identified concerns, such as computer-based aids and sophisticated data management systems has also made audits/assessments a broader management tool.

Of course, the "environmental revolution" in the U.S., beginning in the 1970's with the development of modern environmental and safety laws and regulations, has greatly increased liability exposure. The availability of information on the

internet, and also particularly damaging information to a company's reputation with the public and regulators, has also increased pressures to fully understand what is working and not working within a company's environment and safety management systems. The growth of ESG is a worldwide phenomenon that has also played a key role.

Hopefully, this Chapter provides a comprehensive understanding of both the values and risks of assessments/audits, including the legal issues, which will help readers' practice, whether representing corporations, public interest groups, or government agencies.

TABLE OF ABBREVIATIONS AND ACRONYMS

ARO	Asset Retirement Obligation
ASTM	American Society of Testing and Materials
BEAC	Board of Environmental Health and Safety Auditing Standards
CARO	Conditional Asset Retirement Obligations
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CMS	Common Minimum Standards
CREC	Controlled Recognized Environmental Condition
D&O	Directors and Officers
DOJ	Department of Justice
EH&S	Environmental, Health, and Safety
EMS	Environmental Management System
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESG	Environmental, Social, and Governance
FASB	Financial Accounting Standards Board
GAO	Government Accountability Office
GHG	Greenhouse Gas
HESRE	Health, Environment, Safety, And Risk Engineering
HREC	Historical Recognized Environmental Condition
MD&A	Management's Discussion and Analysis of Financial Condition and Results of Operations
NPM	National Program Manager
OECA	Office of Enforcement and Compliance Assistance
OSHA	Occupational Safety and Health Administration
RCRC	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
SEC	U.S. Securities and Exchange Commission
SFAS	Statement of Financial Accounting Standards
SOP	Statement of Position
TCEQ	Texas Council on Environmental Quality
TCFD	Task Force on Climate-related Financial Disclosures

Chapter 9

Enforcement*

I. OVERVIEW OF ENVIRONMENTAL ENFORCEMENT

- § 9:1 Executive Summary
- § 9:2 The Scope of EPA Enforcement
- § 9:3 The EPA's Enforcement Objectives
- § 9:4 Basic Types of Enforcement Powers
- § 9:5 Relationship between Administrative, Civil, and Criminal Enforcement
- § 9:6 EPA's Administrative Enforcement Powers under the Major Environmental Statutes
- § 9:7 Statute-Specific Considerations
- § 9:8 Civil Judicial Enforcement
- § 9:9 Citizen Suits
- § 9:10 Criminal Enforcement Powers
- § 9:11 EPA Enforcement Policies
- § 9:12 Rulemaking Authority
- § 9:13 Formal Rulemaking
- § 9:14 Informal Rulemaking
- § 9:15 The Relationship between Rulemaking and Enforcement
- § 9:16 Relationship between the EPA and Other Federal Agencies
- § 9:17 Agencies That Help the EPA Regulate
- § 9:18 Agencies Regulated by the EPA
- § 9:19 Joint EPA and U.S. Coast Guard Enforcement
- § 9:20 EPA's Relationship with State and Local Enforcement Authorities
- § 9:21 Basis of the Relationship: Cooperative Federalism
- § 9:22 Federal Approval of State Programs
- § 9:23 Pre-emption of State Programs

II. GOVERNMENT ENFORCEMENT OFFICES

- § 9:24 Executive Summary
- § 9:25 How the EPA is Organized
- § 9:26 EPA Office of Enforcement and Compliance Assurance ("OECA")
- § 9:27 Office of the Assistant Administrator for OECA
- § 9:28 Office of Administration and Policy ("OAP") and Office of Civil Enforcement ("OCE")
- § 9:29 Office of Compliance ("OC")
- § 9:30 Office of Criminal Enforcement, Forensics and Training ("OCEFT")
- § 9:31 Office of Environmental Justice ("OEJ")
- § 9:32 Office of Federal Activities ("OFA")
- § 9:33 Federal Facilities Enforcement Office ("FFEO")
- § 9:34 Office of Site Remediation Enforcement ("OSRE")
- § 9:35 Regional Office Operations

*§ 9:1 by **Jeffrey G. Miller**; § 9:34 by **Cheryl E. Wasserman**; § 9:46 by **F. Henry Habicht II** and **Terrell E. Hunt**, updated by **Susan E. Bromm**; § 9:81 by **Donald C. Baur**; § 9:82 by **Tracy Gipson**; § 9:95 by **Steven L. Leifer**; § 9:116 by **Cheryl E. Wasserman**.

- § 9:36 Enforcement Organization at the Regional Level
- § 9:37 —Process
- § 9:38 Dealing with Regional Offices
- § 9:39 Office of the Administrator
- § 9:40 Office of General Counsel (“OGC”)
- § 9:41 Program Offices
- § 9:42 U.S. Department of Justice
- § 9:43 Environment and Natural Resources Division
- § 9:44 U.S. Attorney’s Offices
- § 9:45 Federal Bureau of Investigation (“FBI”)
- § 9:46 EPA Guidances, Directives, and Other Materials
- § 9:47 Freedom of Information Act (“FOIA”) Requests
- § 9:48 Trade Press, Annual Reports, and Congressional Hearings
- § 9:49 Budget Requests
- § 9:50 Congressional Involvement in Environmental Enforcement
- § 9:51 Coast Guard Environmental Enforcement Overview

III. INSPECTIONS AND INVESTIGATIONS

- § 9:52 Executive Summary
- § 9:53 Triggering EPA Inspections
- § 9:54 Types of Inspections and Investigations
- § 9:55 Recordkeeping and Reporting
- § 9:56 Requests for Information
- § 9:57 Mandated Site Inspections
- § 9:58 Citizen and Employee Complaints
- § 9:59 EPA Authority during Site Visits
- § 9:60 Consent to Entry
- § 9:61 The EPA “Routine Inspection”
- § 9:62 How the EPA Prepares for an Inspection
- § 9:63 Prior Notification of Inspection
- § 9:64 Conferences
- § 9:65 Inspector’s Access to Documents
- § 9:66 Sampling
- § 9:67 Interviews
- § 9:68 Affidavits
- § 9:69 Photographs and Tape Recordings
- § 9:70 Company Responses to Routine Inspections
- § 9:71 Accompanying the Inspector
- § 9:72 Providing Access to Documents
- § 9:73 Refusal of Entry
- § 9:74 Warrants
- § 9:75 Preliminary Injunction
- § 9:76 Permit Violation
- § 9:77 EPA Inspection Reports

IV. ADMINISTRATIVE ORDERS

- § 9:78 Executive Summary
- § 9:79 General Procedures for Issuing Administrative Orders and Similar Sanctions
- § 9:80 Contents of Administrative Orders
- § 9:81 Statute-Specific Considerations
- § 9:82 Resource Conservation and Recovery Act (“RCRA”)

ENFORCEMENT

- § 9:83 Clean Water Act (“CWA”)
- § 9:84 Clean Air Act (“CAA”)
- § 9:85 Toxic Substances Control Act (“TSCA”)
- § 9:86 Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)
- § 9:87 Emergency Planning and Community Right-to-Know Act (“EPCRA”)
- § 9:88 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)
- § 9:89 Safe Drinking Water Act (“SDWA”)

V. THE APPEALS PROCESS FOR ADMINISTRATIVE ORDERS

- § 9:90 Executive Summary
- § 9:91 General Considerations in Seeking Administrative Review of Administrative Orders
- § 9:92 General Considerations in Seeking Judicial Review of Administrative Orders
- § 9:93 Basic Structure of Administrative Hearings for Review of Orders and Other Sanctions
- § 9:94 Presiding Officers
- § 9:95 Burden of Proof
- § 9:96 The Administrative Process Hearing
- § 9:97 The Complaint
- § 9:98 Answer to the Complaint
- § 9:99 Prehearing Procedure
- § 9:100 Other Procedural Considerations
- § 9:101 Prehearing Conference
- § 9:102 Accelerated Decision; Decision to Dismiss
- § 9:103 The Hearing
- § 9:104 Initial Decision
- § 9:105 Informal Settlement; Consent Agreement and Order
- § 9:106 Appealing Administrative Hearing Decisions
- § 9:107 The Environmental Appeals Board
- § 9:108 Scope of Environmental Appeals Board (“EAB”) Authority
- § 9:109 Standard of Review
- § 9:110 Procedures Governing Appeals to the EAB
- § 9:111 Miscellaneous Procedural Considerations
- § 9:112 Statute-Specific Considerations
- § 9:113 Resource Conservation and Recovery Act (“RCRA”)
- § 9:114 Clean Water Act (“CWA”)
- § 9:115 Clean Air Act (“CAA”)
- § 9:116 Toxic Substance Control Act (“TSCA”)
- § 9:117 Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)
- § 9:118 Emergency Planning and Community Right-to-Know Act (“EPCRA”)
- § 9:119 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)
- § 9:120 Safe Drinking Water Act (“SDWA”)

VI. CIVIL MONETARY PENALTIES

- § 9:121 Executive Summary
- § 9:122 Purpose of Civil Monetary Penalties
- § 9:123 Administrative versus Civil Judicial Monetary Penalties
- § 9:124 Calculating Civil Penalties
- § 9:125 Economic Benefit Component
- § 9:126 Gravity Component

- § 9:127 Audit Policy
- § 9:128 General Procedure for Assessing Administrative Penalties
- § 9:129 Negotiating Lower Civil Penalties
- § 9:130 When to Negotiate
- § 9:131 Liability-Based Negotiations
- § 9:132 Negotiating Based on Penalty Criteria
- § 9:133 Negotiating Based on Fairness
- § 9:134 Nonmonetary Considerations
- § 9:135 Litigation Risk: The Final Factor
- § 9:136 Long-Term Value of Contesting Penalties
- § 9:137 Statute-Specific Considerations for Administratively Assessed Penalties
- § 9:138 Resource Conservation and Recovery Act (“RCRA”)
- § 9:139 Clean Water Act (“CWA”)
- § 9:140 Clean Air Act (“CAA”)
- § 9:141 Toxic Substances Control Act (“TSCA”)
- § 9:142 Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)
- § 9:143 Emergency Planning and Community Right-to-Know Act (“EPCRA”)
- § 9:144 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)
- § 9:145 Procedures for Assessing Judicial Civil Penalties
- § 9:146 Pre-filing Notification
- § 9:147 Negotiating with the EPA, DOJ, and U.S. Attorney
- § 9:148 Alternative Dispute Resolution
- § 9:149 Consent Decrees
- § 9:150 Appeals
- § 9:151 Statute-Specific Considerations for Civil Judicial Penalties
- § 9:152 Resource Conservation and Recovery Act (“RCRA”)
- § 9:153 Clean Water Act (“CWA”)
- § 9:154 Clean Air Act (“CAA”)
- § 9:155 Toxic Substances Control Act (“TSCA”)
- § 9:156 Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)
- § 9:157 Emergency Planning and Community Right-to-Know Act (“EPRCA”)
- § 9:158 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)

VII. INJUNCTIONS AND OTHER EQUITABLE ORDERS

- § 9:159 Executive Summary
- § 9:160 How Injunctions Differ from Other Enforcement Sanctions
- § 9:161 Injunctions as Part of Consent Orders
- § 9:162 Types of Injunction Relief
- § 9:163 Temporary Restraining Orders (“TRO”)
- § 9:164 Preliminary Injunctions
- § 9:165 Permanent Injunctions
- § 9:166 EPA Procedures for Seeking Injunctions
- § 9:167 Judicial Standards for the Granting of Injunctions
- § 9:168 Likelihood of Success on the Merits: Violation of the Statute or Regulation
- § 9:169 Threat of Irreparable Harm and Inadequacy of Legal Remedies
- § 9:170 Balancing of the Equities
- § 9:171 Exceptions to the General Standards for Obtaining Injunctions
- § 9:172 Scope of Injunctions
- § 9:173 Necessary and Appropriate Relief
- § 9:174 Monetary Aspects of Injunctive Relief
- § 9:175 Duration of an Injunction

ENFORCEMENT

- § 9:176 Supplemental Environmental Projects (“SEPs”)
- § 9:177 Special Considerations When Faced With Injunction Proceedings
- § 9:178 Responses to a Complaint Seeking Injunctive Relief
- § 9:179 Judicial Consent Decrees
- § 9:180 Releases Under Consent Decrees
- § 9:181 Judicial Enforcement and Review of Injunction and Consent Decrees
- § 9:182 Judicial Enforcement
- § 9:183 Judicial and Appellate Review
- § 9:184 Statute-Specific Considerations
- § 9:185 Resource Conservation and Recovery Act (“RCRA”)
- § 9:186 Clean Water Act (“CWA”)
- § 9:187 Clean Air Act (“CAA”)
- § 9:188 Toxic Substances Control Act (“TSCA”)
- § 9:189 Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)
- § 9:190 Emergency Planning and Community Right-to-Know Act (“EPCRA”)
- § 9:191 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)
- § 9:192 Safe Drinking Water Act (“SDWA”)
- § 9:193 U.S. Coast Guard—Vessel Detentions and Orders

VIII. CITIZEN SUITS

- § 9:194 Executive Summary
- § 9:195 Requirements That Must Be Met Before a Citizen Suit May Be Brought or Maintained
- § 9:196 Notice and Service Requirements
- § 9:197 Jurisdiction
- § 9:198 Statutes of Limitations
- § 9:199 Standing—Harm to Citizens
- § 9:200 Ongoing Violations
- § 9:201 Remedies in Citizen Suits
- § 9:202 Injunctive Relief and Civil Penalties
- § 9:203 Attorney’s Fees, Expert Witness Fees, and Court Costs
- § 9:204 Preservation of Other Relief
- § 9:205 Defense of a Citizen Suit
- § 9:206 Relationship to Government Enforcement Actions—Diligent Prosecution
- § 9:207 Agency Involvement in Citizen Suits
- § 9:208 Intervention
- § 9:209 Agency as the Defendant
- § 9:210 Statute-Specific Considerations
- § 9:211 Resource Conservation and Recovery Act (“RCRA”)
- § 9:212 Clean Water Act
- § 9:213 Clean Air Act (“CAA”)
- § 9:214 Toxic Substances Control Act (“TSCA”)
- § 9:215 The Emergency Planning and Community Right-to-Know Act (“EPCRA”)
- § 9:216 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)
- § 9:217 Safe Drinking Water Act (“SDWA”)

IX. FEDERAL CRIMINAL ENFORCEMENT

- § 9:218 Executive Summary
- § 9:219 Overview of Criminal Enforcement
- § 9:220 Overview of the Criminal Process
- § 9:221 Criminal Sanctions Available

- § 9:222 Misdemeanors versus Felonies
- § 9:223 Knowing Violations
- § 9:224 Negligent Violations
- § 9:225 Strict Liability Violations
- § 9:226 Endangerment Violations
- § 9:227 Violations by Corporations
- § 9:228 Responsible Corporate Officers
- § 9:229 How the EPA Begins a Criminal Investigation
- § 9:230 Sources for Information for Investigations
- § 9:231 EPA/FBI Investigations
- § 9:232 Use of Civil Enforcement Tools for the Criminal Process
- § 9:233 Opportunity for Self-Disclosure
- § 9:234 How EPA Conducts a Criminal Investigation
- § 9:235 Review of Records
- § 9:236 Employee Interviews
- § 9:237 Sampling and Testing
- § 9:238 Referrals to Justice Department/U.S. Attorney
- § 9:239 “Sting” Operations
- § 9:240 Search Warrants
- § 9:241 Grand Juries
- § 9:242 Negotiating Disposition of Criminal Environmental Cases
- § 9:243 Pre-indictment versus Post-indictment
- § 9:244 Individual versus Corporate Dispositions
- § 9:245 Global Settlements
- § 9:246 Parallel Proceedings
- § 9:247 The Dangers of Parallel Proceedings
- § 9:248 When Parallel Proceedings May Be Undertaken
- § 9:249 Protecting Against Parallel Proceedings
- § 9:250 Statute-Specific Considerations
- § 9:251 Resource Conservation and Recovery Act (“RCRA”)
- § 9:252 Toxic Substances Control Act (“TSCA”)
- § 9:253 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)
- § 9:254 Clean Water Act (“CWA”)
- § 9:255 Clean Air Act (“CAA”)
- § 9:256 Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)
- § 9:257 Emergency Planning and Community Right-to-Know Act (“EPCRA”)
- § 9:258 Safe Drinking Water Act (“SDWA”)
- § 9:259 MARPOL and The Act to Prevent Pollution from Ships

X. CRIMINAL SENTENCING FOR ENVIRONMENTAL CONVICTIONS

- § 9:260 Executive Summary
- § 9:261 Federal Sentencing, Generally
- § 9:262 Goals and Limits
- § 9:263 Fines
- § 9:264 Alternative Fines Act (“AFA”)
- § 9:265 Imprisonment
- § 9:266 Restitution and Remedial Orders
- § 9:267 Probation
- § 9:268 The Federal Sentencing Guidelines for Individuals Convicted of Environmental Crimes
- § 9:269 Calculating Environmental Offense Levels

ENFORCEMENT

- § 9:270 Determining Prison Terms from Offense Levels
- § 9:271 Determining Fines for Individuals from the Offense Levels
- § 9:272 Determining Restitution for Individuals Under the Sentencing Guidelines
- § 9:273 Determining Probation for Individuals Under the Sentencing Guidelines
- § 9:274 Departures from Sentencing Guidelines
- § 9:275 The Federal Sentencing Guidelines for Organizations Convicted of Environmental Crimes
- § 9:276 Restitution and Remedial Orders for Organizations
- § 9:277 Probation for Organizations
- § 9:278 Statute-Specific Considerations
- § 9:279 Resource Conservation and Recovery Act
- § 9:280 Clean Water Act
- § 9:281 Clean Air Act
- § 9:282 Toxic Substances Control Act
- § 9:283 Federal Insecticide, Fungicide and Rodenticide Act
- § 9:284 Emergency Planning and Community Right-to-Know Act
- § 9:285 Comprehensive Environmental Response, Compensation, and Liability Act
- § 9:286 Safe Drinking Water Act

XI. DEBARMENT, SUSPENSION, CONTRACTOR LISTING, AND PERMIT BLOCKS

- § 9:287 Executive Summary
- § 9:288 Debarment
- § 9:289 Grounds for Debarment
- § 9:290 Debarment Procedures
- § 9:291 Scope and Period of Debarment
- § 9:292 Reconsideration and Appeal
- § 9:293 Suspension
- § 9:294 Contractor Listing
- § 9:295 Mandatory Listing
- § 9:296 Discretionary Listing
- § 9:297 Removal from the List
- § 9:298 Effect and Scope of Listing/Exemptions
- § 9:299 Permit Blocks

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I. OVERVIEW OF ENVIRONMENTAL ENFORCEMENT*

§ 9:1 Executive Summary

The United States Environmental Protection Agency (“EPA” or “Agency”) has been referred to as “the Federal Bureau of Investigation (‘FBI’) for the environment.” While many federal agencies have responsibilities for addressing environmental issues, the EPA is the primary federal agency responsible for ensuring, through the use of its enforcement powers, that our land, air, and water resources are protected from unnecessary degradation.

There are three sources or dimensions that define the EPA’s power: the substantive requirements for conduct affecting the environment, the power to further define and add to those requirements through regulations, and the power to enforce both sets of requirements.

There are also three levels of federal requirements that form the basis for all

*By Barry M. Hartman.

enforcement actions. First and foremost, as discussed in Chapter 4, legislation passed by Congress and signed into law creates the essential power of the EPA.¹ Second, as also discussed in Chapter 4, like all federal agencies, the EPA promulgates legislative regulations that define and explain, often in great detail, many of the requirements contained in laws.

Finally, the EPA develops a wide variety of guidance documents that explain and interpret the requirements of the law and regulations. Some are published for public comment in the *Federal Register*, and some are not. These documents are referred to differently, depending on the statute under which they are created. Examples include:

- “Office of Solid Waste and Emergency Response Directives”² that relate to enforcement of hazardous waste law;
- “Regulatory Guidance Letters” (“RGLs” which is pronounced “Regals”) that explain the wetlands program under the Clean Water Act; and
- “Control Technique Guidelines” (“CTGs”) under the Clean Air Act’s (“CAA”) Reasonably Available Control Technology program.

All of these guidance documents are public, but some may be difficult to track down. Although not legally binding on the regulated community, the EPA often relies on them in enforcement actions when the language of the statute or regulation is unclear. Many hearing officers and judges also defer to them. Accordingly, these documents have a significant and practical impact on persons and entities attempting to comply with the law and regulations.

For enforcement purposes, the substantive standards and enforcement powers of the Agency generally can be found by referring to the statute being enforced. As with all law enforcement agencies, the EPA has a great deal of discretion in deciding who will be prosecuted and which enforcement tool will be used.

When President Nixon created the EPA in 1970, he stated:

Our national government today is not structured to make a coordinated attack on the pollutants which debase the air we breathe, the water we drink, and the land that grows our food. Indeed, the present governmental structure for dealing with environmental pollution often defies effective and concerted action.

Despite its complexity, for pollution control purposes, the environment must be perceived as a single interrelated system. Present assignments of departmental responsibilities do not reflect this interrelatedness.³

Thus, when originally organized, the federal government’s effort to protect the environment was motivated by a need to have a coordinated approach by the government as a whole. Unfortunately, as the specific laws were passed, there was a lack of focus on the environment as a whole. Instead, a media-specific (air or water or solid waste or pesticides) approach was used. In the past few decades, the EPA’s approach has shifted, and the agency has integrated its own efforts to view the environment as a single entity through multi-media enforcement.

§ 9:2 The Scope of EPA Enforcement

[Section 9:1]

¹See § 9:2.

²Office of Solid Waste and Emergency Response is also known as “OSWER.”

³Reorganization Plans Nos. 3 and 4, *reprinted in* 1970 U.S. Code Cong. & Admin. News at 6,329.

Enforcement of federal environmental laws by the EPA¹ has greatly expanded over the past several decades. The scope of the agency's enforcement is defined by particular environmental hazards and conduct, rather than by particular segments of the regulated community. The eight major environmental laws under which most of this enforcement takes place are:

- **Resource Conservation and Recovery Act ("RCRA"):**² RCRA also encompasses the Solid Waste Disposal Act of 1980 and the Hazardous and Solid Waste Amendments of 1984. This statute regulates the treatment, storage, and disposal of solid and hazardous waste. Regulations may be found at Title 40 of the C.F.R. §§ 239 to 282.
- **Federal Water Pollution Control Act:**³ Commonly called the "Clean Water Act" ("CWA"), this law regulates the discharge of various substances into the "waters of the United States."⁴ Regulations may be found at Title 40 of the C.F.R. §§ 104 to 149 and 400 to 471.
- **Clean Air Act ("CAA"):**⁵ The CAA regulates the emission of various substances into the air. Regulations for CAA may be found at Title 40 of the C.F.R. §§ 50 to 99.
- **Toxic Substances Control Act ("TSCA"):**⁶ TSCA regulates the development and use of certain chemical substances; regulations may be found at Title 40 of the C.F.R. §§ 700 to 799.
- **Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"):**⁷ FIFRA regulates the registration, labeling, and use of these substances; regulations may be found at Title 40 of the C.F.R. §§ 150 to 180.
- **Emergency Planning and Community Right-to-Know Act ("EPCRA"):**⁸ EPCRA regulates the public dissemination of certain chemicals and other substances present in various locals and the preparedness for emergencies involving those materials. Regulations implementing EPCRA may be found at Title 40 of the C.F.R. §§ 350 to 374.
- **Public Health Service Act:**⁹ Commonly known as the "Safe Drinking Water Act" ("SDWA"), this statute governs the protection of drinking water sources. Regulations may be found at Title 40 of the C.F.R. §§ 141 to 143.
- **Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"):**¹⁰ Commonly known as "Superfund," CERCLA governs the cleanup of sites contaminated with hazardous substances. Regulations may be found at Title 40 of the C.F.R. §§ 300 to 310, 373.

The EPA's enforcement universe is not defined by type of business; rather, it is defined by conduct. That is, any person or entity that emits a certain type and amount of chemical into the environment, handles certain wastes or other chemicals, discharges certain pollutants into waters of the United States, or has ever disposed

[Section 9:2]

¹These laws also are enforced by other agencies. *See* § 9:20.

²42 U.S.C. §§ 6901, et seq.

³33 U.S.C. §§ 1251, et seq.

⁴*See, e.g.*, 33 U.S.C. § 1362(7) ("The term 'navigable waters' means the waters of the United States, including the territorial seas.").

⁵42 U.S.C. §§ 7401, et seq.

⁶15 U.S.C. §§ 2601, et seq.

⁷7 U.S.C. §§ 136, et seq.

⁸42 U.S.C. §§ 11001, et seq.

⁹42 U.S.C. §§ 300f, et seq.

¹⁰42 U.S.C. §§ 9601, et seq.

of hazardous wastes at sites regulated under RCRA, is subject to EPA enforcement. Some entities are regulated by means other than a permit system, such as prohibitions or mandates on certain conduct.

In addition, a party may be subject to different types of enforcement, even for what appears to be the same activity. For example, a person manufacturing or applying a chemical for use as a pesticide must meet the requirements of FIFRA, and another may be using the chemical in a way that is subject to TSCA. Once that chemical becomes a waste, each person may have to meet the requirements of RCRA. If the means of manufacture or disposal involve emissions into the air, that person may become subject to the CAA as well.

§ 9:3 The EPA's Enforcement Objectives

The EPA's overall enforcement objective is to protect the environment through assuring compliance with all environmental laws. Its goal in virtually every case is to (1) ensure compliance; (2) punish noncompliance; (3) deter noncompliance; and (4) correct the harm caused by the noncompliance.¹

The EPA uses its administrative order (§§ 9:91 to 9:102) and injunction (§§ 9:172 to 9:206) authority to help ensure compliance and remedy any harm caused by noncompliance. It uses civil penalties (§§ 9:134 to 9:171), criminal fines, and jail terms (§§ 9:273 to 9:299) to punish alleged violators and deter others from doing the same. The agency also uses penalties and fines to ensure the alleged violator does not benefit economically from the violations.

§ 9:4 Basic Types of Enforcement Powers

There are three ways the EPA can exercise its enforcement powers, and for each way there are several options available. The three ways are administrative, civil, and criminal. Administrative enforcement involves a proceeding brought by the EPA Regional Office (§§ 9:103 to 9:133). Review of these sanctions is conducted by an EPA hearing officer. Civil judicial enforcement involves a formal federal law suit filed by the United States Department of Justice ("DOJ"), on behalf of the EPA in federal court, seeking civil fines and court orders to comply or act in a particular way (§ 9:145). Criminal sanctions involve the filing of an indictment or information in federal district court by the United States on behalf of EPA and the seeking of criminal fines, jail terms, and other sanctions against the violators (§§ 9:288 to 9:299). The relationship between enforcement methods is described at § 9:50.

For each of these means of enforcement, the EPA has two general types of sanctions it can pursue: equitable orders and monetary penalties. In addition, if criminal prosecution is pursued, jail time may be imposed (§§ 9:260 to 9:268).

Equitable orders are wide ranging, and their availability is determined by the statute being enforced. These orders may range from simply requiring the responding party to stop violating the law, to ordering cleanup of a site, seizure of a product or substance, or even ordering changes in the business structure or operation. Sections 9:78 to 9:111 (Administrative Orders), §§ 9:159 to 9:193 (Injunctions), and §§ 9:260 to 9:286 (Criminal Sentencing) discuss these types of sanctions. Monetary penalties that the EPA may pursue are also determined by statute. Sections 9:121

[Section 9:3]

¹See EPA, *Enforcement Goals* (2016), available at <https://www.epa.gov/enforcement/enforcement-goals> (listing the EPA's general compliance and enforcement aims); see also EPA, *Fiscal Year 2015 EPA Enforcement & Compliance Annual Results* at 6, available at https://www.epa.gov/sites/production/files/2015-12/documents/fy-2015-enforcement-annual-results-charts_0.pdf ("Criminal fines and restitution punish misconduct, deter other violators and, along with court-ordered environmental projects, help to remedy the harm caused by the criminal conduct.").

to 9:158 (Civil Monetary Penalties) explain how these are assessed in the administrative and civil context. Sections 9:218 to 9:259 discuss them in the criminal context.

The EPA also has informal and indirect enforcement sanctions available. The most typical is the use of its information-gathering power, which, if not responded to properly, may form the basis of a formal enforcement action. The agency's inspection and investigation authorities are also enforcement powers. Both are discussed at §§ 9:52 to 9:77.

Finally, many of these statutes contain an additional enforcement power called "citizen suits." These suits authorize private persons to bring civil judicial actions to enforce many environmental laws when the EPA fails to do so. Citizen suits are discussed at §§ 9:194 to 9:217.

§ 9:5 Relationship between Administrative, Civil, and Criminal Enforcement

While the EPA may combine various sanctions (orders and penalties) within a particular enforcement action, it does not usually bring a combination of administrative, civil, and criminal actions for the same alleged violation against the same party.¹ When and how the EPA chooses the type of enforcement to use is often unclear and unpredictable. However, there are several principles that help guide this choice and differentiate among the three types of enforcement.

First, both administrative and civil enforcement generally do not require any proof that the person charged intended to or even accidentally violated the law. Almost all of the offenses are strict liability offenses, so, like speeding tickets, the mere fact of the violation is enough to establish liability. Criminal enforcement does require some degree of intent or negligence.

Second, each type of enforcement action is progressively more difficult to initiate and win because the burden on the EPA to prove the violation (the "burden of proof") is different and because the procedures for each are different. Administrative enforcement cases are the easiest to prove; civil are more difficult; and criminal cases the most difficult.

Administrative enforcement cases are generally the least difficult types of cases to initiate and win because the degree of review and approval needed prior to filing is minimal. This process is discussed at §§ 9:110 to 9:120. These cases are also easier to prove because (1) the actual proceeding is more informal, thus allowing the EPA to use less reliable evidence; (2) the hearing officer is an EPA employee; and (3) the agency's burden is not as high.

Civil judicial cases are more challenging to initiate and prove. They require review and approval by DOJ and EPA in Washington, rather than by the EPA Region. The EPA has expressed its preference for administrative rather than civil enforcement in the following terms:

Enforcement of the law through civil judicial litigation is slow, cumbersome, and costly. Moreover, when the issue is enforcement of environmental requirements, there is substantial scientific and economic complexity. Often judges who handle a variety of cases are not sufficiently familiar with the issues to preside over an environmental case effectively.²

Civil judicial cases may be more difficult for the agency to win because (1) the

[Section 9:5]

¹See §§ 9:246 to 9:261 (Parallel Proceedings).

²EPA, Office of Enforcement and Compliance Monitoring, Compliance Policy and Planning Branch, Basic Training Course for EPA Inspectors/Field Investigators: Fundamentals of Environmental

rules of evidence and procedure are stricter; and (2) they are heard by federal district judges. Because federal district courts are so backlogged, particularly with criminal cases, the EPA and DOJ carefully select which civil environmental matters to bring before those courts based on the likelihood of success.

Criminal cases are the most challenging to initiate and win. In most cases, not only must the EPA and DOJ approve the case, but most often the case also must be presented to a grand jury (§ 9:220, § 9:241). These cases are most difficult to win because guilt must be established “beyond a reasonable doubt,” and this is often determined by a jury, not by a judge.

As a reflection of the higher standards needed to bring and win each type of case, the sanctions that result are also increasingly severe. Although administrative and civil sanctions often involve similar maximum penalty levels, there is a tendency to bring cases seeking larger penalties as civil judicial cases, rather than administrative cases. Criminal cases involve the most severe sanctions, including large fines and imprisonment.

There are a number of reasons why the EPA may choose to use each of these mechanisms in each case. First and foremost, particularly with respect to criminal cases, is that the agency must be able to prove all the elements of the violation as defined by the statute. If the EPA cannot prove a “knowing” violation, it will not bring a criminal case. Sections 9:234 to 9:241 discuss some of the unique aspects of the elements of offenses, and the elements for specific statutory offenses are discussed at §§ 9:250 to 9:259.

Other considerations influencing which method of enforcement is used include:

- The more egregious the conduct, the more likely a criminal case will be brought;
- The greater the need for immediate action for the environment, the more likely a civil or administrative case will be brought;
- The higher the civil penalty, the more likely a civil case will be brought;
- When the case involves unique interpretations of environmental laws (so-called “test cases”), the more likely it will be brought administratively;
- The weaker the quality, or quantity of evidence, the more likely an administrative case will be brought; and
- The more public the case, the more likely it will be brought civilly rather than administratively.

§ 9:6 EPA’s Administrative Enforcement Powers under the Major Environmental Statutes

There are five basic principals governing the administrative enforcement of environmental laws.

First, all administrative enforcement cases are governed solely by the law pursuant to which the case is brought. There is no “inherent” administrative enforcement authority beyond the statute.

Second, administrative enforcement cases do not result in self-enforcing orders. That is, when an administrative enforcement case results in an order to act or pay a penalty and the recipient fails to do so, the EPA must then file a civil judicial case enforcing the order.¹ That is not to say the recipients can “retry” their cases before the court. Most often they cannot. In contrast, if a civil judicial case results in a

Compliance Inspections, at 6-4 (Feb. 1989).

[Section 9:6]

¹This is discussed at Chapter V. (The Appeals Process for Administrative Orders).

court order, and the defendant declines to comply, the court will immediately consider contempt proceedings to compel the defendant's compliance and sometimes even arrest the defendant based on certain contempt of court charges.

Third, administrative enforcement cases are handled within EPA. The EPA representative bringing the case usually works in a regional office and is representing the Administrator. The presiding officer hearing the case is also an EPA employee and acting on behalf of the Administrator.²

Fourth, administrative enforcement is less formal and less expensive to pursue than civil or criminal enforcement.

Finally, in most cases, a party seeking administrative review of a particular enforcement sanction must wait until the EPA brings an action for a penalty before initiating an administrative review of the sanction. The ability to obtain formal review of allegations of violations and orders to comply before a formal case is brought is quite limited. However, it is always possible and usually appropriate to attempt an informal resolution with the EPA.

§ 9:7 Statute-Specific Considerations

As noted in § 9:6, administrative enforcement actions are completely defined by the statute under which they are brought. While federal courts may have some other general powers to bring to bear in civil and criminal cases (e.g., restitutionary powers), the authority to bring administrative enforcement cases, and seek remedies, is governed by the particular statute. Neither the EPA nor the judicial hearing officer has inherent powers outside the statute. Sections 9:91 to 9:102 discuss the types of administrative enforcement sanctions available under each statute, and §§ 9:91 to 9:120 describe the types of administrative review available for these actions.

§ 9:8 Civil Judicial Enforcement

When the EPA chooses to enforce a case through a federal civil judicial action, it must act through the DOJ. §§ 9:42 to 9:47 explain this process. As with administrative cases, it is often not possible to obtain judicial review of an EPA accusation of a violation until the agency files its suit. In addition, many statutes expressly preclude judicial review of agency orders after compliance has been achieved.

All federal civil judicial cases brought by the EPA are filed in a U.S. District Court in the district where the alleged violation took or is taking place. The Federal Rules of Civil Procedure govern the case, as they govern all federal civil litigation.

Civil judicial cases seek determinations of liability, monetary penalties (§§ 9:123 to 9:158) and injunctions (§§ 9:159 to 9:183). There are two types of civil judicial actions that the EPA may initiate. One is an action simply alleging violations and seeking penalties and injunctive relief. The other is an action seeking to enforce an administrative order, or the results of an administrative adjudication (such as collection of a penalty). In the first type, all issues can be challenged and litigated. In the second, if there was the obligation to seek administrative review, generally only those issues properly raised in the administrative process will be subject to review.¹ If the action is simply for collection of a penalty, review of the original, underlying case by the federal court may be foreclosed.

While civil litigation to enforce environmental statutes is governed by the Federal

²See § 9:94.

[Section 9:8]

¹Sections 9:191 to 9:120 explain this limitation.

Rules of Civil Procedure, the government's attorneys often have extensive experience conducting environmental litigation and have developed a wide variety of tactics and strategies for winning their cases. In addition, the substantive environmental issues involved are often very complicated and difficult to grasp and communicate to a court. Moreover, seldom does a case involve merely reading a statute and a regulation. Obtaining internal agency documents, such as guidance, is often crucial in defending a case.

§ 9:9 Citizen Suits

Federal civil judicial actions seeking to enforce environmental laws may be brought not only by the EPA but also by private citizens as well, if the statute that the EPA seeks to enforce contains a specific authorization to do so. Each of the environmental statutes specifically indicates the matters for which the federal court has jurisdiction.

§ 9:10 Criminal Enforcement Powers

The federal criminal enforcement power of the EPA is the single most powerful—and devastating—weapon in its arsenal. To ensure that such enforcement power is exercised appropriately, the EPA established principles that guide the exercise of investigative discretion in criminal enforcement matters. Central to these principles is the notion that criminal investigations should target only the most significant and egregious violations. Such violations are measured by the significance of the resulting environmental harm and the culpability of conduct. These principles aid investigators in distinguishing cases meriting criminal investigation from those more appropriately pursued administratively or civilly. These principles are discussed in more detail at §§ 9:229 to 9:245. No one faced with even the possibility of a criminal investigation should address it without the benefit of counsel. Because environmental laws are very complex, it sometimes takes years to prepare a case for prosecution. These cases are also given the highest priority by the courts.

Criminal cases generally begin in an EPA regional office and are then referred to both the Environmental Crimes Section at the DOJ and to the U.S. Attorney's office in the district where the alleged wrongdoing is taking place. Section IX (Federal Criminal Enforcement) discusses this process in detail.

§ 9:11 EPA Enforcement Policies

More often than not, enforcement policies are developed as a result of two situations. First, when a new law or requirement becomes effective, an enforcement policy may be developed to demonstrate the EPA's commitment to seeing that the new requirement is met. For example, Clean Air Act ("CAA") enforcement initiatives were announced soon after the 1990 CAA amendments became effective.

Second, these policies may be developed in response to particular environmental problems or a perceived lack of compliance. For example, after the reports in 1988 that medical waste was appearing on public beaches, the EPA and DOJ developed a "Medical Waste SWAT team" to respond quickly to such reports and identify responsible parties.

§ 9:12 Rulemaking Authority

As noted at the outset of this chapter, the vast majority of enforcement actions allege violations of regulations rather than of statutes. That is because most environmental statutes establish general requirements and authorize the EPA to promulgate regulations outlining and expanding on those requirements.

§ 9:13 Formal Rulemaking

Formal regulations are developed in accordance with either the Administrative Procedure Act (“APA”)¹ or in accordance with other procedures in the law pursuant to which the regulations are being promulgated. The hallmark of all formal regulations is that the agency developing them (in this case, the EPA) must first publish the proposed regulation in the *Federal Register* to provide public notice, accept public comments, properly consider the comments, and issue a final regulation that properly reflects the information before it. This is called the “notice and comment” process.

Formal regulations have the force and effect of law, and are binding on all parties subject to them. They are often the basis for administrative, civil, and criminal enforcement actions.

Formal regulations can be either legislative or interpretive. Legislative rules establish substantive requirements consistent with the statute under which they are promulgated.² Interpretive rules, in contrast, “clarify or explain existing law or regulations so as to advise the public of the agency’s construction of the rules it administers.”³ Legislative rules trigger notice and comment provisions of the APA, while interpretive rules do not.⁴ Amendments to interpretive rules are similarly exempt from the APA’s stringent requirements of notice and comment.⁵

§ 9:14 Informal Rulemaking

The EPA has developed thousands of informal guidances, directives, and other documents designed to tell its enforcement personnel how to interpret and apply the substantive requirements of the various environmental laws. These documents are public, but not everyone knows how and where to access them. Seldom are the documents publicly announced in a manner that is effective for the regulated community.

Most of these documents may be obtained by searching the EPA’s Web site or filing a request under the Freedom of Information Act (“FOIA”).¹ The request should be sent to the program office (e.g., Air, Water, Waste, Pesticides; see § 9:41) in the region where the operation (factory, facility, etc.) is located. A list of FOIA contact officers is located in § 9:50.

The policy in question should be described in as much detail as possible. The request should at least state the regulation at issue and ask if there are any policies regarding that regulation. A phone call following the FOIA request can often expedite the process of identifying and receiving the document.

§ 9:15 The Relationship between Rulemaking and Enforcement

As noted above, most enforcement actions cite regulations as the basis for the alleged violation. Although informal rules such as guidances cannot themselves be the basis of an enforcement action because they are not legally binding, they can be

[Section 9:13]

¹5 U.S.C. §§ 551 et seq.

²United Technologies Corp. v. U.S. E.P.A., 821 F.2d 714, 718–20, 26 Env’t. Rep. Cas. (BNA) 1110, 17 Env’t. L. Rep. 21015 (D.C. Cir. 1987).

³Gunderson v. Hood, 268 F.3d 1149, 1154 (9th Cir. 2001).

⁴5 U.S.C. § 553(b) to (c).

⁵Perez v. Mortgage Bankers Ass’n, 135 S. Ct. 1199, 1206, 191 L. Ed. 2d 186, 24 Wage & Hour Cas. 2d (BNA) 529, 165 Lab. Cas. (CCH) P 36321 (2015) (“Because an agency is not required to use notice-and-comment procedures to issue an initial interpretive rule, it is also not required to use those procedures when it amends or repeals that interpretive rule.”).

[Section 9:14]

¹5 U.S.C. § 552.

quite valuable to the EPA in resolving ambiguous regulations. The EPA will argue that these informal rules reflect the agency's long-standing interpretation to which the court should defer.¹

On many occasions, a party cited for violating a regulation will want to challenge its validity, either as inconsistent with the statute, beyond the agency's authority, or simply nonsensical. Some environmental statutes do not allow such challenges in enforcement cases if the statute gave the public the opportunity to challenge the regulation right after it was issued, but before it was enforced. This limitation makes it important to follow significant regulatory developments at the EPA. Of course, this limit on challenges does not generally apply to constitutional challenges to the regulation. Each statute must be consulted to determine if the limit on review in the enforcement context applies.

§ 9:16 Relationship between the EPA and Other Federal Agencies

Although the EPA is the primary environmental enforcement agency at the federal level, many others also are involved. The Department of the Interior ("DOI"), the National Oceanographic and Atmospheric Administration ("NOAA"), and the Coast Guard are examples, as is the Occupational Safety and Health Administration ("OSHA").

§ 9:17 Agencies That Help the EPA Regulate

The EPA has developed Memoranda of Understanding ("MOU") with most agencies that are involved in enforcement activities that have environmental aspects to them. An example is the MOU between the EPA and the U.S. Coast Guard ("Coast Guard") addressing the Oil Pollution Act that is part of the CWA. Another example is the MOU between the EPA and the Army Corps of Engineers regarding enforcement of the wetlands program under Section 404 of the Clean Water Act.

It is important to note that these agreements exist on the national and regional levels. To determine if the EPA region has an MOU with another agency, a copy can be requested via FOIA request directed at the program office (air, water, waste, pesticides, etc.) involved.

§ 9:18 Agencies Regulated by the EPA

Virtually every federal agency has operations subject to environmental laws. Notable examples include the Department of Energy ("DOE") and the Department of Defense ("DOD") facilities. Often these federal facilities have agreements with the EPA governing their operations, particularly where violations may have existed. It is not unusual for these agencies to have interests more closely aligned with the regulated community than with the EPA.

§ 9:19 Joint EPA and U.S. Coast Guard Enforcement

In the maritime environment, the U.S. Coast Guard ("Coast Guard") and the EPA share joint enforcement authority under several key environmental statutes.

For example, pursuant the Clean Water Act ("CWA"), as amended by the Oil Pollution Act of 1990, the EPA and the Coast Guard are designated authority for overseeing removal actions for discharges of oil and hazardous substance into the navigable waters of the United States. Under the National Contingency Plan, the

[Section 9:15]

¹Beazer East, Inc. v. U.S. E.P.A., Region III, 963 F.2d 603, 606, 34 Env't. Rep. Cas. (BNA) 1937, 22 Env'tl. L. Rep. 21161 (3d Cir. 1992).

EPA is designated as the lead agency for such discharges that occur in the inland zone, and the Coast Guard is designated the lead agency for discharges in the coastal zone.¹ Both agencies are delegated authority under the CWA to impose civil penalties on owners, operators, and persons in charge of vessels, onshore facilities, and offshore facilities for discharges of oil or hazardous substances into the navigable waters of the U.S.²

Similarly, under the Act to Prevent Pollution from Ships, 33 U.S.C. 1901, et seq., the Coast Guard and the EPA share authority for the enforcement of exhaust emissions standards applicable to U.S. vessels, and those foreign flag vessels operating in the navigable waters of the U.S.³ Coordination of the respective enforcement activities for both agencies is set forth in an interagency Memorandum of Understanding, as well as agreed upon enforcement protocols.⁴

§ 9:20 EPA's Relationship with State and Local Enforcement Authorities

This section outlines the basic legal framework that exists between state and federal environmental enforcement authorities. At the policy level, the forum in which this relationship is most often discussed is the National Environmental Enforcement Council ("NEEC"). This is a part of the National Association of Attorneys General and is comprised of the EPA, DOJ, state environmental agency heads and attorneys generals and local district attorneys. NEEC has no legal authority, does not take and advocate policy positions, nor are its meetings even open to the public. Nonetheless, it is often the forum in which the strains and concerns among federal, state, and local enforcement authorities are often discussed in frank detail.

The EPA established two advisory committees, the Small Community Advisory Subcommittee ("SCAS") and the Local Government Advisory Committee ("LGAC"). One of the objectives of SCAS is to assist in informing agencies when the cost of providing environmental safeguards will disproportionately affect a community.¹ The LGAC is policy-oriented, and it seeks to "assist the agency in ensuring that its regulations, policies, guidance, and technical assistance improve the capacity of local governments to carry-out these programs. . . ."² It also provides advice and recommendations to the EPA regarding: changes necessary to permit flexibility; improvement performance measures; avenues for which the EPA and states can assist "local governments strengthen their capacity to promote environmental quality, including public access, community right-to-know, and performance measurement"; ways to assist local governments finance environmental projects; and effects of poli-

[Section 9:19]

¹See 40 C.F.R. § 300.120(a)(1)–(a)(2).

²See 33 U.S.C. § 1321(b)(6).

³See 33 U.S.C. § 1903(a) to (b).

⁴See MOU between the U.S. Coast Guard and the U.S. EPA, Regarding the Enforcement of International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 ("MARPOL"), Annex VI, as Implemented by the Act to Prevent Pollution from Ships, dated June 27, 2011; see also U.S. Coast Guard and U.S. EPA Revised Protocols on Referrals Under MARPOL Annex VI, as implemented by the Act to Prevent Pollution from Ships, dated March 4, 2015.

[Section 9:20]

¹EPA, Small Community Advisory Subcommittee (SCAS) (Feb. 2, 2016), available at <http://www.epa.gov/ocir/small-community-advisory-subcommittee-scas>.

²EPA, U.S. EPA Agency Charter, Local Gov't Advisory Committee (Dec. 2011), available at http://www.epa.gov/sites/production/files/2013-09/documents/lgac_renewal_charter_effective_dec302011.pdf.

cies and practices on the EPA's priorities and goals.³

§ 9:21 Basis of the Relationship: Cooperative Federalism

Under the Tenth Amendment of the U.S. Constitution, “the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States, respectively, or to the people.”¹ Congress' power to regulate has in large part been drawn from its authority over interstate commerce. States have traditionally regulated to protect the health and welfare of their citizens. Until the second half of this century, protection of the environment was almost exclusively a state function, unless the activity directly related to interstate commerce (e.g., the Rivers and Harbors Act regulated certain adverse environmental conduct on interstate waters and in harbors).

Today, the major environmental laws apply with little concern for whether the activity actually affects interstate commerce. This has resulted in some degree of tension between federal and state authorities. National standards are imposed in order to ensure some consistency for business and to minimize the competitive playing field among states. However, doing so tends to usurp the sovereignty of states.

To help resolve this conflict, the concept of cooperative federalism has emerged. Under this concept, the federal government establishes minimum standards, and states develop a program incorporating these standards. The program is then reviewed and approved by the EPA. If approved, the state becomes the primary authority for implementation and enforcement with the federal government performing an oversight role. In some circumstances, states with approved programs receive federal funding to assist in enforcement. In others, most notably the Clean Air Act State Implementation Program, failure to cooperate could result in loss of federal funding for other programs (e.g., highways).

This cooperative effort has some tension: the minimum federal standards as developed by the EPA are expensive to implement, and states are concerned about the federal government's tendency to impose these requirements without providing any funding for them.

§ 9:22 Federal Approval of State Programs

Four of the major federal environmental laws are, at least in part, based on the EPA establishing minimum federal requirements, and the state carrying out those requirements. These requirements include:

- The RCRA hazardous waste permit and underground storage tank program;
- The CWA National Pollutant Discharge Elimination System permit program;
- The CAA program for achieving attainment of National Ambient Air Quality Standards and the Operating Permit Program; and
- The SDWA program relating to protection of sources of drinking water.

Under these programs, states are often permitted to have standards that are more stringent than the federal requirements. States may even have standards that conflict with federal ones, as long as they are more stringent. Under most of these programs, if the state has approval, some notice must be given before federal enforcement may commence. The SDWA probably gives the state the greatest degree

³See EPA, U.S. EPA Agency Charter, Local Gov't Advisory Committee (Dec. 2011), *available at* http://www.epa.gov/sites/production/files/2013-09/documents/lgac_renewal_charter_effective_dec302011.pdf.

[Section 9:21]

¹U.S. Const. Amend. X.

of autonomy from federal oversight enforcement.

In every instance where the state is operating under a federally approved program, the process for applying for and achieving approval is public. In addition to the actual approved program, there are Memorandums of Agreement or Memorandums of Understanding between the EPA (usually at the regional level) and the approved state, which help define their respective responsibilities. These agreements can be informative when faced with defending an enforcement action. They are public and can be obtained from the EPA regional office that covers the state in question.

FIFRA, TSCA, EPCRA, and CERCLA all share a common characteristic: states may have similar programs operating parallel to and completely independent of the federal programs. The state program is free to operate as it sees fit provided the state's requirements do not impede the goals of the federal program.

§ 9:23 Pre-emption of State Programs

There are occasions when a state or federal enforcement action alleges violations that seem to be in conflict with the other authority's requirements. Although this conflict rarely occurs under a federal law involving a federally approved state program, it can occur with respect to the remaining laws. When it happens, one must give way. When the state law cannot be reconciled with a federal program, the state law will be preempted, and the federal program will take control. When a federal program imposes requirements that prevent the state from exercising its constitutionally protected powers, the federal program may be enjoined, leaving the state program in place.

Generally, a state program may be preempted in three circumstances: (1) when federal regulation is sufficiently comprehensive to make it reasonable to infer that Congress "left no room" for additional state regulation; (2) when the state and federal programs are in irreconcilable conflict, such that complying with the state program is an impediment to complying with the federal requirements; or (3) when Congress expressly preempts the state from regulating and does so without violating any constitutional limitation on its power or protection of the state's authority.¹ There are rare occasions where a federal environmental requirement will interfere with the traditional and constitutionally recognized power of the state that the statute and its enforcement may be invalidated.²

II. GOVERNMENT ENFORCEMENT OFFICES

§ 9:24 Executive Summary

Federal, state, and local governments have dramatically increased their environmental enforcement efforts in recent years, although the number of EPA employees has been reduced. Twenty years ago, the federal EPA employed about 18,000

[Section 9:23]

¹See *California Federal Sav. and Loan Ass'n v. Guerra*, 479 U.S. 272, 280–81, 107 S. Ct. 683, 93 L. Ed. 2d 613, 7 Employee Benefits Cas. (BNA) 2657, 42 Fair Empl. Prac. Cas. (BNA) 1073, 41 Empl. Prac. Dec. (CCH) P 36641 (1987) (listing these three bases for federal preemption of a state program).

²See *New York v. U.S.*, 505 U.S. 144, 174–77, 112 S. Ct. 2408, 120 L. Ed. 2d 120, 34 Env't. Rep. Cas. (BNA) 1817, 22 Env'tl. L. Rep. 21082 (1992) (holding that the "take title" provision of the Low-Level Radioactive Waste Policy Act, requiring states to accept ownership of waste or regulate it according to congressional instructions, infringed upon state sovereignty in violation of Tenth Amendment).

persons.¹ Today, it employs roughly 15,000 and has a budget of \$8.6 billion.² It also operates through countless private contractors, many of whom collect information to be used in enforcement actions, such as soil and groundwater sampling used in site investigations under the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”), also known as “Superfund.” By law, however, the EPA may not delegate any of its enforcement duties to private contractors. These duties include conducting interviews or investigations related to possible civil or criminal wrongdoing. Although the EPA is hardly a large agency by federal standards, it is clearly the leader with respect to environmental concerns. For enforcement purposes, the EPA has been described as the “FBI for the environment.”

Note, however, that the EPA is not solely responsible for environmental enforcement at the federal level. Many other federal agencies have environmental enforcement responsibilities as well. For example, the Departments of Interior, Agriculture, Defense, Commerce, and Energy have been designated federal trustees for natural resources and may seek to recover natural resource damages caused by pollution under the Clean Water Act (“CWA”) and CERCLA.³

In addition, many state and local organizations have become more involved in these enforcement efforts. Under most of the major federal environmental laws, states may enforce the federal requirements. A state may create its own regulatory program as long as the state’s regulations are at least as stringent as the federal requirements. As a result, many enforcement efforts are handled by federal, state, and sometimes local officials working together. Environmental enforcement has become, in every sense of the word, a team effort. In many locations, such as Boston, Massachusetts, and San Diego, California, federal, state, and local officials with environmental responsibilities are forming “environmental strike forces.” These teams jointly investigate and prosecute environmental violations, particularly criminal matters.

The coordinated enforcement action brought against Exxon Corporation and Exxon Shipping following the 1989 *Exxon Valdez* grounding in Prince William Sound is an excellent illustration of the breadth of agency involvement in environmental enforcement.⁴ Federal agencies involved in this action included the EPA; the U.S. Department of Justice (“DOJ”), Environment and Natural Resources Division; the U.S. Coast Guard; the Department of Agriculture; the Department of Interior; and the National Oceanographic and Atmospheric Administration (“NOAA”). At the state level, the Office of the Attorney General for the State of Alaska and the Department of Environmental Conservation were involved. At the local level, the District Attorney’s office in Anchorage was involved.

To help the reader deal with these different players, this Chapter focuses mainly on the EPA and DOJ if judicial litigation is involved. The rest of this subchapter (§§ 9:25 to 9:54) covers how the EPA is organized, how it makes policy and enforcement decisions, how it processes civil and criminal cases, and how it works with other agencies who may participate in a given enforcement action. The goal is to equip a reader who is the target of an investigation or enforcement action so that he or she can direct effective responses to the correct parties.

[Section 9:24]

¹Audit of EPA’s Fiscal 2005 and 2004 Consolidated Financial Statements, EPA at 34, App’x 1 (Nov. 2005).

²*FY 2016 EPA Budget in Brief*, EPA at 3, 11, 20 (Feb. 2015), http://www.epa.gov/sites/production/files/2015-02/documents/fy_2016_bib_combined_v5.pdf (last visited Jul. 8 2016).

³33 U.S.C. §§ 1251, et seq., including but not limited to Section 311(f), and 42 U.S.C. §§ 9601, et seq., including but not limited to Sections 104, 107, 111(i), and 122.

⁴*United States v. Exxon Corp.*, 1990 U.S. Dist. LEXIS 1821 (D. Alaska Feb. 27, 1990).

§ 9:25 How the EPA is Organized

The EPA was created by Executive Order and has no founding statute.¹ Thus, its organizational structure is determined administratively, and EPA's organization can and does change. The relative importance of different offices may change as well. The EPA maintains an online Organization Chart that is instructive as to how the headquarters offices in Washington, and the regional offices around the nation, are organized.²

The EPA is not a business, and it was not created nor organized like a business. Therefore, many fundamental principles applicable to business organizations do not apply to the EPA. For example, unlike a typical business in which the CEO may fire any employee at almost any time, the Administrator's removal power over certain lower level officials is sharply limited. Both the Administrator and certain lower level officials, such as the Deputy Administrator and a number of Assistant Administrators ("AAs"), are nominated by the president, must be confirmed by the U.S. Senate, and serve "at the pleasure" of the president.³ Even though these lower officials report directly to the Administrator, they are removable only by the president, thereby limiting the Administrator's control over at least some of their actions.

The Office of the Administrator has the final legal authority to approve, and in some cases to bring, enforcement actions under the major environmental statutes. As a practical matter, the Administrator delegates this authority in two ways.

First, the Assistant Administrator (AA) for Enforcement and Compliance Assurance oversees all enforcement efforts of the agency as head of the Office of Enforcement and Compliance Assurance.⁴

Second, the Administrator has also delegated enforcement authority to the regional administrators, who direct the 10 EPA regions around the country.⁵ Each regional administrator approves all enforcement actions brought in his or her region. While regional administrators must report directly to the Administrator, their enforcement actions are also overseen by the AA for Enforcement and Compliance Assurance as noted. Thus, enforcement activities are handled through 11 roughly equal authorities: the Assistant Administrator and the 10 regional administrators. Enforcement actions are usually initiated by staff attorneys in EPA regional offices and approved by the relevant regional administrator.

Further approvals by officials in Washington may also be required depending on the type of case being considered. Administrative enforcement matters generally are not reviewed by the AA for Enforcement and Compliance Assurance in Washington, but rather are handled by the regional offices. Criminal enforcement matters prepared by the regional office always must be reviewed and approved by the DOJ. Cases that are sent to the DOJ directly from the regional offices are called "direct referrals." Large-scale and civil enforcement matters are sometimes reviewed and approved by the AA for Enforcement and Compliance Assurance and the DOJ. In addition, the EPA has a criminal enforcement program that was established in 1982 and granted full law enforcement authority by Congress in 1988 that provides support to federal, state, and local prosecutors as well as the EPA, U.S. Attorneys, and

[Section 9:25]

¹Reorganization Plan No. 3 of 1970, 42 U.S.C. § 4321.

²*EPA Organization Chart* (last updated Jan. 28, 2016), EPA, available at: <http://www.epa.gov/aboute/epa-organization-chart> (last visited Jul. 8, 2016).

³*EPA Organization Chart* (last updated Jan. 28, 2016), EPA, available at: <http://www.epa.gov/aboute/epa-organization-chart> (last visited Jul. 8, 2016).

⁴40 C.F.R. § 1.35.

⁵40 C.F.R. § 1.35.

DOJ.

The various media program offices within the EPA (such as Air and Radiation, Chemical Safety and Pollution Prevention, Solid Waste and Emergency Response, and Water) are the actual clients for enforcement purposes.⁶ These offices establish the programs that are enforced. Each program office is headed by an AA, who is on equal footing with the AA for Enforcement and Compliance. Program AAs seldom get directly involved in the enforcement process unless a case has a direct impact on their programs. These media enforcement offices operate under the auspices of the Office of General Counsel.⁷

The role played by the EPA in environmental litigation is also determined, in large part, by the kind of case at issue. For civil and criminal cases filed in federal court, the EPA typically investigates and prepares the case or assists in its preparation, while the litigation is handled by the DOJ in either its Environment and Natural Resources Division or by the U.S. Attorney's Office. In administrative enforcement cases, EPA attorneys actually file and litigate, in addition to investigating and preparing the cases.

The EPA also has judicial functions. The Administrator not only brings administrative enforcement actions, but also decides them. The EPA's Office of Administrative Law Judges ("OALJ") conducts formal hearings and issues formal opinions when appropriate.⁸ The OALJ is an independent office in EPA's Office of Administration and Resources Management, which, like the other "program" offices, is headed by an AA on equal footing with the AA for Enforcement and Compliance.

§ 9:26 EPA Office of Enforcement and Compliance Assurance ("OECA")

Although the Office of the Administrator sets overall policy and serves a judicial function in deciding environmental matters, the EPA Office of Enforcement and Compliance Assurance ("OECA") is, without question, the most centrally involved in carrying out the federal enforcement responsibilities of the Agency. The OECA sets enforcement priorities, monitors how those priorities are executed, and reviews and approves individual cases.¹ On a broader level, OECA is responsible for ensuring and monitoring compliance with environmental laws and regulations.²

§ 9:27 Office of the Assistant Administrator for OECA

The Assistant Administrator ("AA") who heads OECA is a presidential appointee who is confirmed by the Senate. He or she serves at the pleasure of the president, and customarily resigns when that president leaves office. However, the AA for OECA does not necessarily serve all four years with the president who made the appointment. On average, presidential appointees in the EPA serve about 24 months.

The AA for OECA wears many hats and has a wide variety of responsibilities, including:

- reviewing civil judicial enforcement actions;

⁶See generally 40 C.F.R. §§ 1.41, 1.43, 1.47, 1.49 (2015).

⁷*Organization Chart for the Office of General Counsel (OGC)* (last updated June 9, 2015), EPA, available at: <http://www.epa.gov/aboutepa/organization-chart-office-general-counsel-ogc> (last visited Jul. 8, 2016).

⁸40 C.F.R. § 1.25(a).

[Section 9:26]

¹40 C.F.R. § 1.35.

²*Organization Chart for the Office of Enforcement and Compliance*, EPA, available at: <http://www.epa.gov/aboutepa/organization-chart-office-enforcement-and-compliance-assurance-oeca>.

- establishing administrative, civil, and criminal enforcement priorities;
- working with state and local environmental enforcement authorities;
- representing the EPA before Congress and the public;
- coordinating enforcement efforts by the 10 EPA regions to ensure consistent and effective enforcement programs; and
- reviewing legislation and proposed regulations to determine impacts on the EPA's enforcement mission.

The Office of the AA for OECA performs three substantive operations. The first deals with civil enforcement (both administrative and civil judicial); the second deals with criminal enforcement; and the third deals with enforcement of environmental laws at federally owned facilities. A Principal Deputy AA, who is a career employee, is second in command in this office.

§ 9:28 Office of Administration and Policy (“OAP”) and Office of Civil Enforcement (“OCE”)

Two small offices are aligned with the OECA. They are the Administration and Policy (“OAP”) and the Office of Civil Enforcement (“OCE”). The OAP aids the AA for OECA by providing policy, administrative, and management coordination across OECA, including human resources, labor relations, budget, finances, contracts, grants, records management, information technology, and managing the Agency's enforcement Web site.

The OCE develops and prosecutes administrative and judicial cases and provides legal support for cases and investigations initiated in EPA regions. OCE directly implements and enforces federal programs, e.g., those where there are no EPA-authorized state programs. OCE also has responsibility for planning and setting priorities for enforcement activities, developing national enforcement policy and guidance, participating in Agency rule-making to ensure that regulations contain clear and enforceable provisions, and implementing effective communication to alert regulated entities to potential compliance problems.

§ 9:29 Office of Compliance (“OC”)

The Office of Compliance (“OC”) identifies, prevents, and reduces noncompliance and environmental risks by establishing enforcement initiatives and ensuring effective monitoring and assessment of compliance. OC provides compliance assistance and compliance data and ensures the effectiveness of compliance and enforcement personnel through training. The Office of Compliance manages EPA's National Enforcement Initiatives, statutory programs compliance monitoring; compliance assistance, the Enforcement and Compliance History Online database, the National Enforcement Training Institute, and Compliance and Enforcement Annual Results.

§ 9:30 Office of Criminal Enforcement, Forensics and Training (“OCEFT”)

The Office of Criminal Enforcement, Forensics and Training (“OCEFT”) investigates violations of environmental laws and provides a broad range of technical and forensic services for civil and criminal investigative support and council on legal and policy matters. Programs and projects managed by the OCEFT include criminal enforcement cases, criminal enforcement program area and resident offices, environmental violation reporting, EPA fugitives, and the National Enforcement Investigations Center (“NEIC”).

The NEIC is the “crime lab” for environmental enforcement. The NEIC facility is located in Denver, Colorado, and has the state-of-the-art equipment needed for analyzing and evaluating evidence collected in an environmental case. Members of

its technical staff sometimes testify as expert witnesses in both civil and criminal enforcement cases.

NEIC is developing a complex web of data regarding any person or entity subject to EPA regulation. The objective of this effort is to provide a centralized location from which environmentally related information on subjects of investigations (possible polluters or pollutants) can be quickly and reliably obtained.

§ 9:31 Office of Environmental Justice (“OEJ”)

The Office of Environmental Justice (“OEJ”) works to protect human health and the environment in communities overburdened by environmental pollution by integrating environmental justice into all EPA programs, policies, and activities. Environmental justice is the fair treatment and meaningful involvement of all people, particularly minority, low-income and indigenous populations, in the environmental decision-making process. Programs and projects managed by the OEJ include the National Environmental Justice Advisory Council (“NEJAC”), Federal Interagency Working Group on Environmental Justice (“IWG”), Environmental Justice Achievement Awards, Listserv for environmental justice information, and Environmental Justice Small Grants.

§ 9:32 Office of Federal Activities (“OFA”)

The Office of Federal Activities (“OFA”) coordinates EPA’s review of all federal Environmental Impact Statements (“EIS”) prepared by other agencies under the National Environmental Policy Act (“NEPA”) as well as EPA’s compliance with NEPA. OFA also works with federal and state agencies, foreign governments, and international organizations in order to ensure compliance with United States environmental laws and to promote a level playing field in trade internationally. Programs and projects managed by the Office of Federal Activities include: NEPA, Environmental Impact Assessments (“EIAs”) Regarding Nongovernmental Activities in Antarctica, and the EIS Database.

§ 9:33 Federal Facilities Enforcement Office (“FFEO”)

The Federal Facilities Enforcement Office (“FFEO”) is responsible for ensuring that federal facilities take all necessary actions to prevent, control, and abate environmental pollution. FFEO facilitates compliance through inspections and enforcement under all environmental statutes and cleanup at federal facilities. Programs and projects managed by the FFEO include compliance and enforcement at federal facilities and FedCenter.gov, the federal government’s home for comprehensive environmental stewardship and compliance assistance information.

§ 9:34 Office of Site Remediation Enforcement (“OSRE”)

EPA’s cleanup enforcement program protects human health and the environment by getting those responsible for a hazardous waste site to either clean up the site or reimburse the EPA for its cleanup. The EPA uses a number of cleanup authorities independently and in combination to address specific cleanup situations. The Office of Site Remediation Enforcement (“OSRE”) manages the enforcement of EPA’s national hazardous waste cleanup programs: Superfund (officially known as the Comprehensive Environmental Response, Compensation, and Liability Act), corrective action under the Resource Conservation and Recovery Act (“RCRA”), the Oil Pollution Act, and underground storage tanks.

Programs and projects managed by the OSRE include Superfund enforcement, RCRA cleanup, brownfields and land revitalization, and site cleanup enforcement.

§ 9:35 Regional Office Operations

The Administrator has formally delegated his enforcement responsibilities to regional administrators. Accordingly, the vast majority of administrative and civil enforcement actions are initially developed in regional offices. Criminal enforcement actions are generally investigated through regional offices as well, but unlike administrative and civil matters, these matters are overseen more actively by the DOJ through the local U.S. Attorneys office or the Environmental Crimes Section in the Environment and Natural Resources Division.

§ 9:36 Enforcement Organization at the Regional Level

Similar to the organization at the national level, some of the Regions have an Office of Enforcement and Compliance serving under the Regional Administrator and Deputy Regional Administrator, alongside the media divisions. Each program office has an enforcement component that works with attorneys in the Regional Counsel's office. The Regional Counsel's office tends to take a more active lead in multimedia enforcement initiatives within the region.

To some degree, even this structure may vary from Region to Region. Sometimes certain enforcement activities in a particular area of the Region will be combined, rather than handled through each program enforcement office. One example of this is Region 5, which has a "Great Lakes National Program Office." Because that office tries to coordinate all EPA activity in the Great Lakes area, it tends to blur otherwise distinct enforcement lines.

Another way in which the enforcement organization might vary is by media. Different program offices may have slightly differing procedures. Thus, enforcement procedures in the regional Air offices may be more similar in their case processing structure than the Air and RCRA office within one region.

When faced with a particular federal enforcement action, or if you have a question about enforcement, the first step is always the EPA Region. The following additional considerations should be kept in mind in order to "get to the right person."

1. EPA regions are very large and sometimes employ thousands of persons.
2. Do not start with the Regional Administrator. The person taking your call in the Regional Administrator is not likely to be familiar with your problem.
3. If the matter relates to a particular program (air, water, chemical safety or waste) start with the program office. Remember, waste can mean either Superfund or RCRA. Contact the enforcement (or compliance) office for that program.
4. Contact the Office of Regional Counsel. Since it is often divided along lines as well, ask for the Assistant Regional Counsel in charge of the program for which you have an interest.
5. Be patient. EPA offices reorganize, move, and change phone numbers quite often.

§ 9:37 Enforcement Organization at the Regional Level—Process

How an administrative, civil, or criminal case actually gets processed varies from Region to Region. Several factors influence this process. First, criminal cases do not tend to go through the formal review process that exists in the Region as administrative and civil cases. In many cases, they may originate in a U.S. Attorney's office.

Administrative and civil case processing also may vary from Region to Region. Generally, the case is investigated and prepared through the program office and reviewed and approved by the regional office and the regional administrator.

§ 9:38 Dealing with Regional Offices

Appreciating the pressures, concerns, and goals of a particular office, and how

this office relates to others, is crucial to working effectively with the Region. Depending on the kind of case involved, this means knowing who is playing what role in developing the case. It may be the counsel's office or the program office that is most interested. It may be a situation in which "headquarters" (Washington) has a great interest. When it involves more than one media, understanding which program office is more interested may be crucial. In this regard, knowing who is paying the bill to develop the case may be very important.

Understanding the relationship between the Region and the state where the enforcement action is being considered also is quite important, since in many cases the enforcement action relates to state as well as federal requirements. It may be that the Air office in Region 3 has an excellent relationship with the Air office in the state of Maryland, which may be better than the relationship between the Air office in Region 8 and in the Colorado Air agency. Conversely, the Waste office in Region 8 may have a better relationship with the Colorado Waste office than that which exists between the same offices in Region 3 and Maryland.

§ 9:39 Office of the Administrator

The Administrator is appointed by the president, with the consent of the Senate, and is responsible for all agency operations.¹ Under many of the federal environmental protection statutes, the Administrator has been assigned particular responsibilities, even though he or she serves at the pleasure of the president. For example, under the Clean Air Act ("CAA"), the Administrator is responsible for taking action to enforce State Implementation Plans ("SIPs"),² the plans that states submit to the EPA, detailing how they will meet federal air quality standards. In contrast, under CERCLA, the president has been assigned the responsibility of responding to releases of hazardous substances.³ The president has delegated his responsibilities with regard to this task to the Administrator.⁴

The EPA has a "Directives System," which describes the current organization, policies, procedures, assignments of responsibilities, and delegations of authority from the Administrator down to other officials. Within the Agency, the Administrator has delegated most enforcement responsibilities to lower officials.⁵

The Office of the Administrator has a very limited day-to-day role in enforcement activity. Although the Office of the Administrator is technically responsible for authorizing a wide variety of enforcement actions, it has, in fact, delegated this responsibility to the AA for Enforcement and the regional administrators.⁶

The Administrator, however, continues to play a more direct role in the judicial activities of the Agency. As discussed in §§ 9:103 to 9:133, when any person or entity wants to challenge an administratively assessed order or sanction, it must appeal to the Administrator. The Administrator has delegated the responsibility of hearing these appeals to hearing clerks.⁷ In addition, the Environmental Appeals Board, is acting on behalf of the Administrator when it hears appeals from decisions of hearing officers.

Generally speaking, in any particular enforcement case, one should not expect

[Section 9:39]

¹Reorganization Plan No. 3 of 1970, 42 U.S.C. § 4321; 40 C.F.R. § 1.23.

²42 U.S.C. § 7410.

³42 U.S.C. § 9604(a).

⁴42 U.S.C. § 9615; Exec. Order No. 12580, *reprinted in* 52 Fed. Reg. 2,923 (Jan. 29, 1987).

⁵40 C.F.R. § 1.5(b).

⁶U.S. EPA Delegations Manual, Section 1.1 (Mar. 19, 1984).

⁷*See generally* 40 C.F.R. § 22.3.

that threatening to “go to the Administrator” will be effective or meaningful. While the Administrator has the power to overrule a decision to bring an enforcement action and to “pull” a case from the Environmental Appeals Board, few instances of such action have ever occurred.

§ 9:40 Office of General Counsel (“OGC”)

The General Counsel of the EPA is nominated by the president and confirmed by the Senate, just like the Assistant Administrators. The Office of the General Counsel (“OGC”) provides legal opinion, legal counsel, and litigation support to the Agency and assists in formulating agency policies and programs.¹ The General Counsel’s role has two dimensions. First, as an institutional matter, the General Counsel must participate in and approve of certain actions taken by the EPA. Second, the General Counsel may have influence over enforcement policy issues, depending upon factors such as his or her personality or his or her relationship with the Administrator and other political appointees.

Institutionally, the OGC provides the official interpretation of statutes, rules, and regulations within the EPA. Second, it assists in the development of new regulations and in the defense of existing regulations that are under legal attack.

The General Counsel’s role of interpreter of agency statutes and regulations is extremely important. In the enforcement context, the question of whether a requirement was violated often revolves around how the regulation at issue is interpreted. Also, disputes often arise concerning the interpretation of a statute or regulation between the enforcement counsel and the program office. The OGC is the final authority of legal interpretation within the Agency, so it has the power to resolve these disputes.

In addition, the OGC ensures that all regulations, including those providing the basis for all enforcement actions, are developed and implemented in a manner consistent with legal requirements. If a regulation is not adopted according to the proper procedure (such as the notice and hearing requirements of the Administrative Procedure Act),² it may not be legally binding on the regulated community.³ Procedural defects in regulations can sometimes be a defense in enforcement matters.⁴

The OGC is a potentially valuable source of formal and informal information relevant to any enforcement matter. Formally, the General Counsel issues opinions on the interpretation of agency rules that are effectively binding on the Agency.⁵ Informally, the General Counsel may have been very involved in the development of a rule and may have information relevant to its meaning. Parties to enforcement proceedings can sometimes obtain information from the OGC that might provide insight into the meaning of an otherwise ambiguous regulation.

On the political level, the General Counsel’s importance varies with the personality of the individual holding the position and his or her relationship with the

[Section 9:40]

¹40 C.F.R. § 1.31.

²5 U.S.C. §§ 551 to 559.

³*See, e.g., Shell Oil Co. v. E.P.A.*, 950 F.2d 741, 34 Env’t. Rep. Cas. (BNA) 1049, 22 Env’tl. L. Rep. 20305 (D.C. Cir. 1991).

⁴*U.S. v. Goodner Bros. Aircraft, Inc.*, 966 F.2d 380, 384, 34 Env’t. Rep. Cas. (BNA) 2038, 22 Env’tl. L. Rep. 21201 (8th Cir. 1992); *Rollins Environmental Services (NJ) Inc. v. U.S. E.P.A.*, 937 F.2d 649, 654, 33 Env’t. Rep. Cas. (BNA) 1543, 21 Env’tl. L. Rep. 21353 (D.C. Cir. 1991) (Edwards, J. dissenting in part).

⁵40 C.F.R. § 1.31.

Administrator. When the Administrator is faced with legal questions regarding an enforcement matter, she most likely will seek the advice of the General Counsel.

As with other EPA offices, the OGC is organized along media and functional lines. There is a Principal Deputy General Counsel and two additional Deputy General Counsels, one “political” and one “career.” The political Deputy generally oversees all litigation involving defense of EPA rules, and the career Deputy handles contracts, personnel, and related issues. Associate General Counsels are assigned to program-specific areas including water, solid waste, pesticides and toxic substances, and air and radiation. These Associate General Counsels have a great deal of influence over the drafting of regulations, deciding whether positions taken in litigation are consistent with the Agency’s legal view of a statute or regulation, and determining how challenges to rulemaking petitions should be handled.

To illustrate the manner in which the OGC interacts with other parts of the Agency, consider a typical case brought under the Resource Conservation and Recovery Act (“RCRA”). In such a case, the Associate General Counsel for Solid Waste and Emergency Response works quite closely with both the Deputy Director for RCRA Enforcement in the Office of Civil Enforcement and with the Office of Waste Programs Enforcement within the Office of Solid Waste and Emergency Response.

§ 9:41 Program Offices

As noted above, the various major environmental laws were developed on a media-specific basis: air, water, chemical safety, solid waste, etc. Similarly, the program offices, which function to establish and implement prevention or remediation programs, are largely divided along media lines. The following is a list of the media-specific program offices:

- the Office of Air and Radiation¹
- the Office of Water²
- the Office of Solid Waste and Emergency Response³
- the Office of Chemical Safety and Pollution Prevention⁴

These offices are the legal client in enforcement actions since it is the particular program that is being vindicated in an enforcement action.

Each program office has an enforcement component. Program offices often work with the enforcement office, and even the Office of the General Counsel (“OGC”), to identify “test” cases in order to confirm the meaning of a particular regulatory requirement judicially. This coordinated enforcement activity is most often done in the context of administrative enforcement actions because the burden of proof is less difficult to meet and because the presiding officer is a designee of the Administrator.

The program offices, the Office of Enforcement and Compliance Assurance (“OECA”), and the OGC also must reach an agreement when the Agency decides whether to appeal enforcement decisions from lower courts, whether the appeal would go to intermediate appellate courts or the U.S. Supreme Court.

For example, in *Arkansas v. Oklahoma*,⁵ the question was raised regarding the extent to which a “downstream” state, with arguably more stringent water quality

[Section 9:41]

¹40 C.F.R. § 1.41.

²40 C.F.R. § 1.49.

³40 C.F.R. § 1.47.

⁴40 C.F.R. § 1.43.

⁵*Arkansas v. Oklahoma*, 503 U.S. 91, 112 S. Ct. 1046, 117 L. Ed. 2d 239, 34 Env’t. Rep. Cas.

standards, was able to protect itself from pollutants allegedly originating from waters upstream in a different state. This case was quite important to the Office of Water, which is responsible for developing and implementing water quality protection programs and assuring that states with federally approved programs retain the ability to enforce them. Before taking EPA's case to the Supreme Court, the Office had to coordinate with both the OGC and the OECA before recommending to the DOJ that review of an unfavorable circuit court opinion should be sought before the U.S. Supreme Court.

§ 9:42 U.S. Department of Justice

The U.S. Department of Justice ("DOJ") also plays a very important, but not well known, role in environmental enforcement. Stated simply, when the EPA appears in a federal court, it is represented by DOJ.¹ Only the Attorney General or his designee has the authority to appear in federal court on behalf of an executive agency. A Memorandum of Understanding ("MOU") establishes the relationship between the EPA and DOJ.

The DOJ guards its litigating authority zealously. On several occasions, however, sections of environmental statutes have implied that the EPA may bring legal actions in court without the consent of DOJ.² Additionally, when criminal wrongdoing is suspected, the DOJ (through the FBI) either assists or conducts the investigation, much as it does in any other criminal case.

DOJ is headed by the Attorney General, traditionally considered one of the three most powerful positions in the president's Cabinet (the Secretaries of Defense and State are the others). The Attorney General is served by Deputy and Associate Attorneys General. Their responsibilities are divided based on civil and criminal considerations.

A number of Assistant Attorneys General also hold responsibilities based on substantive areas of law such as criminal, tax, antitrust, environment, and civil. (Other Assistant Attorneys General also exist, but their positions are not "enforcement" specific.) Finally, there are U.S. Attorneys, who are the chief federal law enforcement officials in their district.³

All of the foregoing officials are nominated for their position by the president and confirmed by the Senate. Although each works for the Attorney General, they can be fired only by the president. With respect to the limited removal power of its chief officer, the DOJ is similar to the EPA.

For the purpose of this Chapter, the three most important components of DOJ are the Environment and Natural Resources Division, the U.S. Attorneys' Offices, and the FBI.

§ 9:43 Environment and Natural Resources Division

By law and regulation, the Environment and Natural Resource Division, headed by an Assistant Attorney General ("AAG"), is responsible for all civil and criminal

(BNA) 1193, 22 Env'tl. L. Rep. 20552 (1992).

[Section 9:42]

¹28 C.F.R. § 0.65.

²*See, e.g.*, 42 U.S.C. § 7605.

³For more detailed information about how DOJ is organized, see 28 C.F.R. § 0.1 and the DOJ's organizational chart, available at: http://www.justice.gov/sites/default/files/doj/pages/attachments/2015/04/27/doj_june_2015_2.pdf.

litigation arising out of the major federal environmental laws.¹ The AAG has plenary authority, delegated by the Attorney General, to approve the filing of all civil and criminal actions to enforce federal environmental laws. The two most important sections within the Division for enforcement purposes are the Environmental Enforcement Section and the Environmental Crimes Section.

The Environmental Enforcement Section handles or oversees all civil enforcement matters under the major environmental laws. The Environmental Crimes Section handles or oversees all federal criminal enforcement under the major environmental laws.

Civil and criminal cases are “referred” to the DOJ by either an EPA regional office or by the Office of Enforcement. In the vast majority of cases, EPA enforcement attorneys and investigators prepare cases for many months before they are referred to the DOJ. In many instances, the EPA contacts those being sued before a case is referred and might mention a possible “referral to the Department of Justice” to bring about a settlement.

The U.S. Attorney’s Manual is a multivolume document that contains detailed explanations of the procedures governing the handling of cases by the Department. The Manual is not a regulation, but rather is an order of the Attorney General that is binding on the Department.²

§ 9:44 U.S. Attorney’s Offices

U.S. Attorney’s Offices are located in each one of the 94 federal judicial districts. While some of these Districts are coterminous with states (e.g., the District of Colorado, Alaska, Kansas, Rhode Island, and Connecticut), most are not (e.g., the Northern, Western, Southern, and Eastern Districts of New York; the Northern, Southern, and Central Districts of California; and the Northern, Southern, and Middle Districts of Florida).

U.S. Attorney’s Offices are part of the DOJ. The chief of each office, known as a U.S. Attorney, is nominated by the president and confirmed by the Senate, but the chief takes his or her orders from the Attorney General. The U.S. Attorney is the chief federal law enforcement official in the judicial district.¹ His or her staff lawyers, who try cases, are called Assistant U.S. Attorneys (known as AUSAs).

By law, each U.S. Attorney has authority to file any civil or criminal action and appear in federal court on behalf of the president and any agency under his authority and has plenary authority to settle any case as well.² Although only a few exceptions to this rule exist, environmental litigation is one. By law, the AAG for the Environment Division retains the authority to initiate and settle cases filed under the major environmental laws contains a sample of those portions of the U.S. Attorney’s Manual that explain how responsibility is divided between the U.S. Attorney and the AAG with respect to the handling of environmental cases.

As a practical matter, either the U.S. Attorney or the AAG has responsibility over the litigation of environmental cases. If the U.S. Attorney “has the lead,” then all decisions, negotiations, and other matters are reviewed and approved by him or her,

[Section 9:43]

¹28 C.F.R. § 0.65.

²A complete copy of the U.S. Attorney’s Manual, including Title 5 on the Environment and Natural Resources Division and the ENRD Resource Manual, can be obtained by accessing the following Web site: <http://www.justice.gov/usam/united-states-attorneys-manual>.

[Section 9:44]

¹28 U.S.C. § 541.

²28 U.S.C. § 547.

with only limited review by the AAG. If the Environment Division “has the lead,” then the AAG makes the decisions concerning the case, with limited input from the U.S. Attorney.

For a variety of historical reasons, U.S. Attorney’s Offices are seldom actively involved in civil environmental enforcement cases, but they are actively involved in a large number of criminal cases. Because the Environment Division may provide funding for the investigation and management of cases, it is often significantly involved in larger criminal cases (i.e., those that are more time-consuming and expensive), even when the U.S. Attorney’s Office is also involved.

In some U.S. Attorney’s Offices, particular AUSAs have developed environmental enforcement expertise. Many of these persons have long-standing relationships with investigators and lawyers within EPA Regions, as well as within state and local agencies.

In most federal judicial districts, the U.S. Attorney has established a Law Enforcement Coordinating Council (“LECC”) designed to promote more effective and positive relationships between federal, state, and local prosecutors. While LECCs cover every area of the law, many have subcommittees devoted to environmental enforcement with a particular emphasis on criminal enforcement issues.

It is extremely important for potential defendants to know who is primarily responsible for a particular civil or criminal judicial case among the EPA Region, the Environment Division, and the U.S. Attorney’s Office. Negotiating settlement of a case with an attorney working for the EPA Region may or may not be acceptable to the DOJ. Nor is an agreement reached with the DOJ necessarily binding until it is approved by the “client” agency. Accordingly, it is always advantageous to have all the relevant parties present or to ensure that the person with whom you are negotiating truly has the authority to negotiate.

Finally, it is worth noting that over the past few years there has been significant debate over the relative roles the Environment Division and the Environmental Crimes Section play in reviewing and approving criminal prosecutions. As a result of this debate, the DOJ amended the U.S. Attorney’s Manual to delineate more specifically the nature of how the Environment Division and U.S. Attorney’s Offices interact. For example, routine violations of the Clean Water Act may be prosecuted by the U.S. Attorney without formal approval of the AAG. Cases involving wetlands do require such approval. Similarly, misdemeanor prosecutions require less rigorous approval.

§ 9:45 Federal Bureau of Investigation (“FBI”)

The FBI investigates activities suspected of violating federal criminal laws and has become more involved in investigating environmental crimes over the last several years. An overview of how the FBI is organized can be found at 28 C.F.R. § 0.85 (2015).

The relevant unit for FBI environmental activity is the “Field Office,” which is usually headed by a Special Agent in Charge (SAC).¹ The EPA and the FBI have entered into a Memorandum of Understanding regarding their respective roles in environmental cases. While in many cases the EPA and the FBI work together, more often than not responsibility for a case is allocated according to which agency currently has resources available.

One of the recent benefits of the relationship between the EPA and FBI is cross-

[Section 9:45]

¹Within the EPA’s investigative arm, the office is headed by the Resident Agent in Charge (“RAC”).

training: EPA agents have learned a wide variety of criminal investigatory techniques from the FBI, while FBI agents have learned about environmental law from the EPA.

Generally, when the FBI opens a case file, it advises the local U.S. Attorney's Office, which in turn notifies the Environmental Crimes Section of the Environment Division.

§ 9:46 EPA Guidances, Directives, and Other Materials

Many people share the general belief that the deregulatory efforts of the 1980s reduced the number of rules and regulations issued by government agencies. While deregulation may have reduced the number of formal regulations published and printed in the Code of Federal Regulations, it often led to a substantial increase in the publication of other documents that are not formal regulations, but that are just as important and influential in the enforcement process.

Within the EPA, these other documents are generally called "guidances" or "directives." At the U.S. Army Corps of Engineers, which administers the Clean Water Act program for permitting dredge and fill activities in rivers and wetlands, they are called Regulatory Guidance Letters (RGLs, pronounced "Regals").

These guidances are important for two reasons. Procedurally, they often govern how enforcement actions will be taken or resolved. For example, the EPA has a number of guidances that describe how civil penalty assessments should be made under the Clean Air Act. The EPA also has guidances governing both what the agency will negotiate in the context of settlements under the Comprehensive Environmental Response, Compensation, and Liability Act and the circumstances under which the EPA will accept supplementary projects instead of penalties.

Substantively, these documents often explain the agency's understanding of a vague or confusing regulation. It is crucially important in any enforcement action to know whether the Agency has any guidances explaining the regulation or requirement at issue. In many cases, the EPA has cited someone for violating a regulation and argued that the regulation means what the Agency said in a guidance, even though the guidance was never published as part of or with the regulation.¹

These guidances and directives are most commonly issued from Washington, D.C., either by the program office or the Office of Enforcement. Most often these guidances are directed to regional offices. In addition, the General Counsel often issues opinion letters that serve the same purpose. Most of this information is available through a Freedom of Information Act ("FOIA") request. Additionally, various hotlines exist and can sometimes provide information concerning the existence and availability of such guidances and opinion letters.

It is almost always advisable, when faced with an enforcement action, to obtain and review any guidances, directives, or other EPA documents that might help or hurt your case. While telephone calls to the various hotlines might be the quickest way to find out about guidances, it may not be the most reliable. For reliability, one must consider using a FOIA request to obtain guidances. The various hotlines include the following:

- | | |
|-----------------|---|
| ● EPCRA Hotline | 800-424-9346 (select option #4 from menu) |
| ● RCRA Dockets | 202-566-0270 |

[Section 9:46]

¹Rollins Environmental Services (NJ) Inc. v. U.S. E.P.A., 937 F.2d 649, 33 Env't. Rep. Cas. (BNA) 1543, 21 Env'tl. L. Rep. 21353 (D.C. Cir. 1991) (Edwards, J. dissenting in part).

- Superfund Information 800-424-9346 (select option #5 from menu)
- Drinking Water Hotline 800-426-4791
- Stratospheric Ozone Hotline 800-296-1996
- TSCA Hotline 202-554-1404
- Environmental Justice Hotline 800-962-6215
- FIFRA does not have a hotline. There is a National Pesticide Information Center that operates in a similar manner. That number is 1-800-858-PEST.

§ 9:47 Freedom of Information Act (“FOIA”) Requests

The Freedom of Information Act (“FOIA”) requires that agencies provide the requester with various types of already existing information at a reasonable charge.¹ In many instances, it is useful to direct a FOIA request to the particular EPA Region or office that relates to the issue. Requests may also be submitted to FOIA online, at <https://foiaonline.regulations.gov/foia/action/public/home>.

FOIA requests are sometimes processed by the office administering the program to which the request relates because the underlying statute contains special requirements or limitations. Thus, the Office of Air and Radiation often processes requests for information about policies related to the Clean Air Act. For a summary of the special rules applicable to FOIA requests under certain statutes, see 40 C.F.R. §§ 2.301 to 2.311 (2015). In addition, FOIA contains a number of exceptions in which agencies are not required to disclose information, such as enforcement-sensitive documents and confidential business records.² Parties facing enforcement actions sometimes use FOIA to get information, rather than going through the formal discovery process in the case itself.

§ 9:48 Trade Press, Annual Reports, and Congressional Hearings

Many regulations apply to particular industries because the regulations are written as industry-specific standards. For example, the EPA has developed regulations governing the emission of various chemicals from dry cleaning operations.¹ Other regulations, although generally applicable, as a practical matter only apply to certain types of businesses in particular ways. Thus, public schools, while not normally considered polluters when engaged in renovation, need to know about the proper handling of asbestos. Also, regulations concerning the treatment, storage, and disposal of used oil contaminated with chlorofluorocarbons are generally applicable to anyone handling this substance, but in reality are only a concern for businesses that service heating, ventilation, and air conditioning equipment.

Because of the industry-specific nature of regulations, one of the most useful means of keeping up-to-date on the latest substantive requirements under any of the environmental laws is through a trade association that serves a particular industry. Publications by trade associations often discuss how some of these requirements apply to a particular industry. In addition, innumerable publications exist that are devoted to reporting on important developments and activities relating to environmental issues.

[Section 9:47]

¹See 40 C.F.R. § 2 for information about requesting such public information.

²5 U.S.C. § 552(b).

[Section 9:48]

¹See 58 Fed. Reg. 49,354-01 (Sept. 22, 1993).

Annual reports and other general publications by the EPA and others also contain valuable information about enforcement. The EPA, for example, publishes its “*Enforcement Accomplishments Report*.” This report, which is produced by the Office of Enforcement and Compliance Assurance, provides statistics for enforcement efforts and also describes specific cases. It can provide insights in regard to the Agency’s enforcement priorities.

Congressional hearings can also be a valuable source of information about enforcement issues. For instance, in 1992 the Subcommittee on Criminal Justice of the House of Representatives’ Committee on the Judiciary conducted an investigation and hearing on the status of criminal environmental enforcement.² This report contains discussions of a number of cases. The discussions of the facts in each case provide an interesting perspective on what kinds of conduct may be considered criminal. An independent review of these cases, conducted by career prosecutors from outside the Environment Division, concluded that all were properly handled.

§ 9:49 Budget Requests

Budget requests by agencies involved in environmental enforcement give excellent insight into the agency’s enforcement priorities. For example, if the EPA devotes less money to Superfund and more to the Clean Air Act, it is likely to increase its enforcement of the latter.

§ 9:50 Congressional Involvement in Environmental Enforcement

At the federal level, Congress is responsible for writing laws, and the president (through various agencies) must implement and enforce them. In reality, Congress is very involved in the enforcement process, even though neither Congress nor its members make the decision to prosecute.

For example, the House Energy and Commerce Committee, Subcommittee on Oversight and Investigations reviews the decision-making process in completed environmental criminal cases.¹ The Committee’s negative comments on cases inevitably affect future prosecutorial decisions.

In addition to after-the-fact investigations, Congress sometimes investigates cases that are still pending. The most notable recent example of this type of investigation is the *Deepwater Horizon* oil spill investigation, which resulted in several oil spill-related bills, rulemaking changes, and redefinition of responsibilities for various programs.

Finally, individual members of Congress occasionally become involved in enforcement actions on behalf of constituents. Representatives or Senators may provide their constituents, such as a small business faced with an enforcement action, information concerning the proper method of communicating with the agency.

§ 9:51 Coast Guard Environmental Enforcement Overview

The maritime industry is highly regulated, subject to a complex array of marine safety, security, and environmental protection requirements. These requirements

²Jonathan Turley, ENVIRONMENTAL CRIMES PROJECT-THE NATIONAL LAW CENTER, The George Washington University, *Criminal Environmental Prosecution by the United States Department of Justice*, prepared for The Honorable Charles E. Schumer, Member of Congress, Chairman, Subcommittee on Crime and Criminal Justice, Committee on the Judiciary, United States House of Representatives, October 19, 1992.

[Section 9:50]

¹See Rules 10 and 11 of the Rules of the House of Representatives for a description of this oversight function.

are enforced through the application of numerous international conventions to which the United States is a party, U.S. laws, and federal regulations. The Coast Guard enforces these requirements on U.S. vessels, as well as foreign flag vessels when they call on U.S. ports. When violations are discovered, the Coast Guard is authorized to detain vessels in order to obtain compliance, impose civil or administrative penalties, and refer cases to the U.S. Department of Justice (“DOJ”) for criminal prosecution.

Under several important environmental statutes, the Coast Guard is tasked with preventing and investigating incidents involving the illegal discharge of oil, hazardous substances, and other shipboard wastes into U.S. and international waterways, protecting marine mammals, and regulating the introduction of invasive species into waterways of the United States.

As a general matter, the Coast Guard has broad statutory authority to enforce or assist¹ in the enforcement of all U.S. laws on waters subject to the jurisdiction of the U.S.² To carry out its law enforcement functions, Coast Guard commissioned officers and petty officers have broad authority to board, search, and inspect vessels to ensure compliance with all applicable U.S. laws.³ In the case of waterfront facilities, the Coast Guard has broad authority to investigate any incident which may affect the safety or environmental quality of the ports, harbors, or navigable waters of the United States.⁴

The Coast Guard’s law enforcement activities are generally overseen by nine U.S. Coast Guard Districts, which geographically cover all navigable waters of the U.S. to the outer limit of the U.S. exclusive economic zone (200 nautical miles). Each Coast Guard District is organizationally comprised of one or more Coast Guard Sectors with each being commanded by a Sector Commander. A detailed description of the Coast Guard’s organization is further detailed in 33 C.F.R. Part 3.

Under the authorities cited above, the Sector Commander is delegated authority to respond to discharges of oil and hazardous substances, initiate and oversee investigations and inspections, board and detain vessels, issue orders to vessels and facilities in order to compel compliance with the law, and may impose civil penalties for violations of laws it has jurisdiction to enforce, including environmental laws. In the case of criminal enforcement of environmental laws, the District Commander retains the authority to refer cases to DOJ for criminal prosecution.⁵

III. INSPECTIONS AND INVESTIGATIONS

§ 9:52 Executive Summary

Inspection and investigations are the linchpin of the EPA enforcement program. The EPA is authorized under various statutes to conduct inspections and investigations of both public and private facilities, whether permitted or unpermitted. In many states, the state environmental regulatory agency may do the majority of the inspections and investigations because the EPA has delegated some or all of its regulatory program to those states. Where the EPA has delegated its regulatory

[Section 9:51]

¹For many of the above-mentioned environmental statutes, the Coast Guard shares enforcement authority with the EPA. The division of authority and the coordination of enforcement actions under these statutes between the EPA and the Coast Guard are further defined by regulations and various Memoranda of Understanding between the two agencies.

²See 14 U.S.C. § 2.

³See 14 U.S.C. § 89.

⁴See 33 U.S.C. § 1227.

⁵33 C.F.R. §§ 1.07 to 1.90.

program to a state, in most cases, it retains oversight authority and can institute its own enforcement actions. Hence, the EPA may conduct its own inspections or investigations, even if a facility has already been inspected by the state agency. As a result, the EPA and the state agency sometimes carry out a joint inspection. Otherwise, the EPA will conduct inspections or investigations, or both, using only its inspectors or authorized personnel.

The following questions are discussed in the next sections: What triggers an EPA visit to a facility? How does the EPA conduct a routine inspection? How does a facility respond to an inspection? What are the potential ramifications for failing to respond and participate in an inspection or investigation.

§ 9:53 Triggering EPA Inspections

A variety of circumstances trigger EPA inspections. These circumstances are discussed in §§ 9:54 to 9:58.

§ 9:54 Types of Inspections and Investigations

The EPA has four basic categories of inspections and investigations, as outlined in the Agency's Multimedia Investigation Manual.¹ Routine, program-specific compliance inspections (Category A) are conducted in order to determine the compliance status of the facility for a particular program (air, water, waste, toxics).

The second type is a program-specific inspection (Category B) in which the inspectors first screen for potential violations. This inspection tends to be multimedia in nature but usually focuses on particular problems at smaller facilities.

The third type (Category C) is more investigatory in the sense that it involves a team of inspectors and tends to focus on larger, more complicated facilities. This inspection will involve extensive preparation and will target various program-specific areas.

The fourth type of investigation (Category D) is a comprehensive evaluation to address both compliance and other potential environmental problems. This inspection is resource-intensive and may involve tracing waste streams throughout a facility and carefully evaluating new or modified manufacturing processes. It may last from several days to several weeks.²

It is always a good idea to determine which category of inspection is being conducted.

The basic protocol for both routine compliance inspections and Category C and D multimedia inspections is the same. Routine inspections are conducted at permitted facilities within a certain class and are usually conducted at least annually. For example, National Pollutant Discharge Elimination System facilities discharging one million gallons per day or more will generally be inspected annually. The Resource Conservation and Recovery Act requires that certain facilities be inspected every two years. Other visits occur as a result of a particular problem raised in connection with citizen or employee complaints. The EPA will also visit a site as a follow-up to information obtained in response to the facility's submittal of reports or information that indicates the facility is not in compliance with a particular law.

In cases where deficiencies are found, there will be site visits to follow up the original inspection or investigation. These visits are for the purpose of confirming that

[Section 9:54]

¹U.S. National Enforcement Investigations Center, Denver, Colorado, Multimedia Investigation Manual, No. PB92-161553, at 1-3 (Mar. 1992) [hereinafter *Multimedia Investigations Manual*].

²See § 9:47.

the facility has corrected the deficiency or deficiencies. These follow-up visits usually occur 30 or 60 days after notification by the inspector that the facility must correct the condition causing the alleged violation.

§ 9:55 Recordkeeping and Reporting

Most environmental statutes are “self-policing.” That is, instead of having thousands of inspectors monitoring and testing facilities, facility operators are required to keep and report the information that often reveals the existence of violations.¹ Environmental laws are like tax laws in that taxpayers must also give the government information that could indicate a violation. As a result, recordkeeping and reporting requirements are the most important tools available to the EPA and other agencies to determine if facilities are complying with environmental laws. These documents are key enforcement tools as well—the records and reports indicate not only actual violations but also the failure to keep proper records or make required reports, which is itself a violation of most environmental laws and is a common allegation in enforcement actions.²

Most permits issued under federal environmental laws contain conditions that require a facility to maintain records on the premises and report information to regulatory agencies. These requirements may be the same as or in addition to other recordkeeping requirements. These may include registrations, notifications, testing information, inspection logs, biennial reports, Spill Prevention Control and Countermeasure plans, personnel training records, and copies of permits, to name a few. In addition, the statute, regulations, or permit may require that certain records be kept at the facility for a specified period of time.³ These records include, among others:

1. Wastewater discharge monitoring reports—must be maintained for at least three years.⁴
2. Continuous emission monitoring data—must be maintained for a period of two years following the date of collection.⁵
3. Hazardous waste manifests—for generators, a copy of the outgoing manifest must be maintained at the facility for at least three years or until the generator receives a signed copy from the designated facility; and the copy signed by the receiving facility must be maintained for three years from the date the waste was accepted by the initial transporter.⁶ Owners and operators of hazardous waste treatment, storage, and disposal facilities must maintain the manifests at the facility for at least three years from the date of delivery.⁷
4. Hazardous waste personnel training records—must be maintained until

[Section 9:55]

¹In 1996, the Office of Enforcement and Compliance Assurance issued a policy that provides incentives for businesses to conduct self-audits and establish environmental management systems to monitor, correct, and report violations. This policy was updated in 2000. Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618 (Apr. 11, 2000).

²*E.g.*, 33 U.S.C. § 1319(d) (CWA) (assessment of civil penalties against violators of effluent limitations, national standards of performance, recordkeeping/reporting requirements, or NPDES permit requirements); 42 U.S.C. §§ 9606(b), 9609 (CERCLA) (authorizing the assessment of civil penalties of up to \$25,000 per day of violation, both for violations of EPA-issued endangerment abatement orders and for violations of specified recordkeeping, reporting, and substantive requirements).

³A detailed list of the kinds of records that might trigger an inspection are included in § 9:62.

⁴40 C.F.R. § 122.41(j)(2).

⁵40 C.F.R. § 51.214(d)(1).

⁶40 C.F.R. § 262.40(a).

⁷40 C.F.R. §§ 264.71(a)(2)(vi), 264.71(b)(5), 265.71(a)(2)(vi), and 265.71(b)(5).

closure of the facility if for current personnel. Records relating to former employees must be maintained for at least three years.⁸

5. Hazardous waste generator reports—must be maintained for at least three years from the due date of the report.⁹
6. Superfund Amendments and Reauthorization Act Title III, Section 313 toxic release inventory or Form R reports and all associated support documentation must be maintained for three years from the date of submission of the report.¹⁰

Facilities are often required to report spills, releases, upset conditions, bypasses of pollution control equipment, and discrepancies in manifests. These reporting requirements may be the same as recordkeeping requirements because the facility must maintain certain documents or reports on file for a specified time period as noted above.

It is important to remember that the local or state environmental agency almost certainly has reporting and record retention requirements as well. Under state laws or regulations, the records may need to be retained longer. Usually the state requirements are distinct and separate from the federal requirements with which a facility must comply.

In those instances where there appears to be a recurring history of noncompliance with the terms of a permit, the facility may be targeted for a compliance inspection or an investigation to determine whether enforcement action is warranted.¹¹

§ 9:56 Requests for Information

In addition to routine recordkeeping requirements and self-reporting required by the various environmental statutes, the EPA has broad authority under most major laws to gather information from regulated entities.¹

Recently, written information requests have become a more visible and frequent mechanism used by the EPA for both enforcement and other purposes. Beginning in 1992, the EPA combined its information gathering authority to request information under the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, and other laws. This approach may, in effect, require a company to perform a broad-based audit of its environmental compliance program and provide the results to the EPA.

Two important facts must be kept in mind if a “cross-media” information request is received. First, this enforcement tool is being invoked based on the Agency’s view of the health or environmental risk, or both, associated with the facility, not its belief that violations of law have occurred. Accordingly, facilities having operations that are perceived to be a risk to the environment can expect to receive extensive document requests under this initiative. Second, the EPA is not required to indicate if the information provided in response to the request might be used in a subsequent

⁸40 C.F.R. § 264.16(e).

⁹40 C.F.R. § 262.40(b).

¹⁰40 C.F.R. § 372.10.

¹¹For instance, the EPA policy for the Resource Conservation and Recovery Act (“RCRA”) directs enforcement officials to take administrative, civil, or criminal action against significant noncompliers (“SNCs”) to secure relief both requiring compliance and assessing economic sanctions. SNCs are 1) causing or likely to cause exposure to hazardous waste; 2) chronic or recalcitrant violators of the RCRA; or 3) deviating substantially from RCRA requirements. EPA, *Hazardous Waste Civil Enforcement Response Policy*, Env’tl. L. Rep. (Env’tl. L. Inst.) Admin. Mat. 35,645 (December 2003).

[Section 9:56]

¹See, e.g., *Dow Chem. Co. v. EPA*, 635 F. Supp. 126, 130–31, 16 Env’tl. L. Rep. (Env’tl. L. Inst.) 20,845 (M.D. La. 1986) (information request under CAA § 114, 42 U.S.C. § 7414, was not a final agency action and, therefore, not subject to judicial review).

administrative, civil, or criminal enforcement action. The EPA might try to use responses to information requests as evidence in any enforcement case, whether or not the agency advises the company.

Many EPA regional offices have developed a “Risk-based Cross Media Enforcement Workgroup.” Similar strategies for other regions may be available through a Freedom of Information Act request.² These are very valuable means of determining if your facility might be targeted for an inspection.

Since the 1994 reorganization of EPA’s enforcement functions into a single, consolidated OECA, the Agency has set enforcement priorities on both a traditional media specific basis as well as a new, cross media, sector and place basis. OECA’s Strategic Plan for Next Generation Compliance establishes five primary goals, including (1) “More Effective Regulations and Permits,” (2) “Advanced Monitoring,” (3) “Electronic Reporting,” (4) “Expanded Transparency,” and (5) “Innovative Enforcement.”³ These broad goals are translated into biennial operational priorities in the OECA Memorandum of Agreement (“MOA”) guidance. For example, the FY 2000/2001 MOA guidance sets forth media specific “core program” priorities, as well as “sector” priorities.⁴

Sites are targeted for cross-media enforcement information requests based on factors, including:

- levels of emissions reported on the Toxic Release Inventory forms;
- types of pollutants released;
- proximity of the site to ecologically important areas;
- history of violations; and
- proximity of the site to large populations.

Once targeted, the company may receive a request for information on one or more of its sites. The information request likely also will cite the sanctions available if a company fails to respond or responds inadequately in the time provided in the request.⁵ It also may refer to criminal sanctions available if the information submitted is false, fictitious, or fraudulent.⁶

In many cases, the company can obtain additional time in which to evaluate and respond to the request. If additional time to respond is needed, it is advisable to make a written request as quickly as possible and not on the last day on which the response is due. Oral statements by EPA personnel granting such request should be confirmed by follow-up letter.

There are some limits on the authority of the EPA to seek information in this manner, and these limits may affect a particular response. For example, many of the statutes authorize the Agency to make “reasonable” requests for information. If

²See § 9:47.

³EPA Office of Enforcement and Compliance Assurance, Next Generation Compliance: Strategic Plan 2014–2017 3-7 (October 2014), available at <http://www.epa.gov/sites/production/files/2014-09/documents/next-gen-compliance-strategic-plan-2014-2017.pdf>.

⁴Memorandum from Steve A. Herman to Regional Administrators and State Environmental Commissioners, “FY 2000/2001 OECA Memorandum of Agreement (MOA) Guidance” 2 (April 14, 1999).

⁵E.g., CWA § 309(c)(4), 33 U.S.C. § 1319(c)(4) (up to a \$10,000 fine and/or two years in prison for false statements or tampering with monitoring devices; doubled for second convictions); CAA § 113(c)(2), 42 U.S.C. § 7413(c)(2) (same, except fine is as provided in Title 18); RCRA § 3008(d)(3), 42 U.S.C. § 6928(d)(7)(B) (fines of not more than \$50,000 for each day of violation and/or up to two years in prison for false statements; doubled for second offenses); CERCLA § 103(d), 42 U.S.C. § 9603(d)(2) (fine under Title 18 and/or three years in prison for destruction or concealment of required records; five years in prison for second conviction).

⁶E.g., 18 U.S.C. § 1001.

a particular request is both voluminous and expensive, and provides an unreasonably short period in which to respond, it may be unreasonable and, therefore, beyond the Agency's authority. Similarly, if the information has already been provided to the Agency or its designated representative in another context, it may not be necessary to duplicate the submission in response to the information request.

Responses to requests for information can be and are used as the basis for enforcement actions, and they should be prepared with this consideration in mind.

§ 9:57 Mandated Site Inspections

EPA inspectors are expected to conduct a specified number of permitted facility inspections each year. In addition, many of the states have received authorization to operate one or more of the federal pollution control programs. These states are known as delegated or authorized states. In delegated states, the total number of facilities to be inspected by the EPA will be determined based upon agreements reached with each delegated state's environmental regulatory agency.¹ Other agreements can be obtained from EPA regional offices under the Freedom of Information Act.² Of the total number of facilities to be inspected, a percentage of the inspections will be conducted jointly by an EPA inspector and a state agency inspector. This will vary from state to state. The EPA may not always notify a state agency of a planned inspection or investigation. This can result in back-to-back state and federal inspections of a facility.

The frequency of inspections will depend upon the overall number of facilities to be inspected, the resources of the agencies, and the priority given to the facility. More emphasis will be placed upon facilities with a history of noncompliance, or those with a potential to impact the environment significantly. Sometimes a facility may be targeted for more frequent routine inspections as a result of citizen complaints or as a result of a particular pollutant generated by the manufacturing process, for example, dioxin or lead.

The frequency of inspections is often tied to the agency's fiscal year goals. The EPA, for example, ends its fiscal year on September 30. To the extent it is important to demonstrate investigative field activity, September may be an active month for inspections and investigations.

To ensure a credible likelihood of violation detection and at least a minimum enforcement presence, the EPA has set forth national minimum levels and frequency of source inspections.³

§ 9:58 Citizen and Employee Complaints

Citizen complaints abound in the spring and summer and will generate agency contact with regulated facilities. Citizen complaints are especially common for those facilities located in or near residential areas and those whose operations result in odors, dust, or other particulate emissions.

Although most citizen complaints are received and investigated by a state agency, some complaints are filed directly with the regional EPA office. In some instances,

[Section 9:57]

¹The EPA oversees state compliance monitoring by reviewing the number of source inspections (based on annual state commitments), reviewing state inspection files, and by conducting field oversight inspections.

²See § 9:47.

³See Memorandum from Sylvia K. Lowrance, Acting Assistant Administrator, to Deputy Regional Administrators, et al., Final Fiscal Year 2002/2003 Office of Enforcement and Compliance Assurance Memorandum of Agreement Guidance (June 19, 2001).

the complaint will be handled with a phone call to the facility inquiring about any spills or upset conditions. It is usually advisable to have all relevant information available regarding any spills or upset conditions, including time and date of notification to the EPA and to the state, the names of the agency personnel to whom the report was given, what has been done by the facility to correct the condition, or a timetable in which it is anticipated the condition can be corrected. Notwithstanding that a representative of the facility has already reported the spill or upset condition to the agency, the same information may have to be repeated to the inspector. Providing the inspector with sufficient information to address the concerns of the complaining citizen may preclude the necessity of a site visit or investigation by the inspector.

On occasion, the inspector may elect to investigate the complaint at the facility. In most cases, this will be handled as a complaint investigation. However, the inspector also may conduct a routine compliance inspection as part of the investigation.

Sometimes company employees are reluctant to report spills and other incidents out of fear that the information will be used against them. Some statutes provide legal protection for “whistle-blower” employees who initiate or assist enforcement proceedings or testify in such proceedings.¹

In addition, several laws and the protection against self-incrimination right contained in the Fifth Amendment of the U.S. Constitution may also prevent the EPA from prosecuting someone who reports a spill.² It is important to know whether the condition that you are considering reporting is covered by the legal reporting requirements. If there is a legal obligation to report a spill or other situation under the environmental law in question, there also may be civil and criminal liability for failing to make the report.³ In almost every case, it is better to meet the legal reporting requirement and consider the underlying liability issues later than not report and possibly face both the failure to report liability and the underlying liability.

§ 9:59 EPA Authority during Site Visits

The EPA has been given statutory authority by Congress to conduct on-site reviews of the facilities it is charged with regulating. This statutory authority includes right of entry, access at reasonable times to review and copy records, inspection of pollution control equipment, and sampling. The statutory authority for conducting inspections can be found as follows:

- Section 114(a)(2)(B) of the CAA providing access at reasonable times to copy

[Section 9:58]

¹See, e.g., CWA § 507; 33 U.S.C. § 1367.

²Corporations are not beneficiaries of the defense. *U.S. v. Le Beouf Bros. Towing Co., Inc.*, 537 F.2d 149, 9 Env’t. Rep. Cas. (BNA) 1118, 1976 A.M.C. 1416, 6 Env’tl. L. Rep. 20708 (5th Cir. 1976). However, penalties, such as a penalty for violating CWA § 311, have been held to be civil rather than criminal, making the Fifth Amendment defense inapplicable. See *U.S. v. Ward*, 448 U.S. 242, 10, 100 S. Ct. 2636, 65 L. Ed. 2d 742, 14 Env’t. Rep. Cas. (BNA) 1673, 10 Env’tl. L. Rep. 20477 (1980); see also *U.S. v. Boyd*, 491 F.2d 1163, 3, 1973 A.M.C. 1498, 3 Env’tl. L. Rep. 20434 (9th Cir. 1973); *U.S. v. Atlantic Richfield Co.*, 429 F. Supp. 830, 9 Env’t. Rep. Cas. (BNA) 1993, 1978 A.M.C. 1304, 7 Env’tl. L. Rep. 20635 (E.D. Pa. 1977), aff’d, 573 F.2d 1303, 11 Env’t. Rep. Cas. (BNA) 1699 (3d Cir. 1978) and (rejected by, *U.S. v. Marathon Pipe Line Co.*, 589 F.2d 1305, 12 Env’t. Rep. Cas. (BNA) 1588, 1980 A.M.C. 2928, 9 Env’tl. L. Rep. 20004 (7th Cir. 1978)).

³For example, certain types of releases must be reported under TSCA, CERCLA, and EPCRA, as discussed at § 9:252, § 9:253, and § 9:257. Note, however, that prosecution for failure to notify and a subsequent assessment of penalties for a spill might constitute double jeopardy.

- records, inspect monitoring equipment, and sample air emissions.¹
- Section 308(a)(B)(ii) of the CWA providing access at reasonable times to copy records, inspect monitoring equipment, and sample effluents.²
- Section 3007(a) of RCRA permitting access at all reasonable times to copy records, inspect, and obtain samples of hazardous wastes.³
- Section 104(e) of CERCLA allowing entry at reasonable times and access to inspect and copy documents and obtain samples.⁴
- Section 11(a) of TSCA providing for inspection of the premises and certain records. There are specific record exemptions for some types of documentation.⁵
- Section 8 and 11 of FIFRA providing for access to records relating to pesticide application as well as records required by the Act.⁶
- Section 1445 of SDWA authorizing access to records, tests, and other data.⁷

In addition, the regulatory authority for conducting inspections can be found as follows:

- 40 C.F.R. § 35.840(f) providing that any wastewater treatment works construction contract must provide that the EPA representatives and the state will have access to the work whenever it is in preparation or progress.
- 40 C.F.R. § 35.935-7 providing that an applicant for a grant for the construction of a treatment works facility must ensure that EPA and state representatives will have access to the project work whenever it is in preparation or progress.
- 40 C.F.R. § 86.606-84(a) authorizing EPA enforcement officers to enter facilities manufacturing new light-duty vehicles during normal operating hours upon presentation of credentials.
- 40 C.F.R. § 86.1109-87(a) authorizing EPA enforcement officers to enter any facility during normal operating hours and upon presentation of credentials where any engine or vehicle to be introduced into commerce or any emission related component is manufactured, assembled, or stored
- 40 C.F.R. § 169.3(a) providing that any producer of a pesticide, device, or active ingredient used in producing a pesticide shall, upon request of any officer or employee of the Agency or of any state or political subdivision, furnish or permit such person at all reasonable times to have access to and to copy all records required to be maintained by this part, including records in the possession of an independent testing facility or laboratory that performed tests on behalf of the producer.
- 40 C.F.R. § 256.21(b) providing that state regulatory powers for the management of solid waste disposal programs shall include surveillance capabilities necessary to detect adverse environmental effects from solid waste disposal facilities. Such capabilities including access for inspection and monitoring by regulatory officials.

The following chart summarizes the scope of the EPA's authority during inspec-

[Section 9:59]

¹July 14, 1955, c. 360, Title I, § 114 (codified as amended at 42 U.S.C. § 7414(a)(2)(B)).

²June 30, 1948, c. 758, Title III, § 308 (codified as amended at 33 U.S.C. § 1318(a)(B)(ii)).

³Pub. L. No. 89-272, § 3007, 79 Stat. 992 (codified as amended at 42 U.S.C. § 6927(a)).

⁴Pub. L. No. 99-499, Title I, § 104 (1986) (codified as amended at 42 U.S.C. § 9604(e)(2)(C)).

⁵Pub. L. No. 94-469, § 11, 90 Stat. 2032 (1976) (codified as amended at 15 U.S.C. § 2610(a)).

⁶June 25, 1947, c. 125, § 8 (codified as amended at 7 U.S.C. § 136f(b)); Pub. L. No. 101-624, § 11, 104 Stat. 3627 (1990) (codified as amended at 7 U.S.C. § 136i-1(b)).

⁷July 1, 1944, c. 373, Title XIV, § 1445 (codified as amended at 42 U.S.C. § 300j-4(b)(1)).

tions under the major environmental laws:

[See Chart 9.59]

[Chart 9.59]

**SUMMARY OF EPA AUTHORITY UNDER FEDERAL ENVIRONMENTAL LAWS
TO ENTER, INSPECT, SAMPLE, TEST, ETC.**

Act/Section	Designated Representative	Presentation Credentials	Notice of Inspection	Sampling Permitted	Inspection of Records	Sample Splits	Receipt for Agency's Samples	Return of Analytical Results
<u>Clean Water Act/308(a)</u>	Yes, authorized by Administrator	Required	Not required	Yes (effluents that the owner is required to sample)	Yes	Not required	Not required	Not required
<u>FIFRA/8(b)</u> (Books & Records)	Yes, designated by Administrator	Required	Written statement required with reasons for inspection and any suspected violations	No	Yes	N/A	N/A	N/A
<u>FIFRA/9(a)</u> (Inspection of Establishments)	Yes, designated by Administrator	Required	Written statement required with reasons for inspection and any suspected violations	Yes	See 8(b) above	Required, if requested	Required	Required promptly
<u>CAA/ 114 (a, d)</u>	Yes, authorized by Administrator	Required	Not required—except notify State for SIP sources	Yes	Yes	Not required	Not required	Not required
<u>TSCA/11 (a, b)</u>	Yes, designated by Administrator	Required	Written notice required	(TSCA does not mention sampling in this section. It does state an inspection shall extend to all things within the premises or conveyance inspected.)	Yes	N/A	Not required	N/A
<u>CERCLA/ 104(e)</u>	Yes, designated by President	Not required	Reasonable notice to inspect and copy documents and records; may enter any facility where hazardous substance has been generated, stored, treated, etc., at any reasonable time	Yes	Yes	Required, if requested	Required	Required promptly

Act/Section	Designated Representative	Presentation Credentials	Notice of Inspection	Sampling Permitted	Inspection of Records	Sample Splits	Receipt for Agency's Samples	Return of Analytical Results
RCRA/3007(a) (Hazardous Waste Management)	Yes, designated by Administrator	Not required; May enter at all reasonable times; also thorough inspection of each facility every two years (3007(e))	Not required	Yes	Yes	Required, if requested	Required	Required promptly
RCRA/9005(a) (Regulation of Underground Storage Tanks)	Yes, designated by Administrator	Not required; May enter at all reasonable times	Not required	Yes	Yes	Not required	Not required	Not required
SDWA/1445(b)	Yes, designated by Administrator	Required	Written notice required; must also notify state with reasons for entry if state has primary enforcement responsibility	Yes	Yes	Not required	Not required	Not required

§ 9:60 Consent to Entry

As previously noted, all of the key environmental statutes, such as the CAA, CWA, and RCRA, have statutory provisions that give EPA inspectors the right to enter and inspect the premises.¹

While the statutory authority appears to allow warrantless entry for the purpose of inspecting the premises to determine compliance with applicable EPA requirements, a warrant may be required unless consent is given. In *Marshall v. Barlow's, Inc.*, the U.S. Supreme Court reviewed similar Occupational Safety and Health Act legislation allowing warrantless entry.² Notwithstanding the apparent statutory authority, the Court determined a warrant is required.³ However, the Court upheld a warrantless inspection under the Federal Mine Safety and Health Act of 1977.⁴

In addition to statutory authority, a facility's permit may contain a specific condition providing consent for access and the right to conduct inspections, copy records, and take samples. If the facility denies access to conduct a legally authorized inspection, the EPA may treat such action as a violation of the terms of the permit and bring an enforcement action seeking to assess penalties for the alleged violation.

Finally, settlement agreements with the EPA will also deem the methods (for example, tests or reports) the EPA can use to evaluate the defendant's success in meeting the provisions. In such agreements, the EPA will seek to stipulate its right of access and entry to monitor compliance with compliance provisions.

[Section 9:60]

¹See § 9:59.

²*Marshall v. Barlow's, Inc.*, 436 U.S. 307, 98 S. Ct. 1816, 56 L. Ed. 2d 305, 6 O.S.H. Cas. (BNA) 1571, 1978 O.S.H. Dec. (CCH) P 22735, 8 Env'tl. L. Rep. 20434 (1978).

³*Marshall v. Barlow's, Inc.*, 436 U.S. 307, 323, 98 S. Ct. 1816, 56 L. Ed. 2d 305, 6 O.S.H. Cas. (BNA) 1571, 1978 O.S.H. Dec. (CCH) P 22735, 8 Env'tl. L. Rep. 20434 (1978).

⁴*Donovan v. Dewey*, 452 U.S. 594, 602–03, 101 S. Ct. 2534, 69 L. Ed. 2d 262, 1981 O.S.H. Dec. (CCH) P 25458 (1981); see § 9:74; see also § 9:240 (Search Warrants).

Initially, the inspector will identify himself and produce his credentials and request consent to enter the premises. If an EPA inspector has not been to the facility before, the facility representative may wish to verify the inspector's identification with the regional office. This may be done by telephone.

The EPA is also required to assure that the person giving consent is a person with authority to do so, that is, the person in charge of the establishment and in a position to allow entry.

Should an EPA inspector be accompanied by someone who is not an EPA employee or who does not have the appropriate credentials, the facility representative may wish to seek advice of counsel regarding right of entry, waivers, and confidentiality issues. According to the EPA, if the person accompanying the inspector is denied entry, the reason for the denial should be explained to the inspector. Unless a law specifically authorizes such persons to enter, the mere lack of authority to do so is usually a legally sufficient basis. The inspector may or may not choose to continue with the inspection under the circumstances. In any event, the facility representative should make it clear to the inspector that the denial of entry to the non-EPA employee is not a denial of the inspector's request to enter.

Even though all the major environmental statutes contain legal authority authorizing entry for inspections and many permits contain conditions that constitute consent for such inspections, EPA policy is to obtain access by actual consent at the time access is sought. Consent means the intentional foregoing of a right of privacy that is not the result of fear, ignorance, or trickery. It must be given knowingly and freely according to the EPA. In most cases, the absence of an express denial of consent will be considered by the EPA as consent. Even where an owner or operator of a facility expresses concerns or complains about the entry of the EPA, consent is still considered to have been given, unless (1) the inspector has been asked to leave, (2) the inspector has used coercion to obtain entry, or both (1) and (2). For example, if an inspector suggests that failure to permit entry will result in civil or criminal consequences, that statement may be a sufficient threat of negative consequences to be regarded as coercion.

There are some limits on what an inspector may do during an inspection, but great care must be taken before asserting those limits.

§ 9:61 The EPA "Routine Inspection"

The EPA routine inspection consists of various types of activities. Each media-specific area has standardized types of inspections that utilize checklists or inspection forms. These can be found in manuals maintained by the EPA, such as the *NPDES Compliance Inspection Manual*¹ and the *RCRA Inspection Manual*.² In conducting compliance inspections, the inspector will often follow checklists or inspection forms. These manuals and forms are generally available from the EPA regional offices under the Freedom of Information Act.³ Alternatively, the manual may be available on the EPA's Web site.

Once access to the facility has been granted, a general compliance inspection will involve some or all of the following: a meeting or opening conference with the inspector, a walk-through of the facility, document reviews, sampling, discussions

[Section 9:61]

¹EPA, Office of Enforcement and Compliance Assurance, *NPDES Compliance Inspection Manual* EPA 305-X-04-001 (July 2004).

²EPA, Office of Waste Programs Enforcement, *Revised RCRA Inspection Manual* EC-G-1999-001 (November 1998).

³See § 9:47.

with the facility representative or other employees, and a closing conference. During the discussions or interviews, the inspector will be seeking specific information relative to the facility's operations, processes, and pollution control devices.

If a facility representative or an interviewed employee does not have all the answers, it is better not to speculate because providing incorrect information is a violation of law under some circumstances. One alternative is to offer to obtain the requested information from the person who is knowledgeable of the area being discussed. This offer should be made while the inspector is still at the site. This may be necessary if the inspection is unannounced and the person responsible for environmental compliance is unavailable. As a general matter, it is better to have someone available who is able to answer the inspector's questions at the time of the inspection.

Compliance inspections will often include a review of the facility's operations and processes. The inspections will be media or program specific. For example, if a facility discharges wastewater, the inspector might review how the wastewater is collected and controlled. If the wastewater is treated prior to discharge, the inspector might review the treatment process in detail to determine if it meets with what is required under the terms of the permit. This could mean a detailed review of the operation and maintenance of the collection and treatment system. The inspector will also inquire as to whether the facility has written operating and maintenance procedures, sometimes referred to as an "O & M" manual; a sufficient number of qualified staff; an adequate training program; a system for keeping records; an inventory of equipment and supplies, including spare parts; and the ability to handle spills and other emergency situations.

In some instances, a permit may contain a compliance schedule requiring certain activities to be undertaken by the facility within a specified time schedule. The inspector might review the compliance schedule with the facility representative to determine if the facility is in compliance with it.

For generators of a hazardous waste, the inspector may verify the EPA identification number for the facility, confirm the volume of wastes generated, and determine whether all the wastes generated have been classified as a hazardous or nonhazardous waste. If it is a hazardous waste, the inspector might determine whether the wastes are properly stored, marked, manifested, transported, and disposed in accordance with applicable regulations.

The following chart from a 1989 EPA document may be dated, but its list of the dominant activities in a routine inspection may be informative.

[See Chart 9.61]

[Chart 9.61]

DOMINANT ACTIVITIES IN ROUTINE INSPECTIONS BY PROGRAM

PROGRAM/TYPE INSPECTION	RECORDS REVIEW	INTERVIEW	OBSERVATION	PHYSICAL SAMPLING
<u>TSCA</u>				
Polychlorinated biphenyls (PCBs)	R	R	R	O
Asbestos (Asbestos Hazard Emergency Response Act ("AHERA"))	R	R	R	O
Section 8	R	R	R	O
Section 5	R	R	R	O
Section 4	R	R	R	O
Good Laboratory Practices	R	R	R	N/A
<u>FIFRA</u>				
Compliance Evaluation (Product establishment or marketplace) for:				

PROGRAM/TYPE INSPECTION	RECORDS REVIEW	INTERVIEW	OBSERVATION	PHYSICAL SAMPLING
Cancelled or Suspended Products	R	R	R	O
Labeling	R	R	R	O
Recordkeeping	R	R	R	N/A
Illegal Pesticide Disposal	R	R	R	O
Use/Misuse Inspections	R	R	R	O
Good Laboratory Practices	R	R	R	N/A
Experimental Use Permits	R	R	R	O
Some State Oversight Program Audit	R	R	R	N/A
<u>SARA TITLE III</u>				
Section 313	R	R	R	N/A
<u>RCRA</u>				
Compliance Evaluation	R	R	R	O
Case Development	R	R	R	R
Comprehensive Groundwater Monitoring Evaluation	R	R	R	R

R=Required (R* means only cursory review) O=Optional N/A=Not Applicable

PROGRAM/TYPE INSPECTION	RECORDS REVIEW	INTERVIEW	OBSERVATION	PHYSICAL SAMPLING
Operation and Maintenance	R	R	R	O
Lab Audits	R	R	R	O
State Oversight Inspection	N/A	N/A	N/A	N/A
<u>CWA-NPDES</u>				
Compliance Evaluation	R	R*	R	N/A
Compliance Sampling	R	R*	R	R
Toxic Sampling	R	R*	R	R
Compliance Biomonitoring	R*	R*	R	R
Performance Audit	R	R	R	N/A
Diagnostic	R*	R	R	O
Pretreatment Compliance	R	R*	R*	O
Reconnaissance	R*	R*	R*	N/A
Legal Support	R	R	R	O
<u>CWA § 404</u>				
Preliminary Investigation (General site visit to establish jurisdiction)	R	O	R	O
Case Development (Detailed site evaluation as part of formal enforcement action)	R	O	R	O
Compliance Monitoring (Ensuring compliance with administratively or judicially ordered mitigation/restoration plan)	R	O	R	O
<u>PWSS</u>				
Sanitary Survey				
Compliance Evaluation (routine and for cause)	R	R	R	O
Compliance Oversight	R	R	N/A	N/A

R=Required (R* means only cursory review) O=Optional N/A=Not Applicable

PROGRAM/TYPE INSPECTION	RECORDS REVIEW	INTERVIEW	OBSERVATION	PHYSICAL SAMPLING
SDWA Underground Injection				
Emergency Inspection	0	0	R	O
Class IV Closure Verification	R	0	R	O
Citizen Complaint				
Investigation (Priority 1)	0	R	R	O
Mechanical Integrity Test Witnessing	R	0	R	O
Enforcement Inspection (Compliance evaluation)	R	0	R	O
Preoperational	R	0	R	N/A
Plugging and Abandonment Verification	R	0	R	N/A
Compliance Verification (Compliance oversight)	R	0	R	O
MOBILE AIR				
Retail Outlet (fuel switching/nozzle)	0	R	R	R
Repair Facility (Tampering)	R	R	0	N/A
Fleet Operator				
(Tampering/fuel switching)	R	R	0	O
Refiner/Importer (Phasedown/banking)	R	0	N/A	N/A
STATIONARY AIR	---	---	---	---

R=Required (R* means only cursory review) O=Optional N/A=Not Applicable

Source: U.S. Environmental Protection Agency Compliance Policy and Planning Branch, Basic Inspector Training Course: Fundamentals of Environmental Compliance Inspections 13-6 (February 1989).

In addition to the compliance inspections, the EPA conducts a type of inspection known as the multimedia investigation. Multimedia investigations are generally conducted at medium to large facilities. In 1992, the EPA issued a new manual governing multimedia inspections.⁴ Although resource intensive, these investigations are thought to result in fewer missed violations and are more likely to uncover problems before they can impact public health or the environment. The investigative approach to multimedia inspections is illustrated below.

§ 9:62 How the EPA Prepares for an Inspection

How the inspector prepares for an inspection will vary to some degree between the different media and in the different EPA Regions, as well as the type of inspection. However, as a general matter, the inspector may review:

- permit information, including the application;
- previous inspection reports;
- records and reports submitted by the facility pursuant to permit requirements;
- compliance information (consent decrees, administrative orders, etc.);
- history of citizen complaints; and
- information contained in the files of state agencies.

The inspector also will review applicable databases of information maintained by the EPA. These include the Permit Compliance System that provides NPDES

⁴Multimedia Investigations Manual.

permit-related information for major permitted facilities, the Hazardous Waste Data Management System that provides RCRA-related facility information, and Aerometric Information Retrieval Facility Subsystem containing compliance information for major air emission sources. The EPA inspector also may talk to his or her state counterpart regarding current facility information.

The following chart summarizes the kind of information EPA inspectors might refer to when preparing for an inspection.

[See Chart 9.62.]

[Chart 9.62]

BACKGROUND REVIEW INFORMATION SOURCES

Overall Program Areas	Water Pollution CWA	Air Pollution CAA	Solid Wastes Pollution RCRA	Toxic Substances Pollution TSCA	FIFRA/CERCLA
NEIC Information Retrieval System data on corporate structure, financial conditions, pollution control history, environmental and health impacts of pollutants of interest. EPA grants (research and development, constructing, planning) Information available on process operations; pollutants of interest; existing treatment, control and disposal practices; raw material Administrative Orders issued for environmental noncompliance Applicable local ordinances on environmental control Compliance history and present compliance status Available correspondence between regulating officer and facility officials Available contractor/consultant report on facility environmental control matters Environmental compliance schedules and present status Available aerial photography	NPDES permits/permit applications/draft permits Applicable effluent guidelines Compliance inspection reports (Federal/state/local) Laboratory performance reports Self-monitoring requirements and self-reporting data Best Management Practices Plan Spill Prevention Control and Countermeasure Plan Pretreatment requirements if facility discharges to POTW Applicable federal/state regulations related to water pollution control at facility Technical manuals and references on pollution treatment/control technology, process operation, monitoring inspection procedures Interstate Commission water quality data (e.g., Ohio River Sanitary Commission, Delaware River Basin Commission, Interstate Commission on the Potomac River)	Air permits and permit applications (federal/state/local) Self-monitoring requirements and self-reported data Compliance inspection reports (federal/state/local) Applicable NESHAP Applicable NSPS Applicable air quality standards State Implementation Plan Ambient air quality reports for air quality control regulation Stack test reports Air pollutants emission inventories Continuous monitoring practices and facility and applicable performance inspections Available contractor/consultant reports Technical manuals and references on applicable pollution treatment/control technology, process operators, air pollution monitoring, inspection procedures	Part A of permit application (TSDs only) to designate type and volume of wastes handled, type and design capacity of treatment, storage and/or disposal processes Part B of permit application, if available Draft/final RCRA permit Applicable regulations for source designations Groundwater monitoring plans/data Underground Injection Control Program ("UIC") permit and present status Hydrogeologic reports on local area relative to UIC permit Self-monitoring requirements and self-reported data Applicable regulation on manifest requirements Inspection reports (Federal/state/local) Technical manual and references on applicable treatment/control and disposal technology, inspection and monitoring procedures and techniques	Available information on chemical substances produced by facility Applicable regulations regarding manufacture, identification, self-reporting requirements, concerning toxic materials (e.g., PCB rules) Inspection reports (federal/state/local) Technical manuals and references on applicable treatment/control and disposal technology, inspection and monitoring procedures and techniques Remedial Design reports Removal Action reports	FIFRA establishment numbers, Certified Applicator numbers Applicable labels Inspection reports (federal/state) EPA Pesticide Inspection Manual State Facility Permits for procedures, bulk storage CERCLA Preliminary Assessment (PA) reports Site Inspection reports Remedial Investigation/Feasibility Study reports Records of Decision

§ 9:63 Prior Notification of Inspection

Most routine inspections are unannounced inspections, which means the facility will not receive notice of the date and time of the inspection. However, there are some EPA regional offices in which advance notice of an inspection is routinely

given. Only FIFRA, TSCA, and SDWA contain any notice requirements.¹ Even in those EPA Regions that do not provide advance notice, notice is sometimes given for a special type of inspection or for some RCRA inspections.

Unannounced inspections are considered by the EPA to have the following advantages:

- They allow observation of the facility under normal conditions, and without the benefit of preparation for the inspection.
- They keep the regulated community “off guard” and are more likely to result in careful compliance monitoring.
- They keep the agency at “arm’s length” from the regulated entity.

The disadvantages of an unannounced inspection include the following:

- The facility may take longer to gather information sought by the inspector.
- The most informed company officials may not be present.
- Facilities operating under government contract may have to take time to deal with security clearance measures.

Advance notice of an inspection generally is given by telephone. Under TSCA, a notice of inspection form is given. Sometimes a Section 114 letter under the CAA is used to advise a facility that an inspector will arrive to obtain certain data.

After notice has been received, the facility should make every effort to have someone knowledgeable in the facility’s environmental compliance matters available to accompany the inspector during the inspection. This person should know where the specific environmental records and reports are kept. In addition, he or she should be sufficiently familiar with the media being inspected, including treatment processes or pollution control equipment, so that the facility representative is able to address any questions the inspector may have regarding the pollution control activities or processes. Moreover, lack of familiarity with processes always raises suspicions.

There may be agreements or understandings between an EPA regional office and a state environmental agency that preclude the state from notifying an industry in advance of an EPA inspection.

There do not appear to be any such prohibitions upon private parties who learn of an impending inspection. However, there is a prohibition against obstruction of the administrative process.² This prohibition has been held to apply to investigations conducted by governmental agencies, including the EPA.³

§ 9:64 Conferences

Some inspections begin with opening conferences and conclude with closing conferences. The opening conference can be valuable to the facility, as it usually involves a discussion of the inspection objectives. It is significant in setting the proper tone for the inspection. These are generally used only for announced

[Section 9:63]

¹See chart in § 9:59.

²18 U.S.C. § 1505 prescribes a fine under 18 U.S.C. § 3571 or not more than five years in prison, or both, for anyone who corruptly influences, obstructs, or impedes, or attempts to influence, obstruct, or impede, the due and proper administration of the law under which any pending proceeding is being conducted before any department or agency of the United States.

³See *U.S. v. Technic Services, Inc.*, 314 F.3d 1031, 1044, 55 Env’t. Rep. Cas. (BNA) 1609, 33 Env’tl. L. Rep. 20147 (9th Cir. 2002) (stating that an EPA investigation is a “federal proceeding”), *overruled on other grounds by U.S. v. Contreras*, 593 F.3d 1135 (9th Cir. 2010); *U.S. v. Berg*, 710 F. Supp. 438 (E.D. N.Y. 1989) (Customs Services investigation is a “proceeding”), *aff’d*, *U.S. v. Schwartz*, 924 F.2d 410, 32 Fed. R. Evid. Serv. 98 (2d Cir. 1991); *U.S. v. Vixie*, 532 F.2d 1277 (9th Cir. 1976) (administrative investigation is a “proceeding”).

inspections. For unannounced or complaint-based inspections, the inspectors may proceed right to a particular area or condition, if it triggered the inspections.

A closing conference often involves the inspectors indicating their preliminary findings. The EPA takes the view that the inspectors should discuss conditions that they are sure are violations but should refrain from discussing conditions of which they are unsure. This could be very useful if the Agency later charges a violation of a matter it declined to discuss due to uncertainty, and then seeks a high penalty based on intent. The conference might also result in a list of outstanding questions or requests for information that the inspectors need. They may ask a facility representative to sign the list. Whether or not this is appropriate depends on the situation, but there is no legal obligation to do so.

§ 9:65 Inspector's Access to Documents

An integral part of a compliance inspection or evaluation is a review of the various documents generated or maintained by the company relative to the particular permit under review. These may include laboratory analytical reports; discharge monitoring reports; manifests; annual reports; notifications of bypass, upset condition, or spills; or other kinds of notifications to the state or federal agency, among others. Since many of these documents are required by permit condition or regulation to be maintained on file at the site, failure to have the documents available may result in the company being cited for a violation of a permit condition or regulatory requirement. The authority to inspect company documents is found in the various environmental statutes.¹ The inspector will review the facility's records to ascertain the following:

- Have the proper records been prepared?
- Were the records prepared on time?
- Is all of the information included in the report (correct name, address, permit number, identification number, boxes checked, blanks filled in, etc.)?
- Is the information consistent with the supporting documentation?
- Are the records signed and dated, if required?
- Were the records submitted to the appropriate agencies and, if so, was the submission timely?

The inspector also may request copies of certain documents. If such a request is broad and appears to be unduly burdensome, the facility representative may wish to seek legal advice. Remember that in addition to statutory authority, the right to copies of documents may be a condition of permit. In either case, if the inspector is denied copies of the documents requested, he or she may seek to obtain a warrant, issue a subpoena or information request, or treat it as a violation of the permit condition.² In addition, should the inspector request documents containing proprietary information or confidential trade secrets, the facility may request that such information be treated as confidential by the Agency. The Administrator of the regional EPA office will ultimately make that determination.

§ 9:66 Sampling

In addition to allowing entry upon the premises and access to documents, the various environmental statutes provide EPA inspectors with the authority to

[Section 9:65]

¹See § 9:59.

²See § 9:73.

conduct sampling at the facility.¹ The sampling may be conducted as part of an investigation to confirm noncompliance or it may be part of a routine inspection. A Compliance Sampling Inspection is one such inspection performed at facilities with NPDES permits.

The ability to make use of sampling information will depend, in part, upon the inspector following a proper sampling protocol, including use of proper sampling equipment, obtaining representative samples, properly preserving the samples, and maintaining chain of custody until the sample is delivered to a laboratory for analysis. Sometimes a permit will specify the location where a sample is to be taken and will specify the method of analysis method to be employed. If the inspector is seeking to determine compliance with permit requirements, the sampling must be conducted as specified in the permit. Should the inspector not follow proper sampling protocol, the facility representative observing this may wish to inquire as to the reason for the deviation. At a minimum, the facility representative should make a written notation or memo discussing the specific sampling undertaken by the inspector and noting anything unusual about how or where the sampling was conducted.

The EPA has a wide variety of guidance documents and procedures that describe the proper sampling protocol. Failure of the EPA to follow that protocol can limit its ability to use sampling information as evidence in enforcement proceedings. Thus, in any enforcement case, consideration should be given to reviewing carefully the sampling procedure that was used.

Samples requested may include samples of waste streams, wastewater or stormwater discharges, groundwater, or soil. Whenever samples are requested, it is essential to have a facility representative accompany the inspector during the sampling.

The facility representative should observe how the inspector obtains the sample and may elect to obtain a split sample from the inspector. This means that the facility representative will obtain a portion of the sample taken by the inspector. Sometimes the inspector will keep the company's sample and offer to send it to a lab of the company's choice. Sometimes samples cannot be split. Under those circumstances, a duplicate sample should be obtained. The facility can have the sample analyzed by an independent qualified laboratory. The analytical results can be compared to those of the EPA laboratory. There are no legal prohibitions against split sampling, but some inspectors may discourage it in order to minimize challenges to their samples.

How the sampling is conducted by the inspector is very important, as noted at 6. If the sampling procedure or sampling equipment used is not appropriate for obtaining a particular type of sample, it is important to note such information. It is, therefore, helpful if the person observing the sampling is familiar with the proper sampling protocol applicable to the facility's various sampling points, whether wastewater effluent, air emissions, groundwater monitoring wells, or tanks or drums of stored wastes. The facility representative may wish to consult with appropriate technical people, including chemists or consultants relative to appropriate sampling and analytical techniques. Contemporaneous notes detailing the sampling activities of the inspector may be of assistance if the facility concludes at a later time that it has reason to take issue with the EPA sample results.

Where the facility receives advance notification of a sampling inspection or a sampling investigation, the facility may wish to have a person with expertise in sampling protocol observe the sampling conducted by the inspector. If a consultant

[Section 9:66]

¹See § 9:59.

notes that a local inspector conducting sampling of groundwater monitoring wells for volatile organic compounds did not purge the monitoring wells first, the analytical results of those samples will be unreliable and could be excluded as evidence of violations in an enforcement proceeding because the inspector failed to follow proper sampling techniques.

§ 9:67 Interviews

Quite often the inspector will ask questions regarding the operations or processes, wastes generated, and pollution control devices, as well as other questions pertaining to the facility. Generally, these inquiries are made of the facility representative accompanying the inspector during the inspection. The inspector may also ask to meet with other facility employees in order to ask them questions. This is especially true for questions relating to manufacturing processes or other areas with which the facility's environmental compliance officer may not be as familiar.

Whether the inspector will be allowed to talk to the various facility employees is an issue that should be resolved in advance by the facility with the assistance of counsel. The general environmental statutes do not specifically address the issue of employee interviews. However, such interviews are often considered by the agency to be an integral part of the inspection process. Moreover, having an employee familiar with specific areas of concern to answer questions may expedite the inspection process and preclude erroneous information or assumptions by the inspector from being included in written reports. For these reasons, some facilities choose to designate one person to be the contact person for the facility. This is often the same person who is responsible for accompanying the inspector around the facility.

§ 9:68 Affidavits

As a practical matter, written statements are rarely requested by inspectors in the course of inspections. Nonetheless, an inspector may request that a facility representative review a statement of facts prepared by the inspector and sign the statement affirming that it is true and correct. The facility representative has no legal obligation to sign such a statement and may decline to do so and request to consult with a supervisor or legal counsel prior to signing. As with employee interviews, the facility should determine what its policy will be with regard to signed written statements.

§ 9:69 Photographs and Tape Recordings

The environmental statutes do not specifically authorize the use of cameras or the taking of photographs during an inspection. However, the inspector will almost always have a camera and may seek to take photographs as part of documenting the inspection.¹ Favorite subjects may include spills, leaks, bulging drums, excessive particulate emissions, unpermitted wastewater or stormwater discharges. The inspector will usually request permission to take photographs. If the inspector does not request permission but begins taking photographs, and no one tells him or her that he or she cannot do so, consent may be deemed to have been given.

In the event the inspector seeks to photograph areas of the facility that involve

[Section 9:69]

¹In 2006, the EPA issued guidance on the use of digital cameras in the course of civil inspections and investigations, noting that the Agency "has determined it is acceptable to use digital cameras/photographs for documenting civil inspections and investigations provided certain requirements are met." EPA, Office of Compliance, *Use of Digital Cameras for Civil Inspections and Investigations*, EPA-305-F-06-002 H-1, at H-1 (July 2006).

equipment or processes deemed proprietary, the facility representative should request and seek the inspector's concurrence that the photos will be treated as confidential pending a decision by the Administrator. It will be necessary to make a formal written request to the EPA Regional Administrator with supporting information to substantiate the necessity for treating the photos or other information as confidential so as not to divulge trade secrets. TSCA has specific provisions governing this concern.

Finally, it is always a good idea to note the subject matter of each of the photos as they are taken. In addition, the facility representative may wish to take pictures of the same areas or reach an agreement with the inspector that a duplicate set of the photos be provided to the facility. Of course, the facility will be asked to pay the costs for such duplication. Another alternative is to agree to allow the photography, if the inspector will agree to allow the facility to develop the film, review the photos and provide the inspector with a copy of those photos that do not involve proprietary information. Those that contain proprietary information may then be submitted under a request for confidentiality. However, remember that conditional approval of the inspector's request to photograph may be treated as a denial by the inspector.

There may be other diplomatic arrangements that will allow the inspector to take photographs, while ensuring that the facility receives copies of the photographs and protects its proprietary interests. If a resolution cannot be reached and the inspector believes the photographs are needed to document his findings, he will probably seek assistance of legal counsel to obtain a warrant or other legal relief.

If permission to take photographs is denied, it may be considered a refusal of entry.² While the inspector may continue with the inspection, he or she may also contact a supervisor or legal counsel to address the issue. A determination will be made whether to obtain a search warrant in order to take the necessary photographs. This will depend upon how strongly the inspector believes that the photographs are needed to document the findings.

EPA inspectors generally do not tape record conversations or discussions with facility representatives or other employees. They will make notes in field notebooks or put comments on the inspection report.

§ 9:70 Company Responses to Routine Inspections

How a company responds to an inspection will often determine how the company will be viewed by the agency. The operative word is "cooperation." The EPA may view anyone who does not agree on everything as "recalcitrant." Even when the company is asserting its legally recognized rights, the EPA may view the company as recalcitrant. However, there may be circumstances that require specific advice and assistance of legal counsel, such as a facility that has a related legal proceeding pending against it.

The time it takes to complete an inspection, and the success of the inspection also will depend, in part, upon how prepared the company is for the inspection. For this reason, it may be helpful for a facility to have policies or procedures, or both, regarding agency inspections. These policies and procedures might define such things as designation of the company representatives responsible for accompanying inspectors; the procedures required for an agency inspector to gain entry; the procedures governing employee interviews, written statements, taking photographs, sampling, and record reviews; and other issues. Delays, even for the most innocent and legitimate reasons, are often perceived in a negative light by the EPA. That is not to say that delays are always inappropriate. Rather, planning in advance will avoid delays

²See § 9:73.

that everyone agrees are unnecessary.

§ 9:71 Accompanying the Inspector

It is very important to have the person most knowledgeable of the facility's environmental compliance activities accompany the inspector. Having someone knowledgeable in these practices will eliminate the potential for erroneous or incomplete information being provided during the inspection.

If the facility representative responsible for environmental compliance is unavailable, be sure to so advise the inspector. If possible, arrange to have the environmental compliance person available by phone to answer questions. When that is not possible, the person accompanying the inspector may wish to take note of any questions raised by the inspector and advise the inspector that these questions will be provided to the environmental compliance person. It is important not to have misinformation contained in the inspection report. Consequently, it is better to offer an arrangement to obtain the information than to hazard a guess and be wrong.

There are several points to remember during an inspection. The first is to recognize that the inspector is the primary contact the facility has with the EPA. The nature of the relationship that develops between the inspector and the company representative can impact upon how the EPA views the facility. Second, it is important to provide accurate information to the inspector. Third, it is essential to have all supporting documentation and records required to be kept at the facility readily accessible. Fourth, all information provided to an inspector, whether verbal or written, will find its way to an agency file. As a general matter, agency files pertaining to regulated facilities are available for public inspection. Finally, inspections are intended to identify violations and are always the first real step in the enforcement process.

§ 9:72 Providing Access to Documents

As previously discussed, the EPA has statutory authority to inspect documents. This authority is considered an integral part of the inspection process. During the initial conference, the inspector may provide the facility with a list of documents or records prior to beginning the inspection. This will enable the facility to collect the requested records while the inspector is conducting the physical site inspection.

For documents required by permit or regulation to be maintained at the facility, it is important to know where they are so they can be made available to the inspector. Failure to maintain the documents at the facility may result in a determination of noncompliance by the inspector. This could result in the assessment of a penalty, and each day that the failure continues may be considered a separate violation. Moreover, a determination of noncompliance may be made by the inspector, even though the records are maintained at another location if the records are required by permit to be maintained at the facility.

The inspector will review the documents and determine if there are deficiencies. Although recordkeeping violations may seem to be minor infractions, as explained at §§ 9:137 to 9:139, the EPA assesses penalties in many cases for failure to maintain records properly, and the amounts of the penalties assessed for recordkeeping violations can be significant. Always keep a record of documents provided to an inspector.

§ 9:73 Refusal of Entry

There are some circumstances where the inspector is seeking information or exercising authority beyond that granted him or her. Chief among these are efforts to obtain documents that constitute attorney-client privileged information. Such documents should not be provided without having first consulted with counsel.

Providing attorney-client privileged information may result in a broad waiver of the privilege. As such, the potential for waiver of privileged information should not be taken lightly.

In limited circumstances, it is possible to challenge the inspector's authority to enter or conduct certain aspects of an inspection. The two constraints are: (1) permittees are legally deemed to have agreed to let the inspector exercise the entire authority afforded him and (2) it tends to create ill will.

Allowing entry is treated as consent by the Agency. If conditions are placed on the inspector's right to enter or inspect the premises (like the example above), it is EPA's policy to treat such conditional consent as a denial of entry. Should there be any reason to refuse access to an inspector, those reasons should be determined in advance, preferably with assistance of counsel, and incorporated in a facility policy or procedure regarding regulatory inspections.

If an inspector is denied access or given conditional consent, he will probably seek assistance of EPA legal counsel. Legal counsel may, among other things, seek a subpoena, an administrative warrant, or possibly a criminal search warrant to be served by a Federal Marshal. In rare cases, the EPA may seek injunctive relief to preclude the facility from denying access to inspectors.¹ In addition, the facility's permit may contain a condition providing for access to the facility at reasonable times. In this case, EPA may elect to treat the denial of access as a violation of the permit, thereby subjecting the facility to assessment of penalties or revocation of the permit. Moreover, the lack of cooperation by the facility may only serve to elevate an otherwise routine inspection to a higher degree of scrutiny and an increased potential for enforcement action.

§ 9:74 Warrants

If an inspector is denied access to a facility, the EPA may seek a search warrant to be served by a Federal Marshal and will likely have little trouble obtaining a search warrant for two reasons. First, the probable cause standard for obtaining an administrative search warrant is lower than the standard for obtaining a criminal search warrant. Second, the facility may be considered a "pervasively regulated" industry, in which case a court will be more willing to either grant a search warrant or allow a warrantless inspection.

Standard for Obtaining a Warrant. The Fourth Amendment protects against unreasonable searches and seizures by providing that all warrants must be supported by probable cause. Probable cause generally refers to the amount of evidence necessary to justify a particular search. According to the Supreme Court, probable cause exists in the criminal context when the facts and circumstances are "sufficient in themselves to warrant a [person] of reasonable caution in the belief that an offense" has been or is being committed.¹

However, the Supreme Court has developed a less stringent standard of probable cause in the area of administrative searches under public health and welfare statutes because these searches are necessary to protect public health, safety, and welfare. Thus, the Supreme Court has explained that, for administrative inspections, "probable cause justifying the issuance of a warrant may be based not only on specific evidence of an existing violation but also on a showing that 'reasonable legislative or administrative standards for conducting an . . . inspection are satis-

[Section 9:73]

¹See § 9:75.

[Section 9:74]

¹Carroll v. U.S., 267 U.S. 132, 162, 45 S. Ct. 280, 69 L. Ed. 543, 39 A.L.R. 790 (1925).

fied with respect to a particular [establishment]].”²

In turn, the lower courts have interpreted *Marshall v. Barlow* as developing a two-pronged test under which administrative probable cause may be based on specific evidence of a violation or a routine inspection scheme. In addition, the lower courts agree that the amount of evidence required to satisfy the specific evidence prong of administrative probable cause is less than that required to satisfy criminal probable cause.³ Because the probable cause standard for an administrative warrant is more lenient than the standard for a criminal warrant, EPA will have a strong probability of obtaining an administrative search warrant should they decide to seek one.

Pervasively Regulated Industry. The Supreme Court has recognized an exception to the search warrant requirement for “pervasively regulated” businesses⁴ and for “closely regulated” industries “long subject to close supervision and inspection.”⁵ The Supreme Court has explained the rationale behind this exception as follows:

Certain industries have such a history of government oversight that no reasonable expectation of privacy could exist for a proprietor over the stock of such an enterprise. . . . [W]hen an entrepreneur embarks upon such a business, he has voluntarily chosen to subject himself to a full arsenal of governmental regulation.⁶

EPA may argue that industries subject to environmental regulation are “pervasively regulated” industries and that the court should either grant a search warrant or allow a warrantless search. In short, unless the EPA seeks information to which it is not entitled or seeks to conduct activities outside the scope of the agency’s authority, legal counsel for EPA will probably be able to obtain a search warrant because of the more lenient standard applied to administrative search warrants, and the argument that the facility should be considered a “pervasively regulated” industry with a reduced expectation of privacy.

§ 9:75 Preliminary Injunction

In addition to seeking a warrant, the EPA may also pursue a court order to stop a facility from denying access to inspectors.¹ The EPA is given the authority to pursue a preliminary injunction under several environmental statutes.

²*Marshall v. Barlow’s, Inc.*, 436 U.S. 307, 320, 98 S. Ct. 1816, 56 L. Ed. 2d 305, 6 O.S.H. Cas. (BNA) 1571, 1978 O.S.H. Dec. (CCH) P 22735, 8 Env’tl. L. Rep. 20434 (1978) (quoting *Camara v. Municipal Court of City and County of San Francisco*, 387 U.S. 523, 538, 87 S. Ct. 1727, 18 L. Ed. 2d 930 (1967)).

³*See* Matter of Establishment Inspection of Gilbert & Bennett Mfg. Co., 589 F.2d 1335, 1339, 6 O.S.H. Cas. (BNA) 2151, 1979 O.S.H. Dec. (CCH) P 23243 (7th Cir. 1979); *see also* Matter of Alameda County Assessor’s Parcel Nos. 537-801-2-4 and 537-850-9, 672 F. Supp. 1278, 1287, 26 Env’t. Rep. Cas. (BNA) 1119 (N.D. Cal. 1987) (holding that “the grant of an administrative search warrant [filed by the EPA to investigate possible wetland destruction] is governed by lesser standards than the ‘probable cause’ standard in criminal law”); *Pieper v. U.S.*, 460 F. Supp. 94, 97, 12 Env’t. Rep. Cas. (BNA) 1539 (D. Minn. 1978), judgment aff’d, 604 F.2d 1131, 16 Env’t. Rep. Cas. (BNA) 2177 (8th Cir. 1979) (holding that “an administrative search by a regulatory agency stands on different footing,” and quoting the language from *Marshall v. Barlow’s* that “[p]robable cause in the criminal law sense is not required”).

⁴*U.S. v. Biswell*, 406 U.S. 311, 316, 92 S. Ct. 1593, 32 L. Ed. 2d 87 (1972).

⁵*Colonnade Catering Corp. v. U.S.*, 1970-1 C.B. 333, 397 U.S. 72, 77, 90 S. Ct. 774, 25 L. Ed. 2d 60 (1970).

⁶*Marshall*, 436 U.S. at 313.

[Section 9:75]

¹Due to the nature of environmental harm, if such injury is sufficiently likely, the balance of harms usually will favor the issuance of an injunction to protect the environment. *See Amoco Production Co. v. Village of Gambell, AK*, 480 U.S. 531, 545, 107 S. Ct. 1396, 94 L. Ed. 2d 542, 17 Env’tl. L. Rep. 20574 (1987).

Statutory Authority. The statutory authority to pursue a preliminary injunction can be found as follows:

- Section 113(b) of the CAA authorizing the Administrator to commence a civil action for a permanent or temporary injunction.²
- Section 309(b) of the CWA authorizing the Administrator to commence a civil action for appropriate relief, including a permanent or temporary injunction.³
- Section 3008(a) of RCRA providing that whenever the Administrator determines that any person has violated or is in violation of any requirement of this subtitle, the Administrator may commence a civil action for appropriate relief, including a temporary and permanent injunction.⁴
- Section 208(b) of TSCA providing that upon receipt of evidence that the presence of airborne asbestos in a school building imposes an imminent and substantial endangerment to human health or the environment, the Administrator may bring suit for injunctive relief.⁵

The standards for obtaining injunctive relief are discussed in part VI, §§ 9:172 to 9:206.

§ 9:76 Permit Violation

A facility's permit may contain a condition providing for access to the facility at reasonable times. If so, the EPA may elect to treat the denial of access as a permit violation, thereby subjecting the facility to assessment of penalties or revocation of the permit. The statutory authority for a permit violation can be found as follows:

- Section 502(a) of the CAA providing that after the effective date of any permit program approved or promulgated under this title, it shall be unlawful for any person to violate any requirement of a permit.¹
- Section 309(d)(1) of the CWA providing that any person in violation of any condition or limitation in a permit is subject to a civil penalty.²
- Section 3005(d) of RCRA providing that noncompliance of a facility having a permit shall revoke the permit.³

Accordingly, a facility runs the risk of penalties, fines, and even revocation of its permit if access is denied, when the permit contains a condition providing for access to the facility at reasonable times. In addition, it is important to note that the EPA's options for responding to a denial of access are not mutually exclusive.

§ 9:77 EPA Inspection Reports

During a facility inspection, the EPA inspector will record his or her observations and information gathered in what is known as a "field notebook." The inspector also may make use of checklists that have been developed for various aspects of the inspection. As soon as possible after the inspection, usually within 30 days, the inspector must complete the applicable inspection report form.

Typically, a final inspection report consists of the completed inspection form, cop-

²July 14, 1955, c. 360, Title I, § 113 (codified as amended at 42 U.S.C. § 7413(b)).

³June 30, 1948, c. 758, Title III, § 309 (codified as amended at 33 U.S.C. § 1319(b)).

⁴Pub. L. No. 94-580, § 3008, 90 Stat. 2811 (1976) (codified as amended at 42 U.S.C. § 6928(a), (c)).

⁵Pub. L. No. 94-469, § 208, 90 Stat. 2003 (1976) (codified as amended at 15 U.S.C. § 2648(b)).

[Section 9:76]

¹July 14, 1955, c. 360, Title V, § 502 (codified as amended at 42 U.S.C. § 7661a(a)).

²June 30, 1948, c. 758, Title III, § 309 (codified as amended at 33 U.S.C. § 1319(d)).

³Pub. L. No. 94-580, § 3005, 90 Stat. 2808 (1976) (codified as amended at 42 U.S.C. § 6925(d)).

ies of completed checklists, any supplementary information, and documentary support such as photos or copies of file documents. The supplementary information generally will be in the form of a memorandum containing a summary of the inspector's activities at the site and his or her observations during the inspection. However if major violations are found during the inspection, the inspector may prepare a narrative report. The inspection report data also is entered into a compliance tracking system database. These databases are used to track nationwide compliance information in each of the various environmental media.

Once the inspection report is completed, a copy will be mailed to the facility. It is usually addressed to the permittee as listed on the permit. While most inspectors will send a copy of the inspection report to the person at the facility with whom the inspector interacted during the inspection, it is prudent to request that the inspector send the final report to the facility representative's attention.

If violations are noted during the inspection, the inspector may notify the facility by letter detailing the specific violations and specifying a time, usually 30 days in which to correct the violations. The inspector may do a follow-up inspection thereafter to confirm that the violations have been corrected. However, should the violations be significant, the matter may be referred for formal enforcement action.

Because these techniques operate with minimal supervisory or legal review, they are applied only to minor or technical (not substantive) violations (1) resulting in no serious actual harm to health or the environment, (2) presenting no factual ambiguity or questions of proof, (3) which can be easily remedied by straightforward action by the violator, and (4) which warrant only small penalties.

IV. ADMINISTRATIVE ORDERS

§ 9:78 Executive Summary

Most of the major environmental statutes provide the EPA Administrator with the authority to issue administrative orders to compel compliance with the complex requirements of those statutes. As noted at §§ 9:24 to 9:54, much of the Administrator's day-to-day authority is in fact delegated to and exercised by Regional Administrators. While the breadth of the EPA's enforcement authority varies with the various statutes, the agency is capable in all instances of obtaining significant civil and, in some cases, criminal penalties for violations of its orders.¹

The actions that the EPA may address in an administrative order run the gamut from an inexpensive relabeling of a PCB-containing capacitor to a 30-year, multimillion-dollar remediation of a hazardous waste site. The range of the EPA's administrative enforcement authority is reflective of the breadth of actions that may be ordered. In the instance of a labeling violation, the EPA might penalize the violator several thousand dollars after providing an opportunity for a hearing with the presentation of evidence. In the case of a violation of a Superfund cleanup order, the EPA might recover from the noncomplying party all the costs of cleaning up the disposal site, plus treble damages and fines of \$37,500 a day for each violation.

Many environmental statutes do not explicitly state the procedure for the EPA's exercise of its administrative order authority. Where the statutes are silent, attorneys should review any relevant EPA guidance documents to learn when and how the agency regularly exercises its discretion to issue an order. In most cases, courts defer to the Agency's selection of procedures for issuing an order.

Administrative orders are attractive to the EPA not only because of the breadth of

[Section 9:78]

¹See §§ 9:121 to 9:158 (Civil Monetary Penalties) and §§ 9:218 to 9:259 (Federal Criminal Enforcement).

authority and their potency, but also because of the virtually complete absence of accountability to the courts for the EPA's actions. The EPA generally may issue administrative orders without any prior judicial authorization and without concern for pre-enforcement judicial review. The EPA may base the order upon information that is not "evidence," within the terms of the Federal Rules of Evidence, and without conducting a formal (or, in some cases, even an informal) hearing. When review ultimately is provided, the EPA often can limit it to an administrative record that the EPA prepares and, to a substantial extent, controls. Finally, in order to obtain review, the respondent sometimes must disobey the order, thus exposing itself to potentially ruinous penalties if the EPA's order is upheld.

The courts have pushed back somewhat against the EPA's unfettered use of administrative orders in recent years. In *Sackett v. EPA*, the Supreme Court held that the Clean Water Act ("CWA") did not preclude judicial review of an EPA compliance order directing Idaho homeowners to restore wetlands they had filled allegedly in violation of the CWA.² The respondents' victory in *Sackett* may be hollow for future targets of administrative orders in practical terms, as Justice Samuel Alito pointed out, because a respondent wishing to challenge the EPA's order must risk up to \$75,000 in fines per day if the court ultimately vindicates the EPA's position.³ Following *Sackett*, the circuits are split over whether the Army Corps of Engineers' "jurisdictional determination" that property is a wetland covered by the CWA is likewise reviewable in federal court.⁴

The following sections describe in detail the procedures generally applicable to the EPA's issuance of administrative orders, as well as statute-specific considerations respecting the issuance and enforcement of administrative orders.

§ 9:79 General Procedures for Issuing Administrative Orders and Similar Sanctions

The administrative orders that the EPA issues under the major environmental statutes generally require compliance with the standards established by statutes or their corresponding regulations payment of penalties, or both. When issuing administrative orders, the EPA generally proceeds in one of two ways. Under some statutes, it issues a proposed order and, after conferring with the respondent, issues a final order. Under other statutory authority, it issues a final order without prior consultation with the respondent and then invites the respondent to confer. The meaningfulness of the conference depends upon the order issued. In the case of Comprehensive Environmental Response, Compensation, and Liability Act § 106 orders, the EPA refuses to entertain at the conference any discussion regarding the legality or appropriateness of the order.

When the EPA initiates the administrative enforcement process by first issuing a proposed order, the Agency typically serves the respondent with an administrative complaint describing the alleged violations along with the proposed order. The EPA will then enter into negotiations with the respondent. If the respondent is dissatisfied with the negotiations, it has the opportunity to request an administrative hearing before of an administrative law judge ("ALJ"). At the hearing, the respondent

²*Sackett v. E.P.A.*, 566 U.S. 120, 132 S. Ct. 1367, 182 L. Ed. 2d 367, 73 Env't. Rep. Cas. (BNA) 2121 (2012).

³*Sackett v. E.P.A.*, 566 U.S. 120, 132 S. Ct. 1367, 1375, 182 L. Ed. 2d 367, 73 Env't. Rep. Cas. (BNA) 2121 (2012) (Alito, J., concurring).

⁴*Hawkes Co., Inc. v. U.S. Army Corps of Engineers*, 782 F.3d 994, 80 Env't. Rep. Cas. (BNA) 1265 (8th Cir. 2015), *aff'd*, 136 S. Ct. 1807, 195 L. Ed. 2d 77, 82 Env't. Rep. Cas. (BNA) 1465 (2016) (jurisdictional determination is reviewable). *Contra* *Belle Co., L.L.C. v. U.S. Army Corps of Engineers*, 761 F.3d 383, 78 Env't. Rep. Cas. (BNA) 1933 (5th Cir. 2014), *cert. granted*, judgment vacated, 136 S. Ct. 2427, 195 L. Ed. 2d 776 (2016) (jurisdictional determination not reviewable).

will be able to present its views on the proposed order as well as any exculpatory evidence.

If the EPA does not settle with the respondent, the ALJ, following the hearing, will grant or deny the EPA's request for issuance of a final order. The form of final order issued may be identical to or a modification of the EPA's proposed order. Typically, the final order may be reviewed before the Environmental Appeals Board. Ultimately it is reviewable at the respondent's request in the U.S. District Court or U.S. Court of Appeals.

The EPA issues a final order without prior consultation with the respondent generally when the order is designed to stop an "imminent hazard" to the public health or welfare or to the environment. The order may allow the respondent to confer with the Agency after the order is issued, but consistent with its view that a respondent is not entitled to pre-enforcement judicial or administrative review, the EPA often does not provide the respondent with a meaningful opportunity to comment on or oppose the order in the immediate post-issuance conference.

While the EPA may offer prospective respondents little or no formal process, a proactive attorney nevertheless should attempt to participate in the decisional process leading to the order's issuance. In anticipation of the issuance of the order, the attorney should carefully review the administrative record compiled by the EPA, identify any deficiencies in the present record, and submit for inclusion in the administrative record material information that the EPA did not include. Where the omitted materials are in the possession or control of third parties (including other agencies of the United States), the attorney should request that the EPA exercise its subpoena power to obtain the materials. Where the omitted materials are in the EPA's possession, the practitioner should request an opportunity to review them (either under the Freedom of Information Act or under the specific order authority involved) and, where appropriate, request their inclusion in the record. Where the omitted materials are in the EPA's control but have not been compiled (e.g., field data at a site controlled by the EPA), the attorney should request that the EPA collect these materials for inclusion in the record before issuance of any order. The attorney should request an opportunity to meet with and question EPA's consultants. Although the EPA generally prohibits any taping or transcription of these meetings, the attorney can document the meetings by submitting contemporaneous, detailed written summaries.

In addition to attempting to influence the EPA's decision on whether to issue an order in this fashion, the attorney should consider other changes in the order that may be beneficial to the respondent. These include the joinder (adding additional) or deletion of recipients, a clearer specification of the actions required of the recipients, inclusion of additional tasks designed to supplement the record, or revisions to the order that would make its implementation less burdensome.

The likelihood that the EPA will not comply with the respondent's requests for expansion of the record should not deter the attorney from attempting to participate in the process. The EPA's exclusion of the respondent from the process may be grounds to dispense with record review or to allow a supplementation of the record that otherwise would be impermissible in an enforcement proceeding. The EPA's refusal to collect and consider material data may demonstrate that the order issued was arbitrary and capricious.

In exercising its "imminent hazard" authority, the EPA generally must document its finding that an "imminent" and "substantial" threat to the public health or welfare or the environment may exist in addition to any other statutory prerequisites for issuance of the order. Because the EPA need only address a *threat* of "imminent" harm, but not actual *existing* harm, the EPA and courts have viewed the standards for issuance liberally.

In determining to exercise its administrative order authority, the EPA generally may act on the basis of “any information.”¹ The EPA may rely upon information that would not be considered evidence admissible in court. Nonetheless, if the information is not the sort of information that experts would rely upon, and if it is otherwise untrustworthy, a finding or determination made in reliance upon it may be arbitrary and capricious. More generally, the EPA has construed the phrase “any information” to mean “some reliable information upon which a reasonable person would base a decision or take action.”² “Any information” is not limited to scientific data or analysis, but also may include usual or other credible information.

While the information relied upon for issuing an administrative order need not satisfy the Federal Rules of Evidence, the respondent should evaluate carefully the form of information to determine whether technical deficiencies in it go to the weight that should be assigned to it. The EPA is not free to ignore a declarant’s (witness’) bias or any other factor that could affect the testimonial value of the declarant’s statements. In extreme cases, the EPA’s failure to consider or remedy deficiencies in the information may be enough to render the resulting order arbitrary and capricious.

§ 9:80 Contents of Administrative Orders

Typically, administrative orders issued under most of the major environmental statutes will contain the following:

- a statement of the statutory basis of the order;
- a statement describing the nature of the respondent’s violation with “reasonable specificity”;
- a statement that the statutory standards for issuance of the order are satisfied;
- a statement of the actions that EPA is ordering the respondent to take;
- a schedule for compliance;
- a statement that the respondent has the opportunity to confer with the Agency;
- a statement of penalties the respondent will incur if it does not comply with the order; and
- a statement of EPA authority to take additional enforcement action if the recipient does not comply.

Administrative orders often have provisions requiring the respondents to pay on demand EPA’s costs for overseeing compliance with the requirements of the orders. Although circuits were once split, it now seems clear that the EPA is entitled to recover its oversight costs.¹

Reference should be made to the statute-specific considerations discussed in § 9:82–§ 9:89 for more information on the contents of administrative orders under each of the major environmental statutes.

§ 9:81 Statute-Specific Considerations

[Section 9:79]

¹See, e.g., 33 U.S.C. § 1319(g)(1)(a); 33 U.S.C. § 1344(s)(1).

²Memorandum from Courtney M. Price, Issuance of Administrative Orders under Section 3013 of Resource Conservation and Recovery Act, at 20 (Sept. 26, 1984), <http://www.epa.gov/sites/production/files/documents/admnorders3013-mem.pdf>.

[Section 9:80]

¹U.S. v. E.I. Dupont De Nemours and Co. Inc., 432 F.3d 161, 61 Env’t. Rep. Cas. (BNA) 1673, 35 Env’tl. L. Rep. 20258 (3d Cir. 2005) (en banc) (holding that the EPA may recover oversight costs to enforce a CERCLA section 106 order and overruling U.S. v. Rohm and Haas Co., 2 F.3d 1265, 37 Env’t. Rep. Cas. (BNA) 1193, 23 Env’tl. L. Rep. 21345 (3d Cir. 1993)).

There are a variety of statute-specific considerations relating to administrative orders. The statute-specific considerations are discussed in §§ 9:82 through 9:89. As discussed below, many orders contain a penalty assessment. Since 1997, EPA has increased the statutory penalty amounts several times to keep pace with inflation, most recently in 2013.¹

§ 9:82 Resource Conservation and Recovery Act (“RCRA”)

The EPA may issue Resource Conservation and Recovery Act (“RCRA”) orders pursuant to Section 3008 (for compliance, civil penalties, or corrective actions), Section 3013 (for monitoring, testing, analysis, or reporting), and Section 7003 (for abatement of “imminent and substantial endangerments”), as discussed in greater detail below.

Section 3008(a)¹ gives the EPA the authority to issue an administrative order assessing a civil penalty for any past or current violation of RCRA’s hazardous waste management requirements.² An administrative order issued under Section 3008(a) may assess a civil penalty, require compliance immediately or within a specified time period with the requirements of RCRA, or both.³ The administrative order also may suspend or revoke a permit.⁴

The EPA initiates a Section 3008(a) proceeding by issuing a complaint and a proposed compliance order, pursuant to 40 C.F.R. § 22. The proposed order automatically becomes final unless, within thirty (30) days after issuance, the respondent requests a public hearing.⁵ The hearing procedures are discussed in §§ 9:103 to 9:133.

Once the complaint is issued, the respondent generally has two options. It can initiate negotiations with the EPA, which, if successful, will culminate in an administrative consent decree. The respondent will be able to negotiate with the EPA regarding the nature of the charges as well as the magnitude of the penalty. Alternatively, the respondent may answer the complaint and request an evidentiary hearing. In practice, these two options are not mutually exclusive.

The EPA may issue a Section 3008(a) order to “any person”—as that term is defined by RCRA Section 1004(15)⁶—who has violated RCRA’s hazardous waste management requirements. “Any person” includes corporate officers and employees who are actively involved in corporate decision-making. Corporate officers and employees may be found personally liable under Section 3008(a), even when they do not professionally qualify as “operators” of a facility.⁷ However, the substantive provisions of RCRA that the EPA seeks to enforce with its administrative order may require that the individual respondent own or operate the facility.⁸

The EPA may issue a Section 3008(a) order whenever it determines that a “person”

[Section 9:81]

¹40 C.F.R. Pt. 19; see §§ 9:134 to 9:171 for a detailed explanation.

[Section 9:82]

¹42 U.S.C. § 6928(a).

²42 U.S.C. §§ 6921 et seq.

³42 U.S.C. § 6928(a)(1).

⁴42 U.S.C. § 6928(a)(3).

⁵42 U.S.C. § 6928(b).

⁶42 U.S.C. § 6903(15).

⁷*U.S. v. Conservation Chemical Co. of Illinois*, 660 F. Supp. 1236, 1246, 26 Env’t. Rep. Cas. (BNA) 1423, 17 Env’tl. L. Rep. 20970 (N.D. Ind. 1987).

⁸*See U.S. (EPA) v. Environmental Waste Control, Inc.*, 698 F. Supp. 1422, 1428, 19 Env’tl. L. Rep. 20674 (N.D. Ind. 1988).

has violated RCRA's hazardous waste management requirements.

A Section 3008(a) order must state:

- 1) the nature of the violation "with reasonable specificity" and
- 2) require the respondent to correct the violation immediately or within a specified time.⁹

A Section 3008(a) order may also include:

- 1) a statement to the effect that the respondent's RCRA permit is suspended or revoked, and
- 2) a penalty assessment.¹⁰

A respondent may be subjected to penalties in two different ways. First, the administrative order may include penalties of up to \$37,500 per day for each day of continued noncompliance for each violation of the applicable RCRA requirement. In assessing the penalty, the EPA "shall take into account the seriousness of the violation and any good faith efforts to comply with the applicable requirements"¹¹ A more detailed discussion of penalty assessments is contained in §§ 9:134 to 9:171.

Second, the respondent will be subjected to penalties if it fails to take corrective action in accordance with the compliance requirements of the order within the time specified in that order. The civil penalties may reach up to \$37,500 a day for each day of continued noncompliance.¹² However, the respondent is not required to undertake any required corrective action until the final order is issued.

Section 3008(h)(1)¹³ allows the EPA to issue an administrative order to respond to a past or current release of hazardous wastes into the environment from an interim status facility. The order may require corrective action or such other response action as the EPA "deems necessary to protect human health or the environment." Section 3008(h) has been used to compel facilities to take corrective action beyond simple investigation.¹⁴ Section 3008(h) orders may be issued to address past releases at facilities, as well as contamination that has migrated beyond the boundary of the facility.

The EPA's authority under Section 3008(h) includes releases of hazardous wastes into surface water, air, and land. For the purpose of Section 3008(h), the definition of hazardous waste is not limited to those wastes listed or identified in 40 C.F.R. § 261. It also includes hazardous constituents identified in Appendix VIII of Part 261.

Any person responsible for a release of hazardous waste into the environment from an interim status facility may receive a Section 3008(h) order. Ordinarily, the owner or operator of the facility will be responsible, but officers and other controlling persons may be responsible.

A Section 3008(h) order must state "with reasonable specificity":

- 1) the nature of the required corrective action or other response measure, and
- 2) the time within which the respondent must comply.¹⁵

A Section 3008(h) order also may include a statement addressing the suspension

⁹42 U.S.C. § 6928(a)(1), (3).

¹⁰42 U.S.C. § 6928(a)(1), (3).

¹¹42 U.S.C. § 6928(a)(3).

¹²42 U.S.C. § 6928(c); 40 C.F.R. Pt. 19.

¹³42 U.S.C. § 6928(h)(1).

¹⁴*See* U.S. E.P.A. v. Environmental Waste Control, Inc., 917 F.2d 327, 32 Env't. Rep. Cas. (BNA) 1148, 21 Env'tl. L. Rep. 20007 (7th Cir. 1990) (upholding permanent injunction closing landfill under RCRA Section 3008(h)).

¹⁵42 U.S.C. § 6928(h)(2).

or revocation of authorization to operate as an interim status facility.¹⁶

Section 3013(a) of RCRA¹⁷ gives the EPA the authority to issue administrative orders requiring an owner or operator of a site or facility to conduct monitoring, testing, analysis, and reporting at its site or facility.

Section 3103(a) orders are usually issued to the current owner or operator of a facility.¹⁸ However, the EPA may issue a Section 3013(a) order to the most recent previous owner or operator who could reasonably be expected to have actual knowledge needed to carry out the order when (1) the facility is not in operation when the order is issued and (2) the EPA determines that the current owner could not reasonably be expected to have the actual knowledge needed to carry out the order.¹⁹

The EPA determines whether the previous owner or operator could reasonably be expected to have such “actual knowledge” by considering the use of the facility during the time of the previous ownership or operation. For example, “if a previous owner dumped uncontainerized waste into an unlined pit and then covered it with dirt, he can reasonably be expected to have the actual knowledge of both the presence and potential for release of the waste.”²⁰

The EPA may issue a Section 3013(a) order if it has information that indicates at least the following:

- that there is a known or potential release of hazardous waste from the site; and
- that the release “may present a substantial hazard” to human health or the environment.

According to its interpretation of the statute, the EPA need not show that actual harm exists. The Agency need only demonstrate that “a substantial hazard” may exist.²¹

In determining whether a release or threatened release may present a “substantial hazard,” the EPA considers the following factors: “the likelihood of a release of hazardous wastes, the manner of release of the hazardous waste from the site (i.e., the ground or surface water, air, etc.), the characteristics and amount of the waste discharged, current or potential use of the portion of the environment affected, potential for exposure to humans and the environment, and other related factors.”²²

Section 3013(a) allows the EPA to issue a Section 3013(a) order based on “any information” of a known or potential release of hazardous waste that may present a “substantial hazard” to human health or the environment. The EPA construes “any information” to mean “some reliable information upon which a reasonable person would base a decision or take action.” Such information must be gathered or presented before the agency issues the order. The information may include “laboratory analysis of samples, observations recorded in the course of an inspection and citizens’ complaints corroborated by supporting information.”²³

An order may be issued no matter how small the volume of hazardous waste released at the facility as long as the information indicates that the presence of a

¹⁶42 U.S.C. § 6928(h)(2).

¹⁷42 U.S.C. § 6934(a).

¹⁸42 U.S.C. § 6934(a)(2).

¹⁹42 U.S.C. § 6934(b).

²⁰Memorandum from Courtney M. Price, Issuance of Administrative Orders under Section 3013 of Resource Conservation and Recovery Act, at 5 (Sept. 26, 1984), <http://www.epa.gov/sites/production/files/documents/admnorders3013-mem.pdf> [hereinafter § 3013 Guidance].

²¹§ 3013 Guidance, at 3.

²²§ 3013 Guidance, at 3–4.

²³§ 3013 Guidance, at 2.

release of the hazardous waste “may present” a “substantial hazard.”²⁴

An order issued under Section 3013(a) “must require the respondent to prepare and submit a proposal for the monitoring, testing, analysis, and reporting [plan] for the site from which the waste is or may be escaping,” unless the agency and the owner or operator agree in advance to a work plan.²⁵

Other than the plan described above, the order should contain:

- the information and facts upon which the order is based;
- the reasons for the Agency’s opinion that a threat or potential threat to human health or the environment exists;
- an outline “with some degree of specificity” of the issues which the work plan to be submitted by the respondent should address;
- the name, address, and telephone number of the EPA official whom the respondent should contact to arrange a conference; and
- an advisement to the respondent of its “right to submit in writing any legal or technical defenses, objections or contentions which he may desire to make, and that he is entitled to confer in person and/or by attorney with EPA regarding the proposal.”²⁶

While RCRA does not provide respondents to Section 3013(a) orders with a right to an administrative hearing (the EPA often issues a 3013(a) order when it wants to avoid delay), the EPA must provide the respondents with an informal opportunity to confer with the Agency regarding the proposed work plan and the appropriateness of the order before the order becomes final.²⁷

Section 3013 also gives the EPA the authority to conduct “monitoring, testing or analysis” of a facility and recover costs later through an order if a facility owner or operator is unable or unavailable to perform the necessary activities required by RCRA.²⁸ The procedures for issuing and responding to a Section 3013(d) order are almost identical to the procedures for a Section 3013(a) order.

RCRA Section 7003²⁹ gives the EPA the authority to issue administrative orders that are “necessary to protect public health and the environment” upon receipt of evidence that past or present handling, storage, treatment, transportation, or disposal of any solid waste or hazardous waste may present an imminent and substantial endangerment to health or the environment.

The EPA views Section 7003 as “a broad and effective enforcement tool that may be used to abate imminent hazards”³⁰ The Agency urges its regional offices to use Section 7003 unilateral orders to compel response actions. In recognition of the overlapping goals and authorities of RCRA and CERCLA, the EPA often exercises its administrative order authority under Section 7003 in conjunction with its similar authority under Section 106 of CERCLA. For a discussion of Section 106 of CERCLA, see § 9:88. The EPA will use Section 7003 as opposed to CERCLA Section 106 when there is doubt as to whether the material is a “hazardous substance” under CERCLA and when it would prefer to avoid CERCLA’s requirement for a

²⁴§ 3013 Guidance, at 3.

²⁵§ 3013 Guidance, at 6.

²⁶§ 3013 Guidance, at 6–7.

²⁷§ 3013 Guidance, at 8.

²⁸42 U.S.C. § 6934(d).

²⁹42 U.S.C. § 6973.

³⁰EPA, Guidance on the Use of Section 7003 of RCRA, at 1 (Oct. 1997) [hereinafter § 7003 Guidance].

judicially approved consent decree.³¹

The EPA may issue a Section 7003 order to any person who has been or is currently involved in the “handling, storing, treating, transporting, or disposing of solid and hazardous waste” if the EPA determines that the activity presents an imminent and substantial endangerment. Appropriate recipients include current owners and operators of active and inactive hazardous waste disposal sites, past and current generators of the waste, and past and current transporters.

The EPA may issue a Section 7003 order whenever it determines that a potential “imminent and substantial endangerment to health or the environment” exists. As with CERCLA Section 106, while the risk of harm must be imminent in order for the agency to issue an administrative order, the harm need not be *imminent*.³² For example, under this permissive standard, the EPA could issue a unilateral administrative order if the Agency determines that there is a likelihood that hazardous substances might be released into a water supply, even though the actual harm to the public health (development of injury as a result of long-term ingestion of the contaminated water) is not likely until some point far in the future.

The EPA lists a number of screening factors for regions to determine whether to issue a Section 7003 order, in descending order of importance:³³

- Risk to health or the environment, with particular emphasis on environmental justice concerns;
- Strength of the evidence that all statutory requirements are met. The EPA’s Section 7003 Guidance includes a detailed analysis of the statutory requirements. In brief, there must be (1) an imminent and substantial endangerment to human health and the environment that (2) stems from the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste and (3) a respondent, whether an individual or a business entity, that contributed to the handling, storage, treatment, transportation, or disposal of the solid or hazardous waste.³⁴
- Technical capability of the responsible person to perform the required action. In rare circumstances, the EPA may conclude that the respondent cannot perform the action required under the order even with oversight and will look to other government agencies to perform it.
- Financial ability of the responsible persons to perform the required actions.
- Feasibility of Agency oversight. If the EPA does not have sufficient resources to oversee compliance with the order, it may look to the state, tribal, or local government.
- Availability of other authorities and money.

The EPA suggests several factors for the Regions to consider when determining whether an imminent and substantial endangerment exists: (1) levels of contamination present; (2) any connections between the solid and hazardous waste and air, soil, groundwater, or surface water; (3) pathways of exposure to the receptor population; (4) sensitivity of the receptor population; (5) bioaccumulation in living organisms; (6) visual signs of stress on vegetation; (7) evidence of wildlife mortality or injury; (8) history of releases at the facility; (9) visible staining on the ground; and

³¹§ 7003 Guidance, at 5–6.

³²*U.S. v. Valentine*, 856 F. Supp. 621, 626, 38 Env’t. Rep. Cas. (BNA) 2086, 24 Env’tl. L. Rep. 21553 (D. Wyo. 1994).

³³§ 7003 Guidance, at 2–3.

³⁴*See* § 7003 Guidance, at 9–19.

(10) unaccounted-for solid or hazardous waste.³⁵

Every unilateral administrative order under Section 7003 will include certain required elements.

The order's findings of fact and conclusions of law must demonstrate that each requirement for issuing an order under Section 7003 has been met and that the actions ordered by the EPA are necessary to protect human health or the environment. In most cases where the order names multiple respondents, the order will state that each respondent is jointly and severally liable for each obligation under the order.³⁶

The order will identify the work to be performed and give a schedule including reporting and approval requirements.³⁷ However, the order may give site-specific performance standards affording the respondent flexibility over the means of achieving the EPA's goal rather than dictating specific work. "For example, an order could require the respondent to prevent migration of a plume of contaminated groundwater within a specified time frame" if the Agency believes the respondent is sufficiently sophisticated to achieve the goal.³⁸

The order will recite the respondent's right to request an opportunity to confer "regarding the facts presented in the order and the terms of the order." Any conference with the EPA should be held before the effective date of the order, if possible.³⁹

Finally, the order will direct the respondent to notify the EPA by a specified date of its intent to comply with the order, set forth the potential penalties for noncompliance, and reserve the EPA's rights.⁴⁰

Although the EPA believes it is not required, the EPA strongly encourages the regions to prepare an administrative record for Section 7003 orders before issuing the order. The record should be made publicly available.⁴¹ This record must contain the evidence against the respondent. The respondent should carefully review the record to insure its completeness. The respondent may submit into the record any materials that it believes rebuts the EPA's findings or determinations or constitutes a defense to the order. In addition, the respondent should consider commenting on the weight and probative value of the information relied upon by the EPA and the thoroughness of the EPA's efforts to put together an appropriate administrative record for a future conference with the Agency.

The Agency ordinarily will offer the respondent of a Section 7003 administrative order the opportunity to confer with the Agency "concerning the appropriateness" of the order's terms and its "applicability to the respondent." The conference normally will be held at the appropriate EPA regional office. At the conference, the EPA should provide the respondent a "reasonable" opportunity to ask questions and state its views, with the assistance of legal counsel or technical advisors if desired, on the appropriateness of the order. The EPA will prepare the schedule and agenda for the conference.⁴²

The EPA generally will not allow the conference to be recorded or transcribed. Following the conference, the EPA should prepare a written summary of the proceeding, which should be signed by the presiding official. The statement should contain (1) the date of the conference and the names of attendees, (2) a description of the

³⁵§ 7003 Guidance, at 11.

³⁶§ 7003 Guidance, at 27.

³⁷§ 7003 Guidance, at 27.

³⁸§ 7003 Guidance, at 26.

³⁹§ 7003 Guidance, at 27.

⁴⁰§ 7003 Guidance, at 28.

⁴¹§ 7003 Guidance, at 36–37.

⁴²§ 7003 Guidance, at 14, 37.

major inquiries made and views offered by the respondent contesting the terms of the order, and (3) a summary of the EPA's responses.⁴³ The respondent is well advised to prepare and promptly submit its own summary of the proceeding.

Based upon the conference and review of the file, the issuing officer may modify or revoke the order. Any modification must be contained in a written summary and sent to the respondent.

While the conference is not intended to provide the respondent with an opportunity to negotiate at length with the EPA, the respondent may consider using this conference as another opportunity to explore whether the matter can be voluntarily resolved. Despite statements to the contrary, the EPA will engage in negotiations after issuing the order. Nonetheless, as a practical matter, there is no doubt that the EPA generally has less flexibility in its negotiating position after it has publicly taken a position by issuing an order.

Any person who willfully violates, or fails or refuses to comply with, a Section 7003 order is subject to civil fines of up to \$7,500 for each day in which the violation occurs or continues. These fines are assessed by a U.S. district court in a judicial action by the EPA to enforce its Section 7003 order, following the procedures similar to those for injunctions.⁴⁴

In addition to the orders described above, the EPA Administrator has authority to issue compliance orders to enforce the regulation of underground storage tanks and to issue compliance orders to enforce the regulation of medical waste.⁴⁵

§ 9:83 Clean Water Act ("CWA")

The EPA's and the Army Corps of Engineers' authority to issue administrative compliance orders ("ACOs") and administrative penalty orders for violations under the Clean Water Act ("CWA") is set out at CWA Sections 309 and 404.

Section 309(a)¹ gives the EPA the authority to issue an administrative order requiring compliance with Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA, as set forth in the permits issued by states in accordance with Sections 402 (relating to National Pollution Discharge Elimination System) and 404 (relating to dredged or fill material).

Section 309 states that an order may be issued to "any person" who is in violation of Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA as set forth in a permit issued under Sections 402 or 404. "Person" is defined at 33 U.S.C. § 1362(5). When an order is issued to a corporation, the EPA must serve the order on "any appropriate corporate officers." In addition, all Section 309 administrative orders must be sent immediately to the state where the violation is located and other affected states.²

The EPA may issue a compliance order under Section 309 when it determines that there has been a violation of Sections 301, 302, 306, 307, 308, 318, or 405 as set forth in a CWA permit. Whether such a violation has occurred and the evidence necessary to support such a finding is controlled by the particular requirements of each CWA section.

A Section 309 order must specifically state:

⁴³§ 7003 Guidance, at 37.

⁴⁴See §§ 9:159 to 9:193.

⁴⁵42 U.S.C. § 6991(d), (e).

[Section 9:83]

¹33 U.S.C. § 1319(a).

²33 U.S.C. § 1319(a)(4).

- the nature of the permittee's violation; and
- the time within which the respondent must comply.

The time for compliance should not exceed 30 days in the case of a violation of an interim compliance schedule or operation and maintenance requirement. In the case of a violation of a final deadline, the time for compliance should not exceed a time the EPA determines to be reasonable. In determining a reasonable time to comply for a violation of a final deadline, the EPA must take into account the seriousness of the violation and any good-faith compliance efforts by the respondent.³

Any order issued to redress a violation of Section 308, in particular, may not take effect until the respondent of the order has had an opportunity to confer with the EPA.⁴ The EPA does not treat conferences as evidentiary hearings, and it generally objects to the recording or transcribing of the conferences.

Section 309(d) states that a respondent who does not comply with an order issued under Section 309 will be subject to civil penalties. The maximum penalty amount is \$37,500 per day for each violation.⁵ To determine the amount of the penalty, the court will consider:

the seriousness of the violation or violations, the economic benefit (if any) resulting from the violation, any history of such violations, any good faith efforts to comply with the applicable requirements, the economic impact of the penalty on the violator, and such other matters as justice may require.⁶

A more detailed discussion of the penalty process is contained in §§ 9:134 to 9:171.

Section 309(g) gives the EPA the authority to issue a proposed administrative penalty order for violations of Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA as set forth by CWA permits.⁷ The Army Corps of Engineers ("Corps") may issue a proposed penalty order for violations of permits issued under CWA Section 404.⁸

As with Section 309 compliance orders, a Section 309 penalty order may be issued to "any person" who is in violation of Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA. The term "person" is defined at 33 U.S.C. § 1362(5). Whether a violation has occurred is controlled by the particular requirements of each section.

The EPA issues penalty orders based on a two-tiered scheme.⁹ The procedures for issuance of a proposed administrative Class I penalty order are set forth in *EPA Guidance on Class I Clean Water Act Administrative Penalty Procedures*.¹⁰ The procedures for the issuance of a Class II penalty order are set forth in 40 C.F.R. Part 22.

The EPA may, at the same time or separately from issuing a proposed penalty order, issue a compliance order under CWA Section 309(a). The proposed penalty order may assess penalties for violations of the underlying requirements of the CWA,

³33 U.S.C. § 1319(5)(A).

⁴33 U.S.C. § 1319(a)(4).

⁵40 C.F.R. § 19.

⁶33 U.S.C. § 1319(d).

⁷33 U.S.C. § 1319(g)(1)(A).

⁸33 U.S.C. § 1319(g)(1)(B).

⁹33 U.S.C. § 1319(g)(2).

¹⁰EPA Guidance on Class I Clean Water Act Administrative Penalty Procedures, at § 126.102(a) (July 27, 1987) [hereinafter *Class I Clean Water Act Guidance*].

but not for violations of a compliance order.¹¹

Class I penalties may not exceed \$16,000 per violation, with a maximum penalty of \$37,500. Class II penalties may not exceed \$16,000 per day for each day the violation continues. The maximum Class II penalty is \$187,500.¹² To recover penalties greater than \$187,500, the EPA must bring a civil action under CWA Section 309(b).

A proposed Class I penalty order issued under Section 309 must contain all of the following information: (1) a statement of the alleged violations, the location of the facility, and a reference to the applicable law and regulations; (2) the EPA's authority to issue the proposed order; (3) the nature of the penalty proceedings (including notice and opportunity for comment); (4) the amount of the proposed penalty; (5) a statement that the respondent has a right to a hearing on the proposed order within 30 days of receipt of notice of the proposed order; (6) the name and address of the hearing clerk to whom the respondent may address a request for a hearing; (7) a statement that the EPA may issue a final order within 30 days of the receipt of a notice if a hearing is not requested; and (8) a statement that a penalty order will become effective 30 days after its issuance unless a petition for review is filed or an appeal is taken under Section 309(g).¹³

Section 311¹⁴ provides the EPA with the authority to respond to discharges of oil or hazardous substances into or upon the navigable waters, adjoining shorelines, or waters in the contiguous zone of the United States or which may affect natural resources under the exclusive management authority of the United States. Section 311(b)(6) authorizes the EPA to issue administrative orders assessing civil penalties against any owner, operator, or person in charge of any vessel, onshore facility, or offshore facility from which oil or hazardous substances are discharged in violation of regulations issued under CWA Section 311(b)(3) or 311(j). The Secretary of the department in which the Coast Guard is operating has similar authority.¹⁵ In addition, the EPA may issue administrative orders as may be necessary to protect the public health and welfare whenever there may be an imminent and substantial threat to fish, shellfish, and wildlife; public and private property; and shorelines, beaches, habitat, and other living and nonliving natural resources under the United States' jurisdiction or control because of an actual or threatened discharge of oil or a hazardous substance from a vessel or facility.¹⁶

Section 404 prevents unpermitted discharges of dredged or fill material into the nation's "navigable waters" without a permit. The primary goal of the Section is the protection of streams, rivers, tributaries, and, most notably, "wetlands." The scope of "navigable waters" subject to CWA jurisdiction has been the subject of much controversy.¹⁷ Unlike the rest of the CWA, the Corps has lead enforcement authority for most violations of Section 404. Nonetheless, the EPA has the legal authority to overrule any Corps enforcement action.¹⁸ This split of authority is unique to the

¹¹See EPA Guidance on Choosing Among Clean Water Act Administrative, Civil and Criminal Enforcement Remedies, at 2 (August 1987).

¹²33 U.S.C. § 1319(g)(2); 40 C.F.R. § 19.

¹³Class I Clean Water Act Guidance, at § 126.102(b)(4)(A)–(H).

¹⁴33 U.S.C. § 1321.

¹⁵33 U.S.C. § 1321(b)(6)(A), (E).

¹⁶33 U.S.C. § 1321(e)(1).

¹⁷See Chapter 13 *infra*; *Rapanos v. U.S.*, 547 U.S. 715, 126 S. Ct. 2208, 165 L. Ed. 2d 159, 62 Env't. Rep. Cas. (BNA) 1481, 36 Env'tl. L. Rep. 20116 (2006); *In re E.P.A.*, 803 F.3d 804, 81 Env't. Rep. Cas. (BNA) 1389, 2015 A.M.C. 2409 (6th Cir. 2015), order vacated, 713 Fed. Appx. 489 (6th Cir. 2018) (staying Clean Water Rule pending determination of court's jurisdiction); Clean Water Rule: Definition of "Waters of the United States," 80 Fed. Reg. 37,054 (Jun. 29, 2015).

¹⁸33 U.S.C. § 1344(c).

CWA and does not exist in any other environmental statute. The Corps or EPA may issue a violation notice or “cease-and-desist” order (known as a “Section 404 order”) requiring compliance with the conditions and limitations of permits issued under Section 404.

The regulations require the district engineer of the Corps to notify the responsible parties of the alleged violation and determine whether to recommend that legal action be taken.¹⁹

The Corps occasionally enters into a Memorandum of Understanding with the Fish & Wildlife Service authorizing the Fish & Wildlife Service to undertake certain enforcement actions as agents of the Corps. For enforcement purposes, a Fish & Wildlife Service order is equivalent to an order from the Corps.

A typical cease-and-desist order requires that the alleged violator stop construction or filling of wetlands. The order is usually followed by a request that the owner of the wetlands that have been damaged submit a restoration plan for removing unauthorized fill, if possible, and a mitigation plan for replacing wetlands that cannot be restored (e.g., wetlands under newly constructed homes that have been sold to third parties).

“Any person who violates any condition or limitation in a [Section 404] permit issued by the Secretary [of the Army]” may receive a cease and desist letter under Section 404(s)(1).²⁰ A copy of the order must be served on the state in which the violation occurs.²¹ If the recipient of an order is a corporation, the Corps must serve a copy of the order “on any appropriate corporate officers.”

An order issued under Section 404, must “state with reasonable specificity the nature of the violation” and the time for compliance, which is not usually more than 30 days. The time for compliance must be reasonable and must take into account “the seriousness of the violation and any good faith efforts to comply with applicable requirements.”²²

§ 9:84 Clean Air Act (“CAA”)

The Clean Air Act (“CAA”) has a complex regulatory scheme that is reflected in its enforcement program. Section 113 of the CAA provides the EPA with the authority to issue administrative compliance orders and administrative penalty orders for the following purposes:

- requiring a person to comply with the requirements or prohibitions of an applicable implementation plan or permit;¹
- requiring a person to comply with the requirements or prohibitions of an applicable implementation plan or an approved permit program under Title V;²
- requiring a person to comply with the requirements or prohibitions of the CAA relating to the construction of new sources or the modification of existing sources;³ and
- requiring a person to comply with any other requirements not included in Sec-

¹⁹33 C.F.R. §§ 326.3(c), (d), 326.5.

²⁰33 U.S.C. § 1344(s)(1).

²¹33 U.S.C. § 1344(s)(2).

²²33 U.S.C. § 1344(s)(2).

[Section 9:84]

¹42 U.S.C. § 7413(a)(1).

²42 U.S.C. § 7413(a)(2).

³42 U.S.C. § 7413(a)(5).

tions 113(a)(1) and 113(a)(2).⁴

Any “person” who violates the requirements listed above that Section 113 is designed to enforce may receive an administrative compliance or penalty order under Section 113. “Person” is defined in Section 302(e).⁵ Whether such a violation has occurred is controlled by the particular requirements of each such section.

The EPA must send a copy of any Section 113 order to the state air pollution control agency of the state in which the violation occurs.⁶ If the recipient of an order is a corporation, the EPA must send the order to the “appropriate corporate officers.”⁷

A Section 113 order may be based on “any information available” that indicates a violation is occurring.⁸ The EPA has construed “any information” to mean “some reliable information upon which a reasonable person would base a decision or take action.”

Similar to other administrative orders, a Section 113 order must (1) describe the nature of the violation with “reasonable specificity” and (2) specify a reasonable time for compliance considering the gravity of the violation and any good-faith efforts by the respondent to comply. A Section 113 order requires the respondent to comply as “expeditiously as practicable.” However, compliance must occur no longer than one year after the date the order was issued. A Section 113 order “shall not take effect until the person to whom it is issued has had an opportunity to confer with [EPA] concerning the alleged violation.”⁹

Under Section 113(d)(1), the EPA may issue an administrative penalty order to assess civil penalties whenever a person:

- “has violated or is violating any requirement or prohibition of an applicable implementation plan” under certain conditions;
- “has violated or is violating any other requirement or prohibition of title I, III, IV, V, or VI . . .”; or
- “attempts to construct or modify a stationary source in any area with respect to which finding under Section 113(a)(5) [relating to new sources] has been made.”¹⁰

The Court of Appeals for the Eleventh Circuit held that the imposition of penalties under CAA Section 113(d) for disobeying a CAA administrative order violates the Due Process Clause of the federal Constitution.¹¹ Under the statute, the EPA may issue an administrative order “on the basis of any available information,” and the respondent automatically is subjected to steep daily penalties for not complying with the order. The respondent, thus, is denied the opportunity to argue before an impartial tribunal that it did not commit the acts or omissions alleged by the EPA or that the EPA’s interpretation of the CAA is mistaken.¹² In Florida, Georgia, and Alabama, the EPA must file an action in federal district court under CAA Section 113(b) to assess civil penalties. When “prompt protection of public health or welfare

⁴42 U.S.C. § 7413(a)(3).

⁵42 U.S.C. § 7602(e).

⁶42 U.S.C. § 7413(a)(4).

⁷42 U.S.C. § 7413(a)(4).

⁸42 U.S.C. § 7413(a).

⁹42 U.S.C. § 7413(a)(4).

¹⁰42 U.S.C. § 7413(d)(1).

¹¹*Tennessee Valley Authority v. Whitman*, 336 F.3d 1236, 56 Env’t. Rep. Cas. (BNA) 1737, 33 Env’tl. L. Rep. 20231 (11th Cir. 2003).

¹²*Tennessee Valley Authority v. Whitman*, 336 F.3d 1236, 1243, 1258–59, 56 Env’t. Rep. Cas. (BNA) 1737, 33 Env’tl. L. Rep. 20231 (11th Cir. 2003).

or the environment” is required, the EPA may exercise its emergency authority to order “any person causing or contributing to” pollution from a source or combination of sources to stop the emission of air pollutants. A Section 303 order is effective upon issuance and remains effective for 60 days. If the EPA files suit under Section 303 prior to the expiration of the 60-day period, the order will remain in effect for an additional 14 days or for a longer period as authorized by the court.¹³ The Eleventh Circuit pointed out that the limited duration and sparing use of Section 303 orders for emergencies avoids the constitutional infirmities of Section 113 orders identified in *Tennessee Valley Authority v. Whitman*.¹⁴

Section 120 of the CAA gives the EPA Administrator and the states authority to issue noncompliance penalty orders to “every person who owns and operates”:

- A stationary source which “has violated or is violating any requirement or prohibition of an applicable implementation plan” under certain conditions;
- A major stationary source “which is not in compliance with any emission limitation, emission standard or compliance schedule applicable implementation plan”;
- “[A] stationary source which is not in compliance with an emission limitation, emission standard, standard of performance, or other requirement. . . .”;
- “[A] stationary source which is not in compliance with any requirement of title IV, V, or VI” of the CAA; and
- Any other source “which is not in compliance with any interim emission control requirement or schedule of compliance. . . .”¹⁵

An owner or operator of a source that receives a Section 120 order may be exempted from a penalty if it can meet certain standards set forth in Section 120(a)(2)(B)(i)–(v).

Moreover, the EPA may, after providing an opportunity for notice and hearing, exempt a source from a penalty if it determines that the noncompliance was “de minimis in nature and duration.”¹⁶ Nonexempt sources must calculate the amount of the penalty owed, based on the economic benefit from delayed compliance, and the schedule for payment of the penalty and submit it to the EPA within 45 days after receiving the order.¹⁷ Nonexempt sources will also be given the opportunity to petition the EPA within 45 days of issuance of notice to challenge such notice. Within 90 days of the date of the petition, the EPA must conduct a hearing and make a decision on the petition.¹⁸

If a nonexempt source does not calculate the penalty or submit a petition, the state or EPA may contract with an independent entity to calculate the amount owed. The cost of doing so may be added to the amount of penalty assessed.¹⁹

The CAA also gives the Administrator and the states order authority under the following:

- Pursuant to Section 119, both the Administrator and states may issue a primary nonferrous smelter order. Such an order will be issued upon application

¹³42 U.S.C. § 7603.

¹⁴336 F.3d at 1258 n.38.

¹⁵42 U.S.C. § 7420(a)(2)(A).

¹⁶42 U.S.C. § 7420(a)(2)(C).

¹⁷42 U.S.C. § 7420(b)(4)(A), (d).

¹⁸42 U.S.C. § 7420(b)(5).

¹⁹42 U.S.C. § 7420(c)(2).

by the owner or operator of the smelter;²⁰

- Pursuant to Section 167, both the Administrator and states may issue an order, or seek injunctive relief, “to prevent the construction or modification of a major emitting facility which does not conform to the requirements of” Part C of the CAA pertaining to prevention of significant deterioration of air quality;²¹
- Pursuant to Section 205, the Administrator may assess a civil penalty against any person violating Sections 203(a)(1), 203(a)(4), 203(a)(5), or 203(a)(3)(A) pertaining to emissions control and motor vehicles.²²

§ 9:85 Toxic Substances Control Act (“TSCA”)

The Toxic Substances Control Act (“TSCA”) gives EPA authority to require testing of any substance to which the public or environment might become exposed and to prohibit or limit the manufacture, processing, distribution, or uses of chemical substances. The enforcement provisions of TSCA are discussed in Chapter 16.

§ 9:86 Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)

The Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”) provides the EPA with authority to use a variety of enforcement techniques, including issuing notices of detention; notices of warning; stop sale, use or removal orders (“SSURO”); seizures; injunctive relief; and administrative penalties. The techniques that are most similar to administrative orders are discussed below.¹

FIFRA Section 17(c) regulates the importation of pesticides. The EPA may refuse admission of a pesticide into the United States if the pesticide is adulterated, misbranded, or violates FIFRA in some other manner. The EPA will issue a “Notice of Detention and Hearing.” Upon issuance, the Department of the Treasury will refuse delivery of the pesticide to its consignee. The consignee may request a hearing or export the pesticide within 90 days of the date of the notice. If the consignee does not request a hearing or export the pesticide, the Customs Service will destroy the pesticide. A pesticide shipment may be released to the importer’s agent before the EPA inspects the shipment if (1) the EPA informs Customs that the shipment can be released and (2) the importer provides a bond for the value of the shipment. The pesticide may not be used until the EPA determines that the shipment is inadmissible, and the importer forfeits the bond if the EPA refuses admission.²

Whenever the EPA determines on the basis of inspection or tests that (1) a pesticide or device violates a provision of FIFRA, (2) a pesticide or device has been or is intended to be distributed in violation of FIFRA, or (3) a pesticide registration has been canceled or suspended by final order, the EPA may issue a SSURO to any person who owns or controls the pesticide or device under FIFRA Section 13.³ After receipt of such an order, the respondent may not sell, use, or remove the pesticide or device except in accordance with the requirements of the order. The EPA considers the SSURO “one of the most expedient and effective remedies available to the EPA

²⁰42 U.S.C. § 7419.

²¹42 U.S.C. § 7477.

²²42 U.S.C. § 7524(c).

[Section 9:86]

¹See EPA, FIFRA Enforcement Response Policy (Dec. 2009) [hereinafter *FIFRA Enforcement Policy*].

²7 U.S.C. § 136o; FIFRA Enforcement Policy, at 6.

³7 U.S.C. § 136k.

in its efforts to prevent illegal sale, distribution, and use of pesticides.”⁴ According to the EPA, the SSURO has the following advantages:

- (1) it may be issued whenever EPA has reason to believe that the product is in violation of the Act;
- (2) it is easier to prepare and issue than a seizure;
- (3) it governs all of the product under the ownership, custody, or control of the individual receiving the SSURO regardless of where the product is located;
- (4) it can be written to include future amounts of the product that may come into custody of the respondent; and
- (5) it can easily be adapted to particular circumstances.⁵

The EPA generally will use a SSURO when the risk of harm to humans or the environment is extreme or imminent. For example, the EPA will issue a SSURO when the pesticide is subject to recall but the respondent is unable or unwilling to remove it from the market or when a civil penalty has already been issued and the respondent has not brought the pesticide into compliance.⁶ In cases of less serious risk, the EPA will use civil penalty procedures. Penalty procedures are discussed in greater detail in §§ 9:134 to 9:171.

Under FIFRA Section 6(c)(1),⁷ the EPA has the authority to issue an order suspending the registration of a pesticide when the Agency “determines that action is necessary to prevent an imminent hazard during the time required for cancellation or change in classification proceedings” The Agency cannot issue an order of suspension until it issues (prior to or simultaneously with) a notice of the EPA’s intention to cancel the registration or change the classification of the pesticide.⁸ Regulations addressing the procedures for suspension or cancellation of a pesticide registration are located at 40 C.F.R. Part 164.

The EPA is required to notify the registrant before the Agency issues a suspension order.⁹ The notice will include the findings supporting the conclusion that an “imminent hazard” exists. The registrant will have an opportunity for an administrative hearing on the “imminent hazard” issue.¹⁰ The EPA must follow the FIFRA Section 6 cancellation procedures before it pursues a SSURO under FIFRA Section 13 for pesticides the Agency contends are misbranded.¹¹

The suspension order will take effect within five days of notice to the registrant, if the registrant does not request a hearing. The EPA may issue an emergency suspension order when an emergency exists, without giving prior notice to the registrant.¹²

§ 9:87 Emergency Planning and Community Right-to-Know Act (“EPCRA”)

Under Section 325 of the Emergency Planning and Community Right-to-Know

⁴FIFRA Enforcement Policy, at 6.

⁵FIFRA Enforcement Policy, at 7 (format altered).

⁶FIFRA Enforcement Policy, at 6.

⁷7 U.S.C. § 136d(c)(1).

⁸7 U.S.C. § 136d(c)(1).

⁹7 U.S.C. § 136d(b).

¹⁰7 U.S.C. § 136d(c)(1).

¹¹*Reckitt Benckiser, Inc. v. Jackson*, 762 F. Supp. 2d 34 (D.D.C. 2011).

¹²7 U.S.C. § 136d(c)(3), (4).

Act (“EPCRA”),¹ the EPA may issue administrative orders for the following purposes:

- To a facility owner or operator to comply with Section 302(c) requiring notification to the state emergency response commission that the facility is subject to the requirements of Subtitle A—Emergency Planning and Notification.²
- To a facility owner or operator to comply with Section 303(d) requiring notification to the local emergency planning committee of the “facility representative who will participate in the emergency planning process as a facility emergency coordinator.”³
- To “any person,” as defined by Section 329(7),⁴ for civil penalties for a violation of the reporting requirements contained in Section 312 (emergency and hazardous chemical inventory forms)⁵ and Section 313 (toxic chemical release form).⁶
- To “any person,” as defined by Section 329(7),⁷ for civil penalties for a violation of the reporting requirements contained in Section 311 (Material Safety Data Sheets) and Section 323 (provision of information to health care professionals).⁸
- To the claimant of a trade secret for civil penalties for violations of Section 322(d)(4) and 322(d)(3)(A) when the EPA determines that “an explanation submitted by a trade secret claimant presents insufficient assertions to support a finding that a specific chemical identity is a trade secret” or after a finding based on information under Section 322(d)(3)(A) “that the specific chemical identity is not a trade secret.”⁹

Section 325 also gives the EPA authority to assess civil penalties for violations of the emergency notification requirements of Section 304, but only after public notice and an opportunity for a hearing is given.¹⁰

An order requiring a facility owner or operator to comply with Section 302(c) and Section 303(d) may be enforced by the EPA in the U.S. district court. If the respondent fails to comply with the order, it will be subject to civil penalties in the maximum amount of \$37,500 for each day that the respondent violates or fails to comply with the order.¹¹

As previously noted, the EPA may issue an order assessing a civil penalty to any person violating the reporting requirements of Sections 312 and 313. The penalty amount for each day that each violation of either section continues may reach up to \$37,500.¹²

The EPA may issue an order assessing a civil penalty to any person violating the

[Section 9:87]

¹42 U.S.C. § 11045.

²42 U.S.C. § 11002(c).

³42 U.S.C. § 11003(d).

⁴42 U.S.C. § 11049(7).

⁵42 U.S.C. § 11022.

⁶42 U.S.C. § 11023.

⁷42 U.S.C. § 11049(7).

⁸42 U.S.C. §§ 11021, 11043.

⁹42 U.S.C. § 11042(d)(4), (3)(C).

¹⁰42 U.S.C. § 11045(b)(1)(B).

¹¹42 U.S.C. § 11045(a); 40 C.F.R. § 19.

¹²42 U.S.C. § 11045(C)(1); 40 C.F.R. § 19.

reporting requirements of Sections 311 and 323.¹³ The penalty amount for each day that each violation of either section continues may reach up to \$16,000. The EPA may also issue an order assessing a civil penalty under Section 322 to any person who brings a frivolous trade secret claim.¹⁴ Once the EPA determines that the claim is frivolous, the respondent will be liable for a penalty of up to \$37,500 for each such claim.

For violations of EPCRA's Section 304 emergency notification requirements, the EPA may assess Class I or Class II penalties. However, no civil penalty may be assessed unless the alleged violator is given notice and an opportunity for a hearing regarding the violation.¹⁵

Pursuant to 40 C.F.R. Part 19, a Class I penalty amounts to \$37,500 per violation.¹⁶ A Class II penalty amounts to not more than \$37,500 per day for each day that the violation continues. For subsequent violations, a person may be required to pay up to \$117,500 for each day the violation continues.¹⁷

§ 9:88 Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA")

The EPA will issue an administrative order pursuant to Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") where the Agency wishes to compel a responsible party to undertake a response action and it determines that no settlement can be reached.¹

According to the EPA, Section 106 of CERCLA "is one of the most potent administrative remedies available to the Agency under any existing environmental statute." The "potency" of a Section 106 order lies in the magnitude of its penalties for noncompliance and its general bar of any administrative or judicial review of the order's requirements.²

In addition to daily penalties, a Section 106 order respondent may incur punitive damages of up to three times the cost of cleaning up the site for failure, "without sufficient cause, to properly provide removal or remedial action" pursuant to the Section 106 order.³

When the EPA determines that there may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility, it may issue a Section 106 order requiring such actions as may be necessary to protect public health and welfare and the environment.⁴

Congress designated the President as responsible for taking response and enforcement action under CERCLA. Pursuant to CERCLA § 115, the President delegated the authority to issue administrative orders under CERCLA to the Administrator by Executive Order No. 12580 (Jan. 29, 1987). The Administrator has redelegated the

¹³42 U.S.C. § 11045(C)(2).

¹⁴42 U.S.C. § 11045(d)(1)(B).

¹⁵42 U.S.C. § 11045(b)(1)(B).

¹⁶42 U.S.C. § 11045(b)(1)(A).

¹⁷42 U.S.C. § 11045(b)(2).

[Section 9:88]

¹EPA, Guidance on the Use and Issuance of Administrative Orders Under Section 106, OSWER Dir. No. 9833.0-1a, at 3 (Mar. 7, 1990) [hereinafter *Section 106 Guidance*].

²See *General Elec. Co. v. Jackson*, 610 F.3d 110, 71 Env't. Rep. Cas. (BNA) 1033 (D.C. Cir. 2010) (holding that EPA issuance of CERCLA unilateral administrative orders does not violate due process).

³42 U.S.C. § 9607(c)(3).

⁴42 U.S.C. § 9606(a).

authority to the Regional Administrators and the Assistant Administrator for Solid Waste and Emergency Response. Regional Administrators typically delegate authority to modify the 106 order (or parts of it, such as the attached scope of work or schedules) to staff members. The authority of the Administrator to redelegate Section 106 authority to the Regional Administrators (and then for the Regional Administrators to redelegate Section 106 authority to inferior officials) is open to question.⁵ A number of factors render these redelegations suspect. These factors include: the absence of any administrative hearing or immediate right to judicial review of a 106 order; the onerous penalties threatened by a 106 order; the substantial costs of complying with a 106 order; Congress' refusal to enact an EPA proposal explicitly authorizing redelegation of Section 106 authority to Regional Administrators or other subordinate employees; and the language of Executive Order 12580.⁶

Section 106 does not specify who may receive a 106 order. The EPA's view is that those parties listed as responsible under CERCLA Section 107(a) are the same parties that may be recipients of an order under Section 106.⁷ Section 107(a) designates the following persons as responsible for the costs of responding to a release or threatened release of hazardous substances:

- Present owners and operators of the facility at or from which the release or threatened release occurs;
- Persons who were owners and operators of the facility at the time of disposal of a hazardous substance;
- Persons who arranged for the disposal of a hazardous substance disposed of at the facility; and
- Transporters who hauled hazardous substances disposed of at the facility and who selected the facility for disposal of such substances.

In addition to those parties listed in Section 107(a), the EPA asserts that it may be possible to issue orders to parties other than those listed in Section 107(a), if actions by such parties are necessary to protect the public or the environment.⁸

The EPA identifies the following statutory prerequisites to the issuance of a unilateral cleanup order:

- 1) Evidence of a release or threatened release of a hazardous substance from a facility;
- 2) Evidence of a possible imminent and substantial endangerment; and
- 3) Notice to the affected state.⁹

The EPA asserts that an "actual release" is one that is observable visually or by analysis of water, soil, or air. Whether a "threatened release" exists will be determined on a case-by-case basis. However, the term is broad in scope and could include, for example, a bulging tank under pressure or a surface impoundment that

⁵See *Industrial Park Development Co. v. E.P.A.*, 604 F. Supp. 1136, 1141, 22 Env't. Rep. Cas. (BNA) 1593, 15 Env'tl. L. Rep. 20573 (E.D. Pa. 1985).

⁶See *Fleming v. Mohawk Wrecking & Lumber Co.*, 331 U.S. 111, 67 S. Ct. 1129, 91 L. Ed. 1375 (1947) (Jackson, J., concurring); *Cudahy Packing Co. of Louisiana v. Holland*, 315 U.S. 357, 315 U.S. 788, 62 S. Ct. 651, 86 L. Ed. 895 (1942). *But see* *U.S. v. Mango*, 199 F.3d 85, 91, 49 Env't. Rep. Cas. (BNA) 1641, 30 Env'tl. L. Rep. 20220 (2d Cir. 1999) (approving subdelegation of Clean Water Act permitting authority to district engineers by chief engineer of Army Corps of Engineers).

⁷*U.S. v. Outboard Marine Corp.*, 556 F. Supp. 54, 57, 18 Env't. Rep. Cas. (BNA) 1087, 12 Env'tl. L. Rep. 21153, 13 Env'tl. L. Rep. 20035 (N.D. Ill. 1982); Section 106 Order Guidance, at 12.

⁸Section 106 Order Guidance, at 12.

⁹Section 106 Order Guidance, at 7–11.

appears to be close to overflowing.¹⁰ The EPA should set forth in the Section 106 order the nature of the hazardous substances released or threatened to be released, and the nature of the release or threatened release itself.

The EPA's interpretation of the "imminent and substantial endangerment" requirement is extremely broad. The Agency, in the Section 106 order, need not demonstrate that an "imminent and substantial endangerment" exists today. Rather, as with RCRA, the EPA can act where the risk is "imminent," but the harm is not. For example, the EPA would act if "a relatively small quantity of hazardous substances that are toxic at low dosage levels are substantially likely to enter the groundwater and result in human and environmental exposure."¹¹ The EPA should also set forth in the Section 106 order the nature of the endangerment and the basis for finding a possible "imminent and substantial endangerment."¹²

A Section 106 order must also include a determination that the actions ordered are "necessary to protect public health or welfare or the environment."¹³

The EPA seeks to include the largest manageable number of parties in a Section 106 order. When there are too many Potentially Responsible Parties ("PRPs") to name all as parties (e.g., more than 100 PRPs), the EPA will usually issue Section 106 orders to the parties that account for the majority of the waste sent to the site.

In identifying respondents, the EPA says that it considers the following:

- the responsible party's financial status;
- the PRPs' contribution of hazardous substances (both the volume and nature);
- the evidence implicating the PRP; and
- the likelihood the respondent has a valid "sufficient cause" defense¹⁴ or CERCLA Section 107(b) defense.¹⁵

In practice, the selection of respondents seems less methodical. A party that anticipates receiving a Section 106 order is well advised to consult with the Agency regarding the other potential targets of the order and to consider submitting information it may have regarding the appropriateness of joining other respondents to the order.

An order should contain the following:

- The steps the respondent must take to comply with the order;
- The effective date of the order;
- A mandatory timetable for completion of any remedial work required by the order; and
- A statement that other actions or orders may follow.¹⁶

Section 106 orders also typically include a "notice of intent to comply" requiring the respondent to provide written notice within five days of its unconditional intent to comply with the terms of the order or notice of the basis for any "sufficient cause" defense the respondent may pursue. The EPA states in its guidance that anything less than an unconditional intent to comply constitutes noncompliance with the Sec-

¹⁰Section 106 Order Guidance, at 8.

¹¹Section 106 Order Guidance, at 10.

¹²See *U.S. v. Conservation Chemical Co.*, 619 F. Supp. 162, 24 Env't. Rep. Cas. (BNA) 1008, 16 Env'tl. L. Rep. 20193 (W.D. Mo. 1985) (rejected by *U.S. v. Northeastern Pharmaceutical & Chemical Co., Inc.*, 810 F.2d 726, 25 Env't. Rep. Cas. (BNA) 1385, 17 Env'tl. L. Rep. 20603 (8th Cir. 1986)), for an expansive construction of "imminent and substantial endangerment."

¹³42 U.S.C. § 9606(a).

¹⁴42 U.S.C. § 9606(b)(1).

¹⁵Section 106 Order Guidance, at 15–16.

¹⁶Section 106 Order Guidance, at 16–21.

tion 106 order and justifies the EPA's takeover of the performance of the required actions (thus threatening treble damages).¹⁷ In practice, the EPA relaxes this standard considerably to allow a party to reserve all rights to challenge the order in any appropriate forum at any appropriate time on any appropriate ground, at least so long as a respondent states a present intention to comply. The EPA has treated as noncomplying responses agreeing to perform some portion of the order but refusing to perform other portions. A respondent is well advised not to frame its response in a manner that constitutes an anticipatory repudiation of the requirements of the order unless it is prepared to have the EPA assume performance of the required response actions.

Section 106 orders typically direct each respondent to perform all the required actions, without any specification of which respondent is to perform which action or how that is to be determined. Other times, the Section 106 order identifies general categories of actions to be performed by different respondents or groups, without any clear differentiation of the responsibilities of the various respondents. However, to encourage settlement, the EPA may issue "carve-out" or "parallel" unilateral administrative orders to nonsettling PRPs. In a "carve out" settlement, the EPA relieves the settling PRPs of certain cleanup tasks and issues a unilateral administrative order to the nonsettling PRPs to complete the carved-out tasks. A "parallel" unilateral administrative order is issued to nonsettling PRPs to compel them to participate in a cleanup after the EPA reaches a complete settlement with some PRPs.¹⁸

The EPA typically requires the respondents to develop a Communications and Coordination Plan explaining how the respondents will communicate and make decisions. Section 106 orders customarily give no guidance regarding what the respondents are to do when they cannot agree upon a plan for allocating performance or funding responsibilities.

The failure of a Section 106 order to specify exactly what each respondent must do to comply may render it invalid.¹⁹ If one or more respondents refuses to comply, an action for a declaration of the respondents' respective duties and responsibilities under the Section 106 order may be appropriate.²⁰ The respondent may obtain a similar result by instituting a cost recovery action against other PRPs, whether or not they are named to the Section 106 order.²¹

Section 106 orders typically provide PRPs with an opportunity to discuss implementation of the required response actions and the extent to which the respondent intends to comply. The EPA's position is that the Section 106 order conference is not an evidentiary hearing and is not a forum for discussing liability issues or whether the order should have been issued. The conference can be used to seek correction or clarification of the requirements of the Section 106 order, e.g., inconsistent scheduling requirements. The respondent will have the opportunity to present its position with the assistance of counsel or a technical advisor.²²

Under Section 104(e)(5)(A), the EPA is authorized to issue a compliance order requiring the respondent to comply with the requirements of Sections 104(e)(2) (ac-

¹⁷Section 106 Order Guidance, at 18.

¹⁸Section 106 Order Guidance, at 25–26.

¹⁹*U.S. v. Stringfellow*, 20 Env't. Rep. Cas. (BNA) 1905, 14 Env'tl. L. Rep. 20385, 1984 WL 3206 (C.D. Cal. 1984).

²⁰*See Earthline Co. v. Kin-Buc, Inc.*, 21 Env't. Rep. Cas. (BNA) 2157, 15 Env'tl. L. Rep. 20313 (D.N.J. 1984).

²¹*See E.I. Du Pont De Nemours & Co. v. Starzyk*, 1990 WL 205823 (N.D. Ill. 1990) (stating that contribution action by respondent of Section 106 order may proceed in absence of EPA's joinder).

²²Section 106 Order Guidance, at 23–24.

cess to information), 104(e)(3) (entry), or 104(e)(4) (inspection and samples). The order may not be issued until “after such notice and opportunity for consultation as is reasonably appropriate under the circumstances.”²³

§ 9:89 Safe Drinking Water Act (“SDWA”)

The Safe Water Drinking Act (“SDWA”)¹ provides EPA significant authority to protect drinking water.

Section 1414 provides that, when: (1) a public water system does not comply with any applicable SDWA requirement, and (2) a state does not commence the “appropriate enforcement action” within 30 days after being notified by the EPA of the violation, the EPA “shall issue an order requiring the public water system to comply with such regulation.”² The EPA is also authorized to commence a civil action in the appropriate U.S. district court to require compliance with such an order.³

The EPA may issue an order to an owner and/or operator of a public water system.⁴ When the respondent is a corporation, the EPA must send a copy of the order to “appropriate corporate officers.”⁵

The order must describe the nature of the violation “with reasonable specificity.”⁶

Any person “who violates, or fails or refuses to comply with” an administrative order shall be liable for civil penalties.⁷ The maximum penalty amount is \$37,500 per day of violation.⁸

As with the Section 300g order, 42 U.S.C. § 300h-2(a) grants the EPA the authority to issue an administrative order if the EPA discovers a person in violation of the Underground Injection Control (“UIC”) program. If the violation occurs in a state that has primary enforcement responsibility, the EPA may issue an order if the responsible state fails to act appropriately within 30 days thereafter.

The EPA must give to “the person to whom [the order] is directed” written notice of the proposed order and an opportunity to request a hearing on the order within 30 days after such notice was received.⁹ The Agency must also provide “public notice, and reasonable opportunity to comment upon” any proposed order.¹⁰

“Any person who violates any requirement of an applicable underground injection program” may receive a Section 300h-2 order.¹¹ The term “person” includes “an individual, corporation, company, association, partnership, State, municipality, or Federal agency.”¹²

Section 300h-2 does not state the type or amount of evidence that is required for

²³42 U.S.C. § 9604(e)(5).

[Section 9:89]

¹42 U.S.C. §§ 300f to 300j-26.

²42 U.S.C. § 300g-3(a)(1)(B).

³42 U.S.C. § 300g-3(b).

⁴42 U.S.C. § 300f(4); *see also* U.S. v. Midway Heights County Water Dist., 695 F. Supp. 1072, 1076, 27 Env’t. Rep. Cas. (BNA) 2183, 27 Env’t. Rep. Cas. (BNA) 2185, 19 Env’tl. L. Rep. 20142 (E.D. Cal. 1988) (defendant unsuccessfully argued that its water system fell outside the SDWA).

⁵42 U.S.C. § 300g-3(g)(2).

⁶42 U.S.C. § 300g-3(g)(2).

⁷42 U.S.C. § 300g-3(g)(3)(A).

⁸40 C.F.R. Pt. 19.

⁹42 U.S.C. § 300h-2(c)(3)(A).

¹⁰42 U.S.C. § 300h-2(c)(3)(B).

¹¹42 U.S.C. § 300h-2(a)(1), (2).

¹²42 U.S.C. § 300f(12).

the EPA to issue an order for a violation of the relevant regulations. The Section merely allows the EPA to issue an order “[w]henever the Administrator finds” that a violation has occurred. Most of the environmental statutes allow the EPA to issue an order on the basis of “any information,” which the EPA has construed to mean “some reliable information upon which a reasonable person would base a decision or take action.” According to the EPA, this type of information does not need to include scientific data and, instead, can be visual. It is likely that this same standard of evidence is applicable to Section 300h-2 orders as well.

Section 300h-2(c)(4)(A) requires a Section 300h-2 order to state the nature of the violation with “reasonable specificity” and “specify a reasonable time for compliance.”¹³

Under Section 300h-2(c)(1), the EPA may assess a civil penalty. Pursuant to 40 C.F.R. Part 19, the penalty may increase to \$16,000 for each day that the violation continues (up to \$187,500) for failure to comply with regulations that do not pertain to the underground injection of brine or other similar fluids or any underground injection for “secondary or tertiary recovery of oil or natural gas.”¹⁴ For violations of regulations that do pertain to underground injection of brine or other fluids,¹⁵ the EPA may assess a civil penalty of not more than \$7,500 per day for each day the violation or noncompliance with the order continues, up to \$187,500.

Section 300h-2(c)(4)(B) sets forth a number of factors that the EPA must take into account when assessing a civil penalty, including: (1) the seriousness of the violation, (2) the economic benefit (if any) resulting from the violation, (3) any history of such violations, (4) any good-faith efforts to comply with the applicable requirements, (5) the economic impact of the penalty on the violator, and (6) such other matters as justice may require.¹⁶

The EPA may exercise emergency powers under 42 U.S.C. § 300i(a) to issue an administrative order to “protect the health of persons who are or may be users of” a public drinking water system. An emergency order may be issued when the EPA determines that the presence or potential presence of a contaminant in the water supply “may present an imminent and substantial endangerment to the health of persons.”

The EPA’s powers include the authority to issue an order “requiring the provision of alternative water supplies by persons who caused or contributed to the endangerment” and commence a civil action to seek injunctive relief.¹⁷

The language of Section 300i suggests that “persons who caused or contributed to the endangerment” may receive an order to abate or remedy that endangerment. “Person” is defined in the SWDA at 42 U.S.C. § 300f(12).

The EPA may issue a Section 300i order if it determines that:

- a contaminant is present in or likely to enter a public water system; and
- that contaminant may present an imminent and substantial endangerment to the health of persons.

Similar to numerous other order authorities in the other major environmental statutes, Section 300i gives the EPA broad power. The EPA need not find that

¹³42 U.S.C. § 300h-2(c)(4)(A); *see* *Moose Oil Co. v. U.S.*, 31 Env’t. Rep. Cas. (BNA) 2029, 1990 WL 118098 (W.D. N.Y. 1990) (order that contained paragraphs on “findings,” “background,” and “order for compliance” was reasonably specific).

¹⁴42 U.S.C. § 300h-2(c)(1).

¹⁵42 U.S.C. § 300h-2(c)(2).

¹⁶42 U.S.C. § 300h-2(c)(4)(B).

¹⁷42 U.S.C. § 300i(a).

actual harm exists, but only that a risk of harm *may* exist.¹⁸

An emergency order may be based on “information.” As with orders under RCRA, “information” or “any information” has been construed by the EPA to mean “some reliable information upon which a reasonable person would base a decision or take action.”

Recipients of a Section 300i order who do not comply with the order will be subject to an enforcement action in the appropriate U.S. district court and civil penalties.¹⁹ Pursuant to 40 C.F.R. Part 19, the maximum penalty amount is \$21,500 for each day in which the violation or failure to comply continues.

V. THE APPEALS PROCESS FOR ADMINISTRATIVE ORDERS

§ 9:90 Executive Summary

The vast majority of enforcement actions undertaken by the EPA are administrative rather than judicial. For example, in fiscal year 2015, the EPA initiated 1,400 administrative penalty complaints but referred only 141 civil judicial cases to the Department of Justice (“DOJ”).¹

Administrative actions involve orders and other sanctions issued by the EPA, and if challenged by the recipient of the sanction, the review process is held within the Agency and before Agency personnel. In contrast, judicial sanctions involved formal court cases prepared by the EPA, filed by DOJ, and heard by federal courts.

While it is generally true that judicial enforcement cases seek higher penalties, administrative enforcement cases can be, and often are, of equal or greater importance to the recipient for several reasons. First, administrative sanctions can impose requirements that are extremely expensive and burdensome. Second, the Agency often uses administrative enforcement to put forward or test a new interpretation of a legal requirement, thinking that an EPA hearing officer is likely to be more sympathetic than a federal judge. If that occurs, a reviewing court might be less likely to disturb the ruling than if the court was initially deciding the issue. Third, accumulating a number of administrative sanctions can seriously and adversely influence a recipient’s history of violations and can have significant collateral effects. For example, EPA enforcement guidance documents frequently recommend that the Agency consider recent compliance history in setting the amount of a civil penalty.²

When a person is faced with an administrative enforcement action and believes it is improper, unreasonable, or otherwise inappropriate, he may want to go immediately go to court. Some environmental statutes require a party seeking to chal-

¹⁸See *U.S. v. Midway Heights County Water Dist.*, 695 F. Supp. 1072, 1076, 27 Env’t. Rep. Cas. (BNA) 2183, 27 Env’t. Rep. Cas. (BNA) 2185, 19 Env’t. L. Rep. 20142 (E.D. Cal. 1988).

¹⁹42 U.S.C. § 300i(b).

[Section 9:90]

¹U.S. Environmental Protection Agency, Enforcement Accomplishments Numbers at a Glance for Fiscal Year 2015, *available at* <http://www.epa.gov/enforcement/enforcement-annual-results-numbers-glance-fiscal-year-fy-2015>.

²See, e.g., EPA, FIFRA Enforcement Response Policy (Dec. 2009), *available at* <http://www.epa.gov/sites/production/files/documents/fifra-erp1209.pdf>. A general statement regarding the consideration of past compliance history is on EPA’s Web site, at <http://www3.epa.gov/region9/enforcement/intro.html>. Still more broadly, the International Network for Environmental Compliance and Enforcement’s *Principles of Environmental Compliance and Enforcement Handbook* suggests that, in addition to the violator’s financial situation and the severity of the act, a history of violations is one of the major considerations suggested in assigning penalties for environmental violations. International Network for Environmental Compliance and Enforcement, *Principles of Environmental Compliance Handbook*, Chapter 8, *available at* http://inece.org/principles/08_enforcement_sept09.pdf.

lenge an administrative enforcement action to do so before the Agency, prior to seeking review in court. Failure to pursue the administrative review process properly before going to court can often result in the loss of the right to challenge the administrative sanction at all. In addition, the failure to raise certain issues in the context of that challenge prior to doing so in court could prevent those issues from being raised at all.

This subchapter, §§ 9:91 to 9:120, discusses how and when a party facing a variety of administrative enforcement sanctions can (and often must) seek administrative review of that sanction.

§ 9:91 General Considerations in Seeking Administrative Review of Administrative Orders

There are several types of sanctions that the EPA might issue and that a party might wish to question, depending on the statute being enforced. For purposes of seeking administrative review of these sanctions, they can be grouped into four basic categories:

- 1) Orders to take action, comply with a legal requirement, or cease a particular act (generally called “administrative orders,” or “cease-and-desist orders”);
- 2) Notices assessing administrative civil penalties;
- 3) Orders to produce information; and
- 4) Actions on permits and permit applications.

A person subject to any of these sanctions may question its authority, legitimacy, or factual or legal accuracy. Whether, when, and how a party obtains administrative review of these orders is determined by the statute pursuant to which the action is taken, by the Administrative Procedure Act (“APA”),¹ and/or by the rules for administrative penalties and the appeals thereof in 40 C.F.R. Part 22,² among others.

Notwithstanding the statutory-specific nature of how the appeals process works, the following general principles should be considered in every case, as they will help give fuller meaning to the nature and extent of review that is available.

First, if the order or sanction involves some type of imminent danger or hazard, the receiving party may have to choose between complying with the order and challenging it at a later date, or not complying and obtaining review if the EPA seeks to enforce the order in federal court. The latter course may involve additional penalties for noncompliance.

Second, in most cases one must raise challenges to an administrative order or sanction before the Agency, and only after a final decision is rendered by the Agency may one proceed to obtain review in court.

Third, in some cases, an allegation by the Agency that a party has violated a law or regulation cannot be formally challenged, even administratively, until the Agency

[Section 9:91]

¹5 U.S.C. §§ 500 to 596.

²The regulations at 40 C.F.R. Pt. 22 govern adjudicatory proceedings for the assessment of civil penalties under Sections 3005(e), 3008, 9006, and 11005 of the Solid Waste Disposal Act (“SWDA”), 42 U.S.C. §§ 6928, 6991(e) and 6992(d); Section 14(a) of the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”), 7 U.S.C. § 1361(a); Sections 113(d)(1), 205(c), 211(d), and 213(d) of the Clean Air Act (“CAA”), 42 U.S.C. §§ 7413(d)(1), 7524(c), 7545(d), and 7547(d); Section 16(a) of the Toxic Substance Control Act (“TSCA”), 15 U.S.C. § 2615(a); Section 325 of the Energy Planning and Community Right-to-Know Act (“EPCRA”), 42 U.S.C. § 11045; Section 109 of CERCLA, 42 U.S.C. § 9609; and Section 1414(g)(3)(B) of the Safe Drinking Water Act (“SDWA”), 42 U.S.C. § 300g-3(g)(3)(B). *See* 40 C.F.R. § 22.01.

tries to assess a civil penalty for the violation or tries to force the target of the allegation to change its conduct in order to conform to the law or regulation. For example, the Clean Water Act (“CWA”) permits the EPA and the Army Corps of Engineers to issue cease and desist orders accusing the recipient of violating CWA provisions and ordering that the activity be stopped. Several courts have held that there is no right to challenge this accusation until the agency brings a formal case charging that the law or order has been violated.³

Fourth, in some cases, an administrative sanction will allege a violation of a regulation that the regulated entity believes is invalid. Challenges to the validity or wisdom of regulations (other than constitutional challenges) are sometimes precluded in enforcement actions by the statute itself, if the opportunity to challenge the regulation prior to enforcement is provided by law.

Finally, the actual process of obtaining administrative review of orders and other sanctions is much less formal (and generally less expensive) than obtaining judicial review. For example, it is not necessary to be represented by an attorney in the administrative hearing process. However, the EPA is always represented by counsel at these hearings.

§ 9:92 General Considerations in Seeking Judicial Review of Administrative Orders

A respondent’s ability to obtain judicial review of an EPA administrative order depends on the type of order issued. In general, the Administrative Procedure Act (“APA”) creates a presumption favoring judicial review of administrative action.¹ However, this presumption may be overcome by explicit statutory provisions or, in some cases, by clear evidence of Congressional intent. Further, many orders issued for “imminent hazards” provide only an informal opportunity to confer with the Agency.

At least one statute explicitly prohibits pre-enforcement judicial review of certain administrative orders. CERCLA Section 113(h) explicitly prohibits pre-enforcement judicial review of administrative orders issued under Section 106(a) of CERCLA to require a potentially responsible party to conduct response actions at a contaminated site.²

When the statute is silent, the APA’s presumption in favor of reviewability will apply. However, if specific language or legislative history, including “inferences of

³See *Laguna Gatuna, Inc. v. Browner*, 58 F.3d 564, 566, 40 Env’t. Rep. Cas. (BNA) 2054, 25 Env’tl. L. Rep. 21192 (10th Cir. 1995); *Rueth v. U.S. E.P.A.*, 13 F.3d 227, 231, 24 Env’tl. L. Rep. 20214 (7th Cir. 1993); *Southern Pines Associates by Goldmeier v. U.S.*, 912 F.2d 713, 715, 31 Env’t. Rep. Cas. (BNA) 2020, 21 Env’tl. L. Rep. 20033 (4th Cir. 1990); *Hoffman Group, Inc. v. E.P.A.*, 902 F.2d 567, 569, 31 Env’t. Rep. Cas. (BNA) 1409, 20 Env’tl. L. Rep. 20884 (7th Cir. 1990). This again puts the regulated entity in the awkward position of having to choose between accepting the Agency’s decision or violating the order, waiting for the Agency to try to enforce the order, and then challenging the enforcement. Such a course of action, therefore, requires exposing oneself to sanctions in order to rebut the agency’s initial finding.

[Section 9:92]

¹See 5 U.S.C. §§ 701 et seq.; *Sackett v. EPA*, 132 S. Ct. 1367, 1373 (2012) (landowners permitted to appeal administrative order requiring wetland remediation under CWA § 404). Note that, prior to *Sackett*, courts frequently were willing to infer congressional intent to prevent judicial review of administrative orders. See, e.g., *Laguna Gatuna, Inc.*, 58 F.3d at 566 (pre-enforcement review of Clean Water Act administrative order denied); *Abbs v. Sullivan*, 963 F.2d 918, 926, 75 Ed. Law Rep. 162, 23 Fed. R. Serv. 3d 8 (7th Cir. 1992) (final agency action reviewable under the Administrative Procedure Act ordinarily means a final order imposing sanction); *Ross Incineration Services, Inc. v. Browner*, 118 F. Supp. 2d 837, 842–47, 51 Env’t. Rep. Cas. (BNA) 1875 (N.D. Ohio 2000).

²42 U.S.C. § 9613(h) (prohibiting review of orders issued under 42 U.S.C. § 9606(a), except in cost recovery, enforcement, reimbursement actions, citizen suits, or actions to compel compliance).

intent drawn from the statutory scheme as a whole,” indicate that Congress intended to prevent judicial review of certain actions, review might not be permitted even without an express statutory prohibition.³ On the other hand, judicial review may be had of an administrative order that bears the “hallmarks of finality” as described by the U.S. Supreme Court in *Sackett v. E.P.A.*, 566 U.S. 120, 132 S. Ct. 1367, 182 L. Ed. 2d 367, 73 Env’t. Rep. Cas. (BNA) 2121 (2012). The practitioner also should carefully consider other administrative law doctrines (standing, finality, ripeness, exhaustion of administrative remedies) that may bar pre-enforcement review.

In addition to the statutory language more generally, reviewability may depend on the circumstances or type of order at issue. For instance, courts often reject pre-enforcement judicial review of administrative orders issued to address “imminent hazards” on the grounds that it would delay response and thereby frustrate the purposes of the acts.⁴

Even where judicial review is barred by statute, a respondent may have another route to the federal courthouse. The jurisdiction of the federal courts to ensure that administrative agencies act in a manner consistent with the Constitution and within their authority is well established even in cases where there is a specific statutory prohibition of pre-enforcement review of agency action. In these cases, the court does not technically “review” the agency action; instead, it sets the agency action aside as *ultra vires*.⁵

Orders that seek to correct statutory violations that do not pose an “imminent” risk—for example, certain orders under TSCA—will generally afford the respondent an administrative hearing at which it may offer evidence. Such orders are originally served on the respondent in a proposed form and are later finalized by an administrative law judge (“ALJ”) after an administrative hearing. Specific considerations regarding rights to an administrative hearing and opportunities for judicial review are discussed below with respect to each major environmental statute.

§ 9:93 Basic Structure of Administrative Hearings for Review of Orders and Other Sanctions

Although most environmental laws state that the EPA Administrator is to hear administrative appeals of orders, that function has been delegated and involves a two-stage process: (1) an administrative hearing before a hearing officer and (2) an administrative appeal, usually to the three-member Environmental Appeals Board (“EAB”). Both hearing officers (“Presiding Officers”) and EAB judges are employees of EPA, just like the EPA lawyer prosecuting the case.

Thus, at the first two levels of adjudication, EPA employees will judge the adequacy of the allegations made by the EPA that the law has been violated. This does not mean that the EPA always wins. To the contrary, many hearing officer and EAB decisions favor the responding party. Similarly, many decisions in favor of the EPA are upheld by the federal courts.

§ 9:94 Presiding Officers

³*Sackett*, 132 S. Ct. at 1372–73; *Block v. Community Nutrition Institute*, 467 U.S. 340, 349, 104 S. Ct. 2450, 81 L. Ed. 2d 270 (1984).

⁴*See, e.g., Tennessee Valley Authority v. Whitman*, 336 F.3d 1236, 56 Env’t. Rep. Cas. (BNA) 1737, 33 Env’tl. L. Rep. 20231 (11th Cir. 2003); *Wagner Seed Co. v. Daggett*, 800 F.2d 310, 24 Env’t. Rep. Cas. (BNA) 1916, 16 Env’tl. L. Rep. 21001, 87 A.L.R. Fed. 205 (2d Cir. 1986).

⁵*See, e.g., Leedom v. Kyne*, 358 U.S. 184, 79 S. Ct. 180, 3 L. Ed. 2d 210, 43 L.R.R.M. (BNA) 2222, 36 Lab. Cas. (CCH) P 65085 (1958) (setting aside nonfinal agency action despite express jurisdictional bar to review); *Lepre v. Department of Labor*, 275 F.3d 59, 65–66 (D.C. Cir. 2001); *Dart v. U.S.*, 848 F.2d 217, 221–23 (D.C. Cir. 1988) (statutory prohibition of review only applied to actions within agency’s delegated powers).

Hearings before EPA's Presiding Officers constitute the first, and often most important, step in the process for challenges of many EPA decisions and actions. The Presiding Officers may be administrative law judges employed by the EPA or Regional Judicial Officers, who are administrative attorneys (though they may not be prosecutors) appointed by each EPA Regional Administrator to conduct administrative hearings.¹

The general rules of practice for hearings before Presiding Officers can be found in 40 C.F.R. § 22. There also may be variations of these general rules contained in the particular statute and regulation involved in the challenge.

In conducting administrative hearings, the Presiding Officer may serve many of the functions of other judges, including ruling upon motions, requests, and offers of proof; administering oaths and affirmations; ordering the production of nonprivileged evidence and rule on evidentiary issues; examine witnesses; and issuing subpoenas. He or she also may hear and decide the questions of fact, law, or discretion involved in the proceeding.² The Presiding Officer has substantial latitude in deciding matters that are presented prior to and during the hearing.

The rules governing proceedings before Presiding Officers provide for a relatively streamlined process. The discovery process is both informal and limited. Interrogatories and depositions are generally not permitted, and there is little caselaw to assist a respondent in determining procedural routes and alternatives. The most conservative route for the responding party to take to address unclear procedural issues would be to coordinate with EPA counsel and jointly contact the Presiding Officer or his or her clerk. Utilizing an otherwise unagreed upon procedure or independently contacting the Presiding Officer may lead to procedural objections and concerns regarding *ex parte* communications.

It is worth noting that although Presiding Officers decide the merits of contested cases, if the parties reach a consent agreement to resolve the case, it is approved by the Regional Administrator.

§ 9:95 Burden of Proof

The term "burden of proof" encompasses two separate concepts: (1) the burden of production and (2) the burden of persuasion. In appeals of administrative sanctions, the EPA has the initial burden of production; that is, the EPA has the burden of going forward with evidence proving that the violation occurred and that the relief it seeks (such as a proposed civil penalty, permit revocation, or other enforcement action) is appropriate.¹ If the Presiding Officer determines that the EPA has met this burden, the burden of production then shifts to the responding party, who has the burden of presenting any defense to the allegations set forth in the complaint.

By contrast, the burden of persuasion never shifts and remains with the EPA. The complainant must sustain its position by a "preponderance of the evidence."² The Presiding Officer considers the testimony and other evidence and, balancing the position asserted by the EPA versus the respondent's arguments, determines which

[Section 9:94]

¹40 C.F.R. § 22.4(b) and (c).

²40 C.F.R. § 22.04(c).

[Section 9:95]

¹40 C.F.R. § 22.24(a).

²40 C.F.R. § 22.24. The EAB has stated that the "preponderance of the evidence" standard requires that a fact finder believes his conclusion is "more likely than not." In re: Ocean State Asbestos Removal, Inc./Ocean Statebuilding Wrecking and Asbestos Removal Co., Inc., 7 E.A.D. 522, 1998 WL 214543, *7 (E.P.A. 1998).

has greater “weight.” By way of contrast, in criminal cases the government must prove that the violation occurred beyond a reasonable doubt.

The respondent should be aware that the rules of evidence used in administrative cases are less strict than the rules used in judicial cases. This means that less reliable evidence may be used to prove a violation in an administrative case than is used to prove the same violation in a judicial civil or criminal case.³

§ 9:96 The Administrative Process Hearing

The various aspects of the administrative hearing process are discussed in §§ 9:97 to 9:105.

§ 9:97 The Complaint

Administrative hearings are generally initiated when the EPA files a complaint that asserts a failure to comply with an administrative order or that assesses a civil penalty.¹ The only general exception is for appeals of decisions on permits and permit applications, but those are not enforcement sanctions. A permit suspension or revocation proceeding is initiated by the EPA. Rare exceptions to these basic principles do exist and are spelled out in the various statutes. It is crucial to know whether the ability to obtain formal administrative review of a particular sanction hinges on waiting for a complaint to be filed by the Agency. If the right to initiate the process does lie with the regulated party, failure to do so in a timely fashion could result in a waiver of the right to challenge the sanction.

The EPA’s complaints must include several elements:

- Citation to the statutory sections that authorize the Agency to file the complaint;
- Citation to the specific provisions, regulations, or orders that the Agency alleges have been violated;
- A concise statement of the factual basis for each violation;
- A description of the relief sought, including the amount of any civil penalty and any request for action on a permit;
- Notice of the respondent’s right to request a hearing;
- Notice if C.F.R. Part 22, Subpart I, which provides special rules for certain CWA and SDWA matters, applies;
- The address of the Regional Hearing Clerk; and
- Instructions for paying penalties, if applicable.²

A copy of the rules of practice must accompany each complaint served.³

Although the EPA often uses previously tested “boilerplate” language in complaints, each complaint must be carefully reviewed because defective complaints may allow a responding party to obtain a dismissal of the case. For example, for RCRA civil penalty cases, the EPA must give notice to the state where the violation took place prior to enforcement if the EPA has delegated RCRA authority to that

³For example, where the *Federal Rules of Evidence* contain an entire article related to hearsay testimony, see Fed. R. Evid. Art. VII, EPA’s hearing rules require the Presiding Officer to “admit all evidence which is not irrelevant, immaterial, unduly repetitious, unreliable, or of little probative value,” except for evidence related to settlement that would be excluded under the *Federal Rules of Evidence*.

[Section 9:97]

¹40 C.F.R. § 22.13.

²40 C.F.R. § 22.14(a).

³40 C.F.R. § 22.24(b).

state.⁴ Although the complaint may state that notice was properly given, the notice may not have been adequate (e.g., an EPA program person may have communicated by telephone with the state technical representative without proper, documented communication with the state's program manager or director prior to filing the complaint). Another error may arise if the complaint incorrectly describes highly technical issues, in which case interpretations made by EPA technical personnel may not be correctly alleged by EPA counsel. As a result, the complaint may allege facts that are not violations or that are not adequately supported by the EPA's own evidence. Further, the dollar amount of the proposed civil penalty may be legally defective if it is not based on criteria set forth in the statute relating to the proper amount of a civil penalty and with any civil penalty guidelines issued under the statute.⁵ For example, the EPA may issue complaints assessing huge civil penalties in cases involving public notoriety, such as oil spills or lead contamination, without following the sometimes arcane mathematics of a proper civil penalty calculation.

The EPA can amend the complaint once as a matter of right before the answer is filed. Otherwise, the EPA may amend the complaint only upon a motion granted by the Presiding Officer.⁶ The EPA may withdraw the complaint or any part of it, without prejudice, once before the answer has been filed. Otherwise, the EPA can withdraw all or part of the complaint without prejudice only upon a motion granted by the Presiding Officer.⁷

§ 9:98 Answer to the Complaint

The responding party must file a written answer to a complaint, or amended complaint, with the Regional Hearing Clerk within 30 days after service of the complaint if it wishes to (i) contest any material fact upon which the complaint is based, (ii) contend that the penalty, permitting action, or order proposed in the complaint is inappropriate, or (iii) contend that it is entitled to judgment as a matter of law.¹ Information regarding the Regional Hearing Clerks is available on the EPA's Web site.²

The answer must admit, deny, or explain each of the factual allegations contained in the complaint. If the respondent states that he or she has no knowledge of a particular factual allegation, then the allegation is considered to be denied.³ *He respondent's failure to admit, deny, or explain any material factual allegation contained in the complaint constitutes an admission of the allegation.*⁴

Generally, there are three possible ways to defend a complaint, not all of which are available in each case. First, one can argue that the facts alleged in the complaint are inaccurate. Second, one can argue that the facts, even if true, do not constitute a violation. Third, one can argue that even if the facts are accurate, and they do constitute a violation, an affirmative defense prevents the assertion of liability or imposition of a fine or other sanction. Note that the failure to raise all known and

⁴42 U.S.C. § 6928(a)(2).

⁵For more a more detailed review of civil penalties, including calculation methods, procedures, and some statute-specific considerations, see §§ 9:112 to 9:120.

⁶40 C.F.R. § 22.14(c).

⁷40 C.F.R. § 22.14(d).

[Section 9:98]

¹40 C.F.R. § 22.15(a).

²See EPA, *Administrative Enforcement Dockets* (last updated Feb. 9, 2016), <http://yosemite.epa.gov/oarhcepaadmin.nsf/Information/Contact+Information?OpenDocument>.

³40 C.F.R. § 22.15(b).

⁴40 C.F.R. § 22.15(d).

available defenses in the answer can result in the defense being waived, no matter how meritorious it may be. That means it cannot be raised before the Presiding Officer, nor can it be a basis for appeal to either the EAB or the court.

In addition to responding to the EPA's allegations, the party answering the complaint also must identify the grounds for any affirmative defense, the facts that the respondent intends to place at issue, the basis for opposing any proposed relief, and whether a hearing is requested.⁵

The answer must be filed within 30 days of service of the complaint.⁶ While extensions of time to answer are typically available, there are no guarantees, and some EPA attorneys are reluctant to agree in writing to an extension if they sense the responding party might waive a defense under the time pressure of responding. The respondent must be prepared to meet the 30-day deadline unless the parties agree in writing to an extension. In the event the parties cannot agree to an extension of time in which to file an answer, it will be necessary to file a motion requesting an extension of time.

As discussed below, a Presiding Officer is not assigned until the answer is filed.⁷ Until a Presiding Officer is assigned, a motion to request an extension of time to file an answer will have to be filed with the Regional Hearing Clerk. The Regional Hearing Clerk will then provide a copy to the Regional Administrator or to a Regional Hearing Officer or Judicial Officer, if the Regional Administrator has delegated that authority. As a practical matter, the responding party may wish to contact the Regional Hearing Clerk and offer to provide a copy to the Regional Administrator or the Regional Hearing Officer or Judicial Officer at the time the original is filed with the Regional Hearing Clerk. This is especially true if there is limited time remaining in which to obtain a decision from the Regional Administrator. The Regional Hearing Clerk can advise the responding party whether the Regional Administrator makes those decisions or has delegated the authority to a Regional Hearing clerk or Judicial Officer. If the responding party elects to provide a copy to the Regional Administrator directly, the responding party should advise the Regional Hearing Clerk in writing at the time the original is filed. It is important to remember this is a time-consuming process, and there is no guarantee that an extension will be granted. Consequently, it is essential to determine as soon as possible whether an extension can be obtained by an agreement of the parties.

As noted earlier, it is crucially important that the answer be fully and properly considered. Failure to assert a defense or affirmative defense is considered a waiver of the option. However, it is completely within the discretion of the Presiding Officer to permit an amendment to include a defense not initially raised.⁸ This creates a double standard: if EPA counsel, experienced in preparing complaints, make a mistake, they have the absolute right to amend the complaint once. If responding parties, who may not be attorneys and may be facing their first complaint, make a mistake, they have no absolute right to amend; they must have the Presiding Officer's permission even for the first amendment.

In most cases, a responding party is aware that a complaint may be filed and is generally familiar with the nature of the allegations, because an EPA attorney or an Agency enforcement person or the inspector may have previously contacted him to discuss or resolve the problem. Unfortunately, sometimes the Agency does not file the case until months, or even years, after the alleged violation took place. Witnesses and evidence helpful in a defense may disappear or be unavailable. Accord-

⁵40 C.F.R. § 22.15(b).

⁶40 C.F.R. § 22.15(a).

⁷40 C.F.R. § 22.21(a).

⁸See 40 C.F.R. § 22.15(e) (answer may be amended upon motion granted by the Presiding Officer).

ingly, as soon as an entity is subject to an inspection or investigation, or other activity suggesting the existence of violations for which enforcement action can be taken, consideration should be given to conducting an immediate factual review and to developing and preserving evidence. If done properly, this will preserve evidence until a case is filed and may provide a defense that otherwise is unavailable or could not be proved otherwise.

The answer provides the Presiding Officer with his or her first glimpse of the case. The limited discovery involved in these matters and the otherwise streamlined approach contemplated by the rules increases the relative importance of the complaint and the answer. Experts may need to be involved even at this early stage to allow for a well-pled answer. The respondent should not assume that an amendment to the answer will be permitted at some later date. How the answer is prepared can be of utmost strategic importance as well. A well-pled and informative answer will contrast starkly and often favorably to the form complaint often used by the EPA.

§ 9:99 Prehearing Procedure

Once an answer is filed, the Regional Hearing Clerk forwards the complaint, the answer, and any other filed documents to the Chief Administrative Law Judge, who then assigns himself or herself or another administrative law judge (ALJ) to be the Presiding Officer. The Presiding Officer then reserves the case file and notifies the parties of his or her assignment.¹ If the respondent requests a hearing on his or her answer, or the Presiding Officer determines on his or her own that the proceeding presents genuine issues of material fact, a hearing is scheduled and the parties are notified no later than 30 days prior to the hearing date.²

§ 9:100 Other Procedural Considerations

Although the administrative appeals process is intended to be less formal than the judicial process, in an effort to promote efficiency certain requirements nonetheless exist. The pleadings (complaint, answer, etc.) and certain other documents must be filed with the EPA Regional Hearing Clerk.¹ A party filing documents with the Regional Hearing Clerk must serve copies upon all other parties and the Presiding Officer.² Parties must serve copies of all correspondence with the Presiding Officer, upon all other parties, and send a copy to the Regional Hearing Clerk and attach a certificate of service.³ A certificate of service must accompany each document filed or served.⁴ To avoid confusion, the certificate of service should identify that the document has been filed with the Regional Hearing Clerk as well as certify that other persons have been served.

All rulings, orders, decisions, and other documents issued by the Presiding Officer are filed with the Regional Hearing Clerk. Copies of the Presiding Officer's rulings, orders, decisions, or other documents are also served on all parties.⁵

[Section 9:99]

¹40 C.F.R. § 22.21(a).

²40 C.F.R. § 22.21(b).

[Section 9:100]

¹40 C.F.R. § 22.5(a)(1).

²40 C.F.R. § 22.5(b).

³40 C.F.R. § 22.5(a)(2).

⁴40 C.F.R. § 22.5(a)(3).

⁵40 C.F.R. § 22.6.

The Presiding Officer may grant an extension of time for the filing of any pleading, document, or motion, either upon timely motion for good cause shown and after consideration of prejudice to other parties or upon the Presiding Officer's own initiative.⁶ Extensions of time should not be presumed. In addition, because of the large caseload handled by Presiding Officers and the short time deadlines for answers, among other things, a ruling on a motion may not be timely enough to allow for effective utilization of the extension.

Ex parte discussions after the issuance of the complaint are prohibited. Prohibited discussions include those between the Presiding Officer (or anyone likely to advise him or her in the decision on the case) and any person outside the Agency, any Agency staff member who performs a prosecutorial or investigative function in the proceeding or a factually related proceeding, or any representative of such person. Further, any *ex parte* memorandum or other communication addressed to the Presiding Officer during the proceeding and relating to the merits is regarded as an argument in the proceeding and must be served on all other parties who are then given the opportunity to reply.⁷

The Presiding Officer may be presented with information in the form of EPA-generated correspondence, inspection reports, notices of violation, among other things, which can include hearsay statements, allegations, and characterizations of the action. When such information is served on the responding party, it may wish to respond (as may be permitted pursuant to 40 C.F.R. § 22.08) prior to the hearing so that the respondent is not unduly prejudiced before the Presiding Officer.

Sometimes administrative cases can present important policy issues. When significant issues are raised, persons other than the entity being sanctioned may desire to participate in the proceeding. A motion for leave to intervene must ordinarily be filed before the initial exchange of information described below. Outside persons may also move for leave to file a nonparty brief.⁸

With the increase in focused enforcement initiatives, it is more common for several cases to be brought that involve similar issues. The Presiding Officer may, by motion or on his own, consolidate or sever any or all matters at issue in two or more proceedings on certain conditions.⁹

Motions can be made for extensions of time, alteration of the discovery process, and requests for accelerated decisions, among other things. All motions, except those made orally on the record during the hearing, must state the grounds relied upon, set forth the relief or order sought, and be accompanied by any affidavit, certificate, other evidence, or legal memorandum relied upon.¹⁰ Response times are short, although the Presiding Officer may adjust them—response briefs must be filed within 15 days of service of the motion, and reply briefs must be filed within 10 days of service of responses.¹¹ The Presiding Officer may permit oral argument on a motion in his or her discretion.¹²

As in federal trial courts, a party that fails to file a timely answer to the complaint, fails to comply with a prehearing or hearing order of the Presiding Officer, or fails to appear at a conference or hearing without good cause is subject to a finding

⁶40 C.F.R. § 22.7(b). Note that the period of time to file a responsive document is extended by five days when service is made by mail (but not by overnight or same-day delivery), not three as in Fed. R. Civ. P. 6. 40 C.F.R. § 22.7(c).

⁷40 C.F.R. § 22.8.

⁸40 C.F.R. § 22.11.

⁹40 C.F.R. § 22.12.

¹⁰40 C.F.R. § 22.16(a).

¹¹40 C.F.R. § 22.16(b).

¹²40 C.F.R. § 22.16(d).

of default. Default by the respondent constitutes an admission of all facts alleged in the complaint and a waiver of its right to a hearing on the factual allegations. Any civil penalties proposed in the complaint become due and payable by the respondent 30 days after a final order issued upon default. If the complaint is for the revocation or suspension of a permit, the conditions of revocation or suspension proposed in the complaint become effective on the date designated by the Administrator in his final order issued upon default. Default by the EPA results in the dismissal of the complaint *with prejudice*.¹³

§ 9:101 Prehearing Conference

Before the hearing, the parties are required to exchange all information they may seek to introduce as evidence, and the Presiding Officer may direct the parties and their counsel or other representatives to appear at a conference.

The Presiding Officer will issue an order directing the prehearing information exchange. With certain exceptions, documents and witness testimony not included in the prehearing information exchange will not be admissible at the hearing,¹ although exchanges may be supplemented if a party learns that the information exchanged is incomplete, inaccurate, or outdated, and the supplemental information has not otherwise been disclosed.² Each party's prehearing information exchange must include the names of any witnesses it intends to call at the hearing, including a brief narrative summary of their expected testimony, and copies of all documents and exhibits which it intends to introduce into evidence at the hearing.³ If a civil penalty is proposed, both parties must provide additional information related to the appropriateness of the penalty amount.⁴ Parties may also move for leave to conduct additional discovery after the information exchange.⁵ However, traditional discovery is only available with the permission of the Presiding Officer and if sufficient reasons for it exist.⁶

The EPA seldom engages in extensive discovery within the context of an enforcement action because it often gets necessary information through statutory information requests that may occur even before an order is issued or a complaint is filed. Similarly, a respondent may submit a Freedom of Information Act request to the EPA to obtain pertinent Agency information before the action is commenced. Use of this type of information-gathering technique after the complaint is filed may be considered by the EPA to be a form of discovery that should be agreed to by the EPA and approved by the Presiding Officer prior to its submission. Because the authority for seeking this information is based on a separate statute, it is difficult for the Agency to suggest that this statutory right is somehow "canceled" by virtue of an enforcement proceeding.

The prehearing conference may be ordered at any time before the hearing begins.⁷ The prehearing conference is designed to give the parties an opportunity to sharpen the issues for hearing and streamline the hearing process. The conference may include information exchanges, but also must include a direction that the parties

¹³40 C.F.R. § 22.17.

[Section 9:101]

¹40 C.F.R. § 22.19(a)(1).

²40 C.F.R. § 22.19(f).

³40 C.F.R. § 22.19(a)(2).

⁴40 C.F.R. § 22.19(a)(3) and (4).

⁵40 C.F.R. § 22.19(e).

⁶40 C.F.R. § 22.19(e).

⁷40 C.F.R. § 22.19(b).

consider settlement or simplification of the case, amendments to pleadings, the exchange of evidence to avoid unnecessary proof, limitation of witnesses, time and place of the hearing, and any other matters that may expedite disposition of the proceeding.⁸

§ 9:102 Accelerated Decision; Decision to Dismiss

The Presiding Officer, upon motion of a party or on his or her own, may at any time render an accelerated decision as to all or any part of the proceeding, without hearing further evidence (or upon limited evidence such as affidavits), if no genuine issue of material fact exists and a party is entitled to judgment as a matter of law.¹ This is the equivalent of a summary judgment motion that is available in state and federal courts. In addition, the Presiding Officer, upon the motion of the respondent, may at any time dismiss an action without a further hearing (or upon limited additional evidence) on the basis of a failure to establish a *prima facie* case or other grounds that show no right to relief on the part of the complainant.² This is the equivalent of a motion to dismiss in the state and federal court systems.

If an accelerated decision or decision to dismiss is issued as to all issues and claims in the proceeding, the decision constitutes an initial decision of the Presiding Officer and must be filed with the Regional Hearing Clerk. If an accelerated decision or decision to dismiss is issued regarding less than all the issues or claims, the Presiding Officer must determine what material facts exist without substantial controversy and what material facts remain controverted in good faith. The Presiding Officer must then issue an interlocutory order specifying the facts that appear substantially uncontroverted, and the issues and claims upon which the hearing will proceed.³

§ 9:103 The Hearing

If the proceeding presents genuine issues of material fact, the Presiding Officer must hold a hearing.¹ The Presiding Officer must set a time and location for the hearing and serve notice of the same on the parties no later than 30 days prior to the hearing.² A request to postpone a hearing is only granted upon motion and for good cause.³ The location of the hearing is selected in the same fashion as the location for the prehearing conference, that is, it will be held in the county where the respondent resides or conducts business, in the city in which the relevant EPA Regional Office is located, or in Washington, D.C.⁴

Preparation for a hearing is similar to preparation for trial. Fact and expert witnesses must be prepared, documentary evidence must be organized and identified, and legal arguments must be developed for presentation at the hearing. Because the EPA has the burden of proving the violations and its grounds for penalties or other sanctions, it presents its case first.

⁸40 C.F.R. § 22.19(b).

[Section 9:102]

¹40 C.F.R. § 22.20(a).

²40 C.F.R. § 22.20(a).

³40 C.F.R. § 22.20(b).

[Section 9:103]

¹40 C.F.R. § 22.21(b).

²40 C.F.R. § 22.21(b).

³40 C.F.R. § 22.21(c).

⁴40 C.F.R. § 22.21(d).

It is often beneficial for the respondent's witnesses to be present to hear the testimony of EPA witnesses. This will not only allow the witnesses to become familiar and comfortable with the hearing environment, but it also may create the opportunity for the respondent's witnesses to counter directly and effectively representations made in the hearing by EPA witnesses. In addition, the respondent's witnesses may be helpful in assisting respondent's counsel with cross-examination, particularly with regard to highly technical matters.

While some formalities of a court trial will exist, the hearing will be relatively informal. Witnesses are examined orally and parties may cross-examine a witness who appears at the hearing.⁵ The Presiding Officer may admit statements of fact or opinion prepared by a witness as evidence instead of oral testimony. However, before any statement is read or admitted into evidence, the witness must deliver a copy of it to the Presiding Officer, the reporter, and opposing counsel. The witness presenting the statement must swear to or affirm the statement, and must be subject to appropriate cross-examination regarding its contents.⁶

The respondent has two opportunities to defeat the EPA's case. First, during the presentation of the EPA's case, it may be possible to undermine the credibility, accuracy, or reliability of the evidence presented in support of the government's allegations of liability and demands for penalties. This is done through cross-examination of the government's witnesses and challenges to its other evidence. If enough questions are raised, it may result in the government's case being dismissed even before the respondent counters with his or her evidence. This possibility should not be overlooked. For example, the EPA might allege that violations took place on a particular series of dates, but at the hearing the EPA presents evidence of violations on different dates. The EPA is bound by the allegations in the complaint, and the failure to prove exactly what is alleged in the complaint is grounds for dismissal. However, failure to raise those grounds at the hearing could result in a waiver of the right to do so.

Even if this initial tactic is insufficient to justify dismissal, the respondent still may present its case using its own evidence and argument. As noted earlier, the respondent's case generally may not raise defenses not asserted in the answer that was filed. Similarly, the EPA may not attempt to prove violations not alleged in the original complaint.

The hearing must be transcribed, and the transcript provided to the Agency and to the Presiding Officer. The Regional Hearing Clerk must make copies of the transcript available to the parties. The Presiding Officer will then set a schedule for filing proposed findings of fact, conclusions of law, and a proposed order, together with briefs in support thereof. The deadline for such papers cannot be required before the shorter of 30 days from receipt of the transcript or 45 days from notification of availability, which is the time period in which a party may file a motion to conform the transcript to the actual testimony at the hearing.⁷

§ 9:104 Initial Decision

The Presiding Officer issues and files with the Regional Hearing Clerk his or her initial decision after the period for filing proposed findings of fact, conclusions of law, and orders has expired. The initial decision will include the Presiding Officer's findings of fact, conclusions of law, and, if appropriate, a recommended civil penalty assessment with a proposed order. The Regional Hearing Clerk forwards the initial

⁵40 C.F.R. § 22.22(b).

⁶40 C.F.R. § 22.22(c).

⁷40 C.F.R. §§ 22.25 and 22.26.

decision to all parties and to the EAB.¹ The Presiding Officer must explain any difference between the civil penalty assessed in the complaint and the proposed penalty in the initial decision.²

The initial decision of the Presiding Officer becomes a final order of the EAB within 45 days after it is served on the parties unless an appeal is taken from it to the EAB, a party moves to reopen the hearing, a party moves to set aside a default order that constitutes an initial decision, or the EAB elects to review the initial decision on its own initiative.³

§ 9:105 Informal Settlement; Consent Agreement and Order

The Agency encourages informal settlement of proceedings, but any settlement must be reduced to a written consent agreement to the Regional Judicial Officer or Regional Administrator in which the respondent waives its right to appeal the proposed final order.¹ The Regional Judicial Officer or Regional Administrator (or the EAB for proceedings commenced at EPA headquarters) must then issue a consent order that ratifies the agreement before the matter is final.² The parties also may engage in any alternative dispute resolution process within the scope of the Alternative Dispute Resolution Act,³ although such a dispute resolution does not divest the Presiding Officer of jurisdiction and does not stay the proceeding.⁴

The vast majority of cases are settled by consent agreement rather than after a full hearing and decision by the Presiding Officer. It is important to remember that the terms of the consent agreement are legally binding, may contain penalties for violations, and may last for years. Accordingly, great care must be taken in entering into such agreements.

§ 9:106 Appealing Administrative Hearing Decisions

In March 1992, the Environmental Appeals Board (“EAB”) was established by regulation in order to allow for a source of hearing officer decisions that would issue decisions that create a body of precedent upon which other hearing officers, the EPA, and the regulated community could rely. Over the past 20-plus years, it has done exactly that. In fact, many important decisions on permitting and other fairly technical matters are produced by the EAB rather than by Article III judges, and the EAB’s database of decisions covers a full range of environmental law regimes, from the CWA and CAA to CERCLA, EPCRA, FIFRA, and TSCA, among others.¹

§ 9:107 The Environmental Appeals Board

The Environmental Appeals Board consists of four environmental appeals judges

[Section 9:104]

¹40 C.F.R. § 22.27(a).

²40 C.F.R. § 22.27(b).

³40 C.F.R. § 22.27(c).

[Section 9:105]

¹40 C.F.R. § 22.18(b)(2).

²40 C.F.R. § 22.18(b)(3).

³5 U.S.C. §§ 581 et seq.

⁴40 C.F.R. § 22.18(d).

[Section 9:106]

¹Environmental Appeals Board, *Published Decisions List of Statutes* (last updated Feb. 9, 2016), http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/Statutes?OpenPage.

appointed by the EPA Administrator.¹ In addition to the EAB judges, eight experienced attorneys serve as counsel to the EAB and assist in reviewing the administrative record, analyzing applicable law and agency policy, and preparing formal written opinions. In addition, they are available to answer questions from litigants and the general public about the appeals process. However, counsel to the EAB do not provide legal advice to the public and will not discuss the particulars of any matter before the EAB.²

§ 9:108 Scope of Environmental Appeals Board (“EAB”) Authority

Anytime there is a problem with a formal decision rendered by a hearing officer or an EPA official, it is essential to identify to whom an appeal may be taken. That is because in order to get to judicial review of the decision, the environmental statutes require final agency action or final action of the Administrator. As a result of delegations of authority, as a practical matter the final action of the EPA Administrator often means final action by someone else designated by the Administrator. If an appeal to that person or entity is not properly taken, there may be no decision that can be reviewed by a court.

On almost all appeals of administrative enforcement actions initially heard by a hearing officer, the EAB is the next step in the process, and its decision constitutes both final Agency action and the final decision of the Administrator needed in order to obtain judicial review. The EAB’s authority to hear both permit and penalty cases is determined strictly in accordance with regulations delegating this authority from the EPA Administrator.

The EAB’s caseload consists primarily of appeals from permit decisions and civil penalty decisions. Appeals may be taken from civil penalty decisions *as a matter of right*, that is, permission to take an appeal is not required. A grant of review of a permit decision is at the EAB’s discretion. The following are examples of the types of cases that the EAB may decide:

- Appeals of civil penalty cases arising under Sections 3005(e), 3008, 9006, and 11005 of the Solid Waste Disposal Act, Section 211 of the Clean Air Act (“CAA”), Section 14(a) of Federal Insecticide, Fungicide, and Rodenticide Act, and Section 16(a) of Toxic Substances Control Act;¹
- Appeals from permit decisions made by Regional Administrators under the CAA’s Prevention of Significant Deterioration permitting program;²
- Appeals of Class II (underground injection well) penalty cases arising under Section 309(g) of the Clean Water Act;³
- Appeals of CAA noncompliance penalty cases;⁴ and

[Section 9:107]

¹Environmental Appeals Board, *Frequently Asked Questions* (last updated Feb. 9, 2016), http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/General+Information/Frequently+Asked+Questions?OpenDocument#6.

²Environmental Appeals Board, *Frequently Asked Questions* (last updated Feb. 9, 2016), http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/General+Information/Frequently+Asked+Questions?OpenDocument#6.

[Section 9:108]

¹40 C.F.R. § 22.1(a).

²40 C.F.R. § 124.19.

³40 C.F.R. § 22.1(a).

⁴40 C.F.R. § 66.95.

- Appeals of cases arising under the Equal Access to Justice Act⁵ relating to payment of counsel fees for citizens groups.⁶

Further, the Administrator can ask the EAB for advice and consultation for those decisions that the Administrator has not officially delegated to the EAB, including asking the EAB to make findings of fact and conclusions of law, prepare a recommended decision, or serve as the final decision maker for the Agency.⁷

While the EAB serves as the final decision maker for a majority of EPA adjudications, there are some Agency functions over which it does not have jurisdiction. For example, the EPA Administrator reviews all applications on a pesticide for which registration has been finally canceled or suspended by the Administrator. The Administrator's final decision denying reconsideration of a request to reverse the cancellation or suspension decision constitutes final Agency action of which judicial review is immediately available.⁸ Thus, the specific statutes and regulations for a given program must be consulted to determine whether the EAB is the proper forum for appealing a particular decision that reviews an enforcement action.

§ 9:109 Standard of Review

Except as provided below, the EAB reviews permit or penalty decisions *de novo*.¹ It is not bound by the Presiding Officer's determinations, nor must the EAB give deference or weight to those determinations. However, in practice, the EAB will often give some deference to the Presiding Officer on some factual issues because the EAB only reviews the record, whereas the Presiding Officer has actually observed the witnesses and can better assess their credibility.²

For permit appeals taken pursuant to 40 C.F.R. § 124.19, the petitioner has a higher burden and must show that the challenged permit condition is based on a "clearly erroneous" finding or conclusion or on an exercise of discretion or important policy consideration that the EAB should review.³

§ 9:110 Procedures Governing Appeals to the EAB

Appeal may be taken from a Presiding Officer to the Environmental Appeals Board (EAB) by filing a notice of appeal and accompanying appellate brief with the EAB (with a copy to the Regional Hearing Clerk and another served on the Presiding Officer) within 30 days after the initial decision is served upon the parties.¹ Within 20 days of service of a notice of appeal, any other party or amicus curiae may file and serve their own notice of appeal or a brief responding to the appeal brief.²

The EAB is composed of four members designated by the Administrator who typi-

⁵28 U.S.C. § 2412.

⁶40 C.F.R. § 17.8.

⁷40 C.F.R. § 1.25(e)(2).

⁸40 C.F.R. § 164.131(b).

[Section 9:109]

¹See 40 C.F.R. § 22.30(f); *In re Yee*, 10 E.A.D. 1, 2001 WL 624774, *8 (E.P.A. 2001).

²See *In re Chempace Corp.*, 9 E.A.D. 119, 2000 WL 696821, *10 (E.P.A. EAB 2000) ("When a Presiding Officer has the opportunity to observe the witnesses testify and to evaluate their credibility, his factual findings are entitled to considerable deference.").

³40 C.F.R. § 124.19(a)(4).

[Section 9:110]

¹40 C.F.R. § 30(a)(1).

²40 C.F.R. § 30(a).

cally sit in three-member panels, with two-member panels possible where absence or recusal prevents a full panel.³ Decisions are made by majority vote of the EAB, with the Administrator breaking all tie votes.⁴ At its discretion, the EAB may schedule oral argument.⁵ It also may refer any case or motion to the EPA Administrator when the EAB, in its discretion, deems appropriate.⁶

The EAB publishes formal written opinions in many of the cases it decides. These decisions are available through legal research services such as Lexis and Westlaw, as well as from the EAB's Web site at: https://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/EAB+Dockets?OpenPage.

The EAB issues its final orders as soon as practicable after the filing of all appellate briefs or oral argument, whichever is later. The EAB can adopt, modify, or set aside findings and conclusions contained in the decision or order being reviewed. It can increase or decrease an assessed penalty, except for a penalty contained in a default order.⁷

§ 9:111 Miscellaneous Procedural Considerations

The general rules of procedure before the EAB are the same as those applicable to hearings. For instance, there are no specific requirements as to the form of documents filed with the EAB, although the first page of every pleading, letter, or other document must contain a caption identifying the respondent and the docket number that is exhibited on the complaint.¹ The original of any pleading, letter, or other document (other than exhibits) must be signed by the filing party or by the counsel or other representative. The signature represents that the signer has read the pleading, letter, or other document; that to the best of his/her knowledge, information, and belief, the statements made therein are true; and that it is not interposed for delay.² Like a Presiding Officer, the EAB may grant an extension of time for the filing of any pleading, document, or motion.³ The same limitations on *ex parte* communications and the same requirements for service apply in EAB cases.⁴ Likewise, the EAB also accepts *amicus* briefs where a party moves to submit such a brief and the EAB grants the motion.⁵

§ 9:112 Statute-Specific Considerations

As discussed below, there are a variety of statute-specific considerations relating to the appeals process for administrative orders.

§ 9:113 Resource Conservation and Recovery Act ("RCRA")

The following chart summarizes the reviewability of each order issued under RCRA. Following the chart, this reviewability is discussed.

³40 C.F.R. § 1.25(e)(1).

⁴40 C.F.R. § 1.25(e)(1).

⁵40 C.F.R. § 22.30(d).

⁶40 C.F.R. § 22.4(a)(1).

⁷40 C.F.R. § 22.30(f).

[Section 9:111]

¹40 C.F.R. § 22.5(c).

²40 C.F.R. § 22.5(c)(3).

³40 C.F.R. § 22.7(b).

⁴40 C.F.R. §§ 22.8 (*ex parte* communications) and 22.6 (filing and service requirements).

⁵40 C.F.R. § 22.11.

<u>ORDER</u>		<u>REVIEW OPTION</u>		<u>JUDICIAL RE- VIEW</u>
Hazardous waste compliance order (§ 3008(a)) ¹	—	Governed by Part 22, but become final unless a hearing is requested within 30 days after issuance of the order ²	—	Appeal to the Environmental Appeals Board
Interim status corrective action order (§ 3008(h))	—	May be governed by 40 C.F.R. Part 22 or Part 24 ³	—	Final decisions may be judicially reviewed in accordance with Administrative Procedure Act
Orders for monitoring, testing, or analysis (§ 3013) ⁴	—	Opportunity to confer with EPA, but not entitled to hearing	—	The statute is silent as to the availability of judicial review
Orders for abatement of imminent hazards (§ 7003) ⁵	—	Opportunity to confer with EPA; based on conference and review of file, the officer may modify or revoke order	—	The statute is silent as to the availability of judicial review before EPA seeks to enforce it
Underground storage tank compliance order (§ 9006) ⁶	—	Governed by Part 22	—	The statute is silent as to the availability of judicial review
Medical waste tracking compliance order (§ 11005) ⁷	—	Governed by Part 22	—	The statute is silent as to the availability of judicial review

For the most part, the above orders are governed by the general provisions of 40 C.F.R. Part 22.

However, hearings related to interim status corrective action orders are governed by slightly different regulations found at 40 C.F.R. Part 24, unless the interim status order (1) is contained within an administrative order that includes claims under 42 U.S.C. § 6928(a), (2) includes a suspension or revocation of authorization to operate, or (3) seeks penalties under 42 U.S.C. § 6928(h)(2) for noncompliance

[Section 9:113]

¹42 U.S.C. § 6928.

²40 C.F.R. § 22.37. Compliance orders become final unless a hearing is requested pursuant to 40 C.F.R. § 22.15 within 30 days of service of the order.

³See 40 C.F.R. § 24.01(b).

⁴42 U.S.C. § 6934.

⁵42 U.S.C. § 6973.

⁶42 U.S.C. § 6991e.

⁷42 U.S.C. § 6992d.

with an interim status order.⁸

The Part 24 procedures involve a relatively informal procedure that is similar to that of Part 22 in general format, but eschew some of the formalities of examination and cross-examination.

Because Sections 3013 and 7003 are not enumerated in 40 C.F.R. § 22.1(a) as statutes whose administrative orders are governed by the general Part 22 procedures, it is not immediately clear when and how they are reviewable prior to enforcement. However, one court addressing the subject has determined that pre-enforcement judicial review of an order issued under Section 3013(a) is not precluded because, unlike Section 106 of CERCLA, Section 3013(a) is not designed to abate an “imminent” hazard.⁹ According to the court, based on the legislative history of RCRA, it is clear that Section 3013(a) was intended to be a “preventative tool” rather than a mechanism to respond to an “imminent and substantial endangerment.” This logic would seem to dovetail with the *Sackett* court’s refusal to shield another nonemergency compliance order from judicial review. Therefore, judicial review of Section 3013(a) orders should be allowed before the EPA initiates an action to enforce the order.

Section 7003 does not address whether a respondent may obtain judicial review of an order before the EPA chooses to enforce it and seek penalties against the respondent for noncompliance. The courts also have not addressed the issue. Section 7003 is designed to address potentially “imminent” hazards, and courts prior to *Sackett* were generally reluctant to provide pre-enforcement judicial review of other orders that are designed to remedy “imminent” risks, such as orders issued under Section 106 of CERCLA. Although *Sackett*’s rejection of the benefit of “quick remediation through voluntary compliance” complicates this analysis,¹⁰ the need to address an imminent hazard may be sufficient to overcome the APA’s presumption in favor of judicial review.¹¹

§ 9:114 Clean Water Act (“CWA”)

The following chart summarizes the reviewability of each order issued under the Clean Water Act. Following the chart, this reviewability is discussed.

<u>ORDER</u>		<u>REVIEW OPTION</u>		<u>JUDICIAL RE- VIEW</u>
Compliance order (§ 309) ¹	—	Opportunity to con- fer with EPA before order takes effect	—	Immediate judicial relief under APA

⁸40 C.F.R. § 24.01(b).

⁹*E.I. duPont de Nemours & Co. v. Daggett*, 610 F. Supp. 260, 261–62, 22 Env’t. Rep. Cas. (BNA) 2076, 15 Env’tl. L. Rep. 20745 (W.D. N.Y. 1985).

¹⁰*Sackett v. E.P.A.*, 566 U.S. 120, 132 S. Ct. 1367, 1374, 182 L. Ed. 2d 367, 73 Env’t. Rep. Cas. (BNA) 2121 (2012).

¹¹See Glaze Jr., *A Detailed Look at the Effects of Sackett v. EPA on Administrative Enforcement Orders*, 42 Env’tl. L. Rep. News & Analysis 11030, 11033 (2012).

[Section 9:114]

¹33 U.S.C. § 1319.

<u>ORDER</u>		<u>REVIEW OPTION</u>		<u>JUDICIAL RE- VIEW</u>
Class I penalty order (§ 309)	—	Informal public hearing may be requested within 30 days of receipt of the order	—	Petition for review must be filed within 30 days in the U.S. District Court for District of Columbia or the district where the alleged violation occurred
Class II penalty order (§ 309(g)) ²	—	Governed by Part 22	—	May file petition for review within 30 days in the U.S. Court of Appeals for the District of Columbia Circuit or for any other circuit in which person resides or transacts business
Class I penalty order (§ 311) ³	—	Informal public hearing may be requested within 30 days of its receipt	—	May file petition for review within 30 days in the U.S. District Court for District of Columbia or the district where the alleged violation occurred
Class II penalty order (§ 311)	—	Formal public hearing may be requested	—	May file petition for review within 30 days in the U.S. Court of Appeals for the District of Columbia Circuit or for any other circuit in which the person resides or transacts business
Cease and desist order (§ 404) ⁴	—	Statute is silent as to whether this order can be appealed	—	Statute is silent as to whether this order can be appealed

The CWA does not specifically address whether a respondent may obtain judicial review of a Section 309 compliance order before the EPA seeks to enforce the order. However, the *Sackett* case centered around a compliance order issued under Section 309 and held that the order was a final agency action subject to review.⁵

Class I penalty orders (may not exceed \$16,000 per violation; \$37,500 total penalty) must provide the respondent with an opportunity for an informal hearing with a “reasonable opportunity to be heard and to present evidence” within 30 days

²33 U.S.C. § 1319(g).

³33 U.S.C. § 1321(b)(6).

⁴33 U.S.C. § 1344.

⁵132 S. Ct. at 1369, 1374.

of the order's date of issuance.⁶ A Class II penalty order (may not exceed \$16,000 per violation; \$187,500 total penalty) must follow a formal APA hearing procedure.⁷ Before issuing a final (as opposed to a proposed order) administrative penalty order, the EPA must submit the order for public notice and comment.⁸ Any person that comments on the order will have the opportunity to be heard and present evidence at a hearing on the order.⁹ The order will become final 30 days after it is issued unless judicial review is sought.¹⁰ Once an order is final, the respondent may appeal the administrative penalty order in the U.S. district court (for Class I penalties) or in the U.S. court of appeals (for Class II penalties).¹¹

Although courts historically have found that cease and desist orders under Section 404 are not final agency actions,¹² *Sackett* suggests that these orders should be considered final decisions, since legal consequences may flow from the order.¹³

§ 9:115 Clean Air Act ("CAA")

The following chart summarizes the reviewability of each order issued under the CAA. Following the chart, this reviewability is discussed.

<u>ORDER</u>		<u>REVIEW OPTION</u>		<u>JUDICIAL REVIEW</u>
Civil penalty order (§§ 113(d), 205(c), 211(d), and 213(d)) ¹	—	Governed by Part 22	—	Likely reviewable under <i>Sackett</i>
Emergency compliance order (§ 303) ²	—	No explicit provisions for pre-enforcement review	—	Statute is silent as to the availability of judicial review

The EPA will assess an administrative penalty under Section 113 by an order "made after opportunity for a hearing on the record in accordance with Sections 554 and 556 of Title 5 of the United States Code."³ Before issuing an order pursuant to Section 113(d)(2)(A), the EPA must give the person to be fined written notice of the Agency's intention to issue such an order. The EPA also must provide the recipient of the order the opportunity to request a hearing on the order within 30 days of

⁶33 U.S.C. § 1319(g)(2)(A); Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,647 (Nov. 6, 2013).

⁷33 U.S.C. § 1319(g)(2)(B); 78 Fed. Reg. at 66,647.

⁸33 U.S.C. § 1319(g)(4)(A).

⁹33 U.S.C. § 1319(g)(4)(C).

¹⁰33 U.S.C. § 1319(g)(5).

¹¹33 U.S.C. § 1319(g)(8).

¹²*See, e.g.,* *Leslie Salt Co. v. U.S.*, 789 F. Supp. 1030, 35 Env't. Rep. Cas. (BNA) 1436, 22 Env'tl. L. Rep. 20359 (N.D. Cal. 1991); *Mulberry Hills Development Corp. v. U.S.*, 772 F. Supp. 1553, 22 Env'tl. L. Rep. 20254 (D. Md. 1991); *Route 26 Land Development Ass'n v. U.S. Government*, 753 F. Supp. 532, 21 Env'tl. L. Rep. 21199 (D. Del. 1990), judgment aff'd, 961 F.2d 1568 (3d Cir. 1992).

¹³*See Sackett*, 132 S. Ct. at 1371–72 (discussing effect of administrative order on petitioners).

[Section 9:115]

¹42 U.S.C. §§ 7413(d), 7524(c), 7545(d), and 7547(d).

²42 U.S.C. § 7603.

³42 U.S.C. § 7413(d)(2)(A).

receipt of notice.⁴ A recipient of a Section 113(d) penalty order may seek review of the order in a U.S. district court.⁵

Relief has been less clear for administrative compliance orders under Section 113(a).⁶ However, the provisions of Section 113(a) that authorize issuance of compliance orders are similar to those of Section 309 of the CWA, the statutory basis for the order held reviewable in *Sackett*. It is therefore likely that a Section 113(a)(3) order will be considered reviewable. The CAA is silent as to whether pre-enforcement judicial review is available for Section 303 orders. However, for the same reasons stated above with respect to emergency orders under the CWA, it is possible that pre-enforcement judicial review will not be available for Section 303 orders, as these are for the purpose of restraining persons whose activities are causing an “imminent and substantial endangerment” to public health.⁷

§ 9:116 Toxic Substance Control Act (“TSCA”)

The following chart summarizes the reviewability of each order issued under TSCA. Following the chart, this reviewability is discussed.

<u>ORDER</u>		<u>REVIEW OPTION</u>		<u>JUDICIAL RE- VIEW</u>
Regulation pending development of information (§ 5(e)) ¹	—	Within 30 days of receipt of proposed order, the respondent may file objections with EPA	—	Statute is silent as to availability of judicial review
§ 16(a) notice ²	—	May request a hearing within 15 days upon receipt of written notice	—	May file petition for review within 30 days from date of order with the U.S. Court of Appeals for the District of Columbia or any other circuit in the person resides or transacts business

Within 30 days of receipt of a Section 5(e) order, the respondent may file objections with the EPA to the contents of the order. The objections must specify “with particularity the provisions of the order deemed objectionable,” and the respondent must also state the grounds for each objection.³ The respondent’s objections should be detailed and thorough, addressing as many of the EPA’s determinations as possible.

The proposed order will not take effect if the respondent files objections. The filing of objections is therefore crucial. Once the EPA receives objections, the Agency must

⁴42 U.S.C. § 7413(d)(2)(A).

⁵42 U.S.C. § 7413(d)(4).

⁶See § 9:97.

⁷42 U.S.C. § 7603.

[Section 9:116]

¹15 U.S.C. § 1604(e).

²15 U.S.C. § 2615(a).

³15 U.S.C. § 2604(e)(1)(C).

apply to a U.S. district court for an injunction “to prohibit or limit the manufacture, processing, distribution in commerce, use, or disposal” of the new chemical substance. However, the EPA will not apply for an injunction if it determines that the objections have merit and the EPA’s original determinations cannot be supported.⁴ The court may dissolve the injunction if the defendant produces “test data sufficient to evaluate the health and environmental effects of the chemical substance.”⁵

A notice of violation and proposed penalty assessment pursuant to Section 16 (a) will provide the respondent with the opportunity to request a hearing within 15 days of the date notice is received.⁶ A hearing on the EPA’s finding of noncompliance is conducted in accordance with 40 C.F.R. Part 22.

The EPA will issue a final order assessing the proposed penalty amount to any person who receives a notice of violation and who fails to either request a hearing or otherwise respond to the notice. Within 30 days of the issuance of a final order, the respondent may appeal the order by filing a petition for judicial review with the U.S. court of appeals.

§ 9:117 Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)

The following chart summarizes the reviewability of each order issued under the FIFRA.¹ Following the chart, this reviewability is discussed.

<u>ORDER</u>		<u>REVIEW OPTION</u>		<u>JUDICIAL REVIEW</u>
Stop sale, use, or removal order (§ 13) ²	—	The statute is silent as to whether this can be challenged	—	The statute is silent as to whether this can be challenged; <i>Sackett</i> may imply reviewability
Suspension or cancellation order (§ 6) ³	—	May request a hearing upon notice of suspension	—	May request a public hearing in the U.S. court of appeals

Unless a stop sale order pursuant to Section 13 of FIFRA is based on an imminent threat to human health, it would seem likely that the APA presumption in favor of judicial review and the *Sackett* finality analysis would apply to permit judicial review of a stop sale order.

§ 9:118 Emergency Planning and Community Right-to-Know Act (“EPCRA”)

Assessments of civil penalties under Section 325 of EPCRA (42 U.S.C. § 11045)

⁴15 U.S.C. § 2604(e)(2)(A).

⁵15 U.S.C. § 2604(e)(2)(C).

⁶15 U.S.C. § 2615(a)(2)(A).

[Section 9:117]

¹Note that an assessment of any administrative civil penalty under Section 14(a) of FIFRA, 7 U.S.C. § 136l(a), is reviewable under the procedures of 40 C.F.R. Pt. 22. 40 C.F.R. § 22.1(a).

²7 U.S.C. § 136k.

³7 U.S.C. § 136d.

are explicitly governed by the procedures of 40 C.F.R. Part 22.¹

§ 9:119 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)

The following chart summarizes the reviewability of each order issued under CERCLA. Following the chart, this reviewability is discussed.

<u>ORDER</u>		<u>REVIEW OPTION</u>		<u>JUDICIAL RE-VIEW</u>
Imminent and substantial endangerments (§ 106(a)) ¹	—	Opportunity to discuss with EPA implementation of the required response actions and the extent the respondent intends to reply	—	Review of the adequacy of the response action is based on the administrative record
Order for compliance with information request (§ 104(e)(5)) ²	—	Order may be issued after notice and an opportunity for consultation as is reasonable appropriate under the circumstances	—	The statute is silent as to the availability of judicial review

CERCLA provides broad compliance compulsion authority without opportunity for pre-enforcement judicial review. For example, Section 104 permits the EPA to require certain information from facilities and facility owners. If that information is not provided, the EPA can issue a compliance order.³ Similarly, if the President (through the EPA) determines that there may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility, he may require the U.S. Attorney General to secure whatever relief is necessary to abate the danger or threat.⁴

The EPA does not provide a recipient of one of these orders with any kind of administrative hearing on the merits of the order, either before or after the order’s issuance. Moreover, CERCLA generally provides that the courts do not have jurisdiction to review a Section 106 order.⁵

CERCLA Section 113(j) provides that judicial review of “any issues concerning the adequacy of any response action” shall be based on the administrative record and that a reviewing court shall uphold the EPA’s decision in ordering a particular response action “unless the objecting party can demonstrate, on the administrative

[Section 9:118]

¹40 C.F.R. Pt. 22.1(a).

[Section 9:119]

¹42 U.S.C. § 9606(a).

²42 U.S.C. § 9604(e)(5).

³42 U.S.C. § 9604(e)(5).

⁴42 U.S.C. § 9606(a).

⁵See Glaze Jr., A Detailed Look at the Effects of *Sackett v. EPA* on Administrative Enforcement Orders, 42 Env’tl. L. Rep. News & Analysis 11030, 11032–33 (2012).

record, that the decision was arbitrary and capricious or otherwise not in accordance with the law.”⁶

Any person who receives and complies with a Section 106 order may, within 60 days “after completion of the required action,” petition for reimbursement of the reasonable costs of such action, plus interest. If the petition is refused in whole or in part, the respondent may file an action against the government in the appropriate U.S. district court.⁷

However, civil penalty assessments under Section 109 of CERCLA (42 U.S.C. 9609) are explicitly governed by the Part 22 procedures.⁸

§ 9:120 Safe Drinking Water Act (“SDWA”)

The following chart summarizes the reviewability of each order issued under the SDWA. Following the chart, this reviewability is discussed.

<u>ORDER</u>		<u>REVIEW OPTION</u>		<u>JUDICIAL REVIEW</u>
General compliance order (§ 300g-3)	—	May request a public hearing when EPA gives notice of the order	—	The statute is silent with regards to any judicial review prior to it becoming final; once final, its appropriateness and validity is not subject to review
Underground injection compliance orders (§ 300h-2)	—	May request a hearing within 30 days upon receipt of the notice	—	Within 30 days of the date of the order, an appeal may be filed in the appropriate U.S. district court
Orders regarding imminent and substantial endangerments to health (§ 1431) ¹	—	The statute is silent as to whether it provides an opportunity to have the order reviewed before EPA seeks to enforce it	—	The statute is silent as to whether it provides an opportunity to have the order received before EPA seeks to enforce it

Section 300g-3 is silent as to whether a respondent may obtain judicial review of an order prior to the order becoming final. Once the order is final, its “appropriateness and validity” are not subject to review.² On the other hand, the EPA may not issue a Section 300h-2 order without first providing the respondent with the opportunity for a hearing. The statute requires that the EPA give the respondent 30 days of notice of its proposal to issue an order. Within 30 days of receipt of the notice, the respondent may request a hearing. The hearing will not be governed by the APA, but it will provide the respondent with “a reasonable opportunity to be heard

⁶42 U.S.C. § 9613(j).

⁷42 U.S.C. § 9606(b).

⁸40 C.F.R. § 22.1(a).

[Section 9:120]

¹42 U.S.C. § 300i.

²42 U.S.C. § 300g-3(g)(3)(D).

and to present evidence.”³ In addition, the EPA must provide the public with notice and an opportunity to comment upon the proposed order.⁴ Any person who comments on the proposed order must be given notice of the hearing. At the hearing, that person will be given the opportunity to present evidence and be heard.⁵

Within 30 days of the date that a Section 300h-2 order is issued, a respondent may file an appeal of the order in the appropriate U.S. district court. The appellant must simultaneously send a copy of the appeal to the Administrator of the EPA and the Attorney General. The U.S. district court will uphold the order if there is substantial evidence on the record supporting the order. The court will not uphold the order if its penalty assessment or requirements of compliance constitute an abuse of discretion on the part of the EPA.⁶

Section 300i is silent as to whether it provides respondents with the opportunity to have a Section 300i order judicially reviewed before the EPA seeks its enforcement. Moreover, no courts have addressed the subject. However, because Section 300i is designed to abate an “imminent and substantial endangerment,” it is analogous to Section 106 of CERCLA (see discussion § 9:131), Section 303 of the CAA (see discussion § 9:115), and Section 7003 of RCRA (see discussion § 9:113). Pre-enforcement judicial review has been denied for orders issued under each of those sections on the ground, among other things, that such review would delay the abatement of the “imminent” risk. It is, therefore, likely that a court would also deny pre-enforcement review of Section 300i orders. Consequently, a respondent should not expect to obtain judicial review of a Section 300i order until the EPA seeks to enforce the order.

VI. CIVIL MONETARY PENALTIES

§ 9:121 Executive Summary

Every major environmental statute provides for the imposition of civil monetary penalties for violations of the statute’s provisions. Unlike criminal penalties, the imposition of civil monetary penalties is not dependent on the violator’s state of mind or culpability (e.g., negligent or knowing violations)—the violation itself is a sufficient cause for the assessment. State of mind, however, may be extremely important in determining the amount of penalty assessed. When the various environmental statutes were originally passed, maximum civil penalty amounts were set, ranging anywhere from \$5,000 to \$25,000 per violation.¹

In 1996, however, Congress passed the Debt Collection Improvement Act.² This new law directed each federal agency to adjust the maximum civil monetary penalties that can be imposed under its statutes for inflation. Therefore, the EPA issued new regulations at 40 C.F.R. Parts 19 and 27 that increased almost all the EPA’s penalty provisions by 10%.³ The most recent adjustment was made in 2013.⁴

§ 9:122 Purpose of Civil Monetary Penalties

³42 U.S.C. § 300h-2(c)(3)(A).

⁴42 U.S.C. § 300h-2(c)(3)(B).

⁵42 U.S.C. § 300h-2(c)(3)(C).

⁶42 U.S.C. § 300h-2(c)(6).

[Section 9:121]

¹See Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,647 to 66,648 (Nov. 6, 2013).

²Debt Collections Improvement Act of 1996, Pub. L. No. 104-134, 110 Stat. 1321 to 1358 (1996) (codified as amended at 31 U.S.C. § 3701 note).

³Civil Monetary Penalty Inflation Adjustment Rule, 61 Fed. Reg. 69,360 (Dec. 31, 1996).

⁴Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643 (Nov. 6, 2013).

The EPA has always used civil penalties to encourage compliance. The importance cannot be underscored. In Fiscal Year 2015, for example, via both federal administrative and civil judicial penalties, the EPA assessed nearly \$205 million in penalties.¹

§ 9:123 Administrative versus Civil Judicial Monetary Penalties

The EPA typically has two enforcement options in seeking civil monetary penalties, although these are dependent on the specific environmental statute. The first option is to issue an administrative order levying civil penalties against the violator, who typically is entitled to a formal hearing before a hearing officer and an appeal to the Administrator (although the Administrator has delegated his responsibilities in this regard to the Environmental Appeals Board, as discussed at §§ 9:107 to 9:111). The alleged violator may appeal the decision of the Administrator to a federal court, which grants substantial deference to the Agency's decision.¹ If the violator chooses not to appeal through the administrative process and also refuses to pay the administratively assessed penalty, the EPA may enforce, via the Attorney General, the order in federal district court.²

The EPA's second option is to request that the U.S. Attorney General file a civil action in federal district court seeking civil monetary penalties. These penalty amounts are typically higher than administrative penalties. This process is more complicated because it necessitates a civil trial and requires the involvement of the U.S. Department of Justice ("DOJ").³

The EPA brings many more administrative penalty cases than civil ones. Approximately 92% of all the civil penalty cases in 2015 were administrative enforcement actions.⁴

There are several reasons why the EPA brings more administrative penalty cases than civil judicial ones. First, administrative penalty cases are less expensive and less burdensome to prepare and litigate. Second, they are litigated by Agency counsel, not by the DOJ, thus giving the EPA's lawyers greater opportunity to get to court. Third, the judge in administrative hearings is a hearing officer, appointed by the Administrator and employed by the EPA, who may have a tendency to afford

[Section 9:122]

¹EPA, Fiscal Year 2015 EPA Enforcement & Compliance Annual Results (Dec. 16, 2015).

[Section 9:123]

¹*See, e.g.,* Vidiksis v. E.P.A., 612 F.3d 1150, 1154, 71 Env't. Rep. Cas. (BNA) 1243 (11th Cir. 2010) ("In reviewing an agency action, the court must set aside any findings or conclusions if they are 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.'" (citing 5 U.S.C. § 706(2)(A) and *Legal Environmental Assistance Foundation, Inc. v. U.S. E.P.A.*, 118 F.3d 1467, 1473, 45 Env't. Rep. Cas. (BNA) 1033, 27 Env'tl. L. Rep. 21385, 139 O.G.R. 175 (11th Cir. 1997))); *In re Lyon County Landfill*, Lynd, Mn., 406 F.3d 981, 985, 60 Env't. Rep. Cas. (BNA) 1417, 35 Env'tl. L. Rep. 20094 (8th Cir. 2005) ("We will not set aside the administrative penalty assessment unless 'there is not substantial evidence in the record, taken as a whole, to support the finding of a violation,' or the assessment constitutes an abuse of discretion." (citing 42 U.S.C. § 7413(d)(4))); *cf.* *General Motors Corp. v. E.P.A.*, 168 F.3d 1377, 1380, 48 Env't. Rep. Cas. (BNA) 1257, 29 Env'tl. L. Rep. 21021 (D.C. Cir. 1999) ("We review the EPA's finding of violations of a permit issued under the Clean Water Act for lack of 'substantial evidence in the record, taken as a whole,' and the assessment of an administrative penalty for 'abuse of discretion,' 33 U.S.C. § 1319(g)(8), as we would under the Administrative Procedure Act, 5 U.S.C. § 706(2)(A), (E).").

²*See, e.g.,* 33 U.S.C. § 1319(g)(9); 42 U.S.C. § 7413(d)(5).

³*See* § 9:145.

⁴EPA, *Enforcement Annual Results Numbers at a Glance for Fiscal Year (FY) 2015*, <http://www.epa.gov/enforcement/enforcement-annual-results-numbers-glance-fiscal-year-fy-2015> (stating that 108 Civil Judicial Complaints were filed and 1,400 Administrative Penalty Complaints were filed).

greater deference to the position taken by the Agency than would a federal judge. This factor is especially important where the Agency wants to argue a new or unusual position. Fourth, in an administrative case, the hearing officer not only sets the penalty, but also determines liability. The usual fact finder in a civil judicial proceeding—a jury—may not be as quick to accept the EPA’s view. Finally, the EPA’s burden of proving a violation sometimes is easier to meet in an administrative case rather than a civil judicial penalty case. For these reasons, the Agency’s chance of a favorable outcome is greatly increased in administrative proceedings as opposed to civil judicial proceedings.

§ 9:124 Calculating Civil Penalties

Each environmental statute typically contains specific criteria for civil penalty assessments. For example, Section 103(e) of the Clean Air Act (“CAA”)¹ requires the EPA or a court to consider the following:

the size of the business, the economic impact of the penalty on the business, the violator’s full compliance history and good faith efforts to comply, the duration of the violation as established by credible evidence. . . , payment by the violator of penalties previously assessed for the same violation, the economic benefit of noncompliance, and the seriousness of the violation.²

However, not all statutes contain the same criteria. Sections 3008(a)(3) and 3008(g) of the Resource Conservation and Recovery Act (“RCRA”), for example, do not require the EPA to consider the economic benefits of noncompliance.³

To ensure the consistent implementation of civil penalties, the EPA issued a general policy on assessing civil penalties.⁴ As statutory penalty assessment criteria vary, some question exists as to whether the EPA has the authority to establish a general penalty policy. Nonetheless, the General Policy provides guidance on administratively imposed penalties and settlements of civil penalty actions. Although this General Policy is not a binding, legally enforceable regulation, it is followed in almost every case. The EPA has also issued statute-specific penalty policies.⁵ These policies are based on the General Policy and are available from the EPA via its Web site. Additionally, the EPA usually encloses any applicable penalty policies with the administrative complaint assessing the penalties.

When assessing a penalty, one of two approaches can be taken: a top-down or bottom-up approach. The first, as its name infers, starts with the maximum penalty and adjusts the penalty downward based on the statutory factors.⁶ The latter assesses the penalty based on the economic benefit and then adjusts the penalty based

[Section 9:124]

¹Clean Air Act, 42 U.S.C. §§ 7401 to 7671q; 42 U.S.C. § 7413(e). While *Tennessee Valley Authority v. Whitman*, 336 F.3d 1236, 56 Env’t. Rep. Cas. (BNA) 1737, 33 Env’tl. L. Rep. 20231 (11th Cir. 2003) found that 42 U.S.C. § 7413 is unconstitutional, that decision addressed administrative compliance orders.

²*Id.*

³Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901 to 6992k; 42 U.S.C. §§ 6928(a)(3), 6928(g).

⁴EPA, Policy on Civil Penalties: EPA General Enforcement Policy #GM-21, <https://www.epa.gov/sites/production/files/documents/epapolicy-civilpenalties021684.pdf> [hereinafter General Policy].

⁵See *infra*, § 9:137 and § 9:151.

⁶See *U.S. v. Smithfield Foods, Inc.*, 191 F.3d 516, 528, n.7, 49 Env’t. Rep. Cas. (BNA) 1193, 30 Env’tl. L. Rep. 20076 (4th Cir. 1999).

on the remaining statutory factors.⁷

In calculating the penalty amount under the General Policy, the EPA seeks to remove any significant economic benefit resulting from noncompliance (Economic Benefit Component).⁸ In addition, the penalty should include an amount to reflect the seriousness of the violation (Gravity Component). These components produce the “preliminary deterrence amount.”⁹ The EPA then adjusts the preliminary deterrence amount upward or downward based on the following mitigating factors:

- The violator’s willfulness or negligence;
- The violator’s cooperation with the EPA;
- The violator’s history of noncompliance;
- The strength of the EPA’s case (e.g., any evidentiary problems); and
- The violator’s ability to pay.¹⁰

These factors combined generate the initial penalty target figure.¹¹ This amount represents the penalty the EPA would assess administratively or would consider as a primary settlement target.¹²

As mentioned, the EPA may adjust a civil penalty when its assessment may result in “extreme financial hardship.”¹³ The violator who raises the issue of ability to pay, however, has the burden of providing to the EPA financial information that demonstrates this hardship (e.g., tax returns, balance sheets, income statements, statements of operations, and annual reports).¹⁴ The EPA issued guidance to supplement the 1986 guidance on *Determining a Violator’s Ability to Pay a Civil Penalty Policy*.¹⁵ This guidance lists the factors to be considered when evaluating an ability to pay claim.

The EPA has several computer models, ABEL, INDIPAY, and MUNIPAY, that assist in evaluating the financial health of violators. The model to be used depends on the type of defendant.¹⁶ ABEL is employed when the defendant is an S-Corporation, C-Corporation, or multi-member LLC or partnership.¹⁷ INDIPAY is employed when the defendant is an individual, sole proprietorship, or a one-member LLC or partnership.¹⁸ MUNIPAY is employed when the defendant is a nonfederal government entity.¹⁹ Based on the results of the computer model employed, the EPA will consider several options, including a delayed payment schedule, supplemental

⁷U.S. v. Smithfield Foods, Inc., 191 F.3d 516, 528, 49 Env’t. Rep. Cas. (BNA) 1193, 30 Env’tl. L. Rep. 20076 (4th Cir. 1999).

⁸Policy on Civil Penalties at 3–4 (Feb. 16, 1984).

⁹Policy on Civil Penalties at 4 (Feb. 16, 1984).

¹⁰Policy on Civil Penalties at 5, 8 (Feb. 16, 1984).

¹¹Policy on Civil Penalties at 5 (Feb. 16, 1984).

¹²Policy on Civil Penalties at 5 (Feb. 16, 1984).

¹³Policy on Civil Penalties at 12 (Feb. 16, 1984).

¹⁴Memorandum from Thomas L. Adams, Jr., Guidance on Determining a Violator’s Ability to Pay (Dec. 16, 1986), *amended by* Memorandum from Susan Shinkman, Guidance on Evaluating a Violator’s Ability to Pay a Civil Penalty in an Administrative Enforcement Action (June 29, 2015); *see also* EPA, General Policy on Superfund Ability to Pay, <https://www.epa.gov/sites/production/files/2013-09/documents/genpol-atp-rpt.pdf>.

¹⁵Memorandum from Susan Shinkman, Guidance on Evaluating a Violator’s Ability to Pay a Civil Penalty in an Administrative Enforcement Action (June 29, 2015), <http://www2.epa.gov/sites/production/files/2015-06/documents/atp-penalty-evaluate-2015.pdf>.

¹⁶*Id.* at 6.

¹⁷*Id.*

¹⁸*Id.*

¹⁹*Id.*

environmental projects, or, as a last recourse, straight penalty reductions. The EPA will not adjust a penalty in cases of severe violations or when confronted with corporate indifference to repeated violations.²⁰

§ 9:125 Economic Benefit Component

The EPA has a strict policy of always seeking to recover the economic benefit of noncompliance.¹ The Economic Benefit Component of the General Policy is based on the time value of money and seeks to prevent a violator of an environmental statute from deriving an economic benefit from noncompliance.² A facility that fails to install air pollution control equipment, for example, eventually will be required to install the equipment to come into compliance. By deferring these costs until an enforcement action is commenced, an economic gain may be derived from the delayed expenditures.³ A violator may also derive an economic benefit by permanently avoiding costs (e.g., failing to operate existing pollution control equipment) or by gaining an unfair competitive advantage (e.g., selling banned products).⁴

The EPA calculates the benefit from delayed and avoided costs using a computer program known as the BEN model.⁵ The inputs necessary to run a calculation using the BEN model include: descriptive information (e.g., case name, analyst name), type of entity, state, penalty payment date, capital investment, one-time nondepreciable expenditures, annually recurring costs, date of noncompliance, date of compliance, and the competitive advantage questionnaire.⁶ Additional inputs include, among others, inflation rates, tax rates, and discount rates.⁷

However, outside the EPA, the BEN model is frequently criticized as inaccurately assessing the “benefit” conferred upon a company that delays compliance. For example, BEN does not consider any expenditures associated with good-faith efforts at pollution reduction that ultimately fail to achieve compliance as a mitigating factor.⁸ In utilizing the BEN model, the EPA also ignores any economic costs incurred by the company as a result of the noncompliance (e.g., shortened useful life of process equipment damaged by insufficiently controlled acid fumes).⁹

§ 9:126 Gravity Component

²⁰A Framework for Statute—Specific Approaches to Penalty Assessments: Implementing EPA’s Policy on Civil Penalties, <http://www.epa.gov/sites/production/files/documents/penasm-civpen-mem.pdf>; *see also* Calculation of the Economic Benefit of Noncompliance in EPA’s Civil Penalty Enforcement Cases, 70 Fed. Reg. 50,327 (Aug. 26, 2005).

[Section 9:125]

¹*See* A Framework for Statute-Specific Approaches to Penalty Assessments: Implementing EPA’s Policy on Civil Penalties, App., at 6.

²*Cf.* A Framework for Statute-Specific Approaches to Penalty Assessments: Implementing EPA’s Policy on Civil Penalties, App., at 6–7.

³A Framework for Statute-Specific Approaches to Penalty Assessments: Implementing EPA’s Policy on Civil Penalties, App., at 7.

⁴A Framework for Statute-Specific Approaches to Penalty Assessments: Implementing EPA’s Policy on Civil Penalties, App., at 9–10.

⁵Memorandum from Courtney M. Price, Guidance for Calculating Economic Benefit of Noncompliance for a Civil Penalty Assessment (Nov. 5, 1984), <http://www2.epa.gov/sites/production/files/2013-10/documents/ecobenoncom-mem.pdf>.

⁶Calculation of the Economic Benefit of Noncompliance in EPA’s Civil Penalty Enforcement Cases, 70 Fed. Reg. 50326, 50328 (Aug. 26, 2005).

⁷Calculation of the Economic Benefit of Noncompliance in EPA’s Civil Penalty Enforcement Cases, 70 Fed. Reg. 50326, 50328 (Aug. 26, 2005).

⁸*See* Singh, EPA’s Narrow Definition of Economic Benefit Vastly Increases Its Economic Benefit Estimate, 23 *Env’tl. L. Rep.* 10,121 (1993).

⁹*See* Singh, EPA’s Narrow Definition of Economic Benefit Vastly Increases Its Economic Benefit

The General Policy also seeks to differentiate between violators based on the seriousness of the violation. The EPA typically considers several factors in the Gravity Component, one of which is the actual or possible harm to health or the environment.¹ The EPA calculates this factor based on the amount of the pollutant, its toxicity, the sensitivity of the environment, and duration of the violation.²

A second factor in the Gravity Component considers the violated provision's importance to the regulatory scheme. This addresses how the violation prevents the goal of the statute or regulation from being achieved.³ For example, "if labeling is the only method to prevent dangerous exposure to a chemical, then failure to label could result in a relatively high penalty. By contrast, a warning sign that was visibly posted, but was smaller than the required size, would not normally be considered as serious."⁴

In calculating the Gravity Component, the EPA also considers whether the information is available from another source.⁵ Although the violation of any monitoring, record-keeping, or reporting requirement is typically serious, it is even more serious if the involved entity is the only source of information.⁶

A final factor considered by the EPA is the size of the violator. In some cases, the EPA will increase the gravity component based on the size of the violator (e.g., when it is clear that the penalty will otherwise have minimal or no impact on the violator compared to risk of harm posed).⁷ Shareholder equity is considered in determining a violator's size.⁸ This value includes "capital stock, capital surplus, and accumulated retained earnings."⁹ It "corresponds to the entry for 'worth' in the Dun and Bradstreet reports for publicly traded companies."¹⁰ Alternatively, it can be determined based on the company's net assets, e.g., current assets minus current liabilities.¹¹

As noted in § 9:140, the EPA issued an audit policy. If an entity meets the criteria set forth in the policy, it can mitigate up to 100% of the Gravity Component.¹²

§ 9:127 Audit Policy

In 1995, the EPA issued its first audit policy.¹ This policy was revised and replaced

Estimate, 23 Env'tl. L. Rep. 10,121 (1993).

[Section 9:126]

¹EPA, Framework for Statute -Specific Approaches to Penalty Assessments: Implementing EPA's Policy on Civil Penalties, <http://www.epa.gov/sites/production/files/documents/penasm-civpen-mem.pdf>.

²*Id.* at 14.

³*Id.*

⁴*Id.*

⁵*Id.*

⁶*Id.*

⁷EPA, Policy on Civil Penalties, at 15 (Feb. 16, 1984).

⁸EPA, Clean Air Act, Stationary Source Civil Penalty Policy, at 10 (Oct. 25, 1991).

⁹EPA, Clean Air Act, Stationary Source Civil Penalty Policy, at 10 (Oct. 25, 1991).

¹⁰EPA, Clean Air Act, Stationary Source Civil Penalty Policy, at 10 (Oct. 25, 1991).

¹¹EPA, Clean Air Act, Stationary Source Civil Penalty Policy, at 10 (Oct. 25, 1991).

¹²Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618 (Apr. 11, 2000).

[Section 9:127]

¹See Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618 (Apr. 11, 2000) [hereinafter Audit Policy].

in 2000.² If an entity can establish all nine of the policy's factors, then the entity's Gravity Component may be waived; however, if the entity cannot establish the first factor but can establish the remaining factors (factors two through nine), then the Gravity Component instead may be reduced by 75%.³ The EPA also may refrain from recommending criminal prosecution if factors two through nine are established. Refer to § 9:246, Opportunity for Self-disclosure, for more information.

The EPA is willing to waive or reduce the gravity based component because it recognizes that prevention, detection, and correction of violations are imperative to protecting human health and the environment.⁴ This policy applies to the settlement of administrative and judicial civil penalties.⁵ The EPA has tailored the Audit Policy factors for new owners.⁶

The nine Audit Policy factors are: (1) systemic discovery; (2) voluntary disclosure; (3) prompt disclosure; (4) independent discovery and disclosure; (5) correction and remediation; (6) prevention of reoccurrence; (7) not a repeat violation; (8) not an excluded violation; and (9) cooperation.⁷ These factors, and the new owner adjustments, are elaborated below.

"Systemic discovery" is "[1] the detection of a potential violation through an [a] environmental audit or [b] a compliance management system that [2] reflects the entity's due diligence in preventing, detecting and correcting violations."⁸ A compliance management system refers to "a systematic management plan or systemic efforts to achieve and maintain compliance."⁹ The compliance management system must illustrate the "entity's due diligence in preventing, detecting and correcting violations."¹⁰ If the violation is found via a compliance management system, as opposed to an audit, the entity likely will have to demonstrate how the program reflects due diligence.¹¹ The standard is altered slightly for new owners.¹² A new owner will not have to show that there has been periodic review.¹³

"Voluntary disclosure" requires that the discovery be found absent a statutory, regulatory, permit-based, court-ordered, administrative-ordered, or consent agreement requirement that prescribed the monitoring, sampling, or, auditing.¹⁴ Thus, if the discovery is made due to monitoring required under a permit, this factor cannot

²See 65 Fed. Reg. 19,618.

³65 Fed. Reg. at 19,625. However, the policy also states that it does not create any enforceable rights. 65 Fed. Reg. at 19,627.

⁴65 Fed. Reg. at 19,619–20.

⁵65 Fed. Reg. at 19,626.

⁶Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,991 (Aug. 1, 2008). To be a new owner, three requirements must be met. First, a new owner cannot have been responsible for the entity's compliance prior to the transaction, cannot have caused the violation, and must have been unable to prevent the violation. 73 Fed. Reg. at 44,995. Second, the violation must have originated with the prior owner. Third, neither the buyer nor the seller could have owned the largest share of the prior entity, and the prior and current entity cannot have a common corporate parent. 73 Fed. Reg. at 44,995.

⁷Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,621 to 19,623 (Apr. 11, 2000).

⁸65 Fed. Reg. at 19,620.

⁹65 Fed. Reg. at 19,621.

¹⁰65 Fed. Reg. at 19,621.

¹¹65 Fed. Reg. at 19,621.

¹²Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,991, 45,000 (Aug. 1, 2008).

¹³Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,991, 45,000 (Aug. 1, 2008).

¹⁴Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65

be established.¹⁵ There is one exception. If the discovery is found due to an environmental management system that was implemented pursuant to a settlement agreement, discovery will be considered voluntary.¹⁶ This standard is altered for new owners.¹⁷ If the new owner discovers the violation prior to the next mandatory monitoring, sampling, or auditing, this factor can be established.¹⁸

“Prompt disclosure” requires that written disclosure be provided to the EPA within 21 days of discovery.¹⁹ However, if an applicable statute would require reporting sooner, the shorter time period applies.²⁰ Discovery is based on a reasonable, objective standard and occurs when a prudent person, in the shoes of an employee, officer, or director, would have believed that a violation may have, or has, occurred.²¹ Disclosure should be provided to the appropriate Regional Office, and if more than one Region is involved, then it should be provided to EPA headquarters.²² In exceptional circumstances, the EPA *may* accept a late disclosure. If an entity learns of, or suspects, a violation but does not believe it can meet the deadline, it should contact the EPA to determine whether a later disclosure is permissible.²³ The EPA often will extend the deadline for multi-facility entities. This standard is altered for new owners.²⁴ A new owner is provided a 45-day period, beginning from the date of the transaction, in which to report a violation discovered before closing.²⁵ For violations discovered after closing, the new owner has either 21 days from the date of discovery or 45 days after the date of closing, whichever is longer.²⁶

“Independent discovery and disclosure” requires that the violation be “discovered and identified before the EPA or another government agency would have identified the problem either through its own investigative work or from information received from a third party.”²⁷ Discovery and disclosure is not independent when the entity knows litigation is imminent, e.g., a third party provides notice of a citizen suit, files a complaint, or reports the violation to the government.²⁸ If the entity is a multi-facility complex and one facility is subject to an investigation, it is not automatically

Fed. Reg. 19,618, 19,621 (Apr. 11, 2000).

¹⁵Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,621 (Apr. 11, 2000).

¹⁶Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,621 (Apr. 11, 2000).

¹⁷Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,991, 45,000 (Aug. 1, 2008).

¹⁸Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,991, 45,000 (Aug. 1, 2008).

¹⁹Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,621 (Apr. 11, 2000).

²⁰Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,621 (Apr. 11, 2000).

²¹Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,621 (Apr. 11, 2000).

²²Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,621 (Apr. 11, 2000).

²³65 Fed. Reg. at 19,621–22.

²⁴Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,991, 45,001 (Aug. 1, 2008).

²⁵Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,991, 45,001 (Aug. 1, 2008).

²⁶Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,991, 45,001 (Aug. 1, 2008).

²⁷Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,622 (Apr. 11, 2000).

²⁸Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65

precluded from establishing this factor as to facilities not under investigation.²⁹

“Correction and remediation” requires that the entity take action to remedy the harm caused by the violation.³⁰ The entity must certify to the proper authority that it has remediated the violation as soon as possible and no later than 60 days after discovery.³¹ If remediation is not possible within 60 days, then the entity must notify the EPA prior to the deadline.³² The process for obtaining an extension has been altered in light of the recent eDisclosure policy, discussed below.

“Prevention of reoccurrence,” as the name implies, requires that steps be taken to prevent future violations.³³

“Not a repeat violation” requires that the violation not be the same as, or closely related to, a violation that occurred at the same facility within the last three years.³⁴ If the entity is a multi-facility entity, then the violation cannot be the same or related to a violation that was part of a pattern of violations that occurred at any of the facilities in the past five years.³⁵ For new owners, repeat violations that occurred prior to closing are not considered a repeat violation as to the new owner.³⁶

“Not an excluded violation” requires that the violation not be one that would result in “serious actual harm to the environment or which may have presented an imminent and substantial endangerment to public health or the environment.”³⁷ Also excluded are “violations of the specific terms of any order, consent agreement, or plea agreement.”³⁸ New owners, however, are able to report such violations and still establish this factor so long as the violation did not cause a fatality, community evacuation, or “other seriously injurious or catastrophic event.”³⁹

“Cooperation” requires that the entity cooperate with the EPA, providing it with necessary information regarding the violation.⁴⁰ The entity must not tamper with, hide, or destroy any relevant evidence.

There also is a similar policy for small businesses.⁴¹ However, this policy differs in several respects. The most noteworthy differences include: the violation must be discovered during a “government sponsored on-site compliance assistance program”; the Gravity Component can be reduced by up to a 100% for a violation discovered either through a regular audit or through a “government sponsored on-site compli-

Fed. Reg. 19,618, 19,622 (Apr. 11, 2000).

²⁹Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,622 (Apr. 11, 2000).

³⁰Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,622 (Apr. 11, 2000).

³¹Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,622 (Apr. 11, 2000).

³²Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,622 (Apr. 11, 2000).

³³Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,622 (Apr. 11, 2000).

³⁴Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,622 (Apr. 11, 2000).

³⁵65 Fed. Reg. at 19,622–23.

³⁶Interim Approach to Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,991, 45,003 (Aug. 1, 2008).

³⁷65 Fed. Reg. at 19,623.

³⁸65 Fed. Reg. at 19,623.

³⁹73 Fed. Reg. at 45,003.

⁴⁰Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,618, 19,623 (Apr. 11, 2000).

⁴¹Small Business Compliance Policy, 65 Fed. Reg. 19,630 (Apr. 11, 2000).

ance assistance program”; the entity is provided 180 days to remediate the harm and up to 360 days if remediation involves pollution prevention modifications; and the policy does not apply to criminal violations.⁴²

On December 9, 2015, the EPA issued its eDisclosure Portal Policy (“eDisclosure Policy”) to streamline disclosures.⁴³ Under this policy, most violations should be reported through the portal. However, the EPA will continue to receive and process new owner self-disclosures and potential criminal disclosures that are disclosed to the Voluntary Disclosure Board.⁴⁴ The eDisclosure Policy establishes two categories of disclosures: Category 1 includes Emergency Planning and Community Right-to-Know Act (“EPCRA”) violations, except for Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”) Section 103/EPCRA Section 304 violations, that meet all of the Audit Policy factors or all of the Small Business Compliance factors, so long as there is no significant economic benefit derived from the violation;⁴⁵ Category 2 includes all non-Category 1 violations.⁴⁶ The reason for the distinction of these two categories is, in part, due to the ease in complying with EPCRA guidance.⁴⁷

To submit an eDisclosure, one will need to register on the EPA’s Centralized Data Exchange.⁴⁸ The submission must be made within 21 days of discovery.⁴⁹ If the 21 day is a holiday or weekend, then the report may be submitted on the following business day.⁵⁰ When submitting documents, entities should be cognizant that the portal is not designed to receive confidential business information, so all documents should be appropriately sanitized prior to uploading.⁵¹ Follow up confidential documents are to be submitted manually pursuant to EPA procedures and 40 C.F.R. Part 2.⁵² Within 60 days of the discovery (90 days for a Small Business Compliance disclosure), the entity must correct the violation.⁵³ Under the eDisclosure policy, extensions to correct the violations and submit the compliance certificate are treated differently depending on whether the violation is a Category 1 or 2 disclosure and on whether the entity is disclosing under the Audit Policy or the Small Business Compliance Policy.

For Category 1 disclosures, the violation must be corrected within 60 days of discovery, and the compliance certificate must be filed within 81 days (111 days for Small Business Compliance disclosures) of discovery.⁵⁴ Extensions of time generally

⁴²65 Fed. Reg. 19,630.

⁴³Notice of eDisclosure Portal Launch: Modernizing Implementation of EPA’s Self-Policing Incentive Policies, 80 Fed. Reg. 76,476 (Dec. 9, 2015).

⁴⁴80 Fed. Reg. at 76,477.

⁴⁵80 Fed. Reg. at 76,477.

⁴⁶*See* 80 Fed. Reg. at 76,477. The policy specifically states that “Category 2 disclosures include: (1) All non-EPCRA violations; (2) EPCRA violations where the discloser can only certify compliance with Audit Policy Conditions 2–9 (i.e., discovery was not systematic); and (3) EPCRA/CERCLA violations excluded from Category 1 above,” which in essence is all non-Category 1 violations.

⁴⁷80 Fed. Reg. at 76,477.

⁴⁸80 Fed. Reg. at 76,477.

⁴⁹Notice of eDisclosure Portal Launch: Modernizing Implementation of EPA’s Self-Policing Incentive Policies, 80 Fed. Reg. 76,477 (Dec. 9, 2015).

⁵⁰80 Fed. Reg. 76,477.

⁵¹80 Fed. Reg. 76,477.

⁵²80 Fed. Reg. 76,477.

⁵³80 Fed. Reg. at 76,477–78.

⁵⁴80 Fed. Reg. at 76,477–78.

are disfavored for Category 1 violations and can prevent Category 1 treatment.⁵⁵ For Category 2 disclosures submitted under the Audit Policy, a 30-day extension to correct the violation will be permitted automatically if an online request is submitted prior to the deadline.⁵⁶ This extension will extend not only the period in which the entity has to correct the violation, but it also will extend the period in which the entity must file the compliance certificate. The extension will provide the entity 30 days to correct the violation and an additional 30 days to file its compliance certificate.⁵⁷ If a 30-day extension is insufficient and the correction date will not extend past 180 days from the discovery date, a further extension may be requested, but an explanation will be necessary.⁵⁸ The EPA then will approve or deny the extension and may determine that the further extension is not prompt disclosure.⁵⁹ For Category 2 disclosures submitted under the Small Business Compliance Policy, an additional 90 days will be permitted automatically if the request is made online.⁶⁰ Similar to Category 2 Audit Policy disclosures, the entity will be provided 90 days to correct the violation and an additional 90 days to file a compliance certificate.⁶¹ If the 90-day extension is insufficient and the correction date will not extend past 360 days of discovery, a request can be made for a longer period of time, but a reason for the extension will be needed, and the EPA may deny the request.⁶²

Disclosure violations submitted via the eDisclosure Portal will be deemed withdrawn if the entity fails to timely submit its compliance certificate, withdraws the disclosure prior to submitting a compliance certificate, or submits a compliance certificate that fails to meet the conditions of the Audit Policy or Small Business Compliance Policy.⁶³ Upon withdrawal, an automatic notification will be sent to the entity, and the EPA will retain the records.⁶⁴ The EPA has created an eDisclosure tutorial which can assist with navigating the eDisclosure portal.⁶⁵

§ 9:128 General Procedure for Assessing Administrative Penalties

The EPA has issued rules of practice governing the administrative assessment of

⁵⁵Notice of eDisclosure Portal Launch: Modernizing Implementation of EPA's Self-Policing Incentive Policies, 80 Fed. Reg. 76,478 (Dec. 9, 2015).

⁵⁶Notice of eDisclosure Portal Launch: Modernizing Implementation of EPA's Self-Policing Incentive Policies, 80 Fed. Reg. 76,478 (Dec. 9, 2015).

⁵⁷Notice of eDisclosure Portal Launch: Modernizing Implementation of EPA's Self-Policing Incentive Policies, 80 Fed. Reg. 76,478 (Dec. 9, 2015).

⁵⁸Notice of eDisclosure Portal Launch: Modernizing Implementation of EPA's Self-Policing Incentive Policies, 80 Fed. Reg. 76,478 (Dec. 9, 2015).

⁵⁹See Notice of eDisclosure Portal Launch: Modernizing Implementation of EPA's Self-Policing Incentive Policies, 80 Fed. Reg. 76,478 (Dec. 9, 2015); *see also* What does EPA mean that it is more likely to scrutinize requests for extension of the violation correction period beyond 30 additional days for Audit Policy disclosures or 90 additional days for Small Business Compliance Policy disclosures?, <https://compliancegov.zendesk.com/hc/en-us/articles/215495027-What-does-EPA-mean-that-it-is-more-likely-to-scrutinize-requests-for-extension-of-the-violation-correction-period-beyond-30-additional-days-for-Audit-Policy-disclosures-or-90-additional-days-for-Small-Business-Compliance-Policy-disclosures>.

⁶⁰See 80 Fed. Reg. at 76,478.

⁶¹See 80 Fed. Reg. at 76,478.

⁶²See 80 Fed. Reg. at 76,478; *see also* What does EPA mean that it is more likely to scrutinize requests for extension of the violation correction period beyond 30 additional days for Audit Policy disclosures or 90 additional days for Small Business Compliance Policy disclosures?, *supra* note 59.

⁶³See 80 Fed. Reg. at 76,477.

⁶⁴See 80 Fed. Reg. at 76,477.

⁶⁵See usepagroups, *eDisclosure Video Tutorial for Disclosers and Certifier*, YouTube (Dec. 8, 2015), https://www.youtube.com/watch?v=-fdt_r1CdVc&feature=youtu.be.

civil penalties under the major environmental statutes (“Rules”).¹

§ 9:129 Negotiating Lower Civil Penalties

Although each case is unique, there are a number of general factors to consider when confronted with civil penalties that the EPA seeks to assess through the administrative or civil judicial process.

§ 9:130 When to Negotiate

Typically, the sooner negotiations begin, the better. In many cases, the EPA has the option of initiating administrative or civil proceedings. The Agency will sometimes seek to negotiate an administrative settlement, rather than having to prepare a civil package for referral to the Department of Justice (“DOJ”). If negotiations begin before that referral occurs, there are fewer parties to negotiate with—no DOJ participation, for example.

Second, it is almost always possible to engage in pre-filing negotiations. The typical complaints used to initiate administrative and civil judicial penalty proceedings are “pro forma” and seek the statutory maximum penalty allowed. After filing, that maximum is the EPA’s opening offer (although only rarely is it the Agency’s true position). By engaging in pre-filing negotiations, it is sometimes possible to have the Agency start at a penalty amount that is not as high. This is particularly true in cases having some public notoriety. If the EPA files a civil penalty complaint seeking the statutory maximum, it will be put in the position of having to explain why it apparently compromised so much below that figure. If, on the other hand, negotiations begin before a maximum figure is made, the EPA has more flexibility.

Finally, the time of year can become important in negotiating a civil penalty settlement. As the end of each fiscal year approaches, the EPA has a tendency to try to “wrap” things up. This may create an incentive to settle that may not exist at other times.

§ 9:131 Liability-Based Negotiations

While factors outlined at § 9:124 and § 9:129 are almost always the dominant subjects of negotiations, one must always remember that the underlying basis for the civil penalty assessment is the allegation that a regulation was violated. This allegation is subject to challenge in the civil penalty assessment proceeding. A successful challenge to the underlying allegation of liability will negate any penalty.

The government tends to prepare civil judicial cases more vigorously than administrative cases. As a result, civil judicial cases typically have a stronger factual basis. Do not assume, however, that facts can be proven just because the Agency alleges that a violation occurred, or that if certain facts are proven, a violation actually will be established. This is not to suggest that the government does not prepare carefully, it does. Due to its limited resources, however, sometimes the government makes assumptions about the facts of a case that turn out to be incorrect.

Negotiations based on the absence of liability require a complete understanding of the facts and a willingness to present them to the EPA. Negotiations also may require that the Agency be permitted to talk to witnesses and review documents that support the assertion that there is no liability.

[Section 9:128]

¹See Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties & the Revocation/Termination or Suspension of Permits, 40 C.F.R. §§ 22.1 to 22.52.

The EPA will almost always respond to the suggestion that there is no liability by offering to reduce the penalty. This may be done for two reasons. First, it may be a test to see if the alleged violator really believes his or her own assertion. Quickly agreeing to pay a reduced penalty may cause the Agency negotiator to think twice about the assertion of nonliability. Second, the Agency almost always wants to have something—anything—to “show” for its efforts in developing the case. Because of political considerations, dropping a case in the face of evidence that there was no liability is, for the government in some cases, worse than going to trial and losing.

Assertions of no liability have different effects depending on whether the case is civil or administrative. Civil judicial cases, as noted above, tend to be investigated more thoroughly than administrative cases. Thus, the chances of being able to negotiate a penalty based on the absence of liability are relatively small. On the other hand, if the facts bear out the defense, a favorable settlement (even dropping the case) is possible, since DOJ will not take cases to federal court that it knows it cannot win.

Because administrative cases are less thoroughly investigated, there is a greater chance of discovering facts to suggest that there was no violation in the first place. EPA counsel, however, is less reluctant to take a “bad” case before a hearing officer.

§ 9:132 Negotiating Based on Penalty Criteria

The specific penalty criteria outlined in §§ 9:137 to 9:156 and §§ 9:151 to 9:17 are always a subject of negotiations. It is inevitable that the Agency will assume liability and move right to these criteria. Entering negotiations without understanding how these criteria are understood and applied by the Agency makes any negotiation difficult. Having objective facts in the form of documents, witnesses, studies, samples, reports, and the like is absolutely essential to negotiate effectively. Two examples illustrate this.

First, one may seek to claim that he cannot afford to pay the penalty asserted by the Agency. Such a claim must be accompanied by evidence in the form of tax returns and other financial information.¹ The Agency assumes that in most small- and medium-sized businesses, the reason why a company cannot afford to pay a penalty is because the principal of the business has “overpaid himself.” At times, the EPA therefore has asked for financial information from the principals—in an attempt to pierce the corporate veil for paying a penalty, even though that is not usually possible as a matter of law. Under some of the regulations, however, a parent corporation may be liable for the violation of its subsidiaries.²

Second, one may argue that this is the first time a violation such as this has occurred. It should be made certain that this assertion is true by reviewing an accurate record of all alleged violations. Although most state environmental agencies, as well as the EPA Regions, have access to extensive information on an alleged violator’s history of violations, these histories are not always accurate. In preparing for a negotiating session, the violator should research his history of violations so

[Section 9:132]

¹In RCRA matters, the EPA does not have to look at the ability to pay. See 42 U.S.C. § 6928(a)(3), (g); see also *In re Bil-Dry Corp.*, 9 E.A.D. 575, 611, 2001 WL 59296, *27 (E.P.A. 2001). The EPA may assess this factor “if the Respondent presents sufficient information to substantiate its claim. . . .” *In re Bil-Dry Corp.*, 9 E.A.D. 575, 2001 WL 59296 at *27 (E.P.A. 2001) (emphasis added). In *Bil-Dry*, the court found that the respondent’s information was insufficient when it provided tax returns but failed to provide financial statements or an explanation for withholding such statements. *Id.* The testimony, which was rebuttal testimony, failed to explain how the penalty would cause undue financial hardship and failed to show that the respondent would be prevented “from paying its ordinary and necessary business expenses.” *Id.* at *28–31.

²See, e.g., EPA, Renewable Fuel Standard, 40 C.F.R. § 80.1461(c).

that he or she may be able to explain why the violation at issue is, in fact, the first of its kind.

In short, it is important to examine all applicable penalty criteria carefully and be prepared to present facts that are favorable to the application of that criteria.

§ 9:133 Negotiating Based on Fairness

Confusion surrounding the application of a particular regulation may result in a reduced penalty. While this occurs most often in the context of civil judicial proceedings rather than administrative actions, case law suggests that the EPA should pay more attention to this factor. Courts have upheld findings of violations but negated any civil penalty based on a lack of fairness, regulatory confusion, or a perception of agency overreach.¹

§ 9:134 Nonmonetary Considerations

It is sometimes possible to negotiate a reduced civil penalty when the company offers some environmental benefit. In the context of civil judicial assessments, this benefit will take the form of injunctive relief, such as supplemental environmental projects discussed at § 9:176. Providing an environmental benefit is also an alternative in the context of administrative civil penalties and, again, may take the form of supplemental environmental projects or pollution prevention efforts. One must be prepared to undertake activity that may cost more than the civil penalty assessment and that may go well beyond current legal requirements. Such obligations should not be undertaken lightly. In some circumstances, these commitments may include obligations to disclose unrelated environmental conditions that could form the basis of additional liability as a result of government action or citizen suits.

§ 9:135 Litigation Risk: The Final Factor

There is almost never a case where one simply calculates the penalty based on the statutory criteria and arrives at a result. Instead, in most cases, the Agency bases its decision on rough calculations. When and if the parties reach a negotiated settlement, it is common for the EPA to use litigation risk as a justification for the settlement. Thus, if the Agency negotiator professes an inability to justify a settlement based on strict application of penalty criteria, litigation risk on any issue may provide the needed justification.

§ 9:136 Long-Term Value of Contesting Penalties

In many cases, the penalty assessed by the EPA may be too low to justify a substantial investment of time into either negotiations or challenges. It must be remembered that every violation and penalty becomes a permanent part of the company's history of violation for the purposes of any subsequent violation and penalty assessment. Challenging incorrect allegations and penalties may serve the company's long-term interest by ensuring an accurate compliance history.

§ 9:137 Statute-Specific Considerations for Administratively Assessed Penalties

The EPA has issued several statute-specific penalty policies. Because of the over-

[Section 9:133]

¹See, e.g., *Rollins Environmental Services (NJ) Inc. v. U.S. E.P.A.*, 937 F.2d 649, 653–54, 33 Env't. Rep. Cas. (BNA) 1543, 21 Env'tl. L. Rep. 21353 (D.C. Cir. 1991) (Edwards, J. dissenting in part); see also Strand, *The "Regulatory Confusion" Defense to Environmental Penalties: Can You Beat the Rap?*, 22 Env'tl. L. Rep. 10,330 (1992).

all similarity, however, only the Resource Conservation and Recovery Act (“RCRA”) Civil Penalty Policy will be analyzed in detail in this chapter. In any case, upon receiving a complaint, a respondent should review the EPA’s general penalty policy and any applicable statute-specific policies. If the EPA fails to enclose a statute-specific policy with a complaint, the respondent should obtain a copy via the EPA’s Web site.

§ 9:138 Resource Conservation and Recovery Act (“RCRA”)

The Resource Conservation and Recovery Act (“RCRA”) provides that if any person has violated or is in violation of Subtitle C of RCRA, the EPA may, among other options, issue an order assessing a civil penalty.¹ Pursuant to 40 C.F.R. Part 19, the maximum penalty amount is \$37,500 per day for each violation.² The EPA published, and amended, a civil penalty policy to aid in calculating administrative penalties for certain RCRA violations.³

Sections 9006(a) and 9006(d) of RCRA⁴ authorize the EPA to assess administrative civil penalties for violations of RCRA’s underground storage tank provisions of up to \$16,000 per tank. The EPA has issued a separate civil penalty policy for determining these penalty amounts.⁵

Although the EPA’s general penalty policy has been discussed, it would be beneficial to consider the elements of a statute-specific penalty policy. The penalty calculation system established through the RCRA Civil Penalty Policy (“RCRA Policy”), like the general policy, consists of (1) establishing the gravity-based penalty for the violation; (2) determining the “multi-day” component, if applicable; (3) modifying the penalty for special circumstances; and (4) calculating, and adding, the economic benefit.⁶ In calculating the gravity component, the EPA considers (1) the potential for harm and (2) the extent of deviation from the statute and regulations. These factors constitute the seriousness of the violation. The EPA has created a penalty matrix incorporates these two factors to determine the Gravity Component.

Under the RCRA Policy, the degree of potential harm is categorized as major, moderate, or minor, assessing both the probability of exposure and the harm to the regulatory program. The categories are defined as:

Major—any violation that poses a substantial likelihood of exposure to hazardous waste, and/or “the actions have or may have a substantial adverse effect” on the regulatory program (e.g., failure of an owner or operator of a hazardous waste facility to establish financial assurance for the closure of their facility).⁷

[Section 9:138]

¹Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901 to 6992k; 42 U.S.C. § 6928(a).

²Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643 (Nov. 6, 2013).

³EPA, RCRA Civil Penalty Policy (June 2003), *amended by*, EPA, Revised Penalty Matrices for the RCRA Civil Penalties policy (Jan. 11, 2005), *amended by*, Memorandum from Rosemarie A. Kelley, Revision to Penalty Policy Matrices Package Issued on Nov. 16, 2009, at 8 (Apr. 6, 2010), <http://www.epa.gov/sites/production/files/documents/revisionpenaltypolicy04910.pdf>; *amended by*, Memorandum from Cynthia Giles, Amendments to the EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013), <http://www.epa.gov/sites/production/files/2014-01/documents/guidancetoamendepapenaltypolicyforinflation.pdf>.

⁴Pub. L. No. 98-616, 98 Stat. 3285 (1984); 42 U.S.C. § 6991e; Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643 (Nov. 6, 2013).

⁵See EPA, Penalty Guidance for Violations of UST Regulations (Nov. 14, 1990) (providing guidance to the EPA Regional Offices on how to calculate civil penalties in relation to under ground storage tank violations).

⁶See RCRA Civil Penalty Policy, *supra* note 3, at 1.

⁷RCRA Civil Penalty Policy at 15–16.

Moderate—any violation that poses a significant likelihood of exposure to hazardous waste, and/or “the actions have or may have a significant adverse effect on” the regulatory program (e.g., maintaining an inspection policy that permits the leaking of hazardous material to go unnoticed for up to two weeks).⁸

Minor—any violation that poses a relatively low likelihood of exposure to hazardous waste, and/or “the actions have or may have an adverse affect on” the regulatory program (e.g., failure to sign a manifest that otherwise appears to be correct).⁹

The extent of deviation factor correlates with the extent “to which the violation renders inoperative the requirement (e.g., statute or regulation) violated.”¹⁰ Like the potential for harm, the extent of deviation is categorized as major, moderate, or minor, which are defined as:

Major—the “violator deviates from the requirements of the regulations or statute to such an extent that” there is substantial noncompliance (e.g., failure to notify as a generator or transporter of hazardous waste).

Moderate—the “violator significantly deviates from the requirements of the regulations or statute but some of the requirements are implemented as intended” (e.g., having a closure plan, but failing to include a schedule for final closure).

Minor—the violator deviates from the requirements of the regulations or statute, but most of the requirements are met (e.g., failing to lock an access route at a facility on a single occasion).

These factors, the potential for harm and the extent of deviation, represent “one of the two axes of the penalty assessment matrix.”¹¹ In total, the matrix contains nine cells. Each cell provides a penalty range.¹² The appropriate cell is selected based on the potential harm factor and deviation factor.¹³ “The lowest cell (minor potential for harm and minor extent of deviation) contains a penalty range from” \$150–\$710.¹⁴ The highest cell (major potential for harm and major extent of deviation) contains a penalty range from \$28,330–\$37,500.¹⁵

If the violation occurred over more than one day, then the duration of the violation will be considered and the Gravity Component will be adjusted accordingly. Recognizing that “any system for calculating penalties must have enough flexibility to make adjustments that reflect legitimate differences between” similar violations, the RCRA Policy allows the EPA to consider several “adjustment” factors.¹⁶ The factors considered include a violator’s good-faith efforts to comply with the applicable requirements, “the degree of willfulness and/or negligence, history of noncompli-

⁸RCRA Civil Penalty Policy at 15–16.

⁹RCRA Civil Penalty Policy at 15–16.

¹⁰RCRA Civil Penalty Policy at 16.

¹¹See RCRA Civil Penalty Policy at 16.

¹²RCRA Civil Penalty Policy, *supra* note 3 at 16–18.

¹³RCRA Civil Penalty Policy at 16–18.

¹⁴See RCRA Civil Penalty Policy at 16–18; Memorandum from Rosemarie A. Kelley, Revision to Penalty Policy Matrices Package Issued on Nov. 16, 2009, at 8 (Apr. 6, 2010), <http://www.epa.gov/sites/production/files/documents/revisionpenaltypolicy04910.pdf>.

¹⁵RCRA Civil Penalty Policy, *supra* note 3, at 18; Memorandum from Rosemarie A. Kelley, Revision to Penalty Policy Matrices Package Issued on Nov. 16, 2009, at 8 (Apr. 6, 2010), <http://www.epa.gov/sites/production/files/documents/revisionpenaltypolicy04910.pdf>.

¹⁶RCRA Civil Penalty Policy, *supra* note 3 at 33.

ance, ability to pay,” and cooperation.¹⁷ “The adjustment factors can increase, decrease, or have no effect on the penalty amount.”¹⁸ These adjustment factors generally only apply to the Gravity Component.

The EPA next considers the economic benefit of noncompliance. The RCRA Policy lists the following as examples of regulatory areas that are likely to gain economic benefits for its violations: “groundwater monitoring, financial requirements, closure/post-closure, surface impoundment retrofitting, improper land disposal of restricted waste, clean-up of discharges, Part B permit application submittals, and minimum technology requirements.”¹⁹ In examining any economic benefit from noncompliance, the EPA considers benefits from delayed costs (e.g., failure to install monitoring equipment) and avoided costs (e.g., failure to perform necessary analysis).²⁰

§ 9:139 Clean Water Act (“CWA”)

Sections 309(g) and 311(b)(6) of the CWA¹ authorize the EPA to assess a Class I or Class II civil penalty for violations of certain provisions of the CWA. The amount of a Class I civil penalty may not exceed \$16,000 per violation, and the maximum amount of penalties assessed in a Class I hearing may not exceed \$37,500.² The amount of a Class II penalty may not exceed \$16,000 per day per violation, and the maximum amount of penalties assessed in a Class II hearing may not exceed \$187,500.³ The EPA has published several civil penalty policies to aid in calculating administrative penalties for certain CWA violations.⁴

The EPA may also assess Class I or Class II administrative penalties for violations of dredging permits under Section 404 of the CWA (the “wetlands” program).⁵

§ 9:140 Clean Air Act (“CAA”)

Section 113(d) of the CAA¹ authorizes the EPA to impose administrative penalty orders for the violation of any provision of the CAA or permit. The penalty orders may assess penalties of up to \$37,500 per day per violation.² These orders are generally authorized in cases where the penalty sought is not more than \$320,000 and

¹⁷RCRA Civil Penalty Policy at 33.

¹⁸RCRA Civil Penalty Policy, *supra* note 3, at 34.

¹⁹RCRA Civil Penalty Policy at 28.

²⁰RCRA Civil Penalty Policy at 29–30.

[Section 9:139]

¹Federal Water Pollution Control Act, 33 U.S.C. §§ 1251 to 1387; 33 U.S.C. §§ 1319(g), 1321(b)(6).

²Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643 (Nov. 6, 2013).

³78 Fed. Reg. 66,643.

⁴*See* EPA, Clean Water Act Section 404 Settlement Penalty Policy (Dec. 21, 2001), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, Civil Penalty Policy for Section 311(b)(3) and Section 311(j) of the Clean Water Act (Aug. 1998), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); *see also* EPA, Interim Clean Water Act Settlement Penalty Policy (Mar. 1, 1995), *amended by*, EPA, Supplemental Guidance to the Interim Clean Water Act Settlement Penalty Policy (March 1, 1995) for Violations of the Construction Storm Water Requirements (Feb. 8, 2008); EPA, Public Water System Supervision Program Settlement Penalty Policy for Civil Judicial Actions and Administrative Complaints for Penalties (May 25, 1994).

⁵33 U.S.C. § 1344; Memorandum of Agreement: Exemptions Under Section 404(f) of the Clean Water Act (Jan. 19, 1989) (<http://www2.epa.gov/cwa-404/memorandum-agreement-exemptions-under-section-404f-clean-water-act>).

[Section 9:140]

¹42 U.S.C. § 7413(d).

²Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. at 66,643–48.

where the first alleged date of violation occurred no more than 12 months prior to initiation of the administrative action.³ The EPA published several civil penalty policies to aid in calculating administrative penalties for certain CAA violations.⁴

The Stationary Sources Civil Penalty Policy applies to many CAA violations.⁵ However, this policy is not appropriate for all types of violations.⁶ Separate guidances are provided with the Policy, attached as appendices to the Policy. Appendix I covers Prevention of Significant Deterioration/New Source Review permit violations. Appendix II addresses vinyl chloride National Emissions Standards for Hazardous Air Pollutants (“NESHAP”) violations. Appendix III deals with asbestos NESHAP demolition and renovation violations. Appendix IV provides guidance for Volatile Organic Compound violators who comply via reformulation. (Appendix V is a penalty worksheet.) Appendix VI addresses the Gravity Component for hazardous air pollutant violations. Appendix VII addresses residential wood heaters New Source Performance Standard violations. Lastly, Appendix VIII covers stratospheric ozone violations.

Section 120 of the CAA⁷ contains a seldom-used administrative penalty provision for stationary sources. There are specific procedures for assessing noncompliance penalties under Section 120.⁸

The 1990 Amendments to the CAA authorize the EPA to establish a “field citation” program for minor violations, which would allow the EPA inspectors to issue “tickets” or citations with fines.⁹ These fines can be assessed as up to \$7,500 per day for violations of the CAA.¹⁰ While the EPA initially proposed rules for this program, these rules were withdrawn in 2002.¹¹

§ 9:141 Toxic Substances Control Act (“TSCA”)

Section 16 of TSCA¹ authorizes the EPA to issue an administrative order assessing an administrative penalty. The maximum penalty amount is \$37,500 per viola-

³42 U.S.C. § 7413(d); Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643 to 66,648. While in *Tennessee Valley Authority v. Whitman*, 336 F.3d 1236, 56 Env’t. Rep. Cas. (BNA) 1737, 33 Env’t. L. Rep. 20231 (11th Cir. 2003), the court held that 42 U.S.C. § 7413 is unconstitutional, that decision dealt addressed administrative compliance orders.

⁴*See, e.g.*, EPA, Combined Enforcement Policy for Clean Air Act Sections 112(r)(1), 112(r)(7), and 40 C.F.R. Pt. 68, *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, Clean Air Act, Mobile Sources Civil Penalty Policy (Jan. 2009), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, Clean Air Act, Stationary Source Civil Penalty Policy, (Oct. 25, 1991), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, Volatility Civil Penalty Policy (Dec. 1 1989), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

⁵EPA, Clean Air Act, Stationary Source Civil Penalty Policy, at 3 (Oct. 25, 1991), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

⁶EPA, Clean Air Act, Stationary Source Civil Penalty Policy, at 3 (Oct. 25, 1991), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

⁷42 U.S.C. § 7420(a).

⁸Assessment and Collection of Noncompliance Penalties by EPA, 40 C.F.R. Pt. 66.

⁹*See* 42 U.S.C. § 7413(d)(3).

¹⁰78 Fed. Reg. at 66,643–48.

¹¹Spring 2002 Regulatory Agenda, 67 Fed. Reg. 33,724, 33,734 (May 13, 2002).

[Section 9:141]

¹Toxic Substances Control Act, 15 U.S.C. §§ 2601 to 2629; 15 U.S.C. § 2615.

tion per day for a violation of TSCA's substantive provisions.² The statute is not self-executing, so to enforce the penalty, the EPA may need to initiate a civil action for civil penalties if the violator does not comply with the administrative order. The EPA has published numerous civil penalty policies to aid in calculating administrative penalties for certain TSCA violations.³

Under the PCB Penalty Policy, a systematic approach is delineated to determine the administrative civil penalty.⁴ The penalty consists of two components: (1) the Gravity Component and (2) adjustments to the Gravity Component.⁵ Three factors are considered in assessing the Gravity Component, including "the 'nature' of the violation," "the 'extent' of potential or actual environmental harm from a given violation," and "the 'circumstances' of the violation."⁶ A penalty matrix that incorporates these factors is used to determine the proper gravity-based penalty.⁷ Then, adjustments are made after considering the violator's culpability, violation history, ability to pay, ability to continue in business, and any other factors as required by justice.⁸

§ 9:142 Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA")

Section 14(a)(1)–(2) of FIFRA¹ authorizes the EPA to issue a civil penalty. Currently, the maximum penalty amount for a "registrant, commercial applicator, wholesaler, dealer, retailer, or other distributor" is \$7,500 per violation for a violation of FIFRA's substantive provisions.² The EPA has published several civil penalty policies to aid in calculating administrative penalties for certain FIFRA violations.³

Three factors, the size of the violator's business, effect of the penalty, and the

²Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,647 (Nov. 6, 2013).

³*See, e.g.*, EPA, Section 1018—Disclosure Rule Enforcement Response and Penalty Policy (Dec. 2007), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA's Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, Polychlorinated Biphenyls (PCB) Penalty Policy (Apr. 9, 1990), *as amended by* Memorandum from Stephanie P. Brown, Penalty Policy Supplements Pursuant to the 2004 Civil Monetary Penalty Inflation Adjustment Rule (June 5, 2006), *as amended by* Memorandum from Rosemarie A. Kelley, Revision to Adjusted Penalty Policy Matrices Package issued on Nov. 16, 2009 (Apr. 6, 2010), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA's Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, Interim Final Enforcement Response Policy for the Asbestos Hazard Emergency Response Act (Jan. 3, 1989), *as amended by*, Memorandum from Jesse Baskerville, Revision of the AHERA Enforcement Policy: Civil Penalties for Failure to Conduct Reinspection (Aug. 4, 1998), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA's Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

⁴*See* Polychlorinated Biphenyls (PCB) Penalty Policy, *supra* note 3, at 1.

⁵Polychlorinated Biphenyls (PCB) Penalty Policy at 1.

⁶Polychlorinated Biphenyls (PCB) Penalty Policy at 1.

⁷Polychlorinated Biphenyls (PCB) Penalty Policy at 2.

⁸Polychlorinated Biphenyls (PCB) Penalty Policy at 2.

[Section 9:142]

¹Federal Environmental Pesticide Control Act of 1972, 7 U.S.C. §§ 121 to 136y; 7 U.S.C. § 1361.

²7 U.S.C. § 1361; Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,647 (Nov. 6, 2013). Private applicators, or other individuals not included within the list above, can be assessed a civil penalty of up to \$750 for the first offense and \$1,100 for subsequent offenses. 7 U.S.C. § 1361(a)(2); Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,647 (Nov. 6, 2013).

³EPA, Enforcement Response Policy for FIFRA Section 7(c) (May 2010), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA's Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, FIFRA Enforcement Response Policy, (Dec. 2009), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA's Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); *see also* EPA, Appendix H, Enforcement Response Policy for the FIFRA Pesticide Container/Containment Regulations (Mar. 2012), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA's Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

gravity of the violation, are considered in determining a civil penalty for a FIFRA violation.⁴ The EPA takes a seven step approach that addresses these three factors.⁵ These seven steps include: (1) determining the number of violations; (2) determining the size of the business, using a table created by the EPA; (3) determining the gravity of each individual violation; (4) using Steps 2 and 3 to determine the base penalty using a matrix created by the EPA; (5) adjusting the penalty using a matrix created by the EPA; (6) calculating the economic benefit gained; and (7) considering the effect of the total penalty on the business.⁶ In some instances, a proposed penalty may be further modified during the course of settlement negotiations.⁷

§ 9:143 Emergency Planning and Community Right-to-Know Act (“EPCRA”)

Section 325(b) of the Emergency Planning and Community Right-to-Know Act (“EPCRA”)¹ authorizes the EPA to assess civil penalty for violations of EPCRA provisions. Currently, depending on whether the violation is related to emergency notification provision, a reporting requirement, or trade secret, the maximum penalty can range from \$16,000–\$37,500 per violation.² The related Enforcement Response Policy encompasses provisions of both EPCRA and Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”).³ Under this policy, a two-step process is employed. First, a preliminary deterrence amount is calculated by applying the statutory factors, e.g., the nature, circumstances (actual or potential consequences), and extent (timeliness of notification), and gravity of the violation.⁴ Matrices have been created to determine the base amount.⁵ Second, violator-based statutory factors are considered, e.g., ability to pay and/or continue in business, violation history, culpability, economic benefit and/or savings, size of the business, cooperation and/or willingness to settle, supplemental environmental proj-

⁴EPA, Enforcement Response Policy for FIFRA Section 7(c), at 15 (May 2010), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, FIFRA Enforcement Response Policy, (Dec. 2009), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); *see also* EPA, Appendix H, Enforcement Response Policy for the FIFRA Pesticide Container/Containment Regulations (Mar. 2012), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

⁵EPA, Enforcement Response Policy for FIFRA Section 7(c), at 15 (May 2010), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, FIFRA Enforcement Response Policy, (Dec. 2009), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); *see also* EPA, Appendix H, Enforcement Response Policy for the FIFRA Pesticide Container/Containment Regulations (Mar. 2012), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

⁶*Id.* at 15–16.

⁷*Id.* at 27–28.

[Section 9:143]

¹Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. §§ 11101 to 11152; 42 U.S.C. § 11045.

²Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013). A cap of \$117,500 per day has been set for subsequent Class II emergency notification violations.

³EPA, Enforcement Response Policy for Sections 304, 311, and 312 of the Emergency Planning and Community Right-to-Know Act and Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (Sept. 30, 1999), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

⁴*Id.* at 9, 11, 17.

⁵*Id.* at 9–10.

ects, voluntary disclosures, and other matters as justice may require.⁶

§ 9:144 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)

Section 109 of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)¹ authorizes the EPA to assess a Class I or Class II civil penalty for certain CERCLA violations. The maximum penalty for a Class I civil penalty is \$37,500 per violation.² The maximum penalty for a Class II civil penalty is \$37,500 per day per violation.³ In the case of a second or subsequent violation, the maximum penalty is \$117,500 for each day during which the violation continues. The EPA published a civil penalty policy to aid in calculating administrative penalties for certain CERCLA violations.⁴

§ 9:145 Procedures for Assessing Judicial Civil Penalties

At the request of the EPA, the Department of Justice (“DOJ”) may commence an action to assess a civil penalty. This remedy is independent of the EPA’s authority to assess administrative penalties. In these cases, the EPA will almost always initially seek the maximum penalty amount allowed by the statute. While the Penalty Policy may be used as a guideline, it is not binding on the court.¹

The government may bring the action in the “appropriate” U.S. district court, which typically would include the district where the person from whom the penalty is sought resides or where that person’s principal place of business is located.² The proceedings in these cases are generally controlled by Federal Rules of Civil Procedure, the same procedures that govern other federal civil actions. These rules dictate not only the filing of the complaint, answer, and other pleadings, but they also provide for discovery and the conduct of the trial itself.

The defendant may request a jury trial, but only as to the issue of whether they violated the environmental statute in question.³ The defendant is not entitled to a jury trial as to the amount of the penalty because, in the opinion of the U.S. Supreme

⁶*Id.* at 9.

[Section 9:144]

¹Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601 to 9675; 42 U.S.C. § 9609.

²Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

³Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

⁴EPA, Enforcement Response Policy for Sections 304, 311, and 312 of the Emergency Planning and Community Right-to-Know Act and Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (Sept. 30, 1999), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013). For a discussion of this policy, *see supra*, § 9:143.

[Section 9:145]

¹*Chesapeake Bay Foundation, Inc. v. Gwaltney of Smithfield, Ltd.*, 791 F.2d 304, 316, 24 Env’t. Rep. Cas. (BNA) 1417, 16 Env’tl. L. Rep. 20636 (4th Cir. 1986) (“The EPA policy, however, is an internal document for agency guidance, and is not binding on the district court.”), *vacated on other grounds sub nom.*, *Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc.*, 484 U.S. 49, 108 S. Ct. 376, 98 L. Ed. 2d 306, 26 Env’t. Rep. Cas. (BNA) 1857, 9 Fed. R. Serv. 3d 1029, 18 Env’tl. L. Rep. 20142 (1987).

²One should refer to the relevant environmental statute and as well as 28 U.S.C. § 1391. *See, e.g.*, 28 U.S.C. § 1391; 33 U.S.C. § 1321(b)(7); 42 U.S.C. § 6928(g).

³*See Tull v. U.S.*, 481 U.S. 412, 427, 107 S. Ct. 1831, 95 L. Ed. 2d 365, 25 Env’t. Rep. Cas. (BNA) 1857, 7 Fed. R. Serv. 3d 673, 17 Env’tl. L. Rep. 20667 (1987).

Court, this is a determination that the Congress has delegated to the trial judge.⁴

§ 9:146 Pre-filing Notification

Pursuant to Executive Order No. 12,988, signed by President Bill Clinton on February 5, 1996, before a federal agency or litigation counsel can participate in civil litigation on behalf of the United States, it must make a reasonable effort to notify all parties to the dispute.¹ The Executive Order also requires that agencies and government litigation counsel engage in settlement conferences.²

§ 9:147 Negotiating with the EPA, DOJ, and U.S. Attorney

The negotiated settlement of a judicial action for civil penalties is complicated by the mandated coordination between various government agencies (i.e., the Environmental Enforcement Section of DOJ and the EPA). As a result, the most important step in the negotiation process is for the defendant to identify which entity is acting as lead agency in the litigation. Although the defendant may negotiate primarily with this agency, one should not forget that any settlement may be subject to the review of the EPA Regional Office, EPA headquarters, and DOJ. Ultimately, the DOJ makes the final decision on a settlement because it has the authority to bind the United States to the agreement.

§ 9:148 Alternative Dispute Resolution

In addition to the requirement that federal agencies and litigation counsel engage in settlement conferences, President Clinton also released a memorandum in 1998 directing agencies to take steps to employ alternative dispute resolution (“ADR”) methods.¹ In 2000, the EPA published its policy of alternative dispute resolution.² In its policy, the definition of ADR as defined in the Administrative Dispute Resolution Act of 1996 was adopted, which includes: “any procedure that is used to resolve issues in controversy, including but not limited to, conciliation, facilitation, mediation, fact finding, mini-trials, arbitration, and use of ombuds, or any combination thereof.”³ The EPA uses the criteria set forth in 5 U.S.C. § 572 to determine whether ADR is appropriate for a particular case.⁴ The Conflict Prevention and Resolution Center (“CPRC”) provides ADR services for the EPA.⁵ If an entity is interested in engaging in ADR, it can contact the CPRC, a regional ADR program, or an office

⁴*See* Tull v. U.S., 481 U.S. 412, 427, 107 S. Ct. 1831, 95 L. Ed. 2d 365, 25 Env’t. Rep. Cas. (BNA) 1857, 7 Fed. R. Serv. 3d 673, 17 Env’t. L. Rep. 20667 (1987).

[Section 9:146]

¹Exec. Order No. 12,988, 61 Fed. Reg. 4, 729 (Feb. 7, 1996). There are several exceptions when the agency is permitted to file an action prior to providing notice, including forfeiture actions, bankruptcy proceedings, assets are likely to dissipate, the defendant is a flight risk, or notice is impracticable or would defeat the purpose of litigation. *Id.*

²*Id.*

[Section 9:148]

¹Exec. Order No. 12,988, 61 Fed. Reg. 4, 729 (Feb. 7, 1996); Memorandum from William J. Clinton, Memorandum for Heads of Executive Department and Agencies (May 1, 1998) (<http://govinfo.library.unt.edu/npr/library/direct/memos/disputre.html>).

²Policy on Alternative Dispute Resolution, 65 Fed. Reg. 81,858 (Dec. 27, 2000).

³65 Fed. Reg. at 81,859 (quoting 5 U.S.C. § 571(3)).

⁴65 Fed. Reg. at 81,859 (quoting 5 U.S.C. § 571(3)).

⁵65 Fed. Reg. at 81,859 (quoting 5 U.S.C. § 571(3)).

ADR program.⁶

Consistent with the Administrative Dispute Resolution Act of 1996, the EPA maintains confidentiality during the ADR process.⁷ However, some federal laws may require disclosure (e.g., the Freedom of Information Act).⁸ The CPRC can provide information regarding what information will remain confidential and what disclosures may be required under federal law.⁹

§ 9:149 Consent Decrees

As discussed in § 9:148, the EPA and DOJ must attempt to settle a dispute prior to and during civil litigation. This requirement, coupled with the government's large case load and desire for achieving economic efficiency, results in the settlement of most cases. The steps the defendant must take to achieve compliance are usually established through a judicially approved consent decree, which is a legally binding document between the government and the defendant. A consent decree also establishes a specific timetable for compliance and contains provisions for compliance monitoring by the EPA.

The EPA has issued a very detailed model consent decree to be used for CERCLA violations.¹ The model consent decree addresses the court's jurisdiction to enter the decree, the parties to be bound, the many commitments of the parties, and the penalties to be paid.² It also addresses dispute resolution in the event that a dispute regarding the consent decree arises.³ As required under 42 U.S.C. § 9622(d)(2) and 28 C.F.R. § 50.7, the model consent decree contains a provision requiring 30 days of public notice, reserving the U.S.'s right to withhold its consent to the decree.⁴

For any consent decree that deals with the emission of a pollutant, the DOJ must first provide the public the opportunity to comment on the proposed judgement prior to entering into the judgement.⁵

§ 9:150 Appeals

One should refer to the applicable law, as well as the Federal Rules of Civil Procedures, to determine the proper appeal process. Failure to appeal the action within the time period afforded under the applicable act can prevent review of the penalty.¹

§ 9:151 Statute-Specific Considerations for Civil Judicial Penalties

There are a variety of statute-specific considerations relating to civil monetary penalties. These statute-specific considerations are discussed in §§ 9:152 to 9:158.

⁶65 Fed. Reg. at 81,859 (quoting 5 U.S.C. § 571(3)).

⁷Policy on Alternative Dispute Resolution, 65 Fed. Reg. 81,858, 81,859 (Dec. 27, 2000).

⁸Policy on Alternative Dispute Resolution, 65 Fed. Reg. 81,858, 81,859 (Dec. 27, 2000).

⁹Policy on Alternative Dispute Resolution, 65 Fed. Reg. 81,858, 81,859 (Dec. 27, 2000).

[Section 9:149]

¹EPA, Model Remedial Design/Remedial Action Consent Decree (Sept. 2015).

²EPA, Model Remedial Design/Remedial Action Consent Decree (Sept. 2015).

³EPA, Model Remedial Design/Remedial Action Consent Decree (Sept. 2015).

⁴EPA, Model Remedial Design/Remedial Action Consent Decree (Sept. 2015).

⁵See also DOJ Consent Judgments in Actions to Enjoin Discharges of Pollutants, 28 C.F.R. § 50.7.

[Section 9:150]

¹See *Slinger Drainage, Inc. v. E.P.A.*, 237 F.3d 681, 683, 52 Env't. Rep. Cas. (BNA) 1022, 31 Env'tl. L. Rep. 20428 (D.C. Cir. 2001) (holding that failure to appeal the civil penalty within 30 days prevented judicial review).

§ 9:152 Resource Conservation and Recovery Act (“RCRA”)

Section 3008(g) of RCRA¹ applies to civil judicial enforcement actions and establishes liability to the United States for civil penalties. The maximum penalty amount is \$37,500 per day for each violation of Subtitle C.² The EPA also uses its RCRA Civil Penalty Policy to argue for as high a penalty as the facts of a case justify, should the case go to trial, and the EPA will prepare a calculation that applies this policy to lay out the rationale behind any penalty amount it agrees to accept in settlement of judicial enforcement actions under RCRA.³

Section 9006 of RCRA⁴ authorizes the EPA to bring civil actions seeking civil penalties for violations of RCRA’s underground storage tank (“UST”) provisions. The maximum penalty amount is \$16,000 per tank.⁵ The EPA also uses its UST civil penalty policy for determining acceptable settlements for these penalty amounts.⁶

§ 9:153 Clean Water Act (“CWA”)

Sections 309 and 311 of the CWA¹ authorizes the EPA to bring civil actions to enforce certain requirements of the CWA and related regulations. In such actions, the EPA may seek a civil penalty of up to \$37,500 per day for each day that the violation continues or \$5,300 per barrel of oil or unit of reportable quantity of hazardous substances discharged.²

The EPA has published several civil penalty policies, as well as settlement policies, for different CWA violations.³

§ 9:154 Clean Air Act (“CAA”)

Section 113(b) of the CAA¹ provides the EPA with the authority to commence a civil action to recover a civil penalty. The maximum penalty amount is \$37,500 per

[Section 9:152]

¹Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901 to 6992k; 42 U.S.C. § 6928(g).

²*Id.*; Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,647 (Nov. 6, 2013).

³See EPA, RCRA Civil Penalty Policy, (June 2003), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

⁴42 U.S.C. § 6991e.

⁵Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

⁶EPA, Penalty Guidance for Violations of UST Regulations (Nov. 14, 1990), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

[Section 9:153]

¹Federal Water Pollution Control Act, 33 U.S.C. §§ 1251 to 1387; 33 U.S.C. §§ 1319(b), 1321(b)(7).

²Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,647 (Nov. 6, 2013).

³See EPA, Clean Water Act Section 404 Settlement Penalty Policy (Dec. 21, 2011), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, Civil Penalty Policy for Section 311(b)(3) and Section 311(j) of the Clean Water Act (Aug. 1998), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); *see also* EPA, Supplemental Guidance to the Interim Clean Water Act Settlement Penalty Policy (March 1, 1995) for Violations of the Construction Storm Water Requirements (Feb. 8, 2008), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, Interim Clean Water Act Settlement Penalty Policy (Mar. 1, 1995), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

[Section 9:154]

¹42 U.S.C. § 7413(b).

day for the past or ongoing violation of any provision of the CAA or permit.² The EPA also uses its penalty policies when calculating a minimum settlement amount in civil judicial cases.³

§ 9:155 Toxic Substances Control Act (“TSCA”)

Section 16(a)(4) of the TSCA¹ authorizes the EPA to initiate an action for civil penalties only if the violator does not comply with an administrative order issued pursuant to Section 16(a)(1).

§ 9:156 Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)

Section 14(a)(5) of FIFRA¹ authorizes the EPA to initiate an action for civil penalties only if the violator does not comply with the administrative order issued pursuant to Section 14(a)(1)–(2).

§ 9:157 Emergency Planning and Community Right-to-Know Act (“EPCRA”)

Section 325(b) of EPCRA¹ authorizes the EPA to bring a civil action to recover a penalty. The maximum penalty amount is \$37,500 per day per violation of Section 304.² In the case of a second or subsequent violation, the amount of the penalty may be up to \$117,500 for each day that the violation continues.³

Section 325(c) of EPCRA⁴ authorizes the EPA to bring a civil action to recover civil penalties. Those penalties can be assessed up to: (1) \$37,500 per day per violation of Sections 312 and 313 and (2) \$16,000 for violations of Sections 311, 322(a)(2), and 323(b).⁵ The EPA also uses its EPCRA civil penalty policies to calculate a minimum settlement amount in civil judicial cases brought under Sections 304 and 325(c) of EPCRA.⁶

²Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

³*See, e.g.*, EPA, Combined Enforcement Policy for Clean Air Act Sections 112(r)(1), 112(r)(7), and 40 C.F.R. Part 68, at 3 (June 2012), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, Clean Air Act, Mobile Sources Civil Penalty Policy 3 (Jan. 2009), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013); EPA, Clean Air Act, Stationary Source Civil Penalty Policy 1 (Oct. 25, 1991), *modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

[Section 9:155]

¹Toxic Substances Control Act, 15 U.S.C. §§ 2601 to 2629; 15 U.S.C. § 2615(a)(4).

[Section 9:156]

¹Federal Environmental Pesticide Control Act of 1972, 7 U.S.C. §§ 121 to 136y; 7 U.S.C. § 136l(a)(5).

[Section 9:157]

¹Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. §§ 11101 to 11152; 42 U.S.C. § 11045(b).

²Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

³Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

⁴42 U.S.C. § 11045(c).

⁵42 U.S.C. § 11045(c); Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

⁶*See* EPA, Enforcement Response Policy for Sections 304, 311, and 312 of the Emergency Planning and Community Right-to-Know Act and Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act, at 3 (Sept. 30, 1999), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

§ 9:158 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)

Section 109(c) of CERCLA¹ authorizes the EPA to bring a civil action to recover a penalty. The maximum penalty amount is \$37,500 per day per violation.² In the case of a second or subsequent violation, the amount of the penalty may reach up to \$117,500 for each day during which the violation continues.³ The EPA also uses its CERCLA civil penalty policy to calculate a minimum settlement amount in civil judicial cases brought under Section 109(c) of CERCLA due to a violation of Section 103.⁴

Section 104(e) of CERCLA⁵ authorizes the EPA to seek a civil penalty of \$37,500 for each day of noncompliance with the provisions of Section 104. Furthermore, if a person fails to comply with an abatement order issued under Section 106 of CERCLA,⁶ CERCLA authorizes the EPA to bring a civil action to recover a penalty.⁷ As of November 6, 2013, the maximum penalty is \$37,500 per day per violation.⁸

VII. INJUNCTIONS AND OTHER EQUITABLE ORDERS

§ 9:159 Executive Summary

The EPA is authorized under various statutory provisions to initiate administrative, civil, and criminal actions. These statutes provide for administrative remedies;¹ criminal penalties;² civil judicial remedies (including civil penalties);³ and other equitable remedies such as injunctions. This chapter describes the types of injunctive relief available to the EPA, the grounds for obtaining injunctions, the standards governing the granting of injunctions, the scope of injunctive relief available to the EPA including judicial consent orders and supplemental environmental projects, judicial enforcement of injunctions and consent orders, and the EPA procedures and policies with respect to injunctive relief.

Injunctive relief may be granted as: (1) a tool for the EPA to enforce violations of statutory requirements; (2) a means for the EPA to abate imminent and substantial endangerments caused by pollution, regardless of whether a statute has been violated; or (3) a means for citizens to enforce violations of the statutes and, under the Resource Conservation and Recovery Act, to abate imminent and substantial

[Section 9:158]

¹Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601 to 9675; 42 U.S.C. § 9609(c).

²Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

³Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

⁴See EPA, Enforcement Response Policy for Sections 304, 311, and 312 of the Emergency Planning and Community Right-to-Know Act and Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act, 3 (Sept. 30, 1999), *as modified by*, Memorandum from Cynthia Giles, Amendments to the U.S. EPA’s Civil Penalty Policies to Account for Inflation (Dec. 6, 2013).

⁵42 U.S.C. § 9604(e).

⁶42 U.S.C. § 9606(b).

⁷42 U.S.C. § 9606(b).

⁸Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

[Section 9:159]

¹See IV.

²See IX and X.

³See VI.

endangerments.⁴ The statutes vary considerably in the phrasing of each of the three types of injunctive relief.

Technically, injunctions are a type of equitable remedy. An injunction generally orders that the person or organization specifically named refrain from doing something, such as creating an imminent danger or harm. However, equitable remedies can go further than simply ordering the cessation of certain activity. They may also order the person to do something affirmative within a certain period of time, such as achieving compliance with the law. For instance, they can require specific remedial or cleanup action, which often occurs in environmental cases.

The EPA has placed a high priority on using this enforcement mechanism to impose requirements that do not exist under current law, such as pollution prevention programs, environmental audits, and other proactive environmental requirements. Accordingly, it is crucially important to understand how this process works.

§ 9:160 How Injunctions Differ from Other Enforcement Sanctions

The EPA's most commonly used enforcement mechanism is the issuance of administrative orders.¹ Instead of issuing an administrative order, or to enforce an administrative order, the EPA may seek an injunction or other equitable relief in federal district court. Indeed, all civil judicial actions brought by the EPA seek some form of injunctive relief. At a minimum, this relief will seek compliance with legal requirements.

The difference between legal and equitable relief (penalties and injunctions) is important. Courts generally have broader authority to order equitable relief,² while their authority to grant legal relief is specifically limited to that which a statute permits.³ For example, courts cannot order the payment of a civil penalty not authorized by the law for which enforcement is sought. Legal relief, therefore, is based strictly on "law," without regard to "fairness." Equitable relief (including injunctions), on the other hand, may allow the court to apply its notion of "fairness" to a particular case. It allows a court to impose requirements that go beyond the statute being enforced.

While the court's power to order injunctive relief is broad, the standards that must be met before an injunction may be issued under federal environmental statutes generally are more difficult to meet than the standards for the granting of legal relief. It is often not simply a question of whether the law has been violated.

§ 9:161 Injunctions as Part of Consent Orders

As used in this chapter, court orders are documents that contain all the terms of a resolved judicial enforcement action. They may be consent orders, in which all parties agree, or orders unilaterally imposed on a party by the court after public notice and an opportunity for a hearing have been provided. Because most are obtained through consent, they are often referred to as judicial consent orders. Administra-

⁴Some statutes authorize injunctions in only one of these instances, some in two, and some in all three. Where a statute authorizes them in more than one instance, the authorizations will be found in separate sections.

[Section 9:160]

¹See IV.

²*Swann v. Charlotte-Mecklenburg Bd. of Ed.*, 402 U.S. 1, 15, 91 S. Ct. 1267, 28 L. Ed. 2d 554 (1971) ("The scope of a district court's equitable powers. . . is broad, for breadth and flexibility are inherent in equitable remedies.").

³See § 9:124 and § 9:128.

tive consent orders serve the same purpose but are issued by the Agency. However, administrative consent orders differ from judicial consent orders in that they are not self-enforcing. If a person violates an administrative consent order, the EPA must file a case in federal court seeking a judicial order to enforce the administrative order.¹ A judicial consent order is self-enforcing.² Once issued, if it is not followed, the person in violation may be immediately subject to contempt proceedings.³

Judicial consent orders may include both legal and equitable provisions. While a judicial court order may require the payment of a civil penalty, an injunction does not, although it may contain requirements that other amounts be paid for remedial purposes and may include provisions for the payment of penalties if the injunction is violated.

§ 9:162 Types of Injunction Relief

There are three types of injunctions that can be entered (issued) by a federal district court: (1) a temporary restraining order (“TRO”);¹ (2) a preliminary injunction;² and (3) a permanent injunction.³ The EPA generally cannot seek a TRO or preliminary injunction unless it also seeks a permanent injunction. However, it is quite common for the Agency to seek a permanent injunction without also seeking a TRO or preliminary injunction first.

Rule 65 of the Federal Rules of Civil Procedure provides the basis upon which any party, including the EPA, may obtain an injunction.⁴ Actions seeking injunctions often result in a consent decree that is entered as an order of the court where the EPA brought its action. The consent decree is then enforceable by that court.⁵

Courts traditionally have recognized a distinction between prohibitory and mandatory injunctions. Prohibitory injunctions merely prohibit specific conduct, such as discharging an effluent in violation of permit conditions, while mandatory injunctions require positive conduct, such as building a treatment plant. Because courts traditionally regarded mandatory injunctions as more drastic remedies than prohibitory injunctions, they were reluctant to issue mandatory injunctions.⁶ However, this traditional distinction has eroded, in part because prohibitory injunctions may be more drastic remedies than mandatory injunctions if, for instance, they require the immediate cessation of commercial, manufacturing, or other productive

[Section 9:161]

¹Apple Chapman, Associate Director, EPA Office of Civil Enforcement, Air Enforcement Division, THE ENFORCEMENT PROCESS: OFFICE OF CIVIL ENFORCEMENT, http://www.4cleanair.org/sites/default/files/Documents/Apple_Chapman_The_Enforcement_Process.pdf (noting that Administrative Penalty Orders are not self-enforcing).

²Apple Chapman, Associate Director, EPA Office of Civil Enforcement, Air Enforcement Division, THE ENFORCEMENT PROCESS: OFFICE OF CIVIL ENFORCEMENT, http://www.4cleanair.org/sites/default/files/Documents/Apple_Chapman_The_Enforcement_Process.pdf (noting that Administrative Penalty Orders are not self-enforcing).

³For a complete discussion of judicial enforcement of injunction and consent decrees, see § 9:181.

[Section 9:162]

¹See § 9:163.

²See § 9:164.

³See § 9:165.

⁴Fed. R. Civ. P. 65.

⁵Judicial consent decrees are discussed in § 9:179.

⁶U.S. v. Power Engineering Co., 10 F. Supp. 2d 1145, 1148, 28 Env'tl. L. Rep. 21325 (D. Colo. 1998), order aff'd, 191 F.3d 1224, 49 Env't. Rep. Cas. (BNA) 1097, 30 Env'tl. L. Rep. 20067 (10th Cir. 1999) (“Because mandatory injunctions are more burdensome than prohibitory injunctions, the plaintiff must demonstrate entitlement to the injunction by compelling evidence.”).

operation.⁷ Moreover, some orders do not fit neatly into either category in that they may prohibit the complained-of conduct unless mandated positive action is taken.⁸

§ 9:163 Temporary Restraining Orders (“TRO”)

A temporary restraining order (“TRO”) is the most aggressive and immediate form of injunctive relief that the EPA can seek, although it generally only lasts for 10 days.¹ It serves as a precursor to a request for entry of a preliminary or permanent injunction and, unlike the other forms of injunctions, it can be granted *ex parte*, i.e. without written or oral notice to the alleged violator or the alleged violator’s counsel.² A request for a TRO will seek to direct the alleged violator to immediately cease a particular action or course of conduct that the EPA perceives to have the potential to cause immediate or substantial harm or injury.

In order to obtain a TRO, the EPA must demonstrate by means of a motion and a verified complaint (that is, a complaint supported by affidavit or live testimony) that (1) immediate and irreparable injury, loss, or damage will result before the alleged violator can be heard and (2) efforts to give notice to the alleged violator were made or were not required.³ Despite the provisions of Federal Rules of Civil Procedure 65, some judges require that notice be given to the alleged violator to allow for the presentation of an argument or a defense before granting a TRO, but the practice varies widely.⁴ In addition, the DOJ almost always contacts the alleged violator or his counsel before seeking a TRO in an environmental enforcement case. This contact often turns TRO hearings into preliminary injunction proceedings.⁵

In most instances, the EPA generally enjoys wide latitude when it seeks a TRO for two reasons. First, it rarely seeks a TRO and only does so when it can assert compelling evidence of imminent and significant harm from environmental conditions. Second, Federal Rule of Civil Procedure 65(b) expressly contemplates the expiration of a TRO after 14 days, unless the government can show good cause to extend it or it is extended with the consent of the alleged violator.⁶ Strategically, the Agency may prefer to have a TRO hearing even where it gives notice to the defendant, because the 14-day time limit on the term of a TRO may cause the court to err on the side of granting the TRO for that short period.

Federal Rule of Civil Procedure 65(b) also allows the alleged violator to move for

⁷*U.S. v. Armco Steel Corp.*, 333 F. Supp. 1073, 1, 3 Env’t. Rep. Cas. (BNA) 1067, 1 Env’tl. L. Rep. 20517 (S.D. Tex. 1971) (court orders the immediate cessation of toxic discharge, as opposed to alternative remedial solutions proposed by the EPA and the state of Texas).

⁸*U.S. v. Whizco, Inc.*, 841 F.2d 147, 18, 17 Bankr. Ct. Dec. (CRR) 497, 27 Env’t. Rep. Cas. (BNA) 1373, Bankr. L. Rep. (CCH) P 72214, 18 Env’tl. L. Rep. 20571 (6th Cir. 1988) (the district court issued an order to a coal miner not to conduct coal mining activities anywhere in the United States until he restored strip mined land as required by SMCRA).

[Section 9:163]

¹Fed. R. Civ. P. 65(b)(2) (“The [TRO] expires at the time after entry—not to exceed 14 days—that the court sets, unless before that time the court, for good cause, extends it for a like period or the adverse party consents to a longer extension.”).

²Fed. R. Civ. P. 65(b)(1) (“The court may issue a temporary restraining order without written or oral notice to the adverse party. . .”).

³Fed. R. Civ. P. 65(b)(1) (“The court may issue a temporary restraining order without written or oral notice to the adverse party. . .”).

⁴Office of Solid Waste and Emergency Response, OSWER Directive 9610.11, UST/LUST Enforcement Procedures Guidance Manual 45 (May 1990), <http://www.epa.gov/sites/production/files/2014-02/documents/d9610.11.pdf> (noting that “[i]n a typical case, the owner/operator (or his or her attorney) will be given oral or written notice for the TRO”).

⁵See § 9:164.

⁶Fed. R. Civ. P. 65(b)(2).

dissolution or modification of the TRO, generally on two days' notice to the EPA and the U.S. Attorney's Office.⁷ Thus, upon service of the TRO, or otherwise upon becoming aware of its entry, an alleged violator can request an immediate hearing to modify, vacate, or dissolve the injunction. However, the practical effect of the granting of a TRO is often to force the alleged violator to negotiate an "interim" solution to the problem, until a hearing on the EPA's preliminary injunction request can be held, or until a consent decree is fashioned.

§ 9:164 Preliminary Injunctions

A preliminary injunction is generally sought in instances where prompt relief is required but before a full-blown trial on the merits can be conducted. A preliminary injunction is used more commonly than a TRO. Like a TRO, it is made by motion and verified compliant with a supporting memorandum; however, unlike a TRO, it can be entered only after the alleged violator is provided with notice and a hearing is conducted.¹ A motion for a preliminary injunction may, but need not be, preceded by a request for a TRO; in fact, in most cases it is not.

A preliminary injunction request is designed to place the case on a "fast-track." Federal Rule of Civil Procedure 65(b) provides that when a TRO is granted, the motion for a preliminary injunction is often set for a hearing at the earliest possible time and takes precedence over all matters except older matters of the same character.²

When a preliminary injunction is sought without a prior TRO, there is no way to predict with respect to a particular judge or court what the length of time will be from the filing of the motion to the completion of the hearing. In some instances, because of crowded dockets, courts have been unable to conduct hearings on preliminary injunctions until months after the initial request. Such a delay can substantially hinder the deterrent effect sought by the EPA. In those instances where a TRO has been granted and is continued, the alleged violator is placed at an obvious disadvantage.

The form of hearing on a preliminary injunction request can vary from judge to judge. Federal Rule of Civil Procedure 65 contemplates a complete evidentiary hearing,³ and, as discussed below, a defendant in a preliminary injunction proceeding may want to take full advantage of that hearing. However, judges have been willing to grant preliminary injunctions on the basis of affidavits, documentary evidence, and legal argument, rather than on the basis of a full hearing.

From the defendant's point of view, most, if not all, preliminary injunction hearings should be treated as hearings on the merits of the case because (1) the EPA must usually demonstrate a likelihood of success on the merits of the case (generally a violation of the statute or regulation) and (2) once a preliminary injunction is entered, the defendant must generally await a full trial to seek to overturn the preliminary injunction, unless a motion for dissolution of the injunction based on new facts or evidence is warranted.⁴ It is often to a defendant's advantage to make a complete evidentiary record when attempting to convince the court that an injunc-

⁷Fed. R. Civ. P. 65(b)(4).

[Section 9:164]

¹Fed. R. Civ. P. 65(a)(1) and (2).

²Fed. R. Civ. P. 65(b)(3).

³A hearing may not always be required, depending on the extent to which factual issues are contested. *See* *International Paper Co. v. Inhabitants of the Town of Jay*, 672 F. Supp. 29, 32, 127 L.R.R.M. (BNA) 2621 (D. Me. 1987); *Sugarhill Records Ltd. v. Motown Record Corp.*, 570 F. Supp. 1217, 1221 (S.D. N.Y. 1983).

⁴*See, e.g.,* *Ball v. Paramount Pictures*, 57 F. Supp. 505, 507 (W.D. Pa. 1944) ("Denial of application

tion is not appropriate, and the court is given latitude to consolidate the hearing on the request for a preliminary injunction with trial of the action on the merits.⁵ Even if the two are not consolidated, any evidence presented at the hearing on the preliminary injunction that would be admissible at the trial on the merits becomes part of that record.⁶

Essentially, a preliminary injunction hearing requires the compression of all fact finding, discovery, and trial preparation into a short period of time. Because the EPA cannot request a preliminary injunction without stating sufficient facts to support its request, its initial factual allegations and presentation to the court are generally detailed. Therefore, the defendant is at an immediate disadvantage and must play “catch-up.”

If a preliminary injunction is entered, the EPA gains substantial leverage against the defendant, and issues concerning the defendant’s potential defenses often become moot. Consequently, if a preliminary injunction is granted after a hearing, the defendant’s odds of prevailing at a trial on the merits against the issuance of a permanent injunction are generally low.

The tactical advantages that can result if a preliminary injunction is issued are not without risk to the EPA. The Agency often seeks a preliminary injunction when it perceives the existence of some adverse environmental condition. In such instances, its case preparation focuses on the environmental condition, not necessarily on the existence of a violation of the law. Unless the statute under which it is proceeding expressly authorizes the issuance of an injunction in the absence of a violation of law or regulation (e.g., “imminent danger” cases), it sometimes is possible to defend the case based on the absence of a violation. In addition, it is often possible to successfully challenge the EPA’s assertions regarding the real nature of the environmental risk (or lack thereof) created by the condition. In any event, an alleged violator that is capable of defeating a motion for preliminary injunction puts himself or herself at a strategic advantage with respect to the remainder of the case.

Finally, it is possible to prevent the EPA from gaining the strategic advantage of a preliminary injunction by reaching an appropriate interim agreement before the matter even goes to court. That type of agreement will give the alleged violator additional time to prepare his defense and, at the same time, will avoid giving the EPA the first “shot” before the court.

§ 9:165 Permanent Injunctions

Permanent injunctions can be entered only after a full trial on the merits of the case.¹ They can be sought by the EPA as the final remedy after a preliminary injunction has been granted or simply as requested relief in a complaint. It is not necessary for a preliminary injunction to be granted or even requested before a per-

for temporary injunction does not prevent another application by same party in same suit, if new facts warrant it.”).

⁵Fed. R. Civ. P. 65(a)(2).

⁶Fed. R. Civ. P. 65(a)(2).

[Section 9:165]

¹See *Chappell & Co. v. Frankel*, 367 F.2d 197, 203 (2d Cir. 1966) (“A permanent injunction is ordinarily issued only after a full trial on the merits.”); *Public Interest Research Group of New Jersey, Inc. v. Rice*, 774 F. Supp. 317, 328, 33 Env’t. Rep. Cas. (BNA) 2056, 22 Env’tl. L. Rep. 20598 (D.N.J. 1991) (“The standard for permanent injunctive relief is the same, except that the moving party must show actual success, instead of probable success, on the merits.”).

manent injunction can be entered.²

Generally, permanent injunctions are requested as a form of relief (along with civil penalties) in every civil judicial complaint. The only time that permanent injunctive relief might not be sought as part of a civil judicial enforcement action is where the violations are purely historical and the EPA has no reason to believe that they are of a continuing or repetitive nature. Of course, in most instances, the Agency will assume that the continued operation of the business creates the risk of future violations.

Given the nature of injunction actions brought by the EPA (i.e., preliminary injunctions are generally sought to abate an activity or course of conduct immediately and, when entered, have the equivalent effect of a “permanent” injunction), few permanent injunctions are actually entered by the courts as a result of a full trial on the merits. Modified injunctions, consent decrees, or settlements are often agreed to between the parties prior to trial and sometimes after a preliminary injunction is issued.

§ 9:166 EPA Procedures for Seeking Injunctions

The EPA’s decision to commence a civil judicial action requires coordination and concurrence among EPA’s headquarters, its appropriate Regional Office, the DOJ, and the appropriate U.S. Attorney’s Office. Accordingly, the decision whether to seek an injunction and how aggressively to pursue injunctive relief (i.e., what type of injunction should be sought) involves numerous strategic considerations among those entities. When the EPA believes that an injunction is appropriate, it prepares the case for referral to the DOJ in the same manner as it prepares any other case. Indeed, every civil judicial case that is filed includes requests for injunctive relief, most often combined with requests for penalties. Such requests for injunctive relief, at the very least, seek to prohibit continued violations of the applicable statute and regulations.¹

This process may be expedited when the EPA seeks temporary or preliminary injunctive relief. More often than not, the EPA has discovered an ongoing violation during an inspection and is unable to resolve it using administrative mechanisms. Injunctions are sought, for example, in situations in which there is disagreement regarding whether the condition or conduct in question constitutes a violation of a regulation or statute. If the EPA Regional Office believes that a violation is ongoing, and that there may be some adverse environmental consequences, it will contact the DOJ immediately, and together they may prepare an enforcement action seeking preliminary injunctive relief. Involving the DOJ attorney earlier puts the case on an expedited review process. Instead of taking weeks or months, as most cases do, it is possible that an action seeking injunctive relief may be filed in a matter of days.

Agency enforcement actions may also be dictated solely by drafting anomalies among the various environmental laws. For example, due to peculiarities of legislative draftsmanship, the Agency may not assess monetary penalties in federal court under the Toxic Substances Control Act or the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”).² Accordingly, the Agency must bring actions for immediate or permanent injunctive relief in federal court, but assess civil penalties for the

²Standard Oil Co. of Tex. v. Lopeno Gas Co., 240 F.2d 504, 510 (5th Cir. 1957) (trial court did not err in granting permanent injunction to restrain defendant from committing a breach of the contract, notwithstanding that plaintiff had only applied for a preliminary injunction).

[Section 9:166]

¹The general process of preparing a case is described in Part II.

²Compare 15 U.S.C. § 2615(a)(2)(A) (“A civil penalty for a violation. . . of this title shall be assessed by the Administrator. . . .”) with 15 U.S.C. § 2616(a)(1)(A) (“The district courts of the United

violations associated with the injunctive case in a parallel administrative action.

§ 9:167 Judicial Standards for the Granting of Injunctions

The EPA only has authority to seek injunctive relief where a statute so provides. With the exception of Emergency Planning and Community Right-to-Know Act ("EPCRA") and FIFRA, each of the major federal environmental statutes contains express provisions authorizing the Administrator to seek injunctive relief for violations of the statute's regulatory provisions.¹ EPCRA does contain a provision allowing the EPA to seek equitable relief (e.g., injunctions) to compel compliance with certain emergency planning and response provisions of the Act.² FIFRA authorizes the Administrator to seek other specific remedies.³

Injunctions can become a primary equitable means of enforcement in situations where (1) there is perceived to be an imminent threat to the environment or to the public health, welfare, or safety, and the force of a court order is considered necessary to compel action or the ceasing of action on the part of the alleged violator;⁴ (2) the alleged violator has ignored prior requests, notices, or administrative orders, including requests for access to a facility;⁵ (3) the alleged violator has shown an unwillingness to correct alleged violations such that the violations have become chronic or long-standing; or (4) the alleged violator is perceived to be acting with some degree of bad intent, although not enough to justify criminal prosecution or to meet the burden of proof necessary to sustain a criminal conviction.⁶ Furthermore, a request for injunctive relief is an effective means of upwardly leveraging the EPA's bargaining power with alleged environmental violators. Thus, one or more counts seeking such relief are almost always included in a civil judicial complaint filed by the EPA. A consent decree containing injunctive provisions often results from the filing of a civil judicial action by the EPA.⁷

Courts typically view an injunction as an extraordinary remedy that should not be lightly granted. However, in environmental litigation brought by or on behalf of EPA, courts are less reluctant to enter and enforce an injunction than when this relief is sought by private parties. In fact, most federal district courts apply the traditional requirements for injunctive relief less rigorously in cases involving environmental statutes than in other areas of the law.⁸ Moreover, as previously noted, since the vast majority of its enforcement actions are administrative rather

States shall have jurisdiction over civil actions to . . . restrain any violation of. . . this title.").

[Section 9:167]

¹See §§ 9:185 to 9:188 and §§ 9:190 to 9:192.

²See § 9:190.

³See § 9:189.

⁴See *Cerro Metal Products v. Marshall*, 620 F.2d 964, 973, 8 O.S.H. Cas. (BNA) 1196, 1980 O.S.H. Dec. (CCH) P 24411, 29 Fed. R. Serv. 2d 828 (3d Cir. 1980).

⁵See § 9:73.

⁶See *Llewelyn v. Oakland County Prosecutor's Office*, 402 F. Supp. 1379, 1390 (E.D. Mich. 1975). At common law, injunctions generally were not available to restrain violation of a criminal statute. See *Bass Anglers Sportsman's Soc. of America v. Scholze Tannery, Inc.*, 329 F. Supp. 339, 345, 2 Env't. Rep. Cas. (BNA) 1771, 1 Env'tl. L. Rep. 20359 (E.D. Tenn. 1971). This follows both from the concept that equity is not available when there is an adequate remedy at law and that criminal defendants are entitled to a trial by jury and other procedural safeguards. *Id.* At the same time, the fact that a nuisance might also be a crime does not preclude an injunction restraining the nuisance. *U.S. v. Republic Steel Corp.*, 362 U.S. 482, 491-92, 80 S. Ct. 884, 4 L. Ed. 2d 903, 1 Env't. Rep. Cas. (BNA) 1022, 1961 A.M.C. 545 (1960). This exception has been critical to the enforcement of environmental statutes.

⁷See § 9:179.

⁸See § 9:171.

than judicial, the EPA does not seek judicial intervention by means of a request for injunctive relief as a matter of course. Accordingly, although the requirements for the granting of injunctive relief under the federal environmental statutes are generally the same as those for the granting of injunctive relief in other civil actions, a court is more likely to grant relief in the environmental context.⁹ Thus, the EPA often has a distinct advantage over private sector litigants in obtaining and enforcing an injunction.

Unless modified by the statute itself, the standards for injunctive relief under the federal environmental statutes are equivalent to those for injunctions in all other civil actions.¹⁰ For the EPA to obtain an injunction under an environmental statute, it must establish the following elements: (1) the defendant violated the statute; (2) the threat of irreparable harm to the environment exists if the defendant's action or inaction is not enjoined; (3) the legal remedies (such as monetary penalties) are inadequate to prevent the harm threatened; and (4) the balancing of the defendant's interest, the plaintiff's interest, and the public's interest favors granting of the injunction.¹¹ Exceptions to this general rule exist with respect to certain environmental statutes.¹²

§ 9:168 Likelihood of Success on the Merits: Violation of the Statute or Regulation

As described above, preliminary injunctions require the defendant to act or refrain from acting until trial, while permanent injunctions remain permanently in force after trial, usually for a specific time period.¹ The elements required to obtain each differ only in that the EPA must show actual success on the merits for a permanent injunction as opposed to a "likelihood" of success on the merits for a preliminary injunction. In practice, if the EPA demonstrates to the court's satisfaction that the defendant has violated the statute or regulation at the preliminary injunction stage, the defendant generally can assume that it has lost, or will almost certainly lose, on the merits at trial.

With regard to preliminary and permanent injunctions, the EPA establishes "success on the merits" (or a likelihood thereof) by showing that a violation of the statute or regulation has probably occurred. The EPA typically attempts to meet this requirement by presenting the EPA documentation of the defendant's specific violations and of the defendant's failure to comply with EPA administrative orders.² In addition, environmental statutory provisions granting the Administrator "emergency powers" authorize the Administrator to seek injunctive relief when actions not specifically prohibited by the statute pose an imminent threat to the environment or public health.³ In these situations, "success on the merits" apparently requires the EPA to prove the existence of the imminent hazard as defined by the

⁹See §§ 9:168 to 9:171.

¹⁰See *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 312–13, 102 S. Ct. 1798, 72 L. Ed. 2d 91, 17 Env't. Rep. Cas. (BNA) 1217, 12 Env'tl. L. Rep. 20538 (1982).

¹¹*Weinberger v. Romero-Barcelo*, 456 U.S. 305, 312, 102 S. Ct. 1798, 72 L. Ed. 2d 91, 17 Env't. Rep. Cas. (BNA) 1217, 12 Env'tl. L. Rep. 20538 (1982); *Amoco Production Co. v. Village of Gambell, AK*, 480 U.S. 531, 541–43, 107 S. Ct. 1396, 94 L. Ed. 2d 542, 17 Env'tl. L. Rep. 20574 (1987).

¹²These exceptions are discussed at § 9:171.

[Section 9:168]

¹See § 9:164 (preliminary injunctions) and § 9:165 (permanent injunctions).

²See *U.S. v. Tzavah Urban Renewal Corp.*, 696 F. Supp. 1013, 1021–22, 19 Env'tl. L. Rep. 20351 (D.N.J. 1988).

³See, e.g., 15 U.S.C. § 2606 ("Imminent hazards" under the Toxic Substances Control Act); 33 U.S.C. § 1364 ("Imminent hazards" under the Clean Water Act); 42 U.S.C. § 6973 ("Imminent hazard"

particular emergency powers provision.

§ 9:169 Threat of Irreparable Harm and Inadequacy of Legal Remedies

Even if the EPA has proven that the defendant's activity is in violation of an environmental statutory provision, it must still establish that allowing the defendant to continue the activity would create a threat of irreparable harm. Proving the threat of irreparable harm requires the EPA to show that the harm will likely occur, despite the imposition of legal remedies, if the defendant continues its activities.¹ Thus, the required showing of the inadequacy of legal remedies is intimately related to irreparable harm.

To establish irreparable harm and the inadequacy of legal remedies, the EPA must show that the violation is not merely a technical one and that violations will probably continue unless the defendant's activity is enjoined (halted). The U.S. Supreme Court has indicated that, absent expressed congressional intent otherwise, irreparable harm will not be presumed upon every violation of a federal environmental statute in actions for injunctive relief.² Presuming irreparable harm from every technical violation of the statute would improperly focus on procedural form rather than the statute's underlying policy.³ However, the Supreme Court and the federal district courts have acknowledged that "[e]nvironmental injury, by its very nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, i.e., irreparable."⁴

For instance, the Clean Water Act ("CWA") permit system serves the underlying substantive policy of reducing water pollution by regulating effluent discharge through reduction schedules and permitting. Therefore, a violation of CWA permit effluent standards is strong evidence of irreparable harm.⁵ In contrast, noncompliance with CWA monitoring and testing requirements may not directly threaten irreparable harm to the environment if the defendant is otherwise in substantial compliance with the CWA effluent guidelines.⁶

Likewise, one court held that the violation of plant closure requirements under the Resource Conservation and Recovery Act ("RCRA") posed a threat of irreparable harm to the environment, while violations of RCRA's financial assurances requirements did not.⁷ Thus, absent a showing of the violation's interference with the essential substantive concerns addressed by RCRA, a technical violation should not amount to a threat of irreparable harm as an element for the granting of an injunction.

under the RCRA); 42 U.S.C. § 7603 ("Emergency powers" under the Clean Air Act).

[Section 9:169]

¹See *Amoco Prod. Co.*, 480 U.S. at 542, 543.

²*Amoco Prod. Co.*, 480 U.S. at 544–45.

³*Amoco Prod. Co.*, 480 U.S. at 544.

⁴*Amoco Prod. Co.*, 480 U.S. at 545.

⁵See *Public Interest Research Group of New Jersey v. Yates Industries, Inc.*, 757 F. Supp. 438, 454, 33 Env't. Rep. Cas. (BNA) 1142, 21 Env'tl. L. Rep. 20966 (D.N.J. 1991) (citing *Public Interest Research Group of New Jersey, Inc. v. Top Notch Metal Finishing Co., Inc.*, 26 Env't. Rep. Cas. (BNA) 2012, 1987 WL 44393, 26 (D.N.J. 1987)).

⁶See *Public Interest Research Group of New Jersey v. Yates Industries, Inc.*, 757 F. Supp. 438, 454, 33 Env't. Rep. Cas. (BNA) 1142, 21 Env'tl. L. Rep. 20966 (D.N.J. 1991) (citing *Public Interest Research Group of New Jersey, Inc. v. Top Notch Metal Finishing Co., Inc.*, 26 Env't. Rep. Cas. (BNA) 2012, 1987 WL 44393, 26 (D.N.J. 1987)).

⁷See *U.S. v. Production Plated Plastics, Inc.*, 762 F. Supp. 722, 729–32, 33 Env't. Rep. Cas. (BNA) 1021, 21 Env'tl. L. Rep. 21214 (W.D. Mich. 1991), opinion adopted, 955 F.2d 45, 35 Env't. Rep. Cas. (BNA) 1415, 22 Env'tl. L. Rep. 20899 (6th Cir. 1992).

The EPA often tries to minimize its burden by trying to use the likelihood of the existence of a violation to establish irreparable harm. Indeed, it is unclear what degree of specificity is required for the EPA to establish the threat of irreparable harm. At least one court has held that the EPA need not establish that the activity will cause measurable harm.⁸ However, a defendant should present evidence to demonstrate that no specific, measurable harm can be established, especially given the wide variations in a particular judge's willingness to grant injunctive relief.

In addition to demonstrating that a defendant has violated the substantive provisions of an environmental statute, many courts require the EPA to establish that the threat of future violations cannot be reduced or eliminated unless the defendant's activities cease. Those courts reason that the threat of irreparable harm warrants the imposition of an injunction only when the threat arises out of the likelihood of ongoing violations of the environmental statute.⁹ If a defendant has violated a substantive provision of a federal environmental statute, but is presently in compliance with the statute's requirements and has taken actions to prevent future violations, then the threat of irreparable harm is diminished.¹⁰

On the other hand, in situations where a defendant has a long-standing history of noncompliance, is presently in violation, or where there is evidence that present compliance is only a temporary response to the filing of the action against the defendant, the EPA will argue that there is a likelihood of future noncompliance. One court has accepted that argument and stated that the likelihood of future noncompliance, in turn, establishes the existence of a threat of irreparable harm.¹¹

These issues relating to irreparable harm are largely unsettled, and often provide effective defenses in injunction proceedings.

§ 9:170 Balancing of the Equities

Finally, the EPA must demonstrate that a balancing of equities ("fairness") favors the granting of the injunction.¹ In considering this factor, courts will consider the relative weight of the government's interest in obtaining the injunction, the defendant's interest in avoiding the injunction, and the general public interest in the granting or denial of the injunction.² The specific factors they have considered are varied, but include: the technical feasibility of compliance;³ the financial feasibility of compliance, its effect on the future of the operation, and the importance of the operation;⁴ the existence or nonexistence of a threat to public health;⁵ the ability of

⁸See Pub. Interest Research Grp, 757 F. Supp. at 454 (citing *Pirg v. Powell Duffryn Terminals, Inc.*, 720 F. Supp. 1158, 1167, 30 Env't. Rep. Cas. (BNA) 1201, 20 Env'tl. L. Rep. 20152 (D.N.J. 1989)).

⁹See, e.g., *U.S. v. SCM Corp.*, 667 F. Supp. 1110, 1128–29, 26 Env't. Rep. Cas. (BNA) 1586, 18 Env'tl. L. Rep. 20073 (D. Md. 1987).

¹⁰See, e.g., *U.S. v. SCM Corp.*, 667 F. Supp. 1110, 1128–29, 26 Env't. Rep. Cas. (BNA) 1586, 18 Env'tl. L. Rep. 20073 (D. Md. 1987).

¹¹See *U.S. v. Tzavah Urban Renewal Corp.*, 696 F. Supp. 1013, 1022–23, 19 Env'tl. L. Rep. 20351 (D.N.J. 1988).

[Section 9:170]

¹See *Amoco*, 480 U.S. at 542.

²See, e.g., *Pub. Interest Research Grp.*, 757 F. Supp. at 453, 455.

³See *Friends of the Earth v. Carey*, 535 F.2d 165, 8 Env't. Rep. Cas. (BNA) 1933, 6 Env'tl. L. Rep. 20488 (2d Cir. 1976).

⁴See *State Water Control Bd. v. Train*, 559 F.2d 921, 925–26, 10 Env't. Rep. Cas. (BNA) 1321, 7 Env'tl. L. Rep. 20571 (4th Cir. 1977); *U.S. v. Wayne County Dept. of Health-Air Pollution Control Div.*, 571 F. Supp. 90, 92 (E.D. Mich. 1983) (considering impact on innocent workers' jobs).

⁵See *Pymatuning Water Shed Citizens for a Hygienic Environment v. Eaton*, 506 F. Supp. 902,

the court to assign responsibility for the underlying violation;⁶ the level of interference with local government administration;⁷ and whether the violation was caused in part by reliance on government action or inaction.⁸

As a practical matter, a balancing of equities is often ignored because the court will have determined the disposition of the injunction request under the other requirements. If the court is convinced there is no violation nor any threat of irreparable harm, a balancing of the equities is not necessary and the injunction will be denied. On the other hand, once a court is convinced that there is a violation and the threat of irreparable harm exists, it is unlikely to deny a request for an injunction on a balancing of equities analysis. In balancing the equities, many courts have given controlling weight to the EPA's interest in securing compliance with the environmental statutes and protection of the environment, and the public's interest in strict enforcement of statutes that the legislature promulgated to protect the environment and human health.⁹

With respect to the defendant's interest in continuing its activity or inactivity unhindered by an injunction, courts may consider whether the defendant was relying in good faith on false information when it violated the environmental statute. In such situations, enjoining the defendant's activities after it has come into compliance with the correct standards may be inequitable.¹⁰ On the other hand, it does not appear that courts will typically consider general financial difficulties created by an injunction to deter the granting of the injunction.¹¹ One may be able to distinguish financial impact on a company from economic impact on employees of that company if an injunction is granted.¹²

§ 9:171 Exceptions to the General Standards for Obtaining Injunctions

When Congress enacts a statute that simply authorizes courts to issue injunc-

909, 14 Env't. Rep. Cas. (BNA) 2094, 11 Env'tl. L. Rep. 20498 (W.D. Pa. 1980) (citing *Reserve Mining Co. v. Environmental Protection Agency*, 514 F.2d 492, 537-538, 7 Env't. Rep. Cas. (BNA) 1618, 7 Env't. Rep. Cas. (BNA) 1782, 19 Fed. R. Serv. 2d 1406, 5 Env'tl. L. Rep. 20596, 29 A.L.R. Fed. 73 (8th Cir. 1975), order modified, 529 F.2d 181, 8 Env't. Rep. Cas. (BNA) 1511, 6 Env'tl. L. Rep. 20432 (8th Cir. 1976)) (finding less urgency where no health risks proved).

⁶See *U.S. v. Vertac Chemical Corp.*, 489 F. Supp. 870, 877, 14 Env't. Rep. Cas. (BNA) 1587, 10 Env'tl. L. Rep. 20709 (E.D. Ark. 1980) (inability of the court at preliminary stage to assign responsibility for the violation between two responsible parties weighed against injunction).

⁷See *Pymatuning*, 506 F. Supp. at 908-09.

⁸See *U.S. v. Pennsylvania Indus. Chemical Corp.*, 411 U.S. 655, 670-75, 93 S. Ct. 1804, 36 L. Ed. 2d 567, 5 Env't. Rep. Cas. (BNA) 1332, 1973 A.M.C. 1688, 100 Pub. Util. Rep. 3d (PUR) 163, 3 Env'tl. L. Rep. 20401 (1973) (error for District Court to refuse to allow manufacturer to present evidence that it had been affirmatively misled by Army Corps of Engineers); *U.S. v. Kennebec Log Driving Co.*, 491 F.2d 562, 571, 6 Env't. Rep. Cas. (BNA) 1049, 4 Env'tl. L. Rep. 20047 (1st Cir. 1973) (reliance on 75 years of government inaction a factor to be considered in fashioning relief).

⁹For a discussion of how the courts balance the equities in cases involving environmental harm, see VII. § 9:171.

¹⁰See *Public Interest Research Group of New Jersey v. Yates Industries, Inc.*, 757 F. Supp. 438, 454, 33 Env't. Rep. Cas. (BNA) 1142, 21 Env'tl. L. Rep. 20966 (D.N.J. 1991).

¹¹See, e.g., *U.S. v. Midway Heights County Water Dist.*, 695 F. Supp. 1072, 1077, 27 Env't. Rep. Cas. (BNA) 2183, 27 Env't. Rep. Cas. (BNA) 2185, 19 Env'tl. L. Rep. 20142 (E.D. Cal. 1988) (citing *Long v. Robinson*, 432 F.2d 977, 980-981 (4th Cir. 1970)); *State Water Control Bd. v. Train*, 559 F.2d 921, 923-25, 10 Env't. Rep. Cas. (BNA) 1321, 7 Env'tl. L. Rep. 20571 (4th Cir. 1977) (failure of government to allocate funds for facilitating compliance with effluent limitations did not excuse noncompliance); see also *Union Elec. Co. v. E.P.A.*, 427 U.S. 246, 257-58, 96 S. Ct. 2518, 49 L. Ed. 2d 474, 8 Env't. Rep. Cas. (BNA) 2143, 6 Env'tl. L. Rep. 20570 (1976) (criterion of Clean Air Act that primary air quality standards be met as expeditiously as practicable does not require consideration of claims of economic and technological infeasibility).

¹²See, e.g., *U.S. v. Wayne County Dept. of Health-Air Pollution Control Div.*, 571 F. Supp. 90, 92 (E.D. Mich. 1983) (considering impact on innocent workers' jobs).

tions, Congress has not thereby affected or directed how courts are to exercise their traditional discretion in deciding whether and how to issue such injunctions. If the statute authorizing the injunction does not direct the court's discretion regarding how the injunction is to be issued, the traditional test will be applied.¹

On the other hand, Congress may explicitly affect or direct how courts exercise their discretion. Indeed, it may remove the discretion altogether and direct that injunctions be issued under particular circumstances, but it must do so explicitly and clearly. In such cases, the court may not be required to determine the existence of a threat of irreparable harm or to balance the equities.² In *Tennessee Valley Authority v. Hill*, the U.S. Supreme Court interpreted language in Section 7 of the Endangered Species Act to require that courts enter injunctive relief upon finding that the Act has been violated.³ Similarly, the U.S. Court of Appeals for the Sixth Circuit upheld an injunction granted to the EPA under the Clean Air Act ("CAA") for which the trial court required no evidence of irreparable harm or inadequacy of legal remedies.⁴ At the same time, if the violation thwarts the very purpose of the statute, a court must have very good reasons for denying an injunction.⁵ A defendant will always prefer that the court's traditional discretionary powers are intact, where the alternative makes issuance of an injunction easier.

While the Supreme Court has rejected the legal presumption that violation of an environmental statute causes irreparable harm, something close to a presumption exists when the violation causes environmental harm rather than procedural irregularity.⁶ In *Gambell*, the Supreme Court rejected the holding of the Court of Appeals that failure of an agency to satisfy a statutory requirement to fully evaluate the environmental impact of its proposed actions raises a presumption of irreparable harm.⁷ Yet in the same opinion, the Court acknowledged something close to a presumption of irreparable harm from violations of environmental statutes.⁸ This is based upon the Court's acknowledgement that, by enacting the environmental

[Section 9:171]

¹See *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 308–09, 102 S. Ct. 1798, 72 L. Ed. 2d 91, 17 Env't. Rep. Cas. (BNA) 1217, 12 Env'tl. L. Rep. 20538 (1982).

²See *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 194, 98 S. Ct. 2279, 57 L. Ed. 2d 117, 11 Env't. Rep. Cas. (BNA) 1705, 8 Env'tl. L. Rep. 20513 (1978) (noting that "Congress has spoken" and that "the balance has been struck" in favor of protecting species under the Endangered Species Act).

³*Id.* at 173–74.

⁴See *U.S. v. City of Painesville, Ohio*, 644 F.2d 1186, 1193–94, 15 Env't. Rep. Cas. (BNA) 1849, 11 Env'tl. L. Rep. 20630 (6th Cir. 1981).

⁵See *Amoco Production Co. v. Village of Gambell, AK*, 480 U.S. 531, 542, 107 S. Ct. 1396, 94 L. Ed. 2d 542, 17 Env'tl. L. Rep. 20574 (1987); see also *U.S. v. Production Plated Plastics, Inc.*, 762 F. Supp. 722, 729, 33 Env't. Rep. Cas. (BNA) 1021, 21 Env'tl. L. Rep. 21214 (W.D. Mich. 1991), opinion adopted, 955 F.2d 45, 35 Env't. Rep. Cas. (BNA) 1415, 22 Env'tl. L. Rep. 20899 (6th Cir. 1992) (adopting opinion of district court) ("Following the Supreme Court's decision in *Gambell*, if the purpose of the legislation is thwarted by failure to comply, and the legislation specifically authorizes injunctive relief, no finding of irreparable injury or balancing of the equities need be made.").

⁶See *Romero-Barcelo*, 456 U.S. at 313–14 (distinguishing between the necessity of injunctive relief for violations that jeopardize the purpose of the statute (in the case of the CWA, the preservation of water quality), and the lack of necessity of such relief for violations of the means chosen by Congress to achieve such purpose). The Court's reasoning, that injunctions should be granted when a violation defeats the purposes of the implementing Act, has been applied in other contexts. See *Shadid v. Fleming*, 160 F.2d 752, 753 (C.C.A. 10th Cir. 1947) (defeating purpose of Emergency Price Control Act); see also *Atchison, T. and S. F. Ry. Co. v. Lennen*, 640 F.2d 255, 258–59 (10th Cir. 1981) (citing *Shadid*, 160 F.2d at 753) (collection of property taxes).

⁷*Amoco*, 480 U.S. at 545.

⁸*Amoco*, 480 U.S. at 545 ("Environmental injury, by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, i.e., irreparable. If such injury is sufficiently likely, therefore, the balance of harms will usually favor the issuance of an injunction to

statutes, Congress established the public interest in a clean environment.

Citing *Gambell* and other precedent, the courts of appeals have given great weight to the public's interest in a clean environment when considering whether to grant injunctive relief from environmental harms. An opinion adopted by the Sixth Circuit has summarized its reading of the law as the following:

[T]he traditional requirements for injunctive relief are less rigid when environmental legislation is at issue. Following the Supreme Court's decision in *Gambell*, if the purpose of the legislation is thwarted by failure to comply, and the legislation specifically authorizes injunctive relief, no finding of irreparable injury or balancing of the equities need be made. Even if these traditional prerequisites are considered by the court, equitable relief will often issue given that an environmental injury is usually irreparable, plaintiffs rarely have an adequate remedy at law, and special weight must be given to the public interest in balancing the equities.⁹

The Seventh Circuit has noted that an injunction could issue in environmental cases even without the traditional balancing of equities where the defendant's conduct had been willful or where the plaintiff is a sovereign or "private attorney general" and the complained of activity may endanger public health.¹⁰ Other decisions have reached similar results regarding the weight to be given to the public interest in a clean environment.¹¹

§ 9:172 Scope of Injunctions

Each of the federal environmental statutes contains provisions describing when the EPA is authorized to bring a civil action for injunctions. However, they do not necessarily address the allowable scope of an injunction, that is, how far the court may go in ordering a defendant to act or cease acting in a certain way. For example, whereas Section 309(b) of the CWA¹ authorizes "appropriate" injunctive relief, Section 204(b) of the CAA² authorizes injunctions to "restrain" violators of Title II of the Act. These differences in statutory language may directly impact the scope of the injunction that may be issued by the court. Still other statutes are silent, in which case the federal district courts are left to determine the proper scope of injunctive relief by evaluating the threat of harm and the interests of the parties on a case-by-case basis and placing those considerations in the context of the federal

protect the environment.").

⁹*Prod. Plated Plastics, Inc.*, 762 F. Supp. at 729; see also *U.S. v. Power Engineering Co.*, 10 F. Supp. 2d 1145, 1149, 28 Env'tl. L. Rep. 21325 (D. Colo. 1998), order aff'd, 191 F.3d 1224, 49 Env't. Rep. Cas. (BNA) 1097, 30 Env'tl. L. Rep. 20067 (10th Cir. 1999).

¹⁰*U.S. E.P.A. v. Environmental Waste Control, Inc.*, 917 F.2d 327, 21, 32 Env't. Rep. Cas. (BNA) 1148, 21 Env'tl. L. Rep. 20007 (7th Cir. 1990) (citing *Environmental Defense Fund, Inc. v. Lamphier*, 714 F.2d 331, 337-38, 20 Env't. Rep. Cas. (BNA) 1780, 13 Fed. R. Evid. Serv. 1787, 13 Env'tl. L. Rep. 21094, 71 A.L.R. Fed. 166 (4th Cir. 1983)).

¹¹Citing *Romero-Barcelo*, the court in *Power Engineering* observed that "[n]ormally, the most important equitable factor is irreparable harm. When a case is brought pursuant to an environmental or public health statute, however, the primary focus shifts from irreparable harm to concern for the general public interest." Although the court noted this, a plaintiff still had to demonstrate irreparable harm absent express congressional intent to the contrary. *Power Eng'g Co.*, 10 F. Supp. 2d at 1149. See also *U.S. v. Bethlehem Steel Corp.*, 38 F.3d 862, 868, 39 Env't. Rep. Cas. (BNA) 1449, 24 Env'tl. L. Rep. 21499 (7th Cir. 1994); *Environmental Defense Fund, Inc. v. Lamphier*, 714 F.2d 331, 338, 20 Env't. Rep. Cas. (BNA) 1780, 13 Fed. R. Evid. Serv. 1787, 13 Env'tl. L. Rep. 21094, 71 A.L.R. Fed. 166 (4th Cir. 1983).

[Section 9:172]

¹33 U.S.C. § 1319(b).

²42 U.S.C. § 7523(b).

court's proper role and authority under the United States Constitution.³

§ 9:173 Necessary and Appropriate Relief

In the case of a violation of an environmental statute, the U.S. Supreme Court has held that the scope of an injunction should be to grant relief “necessary to secure prompt compliance with the [statute].”¹ Thus, in defending an injunction action, if the EPA has been able to establish the requirements for entry of an injunction, the alleged violator should focus on whether the breadth of the terms requested by the EPA is necessary to secure compliance with the statute.

Courts operate with broad discretion when fashioning equitable relief.² Whether an injunction is overbroad will depend upon the facts of each particular case.³ When fashioning injunctive relief, a court may balance the benefits conferred by a particular pollution source against the hazards that the source creates.⁴ The factors considered by the court in *Vertac* were (1) the nature of the anticipated harm caused by the source, (2) the burden that the injunction would place on the facility and its employees, (3) the facility's financial capacity to convert to alternative methods of operation, and (4) the margin of public safety.⁵

Several environmental statutes specifically authorize “appropriate” injunctive relief. For instance, the enforcement sections in CWA and RCRA authorize “appropriate” relief, which could include restoration from damage caused by violation of the Acts.⁶ Appropriate injunctive relief under the federal environmental statutes has been construed to permit issuance of injunctions to ensure present and future compliance with the statute, as well as to remedy the effects of past violations. Injunctions are particularly common with regards to violation of filling and dredging permits under the CWA Section 404, where courts have enjoined the violations and ordered the restoration of the wetlands that the defendant's activities destroyed.⁷

§ 9:174 Monetary Aspects of Injunctive Relief

Because injunctive relief under the environmental statutes may require both continued compliance with the statutory requirements and actions to remedy the effects of past violations, injunctions are not entirely without monetary elements.

³See *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 334–35, 102 S. Ct. 1798, 72 L. Ed. 2d 91, 17 Env't. Rep. Cas. (BNA) 1217, 12 Env'tl. L. Rep. 20538 (1982).

[Section 9:173]

¹*Weinberger v. Romero-Barcelo*, 456 U.S. 305, 320, 102 S. Ct. 1798, 72 L. Ed. 2d 91, 17 Env't. Rep. Cas. (BNA) 1217, 12 Env'tl. L. Rep. 20538 (1982).

²See *Lacks v. Fahmi*, 623 F.2d 254, 256 (2d Cir. 1980).

³See *Securities and Exchange Commission v. Hillsborough Inv. Corp.*, 176 F. Supp. 789, 790 (D.N.H. 1959), judgment aff'd, 276 F.2d 665 (1st Cir. 1960) (“the breadth of the injunction must depend upon the circumstances of each case”); see also *Vuitton et Fils S. A. v. Carousel Handbags*, 592 F.2d 126, 130, 26 Fed. R. Serv. 2d 1309 (2d Cir. 1979) (noting that whether one not named in an injunctive decree may nevertheless be bound by it depends on the facts of each case).

⁴See, e.g., *U.S. v. Vertac Chemical Corp.*, 489 F. Supp. 870, 886, 14 Env't. Rep. Cas. (BNA) 1587, 10 Env'tl. L. Rep. 20709 (E.D. Ark. 1980).

⁵See, e.g., *U.S. v. Vertac Chemical Corp.*, 489 F. Supp. 870, 886, 14 Env't. Rep. Cas. (BNA) 1587, 10 Env'tl. L. Rep. 20709 (E.D. Ark. 1980).

⁶For a description of the relief which has been granted under each of these statutes, see VII. § 9:185 (RCRA) and VII. § 9:186 (CWA).

⁷See *U.S. v. Pozsgai*, 999 F.2d 719, 23, 23 Env'tl. L. Rep. 21012 (3d Cir. 1993); *Hobbs v. U.S.*, 947 F.2d 941, 34 Env't. Rep. Cas. (BNA) 1642, 22 Env'tl. L. Rep. 20331 (4th Cir. 1991); *U.S. v. Cumberland Farms of Connecticut, Inc.*, 826 F.2d 1151, 1164–65, 26 Env't. Rep. Cas. (BNA) 1393, 17 Env'tl. L. Rep. 21270 (1st Cir. 1987); see also *U.S. v. Lambert*, 589 F. Supp. 366, 374, 21 Env't. Rep. Cas. (BNA) 1138, 13 Env'tl. L. Rep. 20489, 14 Env'tl. L. Rep. 20588 (M.D. Fla. 1984).

Indeed, the value of penalties assessed by the EPA in 2015 (\$200 million) was far less than the value of estimated injunctive relief (\$7.3 billion).¹ First, there is always a cost incurred by the defendant to comply with an injunction (although, the substantial cost assumed by a defendant to achieve compliance with the statute or remedy past violations does not mean that the injunction ceases to be an equitable remedy).² Second, courts have granted injunctions requiring a defendant to pay the cost of implementing a study or program. For example, the U.S. Court of Appeals for the Third Circuit noted that an injunction requiring a defendant to pay the cost of implementing a program to study the health threat of contamination was an “appropriate” form of equitable relief under Section 1431 (“Emergency Powers”) of the Safe Drinking Water Act (“SDWA”).³

§ 9:175 Duration of an Injunction

The nature and duration of each injunction will vary depending upon the circumstances of the particular case and the court’s perceived need to ensure future compliance with each statute. Generally, permanent injunctions will have a specific time frame attached to them.¹ Continuance of the injunction beyond that time frame would require action by the United States. On the other hand, notwithstanding the time frame contained in an injunction, once compliance has been achieved, parties subject to the injunction may try to have it dissolved by filing a motion with the court.²

§ 9:176 Supplemental Environmental Projects (“SEPs”)

Injunctions may do more than just halt present violations, prevent future ones, and remedy the effects of past violations. In fact, one of the most common issues arising during negotiations for consent decrees is the scope of injunctive provisions, i.e., the extent to which the EPA will impose requirements beyond the nature of the violations at issue.

Supplemental Environmental Projects (“SEPs”) are environmentally beneficial projects that an alleged violator of a statute or regulation agrees to undertake, often in exchange for a partial mitigation of a civil penalty. SEPs are usually incorporated as part of an injunction and judicial consent decree, and often are considered to be a key part of injunctive provisions.¹

By definition, SEPs provide additional environmental benefits beyond those that

[Section 9:174]

¹EPA, ENFORCEMENT ANNUAL RESULTS NUMBERS AT A GLANCE FISCAL YEAR 2015 (Dec. 16, 2015), <http://www.epa.gov/enforcement/enforcement-annual-results-numbers-glance-fiscal-year-fy-2015>.

²See, e.g., U.S. v. Price, 688 F.2d 204, 211–12, 17 Env’t. Rep. Cas. (BNA) 2155, 12 Env’tl. L. Rep. 21020 (3d Cir. 1982) (citing Jaffee v. U.S., 592 F.2d 712 (3d Cir. 1979)).

³*Id.* at 214.

[Section 9:175]

¹See *Kaynard v. Mego Corp.*, 633 F.2d 1026, 1035, 105 L.R.R.M. (BNA) 2723, 89 Lab. Cas. (CCH) P 12292 (2d Cir. 1980) (noting that the Third Circuit had established a policy regarding the length of injunctions for violations of National Labor Relations Act, § 10(j), and urging lower courts to give “serious consideration” to imposing similar limits).

²See *Grubbs v. Bradley*, 821 F. Supp. 496, 498 (M.D. Tenn. 1993) (terminating court’s supervisory control of Tennessee prisons upon finding that conditions of confinement had sufficiently improved).

[Section 9:176]

¹The use of Supplemental Environmental Projects (“SEPs”) is guided by the EPA Supplemental Environmental Projects Policy 2015 Update. EPA, SUPPLEMENTAL ENVIRONMENTAL PROJECTS POLICY 2015 UPDATE (Mar. 10, 2015), <http://www.epa.gov/enforcement/2015-update-1998-us-epa-supplemental-environmental-projects-policy> [hereinafter *2015 SEP Policy*].

can normally be required by injunctive relief or that are not available in the statute the EPA is seeking to enforce.² SEPs typically include projects that go beyond the original violation(s) and often incorporate creative and innovative ideas into the order or decree. Notwithstanding that fact, the EPA's current policy requires it to ensure that a nexus exists between a SEP and the original violation, as discussed *infra*.

The EPA classifies SEPs in seven categories: public health, pollution prevention, pollution reduction, environmental restoration and protection, assessments and audits, environmental compliance promotion, and emergency planning and preparedness. Some of the approved SEP activities are narrowly defined for purposes of meeting SEP policy guidelines. For example, SEPs for studies may not be agreed to unless they include an accompanying commitment to implement the results.³ Defendants may have penalties mitigated for performance of a SEP in an amount no greater than 80% of the estimated cost of implementing the SEP.⁴

Although a SEP may reduce a civil penalty, it is the EPA's policy that the penalty must remain at a level that captures the defendant's economic benefit of noncompliance plus some appreciable portion of the gravity component of the penalty.⁵ Furthermore, the EPA takes the position that the penalty may not be reduced below the greater of (1) the economic benefit of noncompliance plus 10% of the Gravity Component or (2) 25% of the Gravity Component only.⁶

The EPA may approve a SEP if it furthers the Agency's mandate to clean up the environment and deter violations of the law. Accordingly, SEPs may be considered if:

- (1) the proposed SEP has a sufficient relationship ("nexus") between the violation and the proposed project;
- (2) the SEP does not inadvertently augment federal appropriations; and
- (3) the EPA does not directly control the funds set aside for the SEP nor control the precise manner in which the project is carried out.⁷

According to the EPA, a nexus exists between the violation and a SEP when the project remediates injury caused by the same pollutant at the same facility giving rise to the violation.⁸ The EPA does not allow for SEPs that are too far removed from the violator and the particular violation at issue.⁹ The existence of the nexus is critical because the EPA's settlement authority does not extend beyond statutorily authorized prosecutorial objectives.¹⁰

The EPA's enforcement program has made more of an effort to assess the dollar value of injunctive relief and has added sections to its annual national penalty report on the extent and type of supplemental environmental projects employed in

²*Id.* at 1.

³*Id.* at 17.

⁴*Id.* at 23–24.

⁵*Id.* at 21 ("In calculating an appropriate penalty, the EPA considers factors such as the economic benefit associated with the violations, the gravity or seriousness of the violations and the violator's prior history of noncompliance.").

⁶2015 SEP Policy, *supra* note 3, at 22. The "Gravity Component" is related to the seriousness of the harm. *Id.* at 21.

⁷*Id.* at 7–11.

⁸*Id.* at 8.

⁹2015 SEP Policy at 17–18.

¹⁰*See* Matter of CFTC—Donations Under Settlement Agreements, No. B-210210, 1983 WL 197623 (Sept. 14, 1983); *see also* Matter of Nuclear Regulatory Commission's Authority to Mitigate Civil Penalties, B-238419, 1990 WL 293769 (Oct. 9, 1990).

settlements. Between 2011 and 2015, the annual value of SEPs resulting from EPA enforcement actions ranged between \$17 and \$45 million.¹¹ In this period of time, the number of SEPs issued fluctuated between 100 and 124.¹² This represents a significant decline as, in 1992, the EPA negotiated 409 SEPs with a total value of \$50.1 million.¹³

Any defendant against whom the EPA has taken an enforcement action may propose to undertake a SEP at any time prior to resolution of the action, although it is ultimately within the EPA's discretion whether to accept the proposal.¹⁴ In determining whether to accept such a SEP proposal, the EPA uses the following factors:

- (1) significant, quantifiable benefits to public health and/or the environment;
- (2) environmental justice;
- (3) community input;
- (4) innovation;
- (5) multimedia impacts; and
- (6) pollution prevention.¹⁵

Defendants may not transfer their responsibility to ensure that an SEP is completed to any third party, nor may it simply fund the SEP activities which are actually carried out by a third party.¹⁶ Regulated entities must carefully consider the long-term effects of their willingness to agree to a SEP in enforcement cases. A provision that may not seem unduly onerous in one context could cause compliance problems in another. For instance, once the EPA has succeeded in getting an alleged violator to agree to a particular provision or SEP in one context, a court may be inclined to presume that the particular provision is fair and reasonable in another.

§ 9:177 Special Considerations When Faced With Injunction Proceedings

There are a number of special considerations available when faced with injunction proceedings. These considerations are discussed in §§ 9:178 to 9:184.

§ 9:178 Responses to a Complaint Seeking Injunctive Relief

Preliminary and permanent injunctions are sought by the filing of a complaint in federal district court.¹ Accordingly, the initial response by the defendant is often an answer to the complaint or an appropriate motion under the Federal Rules of Civil Procedure if the complaint is defective in some manner. The answer should respond to each allegation contained in the complaint and should set forth all defenses to the complaint.

A preliminary injunction request will cause the court to place the case on a “fast

¹¹See EPA, ENFORCEMENT ANNUAL RESULTS NUMBERS AT A GLANCE FISCAL YEAR (FY) 2015 (Dec. 16, 2015), <http://www.epa.gov/enforcement/enforcement-annual-results-numbers-glance-fiscal-year-fy-2015>.

¹²See EPA, ENFORCEMENT ANNUAL RESULTS NUMBERS AT A GLANCE FISCAL YEAR (FY) 2015 (Dec. 16, 2015), <http://www.epa.gov/enforcement/enforcement-annual-results-numbers-glance-fiscal-year-fy-2015>.

¹³EPA, ENFORCEMENT ACCOMPLISHMENTS REPORT FY 1992, EPA 230-R-93-001, 2-6 (April 1993).

¹⁴EPA, ENFORCEMENT ACCOMPLISHMENTS REPORT FY 1992, EPA 230-R-93-001, 2 (April 1993).

¹⁵EPA, ENFORCEMENT ACCOMPLISHMENTS REPORT FY 1992, EPA 230-R-93-001, 20–21 (April 1993).

¹⁶EPA, ENFORCEMENT ACCOMPLISHMENTS REPORT FY 1992, EPA 230-R-93-001, 26 (April 1993).

[Section 9:178]

¹See Fed. R. Civ. P. 65.

track” and to require a supporting memorandum for the request.² Once a memorandum in support of a motion for preliminary injunction has been filed on behalf of the EPA, the defendant will be required to respond with its opposing memorandum. These memoranda generally contain detailed expositions of each side’s argument and form the initial context within which the court must consider evidence and make its determination concerning the granting or denial of the requested relief. Once the memoranda are filed, the next step is to proceed to a hearing, often after a “pretrial” conference at which the court will explore the possibilities of settlement based on its understanding gleaned from the pleadings and supporting papers. Any discovery (the exchange of documents by both parties) must necessarily be conducted within the short period between the request and the hearing.

When only a permanent injunction has been requested, the case proceeds like any other civil action.³ It is generally not given any scheduling priority; accordingly, a discovery and pretrial schedule will be established and the parties will proceed to a trial on the merits unless a dispositive motion is granted by the court prior to trial or unless the case is settled.

§ 9:179 Judicial Consent Decrees

In many instances, an injunction action results in a judicial consent decree that is entered as an order of the court and that is enforceable by the court.

Although some of the terms of consent decrees are often negotiated and vary according to the circumstances of each case, some of the language proposed by the EPA in its consent decrees is standard language derived from the EPA’s internal policies developed in the context of particular statutory enforcement concerns. For example, the EPA’s policy on drafting consent decrees under RCRA and CERCLA contains standard provisions that routinely appear in consent decrees.¹ Standard provisions in such consent decrees include release and contribution protection; site access; stipulated penalties for noncompliance; scope of responsibility for clean-up, remediation, and reimbursement of the EPA’s costs; and covenants not to sue.² These policies are not legally binding on the Agency, and it is incorrect for the Agency to suggest that particular provisions of a proposed settlement are not negotiable for that reason.

§ 9:180 Releases Under Consent Decrees

In return for agreeing to the entry of a consent decree and complying with the terms of an injunction included in the decree, a defendant may be “released” from liability to the government for the claims asserted against it by the government. Under one statute, CERCLA, the EPA may also grant protection to the defendant against claims of third parties for the same violations.¹

The EPA’s policy under most of the environmental statutes is that releases are to

²For a description of the relevant procedures and strategic considerations, see § 9:164.

³For a description of permanent injunctions and strategic considerations, see § 9:165.

[Section 9:179]

¹See Memorandum from Courtney M. Price, Assistant Administrator for Enforcement and Compliance Monitoring, EPA, DRAFTING CONSENT DECREES IN HAZARDOUS WASTE IMMINENT HAZARD CASES (May 1, 1985).

²See Memorandum from Courtney M. Price, Assistant Administrator for Enforcement and Compliance Monitoring, EPA, DRAFTING CONSENT DECREES IN HAZARDOUS WASTE IMMINENT HAZARD CASES (May 1, 1985).

[Section 9:180]

¹Section 113(f) of CERCLA (42 U.S.C. § 9613), as well as certain provisions of Section 122 (42 U.S.C. § 9622), defines the effect of settlements on nonsettling parties.

be based upon information known to the EPA at the time of the settlement and are not to extend to undefined future violations or site conditions.² Furthermore, the EPA will grant releases from statutory liability only for statutes administered by the EPA and only for civil liability.³ It generally will not grant releases for common law or state law claims, unless the case is one in which there is a delegated state program being enforced by the EPA. If there are pending actions, particularly by state agencies, defendants should either ensure that their claims are merged in the federal judgment or, if separate state law claims are involved, should pursue the opportunity to resolve them as part of a global settlement.⁴

Historically, the EPA has viewed releases very narrowly. Its standard policy has been that releases, when granted, should be no broader than the causes of action asserted in the complaint.⁵ Accordingly, the EPA generally will not agree to any settlement that extends to potential EPA enforcement claims under any statute(s) outside of the program medium under which the case was brought (e.g., a CWA release in a CERCLA case, or a release in a CERCLA case under all statutes administered by the EPA).⁶

Notwithstanding the policy, recent emphasis on multimedia settlements may result in broader releases. In deciding whether to entertain a request for a multimedia release or covenant not to sue in an enforcement case, the EPA will consider, among other things, whether the settlement provides adequate consideration for a broader release, including whether the relief to be obtained under the settlement includes appropriate injunctive relief or penalties, or both, for any actual or potential violation under other media statutes.⁷ The EPA will also consider whether, after investigation, it can be determined that no cause of action exists under a statute the defendant wants to include in the release.⁸ Bankruptcy can also become a factor influencing the scope of releases from liability.

If the EPA believes the relief obtained through settlement is all it can obtain, a multimedia release or covenant not to sue can be considered.⁹ Such a settlement can only be achieved after each of the appropriate EPA officials, whether at regional or headquarters media offices, have concurred.¹⁰ In addition, in every civil judicial enforcement matter, approval by DOJ is required.

Obviously, the EPA will attempt to obtain a release that is the most favorable to it under the particular statute(s) involved. For example, in CERCLA actions, the EPA will generally give a "covenant not to sue" rather than an outright release. A covenant not to sue relates only to liability to the government and allows the EPA

²See Memorandum from James M. Strock, Assistant Administrator, to Regional Administrators et al., MULTI-MEDIA SETTLEMENTS OF ENFORCEMENT CLAIMS, at 2 (Feb. 6, 1990).

³Generally, a complete resolution by the federal government of an enforcement matter should preclude subsequent federal law actions by states or citizen groups for the same transactions.

⁴See *U.S. v. Jones & Laughlin Steel Corp.*, 804 F.2d 348, 17, 25 Env't. Rep. Cas. (BNA) 1221, 17 Env'tl. L. Rep. 20004 (6th Cir. 1986) (resolution of federal and state law claims).

⁵See Memorandum from James M. Strock, Assistant Administrator, to Regional Administrators et al., MULTI-MEDIA SETTLEMENTS OF ENFORCEMENT CLAIMS, at 2 (Feb. 6, 1990).

⁶See Memorandum from James M. Strock, Assistant Administrator, to Regional Administrators et al., MULTI-MEDIA SETTLEMENTS OF ENFORCEMENT CLAIMS, at 2 (Feb. 6, 1990).

⁷See Memorandum from James M. Strock, Assistant Administrator, to Regional Administrators et al., MULTI-MEDIA SETTLEMENTS OF ENFORCEMENT CLAIMS, at 2 (Feb. 6, 1990).

⁸See Memorandum from James M. Strock, Assistant Administrator, to Regional Administrators et al., MULTI-MEDIA SETTLEMENTS OF ENFORCEMENT CLAIMS, at 2 (Feb. 6, 1990).

⁹See Memorandum from James M. Strock, Assistant Administrator, to Regional Administrators et al., MULTI-MEDIA SETTLEMENTS OF ENFORCEMENT CLAIMS, at 2 (Feb. 6, 1990).

¹⁰See Memorandum from James M. Strock, Assistant Administrator, to Regional Administrators et al., MULTI-MEDIA SETTLEMENTS OF ENFORCEMENT CLAIMS, at 2 n. 2, 3 n. 5 (Feb. 6, 1990).

to reinstitute an action if circumstances or facts change sufficiently such that additional enforcement is necessary. Thus, covenants not to sue are often combined with what is typically referred to as a “reopener provision.”¹¹ In such actions, the EPA generally will not release the defendant from government oversight, monitoring, and enforcement costs, nor from natural resource damages caused by the pollution.

Furthermore, in CERCLA actions, parents, subsidiaries, and affiliates of an alleged violator are generally not covered under a release unless 100% of the cleanup costs are recovered. Under CERCLA, the EPA often insists on a site-access provision so that it can observe any remediation work and monitor compliance with the terms of the decree. CERCLA releases also are written to incorporate the notion of joint and several liability (each defendant is responsible for the total amount of damages), thereby reducing the possibility of delaying the entire cleanup process if one defendant becomes insolvent. Additionally, as a general rule, the release only becomes effective when all the work, including monitoring, is completed to the EPA’s satisfaction.¹²

It is important to remember that the EPA will almost always seek injunctive relief broader than what it expects to be granted by a court. The response to such a demand should be a release or covenant not to sue that is equally broad. Thus, a party facing an enforcement action who is willing to negotiate a consent decree in an enforcement action must be mindful of its scope and how that scope might relate to a possible release or covenant not to sue. For example, if the EPA is demanding a multimedia audit in a CWA enforcement action, the alleged violator should consider seeking protection from enforcement actions relating to all media included in the audit.

§ 9:181 Judicial Enforcement and Review of Injunction and Consent Decrees

Judicial enforcement and review of injunction and consent decrees are discussed in § 9:182 and § 9:183.

§ 9:182 Judicial Enforcement

In general, under any form of consent decree and injunction, the EPA almost always insists upon penalties for failure to comply, in order to ensure that a defendant completes the requirements of the decree by making compliance more attractive than violation. In joint federal-state enforcement cases, the federal and state governments will need to agree upon the appropriate injunctive relief and may share in the penalties to be paid under any settlement.¹

Injunctive orders under the environmental statutes are enforced by contempt

¹¹See Memorandum from Bruce S. Gelbe, Deputy Chief, Environmental Enforcement Section, U.S. Dept. of Justice, *DEFINING “MATTERS ADDRESSED” IN CERCLA SETTLEMENTS*, at 12 (Mar. 14, 1997) (discussing “routine reopeners” in covenants not to sue).

¹²See Memorandum from Courtney M. Price, Assistant Administrator for Enforcement and Compliance Monitoring, EPA and Jack McGraw, Acting Assistant Administrator for Solid Waste and Emergency Response, EPA, *DRAFTING CONSENT DECREES IN HAZARDOUS WASTE IMMINENT HAZARD CASES* (May 1, 1985).

[Section 9:182]

¹The EPA and DOJ policy allows the federal government to share a penalty with a state or local entity where the state or local government has: (1) an independent claim that supports its entitlement to a penalty; (2) independent authority to seek such penalties; (3) participated actively in prosecuting the case; and (4) for contempt actions, has participated in the underlying actions giving rise to the contempt. Memorandum from Courtney M. Price, Assistant Administrator for Enforcement and Compliance Monitoring, *DIVISION OF PENALTIES WITH STATE AND LOCAL GOVERNMENTS*, at 2–3 (Oct. 30, 1985).

proceedings in the same manner as other equitable decrees.² Violations of an injunction or consent decree are grounds for contempt (either civil or criminal). The authority of the district court to impose monetary penalties for violations of consent decrees (or administrative orders) flows from the civil penalty provisions of the environmental statutes (e.g., RCRA §§ 3008, 7003; CERCLA § 106),³ and from the court's contempt power—its independent statutory authority to punish violation of its lawful orders by fine or imprisonment.⁴ Criminal contempt is used to vindicate the authority of the court, whereas civil contempt is used to coerce a party to comply with the court's order. Moreover, such violations can result in additional civil or criminal penalties or seizure of assets.⁵

Contempt proceedings are initiated by petition to the court that granted the injunction or entered the consent order, seeking to require the defendant to show cause why it should not be held in contempt. In response, the court will issue an order requiring the defendant to appear and show cause why it should not be held in contempt. Generally, judges are willing to enter contempt citations where there has been what they perceive to be an intentional disregard for their orders. In instances where there is no demonstrable evidence of intentional disregard, the defendant is often given a second-chance ultimatum to comply with the injunction or order. It is rare for a court to allow a party to relitigate on issues resolved in an injunction or court order.

A number of courts have appointed monitors, receivers, and administrators to determine remedies in detail and to assure that injunctive relief is accomplished.⁶ This has occurred when fault lies with the defendant rather than with physical, technological, or financial impossibility. In each case violations of the decrees were repeated and serious, and the defendants appeared to be incompetent or unwilling to comply. In most cases the defendant was a public body, for which contempt penalties are not particularly appropriate or are difficult to administer. The receiver-ship remedy is a particularly appropriate device to keep the judge from becoming mired in complex technical issues that may need constant attention.

§ 9:183 Judicial and Appellate Review

Absent a clear expression of congressional intent (e.g., a statutory provision) to limit the discretion of the federal district courts in dispensing injunctive relief, the

²See, e.g., *U.S. v. Ciampitti*, 669 F. Supp. 684, 18, 26 Env't. Rep. Cas. (BNA) 2026, 18 Env'tl. L. Rep. 20419 (D.N.J. 1987) (authorizing daily fines with the potential for jail time); see also *U.S. v. Pozsgai*, 999 F.2d 719, 23, 23 Env'tl. L. Rep. 21012 (3d Cir. 1993); *U.S. v. Jones & Laughlin Steel Corp.*, 804 F.2d 348, 17, 25 Env't. Rep. Cas. (BNA) 1221, 17 Env'tl. L. Rep. 20004 (6th Cir. 1986); *Public Interest Research Group of New Jersey, Inc. v. Ferro Merchandising Equipment Corp.*, 680 F. Supp. 692, 18, 26 Env't. Rep. Cas. (BNA) 1850, 18 Env'tl. L. Rep. 21368 (D.N.J. 1987); *U.S. v. Wheeling-Pittsburgh Steel Corp.*, 642 F. Supp. 468, 24 Env't. Rep. Cas. (BNA) 1968, 17 Env'tl. L. Rep. 20672 (W.D. Pa. 1986).

³42 U.S.C. § 6928 (RCRA § 3008); 42 U.S.C. § 6973 (RCRA § 7003); 42 U.S.C. § 9606 (CERCLA § 106).

⁴18 U.S.C. § 401.

⁵See *U.S. v. Ciampitti*, 669 F. Supp. 684, 18, 26 Env't. Rep. Cas. (BNA) 2026, 18 Env'tl. L. Rep. 20419 (D.N.J. 1987), in which a defendant was held in contempt for failure to restore a wetland he had filled without a CWA Section 404 permit. The court established a new compliance schedule and a penalty of \$2,000 a day for violating the schedule, which the court indicated it would raise *sua sponte*.

⁶*U.S. v. City of Detroit*, 720 F.2d 443, 14, 19 Env't. Rep. Cas. (BNA) 2090, 14 Env'tl. L. Rep. 20164 (6th Cir. 1983); *O'Leary v. Moyer's Landfill, Inc.*, 523 F. Supp. 642, 20 Env't. Rep. Cas. (BNA) 1318, 11 Env'tl. L. Rep. 21005 (E.D. Pa. 1981); *U.S. v. City of Providence*, 492 F. Supp. 602, 10, 14 Env't. Rep. Cas. (BNA) 1964, 10 Env'tl. L. Rep. 20857 (D.R.I. 1980); *Town of Greenwich, Conn. v. Department of Transp. of State of Conn.*, 14 Env't. Rep. Cas. (BNA) 1150, 10 Env'tl. L. Rep. 20178 (D. Conn. 1979); *Ohio v. Chem Dyne, Inc.*, 10 Env'tl. L. Rep. 20387 (Ohio C.P. 1980), judgment aff'd in part, rev'd in part on other grounds, 16 Env't. Rep. Cas. (BNA) 1854, 1981 WL 5234 (Ohio Ct. App. 12th Dist. Butler County 1981).

courts retain their traditional equitable powers to grant and deny injunctions.¹ Thus, once a court has decided to grant or deny an injunction, its decision will be reviewed on appeal only to determine whether the judge abused his or her discretion.² This standard is extremely narrow, making it quite difficult to reverse a district court's decision granting or denying an injunction. By way of illustration, one appellate court affirmed a decision rejecting a defense based on the impossibility of compliance with an injunctive order under RCRA.³ Such cases, combined with the limited nature of appellate review, arguably enhance the EPA's advantages if an injunction is entered in its favor.

Consent decrees, being consensual, may sometimes be appealed by third parties. Injunctions issued without consent also are appealable by third parties. However, appellate courts often have recognized limits upon their review. For example, the U.S. Court of Appeals for the Sixth Circuit has held in one case that a court may review a consent decree "to assure that if it is fair, adequate, and reasonable, as well as consistent with the public interest."⁴

§ 9:184 Statute-Specific Considerations

There are a variety of statute-specific considerations relating to injunctions and other equitable orders. These statute-specific considerations are discussed in §§ 9:185 to 9:192.

§ 9:185 Resource Conservation and Recovery Act ("RCRA")

The EPA can seek injunctive relief under three provisions of RCRA. Section 3008(a) of RCRA¹ authorizes the EPA to address violations of RCRA Subtitle C (hazardous waste management) requirements. These requirements include both state and federal rules and regulations. Section 3008(a)² allows the EPA to issue an administrative order or to initiate a civil action, including claims for monetary and injunctive relief when any person is in violation of any requirement of Subtitle C of RCRA. Section 3008(a) also requires that the EPA give the state notice before initiating an enforcement action, if that state is authorized to carry out a hazardous waste program under Section 3006.³

Section 9006 of RCRA⁴ authorizes the EPA to address violations of RCRA Subtitle I (underground storage tanks) requirements. This provision allows the EPA to issue

[Section 9:183]

¹*Swann v. Charlotte-Mecklenburg Bd. of Ed.*, 402 U.S. 1, 15, 91 S. Ct. 1267, 28 L. Ed. 2d 554 (1971) ("the scope of a district court's equitable powers . . . is broad, for breadth and flexibility are inherent in equitable remedies."); *see Weinberger v. Romero-Barcelo*, 456 U.S. 305, 320, 102 S. Ct. 1798, 72 L. Ed. 2d 91, 17 Env't. Rep. Cas. (BNA) 1217, 12 Env'tl. L. Rep. 20538 (1982).

²*Natural Resources Defense Council v. Texaco Refining and Marketing, Inc.*, 906 F.2d 934, 937, 31 Env't. Rep. Cas. (BNA) 1605, 20 Env'tl. L. Rep. 20949 (3d Cir. 1990).

³*U.S. v. Production Plated Plastics, Inc.*, 955 F.2d 45, 35 Env't. Rep. Cas. (BNA) 1415, 22 Env'tl. L. Rep. 20899 (6th Cir. 1992) (unpublished).

⁴*U.S. v. Jones & Laughlin Steel Corp.*, 804 F.2d 348, 351, 25 Env't. Rep. Cas. (BNA) 1221, 17 Env'tl. L. Rep. 20004 (6th Cir. 1986); *see also U.S. v. Lexington-Fayette Urban County Government*, 591 F.3d 484, 489, 69 Env't. Rep. Cas. (BNA) 2089 (6th Cir. 2010).

[Section 9:185]

¹42 U.S.C. § 6928(a)(2).

²*See* IV. and VI.

³42 U.S.C. § 6928(a)(2).

⁴42 U.S.C. § 6991e.

an administrative order⁵ or to initiate a civil action, including claims for monetary relief⁶ and injunctive relief, when any person is in violation of any requirement of Subtitle I of RCRA.

Section 7003 of RCRA⁷ authorizes the EPA to issue an administrative order⁸ or to initiate a civil action, including claims for monetary relief⁹ and injunctive relief when it learns that any person is contributing to the handling, storage, treatment, transportation, or disposal of solid or hazardous waste that may present an imminent and substantial endangerment to health or the environment. To obtain injunctive relief under Section 7003, the EPA must establish three elements: (1) that the conditions at the site in question “may present an imminent and substantial endangerment”; (2) that the endangerment stems from “the handling, storage, treatment, transportation, or disposal of any solid or hazardous waste”; and (3) that the particular defendant “has contributed or is contributing to such handling, storage, treatment, transportation, or disposal.”¹⁰

RCRA does not apply to inactive sites or to past generators, transporters, owners, and operators,¹¹ and, indeed, this has been cited as a reason for the passage of CERCLA, which does do so.¹² Another crucial difference is that, unlike § 106 of CERCLA, § 7003 of RCRA applies only to solid and hazardous “wastes” and not to releases or threatened releases of hazardous “substances.”¹³

Under Section 7003, the EPA has sought to compel a wide range of cleanup measures, including restoration of the site (both surface and groundwater contamination), adoption of certain treatment technologies, development of comprehensive plans for remediation, and contributions of money for environmental studies.¹⁴ One district court has permitted the EPA to seek an injunction to recover response costs it incurred.¹⁵ However, unlike typical cost recovery actions brought under and authorized by CERCLA, the court stated that it could permit cost recovery

⁵42 U.S.C. § 6991e(a)(1); *see* IV.

⁶42 U.S.C. § 6991e(a)(1); *see* IV.

⁷42 U.S.C. § 6973.

⁸*See* IV.

⁹*See* VI.

¹⁰42 U.S.C. § 6973(a).

¹¹*See* U.S. v. Northeastern Pharmaceutical and Chemical Co., Inc., 579 F. Supp. 823, 834, 19 Env’t. Rep. Cas. (BNA) 2186, 20 Env’t. Rep. Cas. (BNA) 1401, 14 Env’t. L. Rep. 20212 (W.D. Mo. 1984), judgment *aff’d* in part, *rev’d* in part on other grounds, 810 F.2d 726, 25 Env’t. Rep. Cas. (BNA) 1385, 17 Env’t. L. Rep. 20603 (8th Cir. 1986). In 2005, the EPA released guidance regarding how to designate a site either “active” or “inactive,” with the expected benefit being “the elimination or reduction of duplicate data entry,” and to “allow Implementers to focus inspection resources on active sites that generally pose the greatest risk to human health and the environment.” EPA, RCRA Subtitle C Site Activity Status Workgroup, RCRA SUBTITLE C EPA IDENTIFICATION NUMBER, SITE STATUS, AND SITE TRACKING GUIDANCE 3 (Mar. 21, 2005), <http://www3.epa.gov/epawaste/hazard/tsd/permit/tsd-regs/general/win-inform.pdf>.

¹²42 U.S.C. § 9607(a) (CERCLA § 107(a)); *see* CHAPTER 8: ENVIRONMENTAL ISSUES by Ernest G. Taylor and Quin H. Breland [8.24] COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA) 25, *available at* http://www.balch.com/files/Publication/f1011576-8ecf-458f-b099-02558c0fd0ca/Presentation/PublicationAttachment/909765c3-46c3-42e5-a06a-0246604635f0/BrelandArticle-Environmental_Issues.pdf.

¹³42 U.S.C. § 6973(a).

¹⁴*See, e.g.,* U.S. v. Price, 688 F.2d 204, 213–14, 17 Env’t. Rep. Cas. (BNA) 2155, 12 Env’t. L. Rep. 21020 (3d Cir. 1982); U.S. v. Vertac Chemical Corp., 489 F. Supp. 870, 888–89, 14 Env’t. Rep. Cas. (BNA) 1587, 10 Env’t. L. Rep. 20709 (E.D. Ark. 1980).

¹⁵*See* U.S. v. Northeastern Pharmaceutical & Chemical Co., Inc., 810 F.2d 726, 740, 25 Env’t. Rep. Cas. (BNA) 1385, 17 Env’t. L. Rep. 20603 (8th Cir. 1986).

under Section 7003 “as a matter of equitable discretion.”¹⁶ Accordingly, the court stated that the district court “should afford appellants an opportunity” to rebut the government’s cost claims.¹⁷

The EPA can also enter into consent decrees with potentially responsible parties under Section 7003. The factual circumstances that lead to action under Section 7003 of RCRA are similar to those that lead to actions under Sections 104, 106, and 107 of CERCLA. Consequently, similar issues arise when the EPA seeks recovery by means of a consent decree under the RCRA and CERCLA imminent hazard provisions.¹⁸

§ 9:186 Clean Water Act (“CWA”)

The CWA is quite explicit in describing when injunctive relief is available to address violations of the Act. There are several sections authorizing injunctions based on violations, or authorizing injunctions based on the existence of an imminent and substantial danger.¹

Under Section 309, the EPA is authorized to seek injunctive relief when it finds a violation of conditions and limitations in specified sections of the Act.² The CWA sections to which Section 309 refers are Section 301’s effluent limitation standards;³ Section 302’s water quality effluent limitations;⁴ Section 306’s national standards of performance;⁵ Section 307’s toxic pretreatment effluent standards;⁶ Section 308’s recording, reporting, and inspection requirements;⁷ Section 318’s aquaculture permitting standards;⁸ and Section 405’s sewage sludge disposal permitting standards.⁹

Subsection 309(b) of the CWA authorizes the EPA to bring a civil action for “appropriate relief,” including injunctions, upon a finding that a person has violated one or more of the above sections.¹⁰ The action may be brought in the district court for the district in which the defendant is located, resides, or does business.¹¹

Before proceeding under this section, the EPA is required to provide certain notices to the state, the defendant, and sometimes, the public.¹² If the state is operating an approved federal program, and the EPA believes a violation of the cited provisions is occurring, it must first notify the polluter and the state of the violation and wait 30 days after the notice before seeking the injunction.¹³

In addition, if the EPA finds that widespread violations are occurring because the

¹⁶U.S. v. Northeastern Pharmaceutical & Chemical Co., Inc., 810 F.2d 726, 750, 25 Env’t. Rep. Cas. (BNA) 1385, 17 Env’t. L. Rep. 20603 (8th Cir. 1986).

¹⁷U.S. v. Northeastern Pharmaceutical & Chemical Co., Inc., 810 F.2d 726, 750, 25 Env’t. Rep. Cas. (BNA) 1385, 17 Env’t. L. Rep. 20603 (8th Cir. 1986).

¹⁸See § 9:191.

[Section 9:186]

¹33 U.S.C. §§ 1319(b), 1321(e), 1344(s), 1364.

²33 U.S.C. § 1319(b).

³33 U.S.C. § 1311.

⁴33 U.S.C. § 1312.

⁵33 U.S.C. § 1316.

⁶33 U.S.C. § 1317.

⁷33 U.S.C. § 1318.

⁸33 U.S.C. § 1328.

⁹33 U.S.C. § 1345; 33 U.S.C. § 1319(a).

¹⁰33 U.S.C. § 1319(b).

¹¹33 U.S.C. § 1319(b).

¹²33 U.S.C. § 1319(a)(2), (4).

¹³33 U.S.C. § 1319(a)(1).

state has failed to enforce the Act's permit conditions and limitations effectively, it must notify the state, but apparently not every possible defendant.¹⁴ If the state continues to fail to enforce the Act more than 30 days after the notice, the EPA must then give public notice of its finding. The EPA may then seek injunctive relief at any time during the period of "federally assumed enforcement," which lasts from the time of public notice to the time when the state initiates enforcement of the Act's conditions and limitations to the satisfaction of the EPA.¹⁵ The requirements imposed by this section, if not fulfilled, could provide a defense to an enforcement action. In states that do not have federally approved programs, these notice requirements do not apply.¹⁶

Additional, but somewhat different authority exists under the section of the Act governing oil and hazardous substances into the waters of the United States. Under Section 311(e),¹⁷ authority exists to obtain "any relief . . . as may be necessary" to abate an imminent and substantial threat to the public health or welfare because of an actual or threatened discharge of oil or hazardous substance in violation of Section 311(b) (governing releases into waters of the United States).

Section 404, which governs the dredge and filling program (commonly known as the "wetlands program") specifically authorizes the Army Corps of Engineers (which administers this program subject to EPA review) to obtain injunctions based on violations of dredge and fill permits.¹⁸

Finally, the Act also grants the EPA certain "emergency powers" under Section 504(a), pursuant to which an injunction may be issued without alleging a violation of the Act.¹⁹ However, the "emergency powers" provision only applies when a source of pollution creates an "imminent and substantial endangerment" to the health of persons or to the welfare of persons where the endangerment is to their livelihood.²⁰ The statute makes a specific reference to the inability to market shellfish as an example of such a livelihood. When such a danger exists, the EPA may bring an action in the appropriate district court to enjoin "any person" from "causing or contributing to . . . pollution" and to take any other action necessary to abate the danger.²¹

Injunctions ordering restoration of the environment to its pre-violation condition are commonplace under CWA Section 404, which prohibits dredge or fill activity in navigable waters, including wetlands, without or in violation of a permit.²² The use of restorative remedies under Section 404 is explained by its origins in the Refuse Act and the traditional willingness of courts to order removal of obstructions to waterways under the Act and previous authorities.²³

¹⁴33 U.S.C. § 1319(a)(2).

¹⁵33 U.S.C. § 1319(a)(2).

¹⁶33 U.S.C. § 1319(a)(3).

¹⁷33 U.S.C. § 1321(e)(1)(A).

¹⁸33 U.S.C. § 1344(s)(3).

¹⁹33 U.S.C. § 1364(a).

²⁰33 U.S.C. § 1364(a).

²¹33 U.S.C. § 1364(a).

²²See *U.S. v. Pozsgai*, 999 F.2d 719, 23, 23 *Env'tl. L. Rep.* 21012 (3d Cir. 1993); *Hobbs v. U.S.*, 947 F.2d 941, 34 *Env't. Rep. Cas. (BNA)* 1642, 22 *Env'tl. L. Rep.* 20331 (4th Cir. 1991) (unpublished); *U.S. v. Larkins*, 852 F.2d 189, 18, 28 *Env't. Rep. Cas. (BNA)* 1001, 18 *Env'tl. L. Rep.* 21416 (6th Cir. 1988); *U.S. v. Context-Marks Corp.*, 729 F.2d 1294, 14, 20 *Env't. Rep. Cas. (BNA)* 2142, 14 *Env'tl. L. Rep.* 20459 (11th Cir. 1984); *U.S. v. Van Leuzen*, 816 F. Supp. 1171, 23, 36 *Env't. Rep. Cas. (BNA)* 1992, 23 *Env'tl. L. Rep.* 21107 (S.D. Tex. 1993); *U.S. v. Edwards*, 667 F. Supp. 1204, 18, 26 *Env't. Rep. Cas. (BNA)* 1614, 18 *Env'tl. L. Rep.* 20126 (W.D. Tenn. 1987).

²³See *In re Debs*, 158 U.S. 564, 15 S. Ct. 900, 39 L. Ed. 1092 (1895) (disapproved of by, *Bloom v.*

§ 9:187 Clean Air Act (“CAA”)

Section 113 of the CAA¹ is the primary enforcement provision of the Act. This “federal enforcement” provision authorizes the EPA to bring a civil action for an injunction or civil penalties, to issue compliance orders and administrative penalties, and to seek criminal penalties against CAA violators.² Under Section 113(b) (“civil judicial enforcement”), the EPA may initiate a civil action for a permanent or temporary injunction against owners or operators of an emitting facility or an affected or stationary source or any other person who is in violation of the implementation plan or other requirement specified under the CAA.³ The CAA also provides enforcement mechanisms for nonstationary sources of air pollution. Subchapter II of the Act regulates mobile sources of air pollution and contains specific provisions for actions to restrain violations of the subchapter’s requirements.⁴

The 1990 amendments to subsection 113(b) expanded the EPA’s authority to bring civil actions by replacing references to violations of specific sections with language covering violations of any requirements under the subchapters of the Act.⁵ Thus, the EPA can seek injunctive relief for violations of a Title I state implementation plan (“SIP”).⁶ In addition, subsections 113(a)(5) and 113(b) provide for injunctive relief when the state fails to enforce the Act’s requirements for the construction of new sources of pollution or the modification of existing sources.⁷ The EPA may also seek an injunction against the construction or modification of an emitting facility under Sections 167.⁸ Section 167 applies in cases where the construction of a new source or modification of an existing source violates Subchapter I’s air quality area classification standards.⁹

Civil actions commenced under 42 U.S.C. § 7413(b) may be brought in the district court for the district in which the violation is alleged to have occurred, or is occurring, or in which the defendant resides or has its principal place of business. Notice of the commencement of the action is required to be given to the appropriate state air pollution control agency but is not a prerequisite for the bringing of the action.¹⁰

Like the CWA, the EPA’s power to seek injunctive relief under Section 113 of the CAA is sometimes subject to a number of time and notice requirements. The notice is not required for violations of federally developed requirements, such as new source performance or hazardous emission standards, federal information gathering or inspection requirements, or the automobile emission related requirements. However, the EPA’s power to seek injunctive relief under Section 113 for violations of the CAA’s permitting requirements or SIP standards are sometimes subject to a

State of Ill., 391 U.S. 194, 88 S. Ct. 1477, 20 L. Ed. 2d 522 (1968)); *U.S. v. Republic Steel Corp.*, 362 U.S. 482, 490, 80 S. Ct. 884, 4 L. Ed. 2d 903, 1 Env’t. Rep. Cas. (BNA) 1022, 1961 A.M.C. 545 (1960).

[Section 9:187]

¹42 U.S.C. § 7413.

²42 U.S.C. § 7413(a).

³42 U.S.C. § 7413(b).

⁴*See, e.g.*, 42 U.S.C. § 7523 (CAA § 204) (actions to restrain violation of requirements pertaining to automobile manufacture, distribution, and use).

⁵Clean Air Act, Amendments, Pub. L. No. 101-549, 104 Stat. 2399; *see* S. Rep. No. 101-2-8, 101st Cong., 2d Sess. (1990), reprinted in 1990 U.S.C.C.A.N. 3385, 3742.

⁶*See* S. Rep. No. 101-2-8, 101st Cong., 2d Sess. (1990), reprinted in 1990 U.S.C.C.A.N. 3385, 3742.

⁷42 U.S.C. § 7413(a)(5) and (b).

⁸42 U.S.C. § 7477.

⁹42 U.S.C. § 7477.

¹⁰42 U.S.C. § 7477.

number of time and notice requirements.¹¹ Upon finding that a person is in violation of a CAA permit or SIP, the EPA must provide notice to the person, as well as to the state, and must wait to seek injunctive relief until 30 days after notice is given.¹² In addition, if the EPA finds that the violations are the result of the state's failure to enforce the implementation program or permit program effectively, it must notify the state.¹³

If the state's failure continues for over 30 days after the notice (or 90 days in the case of a permit program), the EPA must give public notice of this finding.¹⁴ Following the public notice, and until the state initiates enforcement action to the satisfaction of the EPA (referred to as the "period of federally assumed enforcement"), the EPA may seek injunctive relief against the violation of the permit program or SIP.¹⁵

As with most of the other federal environmental statutes, the CAA grants the EPA emergency powers to respond to situations not covered by the Act's general enforcement provision.¹⁶ The EPA's powers under Section 303 (emergency powers) are limited to instances where a pollution source (stationary or mobile) presents an "imminent and substantial endangerment to the public health, welfare, or environment."¹⁷ When the EPA finds that such a danger is posed by the pollution source, it may bring suit to restrain immediately any person from causing or contributing to the pollution.¹⁸ In the alternative, it may issue an interim order, effective for 60 days, as necessary to protect the public health, welfare, or environment.¹⁹ If an action is brought within the 60-day period, the interim order remains in effect for an additional 14 days or for such longer period as the court may authorize.²⁰ The only limitation on the EPA's powers is that it must first consult with local and state authorities to verify the accuracy of the information on which it bases its action.²¹

In addition to the EPA's emergency powers under CAA Section 303, subsection 112(r)(9) of the Act grants the EPA authority to take administrative or civil judicial action in response to the release or threatened release of specified extremely hazardous substances.²² This provision was adopted in response to the 1984 chemical spill in Bhopal, India, and is intended to reduce the number of such dangerous toxic

¹¹This suggests, with one anomaly, that the legislative purpose for the notice requirement under the CAA was to ease federalist tensions by allowing states a last opportunity to enforce, not to allow violating members of the regulated public a last, pre-enforcement chance to comply. An intent to ease federalist tensions explains why notice is required prior to federal enforcement of state-developed requirements, but not before federal enforcement of federally developed requirements. The anomaly is that a notice of violation appears to be a jurisdictional prerequisite for enforcement against violations of federally promulgated SIPs, despite the fact that SIPs are federally promulgated when a state fails to adopt a SIP that meets CAA criteria. The state probably lacks the authority under its own law to enforce against violations of a federally promulgated SIP, and a state's failure to adopt a SIP is a good indication of its lack of desire to enforce it.

¹²42 U.S.C. § 7413(a)(1).

¹³42 U.S.C. § 7413(a)(2).

¹⁴42 U.S.C. § 7413(a)(2).

¹⁵42 U.S.C. § 7413(a)(2).

¹⁶42 U.S.C. § 7603.

¹⁷42 U.S.C. § 7603.

¹⁸42 U.S.C. § 7603.

¹⁹42 U.S.C. § 7603.

²⁰42 U.S.C. § 7603.

²¹42 U.S.C. § 7603.

²²42 U.S.C. § 7412(r)(9).

chemical accidents.²³ The EPA applied this new subsection in coordination with the existing enforcement and emergency powers provisions of the CAA as well as those of CERCLA, RCRA, CWA, FWPCA, SDWA, and TSCA.²⁴

§ 9:188 Toxic Substances Control Act (“TSCA”)

Section 5 of the Toxic Substances Control Act (“TSCA”) sets forth the Act’s chemical substance pre-manufacture reporting requirements.¹ It describes the procedures by which chemical producers provide notice of their production of new chemical substances to the EPA, which adopts rules and issues proposed orders in response to the notices. Under subsection 5(e) of the Act, the EPA is specifically authorized to seek injunctive relief to enforce reporting requirements and to prohibit or limit the manufacture, processing, distribution, use, or disposal of a chemical substance subject to the Act’s notice requirements pending development of information necessary to allow evaluation of the health and environmental effects of such a substance.²

Under subsection 5(f)(3)(A) of TSCA, the EPA may also seek an injunction to prohibit the manufacture, processing, distribution, use, or disposal of chemical substances that are subject to the Act’s notice requirements and that present an unreasonable risk of harm to human health or the environment before a rule can be promulgated to protect against such risk.³

In either case, if the EPA determines that there is an unreasonable risk of harm, it may take one of two actions. It can issue a proposed administrative order and, if necessary, enforce it in court, or it may immediately bring a civil action for an injunction prohibiting production, processing, and distribution of the chemical substance. When the EPA chooses to issue a proposed order limiting or prohibiting production, it is still free to seek an injunction if the chemical producer files an objection to its proposed order.⁴ In either case, the EPA can bring suit in the appropriate federal district court for an injunction to prohibit or limit manufacture, processing, distribution, use, or disposal of the substance in question.⁵ The appropriate district court is the United States District Court for the District of Columbia or the United States district court in the district in which the manufacturer or processor of the substance is found, resides, or transacts business.⁶

Section 17 of TSCA grants the federal district courts jurisdiction over civil actions arising out of violations of the Act’s notice, testing, recordkeeping, and manufacturing requirements.⁷ The courts have jurisdiction to restrain violations of the Act’s requirements, to compel compliance with the Act, and to order seizure of substances manufactured, processed, or distributed in violation of the Act.⁸ Note the difference in authorizations between this and the “appropriate” relief language contained in other statutes. The EPA may seek an injunction against any person requiring compliance with TSCA requirements under the specific enforcement provision of

²³Clean Air Act; Enforcement Authority Guidance, 56 Fed. Reg. 24,393 (May 30, 1991).

²⁴56 Fed. Reg. at 24393, 24395.

[Section 9:188]

¹15 U.S.C. § 2604 (manufacturing and process notices).

²15 U.S.C. § 2604(e)(2)(A).

³15 U.S.C. § 2604(f)(3)(A).

⁴15 U.S.C. § 2604(e)(2)(A)(i) and § 2604(f)(3)(A) and (D).

⁵15 U.S.C. § 2604(e)(2)(A)(i) and § 2604(f)(3)(A) and (D).

⁶15 U.S.C. § 2604(e)(2)(A)(i) and § 2604(f)(3)(A)(ii).

⁷15 U.S.C. § 2616 (specific enforcement and seizure).

⁸15 U.S.C. § 2616 (specific enforcement and seizure).

Section 17(a).⁹ In addition, it may seek a mandatory injunction requiring the producer or processor to give specific public notice of risks of injury posed by the substance and to replace or repurchase the substance.¹⁰ Such mandatory injunctive relief under TSCA is available in suits brought by the EPA, but not in citizen suits brought under Section 20 of the Act.¹¹

The EPA's emergency powers under TSCA are found in Section 7 of the Act.¹² Under this section, the EPA may bring a civil action for the seizure of "imminently hazardous" chemical substances or an injunction against the production, processing, and distribution of such substances, or it may do both.¹³ Seizure or injunctive relief, or both, are available against any person who manufactures, processes, distributes in commerce, uses, or disposes of imminently hazardous substances.¹⁴ Any action the EPA seeks under this section must be that necessary to protect human health and the environment from the imminent hazard posed by the chemical substance.¹⁵ Section 208 of TSCA contains a similar provision regarding injunctive relief for imminent hazards posed by the presence of friable asbestos materials present in school buildings and educational facilities.¹⁶

§ 9:189 Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA")

Under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"), the EPA is not expressly given general authority to enjoin manufacturers of pesticides. Instead, the EPA uses administrative orders to suspend or cancel the manufacture of pesticides that are registered under FIFRA.¹ It may then seek a federal court order enforcing the administrative order, and that federal court order is an injunction.²

Several specific authorizations do exist, however, under FIFRA, that allow the EPA to issue a stop sale, use, or removal order ("SSURO") to any person and to request that a court seize pesticides or devices that are being transported, offered for sale, or imported from a foreign country if the pesticide is misbranded, adulterated, not registered as required, incorrectly labelled, or discolored or not colored as required.³ Additionally, a pesticide or device may be seized if it causes unreasonable adverse effects on the environment.⁴

Furthermore, the EPA can seek an injunction to reduce the harm caused by pesticides under other environmental statutes. For example, pesticides that are hazardous to water supplies are regulated as toxic pollutants under the CWA (e.g., DDT is listed as a toxic pollutant under Section 307).⁵ Additionally, hazardous

⁹15 U.S.C. § 2616(a).

¹⁰15 U.S.C. § 2616(a)(1)(D).

¹¹15 U.S.C. § 2619(a)(1) (authorizing citizen suits only "to restrain" violations of the Act); *see* *Arbor Hill Concerned Citizens Neighborhood Ass'n v. City of Albany*, N.Y., 250 F. Supp. 2d 48, 59, 56 Env't. Rep. Cas. (BNA) 1822 (N.D. N.Y. 2003); *see* generally VIII.

¹²15 U.S.C. § 2606 (imminent hazards).

¹³15 U.S.C. § 2606(a)(1).

¹⁴15 U.S.C. § 2606(a)(1).

¹⁵15 U.S.C. § 2606(b)(1).

¹⁶15 U.S.C. § 2648 (emergency authority).

[Section 9:189]

¹7 U.S.C. § 136d(b), (c); *see* IV.

²7 U.S.C. § 136n(c).

³7 U.S.C. § 136k.

⁴7 U.S.C. § 136k(b)(3).

⁵33 U.S.C. § 1317; *see* § 9:186.

waste consisting of pesticides is covered under RCRA.⁶ Pesticides are also covered under the cleanup provisions of CERCLA unless the pesticide contamination resulted from normal application of the pesticide.⁷

§ 9:190 Emergency Planning and Community Right-to-Know Act (“EPCRA”)

The Emergency Planning and Community Right-to-Know Act (“EPCRA”) does not grant the EPA express general authority to seek injunctive relief for violations of the Act. Rather, under EPCRA, the EPA is given the right to issue orders requiring compliance with certain provisions of the Act and the right to bring suit to seek enforcement of the civil penalty provisions of the Act.¹ For example, under Section 325 of EPCRA, the EPA may order a facility owner or operator to comply with the emergency planning and emergency response plan requirements set forth in Sections 302 and 303 of the Act.² The district court for the district in which the facility is located has jurisdiction to enforce the order, and a violation or failure to obey such an order creates liability to the United States for a civil penalty of not more than \$37,500 for each day in which the violation occurs or the failure to comply continues.³

§ 9:191 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)

Upon a finding of “imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility,” the EPA can initiate an action for injunctive relief under Subsection 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”).¹ Such an action must be filed in the district court for the district in which the threat occurs.² Courts often view Section 106 actions as the equitable version of the cost-recovery actions under CERCLA Section 107.

Courts have broadly construed the reach of Section 106(a) injunctions. Some courts have held that to obtain an injunction under Section 106(a), the EPA needs to show only that a risk of harm exists.³ This standard may be more lenient than

⁶See § 9:185.

⁷42 U.S.C. § 9607(i); see § 9:191.

[Section 9:190]

¹42 U.S.C. §§ 11045, 11046.

²42 U.S.C. § 11045(a).

³42 U.S.C. § 11045(a); Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

[Section 9:191]

¹42 U.S.C. § 9606(a).

²42 U.S.C. § 9606(a).

³See *U.S. v. Conservation Chemical Co.*, 619 F. Supp. 162, 194, 24 Env’t. Rep. Cas. (BNA) 1008, 16 Env’tl. L. Rep. 20193 (W.D. Mo. 1985) (rejected on other grounds by, *U.S. v. Northeastern Pharmaceutical & Chemical Co., Inc.*, 810 F.2d 726, 25 Env’t. Rep. Cas. (BNA) 1385, 17 Env’tl. L. Rep. 20603 (8th Cir. 1986)) (holding that endangerment is “substantial” whenever members of the public or environment may be exposed to risk of harm by virtue of release or threatened release of hazardous substances); *B.F. Goodrich Co. v. Murtha*, 697 F. Supp. 89, 94, 19 Env’tl. L. Rep. 20357 (D. Conn. 1988) (holding that an injunction may be granted when there is but a risk of harm, rather than on the more stringent showing of threatened irreparable harm).

the traditional requirement of “threatened irreparable harm.”⁴ One court went further and stated that the EPA did not have to show that a risk of harm actually existed, only that a risk of harm might exist.⁵

Under CERCLA, courts may grant injunctions even where other remedies are available, generally on the basis that Section 106 is intended to work “in tandem” with Section 107 in respect to clean up of hazardous waste sites, and that Section 106 contains no limitations on the classes of persons within its reach.⁶ However, as a practical matter, the EPA will probably not initiate or prosecute a significant number of Section 106(a) injunctive relief actions because of its expanded use of administrative orders. Administrative orders are easier and less expensive for the EPA to issue and are quite effective given the statutory sanctions for failure to comply.

The EPA may seek both administrative and judicial injunctive relief pursuant to CERCLA Section 106(a) where the Agency determines that there may be an imminent and substantial endangerment because of an actual or threatened release of a hazardous substance from a CERCLA facility. The EPA may issue unilateral administrative orders (“UAOs”) to compel the full range of removal and remedial actions, including performance of the remedial investigation and feasibility study (RI/FS) and performance of the full remedial design and remedial action (“RD/RA”).⁷ In 1990 and 1993, the EPA first issued guidance for issuance of Section 106 orders.⁸ That guidance was updated in 2001.⁹

Section 122 of CERCLA provides authority for judicial consent decrees that have unusual characteristics in comparison with typical consent decrees under the other statutes.¹⁰ For example, CERCLA consent decrees can involve cost recovery claims under CERCLA Section 107, remedial or removal actions under CERCLA Sections 104(a) or 106(a), and investigation costs under CERCLA Sections 104(b) and 106(a).¹¹ Section 122(d)(1)(A) of CERCLA (consent decrees for cleanup agreements) also provides that each agreement (except with *de minimis* PRPs) with respect to remedial action must be entered in the appropriate district court as a consent decree.¹²

Consent decrees may include penalties of up to \$37,500 per day for violations of

⁴See *B.F. Goodrich Co.*, 697 F. Supp. at 94; *U. S. v. Reilly Tar & Chemical Corp.*, 546 F. Supp. 1100, 1112–13, 17 Env’t. Rep. Cas. (BNA) 2110, 20 Env’t. Rep. Cas. (BNA) 1058, 12 Env’t. L. Rep. 20954 (D. Minn. 1982).

⁵*Conservation Chem. Co.*, 619 F. Supp. at 193.

⁶See, e.g., *U.S. v. A & F Materials Co., Inc.*, 578 F. Supp. 1249, 1258, 20 Env’t. Rep. Cas. (BNA) 1353, 14 Env’t. L. Rep. 20105 (S.D. Ill. 1984).

⁷See *General Elec. Co. v. Jackson*, 610 F.3d 110, 127, 71 Env’t. Rep. Cas. (BNA) 1033 (D.C. Cir. 2010) (finding UAO regime did not violate due process).

⁸EPA, Strategy and Guidance for Issuance of CERCLA Section 106 UAOs (OSWER Directive No. 9833.0-1a), as well as a Model UAO for RD/RA (OSWER Directive No. 9833.0-2(b)) (Mar. 7, 1990). See also EPA, Model Unilateral Administrative Order for Removal Response Activities (OSWER Directive No. 9833.07) (Mar. 16, 1993); Memorandum from Steven A. Herman, Assistant Administrator, Interim Policy on Settlement of CERCLA Section 106(b)(1) Penalty Claims and Section 107(c)(3) Punitive Damage Claims for Noncompliance with Administrative Orders (Sept. 30, 1997); Memorandum from Barry Breen, Ensuring Potentially Responsible Party Compliance with CERCLA Obligations (Nov. 3, 1998).

⁹See e.g., EPA, Use of CERCLA 106 to Address Endangerments That May Also Be Addressed Under Other Environmental Statutes (Jan. 18, 2001); EPA, Revised Language for the Model RD/RA Unilateral Administrative Order (UAO) (Aug. 1, 2001).

¹⁰See 42 U.S.C. § 9622.

¹¹42 U.S.C. § 9622(h) (cost recovery); 42 U.S.C. § 9622(d) (remedial actions); 42 U.S.C. § 9622(e)(6) (investigation costs).

¹²42 U.S.C. § 9622(d)(1)(A).

any of their provisions.¹³ Furthermore, a PRP may be subject to treble damages for failure to abide by the terms of a Section 104 or Section 106 removal or remediation order.¹⁴ The EPA is given express authority to commence a civil action against the noncompliant person to recover such punitive damages.¹⁵ At least one court has held that the EPA can seek an injunction requiring access to land adjacent to a hazardous waste site under CERCLA Section 104(e)(5)(B).¹⁶

§ 9:192 Safe Drinking Water Act (“SDWA”)

Section 1414 of the Safe Drinking Water Act (“SDWA”) authorizes the EPA to commence civil actions for injunctive relief against the owners and operators of public water systems that are not in compliance with the SDWA national drinking water standards or compliance schedules.¹ If the EPA has delegated to the state primary enforcement responsibility at the time of the violation, then the EPA must first notify the state of the violation and provide any assistance necessary to bring the public water system into compliance with the Act.² Following the state’s failure to initiate an enforcement action within 30 days of the EPA’s notice, the Agency may issue an order requiring compliance or may bring a civil action for injunctive relief seeking compliance.³

If, on the other hand, the violation occurs during a period when the state does not have primary enforcement responsibility, the EPA may immediately issue an order requiring compliance or may bring a civil action for injunctive relief against public water systems seeking compliance with the SDWA.⁴ The EPA follows an identical procedure under Section 1423 to seek injunctive relief for violations of the SDWA’s underground drinking water source program.⁵

Subject to the delegation of enforcement responsibility guidelines, the EPA is authorized, under 42 U.S.C. § 300g-3(b), to bring a civil action in the appropriate district court to require compliance with a national primary drinking water regulation, an order issued under Section 1445 of the Act (the records and inspection provisions) or any schedule or other requirement imposed pursuant to the variance or exemption provisions of the Act (Sections 1415 or 1416 of the Act). Even where the EPA has delegated primary enforcement responsibility to the state, it can bring a civil action to enforce the provisions described above. A civil action can be brought immediately upon request of the chief executive of the state where the noncompliant public water system is located or upon request of the state agency having jurisdiction over compliance by public water systems with the federal primary drinking water regulations or state drinking water regulations.⁶

The EPA’s emergency powers under Section 1431 also allow it to seek an injunction when state and local authorities have failed to respond to a contamination or

¹³42 U.S.C. § 9606(b)(1); Civil Monetary Penalty Inflation Adjustment Rule, 78 Fed. Reg. 66,643, 66,648 (Nov. 6, 2013).

¹⁴42 U.S.C. § 9606(b)(1).

¹⁵42 U.S.C. § 9607(c)(3).

¹⁶42 U.S.C. § 9604(e)(5)(B); *U.S. v. Charles George Trucking Co., Inc.*, 682 F. Supp. 1260, 1273, 27 Env’t. Rep. Cas. (BNA) 1642, 18 Env’t. L. Rep. 20886 (D. Mass. 1988).

[Section 9:192]

¹42 U.S.C. § 300g-3.

²42 U.S.C. § 300g-3(a)(1)(A).

³42 U.S.C. § 300g-3(a)(1)(B).

⁴42 U.S.C. § 300g-3(a)(2).

⁵42 U.S.C. § 300h-2.

⁶42 U.S.C. § 300g-3(b)(2).

potential contamination of a public water supply that threatens human health.⁷ Before acting, the EPA must, to the extent practicable, consult with state and local authorities to verify the accuracy of the information regarding the perceived threat and to ascertain the action the state and local authorities have taken or will take on their own.⁸

Like the emergency powers provisions of the other environmental statutes, the availability of injunctive relief under Section 1431 requires an “imminent and substantial” danger.⁹ However, the EPA’s emergency powers under the SDWA are triggered whenever contamination or potential contamination of a public water supply “may” present such a danger.¹⁰ Thus, the EPA is likely to argue that the possibility of imminent danger created by a potential contamination of a public water supply suffices to warrant the EPA in bringing a civil action for injunctive relief. The EPA is also likely to argue that it can bring such civil actions against a public water supplier or anyone who is in a position to contribute to the contamination.

§ 9:193 U.S. Coast Guard—Vessel Detentions and Orders

In carrying out its marine safety and environmental enforcement functions, the U.S. Coast Guard (“Coast Guard”) has broad authority to detain vessels or otherwise restrict their movement or operations, in order to obtain compliance with any applicable law and to otherwise protect the marine environment. Similar authority exists to issue such orders to waterfront facilities. There are several sources of this authority which are routinely exercised by the Coast Guard.

First, under the Ports & Waterways Safety Act of 1972, as amended by the Ports and Tanker Safety Act of 1978 (“PWSA”), the Coast Guard maintains broad authority to issue orders to vessels operating in the territorial sea.¹ This authority is used by the Coast Guard to compel compliance with a variety of laws, including laws designed to protect the marine environment. Specifically, the Coast Guard Captain of the Port (“COTP”) may issue an order to any vessel to operate in a manner he or she may direct, if there is reasonable grounds to believe that the vessel is not in compliance with any applicable regulation, law, or treaty.² Such an order may, for example, restrict or stop vessel’s operations, deny a vessel further entry to port until a deficiency is corrected, or detain a vessel in port.³ Violation of a COTP order or any regulation issued under the PWSA may result in civil and criminal penalties.⁴ The U.S. district courts have jurisdiction to grant injunctive relief to compel compliance with regulations issued under the PWSA.⁵ Should a vessel owner or operator wish to challenge a COTP order issued under the PWSA, there are several levels of administrative appeals.⁶

Second, under the Act to Prevent Pollution from Ships (“APPS”),⁷ the Coast Guard has the authority to detain foreign-flagged vessels operating in U.S. navigable

⁷42 U.S.C. § 300i.

⁸42 U.S.C. § 300i(a).

⁹42 U.S.C. § 300i(a).

¹⁰42 U.S.C. § 300i(a).

[Section 9:193]

¹33 U.S.C. §§ 1221 to 1236; 33 C.F.R. Pt. 160.

²33 U.S.C. § 1223(b)(1); 33 C.F.R. § 160.110.

³See 33 U.S.C. § 1223(b)(2); 33 U.S.C. § 1228(a)(1) to (7); 33 U.S.C. § 1232(d); 33 C.F.R. § 160.107.

⁴33 U.S.C. § 1232(a) to (b); 33 C.F.R. § 160.105.

⁵See 33 U.S.C. § 1232(d).

⁶33 C.F.R. § 160.7.

⁷33 U.S.C. §§ 1901 et seq.

waters, which do not comply with APPS or where the condition of the ship or its equipment does not substantially agree with the particulars of the certificate issued to it by the vessel's flag state, pursuant to the International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 ("MARPOL").⁸ Such vessel may be detained by the Coast Guard until the vessel no longer presents a threat to the marine environment.⁹

Finally, under the PWSA and numerous other environmental statutes, such as the National Invasive Species Act, the Clean Water Act, and APPS, the Coast Guard has the authority to request that U.S. Customs and Boarder Protection withhold the vessel's clearance to depart port, if there are reasonable grounds to believe that the vessel may be liable for a fine or civil penalty for a violation under the underlying applicable statute.¹⁰ Under APPS, this authority has been interpreted to permit the government to detain the vessel in port until legal proceedings are concluded.¹¹

VIII. CITIZEN SUITS

§ 9:194 Executive Summary

Each of the major environmental statutes, except the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"), contains its own citizen suit provision. Citizen suits provide two primary mechanisms to private parties who can establish the necessary standing to enforce federal environmental statutes. First, they allow private parties to act as private attorneys general and commence actions against any other person alleged to be in violation of either the requirements of an act; or an order issued by the EPA or a state with respect to such requirements. Second, they allow private parties to sue the EPA with respect to the Agency's failure to perform mandatory (as opposed to discretionary) acts or duties required by the particular statute. Citizen suits allow private parties to seek enforcement of the federal environmental statutes by means of injunctive relief, declaratory relief, and the imposition of civil penalties. Although a citizen-plaintiff cannot recover damages for personal injuries (unless they also bring a private claim, such as a toxic tort action, as part of the same suit), most of the statutes contain provisions allowing the courts to award costs, including attorney's fees and expert witness fees. There are a number of procedural requirements intended to ensure that citizen suits will only be filed where the EPA or a state has failed to enforce environmental statutes on their own. For example, each statute contains a notice provision requiring the EPA, alleged violator, and, in many instances, state environmental agency to be notified 60 or 90 days in advance of the filing of the suit. Such notice permits the EPA, the state, or the alleged violator to respond to the citizen's claim (including the cessation of the allegedly volatile activity) before a suit can be filed.

Additionally, no citizen suit may be brought when the EPA or a state is "diligently prosecuting" an action against the alleged violator, with respect to the alleged violations raised by a citizen-plaintiff. Although the diligent prosecution provisions vary from statute to statute (e.g., some require a court action, where others merely require an administrative proceeding or order), they are each designed to prevent private enforcement proceedings in situations where the EPA or the appropriate state agency is acting to enforce the statute.

⁸33 U.S.C. § 1904(e); 33 C.F.R. § 151.23(b).

⁹33 U.S.C. § 1904(e); 33 C.F.R. § 151.23(b).

¹⁰See 33 U.S.C. § 1232(f); 33 U.S.C. § 1321(b)(12); 46 U.S.C. § 3718(e); 33 U.S.C. § 2072(d); 16 U.S.C. § 4711(g)(3).

¹¹See *Watervale Marine Co., Ltd. v. U.S. Dept. of Homeland Sec.*, 807 F.3d 325, 81 Env't. Rep. Cas. (BNA) 2187, 2016 A.M.C. 243 (D.C. Cir. 2015).

The procedural requirements also serve to ensure that EPA will be made aware of the initiation, progress, and settlement of citizen suits. Thus, under each statute, the EPA has the opportunity to intervene in a citizen suit at any time. Moreover, with respect to suits initiated under the Clean Water Act (“CWA”) and the Clean Air Act (“CAA”), the EPA and DOJ have the opportunity to review and comment on any consent judgments negotiated between the litigants before they are entered by a federal court.

In addition to certain procedural requirements that must be met before a citizen suit can proceed, there are certain limiting substantive requirements that courts apply to these proceedings. The two primary substantive requirements are as follows. First, the plaintiff must have standing to sue. In the citizen suit context, courts have interpreted this requirement to mean that a plaintiff must have a sufficient interest that is or may be adversely harmed by the alleged violation. Second, the violations complained of must be ongoing, and they cannot be wholly past. The ongoing violation requirement is perhaps the most controversial, and there have been several attempts to amend the statutes to permit suits for past violations. “The 1990 amendments to the CAA add a basis for citizen suit jurisdiction: a civil action for wholly past violations may be commenced if the plaintiff alleges that the violations have been repeated.”¹ These requirements and their status are discussed in § 9:199, § 9:200, and §§ 9:210 through 9:217.

Citizen suits against alleged violators generally must be brought in the U.S. district court for the district in which the alleged violation is occurring. The variances from this general rule are discussed in §§ 9:210 through 9:217. With one exception as discussed in §§ 9:202 and 9:214, suits against the EPA alleging failure to perform a mandatory duty must be brought in the U.S. District Court for the District of Columbia.

§ 9:195 Requirements That Must Be Met Before a Citizen Suit May Be Brought or Maintained

Subject to the requirements set forth in §§ 9:196 through 9:200, each citizen suit provision generally authorizes any person having an interest that is or may be adversely affected to commence a civil action to enforce the particular statute or its regulations. A citizen suit may be brought against any alleged violator, including individuals, corporations, and federal, state, or local agencies. It may also be brought against the EPA for failure to perform any act or duty under the statute that is mandatory, i.e., not within the EPA’s discretion.

§ 9:196 Notice and Service Requirements

Because a citizen suit is an enforcement mechanism rather than a vehicle for recovery of damages, the citizen-plaintiff must provide written notice of its intent to file suit before any citizen suit can be filed. This notice is designed to alert the EPA, the appropriate state environmental agency, and the alleged violator to the proposed enforcement action so that any or all of them can act in response to the alleged violations.

The persons on whom the notice must be served vary by statute and by the

[Section 9:194]

¹Glazer v. American Ecology Environmental Services Corp., 894 F. Supp. 1029, 26 Env’tl. L. Rep. 20108 (E.D. Tex. 1995) (citing Clean Air Act, Amendments of 1990); *see also* Parker v. Scrap Metal Processors, Inc., 386 F.3d 993, 59 Env’t. Rep. Cas. (BNA) 1353, 34 Env’tl. L. Rep. 20104 (11th Cir. 2004).

identity of the named defendant.¹ Subject to certain limited exceptions described in §§ 9:210 through 9:217, the notice must generally be served 60 days prior to filing of the suit, and it must include sufficient information to permit the recipient to identify with specificity (i) the standard or order allegedly violated; (ii) the action or inaction alleged to have caused the violation; (iii) the person(s) responsible for the alleged violation; (iv) the dates and locations of the alleged violation; (v) the citizen intending to bring suit; and (vi) counsel for the citizen. In the event the citizen-plaintiff intends to bring suit against the EPA for failure to perform a mandatory act, the notice must identify with specificity (i) the provision of the statute that requires the act or creates the duty; (ii) the EPA's action or inaction; (iii) the citizen intending to bring suit; and (iv) counsel for the citizen.

If the alleged violator is an individual or corporation, notice must be served by certified mail or personal service upon the alleged violator and its registered agent. If the alleged violator is a state or local agency, notice must be served by certified mail or personal service upon the head of that agency. Finally, if the alleged violator is a federal agency, notice must be served by certified mail or personal service upon the head of that agency. Generally, a copy of the notice also must be mailed to the Administrator of EPA, the EPA Regional Administrator for the EPA region in which the violation is alleged to be occurring, and the chief administrative officer of the appropriate state environmental agency. Under certain statutes, if the alleged violator is a federal or state agency, a copy of the notice must also be mailed to the U.S. Attorney General or to the attorney general for the state in which the alleged violation is occurring.²

The notice requirement is mandatory, and any notice that fails to contain the information specified in the statute and its regulations is not sufficient for jurisdiction.³ Limited exceptions to the requirement of a 60- or 90-day notice exist in certain exceptional cases under the Resource Conservation and Recovery Act ("RCRA"), the CWA, the CAA, and the Toxic Substances Control Act ("TSCA").⁴ In these exceptional cases, an action can be brought immediately after notifying the EPA Administrator of the intent to commence the action.

The purpose of the notice provision is twofold: (1) to provide the EPA or state environmental agency an opportunity to determine whether it should proceed with an enforcement action and (2) to provide the alleged violator an opportunity to correct the violation. Accordingly, a person subject to a notice letter can pursue two alternatives to litigating the suit prior to the case being filed. One is to enter into an acceptable consent agreement or to negotiate the issuance of an agreeable administrative order with the EPA or state environmental agency that sets forth a path to correct the violation. The other is to correct the violation within the notice period and, thus, render the citizen suit moot.⁵

Assuming the notice requirements have been met, the plaintiff can file suit in the federal district court for the district in which the violation is occurring or in which

[Section 9:196]

¹See §§ 9:210 through 9:217.

²See §§ 9:210 through 9:217.

³*Hallstrom v. Tillamook County*, 493 U.S. 20, 110 S. Ct. 304, 107 L. Ed. 2d 237, 30 Env't. Rep. Cas. (BNA) 1425, 20 Env't. L. Rep. 20193 (1989).

⁴See RCRA, 42 U.S.C. § 6972(c); CWA, 33 U.S.C. § 1365(a); CAA, 42 U.S.C. § 7604(b)(2); and TSCA, 15 U.S.C. § 2619(b)(2).

⁵See *Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc.*, 484 U.S. 49, 108 S. Ct. 376, 98 L. Ed. 2d 306, 26 Env't. Rep. Cas. (BNA) 1857, 9 Fed. R. Serv. 3d 1029, 18 Env't. L. Rep. 20142 (1987) *on remand*, *Chesapeake Bay Foundation, Inc. v. Gwaltney of Smithfield, Ltd.*, 844 F.2d 170, 27 Env't. Rep. Cas. (BNA) 1505, 18 Env't. L. Rep. 20941 (4th Cir. 1988).

the source of the violation is located. In some instances, the suit can be filed in the district in which the defendant resides or has its principal place of business. Suits against the EPA alleging a failure to perform a mandatory duty or act must be brought in the U.S. District Court for the District of Columbia, except under TSCA where the suit may be brought in the district in which the plaintiff is domiciled (permanently resides).⁶

A citizen-plaintiff is required to serve a copy of its complaint on the alleged violator and, in most instances, upon the U.S. Attorney General, the EPA Administrator, and the Regional Administrator of the EPA Region in which the violations are alleged to have occurred or be occurring.⁷ This requirement provides the EPA with an opportunity to intervene in the citizen suit; a right specifically provided for in the citizen suit provisions as discussed in § 9:209.⁸

§ 9:197 Jurisdiction

The federal district courts have exclusive jurisdiction over citizen suits regardless of the amount in controversy or the citizenship of the parties. As stated in § 9:196, the notice requirement depends on the statute, but failure to comply with the notice requirement requires dismissal of the action. Assuming that the notice requirement and the additional requirements discussed in §§ 9:198 to 9:200 are satisfied, the statutes generally do not require express requirement that a citizen-plaintiff exhaust its administrative remedies before bringing a citizen suit. That is, the citizen need not ask the agency in question to enforce the law before going to court.

§ 9:198 Statutes of Limitations

Like any other civil action, a citizen suit must be brought within the applicable statute of limitations. Courts that have addressed the issue have applied the general federal five-year statute of limitations to citizen suit actions when a specific act does not delineate the statute of limitations.¹

Those courts that have adopted a five-year statute of limitations have allowed citizen-plaintiffs to allege and show violations that occurred during the five-year period before the complaint was filed.² Also, the court in *Bethlehem Steel Corporation* permitted the citizen-plaintiffs' amendment to their complaint to relate back to the time of the filing of the original complaint since more recent violations were "merely additional allegations of the same conduct."³

§ 9:199 Standing—Harm to Citizens

In addition to the procedural requirements that must be met before a citizen suit can be commenced, a citizen-plaintiff also must establish that it has standing to

⁶15 U.S.C. § 2619(a).

⁷*See, e.g.*, CWA, 40 C.F.R. § 135.4; RCRA, 42 U.S.C. § 6972(b)(2)(F).

⁸*See, e.g.*, 33 U.S.C. § 1365(c)(2); CAA, 42 U.S.C. § 7604(c)(2).

[Section 9:198]

¹*See* 28 U.S.C. § 2462; *see, e.g.*, *Trawinski v. United Technologies*, 313 F.3d 1295 (11th Cir. 2002); *Chesapeake Bay Foundation, Inc. v. Bethlehem Steel Corp.*, 652 F. Supp. 620, 627 n.6, 25 Env't. Rep. Cas. (BNA) 1684, 17 Env't. L. Rep. 20623 (D. Md. 1987); *Sierra Club v. Chevron U.S.A., Inc.*, 834 F.2d 1517, 1521–1523, 27 Env't. Rep. Cas. (BNA) 1001, 18 Env't. L. Rep. 20237 (9th Cir. 1987). The statute of limitations for a Clean Water Act citizen suit is the federal statute of limitations (five years). *Public Interest Research Group of New Jersey, Inc. v. Powell Duffryn Terminals Inc.*, 913 F.2d 64, 74, 31 Env't. Rep. Cas. (BNA) 1905, 20 Env't. L. Rep. 21216 (3d Cir. 1990) ("The CWA contains no relevant statute of limitations.").

²*See, e.g.*, *Chesapeake Bay Found. v. Bethlehem Steel Corp.*, 652 F. Supp. at 627–28.

³*Chesapeake Bay Found. v. Bethlehem Steel Corp.*, 652 F. Supp. at 628.

bring its action. Citizen suit provisions generally provide that “any person” may bring suit against an alleged violator.¹ The U.S. Supreme Court has held, however, that, even under such a broad grant of standing, a citizen-plaintiff must establish that it has suffered or will suffer a sufficient injury caused by the alleged violation, in order to bring suit.² If the citizen-plaintiff cannot show how it is or will be injured by the violation, the court will dismiss the suit for lack of standing.

Congress has attempted to clarify that requirement by including language in certain environmental statutes expressly allowing suit to be brought only by “any person or persons having an interest which is or may be adversely affected.”³ The legislative history of the CWA suggests that Congress intended to incorporate the standing test of the *Sierra Club v. Morton*⁴ case in the citizen suit provision.⁵

Under *Sierra Club*, the citizen-plaintiffs must establish that they have some interest in the affected resource, such as a recreational, aesthetic, or economic use in order to establish standing. The Supreme Court recognized in *Sierra Club* that an environmental group whose members are injured may represent those members in a proceeding for judicial review; however, the failure of the Sierra Club to meet the requirement that the party seeking review allege facts showing that its members were adversely affected resulted in a lack of standing for the Sierra Club in that case.⁶

The standing test of *Sierra Club* requires the plaintiff to demonstrate that the challenged action will cause or has caused injury to the plaintiff's interests. The injury may be either actual or threatened, but it must be concrete and imminent. Another Supreme Court case, *Lujan v. Defenders of Wildlife*,⁷ construing the standing requirement of the Endangered Species Act's citizen suit provision found that the citizen-plaintiffs lacked standing where they failed to show a sufficiently concrete injury to their interests.⁸ In *Lujan*, the Court found that the plaintiffs failed to establish any particular interest of any member of the group that would be impacted by the challenged action—the decision to no longer subject federally funded foreign projects to review under the Endangered Species Act.⁹

A citizen-plaintiff must also demonstrate that the defendant's actions caused its injury. However, courts generally have not interpreted the causation requirement to defeat the broad, remedial purpose of the relevant statute. For example, one court held that plaintiffs in a CWA suit were not required to show that a certain percentage of the pollution that adversely affected their interests in a waterway was traceable to the defendant because to do so would defeat the purpose of the Act.¹⁰ Instead, the court found that the plaintiffs had satisfied the causation requirement under

[Section 9:199]

¹See, e.g., RCRA, 42 U.S.C. § 6972(a); CAA, 42 U.S.C. § 7604(a).

²*Sierra Club v. Morton*, 405 U.S. 727, 734–737, 92 S. Ct. 1361, 31 L. Ed. 2d 636, 3 Env't. Rep. Cas. (BNA) 2039, 1 Env'tl. L. Rep. 29001, 2 Env'tl. L. Rep. 20192 (1972).

³See, e.g., CWA, 33 U.S.C. § 1365(g).

⁴405 U.S. at 739 (1972).

⁵See 93d Cong., 1st Sess. (1973).

⁶See 405 U.S. at 739–741.

⁷*Lujan v. Defenders of Wildlife*, 504 U.S. 555, 112 S. Ct. 2130, 119 L. Ed. 2d 351, 34 Env't. Rep. Cas. (BNA) 1785, 22 Env'tl. L. Rep. 20913 (1992).

⁸*Lujan v. Defenders of Wildlife*, 504 U.S. 555, 112 S. Ct. 2130, 119 L. Ed. 2d 351, 34 Env't. Rep. Cas. (BNA) 1785, 22 Env'tl. L. Rep. 20913 (1992).

⁹*Lujan v. Defenders of Wildlife*, 504 U.S. 555, 112 S. Ct. 2130, 119 L. Ed. 2d 351, 34 Env't. Rep. Cas. (BNA) 1785, 22 Env'tl. L. Rep. 20913 (1992).

¹⁰See *Student Public Interest Research Group of New Jersey, Inc. v. P.D. Oil & Chemical Storage, Inc.*, 627 F. Supp. 1074, 1082, 23 Env't. Rep. Cas. (BNA) 1894, 16 Env'tl. L. Rep. 20517 (D.N.J. 1986).

the standing test by alleging violations of a wastewater discharge permit.¹¹

For purposes of a citizen suit action, a person is typically defined to mean an individual, trust, stock company, joint venture, consortium, corporation (including a government corporation), partnership, association, state, municipality, commission, political subdivision of a state, or any interstate body and each department, agency, and instrumentality of the United States.¹² An Indian tribe has also been held to be a proper citizen suit plaintiff under RCRA.¹³

§ 9:200 Ongoing Violations

In general, citizen suits may only be initiated where the citizen-plaintiff alleges violations of a continuing nature or intermittent violations in the past and continuation of the conditions that led to those violations.¹ RCRA allows citizen-plaintiffs to bring suit for past violations that present a current endangerment.²

The requirement that the violations must be continuing for non-RCRA cases has been interpreted by the Ninth Circuit Court of Appeals to mean either that the violations must continue on or after the date the complaint is filed or that the trier of fact (judge or jury) could find a continuing likelihood of violations.³

Since the violations must be ongoing, a number of courts have recognized that a defendant can show that a citizen suit seeking injunctive relief is moot by showing that “there is no reasonable expectation that the wrong will be repeated.”⁴ For example, one court stayed a suit where it found that the action would be rendered moot upon the completion of improved pollution control measures.⁵ However, in a case seeking civil penalties, the defendant failed to convince the court that the violations would not recur, and the court imposed penalties notwithstanding that the defendant had taken steps to alleviate the problem.⁶

The requirement that the violation be ongoing is very important to the regulated community. A wide array of information is provided by regulated entities to the EPA and state agencies under the various environmental laws. On occasion, that information is likely to contain some documentation of conditions that may be

¹¹Student Public Interest Research Group of New Jersey, Inc. v. P.D. Oil & Chemical Storage, Inc., 627 F. Supp. 1074, 1083, 23 Env’t. Rep. Cas. (BNA) 1894, 16 Env’tl. L. Rep. 20517 (D.N.J. 1986).

¹²See, e.g., Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. § 9601(21); 42 U.S.C. § 6903(15) (RCRA).

¹³See *Blue Legs v. U.S. E.P.A.*, 668 F. Supp. 1329, 26 Env’t. Rep. Cas. (BNA) 1530, 18 Env’tl. L. Rep. 20197 (D.S.D. 1987), judgment aff’d, 867 F.2d 1094, 29 Env’t. Rep. Cas. (BNA) 1710, 19 Env’tl. L. Rep. 20717 (8th Cir. 1989).

[Section 9:200]

¹*Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc.*, 484 U.S. 49, 64, 108 S. Ct. 376, 98 L. Ed. 2d 306, 26 Env’t. Rep. Cas. (BNA) 1857, 9 Fed. R. Serv. 3d 1029, 18 Env’tl. L. Rep. 20142 (1987).

²See § 9:211; 42 U.S.C. § 6972(a)(1)(B).

³*Sierra Club v. Union Oil Co. of California*, 853 F.2d 667, 669–71, 28 Env’t. Rep. Cas. (BNA) 1333, 18 Env’tl. L. Rep. 21299 (9th Cir. 1988). Other courts have not been so generous and have held both pre- and post-*Gwaltney* that “continuing residual effects resulting from a discharge are not equivalent to a continuing discharge.” *Wilson v. Amoco Corp.*, 33 F. Supp. 2d 969, 975, 46 Env’t. Rep. Cas. (BNA) 1998 (D. Wyo. 1998).

⁴*Sierra Club v. Union Oil Co. of California*, 853 F.2d 667, 669, 28 Env’t. Rep. Cas. (BNA) 1333, 18 Env’tl. L. Rep. 21299 (9th Cir. 1988).

⁵*Atlantic States Legal Foundation, Inc. v. Tyson Foods, Inc.*, 682 F. Supp. 1186, 1190, 27 Env’t. Rep. Cas. (BNA) 1404, 18 Env’tl. L. Rep. 20924 (N.D. Ala. 1988).

⁶*Work v. Tyson Foods, Inc.*, 720 F. Supp. 132, 138, 30 Env’t. Rep. Cas. (BNA) 1580, 20 Env’tl. L. Rep. 20278 (W.D. Ark. 1989), aff’d on other grounds, 921 F.2d 1394, 32 Env’t. Rep. Cas. (BNA) 1508, 19 Fed. R. Serv. 3d 513, 21 Env’tl. L. Rep. 20610 (8th Cir. 1990).

violations. Allowing suits for wholly past violations could result in citizen groups “flyspecking” the files of regulatory agencies and filing suit for every violation suggested in the agency records.

§ 9:201 Remedies in Citizen Suits

A variety of remedies are available to citizen-plaintiffs. These remedies are discussed in §§ 9:202 through 9:204.

§ 9:202 Injunctive Relief and Civil Penalties

Citizen-plaintiffs generally seek injunctive relief to enforce statutory requirements or permit conditions and to enjoin further violations. A plaintiff cannot recover damages from a defendant under a citizen suit (like those recoverable in toxic tort cases); however, under many federal environmental statutes, a court may impose civil penalties to be paid to the U.S. Treasury.

Normally, the need for injunctive relief can be rendered moot by compliance. It is not clear whether civil penalties can be rendered moot, however. For example, the U.S. Court of Appeals for the Second Circuit held that a defendant that comes into compliance with its pretreatment permit after a citizen suit had been filed under the CWA, but before judgment had been entered, may still be liable for civil penalty claims.¹ Thus, even though the plaintiff’s request for injunctive relief had been rendered moot, the court found that civil penalties could be imposed for violations that take place after the complaint is filed, as well as those violations that were ongoing at the time suit was filed.²

In establishing the amount of civil penalties, the court or the parties to a settlement often use the EPA’s Civil Penalty Policy. The policy provides that the penalty should include a benefit component to remove the economic benefit of noncompliance and a gravity component to account for the seriousness of the violations.³

Also, DOJ has made it clear that under the Miscellaneous Receipts Act, all civil penalties must be deposited with the U.S. Treasury. The EPA has indicated its intention to continue monitoring citizen suit settlements and to require the imposition of civil penalties, by intervening if necessary.

§ 9:203 Attorney’s Fees, Expert Witness Fees, and Court Costs

Courts also may award any prevailing citizen-plaintiff its court costs, reasonable attorney’s fees, and expert witness fees. Generally a plaintiff must attain some success on the merits before it may receive a fee award.¹ The U.S. Court of Appeals for the Second Circuit has held that it is not necessary that the plaintiff achieve a judgment or settlement. For example, a citizen may prevail where the suit motivated the defendant to settle with the government.² Some statutes contain language al-

[Section 9:202]

¹See *Atlantic States Legal Foundation, Inc. v. Pan American Tanning Corp.*, 993 F.2d 1017, 1020–1021, 36 Env’t. Rep. Cas. (BNA) 1960, 23 Env’t. L. Rep. 20865 (2d Cir. 1993).

²*Atlantic States Legal Foundation, Inc. v. Pan American Tanning Corp.*, 993 F.2d 1017, 1021, 36 Env’t. Rep. Cas. (BNA) 1960, 23 Env’t. L. Rep. 20865 (2d Cir. 1993).

³See § 9:125 and § 9:126.

[Section 9:203]

¹*Ruckelshaus v. Sierra Club*, 463 U.S. 680, 103 S. Ct. 3274, 77 L. Ed. 2d 938, 19 Env’t. Rep. Cas. (BNA) 1249, 13 Env’t. L. Rep. 20664 (1983).

²See *Atlantic States Legal Foundation, Inc. v. Eastman Kodak Co.*, 933 F.2d 124, 33 Env’t. Rep. Cas. (BNA) 1121, 21 Env’t. L. Rep. 21047 (2d Cir. 1991).

lowing a court to award costs of suit, attorney's fees, and expert witness fees at its discretion. Other statutes require that the party be a prevailing or substantially prevailing party to recover such costs and fees.³

As a practical matter, once a citizen suit has been filed by one of the many environmental organizations that specialize in such litigation (e.g., the Sierra Club, the Natural Resources Defense Council, Atlantic States Legal Foundation), and assuming the citizen suit survives the procedural and substantive hurdles discussed in this chapter, settlement almost always will include a component for the payment of attorney's fees. In some cases, the attorneys' fees component will exceed the actual civil penalty component of settlement.

§ 9:204 Preservation of Other Relief

The citizen suit provisions of the various environmental statutes generally disclaim any intent to limit the rights of any person to assert separate causes of action or seek other relief or remedies under other federal or state statute or common law.¹ Thus, a citizen-plaintiff may bring a private cause of action stemming from the same violation (for example, a nuisance claim) in the same suit under the district court's pendant jurisdiction or pursue that other cause of action in a separate suit.²

§ 9:205 Defense of a Citizen Suit

Like any other civil action, a citizen suit is commenced by the filing of a complaint. The responsive pleading is an answer responding to each allegation, although a motion to dismiss can be made in the event the notice requirement has not been met.¹ A motion for summary judgment also may be appropriate to challenge standing or to raise the diligent prosecution bar to a suit discussed in § 9:206.

Equitable defenses such as laches or estoppel (the plaintiff unreasonably delayed the filing of the action to the prejudice of the defendant) typically are not available in citizen suit actions, because such defenses cannot normally be raised against the government, and citizen-plaintiffs theoretically stand in the government's shoes for purposes of citizen suits. Factual defenses, i.e., discharge monitoring reports were incorrect, an intervening cause resulted in the violation, etc., may be available on a case-by-case basis. In addition to factual defenses, a defendant may be able to assert a diligent prosecution defense² or defense that the violations were wholly past.³

§ 9:206 Relationship to Government Enforcement Actions—Diligent Prosecution

In general, the citizen suit provisions in the federal environmental statutes preclude citizen actions if the federal or state agency is "diligently prosecuting" an enforcement action for the same violation. To preclude a suit, the defendant must show that either a federal or state agency has commenced an appropriate enforce-

³See §§ 9:210 through 9:217.

[Section 9:204]

¹See, e.g., CAA, 42 U.S.C. § 7604(e).

²See e.g., *Vernon Village, Inc. v. Gottier*, 755 F. Supp. 1142, 32 Env't. Rep. Cas. (BNA) 1697, 21 Env'tl. L. Rep. 21186 (D. Conn. 1990).

[Section 9:205]

¹See § 9:196.

²See § 9:210.

³See § 9:200.

ment action.¹ Under some statutes courts have interpreted the requirement of an “action” narrowly and have found that the EPA and state agency administrative actions, including enforcement of administrative orders or consent decrees, would not bar a citizen suit because they were not “court” proceedings.² However, some of the statutes have broader citizen suit preclusion provisions that expressly include, as enforcement actions, administrative agency actions and actions seeking administrative penalties.³

In order to preclude a citizen suit due to the commencement of a parallel action by the EPA or a state agency, the defendant also must demonstrate that the agency’s action constitutes “diligent prosecution.” If the court finds that the agency is not effectively pursuing the action or that the action has failed to achieve compliance over a number of years, the court may reject the defense.⁴ For example, one court held that a state’s monitoring and awareness of a defendant’s difficulties in implementing new technology were not sufficient to preclude a citizen suit.⁵

In *New York Public Interest Research Group v. Limco Mfg.*, the court found that a citizen suit was not barred where the municipality had instituted enforcement actions in both the city court and the state court.⁶ In *Atlantic States Legal Foundation, Inc.*, the Court stated:

In general, the Act [CWA] accords the enforcement actions of local agencies less deference than it does those of state and federal agencies. For example, the Act provides that only federal or state civil or administrative penalty actions can preclude citizens suits. Similarly, the Act requires citizen plaintiffs to give notice to state and federal, but not to local, agencies before filing suit.⁷

Where the agency action fails to address the same factual grievances that form the basis of the citizen suit, the citizen suit may be allowed to go forward.⁸

On the other hand, courts have held that a claim was barred due to diligent prosecution even where compliance had not been achieved due to the defendant’s inability to pay. For example, in *Supporters to Oppose Pollution, Inc. v. Heritage Group*, the Seventh Circuit Court of Appeals precluded the citizen-plaintiffs from initiating a suit under RCRA where the EPA had prosecuted an action against the landfill operator and had succeeded in closing the landfill and imposing fines against

[Section 9:206]

¹See, e.g., CERCLA, 42 U.S.C. § 9659(d)(2); SDWA, 42 U.S.C. § 300j-8(b)(1)(B).

²See, e.g., *Tobyhanna Conservation Ass’n v. Country Place Waste Treatment Co.*, 734 F. Supp. 667, 670, 20 Env’tl. L. Rep. 21066 (M.D. Pa. 1989) (state agency action under Pennsylvania’s Clean Streams Law involving no public notice or hearing and resulting in no assessment of penalties was not a sufficient “action” to preclude a citizen suit under the CWA).

³See, e.g., EPCRA, 42 U.S.C. § 11046(e); TSCA, 15 U.S.C. § 2619(b)(1)(B).

⁴See, e.g., *Tobyhanna Conservation Ass’n v. Country Place Waste Treatment Co.*, 734 F. Supp. 667, 20 Env’tl. L. Rep. 21066 (M.D. Pa. 1989).

⁵See *Chesapeake Bay Foundation, Inc. v. Bethlehem Steel Corp.*, 652 F. Supp. 620, 632, 25 Env’t. Rep. Cas. (BNA) 1684, 17 Env’tl. L. Rep. 20623 (D. Md. 1987).

⁶*New York Public Interest Research Group, Inc. v. Limco Mfg. Corp.*, 697 F. Supp. 608, 27 Env’t. Rep. Cas. (BNA) 1433 (E.D. N.Y. 1987).

⁷*Atlantic States Legal Foundation, Inc. v. Pan American Tanning Corp.*, 993 F.2d 1017, 1022, 36 Env’t. Rep. Cas. (BNA) 1960, 23 Env’tl. L. Rep. 20865 (2d Cir. 1993) (citations omitted).

⁸*U.S. E.P.A. v. City of Green Forest, Ark.*, 921 F.2d 1394, 1404, 32 Env’t. Rep. Cas. (BNA) 1508, 19 Fed. R. Serv. 3d 513, 21 Env’tl. L. Rep. 20610 (8th Cir. 1990); *Friends of Milwaukee’s Rivers v. Milwaukee Metropolitan Sewerage Dist.*, 382 F.3d 743, 756, 59 Env’t. Rep. Cas. (BNA) 1263, 35 Env’tl. L. Rep. 20067 (7th Cir. 2004).

the operator, but the operator had not yet cleaned up the site.⁹

§ 9:207 Agency Involvement in Citizen Suits

As stated previously, the notification requirement provides the EPA with the opportunity to (1) issue an administrative order against the alleged violator; (2) initiate its own action with respect to the alleged violation; (3) negotiate a consent agreement with the alleged violator; (4) intervene in the action in the event it is filed; or (5) file an *amicus curiae* (friend of the court) brief in any action filed. The requirement under some of the statutes that a citizen-plaintiff serve a copy of its complaint on the U.S. Attorney General and on the EPA Administrator also facilitates the government's monitoring of citizen suits. As stated in the House Report discussions with respect to RCRA's citizen suit provision:

It is expected that EPA and the Department of Justice will carefully monitor litigation under this provision and file, where appropriate, *amicus curiae* briefs with the court in order to assure orderly and consistent development of caselaw in this area.¹

§ 9:208 Intervention

The citizen suit provisions of environmental statutes typically reserve to the EPA the right to intervene in the suit at any time. As a practical matter, when the EPA intervenes in a citizen suit, it assumes control of the enforcement action. Intervention in a citizen suit by the EPA is a relatively rare occurrence; however, if the EPA intervenes, it is usually at the outset of a case, after receiving notice of the filing of the complaint.

The reasons the EPA might intervene include the following situations: (1) the citizen group requests intervention; (2) there are novel questions of law; and (3) the outcome of the citizen suit could undermine future EPA enforcement efforts.

If the United States is not a party to a citizen suit, a judgment in the suit will not have any binding effect on the United States. Also, the CWA and the CAA provide that if the United States is not a party to the action, any proposed consent judgment must be provided to the U.S. Attorney General and the EPA Administrator at least 45 days prior to the entry of the consent judgment.¹ During this 45-day review period, the EPA, through DOJ, may comment to the court and the parties or may intervene. It is extremely rare for the EPA to intervene after a consent decree has been negotiated.

Historically, one of the most common bases for comment by the EPA has been whether the consent decree includes a civil penalty. The EPA generally requires a penalty in every case. Citizen groups, however, prefer that the defendant finance environmentally beneficial projects. If the citizen group and the defendant have negotiated a consent decree that includes such a project, and if the EPA seeks a penalty, it may result in a reduction of the amount devoted to the project.

Some citizen suit provisions include authorization for any person to intervene in certain suits brought by the government. Despite the fact that the right to intervene is specifically granted in most of the statutes, where the government action was brought under the government's emergency powers relating to an "imminent and substantial endangerment," citizen-plaintiffs typically will be denied the right to

⁹See *Supporters to Oppose Pollution, Inc. v. Heritage Group*, 973 F.2d 1320, 35 Env't. Rep. Cas. (BNA) 1531, 23 Fed. R. Serv. 3d 697, 23 Env'tl. L. Rep. 20005 (7th Cir. 1992).

[Section 9:207]

¹H.R. Rep. No. 98-198, 98th Cong., 2d Sess. 53 (1984), *reprinted in* 1984 U.S.C.C.A.N. 5576, 5612.

[Section 9:208]

¹See CAA, 42 U.S.C. § 7604(c)(3); CWA, 33 U.S.C. § 1365(c)(3).

intervene.²

§ 9:209 Agency as the Defendant

As stated in § 9:194, a citizen suit may be brought against the EPA to require it to perform an act or duty that is mandated by the particular statute. These suits generally are successful only when the statute clearly and unequivocally imposes a mandatory duty to act by a specified date. Moreover, the relief granted is usually in the form of directing the EPA order to make a decision—not an order stating what the decision must be.

The most common type of suit against the EPA is one seeking to compel the Agency to issue regulations that were to have been issued by a certain date under a specific statute. The relief granted is generally in the form of a schedule for issuing a proposed regulation and, after comment, a final regulation. Courts do not typically order the issuance of a particular regulation as final. However, these suits can and do significantly influence the content of the final regulation in two ways. First, they may include provisions that a particular regulation be proposed without a commitment as to the final form of the regulation. Second, the time frame for issuing the regulation may be so short that, as a practical matter, the Agency has little choice about the content of the regulation.¹

The second type of suit against the EPA is one in which the suit seeks to compel or enjoin the Agency from carrying out its enforcement authority. These are almost uniformly unsuccessful, since the exercise of enforcement authority by the EPA is considered to be a discretionary rather than mandatory duty.

The third type of suit against the EPA is one that seeks to compel the Agency to take action that has been unreasonably delayed. This is generally brought under the Administrative Procedures Act rather than under a specific environmental statute, and although not a citizen suit in the “classic” sense, it often serves the same function. For example, it may be used when a permittee has been waiting for action on his permit application for an inordinate period of time.

In one case an Administrative Procedure Act claim was brought when the EPA failed to remove in a timely manner a contractor from the list of those not eligible for such contracts. Again, the relief generally granted in these cases is not an order that a particular decision be made, but rather an order that a decision—any decision—be made.

The final type of citizen suit brought against the EPA is one in which the plaintiff alleges that the Agency has failed to comply with an environmental law or regulation. This is no different from a suit brought against a regulated private sector entity.

§ 9:210 Statute-Specific Considerations

There are a variety of statute-specific considerations relating to citizen suits. These statute-specific considerations are discussed in §§ 9:211 to 9:217.

²See *U.S. v. Hooker Chemicals & Plastics Corp.*, 749 F.2d 968, 21 Env’t. Rep. Cas. (BNA) 1961, 40 Fed. R. Serv. 2d 269, 14 Env’tl. L. Rep. 20875 (2d Cir. 1984) (denying citizens’ motion for intervention as of right in government-initiated action under emergency provisions of the CWA, SDWA, and RCRA). *But see*, *U.S. v. Stringfellow*, 783 F.2d 821, 24 Env’t. Rep. Cas. (BNA) 1089, 4 Fed. R. Serv. 3d 397, 16 Env’tl. L. Rep. 20458 (9th Cir. 1986) (permitting intervention as of right), *cert. granted in part*, 106 S. Ct. 2273, *cert. dismissed in part*, 107 S. Ct. 10, *decision vacated on other grounds*, 107 S. Ct. 1177 (1987).

[Section 9:209]

¹*Massachusetts v. E.P.A.*, 549 U.S. 497, 127 S. Ct. 1438, 167 L. Ed. 2d 248, 63 Env’t. Rep. Cas. (BNA) 2057 (2007).

§ 9:211 Resource Conservation and Recovery Act (“RCRA”)

The Resource Conservation and Recovery Act (“RCRA”) includes a citizen suit provision that provides three grants of authorization for actions.¹

In proceedings under subsection 6972(a)(1)(A), a citizen may bring suit against any person alleged to be in violation of any permit, standard, requirement, regulation, or order that has become effective under the Act.² “Any person” (as a defendant) includes the United States and any governmental entity, to the extent permitted by the Eleventh Amendment of the United States Constitution. The venue of the federal courts is somewhat modified under RCRA in that suit brought under subsection 6972(a)(1) may be brought in the district in which the alleged violation occurred or in which the alleged endangerment may occur.³

Under subsection (a)(1)(A), the district court may enforce the permit, standard, regulation, condition, requirement, prohibition, or order through injunctive relief and may impose appropriate civil penalties under RCRA Sections 3008(a) (violations of compliance orders) and 3008(g) (violations of any requirement under RCRA’s hazardous waste management subtitle).⁴ At least one circuit court has held that subsection 6972(a)(1)(A) actions do not impose retroactive liability for violations of RCRA standards that occurred before the enactment of RCRA in 1976.⁵

Subsection 6972(a)(1)(B) parallels the imminent hazard provision of RCRA Section 9673(a), which allows the EPA to bring suit under the same conditions.⁶ Under subsection 6972(a)(1)(B), a citizen suit may be brought against any person who has contributed or is contributing to the past or present handling, storage, treatment, transportation, or disposal of any hazardous or solid waste that may present an imminent and substantial endangerment to health or the environment.⁷ It identifies, in particular, past or present generators, transporters, or owners or operators of treatment, storage, or disposal facilities as possible objects of a suit.⁸ Moreover, like subsection 6972(a)(1)(A), “any person” as a defendant includes the United States and any governmental entity to the extent permitted by the Eleventh Amendment of the Constitution. Also, as under subsection 6972(a)(1)(A), a suit may be brought in the district in which the alleged violation occurred or in which the alleged endangerment may occur.

Under subsection 6972(a)(1)(B) actions, the court may restrain any person who has contributed or is contributing to the past or present management or disposal of the waste, impose civil penalties, and order the person to take other necessary action. In *Gwaltney*, the U.S. Supreme Court implied that while subsection 6972(a)(1)(A) of RCRA authorizes only prospective relief, under subsection 6972(a)(1)(B) may be applied retroactively.⁹ Thus, some courts have permitted

[Section 9:211]

¹42 U.S.C. §§ 6972(a)(1)(A), 6972(a)(1)(B), and 6972(a)(2).

²42 U.S.C. § 6972(a)(1)(A).

³42 U.S.C. § 6972(a).

⁴42 U.S.C. § 6928(a), (g).

⁵*Ascon Properties, Inc. v. Mobil Oil Co.*, 866 F.2d 1149, 29 Env’t. Rep. Cas. (BNA) 1001, 12 Fed. R. Serv. 3d 1467, 19 Env’t. L. Rep. 20374 (9th Cir. 1989).

⁶42 U.S.C. § 6973(a).

⁷42 U.S.C. § 6972(a)(1)(B).

⁸42 U.S.C. § 6972(a)(1)(B).

⁹*Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc.*, 484 U.S. 49, 108 S. Ct. 376, 98 L. Ed. 2d 306, 26 Env’t. Rep. Cas. (BNA) 1857, 9 Fed. R. Serv. 3d 1029, 18 Env’t. L. Rep. 20142 (1987).

plaintiffs to seek injunctive relief for past or present conduct under this subsection.¹⁰

In *Meghrig v. KFC Western, Inc.*,¹¹ the U.S. Supreme Court held that subsection 6972(a)(1)(B) of RCRA does not authorize a private cause of action to recover the private cost of cleaning up toxic waste that does not, at the time of the suit, continue to pose an endangerment to health or the environment. The Court explained that while subsection 6972(a)(1)(B) permits citizen suits against persons responsible for “waste that *may present* an *imminent* and substantial endangerment to health or the environment,” subsection 6972(a)(1)(B) “does not authorize a suit based upon an allegation that the contaminated site posed such an endangerment *at some time in the past*.”¹²

The mere creation of solid waste, or the handling, storage, or disposal of solid waste, has been held to support a cause of action under 42 U.S.C. § 6972(a)(1)(B).¹³ Under subsection 6972(a)(1)(B), a court may also impose any appropriate civil penalties under RCRA Sections 3008(a) (violations of compliance orders) and 3008(g) (violations of any requirement under RCRA’s hazardous waste management subtitle).¹⁴

Finally, under subsection 6972(a)(2), a citizen suit may be brought against the EPA for failure to perform a nondiscretionary act or duty required by the Act.¹⁵ An action brought against the EPA to compel performance of the act or duty must be brought in the district court for the district in which the alleged violation occurred or in the District Court for the District of Columbia.¹⁶

To bring a citizen suit under subsection 6972(a)(1)(A) or (a)(1)(B) of RCRA, a plaintiff first must serve notice of its intent to file suit in the following manner:

For private entities:

By registered mail, return receipt requested, or personal service to owner or site manager, with a copy to the Administrator of the EPA, the Regional Administrator of the EPA for the region in which the violation is alleged to have occurred, and the Chief Administrative Officer of the appropriate state’s solid waste management agency. If the alleged violator is a corporation, a copy must also be mailed to the registered agent of the corporation in the state in which the violation is alleged to have occurred;

For state/local entities:

By registered mail, return receipt requested, or by personal service upon the head of the agency, with a copy to the Administrator of the EPA, the Regional Administrator of the EPA for the region in which the violation is alleged to have occurred, and the Chief Administrative Officer of the state’s solid waste management agency;

For federal agencies:

By registered mail, return receipt requested, or by personal service upon the head of the agency, with a copy to the Administrator of the EPA, the

¹⁰*See, e.g.,* Tanglewood East Homeowners v. Charles-Thomas, Inc., 849 F.2d 1568, 28 Env’t. Rep. Cas. (BNA) 1260, 18 Env’tl. L. Rep. 21348 (5th Cir. 1988).

¹¹*Meghrig v. KFC Western, Inc.*, 516 U.S. 479, 116 S. Ct. 1251, 134 L. Ed. 2d 121, 42 Env’t. Rep. Cas. (BNA) 1193, 26 Env’tl. L. Rep. 20820 (1996).

¹²*Meghrig v. KFC Western, Inc.*, 516 U.S. 479, 480, 116 S. Ct. 1251, 134 L. Ed. 2d 121, 42 Env’t. Rep. Cas. (BNA) 1193, 26 Env’tl. L. Rep. 20820 (1996) (emphasis in original in first quote, emphasis added to second quote).

¹³*Cox v. City of Dallas, Tex.*, 256 F.3d 281, 287, 52 Env’t. Rep. Cas. (BNA) 1908, 31 Env’tl. L. Rep. 20767 (5th Cir. 2001).

¹⁴42 U.S.C. § 6928(a)(g).

¹⁵42 U.S.C. § 6972(a)(2).

¹⁶42 U.S.C. § 6972(a).

Regional Administrator of the EPA for the region in which the violation is alleged to have occurred, the Chief Administrative Officer of the state's solid waste management agency, and the Attorney General of the United States (40 C.F.R. § 254 (1993)). If the action is brought under subsection 6972(a)(1)(A) to enforce a permit condition or other requirement, the notice must be given sixty (60) days prior to commencing suit.¹⁷

If the action is one alleging an imminent and substantial endangerment brought under subsection 6972(a)(1)(B), the notice must be given ninety (90) days prior to commencing suit.¹⁸ However, an exception to the notice requirement exists with respect to cases brought under subsection 6972(a)(1)(B) involving alleged violations of Subtitle C of RCRA (relating to hazardous waste management). In those instances, suit may be brought immediately after notification.¹⁹ RCRA, CERCLA, and SDWA are the only statutes that authorize such immediate citizen suit action.

To bring suit under subsection 6972(a)(2), the plaintiff must serve upon the EPA Administrator a 60-day notice of its intent to file suit, with a copy to the Attorney General of the United States.²⁰ Like the exception noted above, however, a suit may be commenced immediately after notification in the case of an action brought with respect to Subtitle C of RCRA.²¹

Notice under the foregoing provisions is considered to have been served on the date of receipt (as shown on the return receipt in the event service is made by mail).

A citizen-plaintiff may not bring a suit under subsection 6972(a)(1)(A) if the EPA or the state has commenced and is diligently prosecuting a civil or criminal action in a federal or state court to require compliance with a permit, standard, regulation, condition, requirement, prohibition, or order.²² If the government action fails to address the problems alleged in the citizen's complaint, however, the government action may not act as a bar as to those problems.

The following government action will be enough to preclude a suit under subsection 6972(a)(1)(B) of the citizen suit provision: if the EPA, in order to abate or restrain the acts or conditions that present the endangerment:

- a) has commenced and is diligently prosecuting an action under Section 6973 of RCRA or Section 106 of CERCLA;²³
- b) is actually engaging in a Section 104 CERCLA removal action;²⁴
- c) has incurred costs to initiate a Remedial Investigation/Feasibility Study ("RI/FS") under Section 104 of CERCLA and is diligently proceeding with a remedial action under CERCLA; or
- d) has obtained a court order (including a consent decree) or issued an administrative order under Section 106 of CERCLA²⁵ or Section 6973 of RCRA and a responsible party is conducting a removal or remedial action (but, the right to bring a citizen suit is only limited as to the scope and duration of the administrative order).²⁶

¹⁷42 U.S.C. § 6972(b)(1)(A).

¹⁸42 U.S.C. § 6972(b)(2).

¹⁹42 U.S.C. § 6972(b)(2).

²⁰42 U.S.C. § 6972(c); 40 C.F.R. Pt. 254.

²¹42 U.S.C. § 6972(c).

²²42 U.S.C. § 6972(b)(1)(B).

²³42 U.S.C. § 9606.

²⁴42 U.S.C. § 9604.

²⁵42 U.S.C. § 9606.

²⁶42 U.S.C. § 6972(b)(2)(B).

Likewise, no citizen suit may be brought under subsection 6972(a)(1)(B) if a state, in order to restrain or abate acts or conditions presenting an endangerment:

- a) has commenced and is diligently prosecuting an action under subsection 6972(a)(1)(B);
- b) is actually engaging in a CERCLA Section 104 removal action; or
- c) has incurred costs to initiate an RI/FS under Section 104 of CERCLA and is diligently proceeding with a remedial action under CERCLA.²⁷ The express provisions of RCRA also contain specific statutory bars to bringing a citizen suit. For example, no citizen suit may be brought (except by the state or local government) to challenge the siting or permitting of a hazardous waste treatment, storage, or disposal facility.²⁸

On the other hand, RCRA specifically prohibits open dumping under 42 U.S.C. § 6945, and courts have allowed citizen-plaintiffs to enforce the prohibition.²⁹ In the view of the EPA:

The open dumping prohibition is a provision of Federal law which stands on its own, separate from the State planning programs. In conjunction with the citizen suit provision, the open dumping prohibition creates a Federal cause of action allowing citizens and States to seek relief in Federal Court for damaging solid waste management practices.³⁰

Any person may intervene as a matter of right in a subsection 6972(a)(1)(A) action. In an “imminent and substantial endangerment” action brought under subsection 6972(a)(1)(B), however, a person may intervene as a matter of right only when that person claims an interest in the action and when the disposition of the matter may impair or impede the person’s ability to protect that interest.³¹ Intervention will be denied if the EPA or the state agency can show that the person’s interest is adequately protected by existing parties to the suit.³² Finally, the EPA has a right to intervene in any action under RCRA’s citizen suit provision.³³

Under 42 U.S.C. § 6972(e), the district court may, at its discretion, award costs of litigation, including expert witness and attorney’s fees to the prevailing or substantially prevailing party.

Finally, RCRA’s citizen suit provision contains a special section modifying the liability of certain transporters under subsection 6972(a)(1)(B) suits. 42 U.S.C. § 6972(g) provides that a transporter will not be deemed to have contributed to or be contributing to the handling, storage, treatment, or disposal of a solid or hazardous waste under subsection (a)(1)(B) that takes place after the waste has left the possession or control of the transporter if the waste was transported by common carrier by rail under a contractual arrangement arising from a published tariff, and due care was exercised.

§ 9:212 Clean Water Act

²⁷42 U.S.C. § 6972(b)(2)(C).

²⁸42 U.S.C. § 6972(b)(2)(D).

²⁹*George v. Reisdorf Bros., Inc.*, 410 Fed. Appx. 382, 386 (2d Cir. 2011) (“The prohibition on open dumping is enforceable through RCRA’s provision authorizing citizen suits against any party ‘alleged to be in violation of any permit, standard, regulation, condition, requirement, prohibition, or order which has become effective pursuant to this chapter.’”); *South Road Associates v. International Business Machines Corp.*, 216 F.3d 251, 253, 50 Env’t. Rep. Cas. (BNA) 1908, 30 Env’tl. L. Rep. 20708 (2d Cir. 2000).

³⁰Guidelines for Development & Implementation of State Solid Waste Management Plans, 44 Fed. Reg. 45,066, 45,072 (July 31, 1979).

³¹42 U.S.C. § 6972(b)(2)(E).

³²42 U.S.C. § 6972(b)(2)(E).

³³42 U.S.C. § 6972(d).

In order to bring a citizen suit under the Clean Water Act (“CWA”), the citizen-plaintiff must allege a violation of either an effluent standard or limitation or an order of the EPA or the state agency regarding a standard or limitation. “Effluent standard or limitation” is defined as: any discharge without a permit; an effluent limitation or other limitation under § 1311 (effluent limitations for point sources) or § 1312 (water quality-related effluent limitations); a § 1316 standard of performance (technology-related standards for specific types of sources); a § 1317 (toxic pollutant and pretreatment effluent standards); a § 1341 certification requirement (for sources seeking a permit); or a § 1342 NPDES (federal water pollutant discharge) permit or permit condition.¹

Most citizen suits filed under the CWA are based on violations of numerical effluent limitations in National Pollutant Discharge Elimination System (“NPDES”) permits. This follows logically from the emphasis in the CWA on permit conditions and requirements instead of an emphasis on water quality. The courts have recognized that, likewise, the issue in citizen suits is not whether the defendant is actually polluting the waterway, but, instead, whether the defendant has discharged effluent without a permit or in violation of a permit.² For example, the court in *New York v. United States* held that only effluent standards and limitations that are administratively predetermined through a NPDES permit may be enforced under the citizen suit provision.³ The Court in *New York* found that Congress did not intend citizens to use the citizen suit provision to enforce state water quality standards or to abate a nuisance.⁴ The Court cited the Senate Report that accompanied the amendments adding the citizen suit provision, which stated:

Section 505 would not substitute a “common law” or court-developed definition of water quality. An alleged violation of an effluent control limitation or standard, would not require reanalysis of technological [considerations] at the enforcement stage. These matters will have been settled in the administration process leading to the establishment of such effluent control provision. Therefore, an objective evidentiary standard would have to be met by any citizen who brings an action under this section.⁵

Thus, state water quality standards should only be enforceable in a private citizen suit if they are incorporated into a NPDES permit through effluent limitations.⁶

Because dischargers are required to file discharge monitoring reports (“DMRs”) as a condition of a NPDES permit, a failure to file DMRs itself has been held to be grounds for a citizen suit.⁷ However, some NPDES permits prohibit discharges that cause or contribute to water quality standard violations. Also, one court held that

[Section 9:212]

¹33 U.S.C. § 1365(f); *see also* *Inland Empire Waterkeeper v. Uniweb, Inc.*, No. ED CV 07-00480 DDP, 2008 U.S. Dist. LEXIS 75585, at *26 (C.D. Cal. Aug. 6, 2008) (“A monitoring report that shows a water sample with pollutant discharges in excess of permit limits is conclusive evidence of a violation.”).

²*Public Interest Research Group of New Jersey, Inc. v. Powell Duffryn Terminals Inc.*, 913 F.2d 64, 72, 31 Env’t. Rep. Cas. (BNA) 1905, 20 Env’t. L. Rep. 21216 (3d Cir. 1990).

³*State of N.Y. v. U.S.*, 620 F. Supp. 374, 384, 16 Env’t. L. Rep. 20142 (E.D. N.Y. 1985). Disagreed with by *U.S. v. Com. of Pa. Dept. of Environmental Resources*, 778 F. Supp. 1328, 1333, 34 Env’t. Rep. Cas. (BNA) 1779 (M.D. Pa. 1991).

⁴*New York*, 620 F. Supp. at 384.

⁵*New York*, 620 F. Supp. at 384 (quoting S. Rep. No. 414, 92d Cong., 2d Sess. (1972), reprinted in 1972 U.S.C.C.A.N. 3668, 3745).

⁶*See also* *Northwest Env’t. Advocates v. City of Portland*, 22 Env’t. L. Rep. 21347 (D. Or. 1991), *aff’d*, 11 F.3d 900, 38 Env’t. Rep. Cas. (BNA) 1856, 24 Env’t. L. Rep. 20238 (9th Cir. 1993), opinion withdrawn and superseded on reh’g, 56 F.3d 979, 40 Env’t. Rep. Cas. (BNA) 1801, 25 Env’t. L. Rep. 21250 (9th Cir. 1995) and *aff’d in part, rev’d in part*, 56 F.3d 979, 40 Env’t. Rep. Cas. (BNA) 1801, 25 Env’t. L. Rep. 21250 (9th Cir. 1995). *But see* 33 U.S.C. § 1365(h) discussed below.

⁷*See* *Menzel v. County Utilities Corp.*, 712 F.2d 91, 19 Env’t. Rep. Cas. (BNA) 2193, 14 Env’t. L.

exceedances of permit limits recorded in the DMRs are sufficient to establish a *prima facie* case of liability.⁸

Suits brought under Section 505(a)(1), like those discussed above, must be brought in the federal district court for the district in which the discharge source is located.⁹ The CWA's citizen suit provision also permits suits against the EPA for failure to perform a mandatory act or duty¹⁰ and permits a governor of a state to commence a civil action under Section 505(a), without regard to the notice requirement or diligent prosecution defense, against the EPA.¹¹ Such an action is authorized where there is an alleged failure of the EPA to enforce an effluent standard or limitation such that the violation is occurring in another state, but is adversely affecting the public health or welfare of the governor's state or constitutes a violation of its water quality requirements.¹²

The Supreme Court has interpreted the language in the citizen suit provision requiring that the defendant "be in violation" to mean that the plaintiff must be able to show that violations are continuing in order to maintain a citizen suit.¹³ Thus, citizen suits traditionally could not be brought for wholly past violations under the CWA.¹⁴ This is still true today.

After *Gwaltney*, a key remaining issue has been how to determine whether alleged effluent limitation violations are entirely in the past, or are recurring, continuously or intermittently, such as to provide jurisdiction for maintenance of a citizen suit. In particular, interesting questions arise where a discharger is subject to multiple effluent limitations, covering different parameters, and past problems with respect to some parameters may have been solved prior to the initiation of the suit, but continuing or intermittent exceedances may exist relating to another parameter. To date, some courts have adopted a parameter-by-parameter approach to determining citizen suit jurisdiction. In other words, they have ruled that in order to maintain a citizen suit with respect to exceedance of a particular parameter, the plaintiff must show continuing or intermittent violations of that parameter.¹⁵ Other courts have taken a different approach, indicating that if an ongoing violation of any parameter is shown, the court has jurisdiction to consider past violations of any

Rep. 20251 (4th Cir. 1983).

⁸United States v. Amoco Oil Co., 580 F. Supp. 1042, 20 Env't. Rep. Cas. (BNA) 1666, 14 Env'tl. L. Rep. 20533 (W.D. Mo. 1984).

⁹33 U.S.C. § 1365(c)(1).

¹⁰33 U.S.C. § 1365(a)(2).

¹¹33 U.S.C. § 1365(a)(2).

¹²33 U.S.C. § 1365(h).

¹³*Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc.*, 484 U.S. 49, 108 S. Ct. 376, 98 L. Ed. 2d 306, 26 Env't. Rep. Cas. (BNA) 1857, 9 Fed. R. Serv. 3d 1029, 18 Env'tl. L. Rep. 20142 (1987).

¹⁴*Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc.*, 484 U.S. 49, 108 S. Ct. 376, 98 L. Ed. 2d 306, 26 Env't. Rep. Cas. (BNA) 1857, 9 Fed. R. Serv. 3d 1029, 18 Env'tl. L. Rep. 20142 (1987).

¹⁵*Connecticut Coastal Fishermen's Ass'n v. Remington Arms Co., Inc.*, 989 F.2d 1305, 1312, 36 Env't. Rep. Cas. (BNA) 1251, 23 Env'tl. L. Rep. 20699 (2d Cir. 1993) ("But once a defendant has come forward with evidence showing there is no genuine factual dispute with respect to an element of plaintiff's claim—that is, it is unlikely defendant will continue its illegal discharges—plaintiff must demonstrate more than good faith. It must present instead evidence from which a factfinder could find a likelihood of continuing violations."); *Chesapeake Bay Foundation, Inc. v. Gwaltney of Smithfield, Ltd.*, 890 F.2d 690, 697–98, 30 Env't. Rep. Cas. (BNA) 1593, 20 Env'tl. L. Rep. 20341 (4th Cir. 1989); *Allen County Citizens for the Environment, Inc. v. BP Oil Co.*, 762 F. Supp. 733, 739–40, 21 Env'tl. L. Rep. 21204 (N.D. Ohio 1991), judgment aff'd, 966 F.2d 1451 (6th Cir. 1992); see also *Natural Resources Defense Council, Inc. v. Texaco Refining and Marketing, Inc.*, 800 F. Supp. 1, 11, 35 Env't. Rep. Cas. (BNA) 2095, 23 Env'tl. L. Rep. 20157 (D. Del. 1992), judgment aff'd in part, rev'd in part, 2 F.3d 493, 37 Env't. Rep. Cas. (BNA) 1305, 26 Fed. R. Serv. 3d 393, 23 Env'tl. L. Rep. 21328 (3d Cir. 1993) (adopting a version of the parameter-by-parameter approach, based on proof of interrelationship between past violation and the continuing problem).

parameter (including those which have been corrected).¹⁶

A notice of intent to file suit pursuant to Section 505(a)(1) of the CWA must be served 60 days prior to filing suit, in the following manner, pursuant to 40 C.F.R. § 135:

For private entities:

By certified mail or personal service with a copy to the Administrator of the EPA, the Regional Administrator of the EPA for the region in which the violation is alleged to have occurred, and the Chief Administrative Officer of the appropriate state's waste pollution control agency. If the alleged violator is a corporation, a copy also must be mailed to the registered agent of the corporation in the state in which the violation is alleged to have occurred;

For state/local entities:

By certified mail or personal service upon the head of the Agency with a copy to the Administrator of the EPA, the Regional Administrator of the EPA for the region in which the violation is alleged to have occurred, and the Chief Administrative Officer of the state's pollution control agency;

For federal agencies:

By certified mail or personal service upon the head of the Agency with a copy to the Administrator of the EPA, the Regional Administrator of the EPA for the region in which the violation is alleged to have occurred, the Chief Administrative Officer of the state's pollution control agency, and the Attorney General of the United States.

A notice of intent to file suit against the EPA for failure to perform a mandatory act or duty¹⁷ must be served upon the Administrator of the EPA 60 days prior to filing, and a copy must be sent to the Attorney General of the United States.¹⁸ An exception to the 60-day notice requirement exists in subsection 505(a)(2) actions involving violations of Section 306 of the CWA (National Standards of Performance) and Section 307 of the CWA (Toxic and Pretreatment Effluent Standards). In such cases, the CWA's citizen suit provision allows citizen-plaintiffs to bring suit immediately after providing notice.¹⁹

A copy of the complaint brought under Section 505(a)(1) of the CWA must be mailed upon filing to the Administrator of the EPA, the Regional Administrator of the EPA region in which the violations are alleged to have occurred, and the At-

¹⁶*Sierra Club v. Union Oil Co. of California*, 853 F.2d 667, 672, 28 Env't. Rep. Cas. (BNA) 1333, 18 Env'tl. L. Rep. 21299 (9th Cir. 1988) ("Union Oil's liability for past violations is subject to Sierra Club's ability to prove the existence of ongoing violations or the reasonable likelihood of continued violations in accordance with *Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc.*, 484 U.S. 49, 108 S. Ct. 376, 98 L. Ed. 2d 306, 26 Env't. Rep. Cas. (BNA) 1857, 9 Fed. R. Serv. 3d 1029, 18 Env'tl. L. Rep. 20142 (1987) and the instant order of this court."); *City of Mountain Park, GA v. Lakeside at Ansley, LLC*, 560 F. Supp. 2d 1288, 1293 (N.D. Ga. 2008) (discusses in detail the split over *Gwaltney's* application); *Public Interest Research Group of New Jersey, Inc. v. Elf Atochem North America, Inc.*, 817 F. Supp. 1164, 1173–76, 36 Env't. Rep. Cas. (BNA) 1855, 23 Env'tl. L. Rep. 21225 (D.N.J. 1993); *Sierra Club v. Port Townsend Paper Corp.*, 28 Env't. Rep. Cas. (BNA) 1676, 1678, 19 Env'tl. L. Rep. 20532 (W.D. Wash. 1988); see *Waste Action Project v. Draper Valley Holdings LLC*, 49 F. Supp. 3d 799, 804, 79 Env't. Rep. Cas. (BNA) 1028 (W.D. Wash. 2014) ("Plaintiff must also satisfy the statutory standing requirements for bringing a citizen's suit under the Clean Water Act. The Clean Water Act authorizes any citizen to commence a civil action on his own behalf against any person who is alleged to have violated an effluent standard or limitation.").

¹⁷33 U.S.C. § 1365(a).

¹⁸40 C.F.R. § 135.

¹⁹33 U.S.C. § 1365(b)(2).

torney General of the United States.²⁰ This permits the EPA to intervene as a matter of right pursuant to 33 U.S.C. § 1365(c)(2).

As under the other environmental statutes, the CWA defines a citizen as a person having an interest that is or may be adversely affected. While recognizing that citizen-plaintiffs must establish their standing to bring suit under the CWA citizen suit provision, one court held that plaintiffs in a CWA suit were not required to show that a certain percentage of the pollution that adversely affected their interests in a waterway was traceable to the defendant because to do so “would defeat the purpose of the Act.”²¹ Instead, the court found that the plaintiffs had satisfied the causation requirement under the standing test merely by alleging violations of a NPDES permit.²²

No citizen suit may be commenced if the EPA or the appropriate state is diligently prosecuting a civil or criminal action in a federal or state court with respect to the alleged violations that would be the subject of the citizen suit.²³ The CWA does allow, however, for a citizen to intervene in such a prosecution in a federal court.²⁴

Section 309(g) of the CWA, added in the 1987 amendments, provides one exception to the diligent prosecution bar to citizen suits.²⁵ If an administrative penalty action has been initiated by the EPA under § 309(g) or by the state under a comparable state law, a citizen penalty action may proceed if the citizen action was filed prior to the commencement of the administrative action. Alternatively, the citizen suit may proceed where the citizen-plaintiff gave the required notice of an alleged violation prior to the commencement of the administrative action and then commenced its action within 120 days of the date on which the notice was given.²⁶

Also, where the EPA Administrator or the state agency has issued a final order and the violator has paid a § 309(g) administrative penalty or a penalty under a comparable state law, a citizen suit for those violations may be barred.²⁷ In order for a state penalty law to be considered “comparable” to the penalty provisions of the CWA, some courts have required that the state law provide for public notice and an opportunity to participate in the assessment of the penalties.²⁸

Some courts have dismissed citizen suits brought under the CWA where a state administrative action under a comparable state law was being “diligently prosecuted” in the form of an administrative order as opposed to a court proceeding. In these cases, the courts found that the administrative orders, requiring the defendant violator either to construct facilities and attain compliance or to pay penalties, were sufficient actions under comparable state laws to bar citizen suits for permit violations.²⁹

Under the CWA, defendants also can avail themselves of certain defenses not

²⁰33 U.S.C. § 1365(c)(3).

²¹*Student Public Interest Research Group of New Jersey, Inc. v. P.D. Oil & Chemical Storage, Inc.*, 627 F. Supp. 1074, 23 Env’t. Rep. Cas. (BNA) 1894, 16 Env’tl. L. Rep. 20517 (D.N.J. 1986).

²²*Student Public Interest Research Group of New Jersey, Inc. v. P.D. Oil & Chemical Storage, Inc.*, 627 F. Supp. 1074, 1083, 23 Env’t. Rep. Cas. (BNA) 1894, 16 Env’tl. L. Rep. 20517 (D.N.J. 1986).

²³33 U.S.C. § 1365(b)(1)(B).

²⁴33 U.S.C. § 1365(b)(1)(B).

²⁵*See* 33 U.S.C. § 1319(g).

²⁶33 U.S.C. § 1319(g)(6)(B).

²⁷*See, e.g., Public Interest Research Group of New Jersey, Inc. v. GAF Corp.*, 770 F. Supp. 943, 21 Env’tl. L. Rep. 20678 (D.N.J. 1991).

²⁸*See, e.g., Public Interest Research Group of New Jersey, Inc. v. GAF Corp.*, 770 F. Supp. 943, 21 Env’tl. L. Rep. 20678 (D.N.J. 1991).

²⁹*See Community of Cambridge Environmental Health and Community Development Group v. City of Cambridge*, 115 F. Supp. 2d 550, 51 Env’t. Rep. Cas. (BNA) 1363, 31 Env’tl. L. Rep. 20086 (D.

available under other statutes. For example, the EPA regulations recognize an “upset” defense. An upset is defined as an “exceptional incident” during which there is an “unintentional and temporary non-compliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee.”³⁰ In order to raise such a defense, the defendant must have documented the upset and reported it to the government within 24 hours.³¹

Defendants also may raise the defense of a legitimate bypass of pollution control measures. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility.³² Normally a bypass is itself prohibited and would be grounds for an enforcement action against the permittee.³³ However, bypasses are permissible where (1) the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; (2) there were no feasible alternatives (this excuse is unavailable where adequate back-up equipment should have been installed for such events); and (3) the permittee submitted the required notices to the agency.³⁴ At least one district court has held that where the violator’s NPDES permit contains a stricter bypass exception under state regulations than under federal regulations, the stricter regulation controls.³⁵

Injunctive relief enforcing an effluent standard or limitation or an order, and civil penalties, under Section 309(d) of the Act, are available under the CWA citizen suit provision.³⁶ Some courts have interpreted injunctive relief to include declaratory relief. For example, where the defendant threatened to repeat the violation in the foreseeable future by discharging overflow into a river, the court entered a declaratory judgment requiring the violator to obtain the necessary permit, and reserved jurisdiction to impose penalties if necessary.³⁷

Section 1365 of the CWA allows a district court to order that all or a portion of a civil penalty imposed under a citizen suit be used for a beneficial project to enhance public health or the environment by restoring or otherwise improving the water quality, wildlife, or habitat of the waterbody in which the violation occurred. This in essence codifies the concept of supplemental environmental projects.³⁸ Section 1365 authorizes the court to order a defendant who has violated the act to take such other actions as may be necessary, including the restoration of natural resources damaged or destroyed as a result of the violation, where the maximum cost of the restoration work would be limited to the amount of civil penalties that could be imposed.³⁹

Like RCRA, the CWA authorizes a district court at its discretion to award costs of

Md. 2000); *North and South Rivers Watershed Ass’n, Inc. v. Town of Scituate*, 755 F. Supp. 484, 32 Env’t. Rep. Cas. (BNA) 1954, 22 Env’tl. L. Rep. 20436 (D. Mass. 1991), *aff’d*, 949 F.2d 552, 34 Env’t. Rep. Cas. (BNA) 1006, 22 Env’tl. L. Rep. 20437 (1st Cir. 1991); *Atlantic States Legal Foundation, Inc. v. Tyson Foods, Inc.*, 682 F. Supp. 1186, 27 Env’t. Rep. Cas. (BNA) 1404, 18 Env’tl. L. Rep. 20924 (N.D. Ala. 1988).

³⁰40 C.F.R. § 122.41(n)(1).

³¹40 C.F.R. § 122.41(n)(3).

³²40 C.F.R. § 122.41(m).

³³40 C.F.R. § 122.41(m).

³⁴40 C.F.R. § 122.41(m).

³⁵*Chesapeake Bay Foundation, Inc. v. Bethlehem Steel Corp.*, 652 F. Supp. 620, 631, 25 Env’t. Rep. Cas. (BNA) 1684, 17 Env’tl. L. Rep. 20623 (D. Md. 1987).

³⁶33 U.S.C. § 1365(a).

³⁷*See Hudson River Fishermen’s Ass’n v. City of New York*, 751 F. Supp. 1088, 32 Env’t. Rep. Cas. (BNA) 1862, 21 Env’tl. L. Rep. 20467 (S.D. N.Y. 1990), *aff’d* without opinion, 940 F.2d 649, 33 Env’t. Rep. Cas. (BNA) 1399, 21 Env’tl. L. Rep. 21226 (2d Cir. 1991).

³⁸*See* § 9:176.

³⁹33 U.S.C. § 1365.

litigation, including reasonable attorney's fees and expert witness fees, to any prevailing or substantially prevailing party.⁴⁰

Section 505(c)(3) of the CWA also includes a requirement that in cases in which the United States is not a party, no consent judgment may be entered in any citizen suit until after 45 days following the receipt of a copy of the proposed consent judgment by the U.S. Attorney General and the Administrator.⁴¹ This provision, which is peculiar to the CWA and the CAA, permits the Attorney General and Administrator to review the consent judgment to ensure that civil penalties are paid to the U.S. Treasury, and to review the terms of the judgment for purposes of objecting to it. It is within the district court's discretion to enter the judgment over any objections of the EPA or U.S. Attorney General.

As a practical matter, the EPA and DOJ endeavor to advise parties to citizen suits of their intent to require a civil penalty long before the consent judgment is finalized. Courts are generally not appreciative of the EPA raising this point after long and arduous negotiations have already been completed.

§ 9:213 Clean Air Act ("CAA")

The CAA allows any person to commence a suit against anyone who is alleged (1) to have violated the CAA (if there is evidence that the alleged violation has been repeated); or (2) to be in violation of an emission standard or limitation under the CAA or an order issued by the EPA or a state environmental agency with respect to such a standard or limitation.¹ The CAA citizen suit provision thus seems to relax somewhat the limitation on suits, although still requiring some indication that the violations are likely to continue. President George H.W. Bush's signing statement for this Act reflected a concern that this may be unconstitutional.

Under the CAA, a citizen suit also may be brought against any person who proposes to construct or who constructs any new or modified major emitting facility without the required Part C or Part D permits (prevention of significant deterioration of air quality and nonattainment) or who is alleged to be in violation of any condition of a Part C or Part D permit.² Finally, like the other environmental statutes, the CAA permits citizen suits against the EPA for failure to perform a mandatory act or duty.³

The definition of "emission standard or limitation" in the CAA is very broad. It includes: a schedule or timetable of compliance; an emission limitation; a standard of performance; an emission standard; a control or prohibition with respect to a motor vehicle fuel or fuel additives; Part C and D permit conditions or requirements; implementation plan conditions relating to transportation control measures, air quality maintenance programs, vehicle inspection and maintenance programs, vapor recovery requirements, visibility protection, or ozone protection standards; any requirement relating to national emission standards for hazardous air pollutants or new source performance standards (without regard to whether the requirement is expressed as an emission standard or limitation); and any other standard, limitation, or schedule established under a Title V permit SIP or any applicable SIP, any permit term or condition, and any requirement to obtain a permit as a

⁴⁰33 U.S.C. § 1365(d).

⁴¹33 U.S.C. § 1365(c)(3).

[Section 9:213]

¹42 U.S.C. § 7604(a)(1).

²42 U.S.C. § 7604(a)(3).

³42 U.S.C. § 7604(a)(2).

condition of operations.⁴

A citizen suit alleging a violation by a stationary source of an emission standard or limitation, or an order with respect to a standard or limitation, must be brought in the judicial district in which the source is located.⁵

Notice of intent to bring a citizen suit under the CAA must be provided 60 days prior to commencement of suit and in accordance with the regulations at 40 C.F.R. § 54 (2012). Those regulations are somewhat different from the notice provisions of other statutes. They require that notice be given to the alleged violator and that: where the notice relates to violation of an emission standard or limitation or to violation of an order issued with respect to an emission standard or limitation, a copy must be served by certified mail upon the Regional EPA Administrator for the Region in which the violation is alleged to have occurred, the authorized representative of the state agency charged with responsibility for air pollution control, the governor of the appropriate state, and, if the alleged violator is a corporation, to the registered agent of the corporation in the state in which the violation is alleged to have occurred. Service under the CAA notice regulations is deemed to be given on the postmark date if served by mail or on the date of receipt if served personally.⁶

The citizen suit provision in the CAA provides an exception to the usual 60-day notice requirement before a citizen suit may be filed.⁷ In general, that exception allows an action to be brought immediately after notifying the EPA Administrator where the citizen-plaintiff alleges that the defendant is operating a source in violation of a hazardous air pollutant standard, limitation, or regulation applicable to the source.⁸

No citizen suit may be commenced if the EPA or a state environmental agency has commenced and is diligently prosecuting a civil action in a federal or state court to require compliance with the standard, limitation, or order.⁹ Any person may intervene as a matter of right, however, in such a federal prosecution.¹⁰

Citizen suits brought under Section 7604 of the CAA may be used to enforce and seek penalties for violations of emission standards or limitations once they are in effect. However, the citizen suit provision may not be the proper mechanism for challenging the EPA's action in approving or promulgating any implementation plan establishing an emission standard or limitation. Instead, review of the propriety of an emission standard or limitation may be sought under Section 7607 of the Act relating to judicial review of agency action.¹¹

Citizen-plaintiffs have enforced a variety of requirements through citizen suits. In suits against the government, the courts have allowed citizen-plaintiffs to challenge the failure to enforce technology requirements, plant site emission limitations, and state implementation plans.¹²

The CAA citizen suit provision allows a citizen-plaintiff to obtain injunctive relief enforcing an emission standard, limitation, or order, and permits a court to impose

⁴42 U.S.C. § 7604(f)(1) to (4).

⁵42 U.S.C. § 7604(c)(1).

⁶See 40 C.F.R. § 54.2.

⁷42 U.S.C. § 7604(b).

⁸42 U.S.C. § 7604(b)(2).

⁹42 U.S.C. § 7604(b)(1)(B).

¹⁰42 U.S.C. § 7604(b)(1)(B).

¹¹See *Delaware Valley Citizens Council for Clean Air v. Davis*, 932 F.2d 256, 33 Env't. Rep. Cas. (BNA) 1001, 21 Env'tl. L. Rep. 21055 (3d Cir. 1991).

¹²See *Oregon Environmental Council v. Oregon Dept. of Environmental Quality*, 775 F. Supp. 353, 22 Env'tl. L. Rep. 20577 (D. Or. 1991).

any appropriate civil penalties against private parties.¹³ Any penalties imposed must be deposited in a special fund in the U.S. Treasury to be used for licensing and other services. Such amounts are authorized for use by the EPA to finance air compliance and enforcement activities.¹⁴ The CAA also provides expressly for SEPs¹⁵ by providing that a court imposing civil penalties may order that up to \$100,000 of the penalty payment be used in beneficial mitigation projects to enhance the public health or environment, but only after obtaining the opinion of the Administrator of the EPA in regard to the use and selection of such a project.¹⁶ Both of these provisions are unique to environmental laws and are likely to be considered for inclusion in each environmental law as it is reauthorized.

It is within a district court's discretion to award the costs of litigation, including reasonable attorney's fees and expert witness fees, to any party.¹⁷

The CAA citizen suit provision contains language identical to that contained in the CWA pursuant to which no consent judgment can be entered in a citizen suit under the CAA in which the United States is not a party until 45 days after a copy of the proposed consent judgment is received by the EPA and U.S. Attorney General.¹⁸ The EPA or Attorney General is expressly authorized to intervene in the action during that review period.¹⁹

§ 9:214 Toxic Substances Control Act ("TSCA")

The citizen suit provision of the Toxic Substances Control Act ("TSCA") (Section 20 of the Act) authorizes any person to commence a civil action against any other person to restrain any violation of TSCA or any rule issued under Sections 4 (testing), 5 (premarket notification), or 6(a) (restrictive rules) of the Act or an order issued under Section 5 of the Act.¹ In any such action, the EPA has the right to intervene. Additionally, any person may commence a civil action to compel the EPA to perform a mandatory act or duty under the statute.²

Venue under TSCA is apparently more expansive than under other statutes. A citizen suit alleging a violation of TSCA may be brought in the federal district court for the district in which the alleged violation occurred or in which the defendant resides or has its principal place of business. An action brought to compel the EPA to perform a mandatory duty or act may be brought in the District Court for the District of Columbia or in the district court for the district in which the plaintiff is domiciled (permanently resides).³

Very few citizen suits have been filed under TSCA. In those cases that have been filed, the courts appear to have disposed of the issues in a manner consistent with the decisions under the more commonly used citizen suit provisions (for example, the CWA). Thus, courts have dismissed TSCA citizen suits where the plaintiffs allege only past violations of the Act or where the plaintiffs attempt to enjoin as a

¹³42 U.S.C. § 7604(a).

¹⁴42 U.S.C. § 7604(g)(1).

¹⁵See VII.

¹⁶42 U.S.C. § 7604(g)(2); see also § 9:176, Supplemental Environmental Projects.

¹⁷42 U.S.C. § 7604(d).

¹⁸42 U.S.C. § 7604(c)(3).

¹⁹42 U.S.C. § 7604(c)(3).

[Section 9:214]

¹15 U.S.C. § 2619(a)(1).

²15 U.S.C. § 2619(a)(2).

³15 U.S.C. § 2619(a).

nuisance, an action authorized by the Act.⁴

The TSCA citizen suit provision contains a unique subpart relating to consolidation of cases from various districts. As drafted, the TSCA contemplates that two or more civil actions may be brought under 15 U.S.C. § 2619(a) involving the same defendant and the same violations in two or more judicial districts. Accordingly, 15 U.S.C. § 2619(d) provides that such actions may be consolidated for trial (upon application of the defendant and at the court's discretion) in (1) any federal judicial district selected by the defendant in which an action is pending, (2) a federal judicial district agreed upon by stipulation of the parties in which an action is pending, or (3) a federal judicial district selected by the court in which an action is pending.

Under Section 20(b) of TSCA, 60 days of notice is generally required prior to filing suit.⁵ 40 C.F.R. § 702.61(b) and (d) require that such notice be served by certified mail or personally upon the EPA Administrator and the alleged violator in suits seeking to restrain a violation of TSCA, and upon the EPA Administrator with a copy to the Attorney General of the United States in suits seeking to compel the EPA Administrator to perform a nondiscretionary duty or act under TSCA. Like other statutes, if the violator is a corporation, service must be affected upon the registered agent of the corporation in the state in which the alleged violation occurred. If the alleged violator is a federal, state, or local agency, notice must be served on the head of the agency, the EPA Administrator, and the Attorney General for the United States. Where the suit seeks to compel the EPA Administrator to file an action under Section 7 of TSCA (the Imminent Hazards provisions), only 10 days of notice to the Administrator is required before suit can be filed.⁶

The diligent prosecution defense is different under TSCA than under the other statutes. Under TSCA, no action may be commenced by a citizen where the EPA has commenced and is diligently prosecuting a proceeding for the issuance of a civil penalty order under Section 16 to require compliance with the Act or with a rule or order.⁷ Nor can a citizen suit be commenced if DOJ has commenced and is diligently prosecuting a civil action in a federal court to require compliance with the Act or with a rule or order.⁸ If, however, the proceeding is commenced by the EPA or DOJ after notice is given by the citizen, the citizen then has the right to intervene in the proceeding.⁹

A court, at its discretion, may award the costs of the suit, including reasonable attorney's fees and expert witness fees.¹⁰

Under Section 21 of the Act, any person may petition the EPA Administrator to commence rulemaking proceedings for the issuance, amendment, or repeal of certain rules under the statute, thereby requiring the EPA to act within 90 days of the filing of the petition or be subject to a citizen action seeking to compel such rulemaking. This provision is unique to TSCA.¹¹

⁴See *Moreco Energy, Inc. v. Penberthy-Houdaille*, 682 F. Supp. 931, 26 Env't. Rep. Cas. (BNA) 1736, 18 Env'tl. L. Rep. 21071 (N.D. Ill. 1987); *Twitty v. State of N.C.*, 527 F. Supp. 778, 16 Env't. Rep. Cas. (BNA) 2042, 12 Env'tl. L. Rep. 20336, 76 A.L.R. Fed. 553 (E.D. N.C. 1981), *aff'd*, 696 F.2d 992, 19 Env't. Rep. Cas. (BNA) 1111, 13 Env'tl. L. Rep. 20788 (4th Cir. 1982).

⁵15 U.S.C. § 2619(b)(1) and (b)(2).

⁶15 U.S.C. § 2619(b)(2).

⁷15 U.S.C. § 2619(b)(1)(B).

⁸15 U.S.C. § 2619(b)(1)(B).

⁹15 U.S.C. § 2619(b)(1)(B).

¹⁰15 U.S.C. § 2619(c)(2).

¹¹15 U.S.C. § 2620.

§ 9:215 The Emergency Planning and Community Right-to-Know Act (“EPCRA”)

The Emergency Planning and Community Right-to-Know Act (“EPCRA”) includes a citizen suit provision that allows citizen suits against an owner or operator of a facility for failure to comply with certain EPCRA provisions.¹ Under that provision, citizen-plaintiffs may challenge the failure to complete and submit (1) a follow-up emergency notice under Section 304(c) of the Act; (2) a material safety data sheet or list under Section 311(a) of the Act; (3) any required inventory forms under Section 312 of the Act; or (4) a toxic chemical release form under Section 313 of the Act. Any state or local government may commence a civil suit against an owner or operator of a facility for a similar list of violations.²

The citizen suit provision also permits the filing of an action against the EPA Administrator for failure to (1) publish inventory forms under Section 312 of the Act; (2) respond to a petition to add or delete a chemical from the toxic chemical release form requirements under Section 313 of the Act; (3) publish a toxic chemical release form under Section 313 of the Act; (4) establish a computer database in accordance with Section 313 of the Act; (5) promulgate trade secret regulations under Section 322 of the Act; or (6) render a decision in response to a petition under Section 322 of the Act within nine months after receipt of the petition.³ Where strategy dictates in favor of use of this provision, it permits corporations to push the EPA into action on petitions and publications necessary for the particular corporation or industry.

The provision goes further than other statutes in providing that a citizen may commence a suit against (1) the EPA Administrator, a state governor, or a state emergency response commission for failure to provide a mechanism for public availability of an emergency response plan, material safety data sheets, and inventory forms in accordance with Section 324 of the Act; and (2) against a state governor or state emergency response commission for failure to respond to a request for Tier II information under Section 312 of EPCRA within 120 days of receipt of the request.⁴

Pursuant to 42 U.S.C. § 11046(a)(2)(C), any state may commence a civil action against the EPA Administrator for failure to provide information to the state under the trade secret provision of the Act (Section 322). Finally, state emergency response commissions or local emergency planning committees may bring suit against an owner or operator of a facility for failure to provide the information required by Section 303 of the Act (relating to emergency response plans) or for failure to submit tier II information under Section 312 of the Act (relating to emergency and hazardous chemical forms).⁵

Venue for an action against an owner or operator is in the federal district court for the district where the violation has occurred. Venue for any action against the EPA is in the District Court for the District of Columbia.⁶

Neither a private citizen-plaintiff nor a state or local government agency may commence suit without providing sixty (60) days of notice to the EPA Administrator,

[Section 9:215]

¹42 U.S.C. § 11046(a)(1)(A).

²42 U.S.C. § 11046(a)(1)(A).

³42 U.S.C. § 11046(a)(1)(B).

⁴See 42 U.S.C. § 11046(a)(1)(C), (D).

⁵See 42 U.S.C. § 11046(a)(2)(B).

⁶42 U.S.C. § 11046(b).

the state in which the alleged violation occurs, and the alleged violator.⁷ An action against the EPA Administrator, the state governor or state emergency response commission requires 60 days of notice to the party being sued prior to the filing of the lawsuit.⁸ Likewise, any action by a state against the EPA Administrator for failure to provide trade secret information requires the same notice.⁹

Like citizen suits under other environmental laws, citizen-plaintiffs under EPCRA must satisfy the court that they have suffered or will suffer a sufficient injury from the alleged violation, in order to convince the court that they have standing to bring the action.

One court held that failure to file the information required by EPCRA in a timely manner can result in a sufficiently concrete and particularized injury to citizen-plaintiffs' "right to know" to confer standing to challenge the violation.¹⁰ The court reasoned that EPCRA was intended to protect citizens' right to know about the presence of toxic chemicals in their community.¹¹ Another court found that the failure to file may inhibit the conduct of research and data gathering or the ability to aid in the development of appropriate regulations, guidelines, and standards, and persons experiencing such a loss of information may be found to have suffered a concrete and particularized invasion of their legally protected interests.¹²

Other courts have dismissed citizen suits for lack of standing because of a failure to allege that there had been or would be injury as a result of the defendant's conduct.¹³

EPCRA specifically codifies the diligent prosecution defense in such a way that no suit can be brought if the EPA Administrator has commenced and is diligently pursuing an administrative order or a civil action to enforce the same requirement or to impose a civil penalty for a violation of that requirement.¹⁴ This provision specifically dispels any confusion under EPCRA over whether an administrative order, as opposed to a court proceeding, can act as a bar to a citizen suit. Moreover, use of the word "pursue" as opposed to "prosecute" would appear to give courts even broader authority to bar a citizen suit.

EPCRA specifically authorizes injunctive relief and the imposition of civil penalties.¹⁵ The court also is given the discretion to award the costs of suit, including reasonable attorney and expert witness fees, to the prevailing or substantially prevailing party.¹⁶

Some courts have permitted citizen-plaintiffs in EPCRA suits to seek relief for wholly past violations in the form of injunctive relief to prevent future violations and civil penalties, although there is no statutory authority for such an award. In

⁷42 U.S.C. § 11046(d)(1).

⁸42 U.S.C. § 11046(d)(2).

⁹42 U.S.C. § 11046(d)(2).

¹⁰See *Atlantic States Legal Foundation, Inc. v. Buffalo Envelope, Div. of American Envelope Co.*, 823 F. Supp. 1065, 23 Env'tl. L. Rep. 21564 (W.D. N.Y. 1993).

¹¹*Atlantic States Legal Foundation, Inc. v. Buffalo Envelope, Div. of American Envelope Co.*, 823 F. Supp. 1065, 23 Env'tl. L. Rep. 21564 (W.D. N.Y. 1993) (citing H.R. Rep. No. 962, 99th Cong., 2d Sess. (1986), reprinted in U.S.C.C.A.N. 3276). See also *Center for Biological Diversity, Inc. v. BP America Production Co.*, 704 F.3d 413, 432, 76 Env't. Rep. Cas. (BNA) 1017, 2013 A.M.C. 221 (5th Cir. 2013).

¹²See *Delaware Valley Toxics Coalition v. Kurz-Hastings, Inc.*, 813 F. Supp. 1132, 36 Env't. Rep. Cas. (BNA) 1682, 23 Env'tl. L. Rep. 20915 (E.D. Pa. 1993).

¹³See *McCormick v. Anschutz Min. Corp.*, 29 Env't. Rep. Cas. (BNA) 1707, 19 Env'tl. L. Rep. 20902, 1989 WL 88083 (E.D. Mo. 1989).

¹⁴42 U.S.C. § 11046(e).

¹⁵42 U.S.C. § 11046(c).

¹⁶42 U.S.C. § 11046(f).

Atlantic States Legal Foundation, Inc. v. Whiting Roll-up Door Manufacturing Corp.,¹⁷ the court held that federal jurisdiction was conferred on citizen suits for wholly past violations.¹⁸ Thus, even where the defendant cured the violation by filing the necessary reports and information, citizen-plaintiffs were permitted to obtain relief.¹⁹ Moreover, in *Delaware Valley*, a citizen suit to enforce EPCRA's civil penalty provisions was found to be constitutional.²⁰

EPCRA's citizen suit provision contains an express subsection concerning intervention rights.²¹ Under Section 11046(h)(1), the United States and the appropriate state are each permitted to intervene in an action as a matter of right.²² The right of any other person to intervene is restricted to situations in which the intervening person has a direct interest that is or may be adversely affected by the action, and the disposition of the action may impair that person's ability to protect his interest.²³ The EPA or state can prevent intervention by showing that the person's interest is adequately represented in the action.²⁴

§ 9:216 Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA")

The Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") was amended in 1986 to include a citizen suit provision. The provision, Section 310, allows any person to commence a civil action against anyone who is alleged to be in violation of any standard, regulation, condition, requirement, or order that has become effective under CERCLA.¹ Additionally, the provision authorizes bringing a suit against any officer of the United States, including the EPA Administrator, for failure to perform a nondiscretionary duty under the Act.² Suits brought under CERCLA Section 310(a)(1) must be brought in the district in which the alleged violation occurred, and suits brought under CERCLA Section 310(a)(2) must be brought in the District Court for the District of Columbia.³

The language of the provision is similar to the language of numerous other federal environmental statutes' citizen suit provisions. Unlike other statutes, however, CERCLA is not a regulatory statute in the sense that it regulates ongoing activity with potentially adverse environmental effects (with the exception of certain spill reporting requirements); instead, CERCLA was created to facilitate the cleanup of

¹⁷*Atlantic States Legal Foundation, Inc. v. Whiting Roll-Up Door Mfg. Corp.*, 772 F. Supp. 745, 749, 34 Env't. Rep. Cas. (BNA) 1300, 21 Env'tl. L. Rep. 21490 (W.D. N.Y. 1991).

¹⁸*See also Williams v. Leybold Technologies, Inc.*, 784 F. Supp. 765, 768, 35 Env't. Rep. Cas. (BNA) 1204, 22 Env'tl. L. Rep. 20987 (N.D. Cal. 1992).

¹⁹*Delaware Valley Toxics Coalition v. Kurz-Hastings, Inc.*, 813 F. Supp. 1132, 36 Env't. Rep. Cas. (BNA) 1682, 23 Env'tl. L. Rep. 20915 (E.D. Pa. 1993); *Atlantic States Legal Foundation, Inc. v. Buffalo Envelope, Div. of American Envelope Co.*, 823 F. Supp. 1065, 23 Env'tl. L. Rep. 21564 (W.D. N.Y. 1993).

²⁰*Delaware Valley Toxics Coalition v. Kurz-Hastings, Inc.*, 813 F. Supp. 1132, 36 Env't. Rep. Cas. (BNA) 1682, 23 Env'tl. L. Rep. 20915 (E.D. Pa. 1993). *But see Atlantic States Legal Foundation, Inc. v. United Musical Instruments, U.S.A., Inc.*, 61 F.3d 473, 41 Env't. Rep. Cas. (BNA) 1091, 25 Env'tl. L. Rep. 21412, 1995 FED App. 0233P (6th Cir. 1995) (holding that the plain language and structure of EPCRA precluded citizens suit seeking civil penalties for purely historical violations that had been cured after receipt of notice of intent to file citizens suit).

²¹42 U.S.C. § 11046(h)(1).

²²42 U.S.C. § 11046(h)(1).

²³42 U.S.C. § 11046(h)(2).

²⁴42 U.S.C. § 11046(h)(2).

[Section 9:216]

¹42 U.S.C. § 9659(a)(1).

²42 U.S.C. § 9659(a)(2).

³42 U.S.C. § 9659(b).

hazardous sites contaminated as a result of past conduct. Due to the different focus of CERCLA, it has been difficult for parties and the courts to determine the appropriate use of the citizen suit provision within CERCLA's cleanup scheme. Sanctions are used, however, to assert claims in toxic tort litigation as a means to attempt to recover attorney's fees and the costs of suit.

The most obvious inconsistency is that created by the ban on pre-enforcement review found in Section 113(h) of CERCLA, which severely limits judicial review of challenges to the EPA's "removal or remedial actions."⁴ Section 113(h) includes an exception for a citizen suit that alleges that the removal or remedial action was in violation of any requirement of CERCLA. This exception, however, does not permit a citizen suit to be brought with regard to a removal action where a remedial action is to be undertaken at the site.⁵

Interpreting these provisions to authorize citizen suits (which could be brought by potentially responsible parties) to challenge remedial actions before they are started could be seen as contravening CERCLA's overriding policy of prohibiting pre-enforcement review. A House Report addressed this issue by suggesting that there would be windows of opportunity between discrete phases of the remediation where plaintiffs could intervene.⁶

Notice requirements for citizen suits under Section 310(d) of the Act are set forth at 40 C.F.R. § 374. Specifically, no suit may be filed unless sixty (60) days of notice is given in the following manner:

For private entities:

By certified mail or return receipt requested, personal service, with a copy in the same manner to the head of the federal agency with delegated responsibility for the CERCLA provision alleged to have been violated; the U.S. Attorney General; and the attorney general for the state in which the violation is alleged to have occurred. Additionally, notice must be served upon a corporation's registered agent in the state in which the violation is alleged to have occurred. If the EPA is the agency with the responsibility for the provision allegedly violated, notice must be served upon the EPA administrator and the appropriate regional EPA administrator;

For state/local entities:

By certified mail, return receipt requested or personal service to the head of the agency with a copy in the same manner and to the same entities as above;

For a federal agency:

By certified mail, return receipt requested or personal service to the head of the agency with a copy in the same manner and to the same entities served in actions against private entities;

For a failure to act on the part of an officer of the United States:

By certified mail, return receipt requested or personal service to the U.S. Attorney General and to the head of the agency who is alleged to have failed to perform a nondiscretionary act or duty.⁷

⁴42 U.S.C. § 9613(h).

⁵42 U.S.C. § 9613(h)(4).

⁶*See Neighborhood Toxic Cleanup Emergency v. Reilly*, 716 F. Supp. 828, 832, 30 Env't. Rep. Cas. (BNA) 1375, 19 Env'tl. L. Rep. 21165 (D.N.J. 1989) (quoting Joint Explanatory Statement of the Comm. of Conference, H.R. Conf. Rep. No. 99-962, 99th Cong., 2d Sess. 224 *reprinted* in 1986 U.S.C.C.A.N. 3276, 3317).

⁷40 C.F.R. § 374.2(a)(1)–(3)(b).

Service is effective upon the date of receipt by the last entity served.⁸

CERCLA codifies the diligent prosecution defense by providing that no action may be commenced under Section 310(a)(1) if the President (EPA) has commenced and is diligently prosecuting an action under the Act or under the Solid Waste Disposal Act to require compliance with the standard, regulation, condition, requirement, or order concerned.⁹ There is no requirement that the action being prosecuted be a civil action in a court.

42 U.S.C. § 9659(c) specifically authorizes courts to: enforce the standard regulation, condition, requirement, or order concerned; to order action necessary to correct the violation; and to impose civil penalties. Moreover, 42 U.S.C. § 9659(f) permits a court in its exercise of its discretion to award costs of litigation (including reasonable attorneys and expert witness fees) to the substantially prevailing party. However, in a suit between private landowners brought under 42 U.S.C. § 9659, a court held that it had jurisdiction to impose civil penalties, but that the plaintiff could not recover response costs or obtain injunctive relief restraining the defendant's activities.¹⁰

The United States and the states are permitted to intervene in a citizen suit as a matter of right.¹¹ Any other person's right to intervene in any action commenced under CERCLA is governed by 42 U.S.C. § 9613(i), which provides that the right to intervene is restricted to situations in which the intervening person has a direct interest that is or may be adversely affected by the action, and the disposition of the action may impair the intervening person's ability to protect his interest. The EPA or state can prevent intervention by showing that the person's interest is already adequately represented in the action.¹²

§ 9:217 Safe Drinking Water Act ("SDWA")

The Safe Drinking Water Act's ("SDWA") citizen suit provision provides that any person may bring an action against any person who is alleged to be in violation of any requirement of the Act, including any governmental instrumentality or agency (subject to Eleventh Amendment restrictions).¹ Citizen suits may be filed under the SDWA against private parties subject to the requirements of the Act. Thus, a resident of a trailer park was able to bring a suit against the owners of the park who allegedly permitted contaminants in the park's public drinking water to exceed maximum levels and failed to notify residents of the contamination.² At least one court has not permitted citizen-plaintiffs to sue private parties where the court viewed the plaintiffs as actually attempting to challenge agency action in issuing standards.³

The SDWA also permits actions against the EPA administrator for failure to

⁸40 C.F.R. § 374.2(c).

⁹42 U.S.C. § 9659(d)(2).

¹⁰*Westfarm Associates Ltd. Partnership v. International Fabricare Institute*, 22 Env'tl. L. Rep. 21350, 1992 WL 315188 (D. Md. 1992).

¹¹42 U.S.C. § 9659.

¹²42 U.S.C. § 9659.

[Section 9:217]

¹42 U.S.C. § 300j-8(a)(1).

²*See Vernon Village, Inc. v. Gottier*, 755 F. Supp. 1142, 32 Env't. Rep. Cas. (BNA) 1697, 21 Env'tl. L. Rep. 21186 (D. Conn. 1990).

³*See Western Nebraska Resources Council v. Wyoming Fuel Co.*, 641 F. Supp. 128, 138, 24 Env't. Rep. Cas. (BNA) 1435, 24 Env't. Rep. Cas. (BNA) 2000, 16 Env'tl. L. Rep. 20535 (D. Neb. 1986).

perform a nondiscretionary act or duty.⁴ State and local governments are expressly authorized to (1) bring any action or obtain any remedy or sanction in a state or local court or (2) bring any administrative action or obtain any administrative remedy or sanction against the United States under state or local law to enforce any safe drinking water requirements or underground injection control programs.⁵

The provisions for giving notice of intent to file a citizen suit under 42 U.S.C. § 300j-8(b) are set forth at 40 C.F.R. § 135. No citizen suit may be commenced under 42 U.S.C. § 300j-8(a)(1) until 60 days after notice of the alleged violation has been given to the EPA administrator, to any alleged violator, and to the state in which the violation is alleged to have occurred. Likewise, no suit may be commenced under 42 U.S.C. § 300j-8(a)(2) until after sixty (60) days of notice has been given to the EPA.⁶ Notice of intent to file a citizen suit must be served as follows:

- (1) If the alleged violator is an individual or corporation, service of notice must be accomplished by certified mail, return receipt requested, addressed to or by personal service upon such individual or corporation. If a public water system or underground injection well is alleged to be in violation, notice shall be sent by certified mail, return receipt requested, to the Administrator of the Agency, the regional administrator of the agency for the region in which such violation is alleged to have occurred, the chief administrative officer of the responsible state agency (if any), and the Attorney General for the State in which the violation is alleged to have occurred. If the alleged violator is a corporation, a copy of the notice also shall be sent by certified mail, return receipt requested, to the registered agent (if any) of the corporation in the state in which the violation is alleged to have occurred.
- (2) If the alleged violator is a state or local agency, service of notice shall be accomplished by certified mail, return receipt requested, addressed to, or by personal service upon, the head of such agency. A copy of the notice shall be sent by certified mail, return receipt requested, to the administrator of the agency for the region in which the violation is alleged to have occurred, the chief administrative officer of the responsible state agency (if any), and the Attorney General for the state in which the violation is alleged to have occurred.
- (3) If the alleged violator is a federal agency, service of notice shall be served by certified mail, return receipt requested, addressed to, or by personal service upon, the head of the federal agency. A copy of the notice shall be sent by certified mail, return receipt requested, to the administrator of the agency for the region in which the violation is alleged to have occurred, the chief administrative officer of the responsible state agency (if any), and the Attorney General for the state in which the violation is alleged to have occurred.

In order to preclude the commencement of a citizen suit under the Act, the EPA Administrator, the Attorney General, or the state must have commenced and be diligently prosecuting a civil action in a federal court to require compliance with a requirement under the Act.⁷ The statute, however, allows any person to intervene as a matter of right in a governmental action seeking to enforce any requirement of the Act.⁸

Consistent with *Gwaltney*, courts have held that citizen suits under the SDWA

⁴42 U.S.C. § 300j-8(a)(2).

⁵42 U.S.C. § 300j-8(e).

⁶42 U.S.C. § 300j-8(b)(2).

⁷42 U.S.C. § 300j-8(b)(1)(B).

⁸42 U.S.C. § 300j-8(b)(1)(B).

must show that there is an ongoing violation of the Act.⁹ Where the plaintiff fails to introduce evidence that there is an ongoing violation of the SDWA, courts have granted summary judgment for lack of jurisdiction.¹⁰

The court in its discretion may award costs of litigation, including reasonable attorney's fees and expert witness fees to any party.¹¹

IX. FEDERAL CRIMINAL ENFORCEMENT

§ 9:218 Executive Summary

Federal criminal enforcement of environmental laws accelerated dramatically in the late 1980s. In the past 10 fiscal years, the United States has charged over 2,300 defendants with violating federal environmental laws.¹

[Chart 9:218]

Year	Investigations Opened	Defendants Charged	Prison Term Imposed (Years) ²	Value of Fines and Restitution ³
FY 06	305	278	154	\$54 million
FY 07	340	248	64	\$73 million
FY 08	319	176	57	\$70 million
FY 09	387	200	76	\$106 million
FY 10	346	289	72	\$44 million
FY 11	371	250	89.5 ⁴	\$37 million
FY 12	320	231	79	\$46 million

⁹See *Jones v. Dow Chemical Co.*, 885 F. Supp. 905, 907 (M.D. La. 1994); *Vernon Village, Inc. v. Gottier*, 755 F. Supp. 1142, 32 Env't. Rep. Cas. (BNA) 1697, 21 Env'tl. L. Rep. 21186 (D. Conn. 1990).

¹⁰See *Mattoon v. City of Pittsfield*, 980 F.2d 1, 37 Env't. Rep. Cas. (BNA) 1471, 24 Fed. R. Serv. 3d 330, 23 Env'tl. L. Rep. 20361 (1st Cir. 1992).

¹¹42 U.S.C. § 300j-8(d).

[Section 9:218]

¹EPA, Office of Enforcement & Compliance Assurance, *Fiscal Year 2015 EPA Enforcement and Compliance Annual Results* (Dec. 16, 2015), available at http://www.epa.gov/sites/production/files/2015-12/documents/fy-2015-enforcement-annual-results-charts_0.pdf; EPA, Office of Enforcement & Compliance Assurance, *Fiscal Year 2014 EPA Enforcement and Compliance Annual Results* (Dec. 18, 2014), available at <https://www.epa.gov/sites/production/files/2014-12/documents/fy-2014-enforcement-annual-results-charts-12-08-14.pdf>; EPA, Office of Enforcement & Compliance Assurance, *Fiscal Year 2013 EPA Enforcement and Compliance Annual Results* (Jan. 13, 2013), available at <http://archive.epa.gov/enforcement/annual-results/web/pdf/eoy2013.pdf>; EPA, Office of Enforcement & Compliance Assurance, *Fiscal Year 2012 EPA Enforcement & Compliance Annual Results* (Dec. 7, 2012), available at <http://archive.epa.gov/compliance/enforcement/annual-results/web/pdf/eoy2012.pdf>; EPA, Office of Enforcement & Compliance Assurance, *Fiscal Year 2011 EPA Enforcement & Compliance Annual Results* (Dec. 8, 2011), available at <http://archive.epa.gov/compliance/enforcement/annual-results/web/pdf/eoy2011.pdf>; EPA, Office of Enforcement & Compliance Assurance, *Fiscal Year 2010 Enforcement & Compliance Annual Results*, (Nov. 22, 2010), available at <https://archive.epa.gov/compliance/enforcement/annual-results/web/pdf/eoy2010.pdf>; EPA, Office of Enforcement & Compliance Assurance, *Fiscal Year 2009 Enforcement & Compliance Annual Results* (Nov. 23, 2009), available at <https://www.agc.org/sites/default/files/pdf2-epa-fy2009results.pdf>.

²Number reflects the total number of years of incarceration to which individual defendants were sentenced. See, e.g., *Fiscal Year 2011 EPA Enforcement & Compliance Annual Results*, *supra* note 1.

³All restitution values have been adjusted to 2015 U.S. dollars and are rounded to the closest million. See US Inflation Calculator, <http://www.usinflationcalculator.com/> (last visited Dec. 11, 2015).

⁴According to the EPA, "[t]he total level of incarceration in FY 2011 was reduced by 43 years as a consequence of prior Supreme Court decisions which made the U.S. federal sentencing guidelines

Year	Investiga- tions Opened	Defendants Charged	Prison Term Imposed (Years) ²	Value of Fines and Restitution ³
FY 13	297	278	161	\$1.5 billion ⁵
FY 14	271	187	155	\$63 million
FY 15	213	185	129	\$200 million ⁶
Totals	3,169	2,322	1,036.5	\$2,193,000,000

The purpose of this section is to outline generally the criminal sanctions available for violations of environmental laws, how a criminal investigation is begun and conducted, how to respond to a criminal investigation, and the relationship between criminal enforcement and civil enforcement of environmental laws.

Before proceeding further, however, an important caution is appropriate. If a company or individual believes it is the target of a criminal investigation, the first and foremost concern is the retention of counsel. Criminal enforcement of environmental laws more often than not results in severe individual sanctions, including imprisonment, large fines, and other penalties. The investigation alone can have severe personal consequences if not handled properly. Becoming involved in the criminal process without the benefit of counsel is a costly mistake.

§ 9:219 Overview of Criminal Enforcement

Although most citizens now realize that midnight dumping of toxic chemicals into a nearby stream or into a landfill is criminal conduct, the breadth of the types of conduct that constitutes a federal criminal offense under the environmental statutes is often overlooked. The categories of conduct that may constitute a criminal offense include the following:

- Failing to obtain a permit for air, water, and waste discharges;
- Exceeding the effluent limits in a discharge permit;
- Accidental discharges of pollutants into air or water;
- Failing to obtain the separate permits necessary to store, transport, and dispose of hazardous wastes;
- Failing to report an unpermitted discharge;
- Failing to submit required periodic reports;
- Submitting false reports concerning discharges on environmental conditions;
- Endangering the health and safety of others; and
- Conspiring to violate environmental laws.

Avoiding conduct that could be considered an environmental offense is becoming increasingly important both for corporations and for their individual officers and employees. Not only are sentences becoming increasingly severe, but the EPA and Department of Justice (“DOJ”) (through the FBI, the DOJ Environmental Division, and the U.S. Attorneys) also are devoting increased resources to the investigation and prosecution of environmental crimes. It has even been suggested that public officials perceive severe punishment of corporate polluters as politically beneficial.

discretionary rather than mandatory.” See, e.g., *Fiscal Year 2011 EPA Enforcement & Compliance Annual Results*, *supra* note 1; see also *U.S. v. Booker*, 543 U.S. 220, 259, 125 S. Ct. 738, 160 L. Ed. 2d 621 (2005).

⁵FY 2013 fine and restitution numbers are substantially higher due to the Deepwater Horizon spill. *Fiscal Year 2013 EPA Enforcement and Compliance Annual Results*, *supra* note 1.

⁶FY 2015 fine and restitution numbers are substantially higher due to the Duke Energy Case. *Fiscal Year 2015 EPA Enforcement and Compliance Annual Results*, *supra* note 1.

Prosecution under environmental statutes alone is not the sole risk of enforcement in this area. The government also will prosecute other crimes that are connected to environmental crimes. Criminal conspiracy is one such example, as are the myriad of statutes that criminalize obstruction of justice. For instance, in 2010, the Deepwater Horizon offshore oil rig experienced an uncontrolled blowout and related explosions and fire in the Gulf of Mexico, resulting in the deaths of 11 workers and the largest oil spill in U.S. history. In its aftermath, the government prosecuted violations of the Clean Water Act (“CWA”)¹ and the Migratory Bird Treaty Acts,² as well as felony manslaughter and obstruction of Congress³ and making false statements.⁴ In addition, those prosecuted for environmental crimes include: Pennwalt Corporation (discharge of sodium dichromate solution into tributary of Puget Sound when a storage tank suddenly collapsed and failure to report the incident promptly); Exxon Corporation (spill of crude oil into Prince William Sound upon grounding of the tanker Exxon Valdez); Ocean Spray Cranberries, Inc. (discharge of untreated food processing wastes into publicly owned sewage treatment system incapable of handling them without pretreatment); Protex Industries, Inc. (knowingly endangering employees by emptying hazardous wastes from drums in a drum recycling facility); Ashland Oil, Inc. (discharging diesel fuel into the Monongahela River when a storage tank collapsed); Orkin Exterminating Co. (removing warning signs from a fumigated home before the fumes dissipated, in violation of label instructions); Argent Chemical Laboratories, Inc. (selling pesticides before the products were registered with the EPA); Gardinier, Inc. (discharge of fertilizer into Alafia River when a tank collapsed); and John Pozsgai (depositing fill without a permit on land he owned, which was considered a “wetland”).

Although the severity of the sentences imposed for environmental crimes generally increases as the defendant’s culpability for the offending conduct increases, a prosecutor can often obtain an environmental criminal conviction without having to prove any deliberate wrongdoing by the defendant. Federal statutes permit the imposition of criminal sanctions upon individuals and corporations whose conduct is merely negligent. Indeed, under some statutes, punishment can be imposed on a strict liability basis, without any showing of intent, knowledge, or even negligence. This is generally called “criminalization” of environmental laws.

Even if environmental statutes define as criminal only “knowing” (or intentional) conduct, the defendant can often be convicted solely based upon his knowledge of the nature of the substance with which he is dealing. Knowledge that the conduct is unlawful is almost never required (ignorance of the law is no excuse), and knowledge of even a third party’s lack of a necessary permit is often not a requisite to a criminal conviction. For corporations, the culpability threshold for a conviction is particularly low, since the corporation is typically deemed to have knowledge of any fact known to any of its employees, regardless of the employment level of the employee. Supervisors in a business setting have special criminal exposure under the environmental laws because they are frequently deemed subject to a criminal conviction for any conduct of their subordinates whom they could have controlled if they had actively supervised the matter.

Beginning in Fiscal Year 2010, the EPA used data to categorize its cases into tiers based on the severity of the crime associated with the alleged violation, which in turn is directly linked to the criteria used in the Federal Criminal Sentencing

[Section 9:219]

¹33 U.S.C. § 1319(c)(1)(A).

²16 U.S.C. § 703.

³18 U.S.C. § 1505.

⁴18 U.S.C. § 1001.

Guidelines (“Sentencing Guidelines”).⁵ This approach is used to produce greater environmental and public health benefits and to deter criminal conduct.⁶ The EPA, like the DOJ, also seeks to prosecute “individual defendants as high up the corporate hierarchy as the evidence permits.”⁷ As the EPA reported in 2011, “[d]uring the early years of EPA’s criminal program, organizational defendants made up approximately 70% of the total defendants charged and individual defendants made up the remaining 30%. Today those figures are reversed: 70% individual and 30% organizational defendants.”⁸

§ 9:220 Overview of the Criminal Process

Investigations of environmental crimes are increasingly conducted using the same methods and resources used to combat traditional crime, including the use of the EPA’s own criminal investigators, FBI agents, wiretapping, confidential informants, search warrants, grand jury subpoenas, and the utilization of the threat of conviction and punishment to induce lower-level employees to provide testimony implicating their superiors.

As described at § 9:238, prosecutions for environmental crimes may be conducted either by the local U.S. Attorney’s office or by the Environmental Crimes Section of DOJ in Washington, D.C. In any case, the Environmental Crimes Section will be involved in coordinating the prosecution and will make its resources available.

In most cases, the investigators will have gathered significant amounts of evidence before the target even becomes aware of the pendency of the investigation. A target business’ first notice of the investigation is often the execution of a search warrant (§ 9:240) at its business premises or the receipt of a grand jury subpoena (§ 9:241) for documents or other evidence. The prosecution will gather evidence supporting the charges by conducting interviews of present and former employees (§ 9:236), customers, competitors, and other potential witnesses, and by requiring testimony, documents, and other evidence to be presented to a grand jury.

If the charges are not resolved first, the prosecutors will formalize the charges through either an indictment—a felony charge authorized by a federal grand jury—or an information—a felony charge to which the defendant agrees to plead guilty without a grand jury determining that the charge is supported by probable cause or a charge that constitutes a misdemeanor. In a corporate setting, federal prosecutors generally attempt to bring charges against both the corporation and against one or more individuals with management responsibility.

Upon issuance of the indictment or information, the defendants will be required to appear in court to enter a plea of guilty or not guilty. The Speedy Trial Act¹ requires the court to bring the case to trial within 70 days unless there is good cause for delay, but this standard is honored in the breach, as almost every criminal case takes longer than 70 days, and the Speedy Trial Act provides ample opportunity for the prosecution, defense, or both to extend the time to trial.

Statistically, an overwhelming majority of federal criminal charges are resolved

⁵EPA, Criminal Enforcement Program, at 5 (October 2011), *available at* <https://www.epa.gov/sites/production/files/documents/oceft-overview-2011.pdf>.

⁶EPA, Criminal Enforcement Program, at 5 (October 2011), *available at* <https://www.epa.gov/sites/production/files/documents/oceft-overview-2011.pdf>.

⁷EPA, Criminal Enforcement Program, at 6 (October 2011), *available at* <https://www.epa.gov/sites/production/files/documents/oceft-overview-2011.pdf>.

⁸EPA, Criminal Enforcement Program, at 6 (October 2011), *available at* <https://www.epa.gov/sites/production/files/documents/oceft-overview-2011.pdf>.

[Section 9:220]

¹18 U.S.C. § 3161(c)(1).

through plea bargaining. The manner in which the case is defended, beginning with the first suggestion that an investigation is underway, can have a critical impact on the results of those negotiations or upon the verdict if a trial is in the defendant's best interests.

§ 9:221 Criminal Sanctions Available

The statutes creating environmental criminal offenses are generally regarded by the courts as laws protecting the public health, safety, and welfare.¹ Therefore, these laws have generally been interpreted to permit conviction and punishment without requiring the prosecutor to produce the same proof of a wrongful intent (often referred to as “scienter” or “mens rea”) that is required to convict a person of more traditional crimes. Accordingly, under the environmental statutes, criminal sanctions may be imposed upon the basis of conduct that is merely negligent or even on a strict liability basis, which requires no showing of any intent to harm or lack of attention.

Corporations are particularly vulnerable to prosecution because they are held responsible for the conduct of their agents and employees. Moreover, in some circumstances, corporate managers may be responsible for the acts of their subordinates. The diminished standards of proof necessary to obtain a conviction for an environmental crime extend particularly broad discretion to federal enforcement officials in deciding whether to pursue enforcement through civil or administration remedies or to invoke the machinery of the criminal justice system.

§ 9:222 Misdemeanors versus Felonies

Virtually every major environmental law contains two types of criminal penalties: misdemeanors and felonies. The classification of a defendant's actions either as a misdemeanor or as a felony can have a profound effect on the remainder of the proceedings.

There are several basic differences between misdemeanors and felonies. First, the severity of the potential punishment differs. Environmental crimes, like all other federal offenses, are divided into felonies and misdemeanors on the basis of the length of the maximum sentence of imprisonment that can be imposed as punishment for the offense.¹ Misdemeanors result in punishment of one year or less in prison, a term of supervised release, and fines of between \$5,000 and \$250,000 per violation. Felonies result in jail terms of more than one year up to life (and in rare cases, the death penalty), longer periods of supervised release, and fines often exceeding \$250,000 per violation. Title 18 of the U.S. Code contains general jail and fine provisions that reflect these differences.²

Second, felony offenses generally require proof of a greater degree of criminal intent than do misdemeanors. Environmental crimes involving only negligence or strict liability are generally misdemeanors, while offenses requiring that a defendant

[Section 9:221]

¹*See, e.g.,* U.S. v. Atlantic States Cast Iron Pipe Co., 2007 WL 2282514, at *26, *42 (D.N.J. 2007), *aff'd*, 695 F.3d 227, 75 Env't. Rep. Cas. (BNA) 1321 (3d Cir. 2012) (collecting cases), *aff'd sub. nom.*, United States v. Maury, 695 F.2d 227 (3d Cir. 2012); *see also* U.S. v. Dean, 969 F.2d 187, 191, 35 Env't. Rep. Cas. (BNA) 1255, 22 Env't. L. Rep. 21296 (6th Cir. 1992); U.S. v. Hayes Intern. Corp., 786 F.2d 1499, 1503, 24 Env't. Rep. Cas. (BNA) 1282, 16 Env't. L. Rep. 20717 (11th Cir. 1986); U.S. v. Johnson & Towers, Inc., 741 F.2d 662, 668, 21 Env't. Rep. Cas. (BNA) 1433, 14 Env't. L. Rep. 20634 (3d Cir. 1984).

[Section 9:222]

¹18 U.S.C. § 3559(a).

²18 U.S.C. §§ 3571, 3581.

have some form of intent or knowledge of the wrongfulness of his conduct are felonies. For example, a knowing violation of a statute resulting in endangerment to health or safety is classified as a felony; a negligent violation, resulting in no public harm, will be punished less severely as a misdemeanor.

Third, the classification of a party's conduct either as a misdemeanor or a felony may determine whether charges are ever commenced against that party. The DOJ's Environment Division and the U.S. Attorneys' Offices all operate with fairly limited prosecutorial resources.³ As a result, they must choose which cases to prosecute out of the universe of all allegations of criminal conduct. One factor in their consideration is the seriousness of the offense as evidenced through its classification either as a misdemeanor or a felony. A felony, with its higher sentences, has a greater deterrent value than a misdemeanor. Thus, while any allegation of criminal conduct deserves a party's full attention, the target of an environmental criminal investigation and prosecution is well advised to focus from the beginning on whether the government is investigating a misdemeanor or felony violation.

Finally, the classification of an offense as a felony or a misdemeanor has significant procedural consequences. To prosecute a felony charge, a federal prosecutor must generally present a grand jury with sufficient evidence from which the grand jury concludes that there is probable cause to believe the defendant has committed an offense as charged in the indictment. But, as noted above, a putative defendant can waive the right to have a grand jury determine whether there is probable cause to support a felony charge proposed by the government, which typically occurs when a defendant has reached a plea agreement with the government. This form of charging document is called an *information*, which is the government's own description of the alleged conduct constituting the crime. In addition, a prosecutor may bring misdemeanor cases by information and need not obtain an indictment from a grand jury. With an *information*, the prosecutor has neither to obtain a grand jury's approval of the form of the charges nor satisfy the grand jury of the existence of probable cause to believe the defendant has committed an offense.⁴

§ 9:223 Knowing Violations

The severity of criminal sanctions available under federal environmental laws varies from statute to statute, depending on the nature of the offending conduct. Environmental crimes are generally divided into four categories: knowing violations, negligent violations, strict liability violations, and endangerment violations. Negligent and endangerment violations are discussed at §§ 9:224 and 9:226, respectively.

A necessary element of a number of environmental crimes is that the defendant has acted "knowingly" or, in some cases, "knowingly and willfully." For instance, the Resource Conservation and Recovery Act ("RCRA")¹ provides that it is a felony to "knowingly" transport hazardous waste to a facility that does not have the necessary permit.² Similarly, the Clean Water Act ("CWA")³ provides a more severe maximum penalty for one who "knowingly" discharges contaminants into navigable

³For a discussion of the role played by those offices in criminal prosecution of environmental laws, see §§ 9:251 to 9:258.

⁴Fed. R. Crim. P. 7.

[Section 9:223]

¹Resource Conservation and Recovery Act, Pub. L. No. 94-580, 90 Stat. 2795 (1976) (codified as amended at 42 U.S.C. §§ 6901 to 6992k).

²RCRA § 3008(d)(1), 42 U.S.C. § 6928(d)(1).

³Clean Water Act, Pub. L. No. 92-500, 86 Stat. 816 (1972) (codified as amended at 42 U.S.C. §§ 1251 to 1387).

waters of the United States without a permit than for one who does so negligently.⁴ Additionally, under the Clean Air Act (“CAA”),⁵ one who “knowingly” places another in imminent danger of death or serious bodily injury through the release of hazardous or extremely hazardous air pollutants faces heavier maximum penalties than one who does so negligently.⁶

Most of the major environmental statutes specify the types of conduct that constitute a knowing violation of the law. Listed below is a summary of knowing violations contained in the CAA, CWA, Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”),⁷ RCRA, Toxic Substances Control Act (“TSCA”),⁸ Emergency Planning and Community Right-to-Know Act (“EPCRA”),⁹ Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”),¹⁰ Marine Protection, Research and Sanctuaries Act (“MPRSA”),¹¹ and the Medical Waste Tracking Act (“MWTa”).¹²

It should be noted, however, that in the case of serious endangerment to public health or welfare, negligent conduct can also be punished as a felony.¹³

[Chart 9:223]

KNOWING VIOLATIONS OF MAJOR ENVIRONMENTAL STATUTES

⁴CWA § 309(c), 33 U.S.C. § 1319(c).

⁵Clean Air Act, Pub. L. No. 88-206, 77 Stat. 392 (1963) (codified as amended at 42 U.S.C. §§ 7401 to 7431). While *Tennessee Valley Authority v. Whitman*, 336 F.3d 1236, 56 Env’t. Rep. Cas. (BNA) 1737, 33 Env’t. L. Rep. 20231 (11th Cir. 2003) held that § 7413 is unconstitutional, that decision dealt with administrative compliance orders, not with criminal penalties.

⁶*Compare* CAA § 113(c)(4), 42 U.S.C. § 7413(c)(4), *with* CAA § 113(c)(5), 42 U.S.C. § 7413(c)(5).

⁷Comprehensive Environmental Response, Compensation, and Liability Act, Pub. L. No. 96-510, 94 Stat. 2767 (1980) (codified as amended at 42 U.S.C. §§ 9601 to 9628).

⁸Toxic Substances Control Act, Pub. L. No. 94-469, 90 Stat. 2003 (1976) (codified as amended at 15 U.S.C. §§ 2601 to 2629).

⁹Emergency Planning and Community Right-to-Know Act, Pub. L. No. 99-499, 100 Stat. 1728 (1986) (codified as amended at 42 U.S.C. §§ 11004 to 11049).

¹⁰Federal Insecticide, Fungicide, and Rodenticide Act, Pub. L. No. 61-152, 36 Stat. 331 (1910) (codified as amended at 7 U.S.C. §§ 136 to 136y).

¹¹Marine Protection, Research and Sanctuaries Act, Pub. L. No. 92-532, 86 Stat. 1052 (1972) (codified as amended at 16 U.S.C. §§ 1431 to 1445c1 and 33 U.S.C. §§ 1411 to 1420).

¹²Medical Waste Tracking Act, Pub. L. No. 100-582, 102 Stat. 2950 (1988) (codified as amended at 42 U.S.C. §§ 6992 to 6992k).

¹³*See* § 9:226, Endangerment Violations.

STATUTE	CRIMINAL ACTS	PENALTIES
CAA	<p>Knowingly violates a substantive requirement of the applicable state implementation plan or any order under §§ 7413(a), 7412, 7414, 7475(a), 7477, 7603, 7661a(a), 7661b(c).</p> <p>CAA § 113(c)(1), 42 U.S.C. § 7413(c)(1)</p> <p>Knowingly makes a material false statement, representation or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any document required pursuant to CAA to be filed or maintained, or fails to notify or report as required under the CAA, or falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under the CAA.</p> <p>CAA § 113(c)(2), 42 U.S.C. § 7413(c)(2)</p> <p>Knowingly fails to pay a fee owed the United States</p> <p>CAA § 113(c)(3), 42 U.S.C. § 7413(c)(3)</p> <p>Knowingly releases into the ambient air any hazardous air pollutant listed pursuant to § 7412, or any extremely hazardous substance listed pursuant to § 11002(a)(2), and knows at the time that he thereby places another person in imminent danger of death or serious bodily injury.</p> <p>CAA § 113(c)(5)(A), 42 U.S.C. § 7413(c)(5)(A)</p>	<p>Fine up to \$250,000 and/or up to five years in prison (doubled for subsequent conviction)</p> <p>Fine up to \$250,000 and/or up to two years in prison (doubled for subsequent conviction)</p> <p>Fine up to \$100,000 and/or up to one year in prison (doubled for subsequent conviction)</p> <p>Person: Fine up to \$250,000 and/or up to 15 years in prison (doubled for subsequent conviction).</p> <p>Organization: Fine up to \$1 million</p>
CWA	<p>Knowingly violates the Act, or knowingly introduces into a sewer system or into a publicly owned treatment works any pollutant or hazardous substances which such person knew or reasonably should have known could cause personal injury or property damage, or, other than in compliance with all applicable requirements or permits, causes such treatment works to violate any effluent limitation or condition in a permit issued to the treatment works pursuant to the CWA.</p> <p>CWA § 309(c)(2), 33 U.S.C. § 1319(c)(2)</p> <p>Knowingly violates the CWA and knows at the time that they thereby place another person in imminent danger of death or serious bodily injury.</p> <p>CWA § 309(c)(3)(A), 33 U.S.C. § 1319(c)(3)(A)</p>	<p>Fine up to \$50,000 per day and/or up to three years in prison (doubled for subsequent conviction)</p> <p>Person: Fine up to \$250,000 and/or up to 15 years in prison (doubled for subsequent conviction)</p> <p>Organization: Fine up to \$1 million</p>
CERCLA	<p>Fails to report a known release/knowingly submitting false information.</p> <p>42 U.S.C. § 9603(b)</p> <p>Knowingly fails to notify the EPA of existence of identified facilities.</p> <p>42 U.S.C. § 9603(c)</p> <p>Knowingly destroys, disposes, conceals, or otherwise renders unavailable records to be provided to the EPA.</p> <p>42 U.S.C. § 9603(d)(2)</p>	<p>Fine up to \$250,000 and/or up to three years in prison (or up to five years for subsequent conviction)</p> <p>Fine of up to \$10,000 and/or up to one year in prison</p> <p>Fine up to \$250,000 and/or up to three years in prison (or up to five years for subsequent conviction)</p>

STATUTE	CRIMINAL ACTS	PENALTIES
RCRA	<p>Knowingly transports to a nonpermit facility or knowingly treats, stores, or disposes of hazardous waste in violation or without a permit.</p> <p>RCRA § 3008(d)(1), 42 U.S.C. §§ 6928(d)(1)–(d)(2)</p> <p>Knowingly omits material information or makes any false material statement or representative in any document filed, maintained, or used for purposes of compliance with RCRA regulations.</p> <p>RCRA § 3008(d)(3), 42 U.S.C. § 6928(d)(3)</p> <p>Knowingly generates, stores, treats, transports, disposes of, exports, or otherwise handles hazardous waste or any used oil not identified or listed as a hazardous waste under this subchapter <i>and</i> knowingly destroys, alters, conceals, or fails to file any document required to be maintained or filed for purposes of compliance with RCRA regulations.</p> <p>RCRA § 3008(d)(4), 42 U.S.C. § 6928(d)(4)</p> <p>Knowingly transports without a manifest, or causes to be transported without a manifest, any hazardous waste or any used oil not identified or listed as a hazardous waste under this subchapter required by RCRA regulations to be accompanied by a manifest.</p> <p>RCRA § 3008(d)(5), 42 U.S.C. § 6928(d)(5)</p> <p>Knowingly exports a hazardous waste identified or listed under this subchapter without the consent of the receiving country or where there exists an international agreement between the United States and the government of the receiving country establishing notice, export, and enforcement procedures for the transportation, treatment, storage, and disposal of hazardous wastes, in a manner which is not in conformance with such agreement</p> <p>RCRA § 3008(d)(6), 42 U.S.C. § 6928(d)(6)</p> <p>Knowingly stores, treats, transports, or causes to be transported, disposes of, or otherwise handles any used oil not identified or listed as a hazardous waste under this subchapter in knowing violation of any material condition or requirement of a permit under this subchapter, or in knowing violation of any material condition or requirement of any applicable regulations or standards under this chapter.</p> <p>RCRA § 3008(d)(7), 42 U.S.C. § 6928(d)(7)</p> <p>Knowingly transports, treats, stores, disposes of, or exports any hazardous waste identified or listed under this subchapter or used oil not identified or listed as a hazardous waste under this subchapter in violation of § 6928(d) who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury.</p> <p>RCRA § 3008(e), 42 U.S.C. § 6928(e)</p>	<p>Fine up to \$50,000 per day and/or up to five years in prison (doubled for subsequent conviction)</p> <p>Fine up to \$50,000 per day and/or up to two years in prison (doubled for subsequent conviction)</p> <p>Fine up to \$50,000 per day and/or up to two years in prison (doubled for subsequent conviction)</p> <p>Fine up to \$50,000 per day and/or up to two years in prison (doubled for subsequent conviction)</p> <p>Fine up to \$50,000 per day and/or up to two years in prison (doubled for subsequent conviction)</p> <p>Fine up to \$50,000 per day and/or up to two years in prison (doubled for subsequent conviction)</p> <p>Person: Fine up to \$250,000 and/or up to 15 years in prison Organization: Fine up to \$1 million</p>
TSCA	<p>Knowingly or willfully violates the TSCA.</p> <p>15 U.S.C. § 2615(b)</p>	<p>Fine up to \$25,000 for each day of violation and/or up to one year in prison</p>
EPCRA	<p>Knowingly and willfully violates emergency notification requirements.</p> <p>42 U.S.C. § 11045(b)(4)</p> <p>Knowingly and willfully divulges or discloses any information entitled to protection with respect to trade secrets</p> <p>42 U.S.C. § 11045(d)(2).</p>	<p>Fine up to \$25,000 and/or up to two years in prison (up to \$50,000 and/or up to five years in prison for subsequent conviction)</p> <p>Fine up to \$20,000 and/or up to one year in prison</p>

STATUTE	CRIMINAL ACTS	PENALTIES
FIFRA	<p>Knowing violation by registrant, applicant for registration, or producer.</p> <p>7 U.S.C. § 136l(b)(1)(A)</p> <p>Knowing violation by any commercial applicator of a restricted use pesticide.</p> <p>7 U.S.C. § 136l(b)(1)(B)</p> <p>Knowing violation by private applicator or other person not included by § 136l(b)(1)(A) who distributes or sells pesticides or devices.</p> <p>7 U.S.C. § 136l(b)(2)</p> <p>Disclosure of information relative to formulas of products with intent to defraud.</p> <p>7 U.S.C. § 136l(b)(3)</p>	<p>Fine up to \$50,000 and/or up to one year in prison</p> <p>Fine up to \$25,000 and/or up to one year in prison</p> <p>Fine up to \$1,000 and/or up to 30 days in prison</p> <p>Fine up to \$10,000 and/or up to three years in prison</p>
MPRSA	<p>Knowingly violates the MPRSA.</p> <p>33 U.S.C. § 1415(b)</p>	<p>Fine up to \$250,000 per day and/or up to five years in prison; in addition, forfeiture to the United States of any property derived from any proceeds obtained as a result of the violation and of any property used to commit or facilitate the violation</p>
MWTA	<p>Knowingly violates requirements or regulations of this subchapter.</p> <p>42 U.S.C. § 6992d(b)(1)</p> <p>Knowingly omits material information or makes any false material statement or representation in any document filed, maintained, or used for purposes of compliance with this subchapter.</p> <p>42 U.S.C. § 6992d(b)(2)</p> <p>Knowingly generates, stores, treats, transports, disposes of, or otherwise handles any medical waste and knowingly destroys, alters, conceals, or fails to file any document required to be maintained or filed for purposes of compliance with this subchapter or its respective regulations.</p> <p>42 U.S.C. § 6992d(b)(3)</p>	<p>Fine up to \$250,000 per day and/or up to five years in prison (doubled for subsequent conviction)</p> <p>Fine up to \$250,000 per day and/or up to two years in prison (doubled for subsequent conviction)</p> <p>Fine up to \$250,000 per day and/or up to two years in prison (doubled for subsequent conviction)</p>

An act is said to be done knowingly if it is done voluntarily and intentionally and not because of ignorance, mistake, accident, or some other reason. The requirement that a violation be done knowingly is designed to ensure that a defendant will not be convicted of a felony for an act he or she did not intend to commit or the nature of which he or she did not understand.¹⁴

The federal government argues that proof that a defendant acted knowingly or with knowledge of a particular fact does not require direct evidence of what was in the defendant's mind. Instead, that knowledge may be inferred from the defendant's familiarity with the subject matter in question or from all of the other facts and circumstances connected with the case. For example, in *United States v. Speech*,¹⁵ a case involving the illegal disposal of hazardous waste, the court allowed knowledge to be proved by (1) the defendant's failure to follow procedures specified by the regulations, (2) the waste recipient's failure to indicate whether he had a permit status, and (3) the waste recipient's unduly low charges for disposal.¹⁶ A typical instruction used by a judge explaining this to a jury might read as follows:

¹⁴U.S. v. MacDonald & Watson Waste Oil Co., 933 F.2d 35, 52, 33 Env't. Rep. Cas. (BNA) 1411, 21 Env'tl. L. Rep. 21449 (1st Cir. 1991); see also U.S. v. Hansen, 262 F.3d 1217, 1250, 53 Env't. Rep. Cas. (BNA) 1203, 57 Fed. R. Evid. Serv. 121 (11th Cir. 2001).

¹⁵U.S. v. Speech, 968 F.2d 795, 35 Env't. Rep. Cas. (BNA) 1325, 22 Env'tl. L. Rep. 21498 (9th Cir. 1992).

¹⁶U.S. v. Speech, 968 F.2d 795, 797, 35 Env't. Rep. Cas. (BNA) 1325, 22 Env'tl. L. Rep. 21498 (9th

The element of knowledge can seldom be shown by direct evidence. Usually it is established from all the facts and surrounding circumstances. In determining the issue of knowledge, therefore, you may consider the entire conduct of the defendant at or near the time of the alleged offenses including any statements made or acts done by the defendant. You may consider whether relevant circumstantial evidence establishes whether the defendant knew of the violations charged in the indictment.

Among the circumstances you may consider in determining a defendant's knowledge is his position in the corporation, including his responsibilities under the regulations and under any applicable corporate policies and his activities as a corporate executive. Thus, you may infer that the defendant knew certain facts by virtue of his position in the corporation, his relationship to other employees, or any applicable corporate policies and other facts and circumstances, including information provided to the defendant on prior occasions. If the defendant was an officer of the corporation, you may consider whether the defendant was the corporate officer who had primary and direct responsibility over the activities which gave rise to the violations charged in determining whether he had knowledge of the charged violations.¹⁷

A common misconception in the regulated community is that a person cannot be guilty of a knowing violation unless he has actual knowledge that he is violating the law. That is not the case. In cases involving regulation of dangerous materials, the Supreme Court has repeatedly applied the familiar principle that "ignorance of the law is no defense."¹⁸ The Sixth Circuit reasoned that where dangerous or deleterious products or obnoxious wastes are involved, the probability of regulation is so great that anyone who is aware that he is dealing with them should be presumed to be aware of the regulation.¹⁹ People long wondered how this standard, developed with reference to dangerous materials, could be used in a case brought under the CWA involving illegal disposal of dredged and fill material—hardly "dangerous" in the ordinary sense. In 1997, the Fourth Circuit held that cases brought under the CWA involving the illegal discharge of fill material into wetlands without a permit required the government to prove a defendant's knowledge of facts, but not that he knew that his conduct was illegal.²⁰ This issue has yet to be addressed by the Supreme Court.

Because federal environmental statutes have often been drafted ambiguously, courts have disagreed about what information a defendant needs to know to be guilty of a "knowing" violation. For instance, RCRA provides that any person who "knowingly treats, stores or disposes of any hazardous waste . . . without a permit

Cir. 1992).

¹⁷See e.g., *MacDonald*, 933 F.2d at 52; *U.S. v. Brittain*, 931 F.2d 1413, 1419, 32 Env't. Rep. Cas. (BNA) 2084, 21 Env't. L. Rep. 21092 (10th Cir. 1991); *U.S. v. Johnson & Towers, Inc.*, 741 F.2d 662, 664–65, 21 Env't. Rep. Cas. (BNA) 1433, 14 Env't. L. Rep. 20634 (3d Cir. 1984); *U.S. v. Frezzo Bros., Inc.*, 602 F.2d 1123, 1130 n.11, 13 Env't. Rep. Cas. (BNA) 1403, 9 Env't. L. Rep. 20556, 53 A.L.R. Fed. 469 (3d Cir. 1979); see also *U.S. v. Iverson*, 162 F.3d 1015, 1020, 50 Fed. R. Evid. Serv. 1065, 29 Env't. L. Rep. 20367 (9th Cir. 1998); *U.S. v. Wilson*, 133 F.3d 251, 264–65, 45 Env't. Rep. Cas. (BNA) 1801, 48 Fed. R. Evid. Serv. 384, 28 Env't. L. Rep. 20299 (4th Cir. 1997); *U.S. v. House of Raeford Farms, Inc.*, 2012 WL 3283396, at *9 (M.D. N.C. 2012). See generally DiTata, *Proof of Knowledge under RCRA and Use of the Responsible Corporate Officer Doctrine*, 7 FORDHAM ENVTL. L.J. 795 (1996).

¹⁸*U. S. v. International Minerals & Chemical Corp.*, 402 U.S. 558, 563, 91 S. Ct. 1697, 29 L. Ed. 2d 178 (1971); see also *U.S. v. O'Malley*, 739 F.3d 1001, 1006–07 (7th Cir. 2014) (applying *Int'l. Minerals* to the asbestos context), *cert. denied*, 135 S. Ct. 411 (2014); see also *Wilson*, 133 F.3d at 261; *U.S. v. Sinskey*, 119 F.3d 712, 715–17, 44 Env't. Rep. Cas. (BNA) 2081, 47 Fed. R. Evid. Serv. 664, 27 Env't. L. Rep. 21468 (8th Cir. 1997); *U.S. v. Self*, 2 F.3d 1071, 1090–91, 37 Env't. Rep. Cas. (BNA) 1437, 23 Env't. L. Rep. 21301, 135 A.L.R. Fed. 695 (10th Cir. 1993); *U.S. v. Hoffman*, 71 Env't. Rep. Cas. (BNA) 2190, 2010 WL 1416869, at *4 (S.D. W. Va. 2010); *U.S. v. Tucker*, 71 Env't. Rep. Cas. (BNA) 1435, 2009 WL 4856280, at *1 (W.D. Mich. 2009).

¹⁹*U.S. v. Dean*, 969 F.2d 187, 191–92, 35 Env't. Rep. Cas. (BNA) 1255, 22 Env't. L. Rep. 21296 (6th Cir. 1992).

²⁰*Wilson*, 133 F.3d at 262.

. . .” is guilty of a felony.²¹ The Second Circuit has held that a conviction under this section requires proof of the defendant’s knowledge of the permit requirement.²² Other courts have held that a conviction can be obtained without providing proof of the defendant’s knowledge of the permit requirement. For those courts, it may be sufficient to prove that the defendant knew he was treating, storing, or disposing of a dangerous waste.²³

In determining whether a defendant acted knowingly, a jury (or the judge, if there is no jury) may also consider whether the defendant deliberately closed his eyes to what otherwise would have been obvious. In such a case of “conscious avoidance,” a defendant cannot avoid responsibility by purposely avoiding discussing the truth. However, mere negligence or mistake in not learning the facts is not enough to satisfy this standard.²⁴ A judge might explain “conscious avoidance” to a jury as follows:

In determining whether the defendant acted knowingly, you may consider whether the defendant deliberately closed his eyes to what would otherwise have been obvious to him. The law provides that an individual cannot avoid knowledge by deliberately closing his eyes to what would otherwise be obvious or by failing to investigate if he is in possession of facts which cry out for investigation.

Consequently, if you find beyond a reasonable doubt that the defendant acted with a conscious purpose to avoid learning the truth about the presence of asbestos, or consciously avoided investigating even though he was in possession of facts which demanded investigation, then you may find that the government has satisfied its burden of establishing knowledge.

If you find that the defendant was aware of a high probability that asbestos was present and that the defendant acted with deliberate disregard of the facts, you may find that the defendant acted knowingly. However, if you find that the defendant actually believed that there was no asbestos on pipes or in stoves, he may not be convicted.

It is entirely up to you whether you find that the defendant deliberately closed his eyes and any inferences to be drawn from the evidence on this issue.²⁵

Several statutes specifically provide that a defendant’s willful blindness or affirmative steps to shield himself from relevant information may be used as a basis for inferring the defendant’s knowledge of such facts.²⁶ However, courts have authorized such an inference even in the absence of such legislative prompting.²⁷

Precisely what facts must be “known” to the defendant to support a conviction of an environmental violation depends on the specific wording of the statute and the interpretation of that statute by the courts. For example, a person commits a criminal violation of RCRA if he “knowingly treats, stores or disposes of any [listed] hazardous waste . . . without a permit . . . or in knowing violation of any material condition or requirement of such permit . . . or in knowing violation of any material condition or requirement of . . . applicable interim status regulations or

²¹RCRA § 3008(d)(2)(A); 42 U.S.C. § 6928(d)(2)(A).

²²*Johnson & Towers, Inc.*, 741 F.2d at 665.

²³*U.S. v. Atlantic States Cast Iron Pipe Co.*, 2007 WL 2282514, at *26–27 (D.N.J. 2007), *aff’d*, 695 F.3d 227, 75 Env’t. Rep. Cas. (BNA) 1321 (3d Cir. 2012) (collecting cases and comparing with *Johnson & Towers*), *aff’d sub. nom.*, *United States v. Maury*, 695 F.2d 227 (3d Cir. 2012); *see also Dean*, 969 F.2d at 191–92.

²⁴*E.g.*, *MacDonald*, 933 F.2d at 52 n.15 (citing *U.S. v. Cincotta*, 689 F.2d 238, 243 n.2, 11 Fed. R. Evid. Serv. 423 (1st Cir. 1982)).

²⁵Adapted from ¶ 3A.01, Modern Federal Jury Instructions-Criminal, Instruction 3A-2 (2015).

²⁶*E.g.*, RCRA § 3008(f)(2), 42 U.S.C. § 6928(f)(2); CAA § 113(c)(5)(B), 42 U.S.C. § 7413(c)(5)(B).

²⁷*Speech*, 968 F.2d at 797; *U.S. v. Hayes Intern. Corp.*, 786 F.2d 1499, 1504–05, 24 Env’t. Rep. Cas. (BNA) 1282, 16 Env’t. L. Rep. 20717 (11th Cir. 1986); *see also U.S. v. Atlantic States Cast Iron Pipe Co.*, 2007 WL 2282514, at *24 (D.N.J. 2007), *aff’d*, 695 F.3d 227, 75 Env’t. Rep. Cas. (BNA) 1321 (3d Cir. 2012) (citing *Hayes* and *Speech*).

standards.”²⁸ Interpreting that provision, various courts have disagreed over whether the word “knowingly” refers solely to the acts of treating, storing, or disposing of the waste, or whether the defendant must also have known specifically that the waste was listed as hazardous and that the treatment, storage, or disposal was unpermitted or in violation of any permit. For example, in *Speech*,²⁹ the Ninth Circuit held that, to convict a defendant under RCRA, the government had to prove (1) that the defendant knew that no permit existed and (2) that the defendant knew the materials were hazardous or presented a potential for harm to persons or the environment.³⁰ However, the government need not prove that a defendant charged with a RCRA violation knew that if improperly disposed of, the waste would be harmful.³¹

In summary, as long as a defendant intends to take the actions that he or she takes, even if he or she did not know that the actions were in violation of the law, the defendant might be found guilty of a knowing, criminal violation of environmental law.

This knowledge is applied in somewhat different ways depending on whether the defendant is a corporation or individual. These differences are explained at § 9:227.

One of the ironies of this relaxed standard of intent is that, while corporate employees can be convicted of knowing violations without knowing that what they did is a violation, the EPA has stated:

It is neither expected nor desired that civil inspectors and investigators be able to define or even that they attempt [to determine] . . . whether criminal conduct has occurred or is occurring at regulated sources. The issues are complex and even the highly trained special Agents in the Office of Criminal Investigations will do that with the help of attorneys in the Office of Criminal Enforcement Counsel, the Office of Regional Counsel, and the Environmental Crimes Section of the Department of Justice.³²

§ 9:224 Negligent Violations

Historically, injuries caused to one person by another’s negligence were remedied through civil suits brought by the injured party. Regulatory agencies concentrated their enforcement efforts on willful offenses. Over time, however, an interim class of offenses evolved between liability for civil negligence claims and criminal liability for knowing violations—criminal liability for negligent violations of certain laws. This section describes the circumstances under which negligence can constitute a crime under the environmental laws.

The criminalization of negligent conduct first arose in the context of negligent acts that resulted in serious harm, such as death. Examples of these statutes include the manslaughter laws enacted by state authorities throughout the United States. For example, Florida Statute § 782.07 defines manslaughter as follows: “The killing of a human being by the act, procurement or culpable negligence of another, without

²⁸RCRA § 3008(d)(2), 42 U.S.C. § 6928(d)(2).

²⁹U.S. v. *Speech*, 968 F.2d 795, 35 Env’t. Rep. Cas. (BNA) 1325, 22 Env’tl. L. Rep. 21498 (9th Cir. 1992).

³⁰U.S. v. *Speech*, 968 F.2d 795, 796–97, 35 Env’t. Rep. Cas. (BNA) 1325, 22 Env’tl. L. Rep. 21498 (9th Cir. 1992); see also U.S. v. *Baytank* (Houston), Inc., 934 F.2d 599, 612, 33 Env’t. Rep. Cas. (BNA) 1825, 21 Env’tl. L. Rep. 21101 (5th Cir. 1991); U.S. v. *Dee*, 912 F.2d 741, 745, 31 Env’t. Rep. Cas. (BNA) 1953, 21 Env’tl. L. Rep. 20051 (4th Cir. 1990).

³¹U.S. v. *Sellers*, 926 F.2d 410, 416–17, 32 Env’t. Rep. Cas. (BNA) 1881, 32 Fed. R. Evid. Serv. 1089, 21 Env’tl. L. Rep. 20787 (5th Cir. 1991); see also U.S. v. *Hopkins*, 53 F.3d 533, 538, 40 Env’t. Rep. Cas. (BNA) 1953, 25 Env’tl. L. Rep. 21178 (2d Cir. 1995) (noting that RCRA does not even “require the government to prove that the defendant knew that the waste he dealt with was identified or listed under RCRA”).

³²EPA, Office of Enforcement & Compliance Monitoring, Basic Inspector Training Course: Fundamentals of Environmental Compliance Inspections, § 6–19 (Feb. 1989).

lawful justification . . . and in cases in which such killing shall not be excusable homicide or murder . . . is manslaughter, a felony of the second degree[.]”¹

The concept of negligent crimes was next applied to violations of certain public health and welfare laws. These statutes sought to regulate public health and welfare under pain of a criminal sanction. For example, in *United States v. Dotterweich*,² the Supreme Court upheld the conviction of the president of a pharmaceutical company for misbranding adulterated food, a criminal violation of the federal Food, Drug, and Cosmetic Act (“FDCA”).³ Upholding the criminal penalty for negligence under the FDCA, the Court found that the FDCA was “a now familiar type of legislation whereby penalties serve as effective means of regulation” and “such legislation dispenses with the conventional requirement for criminal conduct—awareness of some wrongdoing.”⁴ The Court justified imposing criminal liability on defendants who had no actual knowledge of criminal wrongdoing by choosing to place the hardship “upon those who have at least the opportunity of informing themselves of the existence of conditions imposed for the protection of consumers . . . rather than to throw the hazard on the innocent public who are wholly helpless.”⁵

Negligence is generally defined as failing to exercise the type of care that a “reasonably prudent person” would demonstrate under similar circumstances. Negligent violations of environmental laws usually are categorized as misdemeanors, thus resulting in jail terms of not more than one year and fines of not more than \$50,000. Among the major environmental statutes, only the CAA and CWA criminalize negligent conduct, and the CAA provision only applies in limited circumstances.⁶

Persons can be convicted of violating the CWA if they negligently violate the Act, any permit condition required by the EPA or a state, any requirement imposed in a pretreatment program approved under the Act; negligently introduce into a sewer system or into a publicly owned treatment works any pollutant or hazardous substance which they knew or reasonably should have known could cause personal injury or property damage; or, other than when in compliance with applicable laws and regulations, cause such treatment works to violate any effluent limitation or condition in any permit issued to the treatment works under the Act by either the EPA or a state.⁷ Thus, negligent conduct leading to an oil spill into navigable waters is sufficient for a criminal conviction and punishment. The prosecution is not required to present any evidence that the defendant intended for the discharge to occur, or expected it to occur, or recklessly disregarded the possibility. Rather, the same lack of reasonable care that would be sufficient to impose civil liability for damages in the event of an automobile accident or a sidewalk slip-and-fall incident may provide sufficient culpability to permit the imposition of criminal sanctions under the CWA. Punishments range from a fine of at minimum of \$2,500 up to \$25,000 per day of violation, imprisonment of up to one year, or both.⁸

Under the CAA, negligent releases of hazardous pollutants into the ambient air that place others in imminent danger are punishable by up to one year of imprison-

[Section 9:224]

¹Fla. Stat. Ann. § 782.07 (West 2015).

²U.S. v. Dotterweich, 320 U.S. 277, 64 S. Ct. 134, 88 L. Ed. 48 (1943).

³U.S. v. Dotterweich, 320 U.S. 277, 285, 64 S. Ct. 134, 88 L. Ed. 48 (1943).

⁴U.S. v. Dotterweich, 320 U.S. 277, 280–81, 64 S. Ct. 134, 88 L. Ed. 48 (1943).

⁵U.S. v. Dotterweich, 320 U.S. 277, 285, 64 S. Ct. 134, 88 L. Ed. 48 (1943).

⁶CAA § 113(c)(4); 42 U.S.C. § 7413(c)(4); CWA § 309(c)(1); 33 U.S.C. § 1319(c)(1).

⁷CWA § 309(c)(1); 33 U.S.C. § 1319(c)(1).

⁸CWA § 309(c)(1); 33 U.S.C. § 1319(c)(1).

ment, up to \$100,000 in fines, or both.⁹ Fines under both laws may be higher, as discussed at § 9:284.

While prosecutors have historically been reluctant to prosecute misdemeanors, misdemeanor charges for negligent environmental offenses have generally been pursued in two circumstances. First, if the offending conduct results in significant environmental damage, even if there is no indication of intentional misconduct, the investigation may be given a high priority. Not only are these cases subject to intense public pressure to prosecute, but negligent violations can also be fairly simple to prove in these circumstances: the government merely argues that no reasonable person would have (or could have) let this egregious incident occur. In this situation, the government frequently must choose between two conflicting options. On the one hand, it wants the environmental damage addressed quickly and effectively by the responsible party. On the other hand, pursuing serious criminal charges may make the defendant reluctant to cooperate in cleaning up the damage. This dilemma frequently is remedied through expeditious disposition at the outset of the investigation through a plea to misdemeanor charges. This resolution gets the prosecutor his or her “conviction” and results in conditions of probation (§ 9:277), both acceptable to the defendant and sufficient to meet all remedial objectives.

The second set of circumstances under which the government is likely to initiate a negligence prosecution is if an ongoing investigation of more serious charges becomes too burdensome, expensive, or risky, or if the government finds that the facts it originally thought existed in support of “knowing” violations are not as clear as originally believed, or if the government is faced with a defendant willing to fight a “knowing” violation tooth and nail, an expensive proposition even for the United States. As noted in Chapter XI, conviction for knowing violations can have severe impacts on a business far beyond the fine that might be imposed, which could threaten the very existence of the business. Not surprisingly, in the face of these consequences, serious felony offenses often are vigorously defended. Given these considerations, if an appropriate sanction can be obtained through the lesser charge of criminal negligence, the government may opt to negotiate a plea to the lesser charge.

§ 9:225 Strict Liability Violations

In a few instances, criminal sanctions may be imposed without even showing that the defendant was negligent. Under the Refuse Act,¹ a person who discharges or causes a discharge of a foreign substance into navigable waters of the United States is subject to criminal prosecution even if he exercised reasonable care and was not negligent.² Convictions under that Act require no evidence of *mens rea*.³

§ 9:226 Endangerment Violations

A number of the major environmental statutes provide enhanced penalties for violations that place others in imminent danger of death or serious bodily injury. Punishments for these crimes, called “endangerment” violations, are among the

⁹CAA § 113(c)(4); 42 U.S.C. § 7413(c)(4).

[Section 9:225]

¹Pub. L. No. 104-303, 30 Stat. 1153 (1899) (codified as amended at 33 U.S.C. §§ 401 to 426p).

²33 U.S.C. §§ 407, 411.

³*E.g.*, U.S. v. Hamel, 551 F.2d 107, 113 n.9, 9 Env’t. Rep. Cas. (BNA) 1932, 7 Env’tl. L. Rep. 20253 (6th Cir. 1977); U.S. v. White Fuel Corp., 498 F.2d 619, 622, 6 Env’t. Rep. Cas. (BNA) 1794, 4 Env’tl. L. Rep. 20531 (1st Cir. 1974); U.S. v. Granite State Packing Co., 470 F.2d 303, 304, 4 Env’t. Rep. Cas. (BNA) 1706, 3 Env’tl. L. Rep. 20074 (1st Cir. 1972); U.S. v. U.S. Steel Corp., 328 F. Supp. 354, 355, 2 Env’t. Rep. Cas. (BNA) 1700, 1 Env’tl. L. Rep. 20341 (N.D. Ind. 1970).

most severe in the environmental laws. An individual convicted under these provisions can be sentenced to imprisonment for up to 15 years and can be subject to fines of up to \$250,000. Such enhanced punishment may be imposed not only for willful environmental violations, but also in some cases for negligent ones. Organizations permitting such violations can be fined up to \$1 million (or up to \$1 million for each violation under the CAA). The endangerment provisions of the major environmental laws are listed below.

[Chart 9:226]

VIOLATIONS UNDER THE MAJOR ENVIRONMENTAL LAWS

STATUTE	CRIMINAL ACTS	PENALTIES
CAA	<p>Negligently releases into the ambient air any hazardous air pollutant and places other in imminent danger of death or serious bodily injury.</p> <p>CAA § 113(c)(4), 42 U.S.C. § 7413(c)(4)</p> <p>Knowingly violates the CAA and knows at the time that he thereby places another person in imminent danger of death or serious bodily injury.</p> <p>CAA § 113(c)(5)(A), 42 U.S.C. § 7413(c)(5)(A)</p>	<p>Fine of up to \$100,000 and/or up to one year in prison (doubled for subsequent conviction)</p> <p>Person: Fine up to \$250,000 and/or up to 15 years in prison (doubled for subsequent conviction)</p> <p>Organization: Fine up to \$1 million</p>
CWA	<p>Knowingly violates the CWA and knows at the time that he thereby places another person in imminent danger of death or serious bodily injury.</p> <p>CWA, § 309(c)(3)(A), 33 U.S.C. § 1319(c)(3)(A)</p>	<p>Person: Fine up to \$250,000 and/or up to 15 years in prison (doubled for subsequent conviction)</p> <p>Organization: Fine up to \$1 million</p>
RCRA	<p>Knowingly transports, treats, stores, disposes of, or exports any hazardous waste identified or listed under this subchapter or used oil not identified or listed as a hazardous waste under this subchapter in violation of § 6928(d) and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury.</p> <p>RCRA § 3008(e), 42 U.S.C. § 6928(e)</p>	<p>Person: Fine up to \$250,000 and/or up to 15 years in prison</p> <p>Organization: Fine up to \$1 million</p>
MWTA	<p>Knowingly violates any provision of § 6992d(b) and knows at the time that he thereby places another person in imminent danger of death or serious bodily injury.</p> <p>42 U.S.C. § 6992d(c)</p>	<p>Person: Fine up to \$250,000 and/or up to 15 years in prison</p> <p>Organization: Fine up to \$1 million</p>

Endangerment occurs when the defendant violates a material provision of the cited statutes and thereby places another person in imminent danger of death or serious bodily harm. “Serious bodily injury” is defined as bodily injury that involves a substantial risk of death, unconsciousness, extreme physical pain, protracted and obvious disfigurement, or protracted loss or impairment of the function of a bodily member, organ, or mental faculty.¹

Because each of these statutes criminalizes conduct resulting from a violation of an environmental law that “thereby places another person in imminent danger,” a knowing endangerment prosecution cannot be premised upon danger that occurs before the statutory violation. Thus, if a manufacturing operation significantly endangered the health and safety of employees in its treatment of hazardous materials, and the danger to the employees occurred before a discharge of the hazardous

[Section 9:226]

¹*E.g.*, CAA § 113(c)(5)(F), 42 U.S.C. § 7413(c)(5)(F); CWA § 309(c)(3)(B)(iv), 33 U.S.C. § 1319(c)(3)(B)(iv); RCRA § 3008(f)(6), 42 U.S.C. § 6928(f)(6).

material took place in violation of applicable law, the defendant will not have violated the knowing endangerment provision of the Act.²

These laws provide that “endangerment” violations can be the result of negligent or knowing conduct. Negligent endangerment occurs when another person is placed in imminent danger of death or serious bodily injury because of a violation of the statute due to the failure of the defendant to exercise the type of care a “reasonably prudent person” would exercise under similar circumstances.³ The defendant does not have to intend to endanger the public or even know that he is breaking the law for a conviction to be sustained.

Knowing endangerment, on the other hand, occurs when any person violates material provisions of the statutes and “knows at that time that he thereby places another person in imminent danger of death or serious bodily injury.”⁴ In essence, the “knowing endangerment” statutes provide that a defendant is criminally liable if, in violating the environmental laws, the defendant places others in danger of great harm and the defendant has knowledge of that danger.

The amount of certainty or belief that the defendant must possess before he or she is guilty of knowing endangerment varies from statute to statute. Under RCRA and the MMTA:

A person’s state of mind is knowing with respect to . . . his conduct, if he is aware of the nature of his conduct; . . . an existing circumstance, if he is aware of believes that the circumstance exists; or . . . a result of his conduct, if he is aware or believes that his conduct is substantially certain to cause danger of death or serious bodily injury.⁵

Thus, under these laws, there must be proof that the defendant was “substantially certain” of the egregious consequences of its conduct before it can be found guilty.

The standard is different under the CWA.⁶ The CWA omits the “substantial certainty” provision and instead “knowledge” is “measured against the standard established by prevailing case law, as it is for any other federal crime sharing the same state of mind element.”⁷ The omission of the “substantial certainty” language has caused at least one court to adopt a “high probability” standard in a CWA prosecution.⁸ Thus, to be convicted of knowing endangerment under the CWA, a defendant must have known that danger was a highly probable consequence of the discharge. The knowing endangerment provisions of the CAA, enacted in 1990, contain the same language as the CWA.⁹

In cases in which knowing endangerment is the basis for a conviction, the statutes generally provide that a person is chargeable only with those facts and circumstances of which he or she is aware, including results of his or her conduct that he or she believes are substantially certain to occur. Facts known to one person may not be attributed to another natural person (i.e., an individual, not a corporation).

²U.S. v. Borowski, 977 F.2d 27, 32, 35 Env’t. Rep. Cas. (BNA) 1729, 15 O.S.H. Cas. (BNA) 1929, 1992 O.S.H. Dec. (CCH) P 29871, 23 Env’t. L. Rep. 20102 (1st Cir. 1992); *see also* FiberMark North America, Inc. v. Jackson, 65 Env’t. Rep. Cas. (BNA) 1200, 2007 WL 4157235, at *5 (D.N.J. 2007).

³*See* CAA § 113(c)(4), 42 U.S.C. § 7413(c)(4).

⁴*E.g.*, CAA § 113(c)(5)(A), 42 U.S.C. § 7413(c)(5)(A); CWA § 309(c)(3)(A), 33 U.S.C. § 1319(c)(3)(A); RCRA § 3008(e), 42 U.S.C. § 6928(e); 42 U.S.C. § 6992d(c).

⁵RCRA § 3008(f)(1), 42 U.S.C. § 6928(f)(1); 42 U.S.C. § 6992d(c).

⁶*See* CWA § 309(c)(3), 33 U.S.C. § 1319(c)(3).

⁷S. Rep. No. 99-50, at 30 (1985).

⁸U.S. v. Villegas, 784 F. Supp. 6, 12, 22 Env’t. L. Rep. 21027 (E.D. N.Y. 1991), *aff’d* in part on other grounds, *rev’d* in part, 3 F.3d 643, 37 Env’t. Rep. Cas. (BNA) 1265, 23 Env’t. L. Rep. 21526 (2d Cir. 1993).

⁹CAA § 113(c)(5)(A), 42 U.S.C. § 7413(c)(5)(A).

However, circumstantial evidence may be used in assessing a person's knowledge, including evidence of a person's affirmative steps to shield himself from knowledge of relevant facts. Section 9:236 discusses how circumstantial evidence can be used to prove knowledge.

The CAA, CWA, and RCRA all provide a defense to the charge of knowing endangerment if the alleged offending conduct was freely consented to by the person(s) endangered, and the danger and conduct charged were reasonably foreseeable hazards of an occupation, a business, a profession, medical treatment, or experimentation.¹⁰

Finally, it should be noted that facts giving rise to a finding of endangerment can be a basis for enhanced penalties under the applicable environmental sentencing guidelines. For a more thorough discussion of the Sentencing Guidelines applicable to environmental crimes, see § 9:275.

§ 9:227 Violations by Corporations

A corporation may be held criminally liable for the criminal acts and omissions of its employees and agents, provided that those acts were committed in the course of their employment and were accompanied by an intent to benefit the corporation by their actions.¹ The requirement of intent that the employee's actions benefit the corporation is generally read broadly. Thus, if an employee takes an improper shortcut in completing his duties in order to reduce his own exertion, the employee's actions generally might be deemed to be intended to benefit the corporation because the overall task (although not the shortcut) conferred a benefit on the corporation.

The fact that only low-level employees were involved in the offending conduct is generally not a defense to corporate liability.² At least one court has even held that the corporation may be held guilty of the violation even if the employee's conduct was contrary to instructions he or she had received from his or her employer.³ The theory behind these principles is to increase a corporation's incentive to train and educate its employees and to supervise their actions effectively in order to avoid actions that go against the applicable environmental requirements.

Corporations are also particularly vulnerable to environmental criminal prosecutions because the corporation is charged with the collective knowledge of each of its employees, including rank-and-file employees having no supervisory or management responsibility. Thus, if the definition of an offense requires knowledge of two facts, such as disposal of a hazardous waste and the absence of a permit, the corporation may be deemed to have a knowledge of both facts, even though each fact was known only by two separate employees, and no single employee had knowledge of both of the critical facts, and the two with separate knowledge never spoke.⁴

¹⁰CAA § 113(c)(5)(C), 42 U.S.C. § 7413(c)(5)(C); CWA § 309(c)(3)(B)(ii), 33 U.S.C. § 1319(c)(3)(B)(ii); RCRA § 3008(f)(3), 42 U.S.C. § 6928(f)(3).

[Section 9:227]

¹*E.g.*, U.S. v. Agosto-Vega, 617 F.3d 541, 552–53, 71 Env't. Rep. Cas. (BNA) 1841 (1st Cir. 2010).

²*See* Apex Oil Co. v. U.S., 530 F.2d 1291, 1292–94, 8 Env't. Rep. Cas. (BNA) 1906, 1976 A.M.C. 2118, 6 Env'tl. L. Rep. 20628 (8th Cir. 1976).

³U.S. v. Hilton Hotels Corp., 467 F.2d 1000, 1007, 1972 Trade Cas. (CCH) ¶ 74190 (9th Cir. 1972) (stating that “as a general rule a corporation is liable under the Sherman Act for the acts of its agents in the scope of their employment, even though contrary to general corporate policy and express instructions to the agent.”); *see also* The President Coolidge, 101 F.2d 638, 639, 1939 A.M.C. 97 (C.C.A. 9th Cir. 1939) (lack of intent on the part of the steamship and officers to violate statute prohibiting the throwing of garbage into any navigable water of the United States did not relieve steamship from consequences of violating the statute).

⁴*E.g.* U.S. v. Bank of New England, N.A., 821 F.2d 844, 856, 23 Fed. R. Evid. Serv. 417 (1st Cir.

§ 9:228 Responsible Corporate Officers

There are many types of people who may be held liable for violations of environmental criminal laws. Principals—the individuals who actually dump the hazardous waste, falsify reports, or knowingly endanger public health or safety—may be liable for their individual acts. Corporate entities can also be held criminally liable for the violative actions of their employees or agents as discussed at § 9:227. Finally, corporate officers and managers may sometimes be held criminally liable for violations of public welfare statutes within their realm of responsibility even when they do not participate in actual illegal conduct. This section will describe the circumstances under which a corporate representative can become a defendant under the responsible corporate officer doctrine.

The responsible corporate officer doctrine has existed in various public health and welfare statutes for decades. Specifically, the Clean Water Act defines the term “person” to include “any responsible corporate officer” but does not define the term.¹ The “responsible corporate officer” doctrine originated in a Supreme Court case interpreting the Federal Food, Drug, and Cosmetic Act (“FDCA”), *United States v. Dotterweich*.² In *Dotterweich*, the Supreme Court found that the FDCA was:

[A] now familiar type of legislation whereby penalties serve as effective means of regulation. Such legislation dispenses with conventional requirement for criminal conduct awareness of some wrongdoing. In the interest of the larger good it puts the burden of acting at hazard upon a person otherwise innocent but standing in responsible relation to the public danger.³

The Supreme Court further declared that “the offense is committed . . . by all who have a responsible share in the furtherance of the transaction which the statute outlaws.”⁴ The Supreme Court did not say which employees, officers, or managers share in the responsibility for the transaction. “In such matters the good sense of prosecutors, the wise guidance of trial judges, and the ultimate judgment of juries must be trusted.”⁵

Since *Dotterweich*, courts have found that corporate officers responsible for supervising subordinates who violate public welfare offenses may be prosecuted, without evidence of the criminal intent or guilty knowledge, under statutes containing no “knowing” element:

Thus *Dotterweich* and the cases which have followed reveal that in providing sanctions which reach and touch the individuals who execute the corporate mission—and this is by no means necessarily confined to a single corporate agent or employee—the Act imposes not only a positive duty to seek out and remedy violations when they occur but also, and primarily, a duty to implement measures that will ensure that violations will not occur. The requirements of foresight and vigilance imposed on responsible corporate agents are beyond question demanding, and perhaps onerous, but they are no more stringent than the public has a right to expect of those who voluntarily assume positions of authority in business enterprises whose services and products affect the health and well-being of the

1987).

[Section 9:228]

¹33 U.S.C. § 1319(c)(6) (“For the purpose of this subsection, the term ‘person’ means, in addition to the definition contained in section 1362(5) of this title, any responsible corporate officer.”).

²*U.S. v. Dotterweich*, 320 U.S. 277, 64 S. Ct. 134, 88 L. Ed. 48 (1943).

³*U.S. v. Dotterweich*, 320 U.S. 277, 280–81, 64 S. Ct. 134, 88 L. Ed. 48 (1943).

⁴*U.S. v. Dotterweich*, 320 U.S. 277, 284, 64 S. Ct. 134, 88 L. Ed. 48 (1943).

⁵*U.S. v. Dotterweich*, 320 U.S. 277, 285, 64 S. Ct. 134, 88 L. Ed. 48 (1943).

public that supports them.⁶

Given the acceptance of the doctrine within other public health and safety laws, it is not surprising that Congress explicitly incorporated “responsible corporate officers” into the definition of “person” in the penalty provisions of the CWA in 1987⁷ and in the CAA in 1977.⁸ Generally, under the responsible corporate officer doctrine, officers or managing officials of a company can be found guilty of a statutory public health offense if the government proves that (1) the defendant had a responsible relationship to the violation in that it occurred within the defendant’s area of authority and supervisory responsibility; (2) the defendant had the power or the capacity to prevent the violation; and (3) the defendant acted either knowingly, willfully, or recklessly in failing to prevent or detect, and correct the violation.⁹

Under *Dotterweich*, whether a defendant had sufficient “responsibility” over a criminal discharge to be criminally liable is a question for the jury. Under the Clean Water Act (“CWA”), for instance, a person is a “responsible corporate officer” where the person has authority to exercise control over the corporation’s activity that is causing the discharges, even if that person did not in fact exercise such authority and the corporation expressly did not vest a duty in the officer to oversee the activity.¹⁰

Because knowledge is still a legal requirement under the major environmental laws, in most criminal cases involving a corporate officer, the key issue is the officer’s intent in failing to stop or correct the violation. In almost every case, the government will suggest that the officer’s failure was motivated by money, i.e., in saving costs of compliance or in improving profitability. Defendants often suggest that their failure was due to overwork or innocent forgetfulness, or both. This factual dispute is decided by a jury. In many cases, the diligence of the corporate officer comes into question. Judges frequently tell juries the following about diligence as an influence of knowledge:

One of the circumstances you may consider in determining the defendant’s knowledge is what facts he would have known through the exercise of reasonable diligence. Thus, you may, but need not, infer that a defendant knows that which he would have known through the exercise of reasonable diligence. (This is not to say that negligence is enough to support a conviction; it is not. However, you may infer that a defendant in fact knew that which he would have known had he exercised reasonable diligence.) Again, this is only one of the factors which you may consider in determining whether the government has established knowledge beyond a reasonable doubt.¹¹

§ 9:229 How the EPA Begins a Criminal Investigation

As discussed at § 9:230, the initial lead or allegation of possible criminal activity may come from a variety of sources. The first step in the process is providing that information to the EPA Resident-Agent-in-Charge (“RAC”) or FBI Special-Agent-in-Charge (“SAC”). If the lead seems reliable, a case number will be assigned and an investigative file will be opened. Sometimes a special agent is assigned to conduct a preliminary inquiry if the initial lead seems unreliable or unclear.

§ 9:230 Sources for Information for Investigations

⁶U.S. v. Park, 421 U.S. 658, 672, 95 S. Ct. 1903, 44 L. Ed. 2d 489 (1975).

⁷See 33 U.S.C. § 1319(c)(6).

⁸See 42 U.S.C. § 7413(c)(6) (“For the purpose of this subsection, the term ‘person’ includes, in addition to the entities referred to in section 7602(e) of this title, any responsible corporate officer.”).

⁹U.S. v. Cattle King Packing Co., Inc., 793 F.2d 232, 240–41, 21 Fed. R. Evid. Serv. 59 (10th Cir. 1986).

¹⁰U.S. v. Iverson, 162 F.3d 1015, 1025, 50 Fed. R. Evid. Serv. 1065, 29 Env’tl. L. Rep. 20367 (9th Cir. 1998).

¹¹See U.S. v. Amrep Corp., 560 F.2d 539, 546 (2d Cir. 1977).

The information prompting a criminal investigation may originate from many of the same sources used in the civil context Chapter III. For example, an analysis of a plant's periodic reports to the state or federal environmental authorities (such as National Pollutant Discharge Elimination System ("NPDES") discharge reports) may indicate that the plant's discharges have exceeded one or more of the discharge limits in its permit. Newspapers or state fish and game officials may report a large fish kill, indicating that a spill or other discharge has occurred. Unusual air plumes from industrial facilities may be observed by passersby. Fishermen or sportsmen may complain to the state or federal environmental authorities that they have witnessed sheens or other evidence of discharges. Adjoining landowners may report finding contaminants in a groundwater sample that they believe are migrating from an adjacent property. Nearby residents may complain that pollutants in the air are causing illness or property damage or otherwise interfering with their enjoyment of their property. Similarly, neighbors may complain of finding pollutants in their well water.

Environmental groups will often conduct their own compliance checks, either by reviewing publicly available reports filed with the government agencies or by taking water or soil samples. In the 1970s, a wave of prosecutions for unpermitted discharges into navigable waters was precipitated by a group of environmental activists who canoed from industrial plant to industrial plant along the river, grabbing samples of the effluent discharges at each outfall for later laboratory analysis.¹

Another source of information is complaints by disgruntled employees or former employees who possess, or believe they possess, undisclosed information regarding improper practices followed by their employer, as well as identification of the corporate personnel involved in such practices. Such reports can be particularly useful to the government in identifying instances of improper dumping of wastes in landfills or other onshore sites, because the informant can often lead the authorities to the dump site and assist them in uncovering the improperly disposed of material.

Finally, the EPA and DOJ will utilize those whom they are able to charge with an offense as a source of information regarding other violators. Just like a bank robber or a drug dealer, environmental offenders who see themselves facing the prospect of significant punishment will often try to obtain more lenient treatment by giving evidence against others in exchange for immunity or, if charged with a crime, for a reduced sentence. Thus, an illegal transporter of hazardous wastes may identify those who have paid him or her to dispose of their waste under suspicious circumstances, as well as other dumpers from whom he or she learned his or her craft. It is not unusual for the government to offer immunity (a promise not to prosecute) to a person who testifies against his or her employer or supervisor.

§ 9:231 EPA/FBI Investigations

Each of the EPA's 10 Regional Offices has a staff of criminal investigators whose duties are to investigate reports of environmental crimes and to develop evidence to support the prosecution of such crimes. The EPA's criminal investigators are detectives assigned solely to investigate environmental crimes, and they have all of the powers held by the police and other law enforcement authorities investigating more traditional forms of crime.

[Section 9:230]

¹*See, e.g.,* U.S. v. Pennsylvania Indus. Chemical Corp., 329 F. Supp. 1118, 2 Env't. Rep. Cas. (BNA) 1804, 1 Env'tl. L. Rep. 20364 (W.D. Pa. 1971), order rev'd, 461 F.2d 468, 4 Env't. Rep. Cas. (BNA) 1241, 2 Env'tl. L. Rep. 20264 (3d Cir. 1972), judgment modified, 411 U.S. 655, 93 S. Ct. 1804, 36 L. Ed. 2d 567, 5 Env't. Rep. Cas. (BNA) 1332, 1973 A.M.C. 1688, 100 Pub. Util. Rep. 3d (PUR) 163, 3 Env'tl. L. Rep. 20401 (1973).

In addition to the criminal investigators within the EPA itself, DOJ has assigned a significant number of FBI agents to the investigation of environmental offenses. Personnel from the Coast Guard, the Department of the Interior, and other federal agencies may also be involved. Federal investigators also may cooperate with state environmental agencies, state attorneys general, and even local district attorneys to develop evidence for successful environmental prosecutions.

§ 9:232 Use of Civil Enforcement Tools for the Criminal Process

As a general proposition, the government cannot use its civil enforcement tools in order to establish evidence of a criminal case.¹ Nor is it necessary that the government pursue administrative or civil remedies before bringing a criminal case.²

These principles, however, do not mean that the civil and criminal enforcement systems are totally disassociated. In many instances, an exercise of prosecutorial discretion will be the deciding factor in whether civil or criminal enforcement mechanisms are pursued. Furthermore, the civil enforcement system often provides the prosecution with valuable information in a criminal proceeding.

For example, § 9:230 discusses how a criminal prosecution for unpermitted air or water contaminants can result from analysis of required discharge monitoring reports. In addition, the EPA or state agency audits or inspections of regulated premises may uncover evidence of violations that the government considers sufficiently serious to merit criminal prosecution.

Further, enforcement actions that are initially pursued in a civil judicial or administrative forum may be converted to a criminal prosecution on the basis of information discovered in the course of the civil or administrative proceedings. In at least one case, for instance, the EPA, on the basis of regularly filed discharge reports, initiated a civil action to compel compliance with the limits of an NPDES permit. During depositions in the civil injunction action, the EPA learned that the discharge reports were being prepared in a manner that, from the government's viewpoint, did not accurately report the composition of the discharge. At the EPA's request, the DOJ filed criminal charges alleging the filing of fraudulent discharge reports.

As suggested by this example, the innumerable reports that a regulated entity is required to file with the EPA (including NPDES or air discharge quality reports, hazardous waste manifests, and permit applications of all sorts) often provide the basis for criminal prosecutions for making false, misleading, or fraudulent statements to the EPA.³ Such prosecutions may be pursued either under specific environmental statutes regarding false reporting or under 18 U.S.C. § 1001, the general criminal statute regarding supplying false information to a government officer or agency regarding matters that are material to such officer's or agency's responsibilities.

Finally, a history of civil or administrative enforcement actions with respect to the same or similar deficiencies may provide the government with exceedingly useful proof that the defendants, especially senior management personnel, were aware of the problem and, therefore, by failing to take corrective action, knowingly caused or committed subsequent violations. In *Frezzo Brothers*, for instance, the court concluded that because the defendant corporate officers had notice that the corpora-

[Section 9:232]

¹See IX. § 9:246 for a discussion of Parallel Proceedings.

²*U.S. v. Frezzo Bros., Inc.*, 602 F.2d 1123, 1126, 13 Env't. Rep. Cas. (BNA) 1403, 9 Env'tl. L. Rep. 20556, 53 A.L.R. Fed. 469 (3d Cir. 1979).

³See Chapter III. § 9:62 for a list of those sources.

tion had received earlier complaints from the government that runoff from its manure storage facilities was exceeding the capacity of its dike system, the jury could reasonably find that those officers “knowingly” caused the later discharge of contaminants caused by the overflowing of the dikes.⁴ Accordingly, management has a significant personal interest in assuring that all notices of violation and civil complaints regarding unlawful actions are promptly and effectively remedied.

In summary, at any point in time, a civil investigation can disclose information that causes the investigator to consider proceeding on a criminal track instead. Examples of these situations include:

- During an inspection, the inspector speaks with an employee who provides information arguably inconsistent with records of other written information;
- The company cannot provide the inspector with data backing up information contained in required reports;
- Two sets of books containing inconsistent information about environmental compliance; and
- Claimed ignorance about certain legal requirements.

It is important to remember that, although the government cannot intentionally use civil enforcement tools to develop a criminal case, it can convert a civil case into a criminal one if the information obtained in the civil matter justifies such an action.

§ 9:233 Opportunity for Self-Disclosure

An individual or corporation facing potential criminal liability may decide to take advantage of penalty mitigation and other incentives offered by the EPA’s Audit Policy and Small Business Compliance Policy.¹ In particular, with respect to criminal prosecution, in order to encourage the voluntary reporting of and expeditious correction of environmental violations, and assuming the party meets a variety of requirements,² “EPA will not recommend to the U.S. Department of Justice or other prosecuting authority that criminal charges be brought against the disclosing entity,” provided that the EPA determines that the violation is not “part of a pattern or practice that demonstrates or involves” either a “prevalent management philosophy or practice that conceals or condones environmental violations” or “[h]igh-level corporate officials’ or managers’ conscious involvement in, or willful blindness to, violations of Federal environmental law[.]”³ Regardless of whether or not the EPA recommends prosecution for a regulated entity, it “may recommend for prosecution the criminal acts of individual managers or employees under existing policies guiding the exercise of enforcement discretion.”⁴

§ 9:234 How EPA Conducts a Criminal Investigation

After a case file is opened, it is managed by the Special Agent assigned to the case. He or she is responsible for deciding and carrying out an investigative plan that includes such actions as reviewing records; interviewing witnesses; planning

⁴*Frezzo Bros.*, 602 F.2d at 1125, 1129.

[Section 9:233]

¹See Chapter VI, § 9:127.

²For more information, see Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,625 (Apr. 11, 2000).

³For more information, see Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,625 (Apr. 11, 2000).

⁴For more information, see Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, 65 Fed. Reg. 19,625 (Apr. 11, 2000).

and carrying out surveillance; coordinating with other federal, state, and local agencies; contacting witnesses and potential informants; and completing all reports and notifications. The EPA inspectors sometimes assist under the direction of the Special Agent. In more complicated or unusual cases, the Special Agent will coordinate closely with the DOJ attorney or assistant U.S. attorney who is assigned to the case.

§ 9:235 Review of Records

Just like civil investigations (see Chapter III), one of the initial steps in almost any investigation into potential environmental crime will be the government's review of records and reports. These include records that the suspect is required to file with the state and federal environmental agencies and those that the suspect is required to maintain on its own premises. These records often will be compared with production records, or sales-and-purchase records, to determine whether the suspect has been disposing of greater quantities of hazardous wastes or other contaminants than permitted or reported.

In addition to looking for direct evidence of generation, release, or disposal of unpermitted substances, or excessive quantities of permitted substances, the EPA or FBI investigators will carefully seek to identify falsified, altered, or missing records that the suspect is required to maintain. Proving a criminal records violation is often substantially easier and cheaper for the government to prove than a violation involving an excessive or unpermitted discharge or disposal. Moreover, because the environmental regulatory system depends heavily upon self-reporting by the regulated community, both Congress, in enacting maximum penalties, and the judiciary, in imposing sentences, have generally considered reporting and recordkeeping violations to be serious and to merit substantial punishment. Thus, utilization of recordkeeping violations can be an efficient means for the EPA to impose punishment for environmental misconduct.

Because a review of a target's records is often one of the first steps in an environmental prosecution, firms must be highly sensitive to whether the EPA's request for information and review of records is part of a routine compliance inspection. At the first indication that the government may be considering a criminal investigation, the company should take appropriate steps to ward off prosecution or, if necessary, to defend itself and its personnel.

This record review process does not take place only at the facility site. Criminal investigators will often review records submitted to regulatory authorities and compare them to copies at the facility, and to the "backup" data used to prepare the reports and records.

§ 9:236 Employee Interviews

Efforts by the EPA criminal investigators to interview present or former company employees, like records reviews, are likely to be one of the initial steps in the investigation. In fact, the government will almost always try to contact and interview employees before the company does, for the reasons explained below. If an attempt by the government to interview present or former employees provides the company's first information regarding the pendency of a criminal investigation, the company must be prepared to react quickly and properly.

The government may either contact present or former employees directly or contact the company regarding such interviews. Generally, the criminal investigators will attempt to contact the current or former employees at home or in other locations away from work, often at breakfast or dinner time, to exert maximum pressure on the employees to cooperate by isolating them from company manage-

ment and counsel and catching them off guard.

The company may wish to have counsel confer with its employees before the government investigators interrogate them to ensure that the employees understand the import of the government's questions. This is critical for both the company and the employee. For example, an employee who speaks unguardedly to the government, and on later reflection and review realizes he or she has made errors and tries to correct them, may well be accused of making false statements to the government. False statements, like other obstruction of justice charges, can be prosecuted even if the environmental offense originally at issue is not. Further, employees who are questioned without being taken into custody, as would be the case in a pre-charge interview, must be aware that any declination to answer questions can be used by the government as evidence of guilt. To claim the Fifth Amendment right to silence, an employee has an obligation to expressly invoke the privilege; *actual silence* is not an invocation of the *right to remain silent*. Thus, thorough pre-interview preparation is crucial.

It may also be important for the company under investigation to arrange for the comprehensive debriefing of as many of the interviewees as possible in order to determine the subject matter of the investigation and the accuracy of the information that the government obtains. The government rarely will share this type of information during the investigation. There is nothing illegal about such consultations and debriefings. Care in the conduct of the conferences with the government's interviewees is essential to avoid a possible charge that the target company's representative is attempting to obstruct justice.

When criminal investigators seek to interview a company's employees, the company must immediately reach several important decisions: (i) whether the company will seek to facilitate or discourage the interviews and (ii) whether the company will make any arrangements to assist employees in identifying and paying for their own legal counsel. Although employees who are contacted by government investigators to give interviews generally have the right to elect or decline to do so, the company and its management personnel could become exposed to prosecution for obstruction of justice if they attempt to discourage employees from cooperating. Attempts to delay the government's investigation may also galvanize the investigator's opinion that criminal prosecution rather than civil or administrative proceedings is the appropriate remedy for any violations uncovered. In most cases, it is preferable for the company, or its counsel, to limit their remarks to (1) advising employees that it is their right to decide individually whether to participate in such interviews, (2) dispelling any fear that employees will be disciplined for truthfully responding to the government's questions, (3) advising employees of their right to consult legal counsel, and (4) encouraging, but not requiring, employees to report to the company's counsel the substance of their conversations with any government representative.

Consideration should be given to whether the situation is one in which the company can benefit by cooperatively encouraging employees to participate in interviews or even by setting up such interviews itself. At a minimum, the company may obtain a comprehensive listing of those whom the government has interviewed. In some situations, the company's counsel may be able to participate in, or at least to observe, some or all of the interviews. Moreover, the company's behavior may generate some credibility or goodwill that will be beneficial in either convincing the government not to prosecute or, if all else fails, at sentencing. Obviously, each situation must be evaluated on its own merits.

Deciding whether the company should advance employees the cost of consulting legal counsel other than the company's counsel is often a critical decision. In some cases, a company's bylaws, or local statutory law, will require such indemnification.

Where that is not the case, a company may believe that separate counsel is a wasteful expenditure or as an invitation to the employees to cooperate with the government by turning on the company and the employees' supervisors. In many cases, however, a reasonable investment in separate counsel yields substantial dividends.

The interests of the company and of its employees often diverge in a criminal investigation. Employees generally fear that they may be subjected to criminal prosecution, and frequently that fear is well founded. In situations in which the company's best interests and those of the employee are likely to diverge, the company's counsel is ethically obligated to act in the best interests of the company, not of the employee. Moreover, the company's counsel is ethically obligated to advise the employee of this obligation. Thus, absent qualified counsel of his own, the employee is likely to feel desperate and abandoned.

Government investigators will seek to utilize the employee's fear of personal jeopardy to induce him to cooperate against the company and senior management. In such anxiety-producing situations, it is generally in the company's interest to ensure that the employee is well advised of his legal rights and responsibilities.

Often, the employee will receive the most knowledgeable advice and will feel most confident in his relationship with the company if the company offers to advance the employee's legal fees in connection with the investigation. Left to his own financial resources, the employee may feel economically compelled to rely on unqualified representation or on the general practitioner who handled his will or his divorce. The company may also wish to advise the employee that the company's counsel would be willing to recommend to the employee a selection of counsel who are knowledgeable with respect to the specialized area of environmental criminal law.

Many companies consider and formulate their policy regarding representation of employees in those types of cases in advance of the need to do so.

§ 9:237 Sampling and Testing

Analyses of samples of air, water, and various other substances are an important part of preparing an environmental prosecution. Samples may be obtained voluntarily, as part of ongoing sampling programs, or by search warrant. Sampling may be utilized to determine compliance with permit conditions, to evaluate the accuracy of the company's required reports, or to determine whether materials that have been improperly transported or disposed of can be traced back to the target company.

Whenever the environmental enforcement agencies take samples, the company should try to obtain split samples with the agency. Although investigators will usually agree to split samples, the general practice is for the government to retain the split samples and to send the second one to an independent laboratory of the company's choice.¹

§ 9:238 Referrals to Justice Department/U.S. Attorney

When criminal investigators from the EPA or the FBI develop evidence that they believe supports a conclusion that all of the elements of an environmental criminal offense can be established, a recommendation for a criminal prosecution will be forwarded to the local U.S. Attorney's Office or to the Environmental Crimes Section of DOJ in Washington, D.C. At that point, the investigation is managed more actively by the attorney assigned to the case. Any grand jury proceedings will be conducted by attorneys from the U.S. Attorney's Office or the Environmental Crimes Section, or both, and search warrants may be obtained with their assistance.

[Section 9:237]

¹See Chapter III, § 9:66 for a further discussion of sampling.

The final decision to seek an indictment from a grand jury (see § 9:241) or to initiate misdemeanor charges through an information, will be made by the local U.S. attorney or by the Assistant Attorney General (“AAG”) in charge of the Environment and Natural Resources Division of DOJ. Although the AAG retains ultimate responsibility in all environmental prosecutions, the relationship between the local U.S. Attorney’s Office, the Environmental Crimes Section, and the AAG is a complex one.¹

The government will bring charges against an individual where the person’s conduct constitutes a federal offense and admissible evidence, in the judgment of the prosecutor, “will probably be sufficient to obtain and sustain a conviction” unless:

1. No substantial federal interest would be served by prosecution;
2. The person is subject to effective prosecution in another jurisdiction; or
3. There exists an adequate noncriminal alternative to prosecution.²

In deciding whether there is a substantial federal interest to be served by the prosecution, the government weighs relevant considerations, including:

1. Federal law enforcement priorities;
2. The nature and seriousness of the offense;
3. The deterrent effect of prosecution;
4. The person’s culpability in connection with the offense;
5. The person’s history with respect to criminal activity;
6. The person’s willingness to cooperate in the investigation or prosecution of others; and
7. The probable sentence or other consequences if the person is convicted.³

In assessing whether to bring prosecutions against corporations, prosecutors generally consider the same factors: sufficiency of the evidence; likelihood of success at trial; probable deterrent, rehabilitative, and other consequences of conviction; and adequacy of noncriminal approaches. However, prosecutors are also to weigh additional factors in determining whether to bring charges or negotiate pleas or other agreements with corporations:

1. the nature and seriousness of the offense, including the risk of harm to the public, and applicable policies and priorities, if any, governing the prosecution of corporations for particular categories of crime. . . .;
2. the pervasiveness of wrongdoing within the corporation, including the complicity in, or the condoning of, the wrongdoing by corporate management. . . .;
3. the corporation’s history of similar misconduct, including prior criminal, civil, and regulatory enforcement actions against it. . . .;
4. the corporation’s willingness to cooperate in the investigation of its agents. . . .;
5. the existence and effectiveness of the corporation’s pre-existing compliance program. . . .;
6. the corporation’s timely and voluntary disclosure of wrongdoing. . . .;
7. the corporation’s remedial actions, including any efforts to implement an effective corporate compliance program or to improve an existing one, to

[Section 9:238]

¹U.S. Dep’t of Justice, United States Attorneys’ Manual, § 5-11.104, *available at* <http://www.justice.gov/usam/united-states-attorneys-manual> [hereinafter *U.S. Attorneys’ Manual*].

²U.S. Attorney’s Manual, § 9-27.220.

³U.S. Attorney’s Manual § 9-27.230.

- replace responsible management, to discipline or terminate wrongdoers, to pay restitution, and to cooperate with the relevant government agencies. . . ;
8. collateral consequences, including whether there is disproportionate harm to shareholders, pension holders, employees, and others not proven personally culpable, as well as impact on the public arising from the prosecution. . . ;
 9. the adequacy of remedies such as civil or regulatory enforcement actions. . . ; and
 10. the adequacy of the prosecution of individuals responsible for the corporation's malfeasance. . . .⁴

In either case, the decision to prosecute will be substantially affected by the extent of public notoriety that the problem attracts, the extent to which a criminal prosecution would strain the available resources of the DOJ and EPA, the number of persons adversely affected by the offense, the severity of the environmental effects, and whether there was voluntary disclosure.

§ 9:239 “Sting” Operations

The EPA and DOJ utilize undercover “sting” operations to identify and obtain evidence to convict persons committing environmental offenses. Federal agents, for instance, may pose as representatives of a waste disposal company offering illegal disposal services at low prices to see if generators will utilize such services.

Federal enforcement officials' willingness to employ such “hardball” tactics previously reserved for more traditional forms of crime is indicative of the seriousness with which the government regards such violations and its determination to prosecute offenders successfully.

§ 9:240 Search Warrants

Federal enforcement officials seeking documents or other tangible materials that they believe may provide evidence of a criminal offense may obtain these materials either through a search warrant or by service of a grand jury subpoena (see §§ 9:258 to 9:259). Choosing to use a search warrant usually indicates the government's concern that the target may destroy the materials rather than produce them in compliance with a subpoena or a desire to see the documents—and perhaps interview witnesses—on site and seize a tactical advantage. Search warrants also have the effect of intimidating the target. The use of a search warrant requires that the government be able to identify with reasonable specificity both the tangible materials to be seized and their location. Criminal search warrants differ from administrative subpoenas discussed at § 9:74.

To obtain a search warrant, the government investigators must demonstrate to a federal judge that they have probable cause to believe that an offense has been committed and that tangible evidence of the offense, contraband, or fruits of the crime, which they can specifically describe, is in a location that they can describe with reasonable specificity.¹

Federal agents have the authority to take necessary steps to execute a search warrant, including using force in appropriate circumstances. Further, it is a crime to interfere with an officer's execution of the warrant or to knowingly destroy a doc-

⁴U.S. Attorney's Manual, § 9-28.300 (internal cross-references omitted).

[Section 9:240]

¹Fed. R. Crim. P. 41.

ument with intent to obstruct an investigation.² Accordingly, no effort should be made to subvert the service of a search warrant by federal agents. Counsel should be contacted immediately, however.

Upon arrival at the premises covered by the search warrant, the officer in charge should provide a copy of the warrant, which will identify the area to be searched and the items to be seized. A search warrant does not authorize search or seizure of the employees unless they are specially identified in the warrant, although the executing officers may, in some circumstances, have sufficient authority to frisk or to detain the occupants temporarily if appropriate to prevent flight, to avoid the risk of harm to the officers, or to facilitate the search.³ Every effort should be made to clear the area to be searched as quickly as possible. Exiting employees may be subjected to a minimal search if necessary to ensure that they are not removing evidence.

If counsel cannot arrive at the premises immediately and the executing officer cannot be persuaded to await his or her arrival, an individual with the knowledge that they not answer questions other than to identify the premises named in the warrant should accompany the executing officers. Detailed notes should be taken regarding the identity of each of the executing officers, every action taken by the executing officers, the areas searched, the drawers, boxes, and closets opened, and the identity of all materials seized. If the officers attempt to seize letters or other materials covered by the attorney-client privilege, a protest against such seizure should be made orally; and if the officers insist on proceeding, an effort should be made to persuade the agents or the supervising assistant U.S. attorney to permit the privileged documents to be gathered by company personnel under the agents' oversight and sealed so that the documents cannot be examined without breaking the seal. Prosecutors generally take very seriously claims that the privilege is being improperly breached.

The search warrant limits the areas that the executing officers are authorized to search and the objects they are authorized to seize. Therefore, company personnel should not expand the permissible scope of the search by granting permission for the agents to search any other areas or seize any other objects. Any comments from the officers, such as, "Do you mind if we . . ." or "I am sure that you won't mind our . . ." should almost always be met with a firm but measured statement that no permission will be granted to the officers to exceed the scope of the warrant.

Upon completing the search, the officer in charge will supply the company with a record of materials seized. The officer in charge is required to inventory the property seized in the presence of the person in charge of the premises, if that individual is available. A copy of the inventory should be obtained from the searching agents or from the federal judge who signed the search warrant. Although a request can be made that the executing officers make copies of all materials seized before they are taken, there is no assurance that the request will be granted. However, asking for permission to do so will do no harm and may secure substantial benefits.

Finally, note that a search warrant does not constitute an indefinite license to invade private property. Its terms are limited and are legally binding on the government. Legal options to context the issuance or execution of a search warrant require expert counsel.

§ 9:241 Grand Juries

²18 U.S.C. §§ 1501, 1519.

³*Michigan v. Summers*, 452 U.S. 692, 101 S. Ct. 2587, 69 L. Ed. 2d 340 (1981); *Ybarra v. Illinois*, 444 U.S. 85, 100 S. Ct. 338, 62 L. Ed. 2d 238 (1979); *Rivera v. U.S.*, 928 F.2d 592, 606 (2d Cir. 1991); *U.S. v. Prieto-Villa*, 910 F.2d 601, 604–05 (9th Cir. 1990); *U.S. v. Jenkins*, 901 F.2d 1075 (11th Cir. 1990).

Although initially conceived as a restraint upon the prosecutor's ability to impose upon a person the burden of a criminal prosecution, in modern practice, federal grand juries have become an investigative tool of the prosecutor. Grand juries have the power by subpoena to compel persons both to give testimony before the grand jury and to produce documents and other tangible evidence.

A federal grand jury consists of between 16 and 23 individuals residing within a particular federal judicial district.¹ Each grand jury continues in office for a period of 18 to 24 months.² Typically, an individual grand jury sits one day a week, and in most larger federal judicial districts, several grand juries will be serving simultaneously.

When the grand jury is in session, only the prosecutor, the grand jurors, the witness, and a court reporter are allowed to be present in the room. No judge is present. To protect the confidentiality of grand jury proceedings, neither the grand jurors, the prosecutor, nor the stenographer are permitted to disclose what transpires before the grand jury. This restriction does not apply to witnesses, and there is no prohibition against asking them what took place.

A witness who is called to testify before the grand jury must appear without the benefit of counsel, and counsel for a witness cannot enter the grand jury room to represent his or her client. The witness' counsel must wait outside in the hallway while the witness goes into the grand jury room, although the witness is permitted to come outside the grand jury room to consult with his counsel as he or she considers necessary. The witness can be compelled through a *subpoena duces tecum* to bring documents with him or her and produce them to the grand jury. The witness may be questioned before the grand jury about documents that he or she produced or about documents or tangible evidence produced by others.

If decisions regarding recommendations for separate counsel for employees and advancement for the costs of such counsel have not been made at an earlier stage as discussed in § 9:249, that decision should be made as soon as any employee is subpoenaed to appear before a grand jury.

A grand jury witness has a right under the Fifth Amendment to refuse to provide testimony that might incriminate him or her. If the prosecutor wishes to compel a witness to testify in spite of invocation of the Fifth Amendment, the prosecutor can issue an immunity letter or obtain an immunity order under 18 U.S.C. § 6002. An immunity letter is an agreement by the government to immunize a witness so that the witness can provide self-inculpatory testimony without fear of prosecution. The witness must agree to accept such a letter; in many cases, a witness may insist on an order of immunity. Section 6002 permits a federal court, on the prosecutor's motion, to compel a witness to give testimony that would incriminate the witness in criminal conduct.³ Therefore, once the existence of a criminal investigation becomes known, the matter frequently develops into a race to the prosecutor's office among potential witnesses to see who will get immunity and who will remain exposed to prosecution. Corporations have no Fifth Amendment right against compulsory self-incrimination and have no statutory immunity rights. The conflicts of interests among corporate employer, management, supervisors, and other employees, which result from the race for immunity, are an important reason why separate legal representation is generally required for the corporation and for individual employees.

All felony charges contained in an indictment must be approved by the affirma-

[Section 9:241]

¹Fed. R. Crim. P. 6.

²Fed. R. Crim. P. 6.

³18 U.S.C. § 6002.

tive vote of at least 12 grand jurors.⁴ After the grand jury approves the indictment, the indictment is filed in federal district court and proceeds to trial.

To convict, the government must prove each element of a specific charges set forth in the indictment beyond a reasonable doubt. Proving the occurrence of an offense that differs materially from the conduct alleged in the indictment will result in an acquittal. For this reason, the prosecutor may not unilaterally change the indictment after it has been approved by the grand jury, although he or she can return to the grand jury to amend an indictment or to add charges to it. These amended indictments are called superseding indictments.

It should be noted that there are some ethical limits on the kind of cases a prosecution should present to a grand jury.⁵

§ 9:242 Negotiating Disposition of Criminal Environmental Cases

In Fiscal Year 2014, 97.1% of the criminal cases initiated in federal court resulted in the entry of guilty pleas before the case is submitted to a jury.¹ The conduct and timing of negotiations concerning possible plea agreements can significantly impact the nature and the severity of the ultimate result.

§ 9:243 Pre-indictment versus Post-indictment

As discussed in Chapter X, the manner in which an indictment is written can significantly impact the sentence that is imposed. Moreover, the DOJ generally opposes the government's acceptance of plea agreements that do not require the defendant to plead guilty to the most serious crime charged.¹ Accordingly, potential defendants should seriously consider negotiating with the prosecution before an indictment is filed in an attempt to influence the selection of the offenses to be charged. Negligent discharges of unpermitted pollutants into navigable waters, for instance, involve a substantially lower maximum sentence than knowing discharges. Similarly, negligent violations of the CAA involve significantly lower penalties than negligent emissions that place another person in imminent danger of serious bodily injury. For a greater discussion of negligent violations, see § 9:224 and § 9:226.

In addition, the selection of the offense charged may significantly affect related civil liabilities. For example, a guilty plea to a charge of negligently violating the CWA is likely to prove a significant boon to private damage claimants, while a plea to a charge of a strict liability count of violating the Refuse Act, in a case not covered by the Oil Pollution Act, is likely to be significantly less helpful to private damage claimants.

Although the facts of the incident will have the most significant impact upon the prosecutor's charge selection, pre-indictment negotiations may convince the prosecutor that a more serious offense will be difficult to prove and will require more incremental effort than the circumstances merit.

§ 9:244 Individual versus Corporate Dispositions

The EPA/DOJ prosecution strategy is based in part on the premise that the

⁴Fed. R. Crim. P. 6(f).

⁵See U.S. Attorneys' Manual, § 9-27.000 (Principles of Federal Prosecution).

[Section 9:242]

¹U.S. Sentencing Commission, *Overview of Federal Criminal Cases Fiscal Year 2014*, (Aug. 2015), available at http://www.ussc.gov/sites/default/files/pdf/research-and-publications/research-publications/2015/FY14_Overview_Federal_Criminal_Cases.pdf.

[Section 9:243]

¹See U.S. Attorneys' Manual, § 9-27.400.

conviction and punishment of individuals for environmental offenses will result in more diligent environmental compliance efforts by the regulated community than will prosecution of corporations alone. Generally, the DOJ (whether through local U.S. Attorneys or through the Environmental Crimes Section) and EPA will attempt to indict and prosecute not only the corporation, but also the highest ranking corporate official who can be charged with personal responsibility for the offense. In effect, the assumption is that more corporate resources will be devoted to environmental compliance if corporate executives see themselves as personally at risk.

Federal prosecutors generally will not agree to dismiss an indictment against an individual as a condition to a corporation's agreement to plead guilty. The *Department of Justice Manual* contains the following statement of policy:

Charges against an individual defendant should not be dismissed on the basis of a plea of guilty by a corporate defendant unless there are special circumstances justifying the dismissal.¹

Although this policy is generally adhered to, in particular circumstances it may be possible to utilize the corporation's willingness to plead guilty to influence favorably the disposition of the charges or potential charges against one or more individuals.

§ 9:245 Global Settlements

A defendant facing federal criminal charges concerning an environmental offense will typically also confront additional civil claims on behalf of the United States, including (1) claims for government cleanup expenditures, (2) claims for injunctive relief requiring further cleanup of the site or environmental monitoring, (3) claims for natural resource damages resulting from the incident, and (4) claims for civil penalties for related offenses.

The defendant often will consider it advantageous to negotiate a global resolution of all outstanding issues with the government. First, a global settlement limits the risk to the defendant by quantifying the total exposure. Second, by yielding something extra on an issue in which the government has a special interest in obtaining relief, but for which its right may be subject to doubt, the defendant may be able to reduce another expenditure in which it is particularly interested. For instance, the defendant may be able to reduce the criminal penalty by yielding more on natural resources damages or cleanup commitments. Finally, simultaneous resolution of civil and criminal proceedings relieves the defendant of the burden that an adverse judgment in the criminal case or a settlement of the civil case may have in the other proceeding.

The prosecutors typically will respond to overtures for a global settlement by asserting that the criminal case will have to be handled separately either because the government does not wish its vigorous pursuit of the criminal case to be misconstrued as coercing an unreasonable civil settlement (because the government does not want to create a public perception that defendants can "purchase" more favorable treatment on criminal charges) or because of practical time constraints and the necessity of involving too many different government officials in negotiating a global settlement. In practice, however, persistence in pursuit of a global settlement may yield results. The *United States Attorneys' Manual* provides that no plea agreement involving a global settlement may be reached without the approval of the Assistant Attorney General in charge of the Environmental and Natural Resources

[Section 9:244]

¹U.S. Attorneys' Manual § 9-16.050; see also U.S. Attorneys' Manual § 5-11.114(B).

Division.¹ Implicit in that procedural requirement is an acceptance of the concept of global settlements in which the defendant is able to offer the government sufficiently attractive consideration, such as the funding of cleanup and natural resource restoration actions that otherwise would strain the available federal budgetary resources.

§ 9:246 Parallel Proceedings

“Parallel proceedings” is a term used to refer to the government’s pursuit of civil or administrative claims arising out of an environmental incident while simultaneously pursuing a criminal prosecution of the defendant as a result of the same incident.

Thus, parallel proceedings exist in situations in which the government suggests in a civil or administrative proceeding that a defendant violated a particular section of, for example, RCRA, on a particular date based on a particular act, and simultaneously in a criminal case accuses the same defendant of knowingly violating the same RCRA regulation on the same date by engaging in the same act. It does not necessarily apply in situations in which the government suggests in a civil case that a defendant violated a particular RCRA regulation involving the improper transportation of a hazardous wastes and simultaneously prosecutes the same defendant for falsifying a manifest by not accurately reporting what was transported. Nor would it apply in situations in which the government civilly prosecutes a defendant for a violation of the CWA based on conduct occurring on a particular date and later criminally prosecutes the same defendant for the same conduct on a different date.

Generally, the government proceeds with a criminal case before instituting a civil action based on the same conduct. The reason for this is quite simple. In a criminal case, the government must prove guilt beyond a reasonable doubt and may have to prove “intent” as well (also beyond a reasonable doubt). In a civil case, the government’s burden of proving violations is satisfied by the lesser standard of substantial evidence. This is a much easier burden to meet, and one that requires no evidence of intent at all. If the EPA fails to prove a criminal case, it can still initiate the civil case since less evidence is necessary. If the EPA cannot prove its civil case, it certainly cannot satisfy the higher standard necessary for a criminal conviction.

In *Hudson v. United States*,¹ the Supreme Court held that the Double Jeopardy Clause of the Fifth Amendment to the U.S. Constitution “protects only against imposition of multiple *criminal* punishments for the same offense”² and that the Fifth Amendment is not a bar to criminal prosecution initiated after civil administrative proceedings.³ Accordingly, the EPA may seek both criminal and civil sanctions for the same act or omission.

§ 9:247 The Dangers of Parallel Proceedings

Conducting parallel proceedings creates very serious liability concerns for both companies and individuals and can result in the government short-circuiting the

[Section 9:245]

¹U.S. Attorneys’ Manual, § 5-11.115.

[Section 9:246]

¹*Hudson v. U.S.*, 522 U.S. 93, 118 S. Ct. 488, 139 L. Ed. 2d 450, 162 A.L.R. Fed. 737 (1997).

²*Hudson v. U.S.*, 522 U.S. 93, 99, 118 S. Ct. 488, 139 L. Ed. 2d 450, 162 A.L.R. Fed. 737 (1997).

³*Hudson v. U.S.*, 522 U.S. 93, 99, 118 S. Ct. 488, 139 L. Ed. 2d 450, 162 A.L.R. Fed. 737 (1997).

legal (and constitutional) requirements designed to protect defendants faced with possible liability. The damage inherent in the government using civil enforcement mechanisms to prove criminal environmental cases is so serious that the DOJ has a policy devoted to describing when and how parallel proceedings may be undertaken.¹

Civil and criminal actions involve significantly different discovery rights for the parties. In criminal cases, for example, after the filing of an indictment, both the prosecution and the defendant possess restricted rights to see each other's evidence (this is known as "discovery"). In civil cases, by contrast, both parties enjoy broad rights to compel the other party to produce any information reasonably calculated to lead to the discovery of admissible evidence. Thus, in situations in which parallel civil litigation exists, either the government or the defendant may seek to utilize the civil case as a means of obtaining information for use in the criminal trial that they would not be entitled in the criminal proceeding.

Parallel proceedings also present potential problems in maintaining the secrecy of grand jury proceedings. Under Rule 6(e) of the Federal Rules of Criminal Procedure, grand jury proceedings may not be disclosed absent specific exceptions.² Additionally, 18 U.S.C. § 3322 permits the disclosure of grand jury information in a certain circumstances.³ For example, a government attorney who received grand jury information in the course of his or her duties or any government personnel who received grand jury information due to a government attorney considering them to be necessary to assist in performing that attorney's duties may disclose grand jury information in civil forfeiture actions.⁴ However, absent an exception, once a criminal investigation reaches the grand jury stage, the government must isolate its civil litigators from access to information that its criminal litigation team developed through the grand jury.⁵

Parallel proceedings present a special dilemma for individual defendants because of the disparate treatment of their Fifth Amendment rights in the civil and criminal proceedings. In the criminal case, the Fifth Amendment guarantees the individual (not the organizational) defendant that he may maintain his silence unless and until he chooses to testify and that no one will be permitted to draw any adverse inferences from his silence.⁶

In the civil proceeding, on the other hand, the government will have the immediate right to obtain through interrogatories or depositions the defendant's answers to any questions that are reasonably calculated to lead to admissible evidence. Thus, although in the criminal case the government will not be able to compel the defendant's testimony about her actions or her state of mind, in the civil case the government will have the right to ask such questions if they meet a broad standard of relevance. Although the defendant may invoke her Fifth Amendment right to silence in the civil case, the government may ask the court to draw adverse infer-

[Section 9:247]

¹U.S. Dep't of Justice, Env't. & Nat. Res. Div., Parallel Proceedings Policy (Dec. 12, 2008), *available at* http://www.justice.gov/sites/default/files/enrd/legacy/2015/04/13/Directive_No_2008-02_Parallel_Proceedings_Policy_508.pdf; *see also* EPA, Parallel Proceedings Policy (Sept. 24, 2007), *available at* <http://www.epa.gov/sites/production/files/documents/parallel-proceedings-policy-09-24-07.pdf>.

²Fed. R. Crim. P. 6(e).

³18 U.S.C. § 3322.

⁴18 U.S.C. § 3322(a).

⁵*See* § 9:248.

⁶*See Bellis v. U. S.*, 417 U.S. 85, 101, 94 S. Ct. 2179, 40 L. Ed. 2d 678, 39 A.F.T.R.2d 77-815 (1974) (holding right against self-incrimination is a personal privilege that does not extend to a corporation or its records).

ences against the defendant on the basis of her refusal to answer.⁷ Conversely, if the defendant gives up her right to silence in the civil case, whatever she says may ordinarily be used against her in the criminal case.⁸ Thus, the government may derive a significant advantage in the civil case from asking the questions that the Fifth Amendment precludes the government from asking in the criminal case. The defendant confronts the dilemma of suffering a disadvantage in the civil case by maintaining her silence or a disadvantage in the criminal case by speaking up.

§ 9:248 When Parallel Proceedings May Be Undertaken

In order to avoid the problems outlined in § 9:247, both the DOJ and EPA have developed a policy outlining when and how they will pursue both civil and criminal cases against the same party for the same conduct under the same statutory authority.¹

The salient points to remember regarding DOJ policy are:

- It will pursue both civil and criminal cases in parallel if the civil violations are and of such concern to public health or to the environment such that injunctive relief should not be delayed;²
- Information presented to a grand jury in a criminal context will not be shared with persons engaged in civil enforcement unless the information is part of the pre-grand jury record and that fact is documented, or with court approval;³ and
- Information developed informally during civil and administrative discovery may be freely shared with criminal enforcement attorneys.⁴

The EPA policy on parallel proceedings focuses on the procedural means for obtaining approval to proceed with parallel enforcement actions.⁵ The process through which EPA counsel must proceed to investigate parallel cases is convoluted and cumbersome, and ultimately requires approval of the Assistant Administrator for Enforcement. The EPA policy gives the following examples of situations that would call for parallel proceedings:⁶

- There is a threat to human health or the environment that should be expeditiously addressed through preliminary injunctive relief or response action;

⁷*Compare* *Baxter v. Palmigiano*, 425 U.S. 308, 318, 96 S. Ct. 1551, 47 L. Ed. 2d 810 (1976) (“the Fifth Amendment does not forbid adverse inferences against parties to civil actions when they refuse to testify to probative evidence offered against them”) with *Griffin v. California*, 380 U.S. 609, 615, 85 S. Ct. 1229, 14 L. Ed. 2d 106 (1965) (“We . . . hold that the Fifth Amendment in its direct application to the Federal Government and in its bearing on the States by reason of the Fourteenth Amendment, forbids either comment by the prosecution on the accused’s silence or instructions by the court that such silence is evidence of guilt.”).

⁸*See* *U.S. v. Kordel*, 397 U.S. 1, 10, 90 S. Ct. 763, 25 L. Ed. 2d 1, 13 Fed. R. Serv. 2d 868 (1970) (answers to interrogatories in a civil case could be used against defendant in criminal action without violating the right against self-incrimination).

[Section 9:248]

¹U.S. Dep’t of Justice, Env’t & Nat. Res. Div., Parallel Proceedings Policy (DOJ Policy), (Dec. 12, 2008), available at http://www.justice.gov/sites/default/files/enrd/legacy/2015/04/13/Directive_No_2008-02_Parallel_Proceedings_Policy_508.pdf; EPA, Parallel Proceedings Policy (EPA Policy) (Sept. 24, 2007), available at <https://www.epa.gov/sites/production/files/documents/parallel-proceedings-policy-09-24-07.pdf>.

²DOJ Policy, *supra* note 1, at 6.

³DOJ Policy at 3.

⁴DOJ Policy at 2–3.

⁵*See* EPA Policy, *supra* note 1.

⁶EPA Policy at 5.

- There is a threat of dissipation of the defendant's assets;
- There is an immediate statute of limitations or bankruptcy deadline;
- There is only a marginal relationship between the civil and criminal actions;
- The civil case is an advanced stage of negotiation or litigation when the potential criminal liability is discovered; or
- The civil case is integral to a national priority and a decision to postpone the case could substantially and adversely affect implementation of the national effort.

§ 9:249 Protecting Against Parallel Proceedings

The constant risk that information obtained in a civil case might be used in a subsequent criminal prosecution requires that persons facing civil enforcement actions aggressively seek to limit the ability of the government to try to obtain information in the civil case that is not relevant to the civil proceeding, but that could be used for a criminal prosecution. One example of this would be the government seeking information relating to the willfulness of a violation in a civil or administrative case.

In the event the government does seek to bring parallel proceedings, consideration should be given to the desirability of asking the court to stay the civil proceedings, or at least portions of it, pending the conclusion of the criminal case. Whether the court would grant such a stay depends in large part upon the nature of the civil proceedings. It is less likely that the court would grant a stay if preliminary injunctive relief might be appropriate because of a need for immediate action to protect public health or the environment. However, if the issue is a longer-term remediation requiring extensive scientific study and analysis, such as in connection with remediation of natural resources damages, the public prejudice from such a stay would appear to be considerably smaller and a stay in some form might be granted.

§ 9:250 Statute-Specific Considerations

Although it is beyond the scope of this chapter to discuss all the potential substantive violations of the major environmental laws that could be criminally prosecuted, it is possible to outline the basic types of criminal elements that the government must prove in order to gain a conviction for felonies under the major environmental laws. Additionally, many of these provisions have never been subject to legal challenge since most cases result in guilty pleas. The possibility exists that a court could find that the elements outlined below are insufficient or incorrect.

§ 9:251 Resource Conservation and Recovery Act ("RCRA")¹

There are 10 types of felonies that can be prosecuted under RCRA. The elements of each are outlined below.²

- Knowing transportation of hazardous waste to an unpermitted facility.
- Knowing treatment, storage, or disposal of hazardous waste without a permit.
- Knowing treatment, storage, or disposal of hazardous waste in knowing violation of a permit.
- Knowing treatment, storage, or disposal of hazardous waste in knowing violation of interim status regulations and standards.
- Knowing omission or the making of a false statement in documents required

[Section 9:251]

¹RCRA § 3008, 42 U.S.C. § 6928.

²RCRA § 3008(d) to (e), 42 U.S.C. § 6928(d) to (e).

under RCRA.

- Knowing generation, storage, treatment, transportation, disposal of, export, or handling of any hazardous waste or used oil and knowing destruction, alteration, concealment, or failure to file any document required to be maintained or filed for purposes of compliance with RCRA regulations.
- Knowing transportation of any hazardous waste or used oil without a required manifest.
- Knowing exportation of hazardous waste without consent of the receiving country or in violation of an international agreement.
- Knowing storage, treatment, transportation, disposal of, or handling of any used oil in knowing violation of any permit or RCRA regulations.
- Knowing endangerment.

§ 9:252 Toxic Substances Control Act (“TSCA”)¹

The criminal sanctions available under TSCA generally are not as extensive as those currently available under RCRA, CWA, or CAA. All are misdemeanors rather than felonies, and all require proof of “knowing and willful” conduct, not just “knowing” conduct. In addition to chemical regulation, TSCA regulates the handling of PCBs and asbestos and contains certain notice and reporting requirements. There is also a special part of TSCA called the Asbestos Hazard Emergency Response Act (“AHERA”), which is only applicable to school buildings. There are five basic types of crimes defined by TSCA:

- Violations of PCB, asbestos, AHERA, or other regulations—this offense includes knowing and willful violations of regulations promulgated under Sections 4, 5, or 6 of TSCA and under AHERA. These sections govern the testing of chemicals, pre-manufacture notification for new chemicals, and the regulation of specific chemical groups, such as PCBs.²
- Violation of pre-manufacture notice requirements—this offense is applicable to new chemicals or chemicals manufactured or processed for a use designated by regulation as a new use.³
- Use for a commercial purpose of a substance manufactured or distributed in violation of Sections 5, 6, or 7 of TSCA—this offense requires that a person knew, or should have known, that the substance was manufactured, processed, or distributed in violation of restrictions contained in the Act or in rules or orders issued pursuant to the Act.⁴
- Reporting violations—this offense includes situations in which a person knowingly and willfully refuses to permit access to copy records if the Act or regulation requires such access.⁵
- Denial of entry—this offense requires proof that (1) the EPA provided appropriate written notice prior to an inspection; (2) the facility was subject to inspection under the Act; (3) an EPA representative sought entry for a legitimate purpose under the Act; (4) the EPA representative presented appropriate credentials; and (5) the defendant then knowingly and willfully denied

[Section 9:252]

¹15 U.S.C. § 2615.

²15 U.S.C. §§ 2614(1); 2615(b).

³15 U.S.C. §§ 2614(1); 2615(b).

⁴15 U.S.C. §§ 2614(2); 2615(b).

⁵15 U.S.C. §§ 2614(3); 2615(b).

access.⁶

§ 9:253 Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)

As a general proposition, CERCLA is not a traditional regulatory statute insofar as it does not regulate the ongoing handling of either hazardous waste, emissions into the air, or discharges into waters. Rather, CERCLA is primarily concerned with the cleanup of abandoned waste sites. Accordingly, it is not primarily a criminal statute. However, there are two major provisions of CERCLA that contain significant penalties if violated. One relates to emergency notification of “releases,”¹ and the other requires that facilities maintain certain records and imposes penalties for destruction of those records.² The elements of those two offenses—emergency notification and destruction of records—are described below.

Emergency notification. Any person in charge of a vessel from which a hazardous substance is unlawfully released into or upon the navigable waters of the United States, its adjoining shorelines, or into or upon the waters of the contiguous zone; (b) or any person in charge of a vessel from which a hazardous substance is unlawfully released where the release may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States, and who is otherwise subject to United States jurisdiction; or (c) any person in charge of a facility from which a hazardous substance is unlawfully released; (2) who fails to notify the appropriate authorities as soon as he or she has knowledge or who submits any knowingly false information in such a notification, is subject to criminal liability.³

One issue that commonly arises when charges are filed under this section is whether a “reportable quantity” was released.⁴ Another is whether there was a “release” as defined by law.⁵ A third issue is whether the “release” escapes into the environment. The final issue is whether the individual charged is a “person in charge” of the facility.⁶

However, there are limitations on the ability of the government to prosecute for failure to report a release. For example, the statute contains certain exemptions:

- (1) Releases required to be reported under RCRA,⁷ that have been reported to the National Response Center,⁸ or
- (2) A release that is continuous and stable and is a release from a facility for which notification has been given under § 9603(c), or a release of which

⁶15 U.S.C. §§ 2610; 2614(4); 2615(b).

[Section 9:253]

¹42 U.S.C. § 9603(b)(3).

²42 U.S.C. § 9603(d).

³42 U.S.C. § 9603(b).

⁴Reportable quantities are listed at 40 C.F.R. § 302.4. For an example of the important role that reportable quantities can play in a criminal prosecution, see *U.S. v. MacDonald & Watson Waste Oil Co.*, 933 F.2d 35, 54–59, 33 Env’t. Rep. Cas. (BNA) 1411, 21 Env’tl. L. Rep. 21449 (1st Cir. 1991).

⁵42 U.S.C. § 9601(22).

⁶42 U.S.C. § 9603(b); see also *U.S. v. Carr*, 880 F.2d 1550, 1551–54, 30 Env’t. Rep. Cas. (BNA) 1128, 19 Env’tl. L. Rep. 21137 (2d Cir. 1989) (relatively low-ranking employee is still “in charge” if they are in a position to “detect, prevent, and abate a release of hazardous substances.”). *But see* *Sierra Club, Inc. v. Tyson Foods, Inc.*, 299 F. Supp. 2d 693, 716, 58 Env’t. Rep. Cas. (BNA) 1076 (W.D. Ky. 2003) (discussing *Carr* and declining to define a person “in charge” as to always include “owner or operator.”).

⁷42 U.S.C. § 6921.

⁸42 U.S.C. § 9603(f)(1).

notification is given under § 9603(a)–(b) for a period sufficient to establish the continuity, quantity, and regularity of such a release, provided that notification as required under the statute is given annually, or at such time as there is any statistically significant increase in the quantity of any hazardous substance or constituent thereof release that is above that previously reported or occurring.⁹

Destruction of records. Under CERCLA, owners and operators of facilities at which hazardous substances are stored, treated, or disposed of, and other related facilities, are required to notify the EPA of the existence of their facility.¹⁰ This notice requires specification of how much and what types of hazardous substances were found, known, suspected, or likely present at the facility.¹¹ Beginning on December 11, 1980, CERCLA outlines that, until December 11, 2030, or for 50 years after the date of establishment of a record (whichever is later), it is unlawful to knowingly destroy, mutilate, erase, dispose, or conceal those records or render them unreadable or unavailable.¹²

§ 9:254 Clean Water Act (“CWA”)

There are six important types of criminal charges brought under the CWA, which are described below.

Direct discharges into waters of the United States. These charges involve violations of permit requirements because the defendant either did not obtain a permit under the National Pollution Discharge Elimination System (“NPDES”) or did not prevent a discharge from occurring in violation of that permit. Among other things, it requires proof that there was a discharge of a pollutant from a point source into a navigable water in violation of a requirement of the Act (usually a permit requirement).¹

Discharges to sewer systems (pretreatment violations). Apart from violations related to direct discharges to waterways, discharges into sewer systems are also regulated. It is unlawful to operate any facility in violation of pretreatment standard issued under the Act.² Pretreatment standards can be found in the *Code of Federal Regulations*.³

Dredging and filling violations. Section 404 of the CWA regulates the discharge of dredge or fill material into waters of the United States. In *Rapanos v. United States*,⁴ the Supreme Court held that “waters of the united states” referred to “relatively permanent, standing or flowing bodies of water . . . as opposed to ordinarily dry channels through which water occasionally or intermittently flows.”⁵ The Section 404 program is administered both by the EPA and by U.S. Army Corps of Engineers.

Knowing endangerment. As described at § 9:226, the CWA contains a knowing endangerment provision similar to others such as RCRA.

⁹42 U.S.C. § 9603(f)(2).

¹⁰42 U.S.C. § 9603(c).

¹¹42 U.S.C. § 9603(c).

¹²42 U.S.C. § 9603(d)(2).

[Section 9:254]

¹CWA §§ 309(a)(1)–(a)(2); 33 U.S.C. §§ 1319(a)(1)–(a)(2).

²CWA § 307(d); 33 U.S.C. § 1317(d).

³40 C.F.R. § 403.

⁴*Rapanos v. U.S.*, 547 U.S. 715, 126 S. Ct. 2208, 165 L. Ed. 2d 159, 62 Env’t. Rep. Cas. (BNA) 1481, 36 Env’tl. L. Rep. 20116 (2006).

⁵*Rapanos v. U.S.*, 547 U.S. 715, 733–34, 126 S. Ct. 2208, 165 L. Ed. 2d 159, 62 Env’t. Rep. Cas. (BNA) 1481, 36 Env’tl. L. Rep. 20116 (2006).

Falsification and tampering. Making a material false statement, representation, or certification in an application, record, plan, or other document filed or maintained under the Act or falsifying, tampering with, or rendering inaccurate any monitoring device prior to be maintained under the Act is a felony.⁶ This provision has been used in cases involving falsification of discharge monitoring reports or monthly monitoring reports required by federal and state agencies of NPDES permit holders. The criminal liability for falsification of these documents is written next to the signature blocks on the documents. Charges under this provision can be brought either under the CWA or under the general false statements statute.⁷ However, the sentences for prosecutions under the CWA are probably higher than sentences for prosecution under 18 U.S.C. § 1001.

Spills of oil and hazardous substances. Any person who negligently or knowingly discharges oil or hazardous substances into the waters of the United States or upon adjoining shore lines is guilty of subject to criminal liability.⁸

In addition, this provision creates an offense based on “omissions.” That is, if a person is in charge of an onshore or offshore facility from which oil or hazardous substances are discharged into navigable waters and fails to notify the appropriate officials as soon as he has knowledge of the discharge, he is guilty of a felony.⁹ This is similar to the CERCLA notification requirement discussed at § 9:253.

§ 9:255 Clean Air Act (“CAA”)

There are eight general categories of offenses under the CAA. They are:

Knowing Violation of State Implementation Plans. Unique to this provision is the requirement that the defendant must be given 30 days’ notice of the violation prior to being prosecuted.¹ It should also be noted that the prosecution must be for the same violation for which the 30-day notification was given.

Violation of New Source Performance Standards. This offense applies to owners of new sources that operate in violation of the applicable standards.² The new source performance standards may be found in the *Code of Federal Regulations*.³

Violation of National Emissions Standards for Hazardous Air Pollutants. This provision applies to any person who negligently or knowingly releases into the air any hazardous air pollutant as defined under 42 U.S.C. § 7412(b) or extremely hazardous substance pursuant to 42 U.S.C. § 11002(a)(2) that is not listed in § 7412(b) and who at the time negligently or knowingly places another person in imminent danger or serious bodily injury or death is guilty of a felony. The most common prosecution under this section is for the work practice standards applicable to asbestos.⁴ These standards contain notification and handling requirements that are designed minimize the amount of asbestos that is emitted into the air when it is removed and disposed.

Violation of a Preconstruction Requirement in a Prevention of Significant Deterioration area. Under the CAA, there are specific provisions applying to new

⁶CWA § 309(c)(4), 33 U.S.C. § 1319(c)(4).

⁷See 18 U.S.C. § 1001.

⁸CWA § 309(c), 33 U.S.C. § 1319(c); see also CWA § 311(b)(3), 33 U.S.C. § 1321(b)(3).

⁹CWA § 311(b)(5), 33 U.S.C. § 1321(b)(5).

[Section 9:255]

¹CAA § 113(c)(1), 42 U.S.C. § 7413(c)(1).

²42 U.S.C. § 7413(c)(1).

³See 40 C.F.R. § 60.

⁴See 40 C.F.R. §§ 61.140 to 61.157.

construction in certain areas. Sections 162 to 164 of the CAA identify areas that are considered to be “Prevention of Significant Deterioration” (“PSD”) areas.⁵ These are areas that are currently in attainment for certain criteria pollutants. The purpose of PSD requirements is to make sure that new construction does not cause a deterioration in the air quality.

Violation of an Emergency Order under the CAA. The EPA has the authority to issue emergency orders restraining persons from contributing to alleged pollution that would pose an imminent and substantial endangerment to the others.⁶ A knowing violation of such an order is felony under the Act.⁷ An open question under this provision is whether a person who is facing an emergency order has the ability to challenge, through the administrative process, the validity of the order that he is alleged to have violated. Under the current law, it is possible that judicial review of an emergency order is foreclosed. If review is also foreclosed in the context of criminal enforcement action for knowing violations of an emergency order, due process questions may arise.⁸

Knowing False Statements and Tampering with Monitoring Equipment. It is a felony to knowingly tamper with any monitoring device.⁹

Violation of New Titles. Under the criminal provisions of the CAA, any knowing violation of virtually any title of the Act results in a misdemeanor. This includes the failure to pay fees owed pursuant to Titles I, III, IV, V, and VI.¹⁰ These titles cover such matters as ozone depletion (i.e., phasing out chlorofluorocarbons).

Knowing or Negligent Release for the Hazardous Air Pollutant and Endangerment of Another. This criminal provision is discussed at § 9:226.

§ 9:256 Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)

Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”) creates a series of misdemeanors for (1) registrants, applicants for registration, and producers of pesticides; (2) commercial and private applicators of pesticides; and (3) persons who use or disclose product formulas that they obtained pursuant to the Act. In addition, FIFRA specifies that in criminal prosecutions to enforce the Act, employers and principals will be held liable for the acts and omissions of employees, officers, and agents.¹

Any registrant, applicant for registration, or producer who knowingly violates any provision of the Act is guilty of a criminal offense and may be imprisoned for up to one year and fined from up to \$50,000.² Commercial applicators and distributors of pesticides who knowingly violate the Act also are subject to imprisonment for up to

⁵CAA §§ 162 to 164, 42 U.S.C. §§ 7472 to 7474.

⁶CAA § 303, 42 U.S.C. § 7603.

⁷CAA § 309(c)(1), 42 U.S.C. § 7413(c)(1).

⁸*See Adamo Wrecking Co. v. U. S.*, 434 U.S. 275, 98 S. Ct. 566, 54 L. Ed. 2d 538, 11 Env’t. Rep. Cas. (BNA) 1081, 8 Env’tl. L. Rep. 20171 (1978) (Powell, J., concurring); *see also* Tennessee Valley Authority v. Whitman, 336 F.3d 1236, 1249, 56 Env’t. Rep. Cas. (BNA) 1737, 33 Env’tl. L. Rep. 20231 (11th Cir. 2003) (comparing the emergency order rules under § 7603 with the administrative compliance orders (“ACOs”) available under § 7413 and concluding that nonreviewable ACOs are unconstitutional); *Allsteel, Inc. v. U.S. E.P.A.*, 25 F.3d 312, 313, 38 Env’t. Rep. Cas. (BNA) 1697, 24 Env’tl. L. Rep. 20974, 1994 FED App. 0175P (6th Cir. 1994) (judicial review of an EPA order under the CAA can occur prior to an EPA enforcement proceeding).

⁹CAA § 309(c)(2)(C), 42 U.S.C. § 7413(c)(2)(C).

¹⁰CAA § 309(c)(3), 42 U.S.C. § 7413(c)(3).

[Section 9:256]

¹7 U.S.C. § 1361(b)(4).

²7 U.S.C. § 1361(b)(1)(A).

one year and fines of up to \$25,000.³ Private applicators who do so may be imprisoned for up to 30 days and fined from \$5,000 for individuals and \$10,000 for corporations.

Any person who, “with intent to defraud,” uses or reveals product formulas obtained by virtue of the Act may be imprisoned for not more than three years and fined up to \$10,000.⁴

§ 9:257 Emergency Planning and Community Right-to-Know Act (“EPCRA”)

Title III of the Superfund Amendments and Reauthorization Act (“SARA”) is actually a freestanding act known as Emergency Planning and Community Right-to-Know Act (“EPCRA”). *See* § 9:223. EPCRA establishes requirements regarding emergency planning and public reporting on hazardous and toxic chemicals. Although it is seldom used for criminal investigations, two considerations should be kept in mind.

EPCRA makes it a felony for any person who knowingly and willfully fails to provide notice in accordance with the Act.¹ This notice refers to a release of a reportable quantity of a hazardous substance or extremely hazardous substance for which notice must be given. The release must be from a facility at which the chemicals are produced, used, or stored and the defendant must be an owner or operator of the facility.²

§ 9:258 Safe Drinking Water Act (“SDWA”)

The Safe Drinking Water Act (“SDWA”)¹ has resulted in the development of national primary drinking water regulations for specific contaminants (called “MCLs”).² It also authorizes the EPA to regulate filtration, disinfection, self-monitoring, and reporting for public drinking water systems. In addition, it establishes the Underground Injection Control Program (“UIC”), which regulates the injection of hazardous wastes, oil, gas extraction wastes, and other materials into underground locations.³ Only the UIC program contains criminal provisions. However, if in the course of complying with the MCL provisions, a person tampers with a public water system, as described below, or makes a false statement, obstructs justice, or commits mail fraud under Title 18 of the U.S. Code, or commits another Title 18 offense, prosecution is possible.

Before the federal government may bring an enforcement action under the UIC program in states with approved UIC programs,⁴ it must notify the state and wait 30 days for the state to act. This waiting period does not apply to states without approved programs, or, according to the United States, to any criminal enforcement action.

³7 U.S.C. § 136l(b)(1)(B).

⁴7 U.S.C. § 136l(b)(3).

[Section 9:257]

¹42 U.S.C. § 11045(b)(4).

²*See* 42 U.S.C. § 11004.

[Section 9:258]

¹Safe Drinking Water Act, Pub. L. No. 93-523, 88 Stat. 1660 (1974) (codified as amended at 42 U.S.C. §§ 300f to 300j-26).

²*See* 40 C.F.R. §§ 141.60 to 141.63.

³40 C.F.R. § 147.

⁴*See* 40 C.F.R. § 147 for the list of states.

There are four crimes defined by SDWA:

- (1) Tampering, threatening to, or attempting to tamper with a public water system;⁵
- (2) Willful violation of any requirement or order under the UIC program;⁶
- (3) Willful, unauthorized operation of a new underground injection well before a UIC program takes effect;⁷ and
- (4) Knowing failure to comply with an order to prove water treatment chemicals.⁸

§ 9:259 MARPOL and The Act to Prevent Pollution from Ships

Because of the transnational nature of shipping, pollution from vessels has been historically viewed as a global challenge. In this regard, virtually every maritime country in the world, including the United States, have ratified the International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 (“MARPOL”). MARPOL specifies standards for stowing, handling, shipping, and transferring pollutant cargoes, as well as standards for discharge of ship-generated operational wastes. MARPOL consists of six separate Annexes, each of which sets out regulations covering various sources of ship-generated pollution, such as oil, noxious liquid substances in carried in bulk, and ship exhaust emissions, among others. The objective of MARPOL is to limit the intentional and accidental discharge of these ship-borne pollutants into the global marine environment. MARPOL applies to all vessels over 400 gross tons engaged in international trade, which represents the overwhelming majority of vessels engaged in shipping.

The MARPOL convention is implemented into U.S. law through the Act to Prevent Pollution from Ships (“APPS”).¹ The APPS is the primary statute invoked by the U.S. Coast Guard and DOJ to investigate and prosecute criminal environmental offenses occurring on board U.S. and foreign-flagged vessels. The APPS not only imposes comprehensive requirements for the handling, processing, and discharge of wastes from vessels, but it also imposes detailed recordkeeping requirements regarding such operations.²

As a general matter, the Coast Guard has broad authority to board vessels and conduct inspections and investigations to ensure compliance with APPS.³ Potential violations of APPS and MARPOL may be identified during these routine vessel inspections conducted by the Coast Guard or through information provided by a whistleblower.⁴

Under APPS, any person who knowingly violates MARPOL, APPS, or regulations promulgated under APPS commits a class D felony.⁵ Like other environmental offenses, corporations⁶ may be vicariously liable for the acts of employees under the

⁵42 U.S.C. § 300i-1(a) to (b).

⁶42 U.S.C. § 300h-2(b)(2).

⁷42 U.S.C. § 300h-3(c).

⁸42 U.S.C. § 300j(e).

[Section 9:259]

¹33 U.S.C. §§ 1901, et seq.

²See, e.g., 33 C.F.R. Pts. 151, 154 to 159.

³33 U.S.C. § 1907(f).

⁴33 U.S.C. § 1908(a) (In its discretion, the district court is authorized under APPS to pay up to one half of the assessed fine to the person or persons giving information leading to the conviction.).

⁵33 U.S.C. § 1908(a).

⁶33 U.S.C. § 1901(a)(10) (the definition of person under APPS includes both an individual persons and corporations.).

doctrine of *respondeat superior*.⁷

In the case of foreign-flagged vessels calling on U.S. ports, the substantive pollution offenses quite often are alleged to occur in international waters, or otherwise well outside of the United States' jurisdiction. Predictably, such operations are not recorded in the vessel's waste management records, as required by MARPOL. Because the United States lacks jurisdiction to prosecute substantive MARPOL offenses occurring on the high seas,⁸ the DOJ often resorts to prosecuting alleged violations of the recordkeeping requirements of APPS. In this regard, the government has traditionally prosecuted individuals and corporations for failure to maintain accurate records, such as a failure to maintain an accurate oil record book while in the navigable waters of the U.S.⁹ While recordkeeping violations are the most common, any knowing violation of MARPOL, APPS, or regulations under APPS is a crime and may be prosecuted.

In addition, criminal liability may attach in the aftermath of a marine casualty involving a vessel under a variety of other statutes, including the Clean Water Act, the Refuse Act, the Marine Protection, Research, and Sanctuaries Act, the Migratory Bird Treaty Act, and Ports & Waterways Safety Act.

As with all of the above environmental statutes, in environmental cases involving the falsification of documents or destruction of evidence, criminal liability may also arise under numerous Title 18 offenses, such as conspiracy and obstruction of justice.

X. CRIMINAL SENTENCING FOR ENVIRONMENTAL CONVICTIONS

§ 9:260 Executive Summary

Although criminal enforcement of environmental laws receives more press attention than administrative or civil enforcement, less is known about how sentences are imposed for environmental crimes. The implementation of the federal sentencing guidelines has resulted in average served prison sentences of more than one year imposed on first-time offenders and average fines of more than \$500,000. An understanding of how the criminal enforcement process works creates additional incentives for compliance and reasons to avoid these sanctions. Understanding this process before being exposed to it can also result in lower fines if faced with the prospect of criminal enforcement.

Criminal sentencing for environmental offenses has the same basic goals as sentencing for other crimes:

- Punishment,
- Deterrence,
- Rehabilitation, and
- Restitution to victims.

Not every goal is sought or achieved in every case.

This chapter explains how the federal sentencing process works and the types of

⁷See e.g. *U.S. v. Ionia Management S.A.*, 555 F.3d 303, 309, 2009 A.M.C. 153, 38 A.L.R. Fed. 2d 767 (2d Cir. 2009) (corporation criminally liable for APPS violations based on the actions of the crewmembers, under the theory of *respondeat superior*).

⁸See e.g. 33 C.F.R. § 151.09(a)(5) (foreign flag vessels are subject to APPS only when operating in the navigable waters of the United States).

⁹Vessels calling on U.S. ports must maintain an accurate oil record book, which must provide a record of all operations involving the processing, transferring, disposal and other operations involving oily waste onboard the vessel. See 33 C.F.R. § 151.25. A knowing failure to maintain an accurate oil record book is a crime under APPS. See *Ionia Mgmt. S.A.*, 555 F.3d at 308 (a knowing failure to maintain an accurate oil record book, upon entering the ports or navigable waters of the United States, is a crime under APPS).

sentences available for use against individuals and corporations. It explains how environmental sentences are actually calculated and illustrates why even first-time environmental offenders with no prior criminal record can face jail terms exceeding one year. It also discusses some of the peculiarities of the various environmental statutes that contain criminal sentencing provisions.

§ 9:261 Federal Sentencing, Generally

All federal criminal sentences are required to take the following items into account:¹

- The nature and circumstances of the offenses and the history and characteristics of the defendant.
- The need for the sentence:
 - to reflect the seriousness of the offense, to promote respect for the law, and to provide just punishment;
 - to afford adequate deterrence;
 - to protect the public from further crimes by the defendant; and
 - to educate or rehabilitate the defendant.
- The kinds of sentences available.
- The sentence called for by the Sentencing Guidelines.
- Pertinent policy statements by the Sentencing Commission.
- The need to avoid unwarranted sentence disparities.
- The need to provide restitution.

§ 9:262 Goals and Limits

Although a person facing a criminal prosecution has a right to have a jury determine his or her guilt or innocence, the judge—with input from a probation officer, the prosecutor, and defense counsel—determines the sentence.

There are five sanctions available to a judge in sentencing someone after conviction of an environmental crime:

- Fines
- Restitution
- Probation
- Imprisonment
- Forfeiture of property (forfeiture, in which the government actually confiscates properties property used in the crime, is not used in the environmental context with the exception of wildlife offenses).

Although fines and imprisonment are basically designed to punish and deter wrongdoing, restitution (correcting the injury caused by the crime) and probation may focus more on correcting the violation, rehabilitating the criminal, and compensating victims for the wrongdoing.

Several basic sentencing concepts must be kept in mind. First, some statutes specify “mandatory minimum” jail sentences, under which courts must impose a sentence of at least the minimum fine or jail term specified by the statute.¹ Environmental statutes may contain a variation on the mandatory minimum

[Section 9:261]

¹18 U.S.C. § 3553(a)(1) to (7). See *supra* §§ 9:281, 9:288 for discussion of the application of Federal Sentencing Guidelines.

[Section 9:262]

¹See, e.g., 21 U.S.C. § 841(b)(1)(B) (prescribing mandatory minimum prison sentences for

concept. For example, under the Clean Water Act (“CWA”), a conviction must be followed by “a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than three years, or by both.”² This language suggests that although a court may choose between a fine or a jail term, if a fine is chosen it must be at least \$5,000 per day of violation. As a result of the Sentencing Guidelines,³ however, this optional minimum fine has, in effect, become a mandatory minimum fine and will be applied in virtually every case.

Second, many environmental statutes automatically double the permissible maximum fines for second offenses. Again, using the CWA as an example, the \$50,000 maximum is doubled after the first conviction.⁴ It is interesting to note that the minimum fine is not doubled.

Third, a sentence can be significantly increased depending upon how the government accuses (or “charges”) a defendant and how the defendant is convicted. Thus, a person can be charged with violating the CWA 10 times (each charge is called a “count”) based on 10 separate days of violations. Conversely, a person can be charged with one count that covers a 10-day period. Sentencing may be based on the days of violation (regardless of counts), or it may be based on the number of counts (regardless of days of violation). These decisions are made by the prosecutor. In many cases, however, the defendant tries to “plea bargain” before indictment or information. Plea bargaining usually involve negotiations that focus on how the defendant will be charged and how the sentence will be calculated.

The remainder of this chapter focuses on the four mechanisms used in sentencing persons convicted of environmental crimes.

§ 9:263 Fines

A fine is a monetary payment assessed against a defendant for violating criminal laws. As with civil penalties, fines are the most common form of punishment for environmental crimes. Fines for environmental crimes are the single largest component in the criminal prosecution of a company.¹ The following EPA chart² quantifies fines, restitution, and environmental projects associated with criminal enforcement of environmental laws from Fiscal Years 2011 through 2015.

manufacture or distribution of heroin, cocaine, and other drugs); U.S. v. Grant, 312 Fed. Appx. 39, 40 (9th Cir. 2009) (“We previously have held that, absent an applicable exception under 18 U.S.C. § 3553(e) or (f), district courts lack the authority to refuse to impose the mandatory minimum sentence required by 21 U.S.C. § 841(b)(1).”).

²33 U.S.C. § 1319(c)(2).

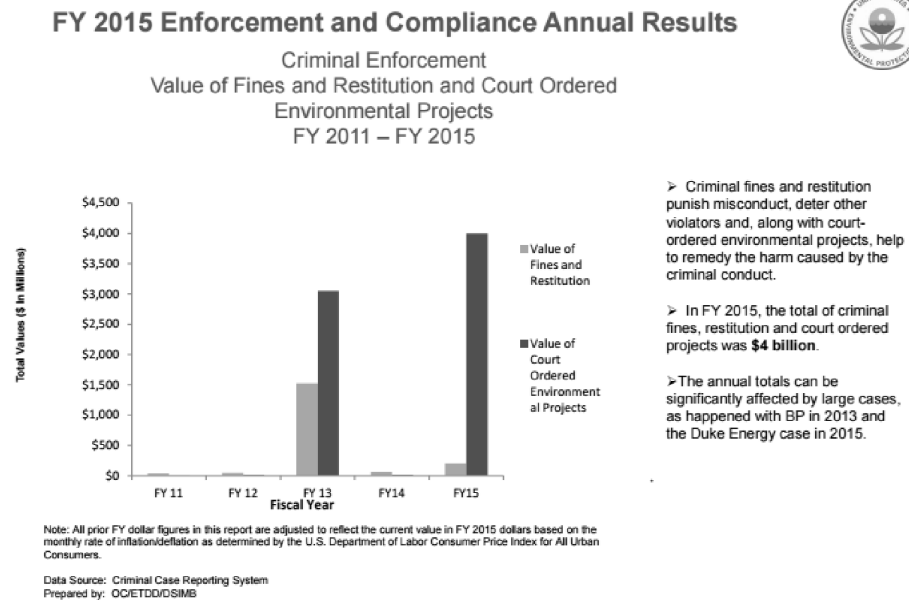
³See *supra* § 9:275.

⁴33 U.S.C. § 1319(c)(2).

[Section 9:263]

¹For more information, see EPA OFFICE OF ENF’T & COMPLIANCE ASSURANCE, FISCAL YEAR 2015 EPA ENFORCEMENT AND COMPLIANCE ANNUAL RESULTS, 6 (Dec. 16, 2015), http://www.epa.gov/sites/production/files/2015-12/documents/fy-2015-enforcement-annual-results-charts_0.pdf.

²For more information, see EPA OFFICE OF ENF’T & COMPLIANCE ASSURANCE, FISCAL YEAR 2015 EPA ENFORCEMENT AND COMPLIANCE ANNUAL RESULTS, 6 (Dec. 16, 2015), http://www.epa.gov/sites/production/files/2015-12/documents/fy-2015-enforcement-annual-results-charts_0.pdf.



Federal laws set fines at significant levels that, under the Federal Sentencing Guidelines,³ are likely to continue to increase. For the eight major statutes covered by the *EPA Enforcement Manual*, fines range from as little as zero to as much as \$1,000,000 per violation. All money paid as a fine in a federally prosecuted criminal case must be paid to the U.S. Treasury.⁴ Fines, unlike certain other payments made in enforcement cases, are not tax deductible.⁵ Money paid for other purposes, such as restitution, need not be paid to the United States.⁶

The eight major environmental laws authorizing the assessment of criminal fines have several common elements. First, the fine amount specified in an environmental statute may not be the actual maximum amount available. Under the Alternative Fines Act of 1984 (“AFA”),⁷ Congress established standard fine amounts for federal offenses. The amounts specified in Section 3571 of the AFA replace the amounts specified in a statute unless the statute explicitly states that it is exempt from Section 3571.⁸ Thus, although the language of the CWA clearly states that the maximum statutory fine for felonies is \$50,000 per day of violation, by virtue of the AFA:

- Individuals convicted of felonies may be fined not more than \$250,000, and organizations convicted of a felony may be fined not more than \$500,000;
- Individuals convicted of a misdemeanor resulting in death may be fined up to \$250,000; for organizations, the maximum is \$500,000;
- Individuals convicted of other misdemeanors may be fined from \$5,000 to \$100,000 depending on the type of misdemeanor; for organizations, the

³See *supra* § 9:275.

⁴42 U.S.C. § 10601(b).

⁵26 U.S.C. § 162(f).

⁶See, e.g., *United States v. Mazoch*, Case No. 1:07-CR-00086 (E.D. Tex. 2007) (defendant ordered to pay \$100,000 in restitution funds to be paid as follows: \$40,000 to Calcasieu Parish, Louisiana, environmental project, \$25,000 to the Louisiana Department of Environmental Quality Criminal Investigations Contingency Account, \$25,000 to the Louisiana State Police Emergency Response program and \$10,000 to the Southern Environmental Enforcement Network).

⁷18 U.S.C. § 3571.

⁸18 U.S.C. § 3571(e).

maximum is from \$10,000 to \$200,000.⁹

Second, not all fines for environmental crimes are calculated in the same way. They may be calculated on a per-violation, per-day of violation, or per-offense basis. For example, although the CWA refers to per-day of violation,¹⁰ the AFA allows for increases in the amount of the fine on a per-offense basis.¹¹ Yet when the government charges someone with a crime, it is done through “counts.” A company convicted of an environmental offense may be convicted on multiple counts involving several days.

Consider the following example: XYZ company is charged with knowingly violating its National Pollutant Discharge Elimination System (“NPDES” permit on 45 days over a 6-month period by exceeding discharge limits for a particular pollutant. Each day, the actual discharge exceedance lasted between 1 and 12 hours. The government might:

- Charge XYZ company for one count that alleges a violation over a 45-day period;
- Charge XYZ for 45 separate counts;
- “Group” the violations and charge each group as a separate count (e.g., nine counts, each containing five days of violations).

Under the CWA, if a fine is imposed, the court is required to assess the company at least \$5,000 per day of violation. Thus, if the company is negotiating a plea agreement after indictment, it must realize that at a minimum the fine could be \$225,000 for those 45 days if they are included in a single count. If they are in separate counts and the company pleads to fewer than all counts, the amount of the minimum fine to be assessed could be less.¹² This disparity highlights the tactical advantages that sometimes exist by negotiating a plea agreement before an indictment or information is returned because the content of that charging document may severely enhance or limit the government’s negotiating position.

Third, all of the statute-specific fines, and even the increases authorized by the AFA, may be replaced by a special provision of the AFA, commonly known as the “loss/gain doubling” provision.¹³ This is extremely important in the environmental arena and is discussed in detail at § 9:264.

The foregoing considerations directly affect the amount that the law authorizes a court to impose as a fine. In addition, courts consider the following factors:¹⁴

- The defendant’s income, earning capacity, and financial resources;
- The effect of the fine on persons dependent on the defendant;
- Whether restitution can and has been ordered, and whether the fine will prevent the defendant from making restitution;
- The need to deprive the defendant of ill-gotten gains;
- The ability of the defendant to pass the fine on to consumers; and
- If the defendant is a corporation or other organization, its size and efforts taken to prevent a recurrence.

⁹18 U.S.C. § 3571.

¹⁰33 U.S.C. § 1319(c).

¹¹18 U.S.C. § 3571(b).

¹²*See, e.g.* U.S. v. Baytank (Houston), Inc., 934 F.2d 599, 33 Env’t. Rep. Cas. (BNA) 1825, 21 Env’tl. L. Rep. 21101 (5th Cir. 1991) (defendant corporation pled guilty to six counts of violating the CWA and was fined \$1,000,000; two corporate officers each pled guilty to two violations and each was fined \$40,000; and one corporate officer pled guilty to one violation and was fined \$20,000).

¹³18 U.S.C. § 3571(d).

¹⁴18 U.S.C. § 3572(a).

Thus, the individual charged with violating environmental statutes should keep several important questions in mind when dealing with the possibility of a criminal fine:

- How does the statute authorize the calculation of the fine (per-violation, per-day, or per-offense)?
- Are there sentencing guidelines governing assessment of the fine?
- Are there facts to justify increasing the fine based on loss to the environment or gain to the defendant?

§ 9:264 Alternative Fines Act (“AFA”)

A special provision of the Sentencing Reform Act, called the Alternative Fines Act,¹ authorizes courts to ignore specific statutory maximum fines and instead impose fines equal to as much as twice the pecuniary loss to someone other than the defendant, or as much as twice the pecuniary gain derived by the defendant or anyone else.² As explained below, this statute is extremely important in environmental cases and has been the basis for the government seeking extraordinarily high fines in several matters.³

Use of the AFA to assess a fine equal to twice the pecuniary loss occasioned by the violation is of great potential significance in environmental cases. Natural resource damages are sometimes caused by illegal discharges of pollutants. These natural resources include wildlife, wetlands, clean water, marine life, vegetation, trees, and other resources. The government has argued that, to the extent loss of natural resources can be quantified, it is a “pecuniary” loss to the United States (and to the individual states) because these government entities are the trustees of natural resources on behalf of the public.

How to quantify the economic value of natural resources has been the subject of much debate. Several means of quantification, such as the cost of replacement or restoration, are easy to understand. Another means—contingent valuation—is not. Contingent valuation involves quantifying the public’s perception of the value of knowing the resource is present.⁴ It is based on a combination of economic theory and public opinion polls. These public opinion surveys are used to determine the public’s view of the nonuse value of lost resources (the value of knowing the resources are “there”). The results of the polls are multiplied by the number of members of the public affected and the number of resources lost.

For example, a survey might indicate that the public values the existence of sea lions in Prince William Sound at \$1,000 each. Five hundred sea lions are believed to have been lost as a result of an oil spill. There are 200 million Americans who lost the value of those sea lions. Thus, $(\$1,000 \times 500) \times 200,000,000$ might be one means of quantifying the loss of these sea lions. Under the AFA, the court can assess a fine equal to twice the value assigned to the natural resource, and then require that the resource be restored, as well. This result would double the cost of

[Section 9:264]

¹18 U.S.C. § 3571.

²18 U.S.C. § 3571(d).

³*United States v. BP Expl. & Prod., Inc.*, No. 2:12-cr-00292-SSV-DEK (E.D. La. Nov. 15, 2012) (defendant agreed to a plea agreement with fines of \$1,256,000,000 and payment of \$350,000,000 to the National Academy of Sciences and \$2,394,000,000 to the National Fish and Wildlife Foundation (“NFWF”) for damages to natural resources); *United States v. Exxon Corp.*, No. A90-115CR (D. Alaska 1991) (defendant agreed to plea agreement with fines of \$25,000,000, remedial payments of \$100,000,000, and civil penalties of \$900,000,000).

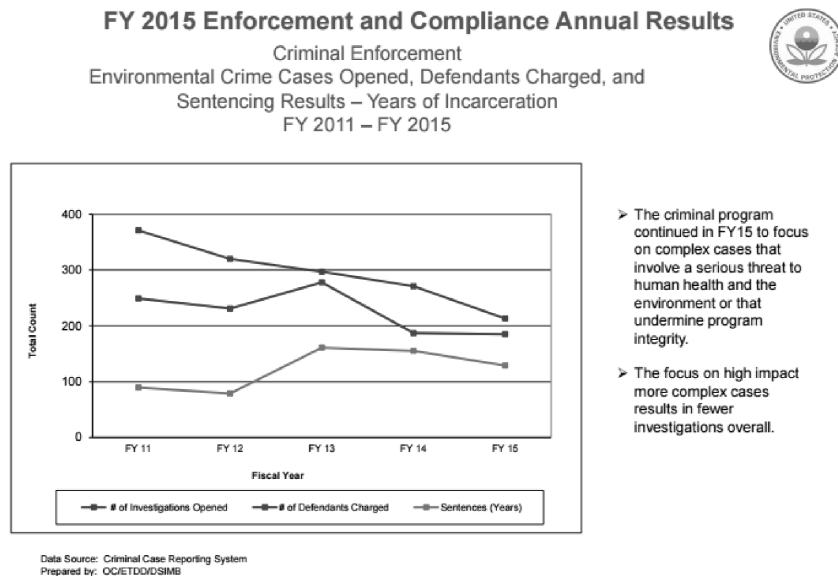
⁴*See State of Ohio v. U.S. Dept. of the Interior*, 880 F.2d 432, 441–459, 30 Env’t. Rep. Cas. (BNA) 1001, 19 Env’tl. L. Rep. 21099 (D.C. Cir. 1989) (discussing contingent valuation).

the fine in the sea lion example. This theory was considered by the government in *United States v. Exxon*, in which the company was ordered to pay approximately \$1 billion for lost natural resources as a result of the Exxon Valdez oil spill.⁵

Another case illustrating how the government interprets the AFA involves BP Products North America (“BP”). BP was charged with a felony violation of the Clean Air Act (“CAA”) for an explosion at its Texas City, Texas, plant in 2005 that killed 15 and injured approximately 170 others. BP entered a plea agreement accepting a \$50 million fine and three years of probation, which was the largest criminal fine against a corporation under the CAA and the largest fine for a fatal industrial accident.⁶

§ 9:265 Imprisonment

Jail time is a second possible sentence for someone convicted of an environmental crime. Like fines, imprisonment is intended to punish the defendant and deter future wrongdoing. The following table, available on the EPA’s Web site, provides statistics for the number of EPA cases opened, number of people charged, and length of sentences from FY 2011–2015.¹ The table reflects a continuing emphasis by the EPA and the DOJ on larger and complex cases with higher sentences:



⁵United States v. Exxon Corp., Case No. A90-015-1CR and -2CR (D. Alaska 1991); United States v. Exxon Corp., Case No. A91-083 CIV (D. Alaska 1991).

⁶U.S. v. BP Products North America Inc., 610 F. Supp. 2d 655, 660–661 (S.D. Tex. 2009).

[Section 9:265]

¹EPA OFFICE OF ENF’T & COMPLIANCE ASSURANCE, FISCAL YEAR 2015 EPA ENFORCEMENT AND COMPLIANCE ANNUAL RESULTS, 6 (Dec. 16, 2015), http://www.epa.gov/sites/production/files/2015-12/documents/fy-2015-enforcement-annual-results-charts_0.pdf. EPA also maintains a database containing summaries of criminal prosecutions that are searchable by party name, statute and keywords: http://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?.

§ 9:266 Restitution and Remedial Orders

When imposing any sentence, federal courts have the authority to require restitution¹ as a condition of probation.² Restitution is a payment made in a criminal case that is designed to compensate for the losses caused by the criminal conduct. In the environmental context, restitution has become a powerful tool, particularly against corporate offenders. Although fines for corporations convicted of environmental crimes are not covered by the Sentencing Guidelines, restitution is covered. As a general matter, in an environmental criminal case, courts will order it.³

As described at § 9:263, courts can assess fines equal to twice the pecuniary loss caused by an offense. As explained at § 9:264, the United States has argued that the repair, replacement, or lost value of natural resources harmed by an environmental crime is a pecuniary loss. However, rather than have this amount paid as a fine, the government can ask that it be paid to the trustees of the natural resources. Those trustees may include the state government in which the harm occurred and federal agencies, such as Interior, Agriculture, and Commerce, which are by law trustees of a variety of natural resources.⁴ Section 9:264 describes the role of the trustees for natural resources. Unlike fines, which are paid to the U.S. Treasury for reappropriation by Congress, money paid as restitution for lost natural resources under the Clean Water Act (“CWA”) and Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”) are paid to special accounts administered by the trustee agencies. Congress does not reappropriate it. This gives the trustee agencies greater control over the use of the money.

For example, the National Fish and Wildlife Foundation (“NFWF”), an independent 501(c)(3) nonprofit organization, is a trustee agency that administers restitution funds provided as part of the resolution of crimes against the environment. These funds can be paid to satisfy community service efforts, supplemental environmental projects (“SEPs”), and natural resource damages. The NFWF’s Impact-Directed Environmental Account manages a nationwide portfolio in excess of \$170 million arising from legal and regulatory actions such as court orders; civil, criminal, and administrative settlements; regulatory permits and licenses; and conservation and mitigation plans.⁵

The difficulty of trying to order a defendant to pay restitution for lost natural resources is one of quantification and timing. It may take years to determine the extent and nature of such loss, and the government is not always prepared to present its case in a criminal sentencing hearing that occurs relatively soon after the offense.

BP Exploration & Production, Inc. (“BP Exploration”) pled guilty to environmental crimes stemming from the *Deepwater Horizon* rig explosion in 2010 at the Macondo

[Section 9:266]

¹18 U.S.C. § 3663.

²18 U.S.C. § 3563.

³*See, e.g.* United States v. Shell Oil Pipeline Corp., Case No. 4-92-CR-00024 (E.D. Mo. 1992) (defendant pled guilty and was ordered to pay \$900,000 restitution to federal and state governments and \$300,000 restitution to individuals “directly affected” by the company’s criminal activity).

⁴United States v. Queen Prods. Co., No. CR91-00027-01-L (W.D. Ky. 1991) (defendant convicted of RCRA violation and ordered to pay \$82,500 restitution to the commonwealth of Kentucky and \$10,000 restitution to the state of Indiana).

⁵United States v. BP Expl. Alaska, Inc., No. 3:07-CR-00125-TMB (D. Ala. Nov. 29, 2007) (BP was sentenced to 36 months probation, ordered to pay a \$125 special assessment fee, \$4,000,000 as a judicially mandated fine to the NFWF for the purpose of conducting research and activities in support of the arctic environment in the state of Alaska on the North Slope, within 10 days of the entry of the plea, \$4,000,000 in criminal restitution to the state of Alaska, and a \$12 million federal fine).

well site in the Gulf of Mexico.⁶ BP Exploration plead to 11 felony manslaughter counts, one for each of the persons who were killed in the initial fire and explosion, an additional felony for obstruction of a Congressional investigation, and one misdemeanor count for violations of the CWA. The company will be on probation for a period of five years and will have two outside, court-appointed monitors to oversee their safety and ethics practices and procedures.

As part of this plea agreement, BP Exploration will make a series of payments totaling \$4.5 billion over a five-year period. This includes the largest criminal fine ever paid in U.S. criminal history (\$1.256 billion), another \$2.39 billion will go to NFWF for environmental damages, \$350 million to the National Academy of Sciences to fund environmental studies on the oil pollution that occurred, and \$525 million to the Securities and Exchange Commission (“SEC”) for settling the allegations that BP Exploration misled investors about the magnitude of the spill in its early stages.⁷

Restitution can be paid to state and federal enforcement agencies to defray the costs of their investigation of a criminal case as well.⁸ It has also been used to establish special environmental trust funds.⁹ Although the DOJ is most interested in assessing criminal fines for criminal conduct, agencies that can benefit from the payment of restitution in the form of natural resource damages are more interested in obtaining those payments than in seeing a fine paid to the U.S. Treasury. Corporate defendants need to be sensitive to this concern.

Another mechanism to impose a penalty and restitution is deferred prosecution. For example, the United States entered into a criminal enforcement agreement with the Gibson Guitar Corporation (“Gibson”) in 2012 to resolve Lacey Act violations for importing rosewood and ebony from Madagascar and India. Gibson agreed to pay a penalty of \$300,000, to withdraw its claim on the seized wood and to provide a community service payment of \$50,000 to the NFWF. In exchange, the government deferred criminal prosecution, provided that Gibson carry out its settlement obligations and commits no further violations of the law.¹⁰

§ 9:267 Probation

The last major tool for sentencing those convicted of environmental crimes is probation.¹ Probation consists of conditions imposed on a defendant for a set period of time after sentencing, instead of imprisonment. The court retains authority over the defendant, and if the conditions are not met, imprisonment results. With respect to individuals, probation is imposed for a wide variety of reasons, such as (1) to

⁶United States v. BP Expl. & Prod., Inc., Case No. 2:12-CR-00292-SSV-DEK (E.D. La. 2013); see also EPA, *Summary of Criminal Prosecutions* (last updated July 20, 2016), http://cfpub.epa.gov/compliance/criminal_prosecution/index.cfm?.

⁷In the civil settlement, BP Exploration resolved the government’s claims under the Clean Water Act and natural resources damage claims under the Oil Pollution Act, as well as economic damage claims of the five Gulf states and local governments. Taken together, this global civil resolution resulted in a \$20.8 billion settlement, the largest settlement with a single entity in DOJ’s history.

⁸United States v. Spirtas Wrecking Co., No. 4-92-CR-00708 (E.D. Mo. 1992) (defendant ordered to pay, *inter alia*, \$10,000 to the United States “for the investigative work of the EPA”).

⁹United States v. Weyerhaeuser, Case No. CR90-2985 (W.D. Wash. Nov. 20, 1990) (defendant pled guilty to Clean Water Act violations and agreed, *inter alia*, to place \$375,000 in a trust fund to be controlled by public officials).

¹⁰DOJ, OFFICE OF PUBLIC AFFAIRS, GIBSON GUITAR CORP. AGREES TO RESOLVE INVESTIGATION INTO LACEY ACT VIOLATIONS (Aug. 6, 2012), <https://www.justice.gov/opa/pr/gibson-guitar-corp-agrees-resolve-investigation-lacey-act-violations>.

[Section 9:267]

¹18 U.S.C. § 3563.

promote rehabilitation of the offender; (2) to avoid the negative effects that imprisonment can have; (3) to reduce the financial cost to the Treasury; (4) to maximize the liberty of the individual; and (5) to minimize the adverse effects that imprisonment might have on those dependent on the offender. For organizations, courts may impose rather harsh fines and then suspend a portion of the fine, imposing conditions of probation. If the organization violates the terms of probation, then the fine is assessed.²

Under the Sentencing Guidelines, a sentence of probation is “authorized” but not required for a conviction unless the crime is a Class A or B felony or if a statute expressly precludes probation for the offense.³ If probation is imposed, the Sentencing Guidelines mandate that its term be at least one year.⁴ In practice, probation is almost always imposed for any environmental felony conviction.

The court has very broad discretion in imposing probation, and restitution is often a “condition of probation.”⁵ Sections 9.287 and 9.289 discuss how probation is applied in environmental cases, using the federal Sentencing Guidelines. Probation may require that a defendant conduct environmental education classes, implement environmental management systems, conduct audits of its facilities, train its employees and officers, change its management structure, restrict its activities, and provide restitution to victims of its crimes. It also may include orders to remedy any problems or conditions caused by the crime.⁶

As noted earlier, courts tend to balance each of the various tools available to punish violations of environmental crimes. It is sometimes possible to reduce a punitive fine by agreeing to more significant terms of probation and restitution.⁷ This should be kept in mind as one negotiates a criminal plea agreement.

§ 9:268 The Federal Sentencing Guidelines for Individuals Convicted of Environmental Crimes

The Federal Sentencing Guidelines (“Sentencing Guidelines”) were developed as a result of the passage of the Sentencing Reform Act in 1984.¹ The Sentencing Guidelines contain ranges for jail terms for a variety of offenses, which federal judges are required to follow (with limited exceptions).²

The Sentencing Guidelines were developed by the U.S. Sentencing Commission. This Commission was created by Congress in the Sentencing Reform Act.³ The Sentencing Guidelines are binding on all federal courts.

Under the Sentencing Guidelines, varieties of criminal conduct are assigned nu-

²United States v. N. Bennington Bd. of Water Comm’rs, Case No. 90-77-02 (D. Vt. 1990) (defendant’s \$100,000 fine suspended upon the condition that defendant comply with all future legal requirements).

³U.S. SENTENCING GUIDELINES MANUAL § 5B1.1 (U.S. SENTENCING COMM’N 2015) [hereinafter *USSG*].

⁴U.S.S.G. § 5B1.2.

⁵18 U.S.C. § 3563(b).

⁶See, e.g., United States v. Pac. Enters. Oil Co., Case No. 92-CR-003 (D. Wyo. 1992) (defendant ordered (1) to deed 1,000 acres of land adjacent to “a popular recreation area” to the United States, (2) to conduct all remedial action required by federal and state governments, and (3) to conduct environmental compliance audits).

⁷See, e.g., United States v. Bristol Meyers Squibb, Case No. 92-CV-123 (N.D.N.Y. 1992) (defendant fined \$3,500,000; all but \$500,000 suspended on the condition that defendant pay \$3,000,000 in restitution to New York State).

[Section 9:268]

¹U.S. SENTENCING GUIDELINES MANUAL, (U.S. SENTENCING COMM’N 2015) [hereinafter *USSG*].

²18 U.S.C. § 3553(b).

³28 U.S.C. § 991.

merical values, called “offense-levels.” Offense-level values can be increased or decreased depending on a wide variety of factors. The Sentencing Guidelines contain charts that assign prison term ranges (expressed in months) and fines to the numerical value of the offense-levels assigned to the conduct. Chapter 2Q of the Sentencing Guidelines addresses sentencing of individuals for environmental crimes.

§ 9:269 Calculating Environmental Offense Levels

In the environmental guidelines, there are six basic categories into which all environmental criminal conduct by individuals may be placed:

- Offenses involving “knowing endangerment” of others;
- Offenses involving mishandling of hazardous or toxic substances or pesticides (including related recordkeeping offenses);
- Offenses involving mishandling of “other” (nontoxic) pollutants (including related recordkeeping offenses);
- Offenses involving public water systems;
- Offenses involving hazardous or injurious devices on federal lands; and
- Offenses involving specially protected fish, wildlife, and plants.

Each of these categories has “base” offense-levels, which are then increased or decreased depending on specific considerations outlined in the Sentencing Guidelines.

By way of illustration, consider an offense involving mishandling of a toxic or hazardous substance by illegally storing hazardous waste beyond the 90 days permitted by RCRA. The base offense-level for this charge is eight. (For comparison purposes, the base-level offense for murder is 43;¹ for robbery the base-level offense is 20;² and for an offense involving at least 1 kilogram, but less than 2.5 kilograms, of marijuana, the base-level offense is 8.)³

That base level can be increased by a specific, fixed amount based on a number of factors, including:

- The ongoing nature of the violation;⁴
- Whether the violation involved permit requirements;⁵
- Whether the violation disrupted a water system;⁶
- Whether the violation created the threat of death or bodily injury;⁷
- Whether the defendant was the leader of a group of more than five persons involved in the conduct;⁸ and
- Whether the person has committed prior crimes.⁹

This base level can also be decreased based on a number of factors, such as,

- Whether the offense involved recordkeeping only;¹⁰ and

[Section 9:269]

¹U.S.S.G. § 2A1.1.

²U.S.S.G. § 2B3.1.

³U.S.S.G. § 2D1.1(c).

⁴U.S.S.G. § 2Q1.2(b)(1)(A).

⁵U.S.S.G. § 2Q1.2(b)(4).

⁶U.S.S.G. § 2Q1.4.

⁷U.S.S.G. § 2Q1.2(b)(2).

⁸U.S.S.G. § 3B1.1.

⁹U.S.S.G. § 4A1.1.

¹⁰U.S.S.G. § 2Q1.2(b)(6).

- Whether the defendant cooperated in the investigation.¹¹

In a “typical” environmental case, the offense level, along with increases and decreases, might be calculated as follows:

<u>Nature of Offense</u>	<u>Increase/Decrease Offense Level</u>
Offense involving a toxic waste	8
Increase based on noncontinuous violation	+4
Increase based on permit violation	+4
Decrease because defendant pled guilty/cooperated	-2
Total value assigned to offense:	14

§ 9:270 Determining Prison Terms from Offense Levels

Once the offense-level is determined, identifying the range of the prison term is relatively easy. The Commission has developed a Sentencing Table, which transposes the offense-level into a sentencing range (expressed in months) based on the criminal history of the defendant. The judge is required to impose a sentence within the prescribed range.

Below is the current table from Chapter 5, Part A to the Sentencing Guidelines:¹

¹¹U.S.S.G. § 3E1.1.

[Section 9:270]

¹U.S.S.G. § 5A.

SENTENCING TABLE
(in months of imprisonment)

	Offense Level	Criminal History Category (Criminal History Points)					
		I (0 or 1)	II (2 or 3)	III (4, 5, 6)	IV (7, 8, 9)	V (10, 11, 12)	VI (13 or more)
Zone A	1	0-6	0-6	0-6	0-6	0-6	0-6
	2	0-6	0-6	0-6	0-6	0-6	1-7
	3	0-6	0-6	0-6	0-6	2-8	3-9
	4	0-6	0-6	0-6	2-8	4-10	6-12
	5	0-6	0-6	1-7	4-10	6-12	9-15
	6	0-6	1-7	2-8	6-12	9-15	12-18
	7	0-6	2-8	4-10	8-14	12-18	15-21
	8	0-6	4-10	6-12	10-16	15-21	18-24
	9	4-10	6-12	8-14	12-18	18-24	21-27
Zone B	10	6-12	8-14	10-16	15-21	21-27	24-30
	11	8-14	10-16	12-18	18-24	24-30	27-33
Zone C	12	10-16	12-18	15-21	21-27	27-33	30-37
	13	12-18	15-21	18-24	24-30	30-37	33-41
	14	15-21	18-24	21-27	27-33	33-41	37-46
Zone D	15	18-24	21-27	24-30	30-37	37-46	41-51
	16	21-27	24-30	27-33	33-41	41-51	46-57
	17	24-30	27-33	30-37	37-46	46-57	51-63
	18	27-33	30-37	33-41	41-51	51-63	57-71
	19	30-37	33-41	37-46	46-57	57-71	63-78
	20	33-41	37-46	41-51	51-63	63-78	70-87
	21	37-46	41-51	46-57	57-71	70-87	77-96
	22	41-51	46-57	51-63	63-78	77-96	84-105
	23	46-57	51-63	57-71	70-87	84-105	92-115
	24	51-63	57-71	63-78	77-96	92-115	100-125
	25	57-71	63-78	70-87	84-105	100-125	110-137
	26	63-78	70-87	78-97	92-115	110-137	120-150
	27	70-87	78-97	87-108	100-125	120-150	130-162
	28	78-97	87-108	97-121	110-137	130-162	140-175
	29	87-108	97-121	108-135	121-151	140-175	151-188
	30	97-121	108-135	121-151	135-168	151-188	168-210
	31	108-135	121-151	135-168	151-188	168-210	188-235
	32	121-151	135-168	151-188	168-210	188-235	210-262
	33	135-168	151-188	168-210	188-235	210-262	235-293
	34	151-188	168-210	188-235	210-262	235-293	262-327
	35	168-210	188-235	210-262	235-293	262-327	292-365
	36	188-235	210-262	235-293	262-327	292-365	324-405
	37	210-262	235-293	262-327	292-365	324-405	360-life
	38	235-293	262-327	292-365	324-405	360-life	360-life
	39	262-327	292-365	324-405	360-life	360-life	360-life
	40	292-365	324-405	360-life	360-life	360-life	360-life
	41	324-405	360-life	360-life	360-life	360-life	360-life
	42	360-life	360-life	360-life	360-life	360-life	360-life
	43	life	life	life	life	life	life

In the example illustrated in § 9:282, for an offense with a level of 14, a sentence of between 15 and 21 months must be imposed, even for a first-time offender. A person so sentenced must serve at least half of the minimum amount before being eligible for parole.² Thus, the court cannot impose the sentence and suspend it in its entirety.

Section 3D of the Sentencing Guidelines addresses the sentence to be imposed if the conviction involves multiple counts. The Sentencing Guidelines mandate that counts “involving substantially the same harm” be grouped together for purposes of sentencing.³ An offense-level is then assigned to the offenses in a group with the level based on the most serious of the counts in the group.⁴ Then the offense-level is increased based on the number of units in the group.⁵

It is important to note the practical effect of the grouping of offenses. The results under the system can be anomalous. For example, it is conceivable that a person who violates the Clean Water Act (“CWA”) over a period of months in the same way will be sentenced to less prison time than another person who commits three unrelated violations of the CWA or three violations of three different environmental statutes.

It is important to understand that courts have little discretion to depart from the Sentencing Guidelines. For a discussion of that discretion in the environmental context, see § 9:273. It is also important to remember that how a plea agreement is structured and which charges are associated with a plea agreement will influence how the Sentencing Guidelines will be applied. As such, plea negotiations often focus on how the government will calculate the offense-level and apply the Sentencing Guidelines in a given case.

The Fine Table, created by the U.S. Sentencing Commissions and reproduced below, provides minimum and maximum fine guideline ranges.⁶ The limiting maximum fine does not apply if the defendant is sentenced under a statute authorizing a maximum greater than \$500,000 or fines calculated for each day of violation. Also reproduced below is the Revocation Table⁷ reflecting sentencing guidelines for someone that violates the terms of probation.

²U.S.S.G. § 5C1.1(d)(2).

³U.S.S.G. § 3D1.2.

⁴U.S.S.G. § 3D1.3.

⁵U.S.S.G. § 3D1.4.

⁶U.S.S.G. § 5E1.2; *see also* U.S.S.G. § 5E1.1(c)(3).

⁷U.S.S.G. § 7B1.4; *see also* U.S.S.G. § 7B1.4(a).

The telephone number for the USSC HelpLine is (202) 502-4545. The hours of operation are from 8:30 a.m. to 5 p.m., Eastern time, Monday through Friday. The *Guidelines Manual* and other Commission publications and information are available on the Commission's web site at www.ussc.gov.

Fine Table (from §5E1.2 (Fines for Individual Defendants))

Offense Level	A Minimum	B Maximum
3 and below	\$200	\$9,500
4-5	\$500	\$9,500
6-7	\$1,000	\$9,500
8-9	\$2,000	\$20,000
10-11	\$4,000	\$40,000
12-13	\$5,500	\$55,000
14-15	\$7,500	\$75,000
16-17	\$10,000	\$95,000
18-19	\$10,000	\$100,000
20-22	\$15,000	\$150,000
23-25	\$20,000	\$200,000
26-28	\$25,000	\$250,000
29-31	\$30,000	\$300,000
32-34	\$35,000	\$350,000
35-37	\$40,000	\$400,000
38 and above	\$50,000	\$500,000.

**Revocation Table (from §7B1.4 (Term of Imprisonment (Policy Statement)))
(in months of imprisonment)**

Grade of Violation	Criminal History Category*					
	I	II	III	IV	V	VI
Grade C	3-9	4-10	5-11	6-12	7-13	8-14
Grade B	4-10	6-12	8-14	12-18	18-24	21-27
Grade A	(1) Except as provided in subdivision (2) below:					
	12-18	15-21	18-24	24-30	30-37	33-41
	(2) Where the defendant was on probation or supervised release as a result of a sentence for a Class A felony:					
	24-30	27-33	30-37	37-46	46-57	51-63.

*The criminal history category is the category applicable at the time the defendant originally was sentenced to a term of supervision.

The Sentencing Guidelines' approach to sentencing is summarized in the Sentencing Table.⁸ Just as the Fine Table indicates a minimum and a maximum fine, the Sentencing Table indicates a minimum and a maximum prison sentence. However, unlike the Fine Table, the Sentencing Table divides its matrix into four "zones."⁹

To understand the Sentencing Table and its zones, consider a relatively simple example: one conviction based on one knowing violation of the Clean Air Act ("CAA") (a base offense level of 24). The judge wishes to impose a prison sentence, and the CAA authorizes a sentence of up to 15 years.¹⁰ For an offense level of 24 (and assuming that the person convicted had never been convicted of an environmental crime), the Sentencing Guidelines would require a sentence of between 51 and 63 months. However, because the offense falls within Zone D, the Sentencing Guidelines mandate that "the minimum term shall be satisfied by a sentence of imprisonment."¹¹ Thus, the judge may not be able to impose a remedy other than imprisonment (e.g., probation) for the minimum term of 51 months. The practical effect of the Sentencing Guidelines may prohibit a judge from, for example, imposing a large sentence and suspending all but a fraction of it. As a practical matter, therefore, the Sentencing Guidelines have produced longer prison sentences and longer time actually served in prison.

§ 9:271 Determining Fines for Individuals from the Offense Levels

The Sentencing Guidelines require that a court impose a fine in every case, unless the defendant is unable to pay a fine.¹ Fines are set in manner similar to prison terms. The key again is the offense-level, and the fine range is determined by that offense-level. Section 9:283 contains a reproduction of the Sentencing Guidelines for sentencing of individuals to fines. In the example outlined in § 9:282, for an offense level of 14, the mandatory fine range is \$4,000 to \$40,000. Two special considerations, however, apply to fines for environmental crimes that override the guideline ranges.

First, as noted at § 9:276, there is currently only one environmental statute that contains minimum fines, so that if the court imposes a fine, it must be at least a minimum amount. Thus, under the Clean Water Act ("CWA"), there is a minimum fine of \$5,000 if the court imposes any fine. Therefore, combined with the rule established in the guidelines, with the exception of a person unable to pay a fine, every CWA criminal offense by an individual is likely to result in a fine of at least \$5,000.

Second, to the extent a statute authorizes a per-day fine that is higher than the Sentencing Guidelines' range, it takes precedence over the guideline amount.² Thus, in the example above, the Sentencing Guidelines suggest a fine of \$4,000 to \$40,000 for the single RCRA violation. However, because RCRA authorizes a fine of up to \$50,000 per day for each violation and because RCRA's penalties are assessed on a per-day basis, the \$50,000 figure governs the case. The Sentencing Guidelines expressly nullify the maximum fine that the Sentencing Guidelines would otherwise set.³ § 9:278 discusses how these provisions affect fines assessed against individuals under each of the environmental laws.

⁸U.S.S.G. § 5A.

⁹U.S.S.G. § 5A.

¹⁰42 U.S.C. § 7413(c)(5)(A).

¹¹U.S.S.G. § 5C1.1.

[Section 9:271]

¹U.S.S.G. § 5E1.2(a).

²U.S.S.G. § 5E1.2(c)(4).

³U.S.S.G. § 5E1.2(c)(4).

§ 9:272 Determining Restitution for Individuals Under the Sentencing Guidelines

The Sentencing Guidelines follow the principles of restitution outlined at § 9:266.¹ Two special considerations are worth noting. First, while the statute governing restitution authorizes that it be imposed, the Sentencing Guidelines require it unless full restitution has already been made. Second, the court requires that any order to make restitution and pay a fine include the provision that restitution must be paid first.² The factors determining payment of restitution in environmental cases include the loss to the victim, the financial resources of the defendant, the financial needs of the defendant and his family, and other “appropriate” factors.

As discussed at § 9:266, the government could seek payments in the form of restitution for natural resource damages from wealthy individual defendants convicted of environmental crimes, and such amounts could be quite high.

§ 9:273 Determining Probation for Individuals Under the Sentencing Guidelines

The general principles of probation, outlined at § 9:267, apply to persons convicted of environmental crimes. However, note the following special considerations contained in the Sentencing Guidelines. First, if the offense level is below 12 (imprisonment for at least eight months), the court may impose probation in lieu of at least part of the sentence. However, if the offense level is above 12, the person must serve at least half the minimum sentence in prison.¹ Conditions of probation in addition to, or instead of, imprisonment can include home confinement, community service, intermittent confinement, provision of financial information, and restitution to victims.² As noted earlier, in environmental cases, these conditions have included establishing trust funds for victims, establishing conservation easements on property, auditing operations, admitting culpability in advertisements, and restricting operations.³

§ 9:274 Departures from Sentencing Guidelines

Notwithstanding their length (approximately 1,000 pages), there are situations in which the facts of a case are not anticipated by the Sentencing Guidelines. Courts are permitted to depart from the Sentencing Guidelines in situations in which “an aggravating or mitigating circumstance of a kind, or to a degree, not adequately taken into consideration by the Sentencing Commission in formulating the guidelines that should result in a sentence different from that described.”¹ The stat-

[Section 9:272]

¹U.S.S.G. § 5E1.1.

²U.S.S.G. § 5E1.1.

[Section 9:273]

¹U.S.S.G. § 5C1.1(d).

²U.S.S.G. § 5B1.3.

³EPA, ENFORCEMENT ACCOMPLISHMENT REPORT FY 1991, at 4–66 (Apr. 1992) (citing *United States v. Gabra*, Case No. 2:91-mj-00180-GDH-1(D.N.J. 1991)) (defendant “now out of the business of exporting pesticides”); *id.* at 4–67 (citing *United States v. Inks* (D. Tenn. 1991) (defendant ordered, inter alia, to make a public apology).

[Section 9:274]

¹18 U.S.C. § 3553(b).

ute lays out how a sentence is to be imposed.² It requires a court to look at several factors, including “the nature and circumstances of the offense,” “the history and characteristics of the defendant,” “the sentencing range established by the Sentencing Guidelines,” “any pertinent policy statement issued by the Sentencing Commission pursuant to its statutory authority,” and “the need to avoid unwarranted sentence disparities among defendants with similar records who have been found guilty of similar conduct.” In sum, while the statute requires a court to give respectful consideration to the Sentencing Guidelines when setting a sentence, it allows the court to tailor a sentence based on other statutory factors.³ Courts are not permitted, however, to depart if they do not agree with the result of the Sentencing Guidelines.⁴

Courts have also been admonished to apply the Sentencing Guidelines correctly in environmental cases and to avoid misapplying them and causing an undesirable result.⁵

§ 9:275 The Federal Sentencing Guidelines for Organizations Convicted of Environmental Crimes

Because organizations cannot be imprisoned, the other forms of sentencing (fines, restitution, and probation) take on added significance. There are currently no sentencing guidelines that govern fines imposed on corporations convicted of environmental crimes. However, the federal Sentencing Guidelines do contain provisions for the imposition of probation and restitution for organizations convicted of crimes, and these apply to companies convicted of environmental crimes. They are discussed at § 9:276 and § 9:277.

§ 9:276 Restitution and Remedial Orders for Organizations

As stated at the outset, federal law directly authorizes restitution only for offenses outlined in Title 18 of the U.S. Code.¹ Environmental offenses are included in Titles 7, 15, 33, and 42. However, the federal sentencing statute also authorizes restitution as a condition of probation,² and that is the cited source of the court’s authority to impose restitution in environmental cases.

As with individuals, the Sentencing Guidelines require that courts enter an order

²18 U.S.C. § 3553(b).

³*See, e.g.,* Kimbrough v. U.S., 552 U.S. 85, 100–102, 128 S. Ct. 558, 169 L. Ed. 2d 481 (2007) (citing U.S. v. Booker, 543 U.S. 220, 245, 125 S. Ct. 738, 160 L. Ed. 2d 621 (2005)) (“The Booker remedial opinion determined that the appropriate cure was to sever and excise the provisions of the statute and rendered the Guidelines mandatory. This modification of the federal sentencing statute, we explained, ‘makes the Guidelines effectively advisory’”); U.S. v. Hansen, 262 F.3d 1217, 1255, 53 Env’t. Rep. Cas. (BNA) 1203, 57 Fed. R. Evid. Serv. 121 (11th Cir. 2001) (“Where the district court expresses ambivalence about its authority to depart from the guidelines, we review the record to determine the district court’s understanding. . . . Because the district court understood that it had authority to depart, we are unable to review the district court’s denial of Hansen’s request for a downward departure.”); U.S. v. Bernal, 90 F.3d 465, 467 (11th Cir. 1996) (departures from Sentencing Guidelines are allowed when the defendant’s conduct does not “cause or threaten the harm or evil sought to be prevented by the law proscribing the offense at issue”).

⁴*See, e.g.* U.S. v. Ellen, 961 F.2d 462, 35 Env’t. Rep. Cas. (BNA) 1165, 22 Env’tl. L. Rep. 21282 (4th Cir. 1992), as amended, (Apr. 27, 1992); U.S. v. Rutana, 932 F.2d 1155, 1158–59, 33 Env’t. Rep. Cas. (BNA) 1233, 21 Env’tl. L. Rep. 21241 (6th Cir. 1991).

⁵*See* U.S. v. Bogas, 920 F.2d 363, 364, 32 Env’t. Rep. Cas. (BNA) 1455, 21 Env’tl. L. Rep. 20356 (6th Cir. 1990).

[Section 9:276]

¹18 U.S.C. § 3663(a)(1).

²18 U.S.C. § 3563.

of restitution compensating victims of a crime, unless full restitution has already been paid.³ In addition, and of particular importance in the environmental context, the Sentencing Guidelines endorse the concept of remedial orders. These are orders that remedy a harm or prevent its future occurrence. They are particularly important in the environmental arena.⁴

§ 9:277 Probation for Organizations

As with individuals, the conditions of probation applicable to organizations follow the general considerations outlined in § 9:267. Some of the conditions that are authorized by the Sentencing Guidelines include:¹

- Conducting environmental audits;
- Agreeing to environmental controls beyond regulatory requirements;
- Reporting adverse environmental conditions to regulatory authorities;
- Publishing the nature of the offense in various media;
- Making periodic submissions to the court regarding environmental conditions; and
- Imposing limits on business activities without prior notice to the courts.

§ 9:278 Statute-Specific Considerations

There are a variety of statute-specific considerations relating to conditional sentencing of environmental conditions. The statute-specific considerations are discussed in §§ 9:279 to 9:286.

§ 9:279 Resource Conservation and Recovery Act

With the exception of knowing endangerment violations, all criminal fines authorized by the Resource Conservation and Recovery Act (“RCRA”)¹ are determined on a per-day basis. As a result, the range of fines in the Sentencing Guidelines, which are not based on a per-day calculation, are not binding in situations in which a single case covers a number of days.

RCRA does not contain any minimum criminal fine and does not create a “mandatory minimum” fine as a matter of law. Only the Sentencing Guidelines require imposition of a fine.

§ 9:280 Clean Water Act

The Clean Water Act (“CWA”) is the only major environmental statute containing a minimum fine provision: \$5,000.¹ Because the Sentencing Guidelines require imposition of a fine in every case (except if the defendant is unable to pay), it is a virtual certainty that a fine of at least \$5,000 will accompany every CWA conviction. Moreover, because the calculation is based on a per-day of violation basis the fine is

³U.S.S.G. § 8B1.1.

⁴United States v. Pac. Enters. Oil Co., Case No. 92-CR-003 (D. Wyo. 1992) (defendant agreed, *inter alia*, to “conduct all remedial action required by federal and state authorities at the Notches Dome, Boone Dome and Salt Creek Oil Fields”).

[Section 9:277]

¹U.S.S.G. § 8D1.4.

[Section 9:279]

¹42 U.S.C. §§ 6901, et seq.

[Section 9:280]

¹33 U.S.C. § 1319.

likely to be higher, as few substantive violations that are criminally prosecuted last for only one day.

§ 9:281 Clean Air Act

Fines under the Clean Air Act (“CAA”) are explicitly tied to the provisions of the Alternative Fines Act of 1984.¹ Thus, the fines mandated by the CAA range from maximums of \$100,000 to \$250,000 for initial violations of the Act.² For example, negligent releases of hazardous emissions that threaten death or serious bodily injury are Class A misdemeanors, for which the maximum fine is \$100,000. Knowing releases of hazardous emissions that threaten death or serious bodily injuries are felonies, for which the maximum fine is \$500,000. Penalties are doubled for convictions that occur after the first conviction.³

Unlike the CWA, the CAA does not mandate that a judge impose a fine for a conviction, nor does it set a minimum fine. The Sentencing Guidelines, however, do require that a judge impose a fine for every conviction.⁴ Thus, the judge has little discretion and must impose a fine upon conviction (absent inability to pay).

The minimum fine imposed by the Sentencing Guidelines depends upon the nature of the offense and upon the Guideline’s assessment of points for that offense.⁵ The actual dollar amount that can be imposed under the CAA is not clear, despite the maximum fines as stated in the CAA. This is so because the CAA does not explicitly specify the unit of measurement—per-day, per-violation, or per-conviction—to which a fine attaches.⁶ Because of the reference to the fine provisions of Title 18—which are calculated on a per-offense basis—the per-offense basis may be the unit on which the fine is based. However, because of the alternatives available to the prosecutor in charging a defendant,⁷ the per-offense basis still does not provide a clear indication of how fines would actually be calculated.

It is conceivable that a fine could actually be calculated on a per-case level required by the Sentencing Guidelines. The Sentencing Guidelines state that the fine schedule is applicable for each “case,” but do not define what a “case” entails.⁸ Insofar as a “case” may include several violations occurring over several days resulting in an indictment of several counts, neither the Act nor the Sentencing Guidelines indicate the maximum fine that can be imposed. Persons charged with violations of the Act should be sensitive to the various arguments available to prosecutors.

For example, if an indictment alleges only one violation of the CAA on one day, then the Sentencing Guidelines would determine the fine. This seems to be the proper result because, in this example, a single offense would constitute the entire “case.”

If a person is charged with, and convicted of, more than one count of violating the CAA, then the proper fine is less clear. Consider the following simplified example: An officer of XYZ Company is charged with knowingly violating the Act on three separate occasions when the company emitted a hazardous air pollutant that

[Section 9:281]

¹18 U.S.C. § 3571(b).

²*See supra* § 9:263.

³42 U.S.C. § 7413.

⁴U.S.S.G. § 5E1.2(a).

⁵*See supra* § 9:270.

⁶*See supra* § 9:263.

⁷*See supra* § 9:262.

⁸U.S.S.G. § 5E1.2(a).

threatens death or serious bodily injury. The three violations constitute three counts in a single indictment. The corporate officer is convicted. Under the CAA, the judge must then choose to impose a fine, a prison sentence, or both. Under the Sentencing Guidelines, however, it appears that the judge has little choice but to impose a fine.

Assume that “Specific Offense Characteristics” apply that would place the crime at level 24 under the Sentencing Guidelines.⁹ Level 24 cases correlate to a fine between \$10,000 and \$100,000. If the judge views the conviction of the defendant as the “case,” then he or she may impose a fine based on what the judge would impose for a single violation. Alternatively, if the judge concludes that the “case” consists of the three violations (upon which the single conviction rests), then she or he may argue that it is proper to impose a fine three times what would have been imposed for a conviction based on a single violation.

The practical effect that the answer to these questions would have on the person convicted is enormous. In the example above, if the judge wanted to impose a fine of \$100,000 (the maximum fine allowed under the Sentencing Guidelines for a level 24 offense) and may impose the fine for each violation, then the total fine imposed will be \$300,000. This is \$50,000 more than the professed maximum allowed.¹⁰ Nevertheless, the \$300,000 would be proper if the judge decided that the maximum fine provided for in the statute referred to the fine that could be imposed for each violation. The \$300,000 fine would be well within the statutory limits for the offense (i.e., the maximum for the three counts would be \$750,000).

Even if a judge imposes a fine against a defendant convicted under the CAA, he may also impose a term of imprisonment.¹¹ Moreover, a judge might read the CAA to require a prison sentence if the judge chooses not to impose a fine.¹² The Sentencing Guidelines inform the judge of (1) how long the prison sentence must be and (2) whether alternatives to prison are available.

§ 9:282 Toxic Substances Control Act

The Toxic Substances Control Act (“TSCA”),¹ unlike the CAA, imposes criminal penalties for knowing or willful conduct. Persons convicted of violating the TSCA “shall . . . be subject . . . to a fine of not more than \$25,000 for each day of violation, or to imprisonment . . ., or both.”² The language of TSCA—“be subject . . . to”—suggests that punishment under TSCA is more permissive than, for example, the CWA. TSCA sets maximum fines and sentences but does not mandate that they be imposed. However, as noted earlier, the Sentencing Guidelines require that a fine be imposed in every case;³ thus, the permissive nature of the penalty provision in TSCA is misleading because a fine will normally result from any conviction. Moreover, the figure of \$25,000 is also misleading because the fine may be as high as \$100,000.⁴

Because the statute does not set a minimum fine, there is no mandatory minimum fine for violating the act. TSCA mandates a per-day fine (i.e., a fine for each day in violation of the Act). As with RCRA, because the fine is on a per-day basis,

⁹U.S.S.G. § 2Q1.2.

¹⁰18 U.S.C. § 3571(b).

¹¹42 U.S.C. § 7413.

¹²42 U.S.C. § 7413(c).

[Section 9:282]

¹15 U.S.C. § 2615.

²15 U.S.C. § 2615(b).

³U.S.S.G. § 5E1.2(a).

⁴18 U.S.C. § 3571(b).

the range for a given offense set by the Sentencing Guidelines is not conclusive. The minimum fine will be determined by the judge. The Sentencing Guidelines expressly allows the judge to disregard the maximum fine set by the Sentencing Guidelines if a statute under which the defendant has been convicted applies a per-day fine.⁵

Prison sentences under TSCA would be determined in a manner similar to the CAA described at § 9:281.

§ 9:283 Federal Insecticide, Fungicide and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”) only imposes penalties for knowing or intentional violations.¹ Like the Clean Air Act (“CAA”),² its criminal penalties are arguably mandatory. It is likely that a judge will seek to impose either a fine, or a prison sentence, or both upon conviction.³ The statute does not specify the unit upon which the fine is based, i.e., per-day, per-violation, or per-conviction. Moreover, unlike the CAA, FIFRA does not refer to the fine provisions of Title 18. Thus, a judge might conclude that the Sentencing Guidelines apply and that the unit on which the fine should be based is the “case.”⁴ However, because the statute states that it applies to all convictions unless explicitly limited by the statute on which the conviction rests, the judge also might argue that fines for FIFRA convictions should be based on a per-offense basis.⁵

As with the CAA, it is important to note the practical impact that the Sentencing Guidelines’ interrelationship with the fine provisions of statute may have on the imposition of fines.⁶ If a judge chooses to impose a fine for conviction of a multicount indictment based on the Sentencing Guidelines’ range of fines, then the total amount of the fine may easily exceed FIFRA’s apparent statutory maximums (\$25,000 for commercial applicators, and \$50,000 for registrants). A fine based on the Sentencing Guidelines that resulted in a fine greater than FIFRA’s apparent statutory maximum would not violate the Act because (1) the statute authorizes fines of greater than \$25,000 and (2) FIFRA does not explicitly limit the application of statute.⁷

§ 9:284 Emergency Planning and Community Right-to-Know Act

The Emergency Planning and Community Right-to-Know Act (“EPCRA”)¹ authorizes a fine or prison sentence, or both, for knowing or willful violations of its notice provisions.² Similar penalties are in place for trade secret violations under EPCRA.³ However, EPCRA does not specify a minimum fine or sentence length. EPCRA also does not provide a unit on which a fine is based, nor does it explicitly

⁵U.S.S.G. § 5E1.2(c)(4).

[Section 9:283]

¹7 U.S.C. § 136(b).

²*See supra* § 9:281.

³*See supra* § 9:281.

⁴U.S.S.G. § 5E1.2(a).

⁵18 U.S.C. § 3571(b).

⁶18 U.S.C. § 3571(b); *see* § 9:276.

⁷18 U.S.C. § 3571(b); *see* § 9:276.

[Section 9:284]

¹42 U.S.C. § 11045.

²42 U.S.C. § 11045(b)(4).

³42 U.S.C. § 11045(d)(2).

limit the application of the fine provisions of the statute.⁴ Thus, EPCRA can be grouped with FIFRA in its operation and in its interaction with the Sentencing Guidelines.

§ 9:285 Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)¹ also authorizes a fine or prison sentence, or both. CERCLA does not specify minimum fines or sentence lengths. However, like the CAA, fines under CERCLA are explicitly tied to the fine provisions of the statute.² Thus, a judge arguably might impose fines under CERCLA on a per-offense basis. However, the judge might apply the fines on the “per case” basis mandated by the Sentencing Guidelines.³ It is important to note that the distinctions between the per-offense and per-case basis are not clear. Thus, CERCLA can be grouped with the CAA in its operation and in its interaction with the Sentencing Guidelines.

§ 9:286 Safe Drinking Water Act

The criminal fines of the Safe Drinking Water Act (“SDWA”)¹ are tied to the fine provisions of the fines’ statute.² Thus, SDWA can be grouped with CERCLA and with the CAA in its operation and in its interaction with the Sentencing Guidelines.

XI. DEBARMENT, SUSPENSION, CONTRACTOR LISTING, AND PERMIT BLOCKS

§ 9:287 Executive Summary

The sanctions that the EPA may impose on persons or organizations for noncompliance with environmental laws are not limited simply to the fines and penalties generally associated with such conduct. The EPA may also impose a variety of collateral sanctions designed to punish noncompliance and encourage corrective measures to ensure future compliance. For instance, violations of environmental laws may prevent a party from gaining government contracts with, or financial assistance from, the EPA or other federal agencies, or may lead to the denial of permits or approvals by the EPA, even with respect to facilities not directly involved in the violation. Preclusion from government contracts or assistance also may arise from violations of nonenvironmental laws. Examples of such collateral sanctions are described in this chapter under the general headings of debarment, suspension, contractor listing, and permit blocks.

§ 9:288 Debarment

Executive Orders 12,549 (Feb. 18, 1986) and 12,689 (Aug. 16, 1989) require federal agencies to participate in a government-wide system for nonprocurement debarment

⁴18 U.S.C. § 3571(b).

[Section 9:285]

¹42 U.S.C. § 9603(b)(3).

²18 U.S.C. § 3571(b).

³18 U.S.C. § 3571(b); U.S.S.G. § 5E1.2(a).

[Section 9:286]

¹42 U.S.C. § 300h-2(b).

²18 U.S.C. § 3571(b).

and suspension.¹ In accordance with these Executive Orders, the EPA issued nonprocurement debarment and suspension regulations governing federal loans and grants.² Other agencies and departments of the federal government administer similar regulations, which may affect persons who fail to comply with environmental laws or regulations.³ These regulations are all an extension of the government-wide regulations issued by the Office of Management and Budget (“OMB”) to address “Grants and Agreements” in 2004.⁴

Persons who are debarred under the EPA regulations are listed on the “System for Award Management Exclusions” (“SAM”), which is compiled and disseminated by the General Services Administration,⁵ and are excluded from participating in any nonprocurement transaction with any federal agency.⁶ Contractors dealing with the EPA also are subject to the Federal Acquisition Regulations, which provide uniform policies and procedures for acquisition by all federal agencies, govern the qualifications of contractors (and prospective contractors) who may participate in federal contracting programs, and include provisions for debarment and suspension of such contractors from federal contracting programs.⁷

§ 9:289 Grounds for Debarment

Federal agencies, including the EPA, are authorized to debar a person for a variety of specified acts or omissions, including, among others:

- (1) Conviction of, or civil judgment for, commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public or private agreement or transaction;¹
- (2) Conviction of, or civil judgment for, violation of federal or state antitrust statutes;
- (3) Conviction of, or civil judgment for, of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiv-

[Section 9:288]

¹Now codified at 2 C.F.R. §§ 180, et seq. and 31 U.S.C. § 6101 note.

²53 Fed. Reg. 19,196 (May 26, 1988) (codified at 2 C.F.R. §§ 1532, et seq.).

³2 C.F.R. §§ 376, et seq. (Department of Health and Human Services); 2 C.F.R. §§ 417, et seq. (Department of Agriculture); 2 C.F.R. §§ 601, et seq. (Department of State); 2 C.F.R. §§ 417, et seq. (Department of Agriculture); 2 C.F.R. §§ 780, et seq. (Agency for International Development); 2 C.F.R. §§ 801, et seq. (Department of Veterans Affairs); 2 C.F.R. §§ 901, et seq. (Department of Energy); 2 C.F.R. §§ 1125, et seq. (Department of Defense); 2 C.F.R. §§ 1200, et seq. (Department of Transportation); 2 C.F.R. §§ 1326, et seq. (Department of Commerce); 2 C.F.R. §§ 1400, et seq. (Department of the Interior); 2 C.F.R. §§ 1880, et seq. (National Aeronautics and Space Administration); 2 C.F.R. §§ 2000, et seq. (United States Nuclear Regulatory Commission); 2 C.F.R. §§ 2200, et seq. (Corporation for National and Community Service); 2 C.F.R. §§ 2336, et seq. (Social Security Administration); 2 C.F.R. §§ 2424, et seq. (Social Security Administration); 2 C.F.R. §§ 2520, et seq. (National Science Foundation); 2 C.F.R. §§ 2700, et seq. (Small Business Administration); 2 C.F.R. §§ 2867, et seq. (Department of Justice); 2 C.F.R. §§ 3000, et seq. (Department of Homeland Security); 2 C.F.R. §§ 3185, et seq. (Institute of Museum and Library Services); 2 C.F.R. §§ 3254, et seq. (National Endowment for the Arts); 2 C.F.R. §§ 3369, et seq. (National Endowment for the Humanities); 2 C.F.R. §§ 3485, et seq. (Department of Education); 2 C.F.R. §§ 3513, et seq. (Export-Import Bank of the United States); 2 C.F.R. §§ 3700, et seq. (Peace Corps); 2 C.F.R. §§ 5800, et seq. (Election Assistance Commission).

⁴Government-wide Guidance for Grants and Agreements; Federal Agency Regulations for Grants and Agreements, 69 Fed. Reg. 26,276 (May 11, 2004) (codified at 2 C.F.R. Subtitles A and B).

⁵2 C.F.R. §§ 180.500 to 180.530, 180.945.

⁶See 2 C.F.R. §§ 180.500, et seq.

⁷48 C.F.R. § 9.

[Section 9:289]

¹2 C.F.R. § 180.800(a).

ing stolen property, making false claims, or obstruction of justice;²

(4) Conviction of, or civil judgment for, any other offense that indicates a lack of business integrity or business honesty seriously and directly affecting the present responsibility of the person;³

(5) Violation of the terms of a public contract so serious as to affect the integrity of an agency program, such as (i) a willful failure to perform in accordance with the terms of one or more public agreements or transactions or (ii) a history of failing to perform or of unsatisfactory performance of one or more public agreements or transactions, or (iii) a willful violation of a statutory or regulatory provision or requirement applicable to a public agreement or transaction;⁴

(6) A nonprocurement debarment by any federal agency taken before October 1, 1988, or a procurement debarment by any federal agency taken pursuant to 48 C.F.R. part 9, subpart 9.4, before August 25, 1995;⁵

(7) Knowingly doing business with an ineligible person, except as permitted under 2 C.F.R. § 180.135;⁶

(8) Failure to pay a single substantial debt or a number of outstanding debts (including disallowed costs and overpayments, but not including sums owed the federal Government under the Internal Revenue Code) owed to any federal agency or instrumentality, provided that the debt is uncontested by the debtor or, if contested, provided that the debtor's legal and administrative remedies have been exhausted;⁷

(9) Violation of the regulations under the Drug Free Workplace Act of 1988 (41 U.S.C. 701);⁸ and

(10) Any other cause so serious or compelling in nature so as to affect the present responsibility of the person.⁹

Item 3 above has particular relevance in the environmental context because many criminal convictions are based of false statements made on required reports.

However, debarment is a discretionary sanction, and the OMB and EPA's regulations demand that the seriousness of the act or omission, as well as all mitigating factors, be considered.¹⁰

§ 9:290 Debarment Procedures

The OMB and EPA's regulations provide that information relating to the existence of a cause for debarment must be promptly reported and investigated and that, where appropriate, such matters should be referred to the debarring official.¹ If the debarring official decides to proceed, she or he will issue a notice of proposed debarment to the respondent.² The respondent has thirty (30) days from receipt of

²2 C.F.R. § 180.800(a).

³2 C.F.R. § 180.800(a).

⁴2 C.F.R. § 180.800(b).

⁵2 C.F.R. § 180.800(c).

⁶2 C.F.R. § 180.800(c).

⁷2 C.F.R. § 180.800(c).

⁸2 C.F.R. § 180.800(c).

⁹2 C.F.R. § 180.800(d).

¹⁰2 C.F.R. § 180.845, 1532.10.

[Section 9:290]

¹2 C.F.R. §§ 180.800, et seq.

²2 C.F.R. § 180.805.

the notice to file a response, which may include a request for a hearing.³ A hearing will be granted in cases not based on convictions or civil judgments if the debarring official finds that the respondent's response raises a genuine dispute of material fact.⁴

The EPA's Suspension and Debarment Division ("SDD") director, within the larger Office of Administration and Resources Management ("OARM"), is the designated debarring official for the EPA, and debarment actions are formally initiated by referrals to the OARM.⁵ The SDD of OARM is principally responsible for the day-to-day implementation of the debarment program and generally takes the lead in promoting or prosecuting a request for debarment. To effectuate this, the SDD has attorneys and/or paralegals in each of the EPA's 10 regions that assist in the investigation and prosecution of debarment cases.⁶

§ 9:291 Scope and Period of Debarment

Debarment of an organization or individual under the EPA regulations debars "all of its divisions and other organizational elements from all covered transactions" unless the debarment decision otherwise indicates.¹ Debarment is government-wide in effect.² Moreover, under the EPA's regulations governing administration of grants and cooperative agreements with state and local governments, grantees and subgrantees may not make or permit any award to any debarred party.³

Debarment may cover both "primary covered transactions" and "lower-tier covered transactions." "Primary covered transactions" include all nonprocurement transactions where the agency deals directly with a person, such as grants, scholarships, loan guarantees, cooperative agreements, and contracts of assistance.⁴ "Lower-tier covered transactions" are those transactions between a participant in a covered transaction and another person which grows out of a primary covered transaction. Lower-tier covered transactions include (1) transactions between a participant and a person other than procurement contracts for goods or services under a primary covered transaction, (2) any procurement transaction for goods or services between a participant and a person in excess of \$25,000 under a primary covered transaction, and (3) any procurement contract for goods or services between a participant and a person under a covered transaction, regardless of amount, where the person will have a critical influence on or substantive control over that covered transaction.⁵ In addition, under certain circumstances, fraudulent, criminal, or other seriously improper conduct by officers, directors, shareholders, or other individuals associated with an organization may be imputed to the organization and such actions by an organization may be imputed to its officers, directors, or other individuals who knew

³2 C.F.R. § 180.820.

⁴2 C.F.R. § 180.830.

⁵2 C.F.R. §§ 180.800, et seq.; *see also* EPA, Suspension and Debarment Program (last updated Jan. 21, 2016), <http://www.epa.gov/grants/suspension-and-debarment-program>.

⁶2 C.F.R. § 180.800, et seq.; *see also* EPA, Suspension and Debarment Contacts (last updated Nov. 25, 2015), <http://www.epa.gov/grants/suspension-and-debarment-contacts>.

[Section 9:291]

¹2 C.F.R. § 180.625.

²2 C.F.R. §§ 180.130, 180.510.

³2 C.F.R. § 1532.220.

⁴2 C.F.R. § 180.200; Appendix to Part 180—Covered Transactions.

⁵2 C.F.R. §§ 180.200, 1532.220.

of, or had reason to know of, the conduct.⁶

Notable exceptions to debarment include: (1) statutory entitlements and mandatory awards; (2) transactions with foreign governments, foreign governmental entities, or public international organizations; (3) personal entitlement benefits; (4) federal employment; (5) transactions pursuant to national emergencies; and (6) incidental benefits from ordinary government operations.⁷

The term of debarment is determined in accordance with the seriousness of the cause but generally will not exceed three years.⁸ The period of debarment may be extended if, after notice and hearing (when appropriate), the debarring official determines that an extension is necessary to protect the public interest.⁹ This decision must be made on new facts and not just the “facts and circumstances” surrounding the original debarment action.¹⁰

§ 9:292 Reconsideration and Appeal

The debarment determination by the debarring official is final. However, any party to the action may petition the debarring official to reconsider the decision for alleged errors of law or fact, or, within 30 days of receiving the determination, request the Director of the EPA Office of Grants and Debarment (“OGD Director”) to review the findings of the debarring official and reconsider the decision.¹ Review by the OGD Director must be based solely on the record, and the determination may be set aside only if it was arbitrary, capricious, an abuse of discretion, or based upon clear error of material fact or law.²

As final agency action, the debarment determination by the debarring official also is subject to judicial review under the Administrative Procedure Act (“APA”).³ In accordance with APA Section 10(c),⁴ and the Supreme Court’s decision in *Darby v. Cisneros* and its progeny, a debarred party need not petition the debarring official for reconsideration or request review by the Office of Grants and Debarment prior to initiating a judicial appeal absent a statutory or regulatory requirement to do so.⁵

An appeal to the courts may even be appropriate where the term of debarment has expired because, under certain circumstances, the initial decision may continue to stigmatize the previously debarred party.⁶

However, attempts to short circuit the administrative debarment process by

⁶2 C.F.R. § 180.630.

⁷2 C.F.R. § 180.215.

⁸2 C.F.R. § 180.865.

⁹2 C.F.R. § 180.885.

¹⁰2 C.F.R. § 180.885.

[Section 9:292]

¹2 C.F.R. §§ 180.875, 1532.890(a).

²2 C.F.R. § 1532.890(a)(2).

³5 U.S.C. §§ 701, et seq.

⁴5 U.S.C. § 704.

⁵*Darby v. Cisneros*, 509 U.S. 137, 143–53, 113 S. Ct. 2539, 125 L. Ed. 2d 113 (1993); *CSX Transp., Inc. v. Surface Transp. Bd.*, 584 F.3d 1076, 1079 (D.C. Cir. 2009) (“*Darby* stands for the proposition that absent a statutory or regulatory requirement to the contrary, courts have no authority to require petitioners seeking judicial review of a final agency action to further exhaust administrative procedures.”).

⁶*See Caiola v. Carroll*, 851 F.2d 395, 401, 34 Cont. Cas. Fed. (CCH) P 75514 (D.C. Cir. 1988) (prospect of lingering stigma from Federal Acquisition Regulation requirement of certification as to whether potential participant has been debarred or suspended prevented finding of mootness); *see also Hickey v. Chadick*, 649 F. Supp. 2d 770, 774 (S.D. Ohio 2009) (finding standing where a company’s expired, wrongful disbarment could still prevent them from receiving new government contracts, which were

injunctive action prior to a determination by the debarring official may be faced with claims that they are premature.⁷

§ 9:293 Suspension

Suspension is similar to debarment, only shorter in duration and with less opportunity for review by the entity being suspended. Nevertheless, the OMB and EPA's debarment and suspension regulations recognize that suspension is a "serious action," which should be taken only when "immediate action is necessary to protect the public interest" and there is adequate evidence to indicate that a cause for debarment may exist or to suspect the commission of certain specified acts involving dishonest or fraudulent conduct.¹ An indictment is "adequate evidence" to support a suspension.²

The OMB and EPA's suspension procedures are similar to the debarment procedures discussed in § 9:288, except that the suspension proceedings take place without the presence of the person or organization subject to the suspension.³ After initial consideration, the suspending official may impose the suspension and then issue a notice to the respondent.⁴ The respondent is afforded an opportunity to request a hearing only after the suspension has been imposed.⁵ A hearing is provided only where the suspending official finds that the response raises genuine issues of material fact.⁶ No hearing is provided where the action is based on an indictment, conviction, or civil judgment, or where a determination is made (based on advice from the DOJ) that substantial interests of the federal government in pending or contemplated legal proceedings would be prejudiced.⁷ Determinations of suspension are subject to reconsideration and appeal in similar manner to debarment determinations.⁸

The scope of a suspension is the same as for debarment.⁹ However, unlike debarments, the period of suspension is only temporary, pending completion of an investigation or ensuing legal or administrative proceedings.¹⁰ A suspension is terminated if legal or administrative proceedings are not initiated within 12 months after the date of the suspension notice, except where an Assistant Attorney General

the basis of their business prior to the adverse agency decision); *cf.* *O'Gilvie v. Corporation for Nat. Community Service*, 802 F. Supp. 2d 77, 81–84 (D.D.C. 2011) (potential stigma from previous debarment was too remote to cause damage where there was no evidence indicating that there would be a required disclosure in the future or any other indication of actual harm).

⁷*See, e.g., Baranowski v. E.P.A.*, 699 F. Supp. 1119, 29 Env't. Rep. Cas. (BNA) 1213 (E.D. Pa. 1988), judgment *aff'd*, 902 F.2d 1558 (3d Cir. 1990) (plaintiff's request for injunction to discontinue debarment process under Federal Acquisition Regulations denied because the court lacked subject matter jurisdiction over ongoing debarment process absent exceptional circumstances and because plaintiffs failed to exhaust their administrative remedies).

[Section 9:293]

¹2 C.F.R. § 180.700.

²2 C.F.R. § 180.700(a).

³2 C.F.R. § 180.705.

⁴2 C.F.R. §§ 180.705, 715.

⁵2 C.F.R. §§ 180.715, 180.720.

⁶2 C.F.R. § 180.730(a).

⁷2 C.F.R. § 180.735.

⁸2 C.F.R. §§ 180.725, 180.730, 180.735, 1532.765.

⁹2 C.F.R. § 180.715.

¹⁰2 C.F.R. § 180.715.

or U.S. Attorney requests an extension.¹¹ In any event, suspensions may not exceed 18 months unless legal or administrative proceedings have been initiated.¹²

§ 9:294 Contractor Listing

The EPA's Contractor Listing Program finds its roots in Section 306 of the Clean Air Act ("CAA"),¹ and Section 508 of the Clean Water Act ("CWA"),² which prohibit federal agencies from entering into procurement contracts for goods, materials, or services with any person convicted of any offense under CAA Section 113(c) or CWA Section 309(c) or where the contract is to be performed at a facility which is owned, leased, or supervised by the person convicted. Pursuant to this statutory authorization and consistent with Executive Order 11738 (September 10, 1973), the EPA issued regulations to govern the Contractor Listing Program.³

§ 9:295 Mandatory Listing

The EPA regulations provide for both "mandatory listing" and "discretionary listing." Mandatory listing, as its name suggests, arises automatically upon conviction of a criminal offense under Section 113(c) of the CAA or Section 309(c) of the CWA.¹ The EPA is required to "enter[] your name and address and that of the violating facility into the Excluded Parties List System ('EPLS') as soon as possible after the EPA learns of your conviction."² According to the OMB and EPA's related regulations, a conviction includes court and jury verdicts, pleas of guilty, pleas of *nolo contendere* (no contest), and "any other resolution that is the functional equivalent of a judgment," which includes "probation before judgment and deferred prosecution."³

§ 9:296 Discretionary Listing

Discretionary listing arises where there is a conviction under the CAA or CWA and the EPA determines that:

- the person who owns, leases, or supervises the facility has been convicted by a federal, state, or local court of a criminal offense for noncompliance with CAA or CWA standards and owns or operates other facilities subject to the EPA's jurisdiction under either the CAA, 2 C.F.R. part 180, or 48 C.F.R. part 9, subpart 9.4 that have been operated in the same manner;¹
- the person who owns, leases, or supervises the facility has been convicted by a federal, state, or local court of a criminal offense for noncompliance with CAA or CWA standards and owns or operates other facilities subject to the EPA's

¹¹2 C.F.R. § 180.760.

¹²2 C.F.R. § 180.760.

[Section 9:294]

¹42 U.S.C. § 7606.

²33 U.S.C. § 1368.

³2 C.F.R. §§ 1532.1100, et seq.

[Section 9:295]

¹2 C.F.R. § 1532.1110.

²2 C.F.R. § 1532.1125 (emphasis added). While the "Listing" regulations still describe the EPLS system, it has now been incorporated into the SAM system. See System for Award Management, *available at* <https://www.sam.gov/portal/SAM/##11>.

³2 C.F.R. § 180.920.

[Section 9:296]

¹2 C.F.R. § 1532.1115.

jurisdiction under either the CAA, 2 C.F.R. part 180, or 48 C.F.R. part 9, subpart 9.4 and has engaged in activities “the EPA debarring official believes were designed to improperly circumvent a CAA or CWA disqualification”;² or

- the person who owns, leases, or supervises the facility has been convicted by a federal, state, or local court of a criminal offense for noncompliance with CAA or CWA standards and owns or operates other facilities subject to the EPA’s jurisdiction under either the CAA, 2 C.F.R. part 180, or 48 C.F.R. part 9, subpart 9.4 and the “EPA determines that the risk presented to Federal procurement and nonprocurement activities on the basis of the misconduct which gives rise to a person’s CAA or CWA conviction exceeds the coverage” granted by the EPA’s mandatory disqualification rights.³

When one of the determinations above is made, the EPA is required to place the facility on the Excluded Parties List System as soon as possible or suspend or disbar the individual pursuant to its authority under the Code of Federal Regulations, Title 2, Part 180 or Title 48, Part 9, Subpart 9.4.⁴ As such, the discretionary listing process, including the appeal process, is virtually the same as the suspension and disbarment processes, previously discussed at § 9:292 and § 9:293.

§ 9:297 Removal from the List

Where the conviction that gave rise to a mandatory listing is overturned, the facility is automatically removed from the List of Violating Facilities.¹ Otherwise, a facility subject to mandatory listing remains listed until the EPA debarring official certifies that the condition giving rise to the listing has been corrected.²

One of the considerations taken into account when evaluating the propriety of removing a facility from the list is the “corporate attitude” regarding compliance with environmental standards.³ A “poor corporate attitude” toward compliance or “inappropriate policies, practices, and procedures,” including those implemented since the “date of the misconduct or conviction,” will be considered when the debarring official determines whether to remove a facility from the System for Award Management Exclusions (“SAM”).⁴ The significance of the corporate attitude factor in the removal decision is a function of the degree of intent involved in the underlying criminal conviction.⁵ This determination may be highly fact-specific and require considerable input by the EPA Region where the facility is located.⁶

A facility placed on the list as a result of a discretionary listing may be removed from the list if the judicial action that formed the basis of the listing is reversed or otherwise modified, if the debarring official determines that the facility has corrected the conditions giving rise to the listing, or if the debarring official has ap-

²2 C.F.R. § 1532.1115.

³2 C.F.R. § 1532.1130.

⁴2 C.F.R. § 1532.1130; *see also* 2 C.F.R. § 1532.1115.

[Section 9:297]

¹2 C.F.R. § 1532.1500 (though the process generally takes about five working days).

²2 C.F.R. § 1532.1205(a).

³2 C.F.R. § 1532.1220.

⁴2 C.F.R. § 1532.1220(c); *see also*, EPA Policies Regarding the Role of Corporate Attitude, Policies, Practices, and Procedures, in Determining Whether to Remove a Facility From the EPA List of Violating Facilities Following a Criminal Conviction, 56 Fed. Reg. 64,785, 64,787 (Dec. 12, 1991) (“The hallmark of an effective program is that the organization exercises due diligence in seeking to prevent and detect environmental problems or violations, or criminal conduct.”).

⁵56 Fed. Reg. 64,785, 64,787 (Dec. 12, 1991).

⁶56 Fed. Reg. 64,785, 64,787 (Dec. 12, 1991).

proved a plan for compliance that ensures correction of the violations.⁷

The process for removing a facility from the EPLS (now SAM) may be initiated by the person who owns, operates, or supervises the listed facility or, in the case of discretionary listing, by the original recommending person.⁸ The debarring official renders an initial decision on a request for reinstatement. If the request is denied by the debarring official, the owner, operator, or supervisor, or the original recommending person may request a reconsideration from the debarring official or an appeal before the OGD Director (as under the debarment or suspension process).⁹ An appeal to the OGD Director will only be granted where the debarring official improperly denied reinstatement based on a clear error of material fact or law or where the decision was arbitrary, capricious, or an abuse of discretion.¹⁰

§ 9:298 Effect and Scope of Listing/Exemptions

The EPA's contractor listing regulations apply to all federal agencies that award grants, contracts, or loans. The listing of a facility prevents it from receiving any federal contracts, grants, or loans, including subcontracts, subgrants, and subloans, with only limited exemptions. To ensure complete exclusion, listed facilities are included on the General Services Administration's SAM list, which is regularly consulted by federal agencies, state contracting agencies, and even municipalities.¹

However, the scope of the resulting bar from listing does not necessarily apply to other facilities of the same company or to facilities located outside the United States.² Moreover, an agency head may also exempt a facility or class of facilities where it is in the "paramount interest" of the government to enter into the transaction.³

§ 9:299 Permit Blocks

In certain contexts, federal agencies will deny permits to applicants who own or operate facilities in violation of environmental laws. States that administer federal environmental programs also employ permit blocks as sanctions for environmental noncompliance. For example, the Pennsylvania Department of Environmental Resources employs permit blocks in the administration of its solid waste and air quality program.¹ In certain contexts, federal law requires the state administering agency to impose permit blocks. For instance, Section 173(a)(3) of the CAA requires that permits for new or modified facilities in a noncompliant region are only authorized if all other facilities owned or operated by that same individual and/or entity in that state are also in compliance.²

One example of a permit block program administered by the EPA is provided by

⁷2 C.F.R. § 1532.1205.

⁸2 C.F.R. § 1532.1205.

⁹2 C.F.R. § 1532.1400.

¹⁰2 C.F.R. § 1532.1400.

[Section 9:298]

¹See System for Award Management, available at: https://www.sam.gov/portal/SAM/?portal:componentId=e2b08608-5787-4ef8-964e-994c69d33d15&interactionstate=JBPNs_rO0ABXcwABBfanNmQnJpZGdlVmllld0lkAAAAQAPl2pzZi9mb290ZXIuanNwAAdfX0VPRl9f&portal:type=action##11; see also 2 C.F.R. § 180.505.

²2 C.F.R. § 1532.1115.

³2 C.F.R. § 1532.1140.

[Section 9:299]

¹See, e.g., Pa. Stat. Ann. tit. 35, § 6018.503(c) to (d).

²42 U.S.C. § 7503(a)(3) (permits for new or modified major stationary sources in nonattainment

regulations under the Toxic Substances Control Act relating to the storage for disposal of polychlorinated biphenyls ("PCBs").³ Those regulations require commercial storers of PCB waste to submit an application for final storage approval. The application must include, among other things, information relating to past violations of federal or state environmental laws by the applicant or affiliated entities that occurred within the five years preceding the application and that related directly to violations resulting in either a civil penalty or judgment of conviction for storage, disposal, transport, or other waste handling activities.⁴

The environmental compliance history of the applicant, its principals, and its key employees constitute a sufficient basis for denial of PCB storage approval whenever two or more related civil violations or one environmental criminal conviction "evidence[s] a pattern or practice of noncompliance that demonstrate[s] the applicant's unwillingness or inability to achieve and maintain its operations in a compliance status."⁵ However, this determination is discretionary. Amendments have been proposed "to clarify that the existence of two or more related civil violations or a single environmental criminal violation will not automatically lead to denial of an application for a PCB commercial storage approval," but they have not been adopted.⁶

The continuing emergence of regulations such as these, which impose sanctions or penalties based on environmental history or compliance attitude, increase the secondary, long-term effects of environmental violations. The possibility exists that a failure to contest compliance orders or other enforcement actions where legitimate grounds to do so exist (perhaps because of short-term administrative or financial considerations) may come back to haunt the "violating" party when its compliance history is examined. Mitigating or exculpatory issues that might have been raised in opposition to the original enforcement action may be barred from consideration in the subsequent compliance history review. In short, environmental actors should pay close attention to their compliance history and endeavor to keep their records "clean."

areas authorized only if all major stationary sources owned or operated by the owner or operator of the proposed new or modified source in the same state are in compliance with all applicable emissions limitations and standards).

³40 C.F.R. § 761.65.

⁴40 C.F.R. § 761.65(d)(3)(iv).

⁵40 C.F.R. § 761.65(d)(2)(vii).

⁶Polychlorinated Biphenyls (PCBs), 58 Fed. Reg. 6,184 (Jan. 26, 1993).

Chapter 10

The National Environmental Policy Act*

I. ADMINISTRATIVE IMPLEMENTATION OF AND JUDICIAL REVIEW UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

- § 10:1 Overview—Introduction
- § 10:2 —NEPA’s purposes
- § 10:3 — —The first objective: Preventing environmental damage
- § 10:4 — —The second objective: Ensuring that agency decisionmakers take environmental factors into account
- § 10:5 —Agency responsibilities under NEPA
- § 10:6 — —Council on Environmental Quality
- § 10:7 — —Environmental Protection Agency
- § 10:8 — —Other federal agencies
- § 10:9 The administrative process under NEPA
- § 10:10 —Prestatement procedures
- § 10:11 — —The environmental assessment
- § 10:12 — —Finding of no significant impact
- § 10:13 — —Definitions of terms regarding when an EIS is required: Proposals for major federal actions significantly affecting the quality of the human environment
- § 10:14 — — —“Proposal”
- § 10:15 — — —“Other major federal actions”
- § 10:16 — — —“Significantly”
- § 10:17 — — —“Affecting”
- § 10:18 — — —“The quality of the human environment”
- § 10:19 — —Scoping
- § 10:20 —Preparation of the statement
- § 10:21 — —Who prepares the EIS?
- § 10:22 — —The Environmental Impact Statement—Determining the scope of the EIS
- § 10:23 — — —Tiering
- § 10:24 — — —Timing, interdisciplinary approach, and plain language
- § 10:25 — — —Stages and format of the EIS
- § 10:26 — — —Environmental consequences and alternatives
- § 10:27 — — —Incomplete or unavailable information
- § 10:28 — — —Streamlining
- § 10:29 — —Commenting
- § 10:30 — —Response to comments and the final EIS
- § 10:31 —Post-statement procedures—CEQ referrals
- § 10:32 — —Agency decisionmaking and the record of decision
- § 10:33 — —Agency actions during the pendency of an EIS

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- § 10:34 Judicial review—Introduction—The importance of courts in the NEPA process
- § 10:35 — — NEPA litigation in the courts
- § 10:36 — Overview of the judicial process in NEPA cases—The complaint
- § 10:37 — — Venue
- § 10:38 — — Discovery
- § 10:39 — — The course of litigation
- § 10:40 — — Remedies
- § 10:41 — — — Preliminary relief
- § 10:42 — — — Permanent relief
- § 10:43 — — Defenses
- § 10:44 — — — Standing
- § 10:45 — — — Inapplicability of NEPA
- § 10:46 — — — Procedural defenses
- § 10:47 — Standards of review of NEPA cases
- § 10:48 — — Failure to prepare an EIS
- § 10:49 — — Inadequacy of an EIS or EA
- § 10:50 — — Other nontrivial violations of NEPA
- § 10:51 — Substantive review of NEPA actions
- § 10:52 Conclusion

II. NEPA: ETHICS, ECONOMICS, AND SCIENCE IN ENVIRONMENTAL LAW

- § 10:53 Introduction
- § 10:54 Legislative history
- § 10:55 The moral approach to NEPA
- § 10:56 — Environmental values tend to determine interests and preferences
- § 10:57 — Nature and the national ego
- § 10:58 — Man's responsibility for nature
- § 10:59 The market approach to NEPA
- § 10:60 — Norms or preferences?
- § 10:61 — Individual or community choice?
- § 10:62 Mitigation: Reconciling the moral and the market approaches to NEPA
- § 10:63 — Science and technology
- § 10:64 — The consideration of alternatives

III. THE COUNCIL ON ENVIRONMENTAL QUALITY

- § 10:65 In general
- § 10:66 CEQ structure
- § 10:67 CEQ duties
- § 10:68 — Research and analytical duties
- § 10:69 — Coordinating federal agency compliance with NEPA
- § 10:70 — — CEQ regulations
- § 10:71 — — EIS reviews and environmental referrals

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I. ADMINISTRATIVE IMPLEMENTATION OF AND JUDICIAL REVIEW UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

§ 10:1 Overview—Introduction

The National Environmental Policy Act (NEPA) is the most pervasive of America’s panoply of environmental laws. Other statutes seek to conserve specific media (such as air, water, or land), to regulate specific endeavors (such as surface mining or introduction of new chemicals), or to protect specific places or flora or fauna (such as wilderness areas or endangered species). In contrast, NEPA involves all these areas, seeking to balance a broad range of environmental factors as well as “other essential considerations of national policy.”¹ An understanding of NEPA and its processes is a necessary predicate to the practice of environmental law.

Sections 10:2 to 10:8 provide an overview of the legislation, examining Congress’ intent in passing it, its stated purposes, and the institutional actors responsible for its implementation. Sections 10:9 to 10:33 analyze NEPA’s administrative process, placing special emphasis on the stages leading to and including preparation of an environmental impact statement (EIS), NEPA’s most conspicuous requirement. And Sections 10:34 to 10:52 examine the role of the courts in enforcing NEPA and reviewing agency decisions.

§ 10:2 Overview—NEPA’s purposes

[Section 10:1]

¹NEPA § 101(b), 42 U.S.C.A. § 4331(b).

NEPA is “our basic national charter for protection of the environment.”¹ Its purposes and policy, as declared in §§ 2 and 101,² are broadly worded, demonstrating the Act’s wide reach and intent.³ It is the “broadest and perhaps most important of the environmental statutes,”⁴ or, as another court put it, “[t]he centerpiece of environmental regulation in the United States.”⁵ The breadth of its stated goals sets NEPA apart from all other environmental statutes, which regulate specific aspects of our environment. NEPA encompasses all environmental values and forces the federal government and its permittees to bear those values in mind as they plan ahead. To accomplish this task, NEPA sets out two basic and related objectives: preventing environmental damage and ensuring that agency decisionmakers take environmental factors into account.

§ 10:3 Overview—NEPA’s purposes—The first objective: Preventing environmental damage

Section 2 of NEPA expressly declares a purpose of promoting efforts “which will prevent or eliminate damage to the environment” while encouraging productive and enjoyable harmony between people and their environment.¹ Section 101 pursues this objective, declaring it the national environmental policy that the federal government use all practicable means to “fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.”²

Federal agencies’ slighting of these responsibilities and overall lack of concern for environmental protection occasioned NEPA’s passage. Congress had seen accumulating “evidence of environmental mismanagement,”³ and it viewed increasing citizen indignation and protest over federal agency action or inaction as indicative of the “public’s growing concern” about this mismanagement. Congress responded by enacting what NEPA’s Senate author, the late Henry Jackson (D-Wash.), described as “the most important and far-reaching environmental and conservation measure ever enacted.”⁴ NEPA’s House author was no less eloquent in his description of the Act’s protective purpose. Congressman John Dingell (D-Mich.) spoke of man’s

[Section 10:2]

¹40 C.F.R. § 1500.1(a).

²42 U.S.C.A. §§ 4321, 4331.

³The Council on Environmental Quality’s (CEQ) NEPA regulations describe the Act’s purposes and organizational scheme:

The National Environmental Policy Act (NEPA) is our basic national charter for protection of the environment. It establishes policy, sets goals (§ 101), and provides means (§ 102) for carrying out the policy. Section 102(2) contains “action-forcing” provisions to make sure that federal agencies act according to the letter and spirit of the Act. The regulations that follow implement § 102(2). Their purpose is to tell federal agencies what they must do to comply with the procedures and achieve the goals of the Act. The President, the federal agencies, and the courts share responsibility for enforcing the Act so as to achieve the substantive requirements of § 101.

40 C.F.R. § 1500.1(a).

⁴*Oregon Natural Desert Ass’n v. Bureau of Land Management*, 531 F.3d 1114, 1121, 67 Env’t. Rep. Cas. (BNA) 1129 (9th Cir. 2008), opinion amended and superseded on denial of reh’g, 625 F.3d 1092 (9th Cir. 2010).

⁵*New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 703 (10th Cir. 2009) (No. 06-2352).

[Section 10:3]

¹42 U.S.C.A. § 4321.

²42 U.S.C.A. § 4331.

³*See* S. Rep. No. 296, 91st Cong., 1st Sess. 8 (1969). The report listed numerous examples of mismanagement, including both federal activities and federally authorized private activities. S. Rep. No. 296, 91st Cong., 1st Sess. 8 (1969).

⁴115 Cong. Rec. 40416 (1969). Gordon Allott (R-Colo.), ranking House minority member and later

exploitation and free use of the resources provided by his natural environment, “secure in his belief that nature’s bounty would last forever, heedless of any consequences in his headlong push toward greater power and prosperity.”⁵ Dingell continued, “[w]e have not yet learned that we must consider the natural environment as a whole and assess its quality continuously if we really wish to make strides in improving and preserving it.”⁶ Congress determined that federal agencies would never again act without heed to the environment, declaring a “national policy to guide Federal activities which are involved with or related to the management of the environment or which have an impact on the quality of the environment.”⁷

To ensure that federal agencies followed this policy, Congress created in NEPA a statute regulating those agencies.⁸ Congress was aware that “if goals and principles are to be effective, they must be capable of being applied in action.”⁹ Hence, Congress incorporated “certain ‘action-forcing’ provisions and procedures . . . designed to assure that all Federal agencies plan and work toward meeting the challenge of a better environment.”¹⁰ The most important of these “action-forcing” devices is the EIS.¹¹

Senator, stressed that it was “significant [that NEPA] enjoys the sponsorship of every single member of the Senate Interior Committee.” 115 Cong. Rec. 40422 (1969). President Nixon dramatized NEPA’s significance by signing it on January 1, 1970, as “my first official act of the decade.” Council on Environmental Quality, *Environmental Quality 1970*, at viii (1970); see Yost, *Streamlining NEPA—An Environmental Success Story*, 9 B.C. Env’tl. Aff. L. Rev. 507 (1981–1982).

⁵115 Cong. Rec. 26571 (1969).

⁶115 Cong. Rec. 26571 (1969).

⁷S. Rep. No. 296, 91st Cong., 1st Sess. 8 (1969). Senator Jackson explained the national policy to the Senate before its final passage of NEPA:

A statement of environmental policy is more than a statement of what we believe as a people and as a Nation. It establishes priorities and gives expression to our national goals and aspirations. It provides a statutory foundation to which administrators may refer . . . for guidance in making decisions which find environmental values in conflict with other values. What is involved is a congressional declaration that we do not intend, as a government or as a people, to initiate actions which endanger the continued existence or the health of mankind: That we will not intentionally initiate actions which will do irreparable damage to the air, land, and water which support life on earth. An environmental policy is for people. Its primary concern is with man and his future. The basic principle of the policy is that we must strive in all that we do, to achieve a standard of excellence in man’s relationships to his physical surroundings. If there are to be departures from this standard of excellence they should be exceptions to the rule and the policy. And as exceptions, they will have to be justified in the light of the public scrutiny as required by section 102.

115 Cong. Rec. 40416 (1969).

⁸In cases involving federal permitting, leasing, or finding, the law necessarily affects private or state or local government applicants to federal agencies, as well as the agencies themselves.

⁹S. Rep. No. 296, 91st Cong., 1st Sess. 9 (1969). Indeed, NEPA authorizes agencies to make decisions based on environmental factors not expressly identified in the agency’s underlying statute. *Village of Barrington, Ill. v. Surface Transp. Bd.*, 636 F.3d 650, 655 (D.C. Cir. 2011).

¹⁰S. Rep. No. 296, 91st Cong., 1st Sess. 9 (1969). As the final bill came out of conference, Senator Jackson explained that “to insure that the policies and goals defined in this act are infused into the ongoing programs and actions of the Federal Government, the Act . . . establishes some important ‘action-forcing’ procedures.” 115 Cong. Rec. 40416 (1969). According to the CEQ NEPA regulations, “section 102(2) contains ‘action-forcing’ provisions to make sure that federal agencies act according to the letter and spirit of the Act.” 40 C.F.R. § 1500.1(a). The “action-forcing” provisions of NEPA, particularly the EIS requirement, were part of the Senate bill, but not of the House bill; the legislative history of the EIS is found only in the Senate report. See S. Rep. No. 296, 91st Cong., 1st Sess. (1969); see also H.R. Conf. Rep. No. 765, 91st Cong., 1st Sess. (1969), reprinted in *United States Code Congressional and Administrative News* p 2767. See generally *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743 (1989); *Andrus v. Sierra Club*, 442 U.S. 347, 350, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20390, 20391 (1979); *Kleppe v. Sierra Club*, 427 U.S. 390, 409, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20532, 20536–37 (1976).

¹¹According to CEQ’s NEPA regulations, “the primary purpose of an environmental impact statement is to serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government.” 40 C.F.R. § 1502.1. The regulations also state that “ultimately, of course, it is not better documents but better decisions that

§ 10:4 Overview—NEPA’s purposes—The second objective: Ensuring that agency decisionmakers take environmental factors into account

NEPA’s “action-forcing” provisions, particularly those requiring EIS preparation, express Congress’ second objective: ensuring that federal agency decisionmakers give environmental factors appropriate consideration and weight. Informed, environmentally responsible decisionmaking is an objective in itself, as well as the means by which Congress sought to achieve its other NEPA objective—environmental protection.¹ As the District of Columbia Circuit has observed, uninformed decisionmaking is itself a harm that NEPA was meant to address and for which relief may be granted:

The harm against which NEPA’s impact statement requirement was directed was not solely or even primarily adverse consequences to the environment; such consequences may ensue despite the fullest compliance. Rather NEPA was intended to ensure that decisions about federal actions would be made only after responsible decision-makers had fully adverted to the environmental consequences of the actions, and had decided that the public benefits flowing from the actions outweighed their environmental costs. Thus, the harm with which courts must be concerned in NEPA cases is not, strictly speaking, harm to the environment, but rather the failure of decision-makers to take environmental factors into account in the way that NEPA mandates. And, for purposes of deciding whether equitable relief is appropriate, we think that this harm matures simultaneously with NEPA’s requirements, i.e., at the time the agency is, under NEPA, obliged to file the impact statement and fails to do so.²

count. NEPA’s purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action.” 40 C.F.R. § 1500.1(c).

[Section 10:4]

¹As the Supreme Court has stated in *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743, 20746 (1989):

[B]y focusing the agency’s attention on the environmental consequences of a proposed project, NEPA ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast.

See also *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20749 (1989).

²*Jones v. District of Columbia Redev. Land Agency*, 499 F.2d 502, 512, 4 Env’tl. L. Rep. (Env’tl. L. Inst.) 20479, 20483 (D.C. Cir. 1974), cert. denied, 423 U.S. 937 (1975) (footnote omitted). Unlike the substantive policy of the Act, which is flexible and allows for responsible exercise of discretion, “the Act also contains very important ‘procedural’ provisions—provisions which are designed to see that all federal agencies do in fact exercise substantive discretion given them.” *Calvert Cliffs’ Coordinating Comm’n, Inc. v. United States Atomic Energy Comm’n*, 449 F.2d 1109, 1112, 1 Env’tl. L. Rep. (Env’tl. L. Inst.) 20346, 20347 (D.C. Cir. 1971), cert. denied, 404 U.S. 942 (1972); see *Sierra Club v. Sigler*, 695 F.2d 957, 965-67, 13 Env’tl. L. Rep. (Env’tl. L. Inst.) 20210, 20214 (5th Cir. 1983). These procedural provisions “are not highly flexible.” *Calvert Cliffs’ Coordinating Comm’n, Inc. v. United States Atomic Energy Comm’n*, 449 F.2d 1109, 1112, 1 Env’tl. L. Rep. (Env’tl. L. Inst.) 20346, 20347 (D.C. Cir. 1971), cert. denied, 404 U.S. 942 (1972). “Indeed, they establish a strict standard of compliance.” *Calvert Cliffs’ Coordinating Comm’n, Inc. v. United States Atomic Energy Comm’n*, 449 F.2d 1109, 1112, 1 Env’tl. L. Rep. (Env’tl. L. Inst.) 20346, 20347 (D.C. Cir. 1971), cert. denied, 404 U.S. 942 (1972); see also *American Bird Conservancy, Inc. v. F.C.C.*, 516 F.3d 1027, 1033-34, 65 Env’t. Rep. Cas. (BNA) 2025 (D.C. Cir. 2008) (requiring “strict compliance” with procedures). NEPA’s importance lies not only in the aid it gives the agency’s decisionmaking process, but also in the notice it gives the public of environmental issues, both those that the agency is aware of and those that it has missed. *Illinois Commerce Comm’n v. I.C.C.*, 848 F.2d 1246, 1260 (D.C. Cir. 1988), cert. denied, 488 U.S. 1004 (1989). In the Supreme Court’s words, the EIS

ensures that the agency, in reaching its decision, will have available and will carefully consider detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision. . . . Publication of an EIS, both in draft and final form, also serves a larger informational role. It gives the public the assurance that the agency “has indeed considered environmental concerns in its decisionmaking process,” and, perhaps more significantly, provides a springboard for public comment.

More recently the same court has accurately observed that “The idea behind NEPA is that if the agency’s eyes are open to the environmental consequences of its actions and if it considers options that entail less environmental damage, it may be persuaded to alter what it proposed.”³ Or, as articulated by another circuit, NEPA’s purpose is realized not through substantive mandates but through procedures which are “almost certain to affect the agency’s substantive decision[s].”⁴

In the Supreme Court’s words, “NEPA does set forth significant substantive goals for the Nation, but its mandate to the agencies is essentially procedural.”⁵

In crafting these “action-forcing procedures,” Congress envisioned a scheme of agency self-regulation; it did not create a regulatory body to enforce compliance.⁶ This is why judicial enforcement of the Act is so important. The binding Council on Environmental Quality (CEQ) NEPA regulations clearly make all federal actors joint partners in implementing NEPA, stating that “[t]he President, the federal agencies, and the courts share responsibility for enforcing the Act.”⁷

§ 10:5 Overview—Agency responsibilities under NEPA

NEPA and subsequent legislation establish different roles for different agencies. The Act created one agency, the CEQ.¹ However, since NEPA is directed at “all agencies of the Federal Government,”² every federal agency plays a role in its implementation. One such agency occupies a special dual position: the Environmental Protection Agency (EPA) is both an entity regulated under NEPA and a co-participant with the CEQ in the process of overseeing NEPA compliance by other federal agencies.³

§ 10:6 Overview—Agency responsibilities under NEPA—Council on Environmental Quality

NEPA’s House sponsors considered creation of the CEQ the landmark achieve-

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743, 20746 (1989) (citation omitted); see Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 372-73, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20749, 20752 (1989).

³Lemon v. Geren, 514 F.3d 1312, 1315 (D.C. Cir. 2008).

⁴Oregon Natural Desert Ass’n. v. Bureau of Land Management, 531 F.3d 1114, 1121 (9th Cir. 2008).

⁵Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 558, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20288, 20297 (1978). The Supreme Court stated that administrative decisions should be set aside “only for substantial procedural or substantive reasons as mandated by statute.” Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 558, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20288, 20297 (1978). See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743, 20747 (1989).

⁶The CEQ does have NEPA oversight responsibilities, but, as a modestly sized agency within the Executive Office of the President (EOP), it does not have the resources to become involved in individual cases, except in the rare instance where, based on an EIS, an agency head believes that another agency’s proposal is so environmentally harmful that EOP resolution of the issue is merited. The project is then referred to the CEQ, whose power depends largely on persuasion. 40 C.F.R. pt. 1504.

⁷40 C.F.R. § 1500.1(a); see 40 C.F.R. § 1500.6. Despite the mandate on all federal participants, “the substantive backbone of NEPA ultimately is dependent upon the courts’ willingness to order agencies to change their plans or to abandon some pursuits.” W. Rodgers, Handbook on Environmental Law 805 (1977).

[Section 10:5]

¹NEPA § 201, 42 U.S.C.A. § 4341.

²NEPA § 102(2), 42 U.S.C.A. § 4332(2).

³See Clean Air Act § 309, 42 U.S.C.A. § 7609; see also § 10:31.

ment of the new legislation.¹ Congress modeled the new agency on the Council of Economic Advisers (CEA), an organization within the Executive Office of the President (EOP) that gives the President general advice on economic issues. Congress intended that the CEQ provide the same sort of pervasive advice concerning the environment.² The “only precedent and parallel to what is proposed,” said Senator Jackson, was the Full Employment Act of 1946 which declared the national economic policy and established the CEA.³

President Nixon originally charged the CEQ with various environmental oversight responsibilities, including adoption of “guidelines” for all agencies’ implementation of NEPA’s EIS requirement.⁴ President Carter strengthened the CEQ’s role and authority. The CEQ “guidelines” became mandatory regulations, and their scope was broadened beyond EISs to include all “the procedural provisions of the Act.”⁵ The regulations, which in large part codified existing case law, became effective in 1979.⁶ The Supreme Court subsequently described the new measures as a “single set of uniform, mandatory regulations” adopted through a “detailed and comprehensive process, ordered by the President, of transforming advisory guidelines into mandatory regulations applicable to all Federal agencies.”⁷

[Section 10:6]

¹Senate sponsors, on the other hand, viewed as the critical accomplishment of the new Act the linkage between the congressional statement of policy and the “action-forcing” procedures devised to achieve that policy. *Compare* 115 Cong. Rec. 26571–91 (1969) (remarks of Rep. Dingell) and H.R. Rep. No. 378, 91st Cong., 1st Sess. (1969), *reprinted in* United States Code Congressional and Administrative News p 2751, *with* 115 Cong. Rec. 40416 (1969) (remarks of Sen. Jackson).

²*See* S. Rep. No. 296, 91st Cong., 1st Sess. 10 (1969); H.R. Rep. No. 378, 91st Cong., 1st Sess. 8 (1969), *reprinted in* United States Code Congressional and Administrative News pp 2751, 2759. *See also* Pacific Legal Found. v. CEQ, 636 F.2d 1259, 1263–64, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20919, 20920 (D.C. Cir. 1980).

³115 Cong. Rec. 40416 (1969) (remarks of Sen. Jackson).

⁴Exec. Order No. 11514 § 3(h), 3 C.F.R. § 904 (1970).

⁵Exec. Order No. 11991 §§ 2(g), 3(h), 3 C.F.R. §§ 124 to 125 (1977).

⁶40 C.F.R. §§ 1500 to 1508. The regulatory history of the CEQ NEPA regulations appears largely in the Preamble that accompanied their publication in the *Federal Register*. 43 Fed. Reg. 55978 (Nov. 29, 1978). CEQ published its official explanations of the meaning of certain provisions in *Forty Most Asked Questions Concerning CEQ’s NEPA Regulations*, 46 Fed. Reg. 18026 (Mar. 23, 1981); *see also* 51 Fed. Reg. 15618 (Apr. 25, 1986) (Question 20 withdrawn). CEQ has since issued further similar guidance. *See* 48 Fed. Reg. 34263 (July 28, 1983). The most recent appendices to the regulations are Appendix I—List of Federal and Federal-State Agency National Environmental Policy Act (NEPA) Contacts; Appendix II—Federal and Federal-State Agencies with Jurisdiction By Law or Special Expertise On Environmental Quality Issues; and Appendix III—Federal and Federal-State Agency Offices for Receiving and Commenting on Other Agencies’ Environmental Documents. 49 Fed. Reg. 49750 to 49782 (Dec. 21, 1984); for updated lists of agency NEPA liaisons and regulations citations, *see* Council on Environmental Quality, *Environmental Quality 1991*, at 359–72 (1992); *see also* Hearings on Implementation of the National Environmental Policy Act by the Council on Environmental Quality, Subcomm. on Toxic Substances and Env’tl. Oversight, Senate Comm. on Env’t and Pub. Works, 97th Cong., 2d Sess. 77–83 (1983); Hearings on Council on Environmental Quality Reauthorization and Oversight, Subcomm. on Fisheries and Wildlife Conservation and the Env’t, Comm. on Merchant Marine and Fisheries, 98th Cong., 2d Sess. 40–42 (1984); Yost, *Streamlining NEPA—An Environmental Success Story*, 9 B.C. Env’tl. Aff. L. Rev. 507 (1981–1982).

⁷*Andrus v. Sierra Club*, 442 U.S. 347, 357–58, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20390, 20393 (1979); *see* *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743, 20746–48 (1989). The Supreme Court also said that “CEQ’s interpretation of NEPA is entitled to substantial deference.” *Andrus v. Sierra Club*, 442 U.S. 347, 358, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20390, 20393 (1979); *see also* *Robertson v. Methow Valley Citizens Council*, 490 U.S. 350, 355–56, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743, 20748 (1989); *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 377, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20749, 20753 (1989). *See* *Piedmont Environmental Council v. FERC*, 558 F.3d 304, 2009 WL 388237, at *12–13 (4th Cir. 2009) (an agency’s procedures

The CEQ is an organization of modest size within the EOP,⁸ and its limited resources preclude extensive involvement in individual NEPA problems. Thus, its participation in the NEPA process is largely generic. The CEQ adopts regulations applicable to all agencies and oversees adoption of individual agency implementing procedures.⁹ It gets directly involved with individual issues only on rare occasions, such as when it receives “referrals” from EPA under section 309 of the Clean Air Act or from other agencies under part 1504 of the CEQ regulations.¹⁰ The CEQ will also involve itself in an occasional project or program visible enough to warrant a diversion of its limited resources.¹¹

§ 10:7 Overview—Agency responsibilities under NEPA—Environmental Protection Agency

EPA occupies a position somewhere between the CEQ and other federal agencies. Like the CEQ, EPA is a participant in the process of overseeing other agencies’ preparation of EISs. Yet EPA is also a federal agency regulated under NEPA, so it must prepare EISs for certain of its own environmentally protective actions.¹ According to statistics maintained by CEQ, EPA has ranged from fifth among all agencies in number of EISs prepared (1986) to eleventh (1994).²

EPA came to play this unique role partly as a result of a statutory attempt to bridge two approaches to environmental legislation. Under Senator Jackson’s environmental charter approach, embodied in NEPA, Congress gave an all-

revised without consulting CEQ are invalid); *Michigan Gambling Opposition v. Kempthorne*, 525 F.3d 23, 28–29 (D.C. Cir. 2008) (agency not bound to follow its “checklist” which was not part of its CEQ-approved procedures). It is important to emphasize that in interpreting NEPA it is to the CEQ that deference is due, not to the agency undertaking the action. The CEQ is charged with overseeing the Act’s implementation. The actions of other agencies are what is regulated by NEPA. Those agencies, whose conduct NEPA was enacted to redirect, are hardly those to whose interpretations of this Act (unlike statutes which they administer) deference is appropriate. Such agencies, in the context of litigation, universally attempt to justify noncompliance.

⁸See discussion of the CEQ in §§ 10:65 to 10:71.

⁹40 C.F.R. § 1507.3. The Ninth Circuit has said of the CEQ provisions: “The regulations have been enacted in such a way as to remove from the ambit of judicial review any agency decision which meets the requirements of the regulations.” *Seattle Community Council Fed’n v. Federal Aviation Admin.*, 961 F.2d 829, 832 (9th Cir. 1992). CEQ has also issued informal guidance, usually in the form of Memoranda to Heads of Agencies, from time to time. Recent such guidance has covered issuance of efficient and timely NEPA reviews, mitigation and monitoring, programmatic NEPA documents, use of categorical exclusions, and the treatment of climate change issues in NEPA documents (the last of which being subsequently “withdrawn” by Executive Order of President Trump in April 2017). All available at NEPA.gov. CEQ guidance, of course, cannot overrule a CEQ Regulation. *Kentucky Riverkeeper, Inc. v. Rowlette*, 714 F.3d 402, 409, 76 Env’t. Rep. Cas. (BNA) 1776 (6th Cir. 2013).

¹⁰42 U.S.C.A. § 7609; 40 C.F.R. pt. 1504; see § 10:31.

¹¹For example, the CEQ has been involved in the U.S. Army’s decisionmaking process regarding disposal of chemical weapons stockpiles. See Council on Environmental Quality, *Environmental Quality* 1985, at 149–58 (1986). For a discussion of the range of the CEQ’s responsibilities, see generally Hearings on Council on Environmental Quality Reauthorization and Oversight, Subcomm. on Fisheries and Wildlife Conservation and the Env’t, Comm. on Merchant Marine and Fisheries, 98th Cong., 2d Sess. 34–36 (1984).

[Section 10:7]

¹See § 10:20.

²Council on Environmental Quality, *Environmental Quality* 1986, at 245–47 tbl.B-6 (1988); Council on Environmental Quality, *Environmental Quality* 1994–95, at 534 (1996). Many EPA impact statements are occasioned by sewage treatment plant construction or issuance of national pollutant discharge elimination system (NPDES) permits under the Federal Water Pollution Control Act (FWPCA). Other EPA actions have been either statutorily exempted from NEPA or found by courts to be exempt because they provide “functional equivalents” of NEPA procedures. See § 10:45 notes 2–4 and accompanying text.

embracing directive and left administrators to fill in the details. Under Senator Muskie's approach, embodied in the Clean Air Act, a wary Congress gave far more detailed directives and left considerably less scope for agency discretion. In the Clean Air Act, passed one year after NEPA, Congress expressly made EPA the environmental evaluator of all agencies' actions by requiring it to review and comment on the environmental impact of other agencies' projects subject to the EIS requirement.³ Under this authority, EPA not only comments generally on the impact of other agencies' proposals, but publicly rates the quality of their EISs.⁴ EPA also coordinates EIS public notice and distribution procedures by publishing notices of all EISs when they are filed with it.⁵ EPA must refer other agencies' actions to the CEQ if it finds them environmentally unsound.⁶

§ 10:8 Overview—Agency responsibilities under NEPA—Other federal agencies

NEPA makes “all agencies of the Federal Government” participants in pursuing the goal of environmental protection.¹ Only Congress,² the judiciary, and the President are excluded from this broad mandate.³ Section 102 of NEPA requires that agencies “to the fullest extent possible” administer their laws in accordance with the national environmental policy and implement the action-forcing provisions of the Act.⁴ According to the conference committee report on NEPA, this phrase means that agencies are expected to comply with the Act to the fullest extent possible under their statutory authorizations. They are not to interpret the words so as to avoid compliance, nor are they to construe their statutory authorizations excessively

³Clean Air Act § 309, 42 U.S.C.A. § 7609. Section 309 provides:

Policy Review. (a) The Administrator shall review and comment in writing on the environmental impact of any matter relating to duties and responsibilities granted pursuant to this chapter or other provisions of the authority of the Administrator, contained in any (1) legislation proposed by any federal department or agency, (2) newly authorized federal projects for construction and any major federal agency action (other than a project for construction) to which section 4332(2)(C) of this title applies, and (3) proposed regulations published by any department or agency of the Federal Government. Such written comment shall be made public at the conclusion of any such review.

(b) In the event the Administrator determines that any such legislation, action, or regulation is unsatisfactory from the standpoint of public health or welfare or environmental quality, he shall publish his determination and the matter shall be referred to the Council on Environmental Quality.

For discussion of Senator Muskie's intentions regarding this important section, see F. Anderson, NEPA in the Courts, 230–31 (1973); F. Anderson, Federal Environmental Law 268–69 (1974) [hereinafter Federal Environmental Law].

⁴See, e.g., 49 Fed. Reg. 41108 (Oct. 19, 1984). An agency must evaluate EPA's comments, but is not required to follow them. *Alaska Survival v. Surface Transp. Bd.*, 705 F.3d 1073, 1087 (9th Cir. 2013).

⁵40 C.F.R. §§ 1506.9 to 1506.10.

⁶Clean Air Act § 309(b), 42 U.S.C.A. § 7609(b); see § 10:31.

[Section 10:8]

¹NEPA § 102(2), 42 U.S.C.A. § 4332(2).

²In some situations, a proposal to Congress by the executive branch or an independent regulatory agency requires an EIS. NEPA § 102(2)(C), 42 U.S.C.A. § 4332(2)(C); 40 C.F.R. §§ 1506.8, 1508.17.

³*Ground Zero Center for Non-Violent Action v. U.S. Dept. of Navy*, 383 F.3d 1082, 1088, 34 Env'tl. L. Rep. 20100 (9th Cir. 2004) (NEPA's procedures do not apply to the President.). Performance of staff functions for the President in the EOP is also excluded. 40 C.F.R. § 1508.12. For NEPA purposes a “federal agency” may include a state or local government or an Indian tribe that assumes NEPA responsibilities as a condition of receiving funds under § 104(h) of the Housing and Community Development Act of 1974, 42 U.S.C.A. § 5304(a). 40 C.F.R. § 1508.12.

⁴The Supreme Court has interpreted the term “fullest extent possible” as furthering NEPA's environmental mandate. See *Flint Ridge Dev. Co. v. Scenic Rivers Ass'n*, 426 U.S. 776, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20528 (1976).

narrowly.⁵ Indeed, the Act states that its policies and goals are supplementary to those in agencies' existing statutory authorizations.⁶ NEPA thus makes environmental protection the mandate of every federal agency.⁷ Each agency must adopt its own NEPA procedures consistent with and to assist in implementing the CEQ NEPA Regulations.⁸

§ 10:9 The administrative process under NEPA

NEPA's administrative process is most easily understood if it is examined chronologically. Because the EIS is the most conspicuous part of the process,¹ the following discussion is organized chronologically by reference to the EIS. The discussion first covers prestatement procedures—early planning, followed by the decision on whether and when an EIS is required. It then proceeds through preparation of the statement, and finally describes post-statement procedures. This approach parallels the bulk of the CEQ regulations, which trace the NEPA administrative process chronologically from agency planning² through EIS preparation³ to commenting⁴ and referrals of environmentally unsatisfactory projects to the CEQ,⁵ and finally to agency decisions and their implementation.⁶

Other procedural requirements are also summarized throughout the discussion, for while litigation has concentrated largely on the EIS requirement and on the requirement of considering alternatives in less detail in environmental assessments (EAs),⁷ the administrative process shaping all federal agency activity in light of environmental considerations is pervasive. CEQ's NEPA regulations encapsulate the various procedural requirements, in large part codifying case law and the administrative experience of NEPA's early years. Those regulations discuss NEPA's

⁵H.R. Conf. Rep. No. 765, 91st Cong., 1st Sess. 3 (1969), *reprinted in* United States Code Congressional and Administrative News pp 2767, 2770.

⁶NEPA § 105, 42 U.S.C.A. § 4335. A more ambiguous provision, NEPA § 105, 42 U.S.C.A. § 4334, was intended to harmonize NEPA and the pollution abatement legislation simultaneously being considered by Congress. The somewhat uneasy result is discussed in § 10:34.

⁷Calvert Cliffs' Coordinating Comm'n, Inc. v. United States Atomic Energy Comm'n, 449 F.2d 1109, 1112, 1 Env'tl. L. Rep. (Env'tl. L. Inst.) 20346, 20347 (D.C. Cir. 1971). For examples of judicial approval of agencies' use of NEPA to expand their mandates, *see, e.g.*, Detroit Edison Co. v. NRC, 630 F.2d 540, 10 Env'tl. L. Rep. (Env'tl. L. Inst.) 20879 (6th Cir. 1980); Gulf Oil Corp. v. Morton, 493 F.2d 141, 4 Env'tl. L. Rep. (Env'tl. L. Inst.) 20086 (9th Cir. 1973); Zabel v. Tabb, 430 F.2d 199, 1 Env'tl. L. Rep. (Env'tl. L. Inst.) 20023 (5th Cir. 1970), cert. denied, 401 U.S. 910 (1971).

⁸40 C.F.R. § 1507.3. An agency's procedures adopted without consulting CEQ are invalid. Piedmont Environmental Council v. F.E.R.C., 558 F.3d 304, 317-319, 68 Env't. Rep. Cas. (BNA) 1324 (4th Cir. 2009). Therefore, an agency is not bound to follow its NEPA "checklist" which was not part of the CEQ approved procedures. Michigan Gambling Opposition v. Kempthorne, 525 F.3d 23, 28-29 (D.C. Cir. 2008).

[Section 10:9]

¹NEPA § 102(2)(C), 42 U.S.C.A. § 4332(2)(C). While NEPA § 102(2)(E), 42 U.S.C.A. § 4332(2)(E), also requires agencies to consider alternatives, independent of the requirement that they prepare EISs, it is the EIS process that has occasioned the bulk of the litigation under NEPA.

²40 C.F.R. pt. 1501.

³40 C.F.R. pt. 1502.

⁴*See* NEPA § 1029(1), 42 U.S.C.A. § 4332(1) ("the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, . . .").

⁵40 C.F.R. pt. 1504.

⁶40 C.F.R. pt. 1505.

⁷40 C.F.R. § 1508.9.

purposes,⁸ provide uniform terminology,⁹ make clear what agencies must do to enable themselves to comply with NEPA,¹⁰ and summarize various other NEPA requirements.¹¹ Throughout the analysis of NEPA's administrative process, it is important to remember that all of NEPA's procedural requirements must be strictly observed.¹²

It is also useful to remember that those procedural requirements are to be interpreted in light of NEPA's purposes.¹³ The procedures of § 102 are, after all, merely means of carrying out the policies of § 101.¹⁴ Ultimately, the regulations caution that "it is not better documents but better decisions that count."¹⁵ NEPA's purpose is "not to generate paperwork—even excellent paperwork—but to foster excellent action."¹⁶

Above all, it should be stressed that although the Act forces decisionmakers to pay heed to environmental factors, the CEQ NEPA regulations are also designed to reduce paperwork¹⁷ and delay.¹⁸ Implementation of NEPA's administrative procedures must be sensitive to these two goals.¹⁹

§ 10:10 The administrative process under NEPA—Prestatement procedures

The NEPA process begins with agency planning¹ and requires that environmental considerations be integrated into that planning.² The CEQ regulations give agencies detailed guidance on how to accomplish this integration.³ They also provide direction for situations in which an applicant, rather than a federal agency, is developing a proposal.⁴

Once an agency begins to plan an action,⁵ it must determine whether it must complete an EIS on the proposed action. This threshold determination is governed

⁸40 C.F.R. pt. 1500.

⁹40 C.F.R. pt. 1508.

¹⁰40 C.F.R. pt. 1507.

¹¹40 C.F.R. pt. 1506.

¹²*Calvert Cliffs' Coordinating Comm'n, Inc. v. United States Atomic Energy Comm'n*, 449 F.2d 1109, 1112, 1 Env'tl. L. Rep. (Env'tl. L. Inst.) 20346, 20347 (D.C. Cir. 1971). The NEPA regulations do caution that "trivial violations" are not intended to give rise to independent causes of action. 40 C.F.R. § 1500.3.

¹³*See generally* 40 C.F.R. pt. 1500.

¹⁴*See* NEPA § 1029(1), 42 U.S.C.A. § 4332(1) ("the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, . . ."). 40 C.F.R. § 1500.1. The CEQ regulations stress that the President, federal agencies, and the courts share responsibility for enforcing the Act so as to achieve the substantive requirements of § 101. 40 C.F.R. § 1500.1(a).

¹⁵40 C.F.R. § 1500.1(c).

¹⁶40 C.F.R. § 1500.1(c).

¹⁷40 C.F.R. § 1500.4.

¹⁸40 C.F.R. § 1500.5.

¹⁹*See* Exec. Order No. 11991, 3 C.F.R. § 123 (1977).

[Section 10:10]

¹40 C.F.R. pt. 1501.

²40 C.F.R. § 1501.1(a).

³40 C.F.R. § 1501.2.

⁴40 C.F.R. § 1501.2(d).

⁵There must, of course, be an underlying proposed "action" for NEPA to apply. *See Grand Canyon Trust v. U.S. Bureau of Reclamation*, 691 F.3d 1008, 1022, 75 Env't. Rep. Cas. (BNA) 1869 (9th Cir. 2012), as amended, (Sept. 17, 2012) (NEPA doesn't apply to routine annual reporting); *but see Karuk*

by NEPA, the CEQ regulations, and the agency's own procedures. Agency compliance actions can be divided into three categories. First, agency procedures may provide for "categorical exclusions"⁶ of categories of actions that individually or cumulatively do not have significant effects on the environment.⁷ Since actions in these categories do not require EISs, the agency may simply proceed with them.⁸ Second, agency procedures may specify cases that normally do require EISs; in such cases, the agency undertakes the process leading to EIS preparation.⁹ Third, an agency may not have decided in advance whether a given type of action requires an EIS. In such a situation—the occasion for both disputes and litigation—the agency is to prepare an EA before proceeding.¹⁰

While the CEQ regulations set out the minimum requirements for considering environmental impacts, NEPA always permits agencies to do more if they choose. Thus, if a situation is categorically excluded, an agency could decide to prepare an EA or EIS anyway. Similarly, if an EA would initially suffice, the agency could nonetheless undertake an EIS directly without first preparing an EA. Agencies may do this when they want to avoid controversy, or when they genuinely desire the additional environmental analysis that more complete documentation would provide.

§ 10:11 The administrative process under NEPA—Prestatement procedures—The environmental assessment

The EA is a concise public document designed to provide sufficient evidence and analysis for an agency to determine whether to prepare an EIS or a finding of no significant impact (FONSI).¹ An EA may also help an agency comply with NEPA

Tribe of California v. U.S. Forest Service, 681 F.3d 1006, 1021-22, 74 Env't. Rep. Cas. (BNA) 1737 (9th Cir. 2012), cert. denied, 133 S. Ct. 1579, 185 L. Ed. 2d 575, 76 Env't. Rep. Cas. (BNA) 1768 (2013) (en banc), which in interpreting the Endangered Species Act takes a broad view of agency action.

⁶40 C.F.R. § 1507.3(b)(2)(ii); see CEQ, Memorandum for Heads of Federal Departments and Agencies, "Establishing, Applying, and Revising Categorical Exclusions Under the National Environmental Policy Act," Nov. 23, 2010 (available at NEPA.gov); *U.S. v. Coalition for Buzzards Bay*, 644 F.3d 26, 73 Env't. Rep. Cas. (BNA) 1009, 2011 A.M.C. 1217 (1st Cir. 2011); *Wong v. Bush*, 542 F.3d 732, 737 (9th Cir. 2008) (if categorically excluded, EIS requirements inapplicable); *Sierra Club v. Bosworth*, 510 F.3d 1016, 1027 (9th Cir. 2007) (allowing challenge to categorical exclusion).

⁷40 C.F.R. § 1508.4. The regulation provides that even when there is an applicable categorical exclusion, if there are "extraordinary circumstances" present, the agency procedures must provide for the preparation of an environmental assessment or an environmental impact statement. 40 C.F.R. §§ 1507.3, 1508.4; *Town of Marshfield v. Federal Aviation Administration*, 552 F.3d 1, 3 (1st Cir. 2008); see *California v. Norton*, 311 F.3d 1162, 1168, 55 Env't. Rep. Cas. (BNA) 1449, 33 Env't. L. Rep. 20119, 157 O.G.R. 181 (9th Cir. 2002); *Rhodes v. Johnson*, 153 F.3d 785 (7th Cir. 1998).

⁸40 C.F.R. § 1501.4(a)(2); A categorical exclusion must, however, be sufficiently documented such that the reviewing court can determine whether the agency considered its applicability. *Wilderness Watch and Public Employees for Env'tl. Responsibility v. Mainella*, 375 F.3d 1085 (11th Cir. 2004). While deference is due to an agency's construction of its own categorical exclusion (*City of Alexandria, Va. v. Federal Highway Admin.*, 756 F.2d 1014, 1020-21 (4th Cir. 1985)), a court may review and invalidate the agency's reliance on a categorical exclusion (*West v. Secretary of Dep't of Transp.*, 206 F.3d 920 (9th Cir. 2000)); see *U.S. v. Coalition for Buzzards Bay*, 644 F.3d 26, 73 Env't. Rep. Cas. (BNA) 1009, 2011 A.M.C. 1217 (1st Cir. 2011); *Sierra Club v. Bosworth*, 510 F.3d 1016, 1027, 65 Env't. Rep. Cas. (BNA) 1545 (9th Cir. 2007); *California ex rel. Lockyer v. U.S. Dept. of Agriculture*, 575 F.3d 999, 69 Env't. Rep. Cas. (BNA) 1161 (9th Cir. 2009).

⁹40 C.F.R. § 1507.3(b)(2)(i); 40 C.F.R. § 1501.3(a), 40 C.F.R. § 1501.4(a)(1).

¹⁰40 C.F.R. §§ 1501.4(b), 1508.9. By way of illustration, see *Anacostia Watershed Soc'y v. Babbitt*, 871 F. Supp. 475, 25 Env't. L. Rep. (Env't. L. Inst.) 20745 (D.D.C. 1994).

[Section 10:11]

¹40 C.F.R. § 1508.9(a)(1).

when no EIS is needed,² and may facilitate preparation of an EIS when one is needed.³ An EA must include brief discussions of the need for the proposed action, the alternatives required under NEPA § 102(2)(E), and the environmental impacts of both the proposed action and the alternatives.⁴ The EA must also list the agencies and persons consulted during its preparation.⁵

§ 10:12 The administrative process under NEPA—Prestatement procedures—Finding of no significant impact

Preparation of an EA can lead to one of two results. If the agency finds, based on the EA, that its proposal will have no significant impact on the environment, it prepares a Finding of No Significant Impact or FONSI, and no EIS is required.¹ A FONSI is a document briefly explaining why the proposal will have no such impact. A FONSI must include the EA or a summary of it and must note any other environmental documents related to the EA.²

If, on the other hand, the agency determines in its EA that there may or will be a significant environmental impact, it takes the first steps toward preparing an EIS.³

§ 10:13 The administrative process under NEPA—Prestatement procedures—Definitions of terms regarding when an EIS is required: Proposals for major federal actions significantly affecting the quality of the human environment

NEPA never actually uses the phrase “environmental impact statement.” Rather, it requires a “detailed statement” that includes discussions of various environmental

²40 C.F.R. § 1508.9(a)(2).

³40 C.F.R. § 1508.9(a)(3).

⁴Several circuits have opined that given that an EA involves lesser impacts (i.e., not “significant”) than an EIS, a lesser range of alternatives need to be examined to address those impacts. *See, e.g.,* *Save Our Cumberland Mountains v. Kempthorne*, 453 F.3d 334, 62 Env’t. Rep. Cas. (BNA) 1833, 36 Env’t. L. Rep. 20118, 2006 FED App. 0214P (6th Cir. 2006); *Native Ecosystems Council v. U.S. Forest Service*, 428 F.3d 1233, 1246, 35 Env’t. L. Rep. 20226 (9th Cir. 2005).

⁵40 C.F.R. § 1508.9(b). The First Circuit has accurately characterized the law and regulations as not requiring public circulation of every EA (*Alliance to Protect Nantucket Sound, Inc. v. United States Dep’t of Army*, 398 F.3d 105 (1st Cir. 2005)), although many high visibility EAs are as a matter of practice so circulated. The Ninth Circuit has now come into line with the other circuits in holding that EAs need not be circulated to the public in all instances. *Bering Straits Citizens for Responsible Resource Development v. U.S. Army Corps of Engineers*, 511 F.3d 1011, 1026 (9th Cir. 2008), opinion amended and superseded on denial of reh’g by 524 F.3d 938 (9th Cir. 2008) (“An agency, when preparing an EA, must provide the public with sufficient environmental information, considered in the totality of circumstances, to permit members of the public to weigh in with their views and thus inform the agency decision-making process.”).

[Section 10:12]

¹40 C.F.R. § 1501.4(e). CEQ has issued guidance on when mitigation may be sufficient to reduce the action’s impacts below the threshold of significance, thereby obviating the need for an EIS—the so-called “mitigated FONSI” situation. Memoranda for Head of Federal Departments and Agencies, “Appropriate Use of Mitigation and Monitoring and Clarifying the Use of Mitigated Findings of No Significant Impact,” Jan. 14, 2011 (available at NEPA.gov).

²40 C.F.R. § 1508.13. A FONSI that includes an EA need not repeat the discussion in the EA but may incorporate it by reference. A FONSI must be supported by convincing reasons. *Alaska Wilderness League v. Kempthorne*, 548 F.3d 815, 824 (9th Cir. 2008), opinion withdrawn and vacated by 559 F.3d 916 (9th Cir. 2008) and opinion superseded, 2009 WL 1856025 (9th Cir. 2009).

³40 C.F.R. §§ 1501.4(d), 1508.3, 1508.11.

impacts.¹ This statement is to be included by all agencies in “every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.”² The CEQ regulations elaborate on every word or phrase in this, the most litigated language in NEPA.

§ 10:14 The administrative process under NEPA—Prestatement procedures—Definitions of terms regarding when an EIS is required: Proposals for major federal actions significantly affecting the quality of the human environment—“Proposal”

The regulations define the term “proposal” largely in terms of timing. A “proposal” exists when an agency has a goal and is actively preparing to make a decision on one or more means of accomplishing it, and the effects of that decision can be meaningfully evaluated.¹ This definition essentially steers a line between two sets of concerns. First, the Supreme Court has held that EISs are not required until prospective proposals are more concrete than mere contemplation.² Second, administrators and applicants are concerned that EIS preparation not be put off so as to delay underlying actions. The regulations require that an EIS be timed so that it will be complete and ready to be included in the agency’s report or recommendation on the proposal.³

Proposals for legislation differ from other agency proposals for action in that the agency has no control over the action that is the subject of the EIS—the legislation. Rather, that control lies with a congressional committee. The CEQ regulations reflect this difference by providing a modified set of administrative procedures for legislative proposals, integrating the NEPA process with the legislative process.⁴ On a related matter, the Supreme Court has upheld the CEQ’s determination that NEPA’s legislative EIS requirement does not extend to requests for appropriations.⁵

§ 10:15 The administrative process under NEPA—Prestatement procedures—Definitions of terms regarding when an EIS is required: Proposals for major federal actions significantly affecting the quality of the human environment—“Other major federal actions”

In contrast to the modified requirements for proposals for legislation, the NEPA procedures for proposals for “other major Federal actions”¹ are more commonly used, since these actions occasion the preparation of most EISs. “Other major

[Section 10:13]

¹NEPA § 102(2)(C), 42 U.S.C.A. § 4332(2)(C); *see* 40 C.F.R. § 1508.11.

²NEPA § 102(2)(C), 42 U.S.C.A. § 4332(2)(C); 40 C.F.R. § 1502.3.

[Section 10:14]

¹40 C.F.R. § 1508.23.

²*Kleppe v. Sierra Club*, 427 U.S. 390, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20532 (1976); *see also* *Montana Ecosystems Defense Council v. Espy*, 15 F.3d 1087, 24 Env’tl. L. Rep. (Env’tl. L. Inst.) 20501 (9th Cir. 1994).

³40 C.F.R. § 1508.23.

⁴40 C.F.R. §§ 1506.8, 1508.17, 1508.18(a). Only a limited number of EISs are prepared on proposals for legislation. *See* A Primer, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 10060, 10067–68 (Feb. 1989) (discussing inattention to legislative EISs).

⁵*See* *Andrus v. Sierra Club*, 442 U.S. 347, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20390 (1979); 40 C.F.R. § 1508.17.

[Section 10:15]

¹NEPA § 102(2)(C), 42 U.S.C.A. § 4332(2)(C); 40 C.F.R. § 1508.18.

Federal actions” are defined broadly to include “projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals.”² Federal activities that may occasion EISs thus fall into four categories, sometimes known as the “four P’s”—policies, plans, programs, and projects.³

The NEPA regulations further define the term to include actions potentially subject to federal control and responsibility.⁴ The regulations also state that “major” reinforces but has no meaning independent of “significantly.”⁵ This CEQ determination follows a well-reasoned line of cases,⁶ and was quoted with apparent approval by the Supreme Court in *Andrus v. Sierra Club*.⁷ Finally, the regulations provide that in certain circumstances, a failure to act can also be an “action.”⁸

§ 10:16 The administrative process under NEPA—Prestatement procedures—Definitions of terms regarding when an EIS is required: Proposals for major federal actions significantly affecting the quality of the human environment—“Significantly”

The term “significantly” presents the threshold for the EIS requirement, and no other term in NEPA has been the subject of more attention. Although there has been much litigation on the meaning of the word, the cases have been very fact-

²40 C.F.R. § 1508.18(a).

³40 C.F.R. § 1508.18(b); *Norton v. Southern Utah Wilderness Alliance*, 542 U.S. 55, 124 S. Ct. 2373, 2384, 159 L. Ed. 2d 137 (2004) (approval of a plan is a major federal action potentially requiring an EIS).

⁴40 C.F.R. § 1508.18. For a discussion of what is “federal,” see W. Rodgers, *Handbook on Environmental Law* 761 (1977); Ellis & Smith, *The Limits of Federal Environmental Responsibility and Control Under the National Environmental Policy Act*, 18 *Envtl. L. Rep. (Envtl. L. Inst.)* 10055 (Feb. 1988). By way of examples where federal involvement was held to be so minimal as not to constitute major federal action, see *Scarborough Citizens Protecting Resources v. U.S. Fish and Wildlife Service*, 674 F.3d 97 (1st Cir. 2012) (state’s conveyance of easement that crossed federal land was not a major federal action); *Macht v. Skinner*, 916 F.2d 13, 21 *Envtl. L. Rep. (Envtl. L. Inst.)* 20004 (D.C. Cir. 1990) (UMTA funding of preliminary studies does not rise to the level of major federal action); *Maryland Conservation Council v. Gilchrist*, 408 F.2d 1039, 17 *Envtl. L. Rep. (Envtl. L. Inst.)* 20499 (4th Cir. 1986); *Sabine River Auth. v. United States Dep’t of the Interior*, 951 F.2d 669, 22 *Envtl. L. Rep. (Envtl. L. Inst.)* 20239 (5th Cir. 1992); *Village of Los Ranchos de Albuquerque v. Barnhart*, 906 F.2d 1477, 20 *Envtl. L. Rep. (Envtl. L. Inst.)* 21433 (10th Cir. 1990) (though eligible for federal funding, did not seek it; federal location study funds minuscule proportion of total); *United States v. 0.95 Acres of Land*, 994 F.2d 696, 23 *Envtl. L. Rep. (Envtl. L. Inst.)* 20997 (9th Cir. 1993) (filing of condemnation proceeding not a major federal action); *Citizen Advocacy Ctr. v. Dupage Airport Auth.*, 141 F.3d 713, 28 *Envtl. L. Rep. (Envtl. L. Inst.)* 21105 (7th Cir. 1998) (when no federal funds or permit needed for a runway expansion, not a major federal action); *Rattlesnake v. U.S. EPA*, 509 F.3d 1095, 1101 (9th Cir. 2007) (looks to extent of federal funding and involvement).

⁵40 C.F.R. § 1508.18.

⁶*See, e.g., Minnesota Pub. Interest Research Group v. Butz*, 498 F.2d 1314, 4 *Envtl. L. Rep. (Envtl. L. Inst.)* 20700 (8th Cir. 1974) (en banc), permanent injunction issued, 401 F. Supp. 1276, 6 *Envtl. L. Rep. (Envtl. L. Inst.)* 20133 (D. Minn.), injunction dissolved, 541 F.2d 1292, 6 *Envtl. L. Rep. (Envtl. L. Inst.)* 20736 (8th Cir. 1975). In following this line of cases, the CEQ rejected another. *See, e.g., NAACP v. Wilmington Medical Ctr., Inc.*, 584 F.2d 619, 8 *Envtl. L. Rep. (Envtl. L. Inst.)* 20699 (3d Cir. 1978).

⁷*Andrus v. Sierra Club*, 442 U.S. 347, 361 n. 20, 9 *Envtl. L. Rep. (Envtl. L. Inst.)* 20390, 20394 (1979). For the legislative history of the CEQ regulations, *see* Preamble, 43 *Fed. Reg.* 56978, 55989 (Nov. 29, 1978).

⁸40 C.F.R. § 1508.18. At the same time mere continuation of the status quo is not a federal “action.” *Fund for Animals v. Thomas*, 127 F.3d 80, 29 *Envtl. L. Rep. (Envtl. L. Inst.)* 20196 (D.C. Cir. 1997).

specific.¹ As a result, rather than formulating a universal interpretation, the CEQ regulations distill generalized direction from case law, and present this direction as a nonexclusive checklist.²

The regulations define “significantly” in terms of both “context”³ and “intensity.”⁴ The former term recognizes that significance varies with the setting of the proposed action and also indicates that an action should be viewed from several different perspectives (*e.g.*, local, regional, and national).⁵ The latter term refers to severity of impact and is to be evaluated according to various listed factors, including beneficial as well as adverse impacts;⁶ effects on public health or safety;⁷ unique characteristics of a geographic area;⁸ whether the effects are highly controversial;⁹ whether there are highly uncertain effects or unique or unknown risks;¹⁰ whether the action may establish a precedent;¹¹ whether the action is related to other actions with individually insignificant but cumulatively significant effects;¹² whether historic, cultural, or scientific resources are affected;¹³ whether endangered or threatened species are involved;¹⁴ and whether the action threatens to violate federal, state, or local requirements protecting the environment.¹⁵ In NEPA litigation, factual showings are likely to revolve around one or more of these factors.

§ 10:17 The administrative process under NEPA—Prestatement procedures—Definitions of terms regarding when an EIS is required: Proposals for major federal actions significantly affecting the quality of the human environment—“Affecting”

The regulations define “affecting” to mean “will or may have an effect on.”¹ The rationale for this definition lies in the phraseology of NEPA itself, and is supported

[Section 10:16]

¹For summaries of some of these cases, see W. Rodgers, Handbook on Environmental Law 750–61 (1977). To this the Supreme Court has, departing from the statutory test of significance, has added its own test of usefulness. *Department of Transp. v. Public Citizen*, 541 U.S. 752, 124 S. Ct. 2204, 159 L. Ed. 2d 60 (2004).

²40 C.F.R. § 1508.27. *See also* *North Carolina v. FAA*, 957 F.2d 1125 (4th Cir. 1992). Courts defer to agencies in technical and scientific matters in determining significance. *Sierra Club v. Wagner*, 555 F.3d 21 (1st Cir. 2009).

³40 C.F.R. § 1508.27(a).

⁴40 C.F.R. § 1508.27(b).

⁵40 C.F.R. § 1508.27(a).

⁶40 C.F.R. § 1508.27(b)(1).

⁷40 C.F.R. § 1508.27(b)(2).

⁸40 C.F.R. § 1508.27(b)(3). These unique characteristics include proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

⁹40 C.F.R. § 1508.27(b)(4). *See Greenpeace Action v. Franklin*, 982 F.2d 1342, 23 Env'tl. L. Rep. (Env'tl. L. Inst.) 20639 (9th Cir. 1992), opinion amended and superseded on denial of reh'g, 14 F.3d 1324 (9th Cir. 1992).

¹⁰40 C.F.R. § 1508.27(b)(5).

¹¹40 C.F.R. § 1508.27(b)(6).

¹²40 C.F.R. § 1508.27(b)(7). Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts. *See also* 40 C.F.R. § 1508.7.

¹³40 C.F.R. § 1508.27(b)(8).

¹⁴40 C.F.R. § 1508.27(b)(9).

¹⁵40 C.F.R. § 1508.27(b)(10).

[Section 10:17]

¹40 C.F.R. § 1508.3. The Supreme Court has said that NEPA requires a reasonably close causal relationship between the environmental effect and the alleged cause. *Department of Transp. v. Public*

by case law.² If there will be no significant environmental impact, no EIS is required. An EIS is required, however, both when a significant impact is certain and when it is not known whether there will be such an impact.³

The regulations define “effects” to include both “direct effects,” those that are caused by the action and occur at the same time and place,⁴ and “indirect effects,” those that are caused by the action and occur later or farther away but are still reasonably foreseeable.⁵ Indirect effects may include growth-inducing effects and other effects of induced changes in land use patterns.⁶ Environmental “effects” are generally synonymous with environmental “impacts” and encompass a broad range—ecological, aesthetic, historic, cultural, economic, social, and health effects.⁷ Socio-economic impacts may only be considered, however, if they accompany physical impacts.⁸ “Effects” include both the beneficial and the detrimental effects of an action, even if an agency considers the overall impact beneficial.⁹

§ 10:18 The administrative process under NEPA—Prestatement procedures—Definitions of terms regarding when an EIS is required: Proposals for major federal actions significantly affecting the quality of the human environment—“The quality of the human environment”

The final term in § 102(2)(C)’s description of when an EIS is required is “the quality of the human environment.” The regulations interpret this term comprehensively “to include the natural and physical environment and the relationship of people

Citizen, 541 U.S. 752, 124 S. Ct. 2204, 159 L. Ed. 2d 60 (2004).

²See, e.g., *Save Our Ten Acres v. Kreger*, 472 F.2d 463, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20041 (5th Cir. 1973); *Lockhart v. Kenops*, 927 F.2d 1028, 1033, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 20994, 20996 (8th Cir. 1991).

³See *Louisiana v. Lee*, 758 F.2d 1081, 1084-85, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20609, 20610-11 (5th Cir. 1985), cert. denied sub nom. *Dravo Basic Materials Co. v. Louisiana*, 475 U.S. 1044 (1986); see also *Sierra Club v. Marsh*, 769 F.2d 868, 871, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20911, 20912 (1st Cir. 1985); *Foundation for N. Am. Wild Sheep v. Department of Agric.*, 681 F.2d 1172, 1178, 12 Env’tl. L. Rep. (Env’tl. L. Inst.) 20968, 20969 (9th Cir. 1982); *Minnesota Pub. Interest Research Group v. Butz*, 498 F.2d 1314, 1320, 4 Env’tl. L. Rep. (Env’tl. L. Inst.) 20700, 20702-03 (8th Cir. 1974); *Hanly v. Kleindienst*, 471 F.2d 823, 831, 2 Env’tl. L. Rep. (Env’tl. L. Inst.) 20717, 20720-21 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973); see also *W. Rodgers*, *Handbook on Environmental Law* 754-55 (1977).

⁴40 C.F.R. § 1508.8(a).

⁵40 C.F.R. § 1508.8(b); *Ground Zero Center for Non-Violent Action v. United States Dep’t of Navy*, 383 F.3d 1083, 1090 (9th Cir. 2004). By way of example of a court dealing with the reach of required analysis of impacts under NEPA, see *Lockhart v. Kenops*, 927 F.2d 1028, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 20994 (8th Cir. 1991) (when exchanging land with a private party the agency must examine the impacts of that party’s use of the land acquired from the government, but, absent sham, need not look at potential uses by subsequent purchasers).

⁶40 C.F.R. § 1508.8(b); *Ground Zero Center for Non-Violent Action v. United States Dep’t of Navy*, 383 F.3d 1083, 1090 (9th Cir. 2004). These indirect effects were sometimes called “secondary impacts” prior to adoption of the CEQ NEPA regulations. The regulations opted for the direct-indirect distinction rather than the primary-secondary one because the latter sometimes led to the not necessarily accurate conclusion that secondary meant less important.

⁷40 C.F.R. § 1508.8(b); *Ground Zero Center for Non-Violent Action v. United States Dep’t of Navy*, 383 F.3d 1083, 1090 (9th Cir. 2004).

⁸40 C.F.R. § 1508.14. See *Douglas County v. Babbitt*, 48 F.3d 1495, 25 Env’tl. L. Rep. (Env’tl. L. Inst.) 20631 (9th Cir. 1995).

⁹40 C.F.R. § 1508.8(b); *Ground Zero Center for Non-Violent Action v. United States Dep’t of Navy*, 383 F.3d 1083, 1090 (9th Cir. 2004).

with that environment.”¹ Economic and social effects by themselves do not require preparation of an EIS, but when an EIS is prepared and economic or social and natural or physical environmental effects are interrelated, the EIS must discuss all of them.²

§ 10:19 The administrative process under NEPA—Prestatement procedures—Scoping

Once an agency determines through an EA or otherwise that a proposal may significantly affect the environment, it must prepare an EIS. The next step is “scoping,” defined by the regulations as “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.”¹ The initiative will have been taken by the lead agency,² assisted by other agencies with jurisdiction or expertise, called cooperating agencies.³

One purpose of scoping is to notify and involve all agencies and individuals concerned about the proposed action. Another is to identify issues that should be analyzed in-depth and eliminate from study those that are not significant.⁴ To help achieve these purposes, the regulations encourage, but do not require, agencies to hold scoping meetings.⁵ Finally, scoping is the appropriate occasion for an agency to set time limits for the entire NEPA process.⁶ The agency may do this on its own, and “shall” do it if an applicant so requests.⁷ This requirement was the provision in the CEQ NEPA Regulations most ardently urged by the business community, represented by the U.S. Chamber of Commerce. It is also, in the author’s opinion, the most underused provision. Applicants are reluctant to insist on time limits, even when, retrospectively, it would clearly have been in their interest to do so.

§ 10:20 The administrative process under NEPA—Preparation of the statement

[Section 10:18]

¹40 C.F.R. § 1508.14.

²40 C.F.R. § 1508.14. In February 1994, President Clinton issued an executive order relating to environmental justice. Exec. Order No. 12898, 59 Fed. Reg. 7629 (Feb. 11, 1994). Although the executive order is silent as to NEPA, in a memorandum of the same date the President said that when feasible NEPA documents should address the effects of federal actions on minority and low-income communities. White House, Memorandum for All Heads of All Departments and Agencies Regarding Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (Feb. 11, 1994).

[Section 10:19]

¹40 C.F.R. §§ 1501.7, 1508.25. *See generally* Memorandum from CEQ to General Counsel, NEPA Liaisons, and Participants in Scoping, Scoping Guidance (Apr. 30, 1981). No scoping is required for EISs on legislative proposals. 40 C.F.R. § 1506.8.

²40 C.F.R. § 1501.5.

³40 C.F.R. §§ 1501.6, 1508.5; *see* North Buckhead Civic Ass’n v. Skinner, 903 F.2d 1533, 20 Env’tl. L. Rep. (Env’tl. L. Inst.) 21061 (11th Cir. 1990).

⁴40 C.F.R. § 1501.7. *See* Northwest Coalition for Alternatives to Pesticides v. Lyng, 844 F.2d 588, 594-95, 18 Env’tl. L. Rep. (Env’tl. L. Inst.) 20738, 20741-42 (9th Cir. 1988) (agency violated spirit and letter of CEQ scoping regulations by failing to invite environmental organizations that had previously enjoined agency’s proposal).

⁵40 C.F.R. § 1501.7(b)(4). Note, however, that most agency NEPA procedures now include provisions for public scoping hearings.

⁶40 C.F.R. §§ 1501.7(b)(2), 1501.8.

⁷40 C.F.R. § 1501.8(a).

The next step in the NEPA process is preparation of the EIS itself.¹ At the outset, it is important to stress several aspects of the EIS. First and foremost, the EIS is not an end in itself, but rather a tool to promote environmentally sensitive decisionmaking.² Second, the document is to be analytic rather than encyclopedic.³ It is to be concise—no longer than absolutely necessary to meet the law's requirements.⁴ The regulations, in fact, impose a page limit of 150 pages, although they allow up to 300 pages for proposals of unusual scope or complexity.⁵ Third, the statement should indicate how the proposal will achieve the policies of NEPA.⁶ Above all, the EIS should be used to assess environmental impacts, not to justify decisions already made.⁷

With these considerations in mind, we now review the actual process of preparing an EIS, first determining who prepares the statement and then analyzing the chronological sequence of preparation.

§ 10:21 The administrative process under NEPA—Preparation of the statement—Who prepares the EIS?

It is important to emphasize that NEPA requires federal agencies to be the entities preparing EISs, but, as will appear below, others may prepare supporting documents. When applicants are involved, two desirable goals conflict—eliminating duplication between the work done by the agency and that done by the applicants or their consultants, and ensuring that the agency exercises independent judgment by doing its own work either directly or through its consultant. The applicable regulation tracks case law on this issue¹ but gives deference to both considerations.²

The regulation provides different treatment for information, for EAs, and for EISs. An applicant may submit³ information to an agency either on its own or at the agency's request.⁴ If an agency requests information, however, it must evaluate that information independently and is responsible for its accuracy. It is the regulation's intent that agencies verify, but not redo, acceptable work.⁵

An agency may permit an applicant to prepare an EA. However, the agency must make its own evaluation of the environmental issues and take responsibility for the

[Section 10:20]

¹40 C.F.R. pt. 1502.

²40 C.F.R. §§ 1501.1, 1502.1.

³40 C.F.R. § 1502.2(a).

⁴40 C.F.R. § 1502.2(c).

⁵40 C.F.R. § 1502.7.

⁶40 C.F.R. § 1502.2(d).

⁷40 C.F.R. § 1502.2(g). Agencies are to ensure the scientific integrity of the NEPA documents they prepare. 40 C.F.R. § 1502.24; *Oregon Natural Desert Association v. Jewell*, 840 F.3d 562, 83 Env't. Rep. Cas. (BNA) 1446 (9th Cir. 2016); *Earth Island Institute v. U.S. Forest Service*, 697 F.3d 1010, 1019, 75 Env't. Rep. Cas. (BNA) 2125 (9th Cir. 2012).

[Section 10:21]

¹40 C.F.R. § 1506.5. *See, e.g., Greene County Planning Bd. v. FPC*, 455 F.2d 412, 2 Env'tl. L. Rep. (Env'tl. L. Inst.) 20017 (2d Cir. 1972), cert. denied, 490 U.S. 849 (1972), stay granted, 490 F.2d 256, 4 Env'tl. L. Rep. (Env'tl. L. Inst.) 20080 (2d Cir. 1973).

²40 C.F.R. § 1506.5.

³40 C.F.R. § 1506.5(a), (c).

⁴40 C.F.R. § 1506.5(a).

⁵40 C.F.R. § 1506.5(a). *See People ex rel. Van de Kamp v. Marsh*, 687 F. Supp. 495, 499, 19 Env'tl. L. Rep. (Env'tl. L. Inst.) 20165, 20166 (N.D. Cal. 1988).

document's scope and content.⁶

Finally, an applicant cannot prepare an EIS; that document is solely the responsibility of the agency.⁷ Thus, the EIS may only be prepared directly by the agency or by a contractor “solely” selected by an agency.⁸ The process is designed to avoid the potential conflict of interest arising from an applicant's selection of a consultant whose analysis could serve the applicant's own interests. A contractor selected by an agency must execute a disclosure statement specifying that it has no financial or other interest in the outcome of the project.⁹ Further, the agency must furnish guidance to the contractor and must independently evaluate and take responsibility for the document.¹⁰

It is important to discuss the roles agencies play when more than one is expected to be heavily involved in the EIS process. In this situation, the NEPA regulations provide for a “lead agency”¹¹ to take “primary responsibility”¹² for preparation of the EIS and to supervise the process.¹³ This simplifies EIS preparation and avoids duplication.

The regulations further allow the lead agency to designate as “cooperating agencies” other agencies that have jurisdiction by law over a project.¹⁴ The lead agency may also so designate other agencies with special expertise on any environmental issues that the EIS should discuss.¹⁵ This mechanism is designed to promote agency cooperation early in the NEPA process, hopefully ensuring that all agencies' concerns are addressed and averting subsequent squabbles.

§ 10:22 The administrative process under NEPA—Preparation of the statement—The Environmental Impact Statement—Determining the scope of the EIS

Although the lead agency should already have considered the scope of the EIS

⁶40 C.F.R. § 1506.5(b); *Anderson v. Evans*, 371 F.3d 475, 488-89 (9th Cir. 2004) (agency may rely on applicant prepared EA and applicant provided information as long as it objectively evaluates it).

⁷40 C.F.R. § 1506.5(c).

⁸40 C.F.R. § 1506.5(c). In *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 21 Env'tl. L. Rep. (Env'tl. L. Inst.) 21142 (D.C. Cir. 1991), the court found that the FAA had violated this section, chastising the agency but declining to reverse on that ground. In *Village of Barrington*, 636 F.3d at 673, the same court, having found no error compromising the objectivity of the NEPA process, explicitly did not consider the claim that the agency improperly selected or supervised its contractors.

⁹40 C.F.R. § 1506.5(c).

¹⁰40 C.F.R. § 1506.5(c). A provision exists for an agency to select a contractor whom the applicant then pays. *Forty Most Asked Questions Concerning CEQ's NEPA Regulations*, 46 Fed. Reg. 18026, 18031 (Mar. 23, 1981). In some cases this procedure, known as a “third party contract,” will expedite the processing of the application. These requirements are generally discussed in *Communities Against Runway Expansion, Inc. v. F.A.A.*, 355 F.3d 678, 686-87 (D.C. Cir. 2004).

¹¹40 C.F.R. §§ 1501.5, 1508.16. When there is a dispute over which agency is to be the lead agency, the regulations provide criteria for resolution, 40 C.F.R. § 1501.5(c), and, if necessary, a mechanism for an independent and final determination by the CEQ, 40 C.F.R. § 1501.5(c) to (f).

¹²40 C.F.R. § 1508.16.

¹³40 C.F.R. § 1501.5.

¹⁴40 C.F.R. §§ 1501.6, 1508.5. Other agencies may opt out of the cooperating agency role based on other program commitments. 40 C.F.R. § 1501.6(c). The provision empowering lead agencies to appoint cooperating agencies is designed, however, to stimulate agencies with jurisdiction to cooperate with the lead agency from the beginning, rather than holding their fire until they see a draft EIS and then taking pot shots at it.

¹⁵40 C.F.R. § 1501.6. A state or local agency or Indian tribe possessing jurisdiction by law or special expertise may also, by agreement with the lead agency, become a cooperating agency. 40 C.F.R. § 1508.5.

during the scoping process,¹ the regulations require that it further define that scope as it prepares the EIS.² Questions of scope cannot be manipulated so as to avoid the EIS process; for example, an agency may not segment an environmentally significant project into less significant portions that do not require EISs.³ On the other hand, proposals or parts of proposals that are so closely related as to be, in effect, a single course of action may be treated as such in a single EIS.⁴ EISs may also be prepared for broad proposals. Such statements may, for example, evaluate similar actions generically, or consider all actions that occur within given geographic areas.⁵

§ 10:23 The administrative process under NEPA—Preparation of the statement—The Environmental Impact Statement—Tiering

In some instances, the regulations suggest that agencies employ “tiering” to help them focus on those issues ripe for decision.¹ Tiering is appropriate when different stages of development—such as a nationwide program and a specific project under that program—are the subjects of separate EISs. Tiering is a method of gearing each EIS to the appropriate stage of development, incorporating by reference what has gone before. Each EIS therefore avoids addressing issues that are premature or that have already been analyzed.²

The courts have generally been sympathetic to the concept of tiering as a streamlining mechanism.³

§ 10:24 The administrative process under NEPA—Preparation of the statement—The Environmental Impact Statement—Timing, interdisciplinary approach, and plain language

The NEPA regulations provide, as a general rule, that EISs are to be prepared earlier rather than later to eliminate subsequent delay and to integrate environmen-

[Section 10:22]

¹40 C.F.R. §§ 1502.4, 1508.25.

²40 C.F.R. § 1506.5(c).

³Named Individual Members of the San Antonio Conservation Soc’y v. Texas Highway Dep’t, 446 F.2d 1013, 1 Env’tl. L. Rep. (Env’tl. L. Inst.) 20379 (5th Cir. 1971), cert. denied, 406 U.S. 933 (1972) (segmentation of major highway project into less significant portions does not allow agency to avoid EIS process); see also Taxpayers Watchdog, Inc. v. Stanley, 819 F.2d 294, 299, 17 Env’tl. L. Rep. (Env’tl. L. Inst.) 20905, 20906-07 (D.C. Cir. 1987); Conservation Law Found. v. Federal Highway Admin., 24 F.3d 1465, 24 Env’tl. L. Rep. (Env’tl. L. Inst.) 21196 (1st Cir. 1994).

⁴40 C.F.R. § 1502.4(a). See Western Radio Servs. Co. v. Glickman, 123 F.3d 1189, 28 Env’tl. L. Rep. (Env’tl. L. Inst.) 20137 (9th Cir. 1997) (telecommunications tower and road not “connected actions”). An agency has a certain amount of discretion to determine the scope of its EIS, subject to the direction of 40 CFR 1508.25. See Pacific Coast Federation of Fishermen’s Associations v. Blank, 693 F.3d 1084, 1097-99, 75 Env’t. Rep. Cas. (BNA) 2014, 2013 A.M.C. 1157 (9th Cir. 2012).

⁵40 C.F.R. § 1502.4(b), (c). As examples of broad programs, the regulations cite adoption of new agency programs or regulations. 40 C.F.R. § 1502.4(b), (c); see 40 C.F.R. § 1508.18.

[Section 10:23]

¹40 C.F.R. §§ 1502.4(d), 1502.20, 1508.28.

²40 C.F.R. §§ 1502.4(d), 1502.20, 1508.28.

³See Danos Marine Inc. v. Certain Primary Protection and Indem. Underwriters, 613 F.3d 479, 511-12, 2010 A.M.C. 1987 (5th Cir. 2010) (allowed tiering from an EIS even though newer information was available); San Juan Citizens Alliance v. Stiles, 654 F.3d 1038, 176 O.G.R. 305 (10th Cir. 2011) (upheld the sufficiency of an EIS on the assumption that a subsequent NEPA document would tier from it and provide more site-specific information).

tal considerations most effectively into the decisionmaking process.¹ The timing of a statement, while usually obvious, can present difficult issues. The regulations address these specifically, providing different rules for federally undertaken projects,² applications to agencies,³ adjudication,⁴ and rulemaking.⁵

EISs are to be prepared using an interdisciplinary approach, integrating where appropriate the natural and social sciences and the environmental design arts.⁶ The statements are to be prepared in language that can be readily understood.⁷

§ 10:25 The administrative process under NEPA—Preparation of the statement—The Environmental Impact Statement—Stages and format of the EIS

EISs are almost always prepared in two stages, draft and final.¹ The one exception to this rule is for EISs for legislative proposals, which need only be prepared as draft statements.² For a nonlegislative proposal, the lead agency, in conjunction with any cooperating agencies, prepares a draft EIS and circulates it for comment.³ After receiving comments, the lead agency prepares a final EIS, indicating its responses to any issues raised by the comments and discussing any responsible opposing views that were not adequately discussed in the draft.⁴ An EIS may be supplemented,⁵ and must be if the agency makes “substantial changes in the proposed action” that are relevant to environmental concerns, or if there are “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.”⁶

[Section 10:24]

¹40 C.F.R. § 1502.5. An agency’s delay in undertaking the NEPA process until 90 percent of the action was complete was held to be arbitrary and capricious. *Citizens Awareness Network v. United States Nuclear Regulatory Comm’n*, 59 F.3d 284, 25 Env’tl. L. Rep. (Env’tl. L. Inst.) 21564 (1st Cir. 1995).

²40 C.F.R. § 1502.5(a).

³40 C.F.R. § 1502.5(b).

⁴40 C.F.R. § 1502.5(c). By adjudication, the regulations primarily mean actions undertaken by independent regulatory agencies.

⁵40 C.F.R. § 1502.5(d).

⁶40 C.F.R. § 1502.6. NEPA specifically mentions these professional disciplines. NEPA § 102(2)(A), 42 U.S.C.A. § 4332(2)(A).

⁷40 C.F.R. § 1502.8. *See Oregon Env’tl. Council v. Kunzman*, 817 F.2d 484, 493-94, 17 Env’tl. L. Rep. (Env’tl. L. Inst.) 20756, 20759-60 (9th Cir. 1987).

[Section 10:25]

¹40 C.F.R. §§ 1502.9, 1506.8. Concerning supplemental EISs, *see Coker v. Skidmore*, 941 F.2d 1306, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 21481 (5th Cir. 1991).

²40 C.F.R. § 1502.9. This exception is itself subject to four exceptions requiring preparation of both draft and final statements. 40 C.F.R. § 1502.9.

³40 C.F.R. § 1502.9(a), pt. 1503.

⁴40 C.F.R. § 1502.9(b).

⁵40 C.F.R. § 1502.9(c).

There has been considerable litigation on the duty to supplement an EIS. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 109 S. Ct. 1851, 1861-65, 104 L. Ed. 2d 377, 29 Env’t. Rep. Cas. (BNA) 1508, 19 Env’tl. L. Rep. 20749 (1989). However, mere passage of time does not render an analysis invalid. *Town Of Winthrop v. F.A.A.*, 535 F.3d 1 (1st Cir. 2008).

⁶40 C.F.R. § 1502.9(c)(1). Preparation of a supplemental statement “is at times necessary to satisfy the Act’s ‘action-forcing’ purpose.” *Marsh v. Oregon Natural Resource Council*, 490 U.S. 360, 371, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20749, 20752 (1989). In the Supreme Court’s words:

It would be incongruous with [NEPA’s] approach to environmental protection, and with the Act’s manifest

The NEPA regulations recommend that statements follow a format⁷ consisting of a cover sheet;⁸ a summary not to exceed fifteen pages;⁹ a brief specification of the purpose of and need for the proposed action;¹⁰ analyses of the alternatives;¹¹ the affected environment that exists before the action,¹² and the environmental consequences;¹³ a list of preparers;¹⁴ and an optional appendix.¹⁵

§ 10:26 The administrative process under NEPA—Preparation of the statement—The Environmental Impact Statement—Environmental consequences and alternatives

The discussions of the environmental consequences of and the alternatives to a proposal are the most critical sections of the EIS.¹ The environmental consequences section is intended to form “the scientific and analytic basis for the comparisons” in

concern with preventing uninformed action, for the blinders to adverse environmental effects, once unequivocally removed, to be restored prior to the completion of agency action simply because the relevant proposal has received initial approval.

40 C.F.R. § 1502.9(c)(1). *See also* *Sierra Club v. Van Antwerp*, 526 F.3d 1353, 1360 (11th Cir. 2008) (changes which minimize impacts are apt to be encompassed within the original EIS and do not require supplementation); *Upper Snake River Chapter of Trout Unlimited v. Hodel*, 921 F.2d 232, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 20347 (9th Cir. 1990) (periodic adjustment of flow of water from dam does not require EIS); *Coker v. Skidmore*, 744 F. Supp. 121, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 20657 (S.D. Miss. 1990), order vacated, 941 F.2d 1306 (5th Cir. 1991) (an EIS can become outdated and no longer provide a basis for tiering). *But see* *Town of Winthrop v. Federal Aviation Administration*, 535 F.3d 1 (1st Cir. 2008) (mere passage of time does not render an analysis invalid).

⁷40 C.F.R. § 1502.10.

⁸40 C.F.R. § 1502.11.

⁹40 C.F.R. § 1502.12.

¹⁰40 C.F.R. § 1502.13. The regulations as originally proposed limited this section to one page under normal circumstances, 43 Fed. Reg. 25230, 25237 (June 9, 1978), but the final regulations removed this limitation, 43 Fed. Reg. 55978, 55996 (Nov. 29, 1978), on the ground that in “some cases” more than one page would be needed, 43 Fed. Reg. 55978, 55983 (Nov. 29, 1978). For a case that goes extraordinarily far in allowing the applicant to delineate the “purpose and need” and thereby confine the alternatives essentially to the applicant’s proposal, see *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 21142 (D.C. Cir. 1991). *See also* *City of Grapevine v. Department of Transp.*, 17 F.3d 1502, 24 Env’tl. L. Rep. (Env’tl. L. Inst.) 20828 (D.C. Cir. 1994). The Seventh Circuit reached a contrary conclusion in *Simmons v. United States Army Corps of Eng’rs*, 120 F.3d 664, 666, 27 Env’tl. L. Rep. (Env’tl. L. Inst.) 21204 (7th Cir. 1997). The court explicitly noted the *Burlington* decision as “contra” and quoted approvingly from the dissent. The court also smartly rapped the Corps for describing “a purpose so slender as to define competing ‘reasonable alternatives’ out of consideration (and even out of existence).” *Simmons v. United States Army Corps of Eng’rs*, 120 F.3d 664, 666, 27 Env’tl. L. Rep. (Env’tl. L. Inst.) 21204 (7th Cir. 1997). *See also* *City of Carmel-by-the-Sea v. Department of Transp.*, 123 F.3d 1142, 27 Env’tl. L. Rep. (Env’tl. L. Inst.) 21428 (9th Cir. 1997), *aff’g in part & rev’g in part*, 95 F.3d 892, 27 Env’tl. L. Rep. (Env’tl. L. Inst.) 20047 (9th Cir. 1997); *Friends of Southeast’s Future v. Morrison*, 153 F.3d 1059 (9th Cir. 1998).

¹¹40 C.F.R. § 1502.14.

¹²40 C.F.R. § 1502.15.

¹³40 C.F.R. § 1502.16. This section represents the principal analytic discussion. The regulations require the section to include discussions of eight factors. 40 C.F.R. § 1502.16(a) to (h); *see* § 10:26.

¹⁴40 C.F.R. § 1502.17.

¹⁵40 C.F.R. § 1502.18.

[Section 10:26]

¹The description of the “affected environment” is consciously downgraded. The notorious “dandelion counts,” overly descriptive discussions that accounted for much of the unneeded bulk of many early EISs, are discouraged. In the regulation’s own words, “[v]erbose descriptions of the affected environment are themselves no measure of the adequacy of an environmental impact statement.” 40 C.F.R. § 1502.15. As a generality, if the affected environment description in an EIS is longer than the two analytic sections (40 C.F.R. §§ 1502.14, 1502.16) one may justifiably look askance at undue padding of the former at the expense of the latter.

the alternatives section,² and to incorporate the discussions required by various subparagraphs of NEPA § 102(2)(C). Hence, the regulations require the environmental consequences section to discuss: the direct³ and indirect effects⁴ of the proposal and alternatives;⁵ possible conflicts with land use plans;⁶ energy requirements and conservation potential;⁷ natural or depletable resources requirements and conservation potential;⁸ effects on the urban, historic, and built environment and reuse and conservation potential;⁹ and means of mitigating adverse environmental effects.¹⁰ The discussion of cumulative impacts is often a vital part of the EIS.¹¹

The alternatives section is based on the information and analysis in the environmental consequences section, but should not duplicate that section.¹² Described as the “heart of the environmental impact statement,” the alternatives section is to “present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmakers and the public.”¹³ The discussion is to “[r]igorously explore and objectively evaluate all reasonable alternatives,” giving “substantial treatment” to each alternative that is considered in detail.¹⁴ The agency is required to consider alternatives not within the jurisdiction of the lead

²40 C.F.R. § 1502.16. Quantified, detailed information is needed for the agency to take the requisite “hard look.” *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 28 Env’tl. L. Rep. (Env’tl. L. Inst.) 21073 (9th Cir. 1998).

³40 C.F.R. § 1502.16(a).

⁴40 C.F.R. § 1502.16(b). Indirect effects include off-site impacts. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 339, 350, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743, 20744, 20747 (1989).

⁵40 C.F.R. § 1502.16(d).

⁶40 C.F.R. § 1502.16(c).

⁷40 C.F.R. § 1502.16(e). *See All Indian Pueblo Council v. United States*, 975 F.2d 1437, 23 Env’tl. L. Rep. (Env’tl. L. Inst.) 20473 (10th Cir. 1992).

⁸40 C.F.R. § 1502.16(f).

⁹40 C.F.R. § 1502.16(g).

¹⁰40 C.F.R. § 1502.16(h). NEPA § 102(2)(C)(ii), 42 U.S.C.A. § 4332(2)(C), specifically requires discussion of adverse impacts that “cannot be avoided should the proposal be implemented.” In the Supreme Court’s words, “one important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743, 20747 (1989) (footnote omitted). Indeed, “omission of a reasonably complete discussion of possible mitigation measures would undermine the ‘action-forcing’ function of NEPA.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743, 20747 (1989). While *Robertson* holds that a full mitigation plan need not be adopted, such a plan is enforceable once it is adopted by the agency in its Record of Decision. 40 C.F.R. §§ 1505.2(c), 1505.3; *Tyler v. Cisneros*, 136 F.3d 603 (9th Cir. 1998).

¹¹40 C.F.R. §§ 1508.7, 1508.25. *See Resources Ltd. v. Robertson*, 8 F.3d 1394, 1400, 24 Env’tl. L. Rep. (Env’tl. L. Inst.) 20026, 20028 (9th Cir. 1993) (requiring consideration of cumulative impacts not under federal control); *Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Dept. of Interior*, 608 F.3d 592, 602-07, 70 Env’t. Rep. Cas. (BNA) 1961 (9th Cir. 2010) (the Court found the analysis of cumulative impacts inadequate because they were evaluated in conclusory fashion). The Council on Environmental Quality has issued guidance on this subject. (CEQ, *Considering Cumulative Impacts Under the National Environmental Policy Act* (1997) (available at NEPA.gov)).

¹²40 C.F.R. § 1502.14.

¹³40 C.F.R. § 1502.14; *In re Operation of Missouri River Sys. Litig.*, 418 F.3d 915 (8th Cir. 2005) (allowing comparison of alternatives in chart form); *see Friends of Yosemite Valley v. Kempthorne*, 520 F.3d 1024, 1038-39 (9th Cir. 2008) (alternatives with essentially identical components invalid); *Beyond Nuclear v. U.S. Nuclear Regulatory Com’n*, 704 F.3d 12, 19-20 (1st Cir. 2013) (must study reasonable alternatives bounded by feasibility).

¹⁴40 C.F.R. § 1502.14(d). “Substantial treatment,” rather than equal treatment, is required, as the treatment must necessarily vary with the degree of impact. By way of case law construing what alternatives must be considered as “reasonable alternatives,” *see City of Tenakee Springs v. Clough*, 915 F.2d 1308, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 20001 (9th Cir. 1990) (that a contract between the

agency¹⁵ and must always consider the no action alternative.¹⁶ The agency is to identify its “preferred alternative,” if it has one, at the draft stage, and must identify that alternative when it prepares the final statement.¹⁷ Mitigation must be discussed in this section if it has not been discussed elsewhere.¹⁸

§ 10:27 The administrative process under NEPA—Preparation of the statement—The Environmental Impact Statement—Incomplete or unavailable information

One provision of the regulations, while only occasionally applied, has excited considerable controversy—the section on “incomplete or unavailable information.”¹

agency and the applicant constrained consideration of certain alternatives did not prevent such alternatives from being reasonable ones that had to be considered). For a contrasting case where the court upheld an agency’s finding that only one alternative was reasonable because the others were infeasible, see *Tongass Conservation Soc’y v. Cheney*, 924 F.2d 1137, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 20558 (D.C. Cir. 1991). See also § 10:25. For an excellent discussion of the requirement to explore alternatives rigorously, see *Dubois v. United States Dep’t. of Agriculture*, 102 F.3d 1273, 27 Env’tl. L. Rep. (Env’tl. L. Inst.) 20622 (1st Cir. 1996) (emphasizing that there must be a reasoned analysis of the alternatives and the alternative selected must be within the spectrum of those examined).

¹⁵40 C.F.R. § 1502.14(c). Similarly an agency may not ignore an otherwise reasonable alternative because of a contractual bar since the contract may be amended. *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 20001 (9th Cir. 1990); see also *Tongass Conservation Soc’y v. Cheney*, 924 F.2d 1137, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 20558 (D.C. Cir. 1991); *Idaho Conservation League v. Mumma*, 956 F.2d 1508 22 Env’tl. L. Rep. (Env’tl. L. Inst.) 20569 (9th Cir. 1992).

¹⁶40 C.F.R. § 1502.14(d). See *Southeast Alaska Conservation Council v. Federal Highway Admin.*, 649 F.3d 1050 at *8 (9th Cir. 2011) (discussion of “no action” alternative held not to meet the “substantial treatment” requirement of the regulations).

¹⁷40 C.F.R. § 1502.14(e). An exception is made for situations in which other laws may prohibit expression of such a preference at this stage. This exception was designed to cover independent regulatory agencies, where staff may prepare a draft and final EIS, but only the commissioners may express an agency preference, and they may not do so until after the final EIS is prepared.

¹⁸40 C.F.R. § 1502.14(e). For a case discussing the importance of mitigation to the NEPA process, see *C.A.R.E. NOW, Inc. v. FAA*, 844 F.2d 1569 18 Env’tl. L. Rep. (Env’tl. L. Inst.) 21081 (11th Cir. 1988). While mitigation must be fully discussed in the EIS, there is no requirement that it actually be imposed. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743 (1989). However, agencies must in their EISs discuss mitigation. A perfunctory description of mitigation is inconsistent with the “hard look” agencies are obligated to take. A mere listing of mitigation measures is not enough. *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 28 Env’tl. L. Rep. (Env’tl. L. Inst.) 21073 (9th Cir. 1998); *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 28 Env’tl. L. Rep. (Env’tl. L. Inst.) 21044 (9th Cir. 1998). An agency must also review the likely effectiveness of proposed mitigation measures. See *South Fork Band Council Of Western Shoshone Of Nevada v. U.S. Dept. of Interior*, 588 F.3d 718, 727 (9th Cir. 2009) (“A mitigation discussion without at least some evaluation of effectiveness is useless.”). Finally, once an agency commits to mitigation, it becomes an enforceable obligation. *Tyler v. Cisneros*, 136 F.3d 603, 608, 28 Env’tl. L. Rep. (Env’tl. L. Inst.) 20540, 20543 (9th Cir. 1998). For CEQ guidance on mitigation, see § 10:12, n.1, *supra*; *South Fork Band Council Of Western Shoshone Of Nevada v. U.S. Dept. of Interior*, 588 F.3d 718, 722 (9th Cir. 2009). See also *Theodore Roosevelt Conservation Partnership v. Salazar*, 616 F.3d 497, 515-17, 175 O.G.R. 824 (D.C. Cir. 2010) (allowed “adaptive management” as part of mitigation to respond to changing conditions as they subsequently emerged); *Pacific Coast Federation*, *supra*. § 10:22, at 1103, n. 4 (same). Generally mitigation must be discussed in an EIS, but there is no obligation actually to adopt it. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 109 S. Ct. 1835, 1849-59, 104 L. Ed. 2d 351, 29 Env’tl. Rep. Cas. (BNA) 1497, 19 Env’tl. L. Rep. 20743 (1989).

[Section 10:27]

¹40 C.F.R. § 1502.22. See generally *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743 (1989). See also *Masterman, Worst Case Analysis: The Final Chapter?*, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 10026 (Jan. 1989); *Yost, Don’t Gut Worst Case Analysis*, 13 Env’tl. L. Rep. (Env’tl. L. Inst.) 10394 (Dec. 1983); *Friends of Endangered Species v. Jantzen*, 760 F.2d 976, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20455 (9th Cir. 1985); *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20035 (9th Cir. 1984); *Southern Oregon Citizens Against Toxic*

According to the CEQ, “incomplete information” is that which cannot be obtained because the overall costs of obtaining it are exorbitant.² “Unavailable information” is that which cannot be obtained because the means of obtaining it are not known.³

The CEQ regulations provide that when information on reasonably foreseeable adverse impacts evaluated in an EIS is essential to making a reasoned choice and the costs of obtaining it are not exorbitant, the agency must secure it.⁴ However, if this information is incomplete or unavailable—that is, if the costs of obtaining it are exorbitant or the means of obtaining it are beyond the state of the art—the agency must “make clear that such information is lacking.”⁵ The agency must follow four prescribed steps.⁶ First, it must state that the information is incomplete or

Sprays, Inc. v. Clark, 720 F.2d 1475, 14 Env'tl. L. Rep. (Env'tl. L. Inst.) 20061 (9th Cir. 1983), cert. denied, 469 U.S. 1028 (1984); *City of New York v. Department of Transp.*, 715 F.2d 732, 13 Env'tl. L. Rep. (Env'tl. L. Inst.) 20823 (2d Cir. 1983), cert. denied, 465 U.S. 1055 (1984); *Sierra Club v. Sigler*, 695 F.2d 957, 13 Env'tl. L. Rep. (Env'tl. L. Inst.) 20210 (5th Cir. 1983); *Oregon Env'tl. Council v. Kunzman*, 614 F. Supp. 657, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20499 (D. Or. 1985), injunction dissolved, 636 F. Supp. 632, 16 Env'tl. L. Rep. (Env'tl. L. Inst.) 20658 (D. Or. 1986), *aff'd*, 817 F.2d 484, 17 Env'tl. L. Rep. (Env'tl. L. Inst.) 20756 (9th Cir. 1987).

²51 Fed. Reg. 15618, 15621 (Apr. 25, 1986).

³51 Fed. Reg. 15618, 15621 (Apr. 25, 1986).

⁴40 C.F.R. § 1502.22(a). *Oceans Advocates v. United States Army Corps of Eng'rs*, 361 F.3d 1108, 1129-30 (9th Cir. 2004) (even under new rules lack of knowledge does not excuse preparation of an EIS but requires the agency to undertake the necessary work to obtain it), opinion amended & superseded on denial of reh'g, 402 F.3d 846 (9th Cir. 2005).

⁵40 C.F.R. § 1502.22. *See Scientists' Inst. for Pub. Info. v. AEC*, 481 F.2d 1079, 1091-92, 3 Env'tl. L. Rep. (Env'tl. L. Inst.) 20525, 20531-32 (D.C. Cir. 1973). In that case, the court stated:

It must be remembered that the basic thrust of an agency's responsibilities under NEPA is to predict the environmental effects of a proposed action *before* the action is taken and those effects fully known. *Reasonable forecasting and speculation is thus implicit in NEPA* and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects a “crystal ball inquiry.”

Scientists' Inst. for Pub. Info. v. AEC, 481 F.2d 1079, 1092, 3 Env'tl. L. Rep. (Env'tl. L. Inst.) 20525, 20531-32 (D.C. Cir. 1973) (emphasis added). Indeed, in case of uncertainty concerning impacts or conflicting data, an EA must be prepared. *American Bird Conservancy v. Federal Communications Commission*, 516 F.3d 1027, 1032-33 (D.C. Cir. 2008). *See also Kleppe v. Sierra Club*, 427 U.S. 390, 410 n. 21, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20532, 20537 n.21 (1976); *Massachusetts v. Andrus*, 594 F.2d 872, 892, 9 Env'tl. L. Rep. (Env'tl. L. Inst.) 20162, 20173 (1st Cir. 1979); *Alaska v. Andrus*, 580 F.2d 465, 473-74, 8 Env'tl. L. Rep. (Env'tl. L. Inst.) 20237, 20242 (D.C. Cir. 1978), vacated on other grounds sub nom. *Western Oil & Gas Ass'n v. Alaska*, 439 U.S. 922 (1978); *Ethyl Corp. v. EPA*, 541 F.2d 1, 18, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20267, 20279 (D.C. Cir. 1976) (en banc), cert. denied, 426 U.S. 941 (1976); *I-291 Why? Ass'n v. Burns*, 517 F.2d 1077, 1081, 5 Env'tl. L. Rep. (Env'tl. L. Inst.) 20430, 20432 (2d Cir. 1975) (per curiam).

⁶40 C.F.R. § 1502.22. This is the only regulation that the CEQ has amended since it promulgated the NEPA regulations. The regulation as amended in 1986 shares certain goals with the prior regulation: disclosure that information is missing, acquisition of that information, and evaluation of impacts in the absence of all information. *See* 51 Fed. Reg. 15618, 15619, 15620 to 15621 (Apr. 25, 1986).

The amendment does, however, make one significant change in the method by which agencies consider incomplete or unavailable information. The earlier regulation provided that when cost or lack of appropriate methodology precluded acquisition of relevant information, the agency had to weigh the need for the action against the risk and severity of possible adverse impacts were the action to proceed in the face of uncertainty. Before proceeding, an agency had to perform a “worst case analysis,” indicating both the probability and the improbability of the occurrence of that worst case. Application of worst case analysis, particularly by the Ninth Circuit in *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20035 (9th Cir. 1984), and *Southern Oregon Citizens Against Toxic Sprays Inc. v. Clark*, 720 F.2d 1475, 14 Env'tl. L. Rep. (Env'tl. L. Inst.) 20061 (9th Cir. 1983), engendered a certain unhappiness among some government agencies that thought they had to go beyond reasonable limits to develop a “worst case scenario.”

The CEQ amended the regulation to delete the worst-case analysis requirement. The amend-

unavailable.⁷ Second, it must state the relevance of the missing information.⁸ Third, it must summarize the existing credible scientific evidence relevant to its evaluation of reasonably foreseeable impacts.⁹ Fourth, it must analyze those impacts based on theoretical approaches or scientific methods generally accepted in the scientific community.¹⁰ The regulation clearly states that agencies must consider impacts with low probability but catastrophic consequences as long as the analysis “is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.”¹¹

Risk analysis of improbable but highly significant impacts is not a new concept.¹² As articulated by the First Circuit in *Massachusetts v. Andrus*:

If it were 100% certain that particular precautions would obviate all danger, the task would be simple; but there is a large element of the unknown created by gaps in science, by possible human errors, and by freak weather conditions. Thus, the Secretary must engage in an uneasy calculus akin to that described by Judge Learned Hand, weighing “the possibility” of accident, “the gravity of the resulting injury” and “the burden of adequate precautions.”¹³

The District of Columbia Circuit made the same point in *Ethyl Corp. v. EPA*:

Danger . . . is not set by a fixed probability of harm, but rather is composed of reciprocal elements of risk and harm, or probability and severity That is to say, the public health may properly be found endangered both by a lesser risk of a greater harm,

ment was to apply to all EISs for which a notice of intent was published in the *Federal Register* on or after May 27, 1986. For EISs in progress before then, the agency may choose to comply with either the original or the amended regulation. 40 C.F.R. § 1502.22(c). The Supreme Court has upheld the new regulation as within the deference to be accorded to the CEQ (while suggesting that the former regulation was also within that deference). See *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 19 Env'tl. L. Rep. (Env'tl. L. Inst.) 20743 (1989); see also *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 19 Env'tl. L. Rep. (Env'tl. L. Inst.) 20749 (1989).

⁷40 C.F.R. § 1502.22(b)(1).

⁸40 C.F.R. § 1502.22(b)(2).

⁹40 C.F.R. § 1502.22(b)(3).

¹⁰40 C.F.R. § 1502.22(b)(4). The CEQ intends for evaluations of reasonably foreseeable significant impacts to be carefully conducted and based upon credible scientific evidence. All scientific evidence must be disclosed, including responsible opposing views supported by generally accepted theoretical approaches or scientific methods. 51 Fed. Reg. 15618, 15621 (Apr. 25, 1986).

¹¹This portion of the amended regulation is specifically intended to substitute for worst case analysis.

¹²Both the prior regulation and the amended regulation incorporate this concept. Moreover, a pre-amendment Supreme Court case recognized the difference between considering the impacts of improbable but possible occurrences should they actually occur and considering the more speculative impacts generated by apprehension of those occurrences. In *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 13 Env'tl. L. Rep. (Env'tl. L. Inst.) 20515 (1983), the Court declined to apply NEPA to the psychological fears generated by the “risk” of a nuclear accident at Three Mile Island but acknowledged the need to consider improbable but possible accidents, stating:

We emphasize that in this case we are considering effects caused by the risk of an accident. The situation where an agency is asked to consider effects that will occur if a risk is realized, for example, if an accident occurs at TMI-1, is an entirely different case. The NRC considered, in the original EIS and in the most recent EIA for TMI-1, the possible adverse effects of a number of accidents that might occur at TMI-1.

Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 775 n.9, 13 Env'tl. L. Rep. (Env'tl. L. Inst.) 20515, 20518 n.9 (1983).

¹³*Massachusetts v. Andrus*, 594 F.2d 872, 892, 9 Env'tl. L. Rep. (Env'tl. L. Inst.) 20162, 20173 (1st Cir. 1979). Evaluation of uncertainties has always been a part of the legal process. “Certainty,” in Justice Holmes’ famous phrase, “generally is illusion.” Oliver Wendell Holmes, *Collected Legal Papers* 181 (1920). Nevertheless, in the absence of certainty we do the best we can. As lucidly put by Justice Cardozo: “The law is not an exact science, we are told, and there the matter ends, if we are willing there to end it. . . . Exactness may be impossible, but that is not enough to cause the mind to acquiesce in a predestined incoherence.” B. Cardozo, *The Paradoxes of Legal Science* 2–3 (1928).

and by a greater risk of a lesser harm.¹⁴

NEPA essentially requires analysis of both the lesser risks of greater harms and the greater risks of lesser harms before actions are taken to bring about the risks. As courts recognize, such “[r]easonable forecasting and speculation is thus implicit in NEPA.”¹⁵

§ 10:28 The administrative process under NEPA—Preparation of the statement—The Environmental Impact Statement—Streamlining

As noted above, the NEPA regulations set out as goals the reduction of both paperwork¹ and delay in the NEPA process.² The procedures accordingly contain certain streamlining provisions designed to simplify NEPA’s implementation and to mesh its application with that of other laws. For example, one section permits EISs to incorporate certain material by reference when this will cut down on their bulk.³ However, the incorporated information must be cited, briefly described, and made publicly available so as not to impede review by other agencies and the public.⁴ Another provision allows an agency to “adopt” in whole or in part another EIS prepared by the same or a different federal agency, thus eliminating unnecessary duplication of work.⁵

Similarly, the regulations seek to eliminate duplication with state environmental procedures,⁶ specifically directing federal agencies to prepare joint statements in cooperation with states that themselves have EIS requirements.⁷ Indeed, the regulations allow an EIS to be combined with any other environmental document to reduce paperwork and duplication.⁸ When streamlining is appropriate, agencies must nevertheless ensure the professional and scientific integrity of environmental analyses.⁹

¹⁴Ethyl Corp. v. EPA, 541 F.2d 1, 18, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20267, 20279 (D.C. Cir. 1976).

¹⁵Scientists’ Inst. for Pub. Info. v. AEC, 481 F.2d 1079, 1092, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20525, 20532 (D.C. Cir. 1973). See also Kleppe v. Sierra Club, 427 U.S. 390, 410 n. 21, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20532, 20537 (1976); Alaska v. Andrus, 580 F.2d 465, 473–74, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20237, 20242 (D.C. Cir. 1978), vacated in part, 439 U.S. 922, 99 S. Ct. 303, 58 L. Ed. 2d 315 (1978); I-291 Why? Ass’n v. Burns, 517 F.2d 1077, 1081, 5 Env’tl. L. Rep. (Env’tl. L. Inst.) 20430, 20432 (2d Cir. 1975).

[Section 10:28]

¹40 C.F.R. § 1500.4.

²40 C.F.R. § 1500.5. CEQ has recently reemphasized the importance of streamlining the NEPA Process in a memorandum to the Head of Agencies entitled “Improving the Process for Preparing Efficient and Timely Environmental Review Under NEPA” (available at NEPA.gov).

³40 C.F.R. § 1500.21. If material is to be relied upon in the EIS or ROD, it must be incorporated by reference, because otherwise it disregards NEPA’s public notice requirements. Recent Past Preservation Network v. Latschar, 701 F. Supp. 2d 49, 59 (D.D.C. 2010).

⁴40 C.F.R. § 1500.21. Material based on proprietary data that is itself not available for public review cannot be incorporated by reference.

⁵40 C.F.R. § 1506.3. This section requires that the adopted EIS meet the standards of an adequate EIS, and specifically describes the kind of circulation necessary for an adopted statement.

⁶40 C.F.R. § 1506.2(b).

⁷40 C.F.R. § 1506.2(c). For a discussion of state mini-NEPAs, see § 7:11.

⁸40 C.F.R. § 1506.4. Environmental statements are to be integrated to the fullest extent possible with other environmental analyses required by the Fish and Wildlife Coordination Act, the National Historic Preservation Act, and the Endangered Species Act, as well as other environmental review laws. 40 C.F.R. § 1502.25(a). The draft EIS must also list all other federal permits that will be required. 40 C.F.R. § 1502.25(b).

⁹40 C.F.R. § 1502.24. In performing its analyses an agency may employ a model that was considered an appropriate methodology at the time. Theodore Roosevelt Conservation Partnership v.

§ 10:29 The administrative process under NEPA—Preparation of the statement—Commenting

Once the draft EIS is prepared, it is to be circulated for comment to all relevant federal, state, and local agencies, to applicants, if any, and to members of the public who request it.¹ Both the Act² and the regulations³ mandate that lead agencies “obtain” comments from federal agencies with jurisdiction by law over a project or with special expertise. Lead agencies generally need only “request” comments from other federal agencies, state and local agencies, affected Indian tribes, applicants, and the public.⁴ Agency comments are to be as specific as possible, and agencies making critical comments must specify what they believe should be done to address the problems they identify.⁵ The usual comment period on a draft EIS is not less than forty-five days,⁶ although provisions exist for both reducing and extending that period.⁷ Bear in mind that commenting on the NEPA document may be an essential element of subsequent judicial review. Commenting on a given issue may be necessary to exhaust one’s administrative remedy as a condition of subsequent review in a court.⁸

§ 10:30 The administrative process under NEPA—Preparation of the statement—Response to comments and the final EIS

Consistent with NEPA’s goal of public-private cooperation in environmental protection,¹ the regulations impose a requirement unique among environmental and, perhaps, all governmental obligations: in the final EIS, the lead agency must explain its position in writing to any member of the public who chooses to comment. When preparing its final EIS, the agency “shall respond” to comments by adding to or modifying its analyses, by making factual corrections, or by explaining why the comments do not warrant these actions, citing “the sources, authorities, or reasons” supporting its position.²

After responding to comments, the agency must circulate its final EIS in much

Salazar, 616 F.3d 497, 511-512 (D.C. Cir. 2010). The CEQ NEPA regulations do not require cost-benefit analyses, but give specific guidance as to the contents of such analyses if they are included. 40 C.F.R. § 1502.23.

[Section 10:29]

¹40 C.F.R. § 1502.19. Section 1506.6 is the provision governing public involvement throughout the NEPA process. This involvement is extensive.

²NEPA § 102(2)(C), 42 U.S.C.A. § 4332(2)(C).

³40 C.F.R. §§ 1503.1(a)(1), 1503.2.

⁴40 C.F.R. § 1503.1(a)(2). It is, however, up to the lead agency to determine the merit of another agency’s comments. *Alaska Survival v. Surface Transp. Bd.*, 705 F.3d 1073, 1087 (9th Cir. 2013); *Missouri Coalition for Environment v. F.E.R.C.*, 544 F.3d 955, 959 (8th Cir. 2008). It is appropriate to rely on work done by other agencies. *Hoosier Environmental Council v. U.S. Army Corps of Engineers*, 722 F.3d 1053, 1061, 76 Env’t. Rep. Cas. (BNA) 1985 (7th Cir. 2013).

⁵40 C.F.R. § 1503.3.

⁶40 C.F.R. § 1506.10(c).

⁷40 C.F.R. § 1506.10(d).

⁸*Department of Transp. v. Public Citizen*, 541 U.S. 752, 124 S. Ct. 2204, 2213-14, 159 L. Ed. 2d 60, 58 Env’t. Rep. Cas. (BNA) 1545, 26 Int’l Trade Rep. (BNA) 1097, 34 Env’tl. L. Rep. 20033 (2004); *Barnes v. U.S. Dept. of Transp.*, 655 F.3d 1124, 73 Env’t. Rep. Cas. (BNA) 1033 (9th Cir. 2011).

[Section 10:30]

¹NEPA § 101(a), 42 U.S.C.A. § 4331(a).

²40 C.F.R. § 1503.4. It is, however, up to the lead agency to determine the value of another agency’s comments. *Missouri Coalition for the Environment v. FERC*, 544 F.3d 955, 959 (8th Cir. 2008).

the same manner as it did its draft EIS.³ Although agencies do not usually request additional comments on final EISs, they may do so and anyone can still comment on a final statement before the agency makes its final decision.⁴ The regulations require that the agency make no decision until thirty days after the final EIS is filed. This allows time for comment and ensures that the agency has adequate time to consider the statement.⁵

§ 10:31 The administrative process under NEPA—Post-statement procedures—CEQ referrals

After an EIS is complete but before a decision is made on the proposal, an infrequent but important procedure may intervene: referral to the CEQ of environmentally unsatisfactory federal actions.¹ Under section 309 of the Clean Air Act,² EPA may refer any proposed federal agency action to the CEQ if EPA determines that the action is environmentally unsatisfactory.³ Under NEPA, other agencies may refer allegedly unsatisfactory proposed actions to the CEQ as well.⁴ Only a small number of visible and significant agency proposals are referred to the CEQ.⁵ As of 1987, the CEQ had received twenty-three referrals.⁶

A 1986 report concluded that the referral process causes agencies to consider the environmental impacts of their proposals more fully, and facilitates interagency communication and dispute resolution. The report concluded that the effectiveness of the process depends substantially on, and varies with, the CEQ's perceived competence, objectivity, and White House backing. Earlier CEQ involvement in potential disputes and increased monitoring of CEQ recommendations on referrals, the report continued, could enhance that effectiveness further.⁷

³40 C.F.R. § 1502.19.

⁴40 C.F.R. § 1503.1(b). On the rare occasion when a draft EIS is "so inadequate as to preclude meaningful analysis," the agency is required to recirculate a revised draft. 40 C.F.R. § 1502.9(a).

⁵40 C.F.R. § 1506.10(b)(2). The decision must also be made at least 90 days after the draft EIS. 40 C.F.R. § 1506.10(b)(1). All dates are measured from the date an EIS is filed with EPA in Washington, D.C. 40 C.F.R. §§ 1506.9, 1506.10. That filing date is not the actual date of receipt, but the date of public notice by EPA in the *Federal Register* of the statements received during the preceding week. 40 C.F.R. § 1506.10(a). The applicable regulation has specific provisions governing special timing situations, such as agency rulemaking and decisions subject to internal appeal, in which the normal time limits may be adjusted. 40 C.F.R. § 1506.10(b). If the final EIS is filed within 90 days after the draft EIS is filed, the minimum 30-day and minimum 90-day periods may run concurrently, although agencies cannot allow less than 45 days for comments on the draft statement. 40 C.F.R. § 1506.10(c). Lead agencies may also extend prescribed periods; EPA may, upon a showing of need by the lead agency, reduce them. 40 C.F.R. § 1506.10(d).

[Section 10:31]

¹40 C.F.R. pt. 1504.

²42 U.S.C.A. § 7609.

³40 C.F.R. § 1504.1(b).

⁴40 C.F.R. §§ 1504.1 to 1504.2.

⁵The CEQ referral process is not discussed in detail because it is used so infrequently. Any agency or person affected, however, should become closely familiar with the regulations. 40 C.F.R. §§ 1504.2 to 1504.3.

⁶Environmental Law Institute, *Environmental Referrals and the Council on Environmental Quality* (1986), reprinted in *Council on Environmental Quality, Environmental Quality*, 1986 at 252. One reason for the paucity of referrals may be that lead agencies seek to avoid them by working more closely with other involved agencies at earlier stages. The very existence of the referral process may thus increase interagency cooperation, even if the process is not actually used much. *Council on Environmental Quality, Environmental Quality*, 1986 at 253.

⁷*Council on Environmental Quality, Environmental Quality* 1986, at 252. The possibility that

§ 10:32 The administrative process under NEPA—Post-statement procedures—Agency decisionmaking and the record of decision

The NEPA process is to be thoroughly integrated into agency decisionmaking, and the CEQ regulations are designed to ensure this integration. For example, the regulations require each agency to adopt procedures ensuring that its decisions accord with the policies and processes of NEPA.¹ In addition, the regulations require agencies to prepare a document, second in importance only to the EIS, which is designed to ensure that agency decisionmakers respect the environment: the “record of decision” (ROD).² An agency must prepare a concise and public ROD whenever it makes a decision following preparation of a final EIS.³ The ROD must state the decision⁴ and identify all alternatives. It must specify the alternative or alternatives “considered to be environmentally preferable,”⁵ and may specify alternatives considered to be preferable from the point of view of other “essential considerations of national policy.”⁶ The agency is to discuss these considerations in explaining how it reached its decision. The ROD must also state “whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted and if not, why they were not.”⁷ Finally, a ROD must adopt and summarize a monitoring and enforcement program, if applicable, for any mitigation.⁸

§ 10:33 The administrative process under NEPA—Post-statement procedures—Agency actions during the pendency of an EIS

As a general rule, agencies may not take any action concerning a proposal while an EIS is pending. The NEPA regulations address this important issue with specificity,¹ tracking both case law² and administrative practice. When, as is usually the case, a proposal is not part of an overall program, the applicable regulation prohibits taking any action on the proposal before issuance of a ROD, if the action would have an adverse environmental impact or limit the choice of reasonable alternatives.³ An individual action that is part of a larger program⁴ cannot proceed while the program’s EIS is pending unless the action meets three criteria: (1) it is justified independently of the program; (2) it is itself accompanied by an adequate EIS; and (3)

CEQ will publish findings that do not support an agency’s position and that can be used in litigation also serves as an impetus to agencies to pay heed to environmental factors.

[Section 10:32]

¹40 C.F.R. § 1505.1.

²40 C.F.R. § 1505.2.

³40 C.F.R. § 1505.2.

⁴40 C.F.R. § 1505.2(a).

⁵40 C.F.R. § 1505.2(b).

⁶NEPA § 101(b), 42 U.S.C.A. § 4331(b); 40 C.F.R. § 1505.2(b).

⁷40 C.F.R. § 1505.2(c).

⁸40 C.F.R. § 1505.2(c). The regulations provide specific guidance for implementation of mitigation and post-decision monitoring. 40 C.F.R. § 1505.2(c).

[Section 10:33]

¹40 C.F.R. § 1506.1.

²The most important case in this regard is *Kleppe v. Sierra Club*, 427 U.S. 390, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20532 (1976).

³40 C.F.R. § 1506.1(a).

⁴40 C.F.R. § 1506.1(c) refers to a program for which an EIS is “required” in order to ensure that individual actions are not held up when an agency voluntarily (without being required to do so, but in furtherance of good environmental practice) undertakes preparation of a program EIS.

it will not prejudice the ultimate decision on the program.⁵ The regulation also specifically addresses situations involving applications to agencies, both in general⁶ and when applicants are developing plans or designs or are performing other work necessary to support their applications.⁷

§ 10:34 Judicial review—Introduction—The importance of courts in the NEPA process

It is judicial review that has given NEPA its significance. The Act places regulatory obligations on agencies without apparent means of oversight. By the conscious choice of its drafters, NEPA internalizes each agency's environmental obligations and is thus essentially self-regulatory in nature. Rather than relying on an outside agency for environmental analysis, each agency is to consider the environmental impacts of its own actions. While NEPA supplies a pervasive impetus for environmentally responsible decisionmaking throughout the government, the absence of institutional enforcement invites administrative inattention and noncompliance.¹ The CEQ, as a White House agency, is too small to get involved in numerous individual projects. EPA's leverage under § 309 of the Clean Air Act is murky at best, and the Agency is no disinterested party, given its conflicting role as a principal preparer of EISs on its own actions. Clearly, successful implementation of NEPA must depend on some other institution removed from the administrative process.

NEPA's enforcement ultimately depends on the courts. Fortunately, the action-forcing provisions of the Act neatly lend themselves to judicial enforcement. The importance of the role these provisions have played in fostering judicial acceptance of the Act cannot be overemphasized. Judges may, and usually should, reasonably question their competence to second-guess the scientific determinations of administrative agencies. Judges may also lack understanding of or sympathy for claimants' environmental goals. But all judges understand procedure. The requirement that an EIS must be filed as a condition precedent to an action is just the sort of requirement that taps familiar judicial strains. Implementation of the procedural provisions of NEPA is judicially comfortable. It has also ensured the success of the Act.

§ 10:35 Judicial review—Introduction—NEPA litigation in the courts

NEPA litigation, while not extensive, constitutes a significant proportion of the environmental litigation against the government. In 1980, for example, the United

⁵40 C.F.R. § 1506.1(c). "Prejudice to the ultimate decision on the program" is defined as a tendency to determine subsequent development or to limit alternatives.

⁶40 C.F.R. § 1506.1(b). If an agency considering an application becomes aware that an applicant is about to take an action that may adversely impact the environment or limit the choice of reasonable alternatives, the agency must promptly notify the applicant that it will "take appropriate action to insure that the objectives and procedures of NEPA are achieved."

⁷40 C.F.R. § 1506.1(d). Such actions are not precluded.

[Section 10:34]

¹Senator Muskie was somewhat leery of NEPA's self-scrutiny approach. As part of the negotiation between Senators Jackson and Muskie, the requirements of a "detailed statement"—the NEPA term for what has become popularly known as the EIS—was substituted for a requirement of "findings," because Senator Muskie believed that such findings would too strongly reflect self-serving agencies' mission-oriented priorities. 115 Cong. Rec. 29053 (1969).

States was a party to 63,628 actions commenced in federal district court.¹ 26,835 of these actions were brought under statutes;² of these, the United States was plaintiff in 8,600 cases and defendant in 18,235;³ 457 of the statutory cases involved environmental causes of action, and the United States was defendant in 201 of those cases.⁴ In that same year, the CEQ reported that 140 cases were brought challenging federal actions under NEPA.⁵ Therefore, litigation under NEPA is not statistically significant relative to litigation generally involving the government, but it does comprise a substantial portion (approximately 70 percent in 1980) of the environmental litigation against the United States.⁶

§ 10:36 Judicial review—Overview of the judicial process in NEPA cases— The complaint

A typical NEPA case begins with a plaintiff filing a complaint in federal court seeking both declaratory and injunctive relief.¹ Typically, the complaint is filed in federal district court, but there are agencies—such as the Federal Aviation Administration, the Federal Energy Regulatory Commission, and the Nuclear Regulatory Commission—whose organic statutes require challenges to their actions to be filed in a circuit or court of appeals. The complaint will typically name as defendants the various federal agency officials in the chain of command responsible for the proposed action that is alleged to violate NEPA. A complaint should also name state officials if their agencies are involved in joint lead capacities.² Private applicants need not be named as defendants since an injunction staying issuance or effectiveness of a permit will necessarily prevent the private action. Should a plaintiff be concerned that a private party might proceed with a plan in spite of injunctive relief against the agency, the plaintiff can name the private party as a co-

[Section 10:35]

¹Annual Report of the Director of the Administrative Office of the United States Courts, 1980 at 376 tbl.C3 (1981).

²The nonstatutory cases were overwhelmingly actions under contracts, while the balance primarily involved torts and real property. Annual Report of the Director of the Administrative Office of the United States Courts, 1980 at 376 tbl.C3 (1981).

³Annual Report of the Director of the Administrative Office of the United States Courts, 1980 at 374 tbl.C2 (1981).

⁴Annual Report of the Director of the Administrative Office of the United States Courts, 1980 at 374 tbl.C2 (1981). Less than 1 percent (0.716 percent) of the cases to which the United States was a party were environmental in nature. Of the statutory actions in which the United States was a defendant, 1.102 percent were environmental.

⁵Council on Environmental Quality, *Environmental Quality* 1981, at 183 (1982). The total includes lawsuits with causes of action in addition to those under NEPA. The CEQ maintains and annually reports statistics concerning all NEPA actions—the number of cases, the nature of the causes of action, the nature of relief, and the institutional identity (environmentalists, states, businesses, and so on) of the plaintiffs. These figures have remained generally consistent. In 2011, for instance, 94 cases were brought under NEPA while 146 NEPA cases were finally resolved. Statistics for current NEPA litigation are available at <http://www.nepa.gov>.

⁶In 2004, according to CEQ data, of the 150 NEPA actions filed by plaintiffs, almost equal numbers challenged the adequacy of the EISs and EAs/FONSIIs, with a small number alleging the need for supplemental NEPA documentation. <http://ceq.eh.doe.gov/nepa/nepanet.htm>.

[Section 10:36]

¹For what may constitute “final agency action” under NEPA for purposes of making litigation ripe, see *Bennett v. Spear*, 520 U.S. 154, 177-78, 117 S. Ct. 1154, 137 L. Ed. 2d 281, 44 Env’t. Rep. Cas. (BNA) 1161, 27 Env’tl. L. Rep. 20824 (1997); *City of Dania Beach, Fla. v. Federal Aviation Administration*, 485 F.3d 1181, 1188 (D.C. Cir. 2007); *Oregon Natural Desert Ass’n v. Bureau of Land Management*, 531 F.3d 1114, 1139–40 (9th Cir. 2008).

²State officials might also be involved in highway construction projects under NEPA § 102(2)(D), 42 U.S.C.A. § 4332(2)(D).

defendant; this does not preclude the plaintiff from seeking an injunction against the private party in a separate proceeding.³ In any event, as a practical matter, a private applicant will probably seek to intervene in an action against an agency.⁴

§ 10:37 Judicial review—Overview of the judicial process in NEPA cases—Venue

A limited measure of forum shopping is available under NEPA, in that naming a particular official as a defendant may establish venue in a desirable locale. Venue in NEPA cases is determined under the general venue statute for suits against the federal government.¹ That statute is permissive and allows the plaintiff wide leeway in the initial choice of forum. As in other suits against the government, that choice is subject to a motion to change venue for the convenience of the parties and in the interests of justice.²

§ 10:38 Judicial review—Overview of the judicial process in NEPA cases—Discovery

Discovery is somewhat more limited in environmental litigation than in litigation generally because judicial review is ordinarily confined to the administrative record.¹ However, it is sometimes necessary to look outside the record in order to properly evaluate what information was not considered.² The limitations on what may be added to the record will determine what information the government will seek or divulge during discovery. In some cases, the government may also assert a deliberative process privilege. In any event, the plaintiff should still press its discovery program if it is critical or useful to the case. Defendants typically have less to gain from discovery, except that discovery may bolster defenses such as standing, and, if plaintiffs have succeeded in introducing further evidence, discovery may enable defendants to examine that evidence or its presenting witnesses.

³See Fed. R. Civ. P. 65(d); *see also* *Foundation on Economic Trends v. Heckler*, 756 F.2d 143, 155, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20248, 20254 (D.C. Cir. 1985).

⁴An applicant will usually find it important to intervene, since its interests and the agency's may not coincide. A plaintiff generally will not resist such intervention.

[Section 10:37]

¹28 U.S.C.A. § 1391(e). This provision allows a plaintiff to bring suit: (1) where a defendant resides; (2) where the cause of action arose; (3) where the real property involved in the action is situated; or (4) where the plaintiff resides if real property is not involved. 28 U.S.C.A. § 1391 also provides for nationwide service of process.

²28 U.S.C.A. § 1404(a).

[Section 10:38]

¹*Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 1 Env'tl. L. Rep. (Env'tl. L. Inst.) 20110 (1971); *Center for Biological Diversity v. U.S. Fish & Wildlife Service*, 450 F.3d 930, 943-44, 62 Env't. Rep. Cas. (BNA) 1873, 36 Env'tl. L. Rep. 20102 (9th Cir. 2006); *Southwest Center for Biological Diversity v. U.S. Forest Service*, 100 F.3d 1443, 1450, 43 Env't. Rep. Cas. (BNA) 2077, 27 Env'tl. L. Rep. 20455 (9th Cir. 1996). Of course, the alert participant in the NEPA process places all he or she wishes into the administrative record when the structure of the proceeding so permits. When an EIS is prepared, the commenting process provides the usual occasion to place such information in the record. *See generally* *McMillan & Peterson, The Permissible Scope of Hearings, Discovery, and Additional Factfinding During Judicial Review of Informal Agency Action*, 1982 Duke L.J. 333 (1982).

²*County of Suffolk v. Secretary of the Interior*, 562 F.2d 1368, 1384, 7 Env'tl. L. Rep. (Env'tl. L. Inst.) 20637, 20644 (2d Cir. 1977). *See* *Animal Defense Council v. Hodel*, 840 F.2d 1432, 1436-37, 18 Env'tl. L. Rep. (Env'tl. L. Inst.) 20497, 20499-500 (9th Cir. 1988); *Friends of the Payette v. Horseshoe Bend Hydroelectric Co.*, 988 F.2d 989, 997, 23 Env'tl. L. Rep. (Env'tl. L. Inst.) 20530, 20534 (9th Cir. 1993); *National Audubon Soc'y v. United States Forest Serv.*, 4 F.3d 832, 841-42, 23 Env'tl. L. Rep. (Env'tl. L. Inst.) 21520, 21525 (9th Cir. 1993); *Greenpeace v. Evans*, 688 F. Supp. 579, 584-85, 17 Env'tl. L. Rep. (Env'tl. L. Inst.) 21207, 21209 (W.D. Wash. 1987).

§ 10:39 Judicial review—Overview of the judicial process in NEPA cases— The course of litigation

In a NEPA case, either the U.S. Department of Justice or the local U.S. Attorney represents the federal agency, although the agency itself may answer the complaint and proceed through discovery to trial.¹ As with discovery, the usual course of NEPA litigation is more abbreviated than that of general litigation. A plaintiff may take several steps to expedite the litigation. For example, the plaintiff may move for a preliminary injunction. As a practical matter, the case may end if the plaintiff loses at this stage and the project proceeds in the interim between the ruling and trial. Alternatively, the plaintiff can seek to have the hearing on the preliminary injunction consolidated with an advanced trial on the merits.² Often the plaintiff will move for summary judgment based on the administrative record, since that record was generated by the agency and purportedly contains undisputed facts. Typically where there is an applicant, that entity will seek to intervene, either as a matter of right or permissively.³ The defendant agency or intervening applicant will probably file a motion or crossmotion for summary judgment or dismissal. At any rate, most NEPA actions are resolved on motion.

§ 10:40 Judicial review—Overview of the judicial process in NEPA cases— Remedies

“When a court has found that a party is in violation of NEPA,” the Fifth Circuit has said, “the remedy should be shaped so as to fulfill the objectives of the statute as closely as possible, consistent with the broader public interest.”¹ As stated at the outset of this article, those objectives are to prevent or eliminate damage to the environment and to ensure environmentally responsible decisionmaking by agencies. In order to achieve these objectives, plaintiff may ask for, and courts may grant, preliminary or permanent injunctive relief.

§ 10:41 Judicial review—Overview of the judicial process in NEPA cases— Remedies—Preliminary relief

In order to receive preliminary injunctive relief, plaintiffs ordinarily must show: (1) a substantial likelihood of success on the merits; (2) a substantial threat of irreparable injury absent an injunction; (3) that this threatened injury outweighs the harm to defendants of granting the injunction; and (4) that an injunction would be in the public interest.¹ These standards impose a greater burden on a plaintiff than do those for permanent relief once a violation of NEPA is found. Of course, the gen-

[Section 10:39]

¹Note that when U.S. officers are parties in a NEPA case, the government has sixty days to file its answer. Fed. R. Civ. P. 12(a).

²Fed. R. Civ. P. 65(a)(2).

³See *WildEarth Guardians v. U.S. Forest Service*, 573 F.3d 992, 995-97 (10th Cir. 2009) (an applicant, as one with an immediate stake in the NEPA process, may intervene as a matter of right). In a less permissive jurisdiction, DOJ will generally stipulate to an applicant’s permissive intervention (which may or may not be agreed to by the plaintiff).

[Section 10:40]

¹The 9th Circuit in an en banc decision recently set aside earlier precedent and held that affected private parties may intervene as a matter of right in NEPA cases. *Wilderness Soc. v. U.S. Forest Service*, 630 F.3d 1173, 1180 (9th Cir. 2011); *Environmental Defense Fund, Inc. v. Marsh*, 651 F.2d 983, 1005, 11 Env’t. L. Rep. (Env’t. L. Inst.) 21012, 21022 (5th Cir. 1981).

[Section 10:41]

¹*Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 130 S. Ct. 2743, 177 L. Ed. 2d 461, 70 Env’t. Rep. Cas. (BNA) 1481 (2010); *Winter v. Natural Resources Defense Council, Inc.*, 555 U.S. 7, 129

eral judicial policy of shaping injunctions to implement NEPA's objectives, rather than thwart them, will prevail.²

The Supreme Court's decision in *Winter*,³ has brought a degree of clarity to the criteria for injunctive relief, particularly by its holding that irreparable harm must be shown to be "likely" and the "possibility" of such harm is insufficient to warrant preliminary injunctive relief. There is no "thumb on the scales" in NEPA cases, the Court held in another case.⁴

§ 10:42 Judicial review—Overview of the judicial process in NEPA cases—Remedies—Permanent relief

Both preliminary and permanent injunctions are equitable in nature and the considerations for whether they should issue have much in common.¹

When a NEPA violation has been found, the court typically shapes the injunction to remedy it. For example, if a court determines that an EIS should have been prepared, it will order the agency to prepare one.² Courts have differed, though, on when they consider permanent injunctive relief appropriate. Some courts have held that injunctive relief is appropriate to encourage rapid and thorough compliance with NEPA, but that principles of general equity may limit that relief.³ Other courts have been willing to grant injunctions. For example, one court held that a NEPA violation in itself constitutes irreparable harm, entitling a plaintiff "to blanket injunctive relief."⁴ Other courts have created a rebuttable presumption that a NEPA violation causes irreparable injury warranting injunctive relief.⁵ Still other courts have presumed irreparable harm and award injunctive relief if there has been ei-

S. Ct. 365, 172 L. Ed. 2d 249, 67 Env't. Rep. Cas. (BNA) 1225 (2008); *National Wildlife Fed'n v. Marsh*, 721 F.2d 767, 770 n.3, 14 Env'tl. L. Rep. (Env'tl. L. Inst.) 20172, 20173 n.3 (11th Cir. 1983); see *Foundation on Economic Trends v. Heckler*, 756 F.2d 143, 157, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20248, 20255 (D.C. Cir. 1985); *Piedmont Heights Civic Club, Inc. v. Moreland*, 637 F.2d 430, 435, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 20257, 20259 (5th Cir. 1981); *Canal Auth. of Fla. v. Callaway*, 489 F.2d 567, 577-78, 4 Env'tl. L. Rep. (Env'tl. L. Inst.) 20164, 20169 (5th Cir. 1974); *Latham v. Volpe*, 455 F.2d 1111, 1116-17, 1 Env'tl. L. Rep. (Env'tl. L. Inst.) 20602, 20603 (9th Cir. 1971).

²See *Foundation on Economic Trends v. Heckler*, 756 F.2d 143, 157, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20248, 20255 (D.C. Cir. 1985); *Winter v. Natural Resources Defense Council*, 129 S.Ct. 365 (2008) (holding that alleged injury to whales from the Navy's testing of sonar was outweighed by the public interest in training sailors); see also *Monsanto Co. v. Geertson Seed Farm*, 138 S.Ct. 2743, 2761-62 (2010) (scope of injunctive relief found to be overbroad); *Alliance for the Wild Rockies v. Cottrell*, 632 F.3d 1127, 1131 et seq. (9th Cir. 2011) (9th Circuit's "serious question" and "sliding scale" held to survive *Winter*).

³*Winter v. Natural Resources Defense Council, Inc.*, 555 U.S. 7, 129 S. Ct. 365, 172 L. Ed. 2d 249, 67 Env't. Rep. Cas. (BNA) 1225 (2008).

⁴*Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 130 S. Ct. 2743, 177 L. Ed. 2d 461, 70 Env't. Rep. Cas. (BNA) 1481 (2010).

[Section 10:42]

¹See Wright, Miller & Cooper, Federal Practice and Procedure § 2942.

²See, e.g., *Environmental Defense Fund, Inc. v. Marsh*, 651 F.2d 983, 1005-06, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 21012, 21022 (5th Cir. 1981); *Lemon v. Geren*, 514 F.3d 1312, 1315-16 (D.C. Cir. 2008) (if unraveling a transfer is necessary, it is in the court's power to do so).

³See, e.g., *Environmental Defense Fund, Inc. v. Marsh*, 651 F.2d 983, 1005-06, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 21012, 21022 (5th Cir. 1981); see also *Northern Cheyenne Tribe v. Hodel*, 851 F.2d 1152, 1158, 18 Env'tl. L. Rep. (Env'tl. L. Inst.) 20865, 20867 (9th Cir. 1988); *Save the Yaak Comm. v. Block*, 840 F.2d 714, 722, 18 Env'tl. L. Rep. (Env'tl. L. Inst.) 20869, 20873 (9th Cir. 1988); *Richland Park Homeowners Ass'n v. Pierce*, 671 F.2d 935, 942, 12 Env'tl. L. Rep. (Env'tl. L. Inst.) 20717, 20719 (5th Cir. 1982).

⁴*Environmental Defense Fund, Inc. v. Froehlke*, 477 F.2d 1033, 1037, 5 Env't. Rep. Cas. (BNA) 1313, 3 Env'tl. L. Rep. 20383 (8th Cir. 1973).

⁵*American Motorcyclist Ass'n v. Watt*, 714 F.2d 962, 966 (9th Cir. 1983); *Alpine Lakes Protection*

ther a failure to evaluate properly the environmental impact of a major federal action⁶ or a continuing denial of plaintiffs' rights.⁷

Courts that had held that a NEPA violation raises a presumption of injunctive relief have done so in order to ensure the integrity of the NEPA process. In Judge Wilkey's words, "[o]rordinarily where an action is being undertaken in violation of NEPA, there is a presumption that injunctive relief should be granted until the agency brings itself into compliance."⁸ Judge Wilkey explained that a NEPA analysis might reveal substantial environmental consequences critical to further consideration of the propriety of the action. Further, an injunction is justified on an ongoing project because the decisionmakers are entitled to all the information relevant to a determination whether to abandon or alter the project.⁹ Injunctive relief also preserves the widest freedom of choice for the agency when it reconsiders its action after preparing an EIS. "This rationale," continued Judge Wilkey, "often requires an injunction against all the activities of a project, even activities that themselves have no effect on the environment."¹⁰ Accordingly, courts "*should not prejudge*" the outcome of reconsideration "once the full environmental consequences . . . have been determined."¹¹

However, all litigants are strongly encouraged to review the above-referenced authorities in light of the Supreme Court's decisions in *Winter* and *Monsanto*, both of which have undermined much of this preexisting NEPA-specific case law governing injunctive relief. That said, it still must be borne in mind that injunctive relief has been appropriately termed "the vehicle through which the congressional policy behind NEPA can be effectuated."¹² Otherwise stated, the policies underlying NEPA "weigh the scales in favor of those seeking the suspension of all action until the Act's requirements are met."¹³ Without injunctive relief, "application of a 'rule of reason' would convert an EIS into a mere rubber stamp for *post hoc* rationalization

Soc'y v. Schlapfer, 518 F.2d 1089, 1090, 5 Env'tl. L. Rep. (Env'tl. L. Inst.) 20322 (9th Cir. 1975).

⁶*Thomas v. Peterson*, 753 F.2d 754, 764, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20225, 20230 (9th Cir. 1985); *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1250, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20035, 20040 (9th Cir. 1984); *see also* *Foundation on Economic Trends v. Heckler*, 756 F.2d 143, 157, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20248, 20255 (D.C. Cir. 1985).

⁷*Environmental Defense Fund, Inc. v. Tennessee Valley Auth.*, 468 F.2d 1164, 1184, 2 Env'tl. L. Rep. (Env'tl. L. Inst.) 20726, 20734-35 (6th Cir. 1972). It is worth noting that in some cases, judicial insistence upon NEPA compliance prior to issuance of a permit bars the activity sought to be permitted without the need for an injunction. *See, e.g., Sierra Club v. Sigler*, 695 F.2d 957, 13 Env'tl. L. Rep. (Env'tl. L. Inst.) 20210 (5th Cir. 1983) (no action on project was undertaken during pendency of litigation or after Corps of Engineers was ordered to correct deficiencies in EIS).

⁸*Realty Income Trust v. Eckerd*, 564 F.2d 447, 456, 7 Env'tl. L. Rep. (Env'tl. L. Inst.) 20541, 20545 (D.C. Cir. 1977).

⁹*Realty Income Trust v. Eckerd*, 564 F.2d 447, 456, 7 Env'tl. L. Rep. (Env'tl. L. Inst.) 20541, 20545 (D.C. Cir. 1977).

¹⁰*Realty Income Trust v. Eckerd*, 564 F.2d 447, 456, 7 Env'tl. L. Rep. (Env'tl. L. Inst.) 20541, 20545 (D.C. Cir. 1977). The reason underlying this analysis is well explained in *Jones v. District of Columbia Redev. Land Agency*, 499 F.2d 502, 511-13, 4 Env'tl. L. Rep. (Env'tl. L. Inst.) 20479, 20483 (D.C. Cir. 1974). In brief, the harm to be remedied by the EIS is of two kinds—the actual degradation of the environment, and the failure of federal agency officials to take the environment into account in the manner prescribed by NEPA.

¹¹*Realty Income Trust v. Eckerd*, 564 F.2d 447, 456-57, 7 Env'tl. L. Rep. (Env'tl. L. Inst.) 20541, 2054 (D.C. Cir. 1977) (emphasis in original).

¹²*Environmental Defense Fund, Inc. v. Froehleke*, 477 F.2d 1033, 1037, 3 Env'tl. L. Rep. (Env'tl. L. Inst.) 20541, 20384 (8th Cir. 1973).

¹³*Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1250, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20035, 20040 (9th Cir. 1984) (quoting *Alpine Lakes Protection Soc'y v. Schlapfer*, 518 F.2d 1089, 1090, 5 Env'tl. L. Rep. (Env'tl. L. Inst.) 20322 (9th Cir. 1975)).

of decisions already made.”¹⁴ Injunctive relief in a NEPA case, of course, is designed to maintain the status quo until the appropriate EIS has been prepared.¹⁵

Two earlier Supreme Court cases have given some indication that the Court prefers appellate courts to defer to trial courts’ traditional balancing of equitable factors rather than to apply presumptions necessitating injunctive relief. Those cases, *Weinberger v. Romero-Barcelo*¹⁶ and *Amoco Production Co. v. Village of Gambell*,¹⁷ held that violations of federal environmental statutes do not necessarily compel injunctions or raise presumptions of irreparable harm. While neither case explicitly addressed injunctive relief under NEPA, they have led some lower courts to question whether Congress intended NEPA to limit their traditional equitable discretion in enforcing the statute.¹⁸

§ 10:43 Judicial review—Overview of the judicial process in NEPA cases—Defenses

¹⁴Natural Resources Defense Council, Inc. v. Callaway, 524 F.2d 79, 95, 5 Env’tl. L. Rep. (Env’tl. L. Inst.) 20640, 20648 (2d Cir. 1975). Injunctive relief in a NEPA case runs both against the federal agency and, where private activity is permitted, against the company. See Fed. R. Civ. P. 65(d); Foundation on Economic Trends v. Heckler, 756 F.2d 143, 155, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20035, 20254 (D.C. Cir. 1985); Biderman v. Morton, 497 F.2d 1141, 1147, 4 Env’tl. L. Rep. (Env’tl. L. Inst.) 20487, 20490 (2d Cir. 1974); Silva v. Romney, 473 F.2d 287, 289-90, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20082, 20083-84 (1st Cir. 1973).

¹⁵See Environmental Defense Fund, Inc. v. Marsh, 651 F.2d 983, 1005-06, 11 Env’tl. L. Rep. (Env’tl. L. Inst.) 21012, 21022 (5th Cir. 1981); Natural Resources Defense Council, Inc. v. Callaway, 524 F.2d 79, 95, 5 Env’tl. L. Rep. (Env’tl. L. Inst.) 20640, 20648 (2d Cir. 1975); Jones v. District of Columbia Redev. Land Agency, 499 F.2d 502, 512-13, 4 Env’tl. L. Rep. (Env’tl. L. Inst.) 20479, 20483 (D.C. Cir. 1974). Relicensing is more akin to an irreversible and irretrievable commitment of resources than a mere continuation of the status quo. See Confederated Tribes & Bands of the Yakima Indian Nation v. FERC, 746 F.2d 466, 475-76, 14 Env’tl. L. Rep. (Env’tl. L. Inst.) 20593, 20597-98 (9th Cir. 1984) cert. denied, 471 U.S. 1116 (1985). For examples of the numerous cases granting injunctive relief to bar or severely limit an action pending completion of an adequate EIS, see Save Our Ecosystems v. Clark, 747 F.2d 1240, 1250, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20035, 20040 (9th Cir. 1984); Sierra Club v. United States Army Corps of Eng’rs, 701 F.2d 1011, 1034, 13 Env’tl. L. Rep. (Env’tl. L. Inst.) 20326, 20337-38 (2d Cir. 1983); Environmental Defense Fund, Inc. v. Marsh, 651 F.2d 983, 1005-06, 11 Env’tl. L. Rep. (Env’tl. L. Inst.) 21012, 21022 (5th Cir. 1981); Natural Resources Defense Council, Inc. v. Callaway, 524 F.2d 79, 94-95, 5 Env’tl. L. Rep. (Env’tl. L. Inst.) 20640, 20647-48 (2d Cir. 1975); Manatee County v. Gorsuch, 554 F. Supp. 778, 794, 13 Env’tl. L. Rep. (Env’tl. L. Inst.) 20180, 20187-88 (M.D. Fla. 1982); Montgomery v. Ellis, 364 F. Supp. 517, 535, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20845, 20852-53 (N.D. Ala. 1973).

¹⁶Weinberger v. Romero-Barcelo, 456 U.S. 305, 12 Env’tl. L. Rep. (Env’tl. L. Inst.) 20538 (1982). In *Romero-Barcelo*, the Court held that federal courts are not compelled to issue injunctions against violators of section 402 of the FWPCA because the Act provided for alternative means of enforcement.

¹⁷Amoco Prod. Co. v. Village of Gambell, 480 U.S. 531, 17 Env’tl. L. Rep. (Env’tl. L. Inst.) 20574 (1987). In *Gambell*, the Court held that the Ninth Circuit erroneously applied a presumption of irreparable injury to the question of whether injunctive relief was appropriate for a violation of section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). Section 810(a) of ANILCA requires an evaluation of any decision relating to the use or disposition of public lands before that decision is made of the impact on Alaskan native subsistence uses and needs. If the evaluation indicates that the proposed use would significantly restrict subsistence uses, the proposal may not be implemented until certain notice and mitigation requirements are met. 16 U.S.C.A. § 3120(a) (1985). Concluding that the environment can be protected without a presumption of irreparable harm, the Court questioned the Ninth Circuit’s adherence to the principle that “[i]rreparable damage is presumed when an agency fails to evaluate thoroughly the environmental impact of a proposed action.” *Amoco Prod. Co. v. Village of Gambell*, 480 U.S. 531, 544-45, 17 Env’tl. L. Rep. (Env’tl. L. Inst.) 20574, 20577 (1987).

¹⁸See Northern Cheyenne Tribe v. Hodel, 851 F.2d 1152, 1158 (9th Cir. 1988); Save the Yaak Comm. v. Block, 840 F.2d 714, 722, 18 Env’tl. L. Rep. (Env’tl. L. Inst.) 20869, 20873 (9th Cir. 1988); see also Town of Huntington v. Marsh, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 21350 (2d Cir. 1989); Sierra Club v. United States Forest Serv., 843 F.2d 1190, 1195, 18 Env’tl. L. Rep. (Env’tl. L. Inst.) 20749, 20752 (9th Cir. 1988).

Before plaintiffs can obtain temporary or permanent injunctive relief, they may have to overcome defenses typically raised by defendants or interveners in NEPA cases. These defenses are lack of standing, inapplicability of NEPA, and certain procedural defenses not specifically related to the Act.

§ 10:44 Judicial review—Overview of the judicial process in NEPA cases—Defenses—Standing

During most of the 1970s and 1980s it could fairly be said that provided that the facts were suitable and the complaint was properly plead, a standing defense should not present a significant hurdle to plaintiff.¹ That is probably no longer an accurate statement, particularly in certain of the circuits. In NEPA's early years one could look to the leading case on standing in environmental litigation, *Sierra Club v. Morton*,² which made clear that environmental as well as economic interests allow a plaintiff to meet this threshold requirement as long as injury to those interests is particularized to the plaintiff. Thus, it is insufficient for a plaintiff to assert a general interest in protecting the environment. Rather, the complaint must state that the plaintiff in fact uses and enjoys the environmental amenity alleged to be threatened. If the plaintiff is an organization, it must allege that some of its members use and enjoy that amenity. In *Morton*, for example, it was not enough for the plaintiffs to allege that they were interested in protecting the Mineral King Valley in California. Instead, they had to allege that they used and enjoyed the valley.³

As another early NEPA case, *United States v. Students Challenging Regulatory Agency Procedures (SCRAP # 1)*,⁴ made clear, the Supreme Court's broad view of standing is not diminished by the pervasiveness of the alleged environmental injury. In *SCRAP*, the Court found that plaintiffs had standing to challenge nationwide freight rates for recycled goods. The environmental injury alleged—damage to plaintiffs' recreational use and enjoyment of forests, streams, mountains, and other resources in the Washington, D.C., metropolitan region—was widely shared, but still gave plaintiff standing to sue.⁵

However, the Supreme Court has been shifting its view on standing. In an opinion dealing with NEPA, *Lujan v. National Wildlife Federation*,⁶ the Court took a more constrained view of standing. The Court held that plaintiffs, through their limited

[Section 10:44]

¹See generally F. Anderson, NEPA in the Courts 283 (1973); W. Rodgers, Handbook on Environmental Law 23–30 (1977).

²*Sierra Club v. Morton*, 405 U.S. 727, 2 Env'tl. L. Rep. (Env'tl. L. Inst.) 20192 (1972). See *Defenders of Wildlife v. Hodel*, 851 F.2d 1035, 1039–40, 18 Env'tl. L. Rep. (Env'tl. L. Inst.) 21343, 21345–46 (8th Cir. 1988). The injury may be threatened or contingent. *Sierra Club v. Morton*, 405 U.S. 727, 2 Env'tl. L. Rep. (Env'tl. L. Inst.) 20192 (1972).

³The Supreme Court held that the Sierra Club's allegation of interest in environmental protection was insufficient for standing, but noted in a footnote that actual use would suffice. *Sierra Club v. Morton*, 405 U.S. 727, 735 n. 8, 2 Env'tl. L. Rep. (Env'tl. L. Inst.) 20192, 20194 n. 8 (1972). On remand, the appropriate allegations of use were made and standing was achieved. *Sierra Club v. Morton*, 348 F. Supp. 219, 2 Env'tl. L. Rep. (Env'tl. L. Inst.) 20576 (N.D. Cal. 1972). See also *Sierra Club v. SCM Corp.*, 747 F.2d 99, 14 Env'tl. L. Rep. (Env'tl. L. Inst.) 20890 (2d Cir. 1984).

⁴*United States v. Students Challenging Regulatory Agency Procedures (SCRAP #1)*, 412 U.S. 669, 3 Env'tl. L. Rep. (Env'tl. L. Inst.) 20536 (1973). See also *Oregon Env'tl. Council v. Kunzman*, 817 F.2d 484, 491–92, 17 Env'tl. L. Rep. (Env'tl. L. Inst.) 20756, 20758 (9th Cir. 1987) (plaintiffs have standing to challenge nationwide spraying program because they live in state that is part of program, and thus have "geographical nexus"). But see *Lujan v. National Wildlife Fed'n*, 497 U.S. 871, 20 Env'tl. L. Rep. (Env'tl. L. Inst.) 20962 (1990), discussed in this section.

⁵See *Resources Ltd. v. Robertson*, 8 F.3d 1394, 24 Env'tl. L. Rep. (Env'tl. L. Inst.) 20026 (9th Cir. 1993).

⁶*Lujan v. National Wildlife Fed'n*, 497 U.S. 871, 20 Env'tl. L. Rep. (Env'tl. L. Inst.) 20962 (1990).

affidavits, lacked standing to challenge as a nationwide program what in reality the Court found to be many hundreds of separate actions.

Given these and subsequent cases, plaintiffs who are individuals affected by a proposed action, organizations whose members include such individuals, or state or local governments⁷ whose citizens are so affected should not have difficulty establishing standing if the required injury in fact exists and it is set out with sufficient particularity. The Supreme Court has made very clear its insistence upon the fact of injury and the connection of the plaintiff to it.⁸ Some business plaintiffs, however, may have difficulty establishing that their interests are within the zone of interests protected by NEPA, a prerequisite to standing under the Act,⁹ or that the injuries suffered are sufficient to confer standing.¹⁰ Business plaintiffs are a significant proportion of the parties filing NEPA cases,¹¹ though, and in some of these cases environmental and business interests coincide, so that the two types of organiza-

⁷A significant proportion of NEPA litigation typically includes state or local government plaintiffs. The proportion has ranged from 28 percent of the cases filed in 1978, Council on Environmental Quality, *Environmental Quality* 1979, at 589 (1979); to 14 percent of those filed in 1982, Council on Environmental Quality, *Environmental Quality* 1983, at 266 tbl.7-2 (1984); to 30 percent of those filed in 1985, Council on Environmental Quality 1986, at 243 tbl.B-4 (1988); to 6 percent in 1989, Council on Environmental Quality, *Environmental Quality* 1990, at 235 tbl.5-4 (1991); to 8 percent in 1991, Council on Environmental Quality, *Environmental Quality* 1992, at 167 (1993); to 16 percent in 1992, Council on Environmental Quality, *Environmental Quality* 1993, at 371 (1994); to 14 percent in 1993 and 10 percent in 1994, Council on Environmental Quality, *Environmental Quality* 1994–95, at 544–45 (1996).

These percentages were computed by comparing the number of plaintiffs by category to the total number of suits filed. *See City of Davis v. Coleman*, 521 F.2d 661, 5 Env'tl. L. Rep. (Env'tl. L. Inst.) 20633 (9th Cir. 1975); *see also Michigan v. United States*, 994 F.2d 1197, 23 Env'tl. L. Rep. (Env'tl. L. Inst.) 21003 (6th Cir. 1993); *Louisiana v. Lee*, 596 F. Supp. 645, 649, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20141, 20142 (E.D. La. 1984), order vacated, 758 F.2d 1081 (5th Cir. 1985).

⁸*Lujan v. National Wildlife Fed'n*, 497 U.S. 871, 20 Env'tl. L. Rep. (Env'tl. L. Inst.) 20962 (1990); *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 22 Env'tl. L. Rep. (Env'tl. L. Inst.) 20913 (1992). *But see Resources Ltd. v. Robertson*, 8 F.3d 1394, 24 Env'tl. L. Rep. (Env'tl. L. Inst.) 20026 (9th Cir. 1993). For an exceptionally restricted view of standing, *see Florida Audubon Soc'y v. Bentsen*, 94 F.3d 658 (D.C. Cir. 1996). For more traditional holdings allowing citizen standing, *see Committee to Save the Rio Hondo v. Lucero*, 102 F.3d 455, 27 Env'tl. L. Rep. (Env'tl. L. Inst.) 20576 (10th Cir. 1996), and *Dubois v. United States Dept. of Agriculture*, 102 F.3d 1273, 27 Env'tl. L. Rep. (Env'tl. L. Inst.) 20622 (1st Cir. 1996); *Lemon v. Geren*, 514 F.3d 1312, 1315 (D.C. Cir. 2008) (an agency's failure to follow NEPA's procedures creates a procedural injury which in turn creates standing); and *Heartwood, Inc. v. Agpaoa*, 628 F.3d 261 (6th Cir. 2010) (standing allegations must be site-specific).

⁹*See, e.g., Lone Pine Steering Comm. v. EPA*, 600 F. Supp. 1487, 1499 n.2, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20109, 20116 n.2 (D.N.J.), *aff'd*, 777 F.2d 882, 888 n.4, 16 Env'tl. L. Rep. (Env'tl. L. Inst.) 20009, 20012 n.4 (3d Cir. 1985), *cert. denied*, 476 U.S. 1115 (1986). It is worth observing, however, that both the district court and the court of appeals noted plaintiffs' failure to plead or to demonstrate their interest in general environmental concern. *See also Nevada Land Action Ass'n v. United States Forest Serv.*, 8 F.3d 713, 24 Env'tl. L. Rep. (Env'tl. L. Inst.) 20100 (9th Cir. 1993).

¹⁰*Region 8 Forest Serv. Timber Purchasers Council v. Alcock*, 993 F.2d 800, 23 Env'tl. L. Rep. (Env'tl. L. Inst.) 21051 (11th Cir. 1993); *Nevada Land Action Ass'n v. United States Forest Serv.*, 8 F.3d 713, 24 Env'tl. L. Rep. (Env'tl. L. Inst.) 20100 (9th Cir. 1993). For contrasting views on standing with respect to those with economic interests, compare *Ashley Creek Phosphate Co. v. Norton*, 420 F.3d 934, 941-45 (9th Cir. 2005), with *Friends of Boundary Water Wilderness v. Dombeck*, 164 F.3d 1115, 1126-27 (8th Cir. 1999). However, a plaintiff which has both environmental and economic interests may have NEPA standing. *National Ass'n of Homebuilders v. United States Army Corps of Eng'rs*, 417 F.3d 1272, 1287 (D.C. Cir. 2005).

¹¹Business and industry plaintiffs were involved in 19 percent of the NEPA cases filed in 1978, Council on Environmental Quality, *Environmental Quality* 1979, at 589 (1979); in 12 percent in 1983, Council on Environmental Quality, *Environmental Quality* 1983, at 523 tbl.12-2 (1984); in 7.4 percent in 1985, Council on Environmental Quality, *Environmental Quality* 1985, at 243 tbl.B-4 (1988); in 4.4 percent in 1991, Council on Environmental Quality, *Environmental Quality* 1979, at 167 (1992); in 12 percent in 1991, Council on Environmental Quality, *Environmental Quality* 1979, at 371 (1992); and in 9 percent in 1993 and 12 percent in 1994, Council on Environmental Quality, *Environmental Quality*

tions join as plaintiffs.¹²

§ 10:45 Judicial review—Overview of the judicial process in NEPA cases—Defenses—Inapplicability of NEPA

Defendants and intervenors have attempted to escape judicial enforcement of NEPA by arguing that their proposals lie outside the coverage of the Act. Again, such arguments may be easily overcome and have met with little success. This is due largely to NEPA's broad mandate as affirmed by the Supreme Court; the Act applies to all agency actions, absent clear conflicts of statutory authority.¹ Only one significant exception has been carved into NEPA's reach, partly by Congress² and partly by the courts:³ certain limited regulatory activities conducted for purposes of environmental protection are said to constitute the "functional equivalents" of EISs.

One important question regarding NEPA's applicability is the extent to which the statute covers toxic waste cleanups under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as Superfund. This promises to be a major issue in coming years.⁴

§ 10:46 Judicial review—Overview of the judicial process in NEPA cases—Defenses—Procedural defenses

NEPA defendants and intervenors may raise general procedural defenses not directly related to NEPA, such as ripeness, exhaustion, laches, and mootness.¹ These defenses, like those discussed above, have rarely been successful. Ripeness is

1979, at 544–45 (1994).

¹²For example, NEPA litigation challenging construction of locks and dams that facilitate barge traffic on rivers may be brought both by environmental groups and by railroads, whose interests can be assumed to be at least partly competitive. *See Environmental Defense Fund, Inc. v. Marsh*, 651 F.2d 983, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 21012 (5th Cir. 1981) (EDF joined with Louisville & Nashville R.R. Co. in litigation over Tennessee-Tombigbee Waterway); *Izaak Walton League v. Marsh*, 655 F.2d 346, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 20707 (D.C. Cir. 1981) (environmental organization joined with Atcheson, Topeka & Santa Fe Ry. in suit concerning locks on Mississippi River), cert. denied, 454 U.S. 1092 (1981).

[Section 10:45]

¹*Flint Ridge Dev. Co.*, 426 U.S. 776, 777–78, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20528, 20529 (1976); *see also Village of Barrington*, *supra*, 636 F.3d at 662 (300- or 180-day statutory deadlines do not implicitly repeal NEPA's conditioning authority); *Concerned About Trident v. Rumsfeld*, 555 F.2d 817, 823, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20787, 20789-90 (D.C. Cir. 1977); *Douglas County v. Babbitt*, 48 F.3d 1495, 25 Env'tl. L. Rep. (Env'tl. L. Inst.) 20631 (9th Cir. 1995); *cf. Ellis & Smith, The Limits of Federal Environmental Responsibility and Control Under the National Environmental Policy Act*, 18 Env'tl. L. Rep. (Env'tl. L. Inst.) 10055 (1988) (analyzing scope of "federal action" subject to NEPA).

²All of EPA's actions under the Clean Air Act, and some of those under the FWPCA, are exempted. 15 U.S.C.A. § 793(c)(1) (no action taken under Clean Air Act is "major Federal action" within meaning of NEPA); FWPCA § 511, 33 U.S.C.A. § 1371(c)(1) (only construction of publicly owned treatment works under 33 U.S.C.A. § 1281 and issuance of new pollution source permits under 33 U.S.C.A. §§ 1316, 1342 not exempted).

³*See Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 3 Env'tl. L. Rep. (Env'tl. L. Inst.) 20642 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974); *Alabama v. EPA*, 911 F.2d 499, 21 Env'tl. L. Rep. (Env'tl. L. Inst.) 20107 (11th Cir. 1990); *see also W. Rodgers, Handbook on Environmental Law* 764 (1977).

⁴The issue was raised but not decided in *Lone Pine Steering Comm. v. EPA*, 600 F. Supp. 1487, 1488, 15 Env'tl. L. Rep. (Env'tl. L. Inst.) 20109, 20110 (D.N.J. 1985). A state court in California has applied the state's NEPA equivalent to a Superfund cleanup. *See County of Kern v. State Dep't of Health Servs.*, No. 190784 (Cal. Super. Ct., 1985). The legislative history of Superfund makes clear the intent that NEPA apply in some, but not all, situations. *See generally S. Rep. No. 96-948*, at 61 (1980).

[Section 10:46]

¹*Ohio Forestry Ass'n, Inc. v. Sierra Club*, 523 U.S. 726, 737 (1998) (can sue when NEPA's

covered by CEQ regulations; the other procedural defenses have been addressed by the courts.

Two NEPA regulations bear directly on the procedural aspects of judicial relief. Both were adopted to assuage apprehensions that the new regulations—designed in part to relieve delay in the NEPA process—could, paradoxically, have the opposite effect. Fears were expressed that because the regulations had a greater number of explicit commands, there would be more provisions to violate, and would therefore be earlier and more frequent litigation that could undermine the delay-reducing purpose of the regulations. The CEQ responded by adding the two provisions on judicial relief. The first directly addresses the issue of ripeness and provides that it is the

Council's intention that judicial review of agency compliance with these regulations not occur before any agency has filed the final environmental impact statement or has made a final finding of no significant impact (when such a finding will result in action affecting the environment), or takes action that will result in irreparable injury.²

The second provision asserts the CEQ's intention that a "trivial violation" of the regulation "not give rise to any independent cause of action."³ Litigation prior to an agency's final decision and litigation on minor technical flaws in the agency's procedure under NEPA are thus discouraged.

The doctrine of exhaustion of administrative remedies raises the question of the degree to which objectors must make their environmental reservations known to an agency as a condition of later asserting them in court. There is a certain tension between an agency's NEPA obligations and this more traditional doctrine of administrative law. NEPA obligates an agency to gather information itself to protect the public, rather than to act as an umpire between opposing parties, but a basic tenet of administrative law demands that one who has information bring it to that agency's attention before seeking judicial review.⁴ Given NEPA's mandate that agencies consider all pertinent environmental impacts, courts have favored demanding more from agencies than from plaintiffs and have quite properly been reluctant to penalize plaintiffs for tardily bringing to an agency's attention what the agency itself should have known from its own studies.⁵

§ 10:47 Judicial review—Standards of review of NEPA cases

procedures violated because "the claim can never get riper.").

²40 C.F.R. § 1500.3. A case is not ripe when the local agency's conditional approval depends upon the approvals of other agencies which have not acted. *City of Fall River, Mass. v. FERC*, 507 F.3d 1, 7 (1st Cir. 2007).

³40 C.F.R. § 1500.3. *See* 43 Fed. Reg. 55978, 55981 (Nov. 29, 1978). Of course the converse is also the case—significant violations of the regulations do provide grounds for judicial relief. This is precisely how NEPA and its regulations are enforced.

The question of ripeness overlaps with that of when a "proposal" exists that may require an EIS. This issue is discussed at § 10:14. *See also* F. Anderson, *NEPA in the Courts* 46–47 (1973).

⁴*See Barnes v. U.S. Dept. of Transp.*, 655 F.3d 1124, 73 Env't. Rep. Cas. (BNA) 1033 (9th Cir. 2011); *Greene County Planning Bd. v. FPC*, 455 F.2d 412, 419, 2 Env'tl. L. Rep. (Env'tl. L. Inst.) 20018, 20019-20 (2d Cir. 1992); F. Anderson, *NEPA in the Courts* 45–46 (1973). In adopting its "scoping" regulation, *see* § 10:19, the CEQ clearly intended to make sure that interested persons or groups are alerted to pending federal proposals before NEPA studies are undertaken. In this way, the concerns of these parties can be known and addressed. However, other implications also follow. The opportunity to comment makes it more difficult for a person or group who is given notice but does not participate to come to court later and complain.

⁵*See e. g.*, *Ilio'ulaokalani Coalition v. Rumsfeld*, 464 F.3d 1083, 1092, 36 Env'tl. L. Rep. 20204 (9th Cir. 2006); *Park County Resource Council v. United States Dep't of Agric.*, 817 F.2d 609, 619, 17 Env'tl. L. Rep. (Env'tl. L. Inst.) 20851, 20854 (10th Cir. 1987). Anderson quite appropriately suggests a greater obligation to exhaust remedies when "extensive administrative proceedings" precede the agency's action. F. Anderson, *NEPA in the Courts* 46 (1973).

As a general rule, the courts have devised a NEPA-specific shorthand rule for reviewing agency action; the courts insure that the agency took a “hard look” at the environmental impacts of the action.¹ As noted above, the majority of NEPA cases filed allege that an EIS should have been prepared but was not, or that an EIS that was prepared was inadequate.² Hence, most substantive review of NEPA cases involves these issues. Other cases allege inadequate EAs or additional procedural violations of the Act.³ The following discussion briefly analyzes the standards of review employed by courts examining these various claims.

§ 10:48 Judicial review—Standards of review of NEPA cases—Failure to prepare an EIS

Since NEPA’s enactment, courts have applied various standards in reviewing complaints alleging that EISs should have been prepared. Until the late 1980s, the majority employed a “reasonableness” standard, applying searching scrutiny to an agency’s determination that no EIS was required.¹ A minority employed the “arbitrary and capricious” standard, a standard typically applied in the field of administrative law.² A few courts took middle positions.³

The Supreme Court, while stating that it was only deciding the “narrow question” of what standard of review governed failure to supplement an EIS, appeared to

Courts have been as reluctant to apply the doctrine of laches to preclude NEPA claims as they have been to dismiss for failure to exhaust administrative remedies. *See e.g.*, *Park County Resource Council*, 817 F.2d 609, 617–19, 17 Env’tl. L. Rep. (Env’tl. L. Inst.) 20851, 20854 (10th Cir. 1987); *Headwaters, Inc. v. BLM, Medford Dist.*, 665 F. Supp. 873, 876, 18 Env’tl. L. Rep. (Env’tl. L. Inst.) 21370, 21371 (D. Or. 1987). *But see* *National Parks & Conservation Ass’n v. Hodel*, 679 F. Supp. 49, 54 (D.D.C. 1987) (laches bars action).

Courts may also be reluctant to declare a NEPA complaint moot when an agency has produced an inadequate EIS, but indicates it will not implement the decision it made based on that statement, if the agency’s NEPA violation is capable of repetition but evading review. *See* *Oregon Env’tl. Council v. Kunzman*, 817 F.2d 484, 492, 17 Env’tl. L. Rep. (Env’tl. L. Inst.) 20756, 20758 (9th Cir. 1987); *Apache Survival Coalition v. United States*, 21 F.3d 895, 24 Env’tl. L. Rep. (Env’tl. L. Inst.) 20854 (9th Cir. 1994).

[Section 10:47]

¹*Department of Transp. v. Public Citizen*, 541 U.S. 752, 124 S. Ct. 2204, 159 L. Ed. 2d 60 (2004).

²*See* § 10:35.

³*Council on Environmental Quality, Environmental Quality* 1990, at 235 tbl.5-3 (1991); *Council on Environmental Quality, Environmental Quality* 1993, at 371 (1994).

[Section 10:48]

¹*See* *Hoskins, Judicial Review of an Agency’s Decision Not to Prepare an Environmental Impact Statement*, 18 Env’tl. L. Rep. (Env’tl. L. Inst.) 10331, 10339–45 (1988) (analyzing cases applying reasonableness standard).

²*Hoskins, Judicial Review of an Agency’s Decision Not to Prepare an Environmental Impact Statement*, 18 Env’tl. L. Rep. (Env’tl. L. Inst.) 10331, 10336–39 (1988) (analyzing cases applying arbitrary and capricious standard).

³Several courts have questioned whether there is any difference between the standards. *See* *Sierra Club v. Marsh*, 769 F.2d 868, 871, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20911, 20912 (1st Cir. 1985); *River Road Alliance v. Corps of Eng’rs*, 764 F.2d 445, 449, 15 Env’tl. L. Rep. (Env’tl. L. Inst.) 20518, 20519 (7th Cir. 1985); *Quinonez-Lopez v. Coco Lagoon Dev. Corp.*, 733 F.2d 1, 3, 14 Env’tl. L. Rep. (Env’tl. L. Inst.) 20445, 20446 (1st Cir. 1984); *Lower Alloways Creek Twp. v. Public Serv. Elec. & Gas Co.*, 687 F.2d 732, 742, 12 Env’tl. L. Rep. (Env’tl. L. Inst.) 21029, 21033–34 (3d Cir. 1982); *Boles v. Onton Dock, Inc.*, 659 F.2d 74, 75, 11 Env’tl. L. Rep. (Env’tl. L. Inst.) 20986, 20987 (6th Cir. 1981); *see also* *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 377 n.23, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20749, 20753 n.23 (1989); *City of Alexandria v. Federal Highway Admin.*, 756 F.2d 1014, 1017 (4th Cir. 1985); *Committee for Auto Responsibility v. Solomon*, 603 F.2d 992, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20575 (D.C. Cir. 1973); *Peshlakai v. Duncan*, 476 F. Supp. 1247, 1252, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20690, 20692 (D.D.C. 1979), cert. denied, 445 U.S. 915 (1980).

have come down on the side of the arbitrary and capricious standard.⁴ In doing so, however, the Court stressed that a “searching and careful” inquiry must be made⁵ and observed that the difference between the two standards “is not of great pragmatic consequence.”⁶ “Accordingly,” the Court continued, “our decision today will not require a substantial reworking of long-established NEPA law.”⁷

After the Supreme Court applied the arbitrary and capricious standard of review to supplementation decisions, several courts abandoned the reasonableness standard for review of an agency’s threshold decision on whether to prepare an EIS in favor of the more deferential arbitrary and capricious standard.⁸ Finally, in 2004, the Supreme Court made explicit its reliance on the arbitrary and capricious standard.⁹

The rationale for a searching and careful review of such decisions remains valid, however. That rationale was clearly articulated by the Fifth Circuit in *Save Our Ten Acres v. Kreger*:¹⁰

NEPA was intended not only to insure that the appropriate responsible official considered the environmental effects of the project, but also provided Congress (and others receiving such recommendation or proposal) with a sound basis for evaluating the environmental aspects of the particular project or program. The spirit of the Act would die aborning if a facile, *ex parte* decision that the project was minor or did not significantly affect the environment were too well shielded from impartial review. Every such decision pretermits all consideration of that which Congress has directed be considered “to the fullest extent possible.” The primary decision to give or bypass the consideration required by the Act must be subject to inspection under a more searching standard.¹¹

This guidance retains its wisdom. The threshold determination of whether to prepare an EIS is not the informed exercise of agency discretion, which should properly receive considerable deference. Rather, that determination is the agency’s decision whether or not to inform its discretion by preparing an EIS that will provide the information it needs to evaluate the environmental consequences of a project. Judicial solicitude for agency discretion is proper when, based on whatever

⁴*Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 376, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20749, 20754-55 (1989); *see also* *Alaska Wilderness Recreation and Tourism Ass’n v. Morrison*, 67 F.3d 723, 26 Env’tl. L. Rep. (Env’tl. L. Inst.) 20065 (9th Cir. 1995).

⁵*Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 378, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20749, 20754-55 (1989). The Court also emphasized that the ultimate standard of review was a narrow one.

⁶*Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 377 n.23, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20749, 20753 n.23 (1989). *But see* *National Audubon Soc’y v. United States Forest Serv.*, 4 F.3d 832, 840, 23 Env’tl. L. Rep. (Env’tl. L. Inst.) 21520, 21524 (9th Cir. 1993).

⁷*Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 377 n.23, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20749, 20753 n.23 (1989).

⁸*See, e.g.,* *Greenpeace Action v. Franklin*, 982 F.2d 1342, 23 Env’tl. L. Rep. (Env’tl. L. Inst.) 20639 (9th Cir. 1992); *Friends of the Payette v. Horseshoe Bend Hydroelectric Co.*, 988 F.2d 989, 23 Env’tl. L. Rep. (Env’tl. L. Inst.) 20530 (9th Cir. 1993). *See also* *Sabine River Auth. v. United States Dep’t of Interior*, 951 F.2d 669, 22 Env’tl. L. Rep. (Env’tl. L. Inst.) 20633 (5th Cir. 1992); *Village of Los Ranchos de Albuquerque v. Marsh*, 956 F.2d 970, 22 Env’tl. L. Rep. (Env’tl. L. Inst.) 21033 (10th Cir. 1992); *Lockhart v. Kenops*, 927 F.2d 1028, 21 Env’tl. L. Rep. (Env’tl. L. Inst.) 20994 (8th Cir. 1991); *Committee to Preserve Boomer Lake Park v. United States Dept. of Transp.*, 4 F.3d 1543, 24 Env’tl. L. Rep. (Env’tl. L. Inst.) 20142, 20146 (10th Cir. 1993). Each of these cases involved review of an agency’s decision not to prepare an initial EIS after the agency had first performed an EA that resulted in FONSI.

⁹*Department of Transp. v. Public Citizen*, 541 U.S. 752, 124 S. Ct. 2204, 159 L. Ed. 2d 60 (2004).

¹⁰*Save Our Ten Acres v. Kreger*, 472 F.2d 463, 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20041 (5th Cir. 1973).

¹¹*Save Our Ten Acres v. Kreger*, 472 F.2d 463, 466 3 Env’tl. L. Rep. (Env’tl. L. Inst.) 20041, 20042 (5th Cir. 1973).

record the law requires, the agency exercises *informed* discretion. An agency's decision not to prepare an EIS, however, is a decision not to inform its discretion and therefore invites more exacting judicial scrutiny. An agency should not be enabled to bypass the entire EIS requirement with a cursory assessment to which a court gives an equally cursory review.

§ 10:49 Judicial review—Standards of review of NEPA cases—Inadequacy of an EIS or EA

Cases challenging the adequacy of EISs or EAs are reviewed under a less disputed standard than decisions on whether to prepare EISs.¹ This is primarily due to the fact that such cases present factual rather than legal issues, and courts traditionally afford substantial deference to agency determinations of fact. While NEPA does not specifically provide for judicial review of EISs, these documents are usually reviewed under the Administrative Procedure Act² standard for review of agency actions: an agency action is to be set aside if found to be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,”³ or “without observance of procedure as required by law.”⁴ EAs are also judicially reviewable under this standard,⁵ and allegations of EA inadequacy form a significant portion of NEPA litigation.⁶

§ 10:50 Judicial review—Standards of review of NEPA cases—Other nontrivial violations of NEPA

While the CEQ does not intend for trivial violations of its regulations to give rise to independent actions,¹ nontrivial violations of the law or regulations may do so. These violations constitute the third most frequent group of allegations made in NEPA suits.² Where agency decisionmaking is alleged to violate NEPA regulations, the same standard applies as in cases alleging inadequate EISs—the arbitrary and

[Section 10:49]

¹Indeed, the standard of judicial review in this area has been accurately described as “relatively stable.” Mandelker, *NEPA Law and Litigation* § 10:13; see F. Anderson, *Federal Environmental Law* 375 (1974).

²5 U.S.C.A. § 706.

³5 U.S.C.A. § 706(2)(A); see *Oregon Envtl. Council v. Kunzman*, 817 F.2d 484, 492, 17 *Envtl. L. Rep. (Envtl. L. Inst.)* 20756, 20759 (9th Cir. 1987); *Sierra Club v. United States Army Corps of Eng'rs*, 772 F.2d 1043, 1050, 15 *Envtl. L. Rep. (Envtl. L. Inst.)* 20998, 21001 (2d Cir. 1985).

⁴5 U.S.C.A. § 706(2)(D); *Oregon Envtl. Council v. Kunzman*, 817 F.2d 484, 492, 17 *Envtl. L. Rep. (Envtl. L. Inst.)* 20756, 20759 (9th Cir. 1987); *Natural Resources Defense Council v. SEC*, 606 F.2d 1031, 9 *Envtl. L. Rep. (Envtl. L. Inst.)* 20367 (D.C. Cir. 1979); see also 5 U.S.C.A. § 706(2)(C) (“in excess of statutory jurisdiction, authority, or limitation”). Courts regularly (and appropriately) assert that judges are not scientific experts and defer to agency scientific expertise, provided it is clearly explained. See *Native Ecosystems Council v. Weldon*, 697 F.3d 1043, 1051, 75 *Env't. Rep. Cas. (BNA)* 1385 (9th Cir. 2012).

⁵*Department of Transp. v. Public Citizen*, 541 U.S. 752, 763, 124 S. Ct. 2204, 159 L. Ed. 2d 60, 58 *Env't. Rep. Cas. (BNA)* 1545, 26 *Int'l Trade Rep. (BNA)* 1097, 34 *Envtl. L. Rep.* 20033 (2004); *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Com'n*, 635 F.3d 1109, 1117-18, 72 *Env't. Rep. Cas. (BNA)* 1818 (9th Cir. 2011); *Hanly v. Kleindienst*, 471 F.2d 823, 2 *Envtl. L. Rep. (Envtl. L. Inst.)* 20717 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973).

⁶Of the 77 NEPA suits filed in 1992, 21 percent alleged this ground while 13 percent alleged that an EA should have been prepared but was not. Council on Environmental Quality, *Environmental Quality* 1993, at 371 (1994).

[Section 10:50]

¹40 C.F.R. § 1500.3.

²In 1992, 6 of 112 causes of action brought under NEPA were filed on bases other than those mentioned above. An additional five concerned the filing of supplemental EISs. Council on

capricious standard.³

§ 10:51 Judicial review—Substantive review of NEPA actions

One final issue concerning judicial review merits attention—the degree to which a court can reverse an agency decision made in compliance with NEPA procedures. NEPA and its procedures seek to ensure environmentally responsible decisionmaking, but an agency may quite possibly comply with the Act and still fail to choose the action most consistent with the national environmental policy stated in §§ 101 and 102(1) of the Act. Early in NEPA’s development, there were considerable indications that the judiciary would go beyond procedure and show a greater willingness to conduct substantive review of final agency decisions.¹ The Supreme Court has largely limited such developments. In *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*,² the Court said that NEPA sets forth “significant substantive goals” for the nation, but that its mandate to the agencies is “essentially procedural.”³ That remains an accurate statement.⁴ Even acknowledging the deference properly due to agencies in their decisionmaking, the CEQ has certainly taken the view that their actions can be so violative of NEPA’s “substantive requirements”⁵ as to merit review under the arbitrary and capricious standard.⁶

§ 10:52 Conclusion

The congressional framers of NEPA sought to change the way the federal government operates. After four decades of experience, it may fairly be concluded that they succeeded. Federal officials know that they must consider the environment in all that they do. Those who care about the environment are armed with NEPA’s action-forcing provisions. Those less environmentally inclined are brought into line by this

Environmental Quality, Environmental Quality 1993, at 371 (1994).

³See § 10:49.

[Section 10:51]

¹See W. Rodgers, Handbook on Environmental Law 738–50 (1977); see also Council on Environmental Quality, Environmental Quality 1978, at 403–05 (1979) (summarizing cases).

²*Vermont Yankee Nuclear Power Corp. v. NRDC, Inc.*, 435 U.S. 519, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20288 (1978).

³*Vermont Yankee Nuclear Power Corp. v. NRDC, Inc.*, 435 U.S. 519, 558 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20288, 20297 (1978). See *Baltimore Gas & Elec. Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 13 Env’tl. L. Rep. (Env’tl. L. Inst.) 20544 (1983); *Strycker’s Bay Neighborhood Council v. Karlen*, 444 U.S. 223, 10 Env’tl. L. Rep. (Env’tl. L. Inst.) 20079 (1980); Weinstein, Substantive Review under NEPA after *Vermont Yankee IV*, 36 Syracuse L. Rev. 837 (1985). The Court has defined the judicial role as that of ensuring that agencies take a “hard look” at environmental consequences in their actions under NEPA. *Kleppe v. Sierra Club*, 427 U.S. 390, 6 Env’tl. L. Rep. (Env’tl. L. Inst.) 20532 (1976); *Seattle Community Council Fed’n v. FAA*, 961 F.2d 829 (9th Cir. 1992). This means that a reviewing court must make a pragmatic judgment as to whether the form, content, and preparation of the EIS foster “both informed decisionmaking and informed public participation.” *Northwest Coalition for Alternatives to Pesticides v. Lyng*, 844 F.2d 588, 590–91, 18 Env’tl. L. Rep. (Env’tl. L. Inst.) 20738, 20739 (9th Cir. 1988).

⁴*Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 19 L. Rep. (Env’tl. L. Inst.) 20743 (1989).

⁵40 C.F.R. § 1500.1(a); see *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743 (1989).

⁶See F. Anderson, Federal Environmental Law 266–67 (1974); W. Rodgers, Handbook on Environmental Law § 7.5 (1977); Weinstein, Substantive Review under NEPA after *Vermont Yankee IV*, 36 Syracuse L. Rev. 837 (1985). See also 40 C.F.R. §§ 1500.1, 1502.2(d), 1505.1(a), 1505.2(b). The most recent Supreme Court discussion of this issue, however, further narrows the opportunity for review beyond the essentially procedural. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 19 Env’tl. L. Rep. (Env’tl. L. Inst.) 20743 (1989). For a criticism of the Supreme Court’s increasingly narrow reading of NEPA, see Yost, NEPA’s Promise—Partially Fulfilled, 20 Env’tl. L. 533 (1990).

congressional enactment, buttressed by the ever-present prospect of litigation. In short, NEPA works.

II. NEPA: ETHICS, ECONOMICS, AND SCIENCE IN ENVIRONMENTAL LAW*

§ 10:53 Introduction

What is striking about the National Environmental Policy Act of 1969 (NEPA) is its insistence on substantive values¹—ethical, cultural, historical, and aesthetic—and its reliance on procedural methods for achieving them.² “The most important feature of the Act,” according to Senator Henry Jackson, its principal author, “is that it establishes new decision-making procedures for all agencies of the federal government.”³

Congress instituted these procedures, however, as part of a broad national policy to encourage a “productive and enjoyable harmony between man and his environment; to . . . prevent or eliminate damage to the environment . . . ; [and] to enrich the understanding of ecological systems and natural resources important to the Nation.”⁴ This chapter discusses the nature and extent of these legislative purposes; it analyzes the substantive values which underlie NEPA and which may provide a basis for interpreting subsequent environmental legislation.

NEPA is not primarily an operational statute: it states goals but does not set standards; it calls on federal agencies to undertake environmental planning, but it does not empower them to promulgate environmental regulations.⁵ NEPA does not prohibit development in environmentally sensitive areas, except that it requires federal agencies to consider environmental values and to prepare environmental impact statements; NEPA does not amend other legislation.⁶ NEPA was intended primarily as a statement of national purpose and policy; subsequent legislation,

*By Mark Sagoff.

[Section 10:53]

¹42 U.S.C.A. §§ 4321 to 4370. This section is concerned primarily with the provisions of Title I of NEPA. 42 U.S.C.A. §§ 4331 to 4335. Title II of NEPA establishes a Council on Environmental Quality. 42 U.S.C.A. §§ 4341 to 4347.

²Courts have recognized from the outset the substantive policy implications of NEPA. *See, e.g.*, *Environmental Defense Fund v. Corps of Eng’rs*, 470 F.2d 289, 2 Env’tl. L. Rep. (Env’tl. L. Inst.) 20740 (8th Cir. 1972):

The language of NEPA, as well as its legislative history, make it clear that the Act is more than an environmental full-disclosure law. NEPA was intended to effect substantive changes in decision making. Section 101(b) of the Act states that agencies have an obligation “to use all practical means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs and resources” to preserve and enhance the environment. To this end, § 101 sets out specific environmental goals to serve as a set of policies to guide agency action affecting the environment

Environmental Defense Fund v. Corps of Eng’rs, 470 F.2d 289, 297, 2 Env’tl. L. Rep. (Env’tl. L. Inst.) 20740, 20743 (8th Cir. 1972).

³Jackson, *Environmental Quality, the Courts, and Congress*, 68 Mich. L. Rev. 1079 (1970).

⁴NEPA § 2, 42 U.S.C.A. § 4321.

⁵*See* Goldsmith & Banks, “Environmental Values: Institutional Responsibility and the Supreme Court,” 7 Harv. Env’tl. L. Rev. 1, 2 (1983). “Whereas NEPA required the federal government to function as an environmental planner, the Clean Air Act and OSHA required the federal government to function as an environmental regulator.” Goldsmith & Banks, “Environmental Values: Institutional Responsibility and the Supreme Court,” 7 Harv. Env’tl. L. Rev. 1, 2 (1983) (footnotes omitted).

⁶NEPA § 104, 42 U.S.C.A. § 4334, states that nothing in the previous sections “shall in any way affect the specific statutory obligations of any Federal agency” to comply with criteria, standards, and other requirements set by legislation. This “non-derogation clause” was added as part of a compromise between Senator Jackson (the chief sponsor of NEPA in the Senate) and Senator Muskie (chairman of the relevant subcommittee) when the version of NEPA passed by the House was referred back to the

which did set standards and state prohibitions, would make that policy operational.⁷

The single major operational requirement of the Act, included as a result of a last-minute compromise,⁸ stipulates that all agencies of the federal government should prepare “a detailed statement by the responsible official” describing the environmental impact of every action “significantly affecting the quality of the human environment.”⁹ This requirement has engendered a vast NEPA jurisprudence,¹⁰ which is adequately analyzed in casebooks,¹¹ treatises,¹² and articles,¹³ and need not

Senate on its way to the Conference Committee. Senator Muskie wished to ensure that NEPA would not modify pollution control legislation his committee had approved or would approve. For an account of these events, see R. Liroff, *A National Policy for the Environment: NEPA and its Aftermath* 18–20 (1976). For an analysis of the extent to which the non-derogation clause applies to agencies specifically concerned with environmental protection, such as the Environmental Protection Agency, see Mandelker, *NEPA Law and Litigation* §§ 2:15, 2:17, 2:18; F. Anderson, *NEPA in the Courts: A Legal Analysis of the National Environmental Policy Act* 108–22 (1973).

⁷For discussion of this point, see Mandelker, *NEPA Law and Litigation* §§ 1:2, 1:3. See also Senate Comm. on Interior and Insular Affairs, *Congress and the Nation’s Environment*, 92d Cong., 1st Sess. xv (1971):

By proclaiming the responsibility of the Federal Government to promote the restoration and maintenance of the human environment, the Act provides a framework for the formulation of specific legislative measures to deal with a wide variety of environmental problems. On the action level, it requires all U.S. agencies to submit detailed environmental impact reports, available to the public at large, on any proposed project or legislation “significantly affecting the quality of the human environment.”

Senate Comm. on Interior and Insular Affairs, *Congress and the Nation’s Environment*, 92d Cong., 1st Sess. xv (1971).

Commentators have criticized NEPA for being more aspirational than regulatory; this criticism, however, ignores the intention that NEPA serve as a framework for subsequent legislative measures dealing with a variety of specific environmental problems. Liroff, for example, argues “that Congress did not really enact a national environmental policy when it passed NEPA. Rather, it enacted only a statement of national environmental policy.” R. Liroff, *A National Policy for the Environment: NEPA and its Aftermath* 6 (1976). Lowi, however, misunderstands the role of NEPA. He writes:

The act states a whole lot of lofty sentiments. . . . But there is no law to be found anywhere in the act. Sentiments only—with a bit of staff and eventually a bit of money thrown in. But no law. No criteria identifying precisely what behavior is thought to be harmful and therefore unlawful. There is not even a small step in this direction.

⁸Senator Jackson believed that the policy statement in NEPA would suffice to direct mission-oriented public works agencies to consider environmental “findings,” but Senator Muskie insisted on a stronger mandate involving a “detailed statement” of environmental impact. For the relevant textual changes in the statute, see 115 Cong. Rec. 29051 (1969). For a discussion of the legislative history of the impact statement requirement, see R. Liroff, *A National Policy for the Environment: NEPA and its Aftermath* 6, 15–20 (1976).

⁹NEPA § 102(1)(C), 42 U.S.C.A. § 4332(1)(C).

¹⁰NEPA does not contain any provision for judicial review and it is clear that few, if any, legislators contemplated the extent to which the judiciary would enforce NEPA requirements. The only mention of possible judicial consequences to be found in the legislative history occurs in the “Statement of the Managers on the Part of the House” examining a provision, later deleted, concerning environmental rights. See 115 Cong. Rec. 39702 (1969). Apparently, even Representative Aspinall, a major opponent of the statute, failed to foresee the possibility of judicial activism. According to Liroff, “judicial review of environmental impact statements, which ultimately proved to be the most important role for the courts, was never discussed.” R. Liroff, *A National Policy for the Environment: NEPA and its Aftermath* 6, 31 (1976).

¹¹See, e.g., J. Battle, *Environmental Decisionmaking and NEPA* (1985); J. Bonine & T. McGarity, *The Law of Environmental Protection* 1–234 (1984); N. Orloff & G. Brooks, *The National Environmental Policy Act: Cases and Materials* (1980).

¹²See, e.g., F. Anderson, *NEPA in the Courts: A Legal Analysis of the National Environmental Policy Act* 108 (1973); R. Liroff, *A National Policy for the Environment: NEPA and its Aftermath* 6 (1976); Mandelker, *NEPA Law and Litigation*.

¹³See Worsham, *The National Environmental Policy Act and Related Materials: A Selected Bibliography* (Vance Bibliographies, Pub. Admin. Ser. # P. 43) (listing approximately 200 articles on NEPA

be reviewed here. Our present interest is to consider the statute not as a catalyst for the development of a NEPA common law,¹⁴ but as a statement of national values, purposes, and policies for the natural and human environment. These values, principles, and policies will be examined to find out what they are and how conflicts among them may be resolved.

Section 101 of NEPA declares six specific policy goals which are supposed to implement the overall objective of establishing a productive, enjoyable harmony between man and his environment. These sweeping policy goals include trusteeship of the environment for future generations; assurance of safe, healthful, productive, and aesthetically and culturally pleasing surroundings for all Americans; and preservation of important historical, cultural, and natural aspects of the national heritage.¹⁵

These policy goals are explicitly ethical: They arise from a conception of the good society¹⁶ and the harmonious relation it seeks to maintain with its environment.¹⁷ These goals reflect social virtues: justice between generations, respect for nature, and reverence for life.¹⁸ Yet NEPA also recognizes the importance of economic interests, and it acknowledges the possibility that these interests may conflict with attempts to protect the environment.

The statutory language, the legislative history, and the subsequent judicial interpretation of NEPA suggest three possible approaches to understanding, if not resolving, the conflict between environmental values and economic growth. First, those who emphasize the ethical and aspirational aspects of the statute look upon environmental deterioration with alarm and disgust and call for a fundamental

published in the 1970s).

¹⁴See *Kleppe v. Sierra Club*, 427 U.S. 390, 421, 6 Env'tl. L. Rep. (Env'tl. L. Inst.) 20532, 20539 (1976) (Marshall, J., and Brennan, J., dissenting in part) ("In fact, this vaguely worded statute seems designed to serve as no more than a catalyst for development of a 'common law' of NEPA.").

¹⁵NEPA § 101(b), 42 U.S.C.A. § 4331(b).

¹⁶Ethical as distinct from economic goals are usually thought to characterize a good or "great" society. Thus President Lyndon Johnson remarked in 1965:

We have increased the wealth of our Nation and the prosperity of our people. Yet we do not do this simply to swell our bank deposits, or to raise our gross national product. The purpose of this nation cannot be listed in the ledgers of accountants. It is to enrich the quality of people's life—to produce great men and women which are the measure of a Great Society.

White House Conf. on Natural Beauty, Report to the President and the President's Response 41 (1965).

¹⁷"[T]he cornerstone of environmental policy is ethical. . . . The sacrifice of a plant or animal species, for example, or of a unique ecosystem ought not to be permitted for reasons of short-run economy, convenience or expediency. The philosophy of reverence for life would be an appropriate guiding ethic for a policy that must at times lead to a decision as to which of two forms of life must give way to a larger purpose." L. Caldwell, *A National Policy For The Environment* (1968) (A Special Report to the Committee on Interior and Insular Affairs, U.S. Senate), *reprinted in* Hearings Before the Comm. on Interior and Insular Affairs, U.S. Senate and the Comm. on Sci. & Astronautics, 90th Cong., 2d Sess. 87, 109 (1968). For current assessments of NEPA along these lines, see Goldsmith & Banks, "Environmental Values: Institutional Responsibility and the Supreme Court," 7 Harv. Env'tl. L. Rev. 1, 2 (1983), and Pollack, *Reimagining NEPA: Choices for Environmentalists*, 9 Harv. Env'tl. L. Rev. 359 (1985).

¹⁸See note 2. Politicians during the 1960s frequently contrasted economic goals, such as welfare and efficiency, with ethical concerns, particularly with respect to the environment. President Johnson's statement is typical:

Our conservation must not be just the classic conservation of protecting and development, but a creative conservation of restoration and innovation. Its concern is not with nature alone, but with the total relation between man and the world around him. Its object is not just man's welfare but the dignity of his spirit.

Cooley, Introduction: Politics, Technology and the Environment, in *Congress and the Environment* xiii (R. Cooley & G. Wandesforde-Smith eds. (1979) (quoting The White House Message on Natural Beauty to the Congress of the United States (Feb. 8, 1965))).

change of conscience in America.¹⁹ They may argue that NEPA establishes an “environmental bill of rights”; they insist, at any rate, that it gives environmental values priority over ordinary economic and commercial interests in agency decisionmaking.²⁰ From this moral or principled point of view “the growth-versus-environment contest is in one sense a mismatch: economic growth is a means, an instrumental goal, while environmental quality is an end in itself, an important component of the quality of existence.”²¹

There are passages in NEPA which imply, indeed, that environmental protection should not be weakened in order to accommodate economic development.²² In other passages, however, the statute introduces “weasel” words, such as “practicable”²³ and “to the fullest extent possible,”²⁴ which can be interpreted as tempering its environmental mandate. NEPA refrains from creating a “right” to a healthful environment. The statute may do more to state than to solve the problem of giving environmental values “appropriate consideration in decisionmaking along with economic and technical considerations.”²⁵

Those who approach NEPA from an economic point of view, in contrast, may interpret the statute as a call on agencies to allocate natural resources more efficiently and to prevent wasteful exploitation. In this view, “the role of NEPA is narrow: ensuring that agencies conduct proper scientific and economic analysis.”²⁶ Those who take this approach argue that NEPA neither gives moral priority to environmental values nor suggests that these values should “trump” economic interests. The law requires, on this reading, only that values be weighed equitably along with other wants and preferences, the aggregate satisfaction of which will

¹⁹In this respect, the environmental movement can be understood by analogy to the civil rights movement which preceded it by a few years. Civil rights activists viewed segregation with moral revulsion and sought to change attitudes by changing behavior through law. They used legislation to change attitudes and preferences concerning race. Environmentalists similarly wished to mobilize the force of law in the service of consciousness-raising, not necessarily to satisfy extant preferences and tastes, but to improve and reform behavior with respect to natural resources and the environment.

²⁰For this view, see, e.g., Hanks & Hanks, *An Environmental Bill of Rights: The Citizen Suit and the National Environment Policy Act of 1969*, 21 Rutgers L. Rev. 230 (1970).

²¹Heller, *Coming to Terms with Growth and the Environment*, in *Energy, Economic Growth, and the Environment* 3 (S. Schurr ed. 1972).

²²In one such passage, NEPA calls on the nation to “[a]ttain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable or unintended consequences.” NEPA § 101(b)(3), 42 U.S.C.A. § 4331(b)(3). This statement might be read as a non-degradation requirement, but the courts, in generally backing away from substantive NEPA review of agency decisions, have not given it this effect. *See generally* Mandelker, *NEPA Law & Litigation*, § 10:8.

²³NEPA § 101(b), 42 U.S.C.A. § 4331(b).

²⁴NEPA § 102, 42 U.S.C.A. § 4332. In the version of the Muskie-Jackson bill that went to conference, the words “to the fullest extent possible” modified “policies, regulations and public laws,” and *not* the responsibilities of the federal agencies. Congressman Aspinall insisted on the revision so that, in his view, agencies would have to comply with NEPA only to the extent permitted under existing legal authority. This would have the same effect, he thought, as the vitiating amendment he had placed in the House version. In exchange for this revision, therefore, he permitted his amendment to be deleted from the final bill.

Senator Jackson created some legislative history, however, to abort Aspinall’s interpretation of this passage. In a “Statement of the Managers on the Part of the House,” Jackson’s staff, in cooperation with Dingell, stipulated that agencies were to comply with NEPA directives unless explicitly prohibited from doing so by authorizing legislation. 115 Cong. Rec. 39702 (1969) (Aspinall, of course, refused to sign this statement.). When it is said that Congressman Aspinall was outmaneuvered in conference, this is what it means. *See* R. Liroff, *A National Policy for the Environment: NEPA and its Aftermath* 29–30 (1976).

²⁵NEPA § 102(2)(B), 42 U.S.C.A. § 4332(2)(B).

²⁶Pollack, *Reimagining NEPA: Choices for Environmentalists*, 9 Harv. Envtl. L. Rev. 372 (1985).

promote individual welfare and maximize social wealth.²⁷

On this view, there is no logical difference between a moral commitment to “clean up America,” for example, and any other preference or desire. Moral and aesthetic “benefits” are simply harder to quantify—and even harder to price—and therefore more difficult to enter into the utilitarian calculus upon which social decisions are to be based.²⁸

Finally, many politicians during the 1960s and 1970s argued that the nation did not have to choose between economic growth and environmental protection but that, by forcing science and technology to develop in appropriate ways, it could have its environmental cake and eat it too. To quote the Republican Presidential nominee in 1968: “We are faced with nothing less than the task of preserving the American environment and at the same time preserving our high standard of living.”²⁹ During the 1960s, many Americans believed that environmental quality and economic growth were not enemies, but that a wiser use of science and technology could solve—just as a careless use had caused—the environmental crisis. Much of the debate in Congress was concerned with diagnosing the reasons for environmental problems and developing the expertise to solve them.³⁰ One may argue that NEPA avoids rather than confronts many of the “hard choices” that sustain an enforceable environmental policy.

This section considers NEPA as a response to the pervasive conflict between economic growth and environmental protection or, in the language of the time, between

²⁷An early leading NEPA case, *Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n*, 449 F.2d 1109, 1 Env'tl. L. Rep. (Env'tl. L. Inst.) 20346 (D.C. Cir. 1971), interprets NEPA as entering environmental values into a general cost-benefit balancing on which a decision may be legitimately based. “In some instances environmental costs may outweigh economic and technical benefits and in other instances they may not. But NEPA mandates a rather finely tuned and ‘systematic’ balancing analysis in each instance.” *Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n*, 449 F.2d 1109, 1113, 1 Env'tl. L. Rep. (Env'tl. L. Inst.) 20346, 20348 (D.C. Cir. 1971). In spite of this statement, courts have generally not taken either *Calvert Cliffs* or NEPA § 102(2)(B) to require a cost-benefit test or cost-benefit analysis in environmental impact statements. See, e.g., *Trout Unlimited v. Morton*, 509 F.2d 1276, 5 Env'tl. L. Rep. (Env'tl. L. Inst.) 20151 (9th Cir. 1974).

²⁸For citations to and criticism of this literature, see Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 *Stanford L. Rev.* 387 (1981).

²⁹See Radio Address of Richard M. Nixon, Republican Presidential Nominee, CBS Radio, October 18, 1968, reprinted in U.S. Senate, Comm. on Interior and Insular Affairs, *National Env'tl. Policy*, 91st Cong., 1st Sess. 101 (1969) [hereinafter cited as *Nixon Radio Address*]. This radio address represents an exception to Nixon's general antipathy to the environmental movement. According to R.N.L. Andrews, “NEPA was a political threat to the Nixon Administration and not an initiative of it. NEPA was a congressional initiative and one whose enactment Nixon had initially opposed; he had not shared in the development of it, nor had he demonstrated any previous commitment to the policy it declared.” R. Andrews, *Environmental Policy and Administrative Change* 22 (1976). Andrews fully documents Nixon's indifference to and rejection of environmental programs between 1971 and 1974. R. Andrews, *Environmental Policy and Administrative Change* 21-27 (1976). For a somewhat more sympathetic view of Nixon's environmental policy, see J. Whitaker, *Striking A Balance: Environment and Natural Resources Policy in the Nixon-Ford years* (1976); J. Quarles, *Cleaning Up America* (1976).

³⁰See F. Anderson, *NEPA in the Courts: A Legal Analysis of the National Environmental Policy Act* 1-2 (1973). There, Anderson states that the largest portion of NEPA's legislative history is taken up with establishing the dynamics of environmental systems, diagnosing the extent of environmental harm insofar as it is known (and calling for the study and measurement of what is not yet known), identifying the federal institutional shortcomings which contribute to environmental deterioration, and endorsing the need for comprehensive federal planning, coordination, and decisionmaking under a unified national policy. The subject of enforcement of such a policy on the working level in the federal agencies did not command Congress' full attention at any point. F. Anderson, *NEPA in the Courts: A Legal Analysis of the National Environmental Policy Act* 1-2 (1973).

our standard of living and our quality of life.³¹ The legislative and subsequent history of NEPA will be examined to understand how the statute responds to this conflict and how it seeks to reconcile technological progress with “a standard of excellence in man’s relationship to his physical surroundings.”³²

This section is divided into four subsections. The first subsection, which looks into the legislative history of NEPA, suggests that Congress did not itself strike a balance between economic growth and environmental protection. Rather, Congress intended what it achieved, namely, “to have created a new, complex political process which can be and has been used very effectively to improve the social and environmental sensitivity of government decisionmakers.”³³

In the second subsection, the ethical or the “ecological” understanding of NEPA is examined. Michael McCloskey, who headed the Sierra Club when NEPA was enacted,³⁴ expressed this attitude. He declared that a “revolution is truly needed—in our values, outlook and economic organization. For the crisis of our environment stems from a legacy of economic and technical premises which have been pursued in the absence of ecological knowledge.”³⁵

The third subsection takes up the economic interpretation of NEPA’s substantive mandate. Roughly speaking, those who take this approach consider environmental regulation to be appropriate only when it can be construed as correcting a market failure.³⁶ NEPA does not respond to a new “ecological” ethic, on this view, but rests on the conventional utilitarianism of the conservationist movement.³⁷ NEPA addresses the problem Pinchot summarized a generation earlier: “the one great central problem of the use of the earth for the good of man.”³⁸

The final subsection turns to the idea that science and technology, if developed and applied appropriately, can help to minimize or even to eliminate the conflict between economic development and environmental protection in specific contexts. As science and technology have led us into the environmental crisis, according to this

³¹See Radio Address of Richard M. Nixon, Republican Presidential Nominee, CBS Radio, October 18, 1968, *reprinted in* U.S. Senate, Comm. on Interior and Insular Affairs, National Env’tl. Policy, 91st Cong., 1st Sess. 101 (1969). *See also* Reconciling Progress with the Quality of Life, in *The Environment: A National Mission For The Seventies* 7 (Editors of Fortune ed. 1970).

³²115 Cong. Rec. 40416 (1969) (remarks of Sen. Jackson, urging passage of the bill coming out of conference committee, as modified by the Jackson-Muskie compromise).

³³Friesema & Culhane, Social Impacts, Politics, and the Environmental Impact Statement Process, 16 Nat. Resources J. 339, 340 (1976).

³⁴David Brower was Executive Director of the Sierra Club from 1952 to 1969, when he left to become president of Friends of the Earth. Michael McCloskey succeeded Brower.

³⁵McCloskey, Foreword to *Ecotactics: The Sierra Club Handbook For Environmental Activists* 11,11 (1970). Both technocrats and moralists appeal to science and especially to ecology as a basis for their positions—but they have very different conceptions of ecology in mind. For discussion of this point, see Murdoch & Connell, *The Ecologist’s Role and the Nonsolution of Technology*, in *Ecocide—And Thoughts Toward Survival* 47 (C. Fadiman & J. White eds. 1971). “Ecologists function at low conceptual levels. The first level is directly concerned with their day-to-day research, and the second constitutes a way of viewing the world.” Murdoch & Connell, *The Ecologist’s Role and the Nonsolution of Technology*, in *Ecocide—And Thoughts Toward Survival* 47 (C. Fadiman & J. White eds. 1971).

³⁶For a statement of this position, see W. Baxter, *People or Penguins? The Case for Optimal Pollution* (1974). “To assert there is a pollution problem or an environmental problem is to assert, at least implicitly, that one or more resources is not being used so as to maximize human satisfactions. In this respect at least environmental problems are economic problems, and better insight can be gained by application of economic analysis.” W. Baxter, *People or Penguins? The Case for Optimal Pollution* 17 (1974).

³⁷The difference between the conservation and the “ecology” movements is widely recognized. *See, e.g.,* Krieger, *What’s Wrong With Plastic Trees?*, 179 Sci. 446, 446 (1973).

³⁸G. Pinchot, *Breaking New Ground* 322 (1947).

“hair of the dog” argument, so they might also lead us out of it.³⁹ This seems to have been Senator Jackson’s position:

For now and in the future we must rely heavily on [scientific and engineering] talent to solve major environmental problems—to provide clean energy, to devise pollution-free manufacturing processes and transportation systems and to develop new techniques for recycling and reusing our resources. The solution to these problems is not to halt economic growth or the development of science and technology, but rather it is to develop responsible programs and policies to guide their use.⁴⁰

§ 10:54 Legislative history¹

On February 18, 1969, Senator Jackson introduced in the Senate bill S. 1075, which, like the companion legislation Congressman Dingell introduced in the House a day earlier,² provided an incomplete and inchoate version of NEPA.³ Both bills would have supported ecological research and created a Council on Environmental Quality, but neither contained any action-forcing provisions. Students of NEPA conclude that, while Senator Jackson and Congressman Dingell both favored much stronger legislation, they wrote the initial bills narrowly to avoid jurisdictional conflicts. They wished “to ensure that the bills, once introduced, would be referred to their respective committees, where they could then be accordingly altered.”⁴

In presenting S. 1075 to the Senate that day in February,⁵ Senator Jackson noted that the exploitation of resources and the conquest of nature were once important national priorities. He then observed: “Our national goals have, however, changed a

³⁹The conventional argument that nothing could, or should, stop technological or economic progress began to be turned against the despoiling of the natural environment. Why could not technical ingenuity be employed to abate air and water pollution, to salvage or disintegrate waste products, or to bury electric power transmission lines? As it became increasingly evident that technology could remedy many forms of environmental degradation, the questioning turned more and more to matters of economic price. As Americans began to believe that ugly or unhealthy environments were not technologically inevitable, the issue of environmental quality became clearly a matter of policy, economics, and administration. L. Caldwell, *A National Policy For The Environment* 24 (1968) (A Special Report to the Committee on Interior and Insular Affairs, U.S. Senate).

⁴⁰Jackson, *Environmental Policy and the Congress*, 11 *Nat. Resources J.* 403, 415 (1971).

[Section 10:54]

¹The legislative history of NEPA has been described many times and is only briefly sketched here. For fuller accounts of the legislative history, F. Anderson, *NEPA in the Courts: A Legal Analysis of the National Environmental Policy Act* 1–14 (1973); R. Andrews, *Environmental Policy and Administrative Change* Ch 1 22 (1976); T. Finn, *Conflict and Compromise: Congress Makes a Law, The Passage of The National Environmental Policy Act* (1972); R. Liroff, *A National Policy for the Environment: NEPA and its Aftermath* ch. 2 (1976); and Dreyus & Ingram, *The National Environmental Policy Act: A View of Intent and Practice*, 16 *Nat. Resources J.* 243 (1976).

²H.R. 6750, 91st Cong., 1st Sess. (1969).

³NEPA had several forebears and antecedents in both the Senate and the House during the 1960s. For a thorough and detailed history of environmental legislation during this period, see R. Shelton, *The Environmental Era: A Chronological Guide To Policy And Concepts, 1962–1972* (Dissertation, Dep’t of Gov’t, Cornell University, Ithaca, N.Y. 1973).

⁴F. Anderson, *NEPA in the Courts: A Legal Analysis of the National Environmental Policy Act* 5 (1973). If Senator Jackson had referred to a national policy for the environment in the original bill, it might have been sent to Senator Edmund Muskie’s Subcommittee on Air and Water Pollution of the Committee on Public Works, which had apparent jurisdiction over environmental legislation. The two Senators were competing politically at the time as environmental leaders in Congress. Congressman Dingell, ironically, had to keep the House bill away from Congressman Aspinall’s Committee on Interior and Insular Affairs, the complement in the House to Senator Jackson’s committee. Congressman Dingell succeeded in doing this primarily by limiting environmental impacts to fish and wildlife, a limitation later removed by amendment under pressure from Congressman Aspinall.

⁵S. 1075, 91st Cong., 1st Sess. (1969).

great deal in recent years.”⁶ He continued:

[T]he concept of man’s total environment has emerged in the last few years as a new focus for public policy. Not long ago the ideal of a governmental responsibility for the health of the individual, for the state of the economy, for consumer protection and for housing were considered revolutionary. Today, we have come to take these responsibilities for granted. We must now proceed to make the concept of a governmental responsibility for the quality of our surroundings an accepted tenet of our political philosophy.⁷

Those who heard Jackson’s remarks must have found them familiar. Congress had for ten years been lobbied by a growing grassroots environmental movement.⁸ Congressional concern with environmental issues culminated early in 1968, when Congressman Daddario’s Subcommittee on Science, Research, and Development completed extensive hearings on environmental quality.⁹ Later that year, the House and Senate joined in an unusual colloquium to discuss a national policy for the environment. In June 1968, Daddario’s subcommittee issued a report attributing many of the nation’s environmental problems to the fragmented, mission-oriented structure of the federal agencies.¹⁰ The report echoed a point economists had frequently stressed:

The point is that the agencies planning highways or dams are compelled to adopt a single-purpose approach, generally ignoring other considerations except when they are forced upon them by an aroused public. For the agency to do otherwise—for example, to admit the economic and aesthetic loss that results from the destruction of wilderness—is to weaken the case for the agency’s projects, to reduce the number of projects that can be undertaken by the agency.¹¹

Jackson presented similar arguments to Congress.¹² Federal agencies must be made responsive to a comprehensive environmental policy if they were to cease being part of the environmental problem and become part of its solution.¹³ NEPA was plainly intended to raise the environmental consciousness of public officials in

⁶Hearings on S. 1075, S. 237, and S. 1752, National Env’tl. Policy, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st Sess. 24–25 (1969).

⁷Hearings on S. 1075, S. 237, and S. 1752, National Env’tl. Policy, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st Sess. 27 (1969).

⁸In 1959, legislation had been introduced into the Senate, S. 2549, 86th Cong., 1st Sess. (1959) (Resources and Conservation Act), to declare a “unified statement of conservation, resource and environmental policy” and to create a “Council of Conservation, Resource, or Environmental Advisors.” Similar legislation was introduced in 1966, S. 2282, 89th Cong., 2d Sess. (1966) (Ecological Research and Surveys Act).

⁹Hearings on Env’tl. Quality before the Subcomm. on Sci., Research, and Dev., House Comm. on Sci. & Astronautics, 90th Cong., 2d Sess. (1968).

¹⁰Subcomm. on Sci., Research, and Dev., House Comm. on Sci. & Astronautics, 90th Cong., 2d Sess. (1968) (Managing the Environment).

¹¹Address by Lawrence Hines, Professor of Economics, Dartmouth College, before the Tenth Biennial Wilderness Conference, Apr. 17, 1967, *quoted in* Hutchinson, Bringing Resource Conservation into the Mainstream of American Thought, 9 Nat. Resources J. 518, 521 (1969).

¹²Senator Jackson emphasized the interdisciplinary nature of an effective environmental policy:

There are about 80 major Federal agencies with programs under way which affect the quality of the human environment. If environmental policy is to become more than rhetoric, and if the studies and advice of any high-level, advisory group are to be translated into action, each of these agencies must be enabled and directed to participate in active and objective-oriented environmental management. Concern for environmental quality must be made part of every Federal action.

115 Cong. Rec. 29087 (1969) (remarks of Sen. Jackson).

¹³One commentator aptly described the situation:

Federal legislation was necessary because the creation of program, mission-oriented agencies has insured that these environmental considerations have been systematically under-represented in most short-and long-range decision making. Existing agencies were established to supervise the development of natural resources consis-

mission-oriented agencies. As one commentator wrote: "The importance of NEPA lies in its role as an environmental overlay on the statutory responsibilities of federal agencies."¹⁴

Hearings on S. 1075 before Senator Jackson's Committee on Interior and Insular Affairs began in April, 1969.¹⁵ In June, Jackson introduced, as an amendment to S. 1075, a complete revision of the bill, printed in an appendix to the committee hearings.¹⁶ The amended bill, while resembling the final statute, differed primarily in that it required "a finding by the responsible official" that the environmental impact of a proposed action had been studied and considered.¹⁷ It also declared that "each person has a fundamental and inalienable right to a healthful environment."¹⁸

The version of NEPA which emerged from Jackson's committee resulted, in part, from testimony, particularly by Dr. Lynton Caldwell, urging that strong "action-forcing" provisions be included in the bill. Caldwell, who had written for years on the need for the statute,¹⁹ had prepared a major report for the committee²⁰ and had acted as a consultant to Senator Jackson. Caldwell interpreted NEPA not as a merely procedural statute but as "a fundamental reconstruction of national priorities."²¹ The following exchange between Dr. Caldwell and Senator Jackson provides a good indication of their agreement on that point:

Dr. Caldwell: I have already suggested, it seems to me, that the Congress indeed has a responsibility and could enunciate [a national environmental policy]. But beyond this, I would urge that in the shaping of such a policy, it have an action-forcing, operational aspect. When we speak of policy we ought to think of a statement which is so written that it is capable of implementation; that it is not merely a statement of things hoped for; . . . but that it is a statement which will compel or reinforce or assist all of these things, the executive agencies in particular, but going beyond this, the Nation as a whole, to take the kind of action which will protect and reinforce what I have called the life support system of this country

The Chairman [Senator Jackson]: . . . I agree with you that realistically what is needed in restructuring the governmental side of this problem is to legislatively create those situations that will bring about an action-forcing procedure the departments must comply with. Otherwise, these lofty declarations are nothing more than that. It is merely a finding and statement but there is no requirement as to implementation. I believe this is what you were getting at.

Dr. Caldwell: Yes, exactly so.²²

In June 1969, the Senate Interior Committee unanimously reported out S. 1075,

tent with the ethic which has prevailed throughout this country's history and, thus, they tended to overstress the benefits of development and to explore damaging alternatives to current methods of meeting their programmed objectives.

Tarlock, *Balancing Environmental Considerations and Energy Demands: A Comment on Calvert Cliffs' Coordinating Committee, Inc. v. AEC*, 47 Ind. L.J. 645, (1972).

¹⁴Mandelker, *NEPA Law and Litigation* Ch 2.

¹⁵See Hearings on S. 1075, S. 237, and S. 1752, National Env'tl. Policy, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st. Sess. 24-25 (1969).

¹⁶Hearings on S. 1075, S. 237, and S. 1752, National Env'tl. Policy, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st. Sess. 205 (1969).

¹⁷Hearings on S. 1075, S. 237, and S. 1752, National Env'tl. Policy, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st. Sess. 205 (1969).

¹⁸Hearings on S. 1075, S. 237, and S. 1752, National Env'tl. Policy, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st. Sess. 207 (1969). See also S. Rep. No. 296, 91st Cong., 1st Sess. 2 (1969).

¹⁹Caldwell, *Environment: A New Focus for Public Policy*, 23 Pub. Ad. Rev. 138 (1963).

²⁰Hearings on S. 1075, S. 237, and S. 1752, National Env'tl. Policy, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st. Sess. 205 (1969).

²¹L. Caldwell, *Man and His Environment: Policy and Administration* 80 (1975).

²²Hearings on S. 1075, S. 237, and S. 1752, National Env'tl. Policy, Senate Comm. on Interior and

including the declaration of national environmental policy, the environmental “finding” requirement, and the statement recognizing the right of each individual to a healthful environment. In July, the Senate overwhelmingly passed the measure, almost without debate.

Congressman Dingell’s companion legislation endured rougher treatment in the House, where Congressman Aspinall, Chairman of the House Interior Committee, opposed it partly for jurisdictional reasons, partly because of its general scope and language, and partly because of its potential effect on the exploitation of natural resources. In exchange for a rule from the Rules Committee, Aspinall insisted on having a seat on the conference committee and on including in the House bill an amendment which emptied NEPA of its significance.²³ In September 1969, the bill, thus amended, passed the House by lopsided vote.

Senator Jackson had his own jurisdictional battle to fight with Senator Muskie, chairman of the Air and Water Pollution Subcommittee of the Senate Committee on Public Works. Senator Muskie argued forcefully that the “finding” requirement would be inadequate to change agency behavior.²⁴ Senator Jackson agreed, in response, to amend the “finding” provision to require a “detailed statement” by the responsible official.²⁵ When Senator Jackson also included language giving pollution control agencies more presence in the environmental assessment process, Senator Muskie agreed to support the Interior Committee bill.

In conference, representatives from the House, with the exception of Aspinall, spoke in favor of the Senate bill, as amended by the Jackson-Muskie compromise.²⁶ Aspinall constituted a minority of one against a majority of votes controlled by Jackson and Dingell. Nevertheless, Aspinall won important changes in the statute, notably the deletion of the provision recognizing every citizen’s “right” to a healthful environment.²⁷ It is indicative of the spirit of the time, however, that the “environmental rights” provision survived as long as it did in the legislative process. “Though eventually stricken on the ground that its vagueness might invite endless litigation,” two students of NEPA write, “the provision is indicative of the sponsor’s policy objectives.”²⁸

The Senate passed NEPA in December 1969, on a voice vote, after a short debate

Insular Affairs, 91st Cong., 1st. Sess. 116–117 (1969).

²³The Aspinall amendment stated that “nothing in the Act shall increase, decrease or change any responsibility of any Federal official or agency.” Congressman Dingell managed to outmaneuver Aspinall in conference and have the amendment deleted. *See* § 10:53, note 24.

²⁴Senator Muskie stated:

The concept of self-policing by Federal agencies which pollute or license pollution is contrary to the philosophy and intent of existing environmental quality legislation. In hearing after hearing agencies of the Federal Government have argued that their primary authorization, whether it be maintenance of the navigable waters by the Corps of Engineers or licensing of nuclear power plants by the Atomic Energy Commission, takes precedence over water quality requirements.

I repeat, these agencies have always emphasized their primary responsibilities making environmental considerations secondary in their view.

115 Cong. Rec. 29053 (1969) (Remarks of Sen. Muskie).

²⁵Senator Jackson also included in section 102(2)(C) a directive to the responsible federal official to consult with relevant agencies. Senator Muskie wished to assure that pollution-control agencies, over which his subcommittee had jurisdiction would be consulted. “The requirements that established environmental agencies be consulted and that their comments accompany any such report would place the environmental control responsibility where it should be.” 115 Cong. Rec. 29053 (1969).

²⁶For a full account based on interviews with principal staffers, *see* R. Liroff, *A National Policy for the Environment: NEPA and its Aftermath* 18–20 (1976).

²⁷The conference committee was apparently persuaded that the original provision invited endless litigation. *See* 115 Cong. Rec. 39702 (1969) (“Statement of the Managers on the Part of the House.”).

²⁸Dreyus & Ingram, *The National Environmental Policy Act: A View of Intent and Practice*, 16 *Nat. Resources J.* 56–7 (1976) (Dreyfus was Deputy Staff Director for Legislation, Senate Committee

consisting largely of speeches by Senator Jackson and Muskie on the relation of NEPA to pollution-control agencies. The statute quickly passed the House, which was eager to adjourn for Christmas, with very little debate.²⁹ President Nixon, with much ceremony, signed the statute on January 1, 1970, as the National Environmental Policy Act of 1969.

The general legislative intent of NEPA is easy to summarize: (1) to declare a national policy for the environment; (2) to direct federal agencies to take this policy seriously and to follow procedures to ensure that they do; and (3) to establish a Council on Environmental Quality (CEQ). Students of NEPA believe that the CEQ was intended as a counterweight to the Council of Economic Advisors, created by the Employment Act of 1946.³⁰ The entire statute might be understood, then, as the culmination of ten years of Congressional effort to give environmental concerns a legitimacy similar to that of economic concerns in policy formation at the agency level.

Events Congress had not anticipated—for example, the growth of public interest lawsuits, the expansion of traditional limits to legal standing, and the willingness of judges to interpret section 102 as requiring more than *pro forma* attention to the environment—helped NEPA to bring environmental values into the administrative process.³¹ While Congress may not have willed these means, it seems clearly to have intended the result. Congress wished mission-oriented federal agencies to change their role from that of satisfying interests to that of solving problems in order to reach general policy objectives.³²

Since the enactment of NEPA, federal agencies have struggled to determine how to assess environmental impacts and, having assessed them, how to evaluate them or take them into account. The aspirations expressed by NEPA must be translated by agency officials, in the course of carrying them out, into practical, testable, and enforceable terms. In implementing the aspirational policies of NEPA, agencies have found themselves forced to place an “increased emphasis on technical expertise,

on Interior and Insular Affairs, at the time NEPA was enacted and into the 1970s.).

²⁹See 155 Cong. Rec. 40414–27 (1969) (Senate, December 20); 115 Cong. Rec. 40923–28 (1969) (House, December 23). For transcripts of the debates, see 115 Cong. Rec. S.17450–69 (daily ed. Dec. 20, 1969) (Senate); H. 13091–96 (daily ed. Dec. 23, 1969) (House).

³⁰Senator Murray’s Resource and Conservation Act, proposed in 1959 (S.2549), would have set up a Council of Resources and Conservation Advisors, with the same status as the Council of Economic Advisors, established by the Employment Act of 1946, 15 U.S.C.A. §§ 1021 to 1025 (version in force in 1964). Caldwell similarly compares the Employment Act with NEPA. L. Caldwell, *Man and His Environment: Policy and Administration* 21 (1975).

³¹For a thorough survey of the effect of NEPA requirements on federal agencies, as perceived by agency personnel, see L. Caldwell, *A Study of Ways to Improve the Scientific Content and Methodology of Environmental Impact Analysis* ch. 4 (1982). Caldwell and his associates distributed 532 questionnaires to relevant personnel in the Army Corps of Engineers, the Forest Service, the Bureau of Land Management. They achieved a response rate of over 90 percent. The Caldwell survey describes the large extent to which federal agencies have reorganized after NEPA, for example, by creating “environmental exports units,” by recruiting environmentally-informed personnel, and by employing consultants. Caldwell concludes:

We found NEPA to be generally accepted by the officials directly responsible for its administration. This acceptance was not merely incidental to the mandatory features of the National Environmental Policy Act, but as a number of officials observed, public expectations now required the kind of assessment of the environmental significance of agency proposals that the Act required.

L. Caldwell, *A Study of Ways to Improve the Scientific Content and Methodology of Environmental Impact Analysis* 436 (1982).

For a positive review of the impact of NEPA, see Andrews, *NEPA in Practice: Environmental Policy or Administrative Reform*, 6 *Envtl. L. Rep. (Envtl. L. Inst.)* 50001 (1976). For a negative view, see Bardach & Pugliaresi, *The Environmental Impact Statement vs. the Real World*, 49 *Pub. Interest* 22, 25 (1977).

³²For essays on this distinction, see *Area and Power* (A. Maass ed. 1959).

especially the language of economics, as the debate shifts from general environmental mandates to questions of ‘how’ and ‘at what cost.’”³³ The demands of “rational socialization” affect even the most ardent attempts to put NEPA into practice.³⁴

From a logical point of view, agencies may choose among at least three approaches to answering questions of “how” and “at what cost.” There are at least three ways, in other words, to “strike a balance” between legitimate economic and environmental concerns. We may call these the “moral,” the “market,” and the “mitigation” approaches to environmental policy formation. Each of these approaches to NEPA shall be addressed to determine which offers the most hopeful method for pursuing the statutory mandate within what academics refer to as “the real world.”

§ 10:55 The moral approach to NEPA

In a report prepared for Senator Jackson’s Interior Committee on July 11, 1968, Lynton Caldwell wrote that “the cornerstone of environmental policy is ethical.”¹ Caldwell continued: “Ethics, like justice, is not easily quantifiable, yet few would argue that society should not seek to establish justice because justice cannot be adequately defined or quantified. Environmental policy is a point at which scientific, humanistic, political, and economic considerations must be weighed, evaluated, and hopefully reconciled.”²

The analogy Caldwell draws between justice and environmental values is suggestive. Many political theorists have argued that in a just society the rights of individuals are taken seriously; rights to freedom of conscience, speech, and a fair trial, for example, are protected even when they conflict with the general welfare. “These rights will function as trump cards held by individuals”;³ by asserting these rights, individuals can resist even those policies which increase welfare or maximize social wealth.

During the 1960s and 1970s, legal scholars who took this approach sought to find in the private rights of citizens a common law basis for controlling pollution and compelling agencies to recognize environmental problems.⁴ Moreover, various states enacted their own Environmental Rights Acts.⁵ And a good deal of scholarly discussion centered on the possibility of a constitutionally-based right to a reasonably

³³Environmental Movement Checks Its Pulse and Finds Obituaries are Premature, 39 Cong. Q. Weekly Rec. 211, 211 (1981).

³⁴See Langton, *The Future of the Environmental Movement*, in *Environmental Leadership: A Sourcebook for Staff and Volunteer Leaders of Environmental Organizations* 1 (S. Langton ed. 1984). Langton argues that environmentalism has been “transformed from a relatively charismatic movement to a more institutionalized movement. . . . This is not to suggest that there is . . . no need for passion, drama, and charisma, but the environmental movement must confront the demands of rational socialization.” Langton, *The Future of the Environmental Movement*, in *Environmental Leadership: A Sourcebook for Staff and Volunteer Leaders of Environmental Organizations* 4-5 (S. Langton ed. 1984).

[Section 10:55]

¹L. Caldwell, *A National Policy For The Environment* 109 (1968).

²L. Caldwell, *A National Policy For The Environment* 109 (1968).

³Dworkin, *Liberalism*, in *Public and Private Morality* 113, 135 (S. Hampshire ed. 1978). The norms of right and wrong implicit in the concept of justice, according to Charles Fried, override utilitarian considerations “because they establish our position as freely choosing entities.” C. Fried, *Right and Wrong* 8-9 (1978). These norms constitute what it is to be a person and thus “are absolute in respect to the ends we choose to pursue.” Dworkin, *Liberalism*, in *Public and Private Morality* 29 (S. Hampshire ed. 1978).

⁴See, e.g., J. Sax, *Defending the Environment* (1971); Juergensmeyer, *Control of Air Pollution Through the Assertion of Private Rights*, 1967 Duke L.J. 1126; Bryden, *Environmental Rights in Theory and Practice*, 62 Minn. L. Rev. 163 (1978) (see additional sources cited therein).

⁵E.g., *The Minnesota Environmental Rights Act*, Minn. Stat. §§ 116B.01 to .13 (1976). For a compilation and review of other such acts, see Dimento, *Citizen Environmental Litigation and the*

nonhazardous environment.⁶

Efforts to find in the rights of individuals a basis for environmental protection, however, have not been particularly successful. “Courts have been notably inhospitable, for example, to claims that a ‘natural’ environment is protected by the federal constitution.”⁷

In analogizing environmental values to justice, however, Caldwell did not necessarily affirm the existence of environmental rights. He may have meant rather that environmental values, like the rights secured by justice, are *lexically prior* to considerations of social wealth and economic development.⁸ A lexical or serial ordering of priorities “is an order which requires us to satisfy the first principle in the ordering before we can move on to the second, the second before we consider the third, and so on. A principle does not come into play until those previous to it are either met fully or do not apply.”⁹

The analogy between environmental values and justice, then, seems to be this: According to many political theorists, justice—because it defines the appropriate conditions of choice (the conditions of autonomy)—must take priority over considerations of utility, which concern only what people happen to choose.¹⁰ Rights constitute “side-constraints,” as it were, on policy decisions because they establish our identities as moral agents.¹¹ What we *are* is morally prior to what we *want*.¹²

Environmental values, according to an ethical reading of NEPA, need not be assimilated to rights; the statute declares only that each person should enjoy—not that he has a right to—a healthful environment.¹³ Nevertheless, environmental values and goals, like rights, arguably have a kind of lexical priority over the satisfaction of economic interests.

Those who construe NEPA in this way contend, therefore, that environmental values and goals should not be construed as “interests” or “preferences” to be

Administrative Process: Empirical Findings, Remaining Issues and a Direction for Future Research, 1977 Duke L.J. 409, 411 n.4.

⁶See Klipsch, Aspects of a Constitutional Right to a Habitable Environment: Towards an Environmental Due Process, 49 Ind. L. Rev. 203 (1974).

⁷Tribe, From Environmental Foundations to Constitutional Structures: Learning from Nature’s Future, 84 Yale L.J. 545, 546 n.9 (citing *Tanner v. Armco Steel Corp.*, 340 F. Supp. 532 (S.D. Tex. 1972)).

⁸For discussion of lexical orderings and their relation to utility theory, namely, that lexical orderings violate the assumption of continuity, see Pearce, A Contribution To Demand Analysis 22 (1946); A. Sen, Collective Choice and Social Welfare 34 (1970). For relevant discussion of the hierarchy of wants in utility theory, see Georgescu-Roegen, Choice, Expectations, and Measurability, 68 Q.J. Econ. 510 (1954).

⁹J. Rawls, A Theory of Justice 43 (1971). “A serial ordering avoids, then, having to balance principles at all; those earlier in the ordering have an absolute weight, so to speak, with respect to later ones, and hold without expectation.” J. Rawls, A Theory of Justice 43 (1971).

¹⁰For a critical discussion of this point, see M. Sandel, Liberalism And The Limits of Justice (1982); for a reply, see Rawls, Justice as Fairness: Political not Metaphysical, 14 Phil. & Pub. Aff. 223 (1985).

¹¹For an analysis of moral “side constraints” on policy, see R. Nozick, Anarchy, State, and Utopia 28–35 (1974).

¹²John Rawls has persuasively argued that conceptions of utility which are not founded on prior conditions of justice and autonomy have no value. See J. Rawls, A Theory of Justice 31 (1971). He observed that:

Each person possesses an inviolability founded on justice that even the welfare of society as a whole cannot override. . . . Therefore in a just society the liberties of equal citizenship are taken as settled; the rights secured by justice are not subject to political bargaining or to the calculus of social interests.

J. Rawls, A Theory of Justice 3–4 (1971).

¹³NEPA § 101(c), 42 U.S.C.A. § 4331(c).

quantified in cost-benefit decisions. Rather, these goals and values constitute side-constraints on those decisions. An ethical reading of NEPA suggests three reasons to give lexical priority to environmental concerns.

First, one may argue that environmental conditions tend to determine, and for that reason should not simply be included among, the social preferences and interests on which cost-benefit assessments are based. Second, although environmental values may not reach to our nature as moral agents, they are associated with our cultural identity as Americans. Third, we have a duty as a nation to preserve the magnificent aspects of our natural environment. This is the same sort of moral obligation, for example, that any civilized nation recognizes with respect to the good, the true, and the beautiful. This kind of obligation is founded in love, respect, and reverence, not in conceptions of utility or welfare. It is a good environment—not simply our own good—we desire. In our democracy, legislatures may legitimately respond to obligations of this kind, as long as policies are reasonable and do not violate constitutionally-guaranteed rights.

§ 10:56 The moral approach to NEPA—Environmental values tend to determine interests and preferences

The rhetoric which accompanied the passage of NEPA—like the language of the statute itself—emphasizes the ethical and social, as distinct from the economic, purposes of the law. The reason to restore and maintain the quality of the environment is not necessarily to improve the productivity and purchasing power of Americans, but to make prosperity compatible with environmental quality, to enhance the “development of man,”¹ and to support “diversity, and variety of individual choice.”²

Politicians eager to associate themselves with the statute stressed the distinction between a “high standard of living” and a “high quality of life” and, accordingly, the need for “not only more uses for our natural resources, but also better uses.”³ Strategies to conserve natural resources generally consider only in the long-run the

[Section 10:56]

¹NEPA § 101(a), 42 U.S.C.A. § 4331(a).

²NEPA § 101(b)(4), 42 U.S.C.A. § 4331(b)(4).

³See Radio Address of Richard M. Nixon, Republican Presidential Nominee, CBS Radio, October 18, 1968, *reprinted in* U.S. Senate, Comm. on Interior and Insular Affairs, National Env'tl. Policy, 91st Cong., 1st Sess. 105 (1969). Then-candidate Nixon so brilliantly captured public opinion that it is useful to quote his speech further:

This is a time when technological advances have given us material benefits beyond the dreams of all other nations and civilizations, and yet we are confronted with a perplexing problem.

Obviously, we must make more use of our natural resources to maintain our high standard of living.

But the more inroads we make upon our land and water and air, the less we are able to enjoy life in America.

We need lumber to build our homes; but we also need untouched forests to refresh our spirit.

We need rivers for commerce and trade; but we also need clean rivers to fish in and sit by.

. . . .

Today, “Natural Resources” has a double meaning. It means not only those riches with which we have been so abundantly blessed for our economic and technological advantage, but also those same riches as they exist for our psychological and emotional and spiritual advantage.

We must conserve and use our natural resources because of the numerous things we can do with them.

We must also conserve and use them because of what they can do for us. . . .

We need a strategy of quality for the seventies to match the strategy of quantity of the past. . . .

Can we have the highest standard of living in the world and still have a land worth living in?

Will future generations say of us that we were the richest nation and the ugliest land in all history?

Are we doomed by some inexorable thing called progress to give to our children a land devoid of beauty, empty of scenes of natural grandeur, filled with gadgets and gimmicks, but lost forever to the wonder and inspiration of nature?

balance of economic costs and benefits with respect to the production and consumption of goods and services.⁴ In a policy concerned with environmental quality, as NEPA is, “the total environmental needs of man—ethical, aesthetic, physical, and intellectual, as well as economic—must also be taken into account.”⁵

Social preferences adapt to and, in that sense are influenced by, the environment.⁶ In forming environmental policy, accordingly, public officials do not simply satisfy but also create wants and desires.

The government, in making environmental decisions, takes responsibility for the nature and quality of social preferences, within the constraints set by individual rights, such as that of privacy. The legislature provides moral leadership in setting environmental objectives. It affirms a conception of the kind of society we are and the kind of people we shall be. The purpose of agencies, on this view, is not to balance interests so much as “to help define and realize social and economic norms in industrialized society.”⁷ This responsibility of government differs logically from and is morally prior to its responsibility to allocate resources efficiently or to satisfy “given” preferences and desires.

This approach to NEPA distinguishes the aspirational goals and values that citizens express through their legislative representatives from the wants and preferences those same citizens may reveal in their behavior in consumer markets.⁸ Environmental policy after NEPA, then, may serve not necessarily to satisfy “given” demands, even over the long run, but to enhance our aspirations and to bring us to a higher standard of excellence in our relationship with the environment. In any case, there is no avoiding this kind of self-paternalism with regard to future generations, since the environment we leave to our children determines to a large extent what they shall want and enjoy and what their values and preferences will be.⁹

NEPA calls on federal agencies to “[p]reserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an

We are faced with nothing less than the task of *preserving the American environment and at the same time preserving our high standard of living.*

U.S. Senate, Comm. on Interior and Insular Affairs, National Env'tl. Policy, 91st Cong., 1st Sess. 105-06 (1969) (emphasis added).

⁴See S. Hays, *Conservation And The Gospel Of Efficiency: The Progressive Conservation Movement, 1890-1920* (1969).

⁵L. Caldwell, *A National Policy For The Environment* 108 (1968).

⁶For a discussion of environmentally “adaptive” preferences, see Elster, *Sour Grapes: Utilitarianism and the Genesis of Wants*, in *Utilitarianism And Beyond* (A. Sen & B. Williams eds. 1982).

⁷Stewart & Sunstein, *Public Programs and Private Rights*, 95 Harv. L. Rev. 1193, 1238 (1982). See also Michelman, *Political Markets and Community Self-Determination: Competing Judicial Models of Local Government Legitimacy*, 53 Ind. L. Rev. 145 (1977-78).

⁸Economists have long recognized the great differences between “consumer” and “citizen” preference-maps. R. A. Musgrave attributes this distinction to Gerhard Colm:

He [Colm] holds that the individual voter dealing with political issues has a frame of reference quite distinct from that which underlies his allocation of income as a consumer. In the latter situation the voter acts as a private individual determined by self-interest and deals with his personal wants; in the former, he acts as a political being guided by his image of a good society. The two, Colm holds, are different things.

R. Musgrave, *The Theory Of Public Finance* 87-88 (1959). Stephen Marlin agrees:

[T]he preferences that govern one's unilateral market actions no longer govern his actions when the form of reference is shifted from the market to the political arena. The Economic Man and the Citizen are for all intents and purposes two different individuals. It is not a question, therefore, of rejecting individual . . . preference maps; it is, rather, that market and political preference maps are inconsistent.

Marglin, *The Social Rate of Discount and the Optimal Rate of Investment*, 77 Q. J. Econ. 95, 98 (1963).

⁹In economic terms, this is an example of Say's Law that production increases demand. See also J. Galbraith, *The Affluent Society* ch. 11 (1968) (arguing that demand follows and does not lead markets since it depends on advertising and similar factors). But see F. Hayek, *The Non Sequitur Of The “Dependence Effect,”* in *Microeconomics* 7 (3d ed., E. Mansfield ed. 1979).

environment which supports diversity, and variety of individual choice.”¹⁰ This provision, if read from a moral point of view, recognizes the obligation of the government to assure an environment which affords Americans a better quality of life, not simply a higher standard of living.¹¹

NEPA similarly directs agencies to “[f]ulfill the responsibilities of each generation as trustee of the environment for succeeding generations.”¹² This provision, on an ethical reading, does not require agencies to simply maximize the productivity of resources over the long run; rather, it directs them to maintain for future generations opportunities to form values and preferences consistent with respecting, maintaining, and enjoying the beauty and integrity of the natural and human environment.¹³

NEPA therefore reflects the “fairly established consensus that happiness depends more on spiritual resourcefulness, a joyous appreciation of the costless things of life, especially affection for one’s fellow creatures, than it does on material satisfaction.”¹⁴ The statute reminds one of Frank Knight’s dictum that “[t]he chief thing which the common-sense individual actually wants is not satisfactions for the wants which he has, but more and *better* wants.”¹⁵

§ 10:57 The moral approach to NEPA—Nature and the national ego

So far, environmental policy under NEPA has been considered as a sort of self-paternalism, a national effort to attain a standard of excellence and so to improve the expectations or preferences of present and future citizens. This would suggest that environmental goals under NEPA constitute a side-constraint on public policy and are not to be considered as “preferences” or “wants” to be aggregated in the general economic calculus upon which resource policy might otherwise be based.

There is a second reason for believing that environmental values—somewhat like rights¹—cannot be aggregated with, but must take priority over, ordinary consumer wants and preferences. Environmental policy, it may be argued, goes to our

¹⁰NEPA § 101(b)(4), 42 U.S.C.A. § 4331(b)(4).

¹¹President Nixon often emphasized this distinction in his environmental speeches. Here is an example:

The major concern of our third century, I believe, will be the pursuit of happiness. In conducting this pursuit, we must remember that happiness is not measured in quantitative but in qualitative terms. It is not achieved merely by piling up objects.

. . . .

In recent years, many Americans—and particularly young Americans—have become increasingly aware of the part the environment plays in determining the quality of their lives. Perhaps no single goal will be more important in our future efforts to pursue the public happiness than that of improving our environment.

A Statement From President Nixon, in *The Environment: A National Mission For The Seventies* 12 (Editors of *Fortune* ed. 1970).

¹²NEPA § 101(b)(1), 42 U.S.C.A. § 4331(b)(1).

¹³For an interesting discussion along these lines, see Holland, *Judicial Review of Compliance with the National Environmental Policy Act: An Opportunity for the Rule of Reason*, 12 *Envtl. Aff.* 743 (1985) (analogizing the provisions of NEPA to the common law concept of a charitable trust).

¹⁴F. Knight, *The Ethics of Competition* 22 (1935).

¹⁵F. Knight, *The Ethics of Competition* 71 (1935). Many of the founders of welfare economics apparently agreed with Knight. Thus, Pigou wrote that consumption can be “debasing,” the satisfactions associated with literature and art are “ethically superior to those connected with the primary needs,” and a person “attuned to the beautiful in nature and art” is himself an important element in the ethical value of the world.” A. Pigou, *The Economics of Welfare* 13, 17–18 (1938).

[Section 10:57]

¹Rights, in other words, constitute the conditions under which interests can make a legitimate claim for societal recognition. Nothing is gained by satisfying preferences which are not autonomous, *i.e.*, not formed under the conditions of equal freedom, and therefore not expressive of the individual as a freely choosing agent. This is the reason that the rights secured by equal liberty are not to be as-

identity—not just to our interests—if not as moral agents, then at least as Americans.

The natural environment provides a common heritage ethnic immigrant groups share as Americans. Artists, writers, and historians have long emphasized the role of nature in shaping the American identity in opposition to the European past. The American, in this conventional literary view, takes his or her values and instincts from environing Nature;² “The plain old Adam,” as Emerson wrote, “the simple genuine self against the whole world.”³

Leo Marx, along with many other cultural historians, has shown that a pastoral impulse constitutes a notable fact about the literary and artistic imagination in America.⁴ Writers like Cooper, Emerson, Thoreau, Melville, Whitman, and Twain allied the national consciousness to symbols, images, and values drawn from nature, as opposed to “progress” and “civilization.” “They took for granted a thorough and delicate interpenetration of consciousness and environment. In fact it now seems evident that these gifted writers had begun, more than a century ago, to measure the quality of American life against something like an ecological ideal.”⁵

In testimony before a joint House-Senate colloquium on the environment in 1968, Robert Weaver, Secretary of Housing and Urban Development, took up this theme. He observed that “Americans cling to memories of the past. We do invoke Walden Pond in moments of nostalgia. . . . This romantic nostalgia for the ‘good old days’ is constantly reinforced by the ever-present difficulties of our present urban environment.” Weaver juxtaposed the nostalgia for the “good old days” with the reality of the present day: “Herein lies the problem: How can we preserve the amenities we remember and want—clean air, sparkling brooks, nearby fields and woods, and a sense of identity with community—against the forces of urbanization.”⁶

Those who testified during Congressional hearings on NEPA often invoked the conventional conflict between the innocence of nature and the corrupting influence of civilization, a persistent theme in American culture, particularly in Romantic thought.⁷ Nature as an ideal, or at least as a cultural artifact, often vies with nature

simulated to interests which may be “weighed” in a cost-benefit analysis. For the opposite view, however, see Weisbrod, *Income Redistribution Effects and Benefit-Cost Analysis*, in *Problems in Public Expenditure Analysis* 177 (S. Chase ed. 1968) (assuming that the equity effects of transactions can be “priced” in a grand-efficiency analysis).

²Shortly before the American Revolution, the Pennsylvania farmer Crevecoeur wrote: “What then is the American, this new man? *He* is an American who, leaving behind him all his ancient prejudices and manners, receives new ones from the new mode of life he has embraced.” J. Crevecoeur, *Letters From An American Farmer* 54 (1904).

³R. Emerson, *quoted in* R. Lewis, *The American Adam* vi (1955).

⁴Marx, *American Institutions and Ecological Ideals*, 170 *Sci.* 945, 949 (1970). Marx continues:

By “pastoral impulse” I mean the urge, in the face of complexity, to retreat in the direction of nature. . . . The writer or narrator describes, or a character enacts, a move away from a relatively sophisticated to a simpler, more “natural” environment. Whether this new setting is an unspoiled wilderness, like Cooper’s forests and plains, Melville’s remote Pacific, Faulkner’s Big Woods, or Hemingway’s Africa, or whether it is as tame as Emerson’s New England village common, Thoreau’s Walden Pond, or Robert Frost’s pasture, its significance derives from the plain fact that it is “closer” to nature: it is a landscape that bears fewer marks of human intervention.

Marx, *American Institutions and Ecological Ideals*, 170 *Sci.* 945, 949 (1970). *See also* L. Marx, *The Machine In The Garden: Technology And The Pastoral Ideal In America* (1964). For a brilliant study of the relationship between American national character and the romantic dilemma (*i.e.*, between the country and the city, the heart and the head, Nature and Civilization, etc.), *see* P. Miller, *The Romantic Dilemma In American Nationalism And The Concept of Nature*, in *Nature’s Nation* 197 (1967).

⁵Marx, *American Institutions and Ecological Ideals*, 170 *Sci.* 945 (1970).

⁶L. Marx, *The Machine In The Garden: Technology And The Pastoral Ideal In America* 19 (1964).

⁷For example, an appendix to the Senate Hearings on S. 10756 quotes AFL-CIO President George

as a commodity in debates over environmental policy and law.⁸

NEPA, from a normative point of view, can be seen, then, as addressing a persistent cultural dilemma characteristic of American thought: The fundamental opposition of the country to the city, “of nature to civilization, with the assumption that all virtue, repose, dignity are on the side of ‘Nature’—spelled with a capital and referred to as feminine—against the ugliness, squalor and confusion of civilization, for which the pronoun was simply ‘it.’”⁹

Viewing NEPA in this way—as an example of the ritual *mea culpa* with which Americans have accompanied their exploitation of nature for “progress” or profit¹⁰—may not show us how to make any particular environmental policy decision. But it does tell us something about the ethical, aesthetic, and historical context in which environmental values are formed and environmental policy takes shape.

§ 10:58 The moral approach to NEPA—Man’s responsibility for nature

“Conservation,” Aldo Leopold wrote, “is a state of harmony between men and land.”¹¹ This view opposes that of Pinchot: “The First great fact about conservation is that it stands for development.”¹² These two conceptions of conservation suggest different approaches in environmental policy.

Leopold argued that our love, admiration, and respect for the natural world should direct our policies and actions. Love, admiration, and respect for nature are human values, of course, but they are not values which necessarily concern human welfare.³ They are supposed to engender an altruistic attitude or an attitude of aesthetic contemplation; love seeks not benefits for itself but the maintenance, exis-

Meany:

Ambitious but too often heedless Americans have long since occupied the last frontier, felled the once limitless forests, slain the countless game, tilled the prairies, fouled the lakes and rivers and polluted the air. Now evils committed in the name of progress must be undone; what remains of nature’s beauty must be preserved and the air and waters purified.

Hearings on S. 1075, S. 237, and S. 1752, National Env’tl. Policy, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st. Sess. 208 (1969).

⁸For example, Joseph Sax, in pleading for the preservation as opposed to the commercialization of the national parks, writes:

To those for whom wilderness values and the symbolic message of the parks has never been of more than peripheral importance, this book asks principally for tolerance: a willingness to entertain the suggestion that the parks are more valuable as artifacts of culture than as commodity resources; a willingness to try a new departure in the use of leisure more demanding than conventional recreation; a sympathetic ear tuned to the claims of self-paternalism.

J. Sax, *Mountains Without Handrails* 108 (1980).

⁹P. Miller, *The Romantic Dilemma In American Nationalism And The Concept of Nature*, in *Nature’s Nation* 197 (1967).

¹⁰Senator Gaylord Nelson, testifying during Senate hearings on NEPA, and commenting on the destruction of the natural environment, noted: “all of this was done in the name of progress. You could substitute, ‘profits’ for the word ‘progress,’ and come out with the same result. In any event, we have dangerously degraded our total environment.” Hearings on S. 1075, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st. Sess. 59 (1969) (Statement of Hon. Gaylord Nelson).

[Section 10:58]

¹Leopold, *The Land Ethic*, in *People, Penguins, and Plastic Trees* 73, 75 (D. VanDeVeer & C. Price eds. 1968).

²G. Pinchot, *The Fight For Conservation* 42 (1910).

³Only human beings, as far as we know, value things, in the sense that “valuing” is an activity carried on by rational beings. Yet it does not follow from this that only human beings *have* value, or that only human welfare is ultimately valuable. Human beings may, indeed, do value things other than their own welfare, and this seems to be a driving factor in environmental law. For a discussion, see Weston, *Beyond Intrinsic Value: Pragmatism in Environmental Ethics*, 7 *Env’tl. Ethics* 321 (1985).

tence, or flourishing of that which is the object of love.⁴ These values are directed to the good of nature, not the good of man.⁵

Pinchot, on the other hand, apparently believed that the good of man (*i.e.*, welfare) is the only conception of the good to be served by resource policy. On this view, reverence or respect for nature may affect resource policy only insofar as it may involve wants and interests, the satisfaction of which will contribute to human "satisfaction."⁶ Thus, both Leopold and Pinchot could agree that only human beings *have* values; only humans, so far as we know, value things. Those in the tradition of Pinchot, however, also believe that only human welfare is valuable and constitutes the single criterion of environmental policy.

During the 1960s, Congress sought to draft legislation "to reverse what seems to be a clear and intensifying trend toward environmental degradation."⁷ One commentator, after reviewing documents prepared during this period, concluded that "NEPA was conceived as an environmental policy dictate to the federal government in response to the burgeoning public concern for the integrity of the environment."⁸ This public concern for the integrity of nature may be understood in either of two ways. The public might be concerned insofar as the degradation of nature threatens its welfare. The public may also be concerned because of an ethical belief that we owe more to the magnificence of the environment than to turn every arcadia into an arcade and all of its beauty to blight even if, by doing so, we maximize the long-run "benefits" nature offers man.

NEPA, by discouraging environmental damage and degradation, as well as by encouraging harmony between man and his environment, arguably seeks to protect nature for its intrinsic characteristics and not simply for the sake of human welfare. This ethical regard for nature supposes that natural communities possess an order, integrity, and life which command our admiration and ought to be preserved for their own sake. According to one observer, "NEPA incorporates the basic principle of the Leopoldian ethic."⁹

Insofar as NEPA insists that environmental obligations go "beyond" concerns with human welfare (although not "beyond" human values), NEPA anticipates subsequent environmental and wildlife legislation. Statutes enacted during the 1970s rarely, if ever, merely called for efficiency in the exploitation of natural resources. Rather, this legislation tends to echo NEPA in asserting society's responsibility to protect the authenticity and integrity, not simply the productivity and usefulness, of the natural environment.¹⁰

Since the enactment of NEPA, legal scholars and others have struggled to explain, from a policy perspective, how environmental values can go "beyond" human welfare. A few legal scholars have explored the possibility that environmental objects, such

⁴Aristotle, *Nicomachean Ethics* 217–24 (M. Oswald trans. 1962) (especially nos. 115a–1157b).

⁵For the sense in which living things can have a good of their own, see G. Von Wright, *The Varieties of Goodness* chs. 3, 5 (1963).

⁶For an uncompromising statement of this position, see W. Baxter, *People or Penguins: The Case For Optimal Pollution* ch. 1 (1974).

⁷H.R. Rep. No. 378, 91st Cong., 1st Sess. 3 (1969), *reprinted in* United States Code Congressional and Administrative News pp 2751, 2753.

⁸Holland, *Judicial Review of Compliance with the National Environmental Policy Act: An Opportunity for the Rule of Reason*, 12 *Env'tl. Aff.* 743, 757 (1985) (footnotes omitted).

⁹Sessions, *Anthrocentrism and the Environmental Crisis*, *Humboldt J. Soc. Rel.*, Fall-Winter 1974, at 71, 80.

¹⁰The Coastal Zone Management Act, for example, calls for management programs that give "full consideration to ecological, cultural, historic, and aesthetic values as well as to needs for economic development." 16 U.S.C.A. §§ 1451, 1452(2). For a general survey of economic and ethical concerns in federal wildlife management law, see M.J. Bean, *The Evolution Of Natural Wildlife Law* ch. 11 (1983).

as animals, trees, and so on, might have rights of the sort that could give them legal standing or, failing that, interests that might be entered into the general social calculus of costs and benefits on which environmental policy might be based.¹¹ This suggestion—that environmental policy ought to consider the rights and interests of animals and other natural objects by weighing these interests against our own—went nowhere. It failed, in part, because only individuals—particular animals—can possess rights and interests, while it is collections—species, communities, and ecosystems—that environmentalists wish to protect.¹² Thus, while the “animal rights” movement may be relevant to domestic, laboratory, and farm animals, such an assertion of rights appears irrelevant to the issues presented by environmental law.¹³

When we say that nature has an intrinsic value and, therefore, a good, an integrity, or a health of its own, however, we do not necessarily ascribe *rights* or even *interests* to nature. We consider nature as an object of our respect and admiration, not as a source or as a subject of “welfare.”

Our duties to respect the integrity of natural ecosystems, to preserve endangered species, and to avoid environmental pollution stem from the fact that these are ways in which we can make it possible for wild species populations to achieve and maintain a healthy existence in a natural state. Such obligations are due those living things out of recognition of their inherent worth.¹⁴

NEPA, on an ethical reading, establishes the priority of environmental values over ordinary interests and preferences. NEPA endows environmental goals and values, with special authority and significance, separating them categorically for the sorts of wants and preferences in terms of which conceptions of welfare are defined. It does this, roughly speaking, for paternalistic reasons, for reasons of national pride and character, and because of love, affection, and reverence for nature which has long been strong in American life. NEPA does not itself prescribe how environmental values should affect each policy decision; the statute delegates responsibility to the agencies to pursue their missions within the constraints of our general environmental objectives.

Judge Leventhal summarized this approach as follows:

It is the premise of NEPA that environmental matters are likely to be of secondary concern to agencies whose primary missions are nonenvironmental. From this vantage point, NEPA looks toward having environmental factors play a central role in the decisions of such agencies. The goal does not mean that environmental considerations are to be more important than every nonenvironmental agency mission; questions of housing, energy and inflation might have equal claim or even higher priority. But it does mean that environmental factors must be weighed heavily in the decisional balances. It is the function of review under NEPA to ensure that this purpose is served.¹⁵

§ 10:59 The market approach to NEPA

Economist Allen Kneese, while testifying before Congress in 1970, acknowledged

¹¹See, e.g., C. Stone, *Should Trees Have Standing? Towards Legal Rights For Natural Objects* (1974); Tribe, *Ways Not To Think About Plastic Trees: New Foundations for Environmental Law*, 83 *Yale L.J.* 1315 (1974).

¹²Animal rights advocates generally acknowledge this point and, thus, may deny that we have a moral reason for saving species. “Species are not individuals, and the rights view does not recognize the moral rights of species to anything, including survival.” T. Regan, *The Case For Animal Rights* 359 (1983).

¹³For discussion, see Callicott, *Review of Tom Regan, The Case for Animal Rights*, 7 *Envtl. Ethics* 365 (1985). See also Callicott, *Animal Liberation: A Triangular Affair*, 2 *Envtl. Ethics* 311 (1980).

¹⁴Taylor, *The Ethics of Respect for Nature*, 3 *Envtl. Ethics* 197, 198 (1981).

¹⁵Leventhal, *Environmental Decisionmaking and the Role of the Courts*, 112 *U. Pa. L. Rev.* 509, 515 (1974) (footnote omitted).

the popularity of ethical concerns and values regarding the environment. He remarked:

It has often been said that what we need is a new morality or a new ethic if we are to avoid despoiling the earth. This is really a call for a new set of values which lays more emphasis on the natural, the tranquil, the beautiful and the very long run.¹

Kneese here correctly discerns the public temperament. Surveying the years in which NEPA became law, one historian noted:

[T]here is a definite ethical basis to a national policy for the environment. This centers upon the responsibility of government as the agent of the people to manage the environment in the role of steward or protective custodian for posterity. It requires abandonment of the government's role as umpire among conflicting and competing resource interests and the adoption of the total environment as a focus for public policy.²

Dr. Kneese, in his prepared testimony, however, argued that "the frequent calls for morality with respect to the environment" are "[i]llustrations of the poverty of understanding" about the reasons social and economic systems produce the results they do.³ Kneese added: "I think assertions that there is a failure of morality, searching for villains, wondering why it is we have Government subsidies and the problem gets worse, are all manifestations of this lack of understanding of what some of the central problems are."⁴

Dr. Kneese, in introducing what he believes is a better understanding of environmental problems, offered the congressional subcommittee a lesson in civics. The framers of the Constitution, he said, created a social system

built largely on the concepts of private property and individual freedom within the framework of laws to keep the channels of commerce open. This reflected the conviction that private ownership, freedom of individual choice, and the profit motive would direct resources to those uses where they are the most productive, given individual preferences for various goods and services and the income of the population. This conviction, plus fear of losing personal freedom, have underlain our national assumption that the role of collective action through government should be minimized and have been used to justify our traditional antipathy toward planning.⁵

Here Kneese presents the view, familiar in political theory since Locke,⁶ that the primary purpose of government is to enforce rights to person and property so that individuals may truck and bargain in equitable and efficient markets. The "invisible hand" of the marketplace will then allocate resources to those willing to pay the most for their use. Markets so arranged will maximize social welfare. This last statement expresses a tautology because "social welfare," on this approach, is defined

[Section 10:59]

¹Hearings Before the House Subcomm. of the Comm. on Gov't Operations, 91st Cong., 2d Sess. 191 (1970) (prepared statement of Dr. Allen V. Kneese).

²Wandesforde-Smith, *National Policy for the Environment: Politics and the Concept of Stewardship*, in *Congress and the Environment* 205, 208 (E. Cooley & G. Wandesforde-Smith eds. 1970).

³Wandesforde-Smith, *National Policy for the Environment: Politics and the Concept of Stewardship*, in *Congress and the Environment* 190 (E. Cooley & G. Wandesforde-Smith eds. 1970).

⁴Wandesforde-Smith, *National Policy for the Environment: Politics and the Concept of Stewardship*, in *Congress and the Environment* 187 (E. Cooley & G. Wandesforde-Smith eds. 1970).

⁵Wandesforde-Smith, *National Policy for the Environment: Politics and the Concept of Stewardship*, in *Congress and the Environment* 191 (E. Cooley & G. Wandesforde-Smith eds. 1970).

⁶For an historical account of this political philosophy, see C. Macpherson, *The Political Theory Of Possessive Individualism: Hobbes To Locke* (1962). For criticism, see, e.g., R. Wolff, *The Poetry Of Liberalism* (1968). Liberalism, of course, need not rely on "individualistic" foundations but may be consistent (as it is in Rawls) with democratic majority rules and with attention to communitarian values. See Sagoff, *The Limits of Justice*, 92 Yale L.J. 1065 (1983).

as the satisfaction of preferences ranked on the basis of willingness to pay.⁷

Within this conception of the legitimate role or purpose of government, Dr. Kneese outlined a now familiar theory of the cause and the cure of environmental problems. These problems arise because various resources, such as clean air and water, are unowned; they are “common property resources.” Dr. Kneese then testified:

Our usual method for limiting the use of resources and leading them into their highest productivity employments is the prices which are established in markets through exchanges between buyers and sellers. For common property resources this mechanism does not function This idea has been well developed in the economics literature⁸

In the literature to which Dr. Kneese refers,⁹ economists suggest ways the government may help to bring market “externalities,” for example, spillovers like pollution, into the pricing mechanism, and so close the gap between the “private” and the “social” costs of production.¹⁰ If markets cannot set prices for unowned resources, the government may set “shadow” or surrogate market prices, so that environmental resources will be allocated to those willing to pay the most for them and, in that sense, these resources will then find their most productive or efficient use.

While this cost-benefit or “efficiency” approach to environmental policy provides a way of considering conventional “spillovers,” such as pollution, it does not do as well to bring “presently unquantified environmental amenities and values”¹¹ into the administrative process.¹² Many economists believe that the problem of quantifying non-market, especially ethical and aesthetic values, is intractable, since these values cannot be measured “with honesty.”¹³ One commentator noted: “The courts unanimously agree that the 1969 NEPA does not require environmental impacts to be converted into monetary values. . . . The preferable view is to require quantification of each factor to the extent possible under existing methodologies.”¹⁴

Economists have been sensitive to the practical difficulties which attend the measurement of non-market costs and benefits. Accordingly, many, probably most, economists would list “intangible” or “moral” factors separately, describing them qualitatively as well as possible, leaving it to the legitimate political authority to take them into account.¹⁵ Other economists note, however, that cost-benefit

⁷The standard criticism of this tautology is that one must not simply assume but test the hypothesis that efficient market allocations maximize welfare. One way would be to consider labor markets at the turn of the century, which were fairly efficient since they were unregulated, and individuals (including parents of child laborers) understood the risks they took. *See* S. Tool, *The Discretionary Economy* 334 (1979); Hook, *Basic Values and Economic Policy*, in *Human Values And Economic Policy* 247 (S. Hook ed. 1967).

⁸Hearings Before the House Subcomm. of the Comm. on Gov’t Operations, 91st Cong., 2d Sess. 192 (1970) (prepared statement of Dr. Allen V. Kneese).

⁹For a useful bibliography of this literature, see Fisher & Peterson, *The Environment in Economics: A Survey*, 14 *J. Econ. Lit.* 1 (1976).

¹⁰For an introduction to these terms, see Ruff, *The Economic Common Sense of Pollution*, in *Microeconomics: Selected Readings* 498 (2d ed. E. Mansfield ed. 1975).

¹¹NEPA § 102(2)(B), 42 U.S.C.A. § 4332(2)(B).

¹²For discussion of the role of cost-benefit analysis in NEPA assessments, see Rosen, *Cost-Benefit Analysis, Judicial Review, and the National Environmental Policy Act*, 7 *Env’tl. Law* 363 (1977); Note, *Cost-Benefit Analysis in the Courts: Judicial Review Under NEPA*, 9 *Ga. L. Rev.* 417 (1975); Comment, *Judicial Review of Cost-Benefit Analysis Under NEPA*, 53 *Neb. L. Rev.* 540 (1974).

¹³E. Mishan, *Cost-Benefit Analysis* 160 (1976).

¹⁴Luke, *Environmental Impact Assessment for Water Resource Projects*, 45 *Geo. Wash. L. Rev.* 1106, 1108 (1977).

¹⁵For evidence that this is the usual practice, *see* Hare, *Contrasting Methods of Environmental Planning*, in *Ethics and the Problems of the 21st Century* 65 (K. Goodpaster & K. Sayre eds. 1979); E.

techniques have been developed for ordinary “spillovers,” such as pollution. They argue that cost-benefit techniques should be developed to “price” non-market “externalities,” such as aesthetic and ethical costs and benefits, as well.¹⁶

Two fundamental conceptual problems, however, plague attempts to put NEPA policy on a firm economic or market basis. First, an efficient market and, therefore, cost-benefit analysis, at least in theory would maximize the satisfaction of the preferences we have, whatever the consequences; in this sense, cost-benefit techniques advance a formal conception of welfare which has no clear connection with substantive concerns about the quality of life.¹⁷ The efficiency criterion, in principle, is indifferent to the nature, quality, or wholesomeness of our desires.¹⁸ It answers to the preferences we have; it does not educate taste or encourage the formation of new or better preferences.

NEPA, however, seems more reformistic, more aspirational. The statute concerns not just the standard of living in America, but also the quality of life. In that sense, it may respond less to a national desire to satisfy consumer preferences than to a sense of dissatisfaction with those preferences.¹⁹ The statute apparently takes a substantive rather than a formal approach to welfare or well-being.

Second, the statute is political: It sets forth a general policy goal chosen by the political community through a deliberative and democratic process. NEPA calls for governmental planning and problem solving; it defends environmental objectives which may conflict with an efficient allocation of resources. Accordingly, the application of cost-benefit techniques in NEPA decisionmaking might substitute a goal Congress did not choose (allocatory efficiency) for the goals it explicitly mentions in legislation.

We shall now briefly examine these two conceptual difficulties and the ways economists have proposed to overcome them.

§ 10:60 The market approach to NEPA—Norms or preferences?

Classical welfare economists have long recognized that “[e]thically, the creation of

Mishan, *Welfare Economics* 86 (1976).

¹⁶See, e.g., Cummings, Cox & Freeman, *General Methods for Benefits Assessment*, in *Benefits Assessment: The State of The Art* 161 (1986) (and references cited therein). For a fine, balanced discussion of “partial” versus “complete” quantification, see K. Shrader-Frechette, *Science Policy, Ethics, And Economy Methodology* ch. 6 (1985).

¹⁷Supporters of environmental legislation made this criticism of economic theory familiar during the 1960s. For example:

The economist prodding the nation to growth is not disturbed by the beer-can-littered landscape or the unsightliness of the strip mining location. His concern is to stimulate the appetite, not to cultivate the taste. His is a kind of science of collective gluttony. It has been aptly remarked that “one of the weaknesses of our age is our apparent inability to distinguish between our needs and our greeds.”

R. Rienow & L. Rienow, *Movement In the Sun* 233 (1967).

¹⁸Many attempts have been made, however, to “launder” the preferences which enter economic analysis. See, e.g., E. Mishan, *Cost-Benefit Analysis* 86 (1976) (“Thus, notwithstanding that all members of society agree that an individual is the best judge of his own welfare, society may not wish to admit a Pareto improvement by reference to utility alone which otherwise affords in any particular the moral sense of society.”). See also A. Okun, *Equality And Efficiency: The Big Tradeoff* 78 (1975). Sen writes: “[A] liberal society narrows the range of supposed externalities dignified by social policy.” A. Sen, *Collective Choice and Social Welfare* 82 (1970).

¹⁹For an excellent study of consumer dissatisfaction and the turn to public or political action, see A. Hirschman, *Shifting Involvements: Private Interest And Public Action* (1982). Hirschman argues that the satisfaction of consumer preferences leads to dissatisfaction with them rather than to any sort of contentment or “satisfaction” in the sense of happiness. To attain the latter, individuals enter public life or engage in political action to change the basic conditions under which those preferences are formed. Eventually, they grow weary and frustrated with this as well, and return to private consumption. This seems to be a cycle.

the right wants is more important than want-satisfaction.”¹ Adam Smith argued that the state has an obligation to educate citizens to refine their judgment and tastes.² Alfred Marshall considered it part of the economist’s role to discuss substantive notions of welfare—for example, expenditures which actually make people happy—as distinct from expenditures which simply satisfy their desires. He suggested, among other things, the provision and maintenance of public parks.³ Likewise Wicksteed.⁴ Pigou observed that a person “attuned to the beautiful in nature or art” was “himself an important element in the ethical value of the world.”⁵ And Knight summarized the “fairly established consensus that happiness depends more on spiritual resourcefulness, and a joyous appreciation of the costless things of life, especially affection for one’s fellow creatures, than it does on material satisfactions.”⁶

The economist’s concern with the formation and quality of preferences—not merely with their satisfaction—goes back at least to Mill. Everyone knows his dictum: “It is better to be a human being dissatisfied than a pig satisfied; better to be a Socrates dissatisfied than a fool satisfied.”⁷

When Carlyle accused the utilitarians of advocating a “pig philosophy,” he assumed they failed to distinguish between better and worse desires.⁸ But this badly misrepresents Mill’s position. Mill recognized that if the satisfaction of preferences were our primary goal, then we should strive to make tastes gross, callous, and stupid, since “[i]t is indisputable that the being whose capacities of enjoyment are low, has the greatest chance of having them fully satisfied.”⁹

Mill did not define social welfare as the satisfaction of preferences. Rather, Mill and the great economists who followed him were concerned with the quality of preferences and the quality of life. They adopted a substantive not a formal approach to utility.¹⁰ They thought that happiness and well-being depend at least as much on the quality of one’s goals and values as on the degree to which one satisfies them. Accordingly, they considered the conditions under which preferences are formed, not simply the conditions under which they are satisfied, to be a principal issue in political economy.

With contemporary economists, however, it is different. Kneese,¹¹ Freeman,¹²

[Section 10:60]

¹F. Knight, *The Ethics Of Competition* 23 (1935).

²A. Smith, *The Wealth Of Nations* bk. 5, ch. 1 (1976).

³For a discussion of Marshall’s views in the context of the paternalistic attitude of neoclassical economists, see S. Rhoads, *The Economist’s View Of The World* 175 (1985).

⁴S. Rhoads, *The Economist’s View Of The World* 175–76 (1985).

⁵A. Pigou, *The Economics Of Welfare* 17–18 (1938).

⁶F. Knight, *The Ethics Of Competition* 71 (1935).

⁷J. Mill, *Utilitarianism* (1863), *reprinted in* *The Utilitarians* 410 (1961).

⁸Carlyle, *Pig Philosophy*, in *Latter Day Pamphlets* 400 (1960).

⁹Carlyle, *Pig Philosophy*, in *Latter Day Pamphlets* 400 (1960).

¹⁰Mill and the classical utilitarians were reformers; they sought social change, not the preservation of the status quo. Accordingly, when they saw that efficient labor markets (*e.g.*, markets in which fully informed individuals make bargains without transaction costs) led to horrendous social misery (child labor, death, etc.), they did not define this misery as social welfare simply because it resulted from transactions within those markets. Rather, they sought to change the conditions under which people formed their preferences, in order to increase happiness and well-being, or lessen pain; they adopted a substantive conception of welfare.

¹¹See *Handbook Of Environmental And Resource Economics* (A. Kneese & J. Sweeney eds. 1985).

¹²A. Freeman, *The Benefits Of Environmental Improvement: Theory And Practice* (1979).

Cummings,¹³ Brookshire,¹⁴ and many others depart profoundly from the classical tradition, first, by taking values as “given” in the preferences consumers reveal in their market behavior, and, second, by defining “welfare” and “utility” formally or tautologically in terms of the satisfaction of those preferences.

To be more precise: “Benefit-cost analysis maintains that consumers’ values should be the basis for measures of the benefits of an action. In defining them, economists have generally used an individual’s *willingness to pay* for the good or service provided by the proposed action.”¹⁵ In this context, cost-benefit analysis “judges actions based on an efficiency criterion.”¹⁶ Economic “efficiency requires that resources be allocated to their highest-valued uses,” *i.e.*, the uses for which consumers are willing to pay the most.¹⁷

During the 1970s, politicians, economists, and environmental activists argued that the advertising budgets of corporations were dedicated to producing consumer preferences (willingness-to-pay) for things which destroyed the beauty and integrity of the environment, while adding nothing to actual well-being and happiness. These critics saw the quality of our preferences—not our failure to satisfy them—as a principal cause of the environmental crisis.

John Kenneth Galbraith, among others, pressed the opinion that corporations create through advertising the desires they satisfy; in today’s economy, producers, not consumers, are sovereign.¹⁸ Senator McGovern, taking up this theme, worried that advertising can “brainwash the consumer. . . . No one was ever born, for example, with a taste for gas guzzling automobiles. That is one of so many created demands.”¹⁹

NEPA, if what we argued earlier is correct, concerns not only the satisfaction of consumer preferences but also our national dissatisfaction with them. If this is so, it is hard to see how a cost-benefit approach, which takes its values directly and uncritically from consumer preferences, could help the nation achieve its environmental objectives.

Contemporary policy analysts are aware of this criticism. In order to make cost-benefit techniques more relevant to these objectives, therefore, a group of economists has attempted to assign market prices to a variety of nonconsumer goods and non-user services which reflect, in some way, the kinds of ethical and aesthetic concerns which often underlie environmental legislation.

¹³R. Cummings, D. Brookshire & W. Schultze, *Valuing Environmental Improvements: A State Of The Arts Assessment On The Economic Aspects Of The Contingent Valuation Method* (1986).

¹⁴Brookshire, Ives & Schulze, *The Valuation of Aesthetic Preferences*, 3 *J. Env'tl. Econ. & Management* 325 (1976).

¹⁵Smith, *A Conceptual Overview of the Foundations of Benefit-Cost Analysis*, in *Benefits Assessment: The State of The Art* 13, 16 (J. Bentkover, V. Covello & J. Mumpower eds. 1986).

¹⁶Smith, *A Conceptual Overview of the Foundations of Benefit-Cost Analysis*, in *Benefits Assessment: The State of The Art* 13, 16 (J. Bentkover, V. Covello & J. Mumpower eds. 1986).

¹⁷Smith, *A Conceptual Overview of the Foundations of Benefit-Cost Analysis*, in *Benefits Assessment: The State of The Art* 13, 16 (J. Bentkover, V. Covello & J. Mumpower eds. 1986).

¹⁸J. Galbraith, *Economics as a System of Beliefs*, in *Economics, Peace and Laughter* 68 (1981); see also J. Galbraith, *The Affluent Society* ch. 11 (1958).

¹⁹See S. Rhoads, *The Economist's View Of The World* 148 (1985). Rhoads also cites Senator Philip Hart's estimate that \$200 spent by consumers in 1960 purchased nothing of value. Rhoads states similar views by Ralph Nader and Thorstein Veblen. S. Rhoads, *The Economist's View Of The World* 148 (1985). Also, from Marx:

[U]nder private property . . . every person speculates on creating a *new* need in another, so as to drive him to a fresh sacrifice, to place him in a new dependence and to seduce him to a new mode of *gratification*. . . . The extension of products and needs falls into *contriving* and ever-calculating *subservience* to inhuman, refined, unnatural and imaginary appetites.

Marx, *Economic and Philosophic Manuscripts of 1844*, in *The Marx-Engels Reader* 93 (R. Tucker ed. 1978) (emphasis added).

Consider, for example, the belief that the visibility in national parks should not be impaired by air pollution. People may hold this belief—and thus support relevant legislation²⁰—for various aesthetic, ethical, patriotic, or other reasons. This belief may have little relation to—indeed, it may conflict with—the preferences these people reveal by their behavior in consumer markets.²¹

Analysts may ask people how much they are willing to pay to keep national parks, let us say, free of pollution.²² By this technique, contemporary economists may convert an ethical or aesthetic conviction “from a value judgment to a datum of economic science.”²³ They may convert a person’s objective belief about our national obligations to a subjective report about the intensity of his or her desires.

Once this conceptual shift has taken place, it is a simple matter to make cost-benefit techniques relevant, at least theoretically, to the aspirational and ethical aspects of environmental legislation. All that is required are techniques to “shadow” price the non-consumer or “moral” benefits of projects and decisions.

Economists in recent years have developed various techniques to “price” non-consumption goods and non-user services associated with the environment.²⁴ These techniques measure in monetary terms the “existence,” “bequest,” “option,” and “quasi-option” worth of objects people may value intrinsically or wish to preserve for their own sakes.

Consider, for example, NEPA’s mandate that agencies “preserve important historic, cultural, and natural aspects of our national heritage.”²⁵ An economist may interpret this mandate to mean that many people want cultural, historical, and natural landmarks to be preserved, even though these people may not plan to visit those places. Preferences of this sort can be “priced” on the basis of willingness to pay for preservation. This is the “existence” value of a natural environment.

Now consider the directive in NEPA that federal agencies “fulfill the responsibilities of each generation as a trustee of the environment for succeeding generations.”²⁶ This seems to be an ethical command, which might be interpreted legally along the lines of a “public trust”²⁷ or “charitable trust”²⁸ doctrine. From an economic point of view, however, a person’s sense of moral obligation to future generations “might appear as utility to him from the enhanced utility of his heirs.”²⁹ This is the basis of “bequest” value.

Finally, NEPA directs agencies to “maintain, wherever possible, an environment

²⁰Clean Air Act § 165(a)(4), 42 U.S.C.A. § 7475(a)(4).

²¹Consider, for example, a person who believes the workplace ought to be safe, and so supports worker safety legislation. That same person, by trying to buy goods at the lowest prices, might “reveal” the contrary interest in his or her market behavior.

²²For many examples of this, see R. Rowe & L. Chestnut, *The Value Of Visibility; Economic Theory And Applications For Air Pollution Control* (1982).

²³Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 *Stan. L. Rev.* 387, 406 (1981). Kennedy cites many examples of conversions of this kind.

²⁴For examples, see Brookshire, Eubanks & Randall, *Estimating Option Prices and Existence Value for Wildlife Resources*, 59 *Land Econ.* 1 (1983); Brookshire, Ives & Schulze, *The Valuation of Aesthetic Preferences*, 3 *J. Envtl. Econ. & Management* 325 (1976); Schulze, d’Arge & Brookshire, *Valuing Environmental Commodities: Some Recent Experiments*, 57 *Land Econ.* 151 (1981).

²⁵NEPA § 101(b)(4), 42 U.S.C.A. § 4331(b)(4).

²⁶NEPA § 101(b)(1), 42 U.S.C.A. § 4331(b)(1).

²⁷See J. Sax, *Defending The Environment* (1971).

²⁸See Holland, *Judicial Review of Compliance with the National Environmental Policy Act: An Opportunity for the Rule of Reason*, 12 *Envtl. Aff.* 743, 746 (1985).

²⁹McConnell, *Existence and Bequest Value*, in *Managing Air Quality And Scenic Resources At National Parks and Wilderness Areas* 257 (R. Rowe & L. Chestnut eds. 1983).

which supports diversity, and a variety of individual choice.”³⁰ As if on cue, economists speak of “option value,” which reflects “the desire to preserve resources because of the uncertainty of demand. Option value . . . is the value of an option to consume the good when preferences are uncertain.”³¹ One may also add “quasi-option value” which is “the expected value of information gained from postponing an irreversible development.”³²

In short, economic analysts have responded to the ethical and aspirational aspects of NEPA by identifying relevant pockets of willingness to pay. As a result,

[v]alue concepts have proliferated—use value, option price, option value, expected consumer’s surplus, quasi-option value, existence value, preservation value, bequest value, etc.,—but some of these are overlapping in concept while many are empirically elusive so that validation of estimates is difficult and often incomplete. Thus, confusion in some quarters is matched by skepticism in others.³³

All sorts of technical and practical problems beset attempts to measure non-consumer and non-user “costs” and “benefits.” Since these are discussed in the economic literature, we need not consider them here.³⁴ Attempts to “price” moral and aesthetic values and obligations—to enter them into a utilitarian calculus along with consumer preferences—also confront logical or conceptual difficulties, however, which we should mention, since they are not discussed in the economic literature.

One principal difficulty appears to be this: Ethical values and consumer preferences belong to different conceptual categories and must, therefore, be evaluated and justified in different ways. Ethical and aesthetic judgments, having the form “*x* is good” or “*x* is beautiful,” constitute objective or public beliefs which are either true or false, correct or mistaken. Judgments of this sort are to be justified or criticized on the merits. Consumer preferences, having the form “I want *x*,” constitute private or subjective desires. These need not be judged on the merits but may be priced in a market.³⁵

To lump values of these different sorts together may be to commit a category mistake.³⁶ The problem here is not that those who take an economic approach to NEPA are committed “to think that every social value should eventually be handleable by something like cost benefit analysis.”³⁷ Rather, the problem is that “they are committed to something which in practice has those implications: that there are no

³⁰NEPA § 101(b)(4), 42 U.S.C.A. § 4331(b)(4).

³¹McConnell, Existence and Bequest Value, in *Managing Air Quality And Scenic Resources At National Parks and Wilderness Areas* 254 (R. Rowe & L. Chestnut eds. 1983).

³²McConnell, Existence and Bequest Value, in *Managing Air Quality And Scenic Resources At National Parks and Wilderness Areas* 254 (R. Rowe & L. Chestnut eds. 1983).

³³Randall & Stoll, Existence Value in a Total Valuation Framework, in *Managing Air Quality And Scenic Resources At National Parks and Wilderness Areas* 254 (R. Rowe & L. Chestnut eds. 1983).

³⁴For a practitioner’s view, see Hyman, *The Valuation of Extramarket Benefit and Costs in Environmental Impact Assessment*, 2 *Envtl. Impact Assessment Rev.* 260 (1981).

³⁵There is a simple way to illustrate the epistemological difference between judgments and preferences at stake here. Judgments can contradict one another; *e.g.*, for any *x*, it is logically impossible that the statements “*x* is good” and “*x* is bad” are both true, even when uttered by different persons. The statements “I want *x*” and “I want non-*x*,” when uttered by different people, do not constitute a logical contradiction. Preferences can conflict, at most, in the sense that they compete for the use of scarce resources. This is not a form of logical or epistemic contradiction, not a matter of one being true while the other is false.

³⁶For an explanation of this sort of fallacy, see Ryle, *Categories*, in *Essays on Logic and Language* 65 (A. Flew ed. 1953).

³⁷B. Williams, *Morality: An Introduction To Ethics* 96–97 (1972).

ultimately incommensurable values.”³⁸

When a person says that something is good, beautiful, etc., he or she makes a disinterested judgment; this is not the same thing as expressing an interest, for example, in acquiring or consuming that object. Disinterestedness of this kind, indeed, seems to be the characteristic of moral and aesthetic judgment.³⁹

Statements which ascribe moral or aesthetic worth to objects or events are *statements of fact*, not *expressions of desire*. They take an impersonal stance and claim intersubjective agreement; their truth value has nothing logically to do with the speaker’s willingness to back them up with money.⁴⁰ A judgment of this sort entails nothing about the welfare or utility of the person who makes it.

Cost benefit analysis, in contrast, measures the utility of the person who ascribes value to an object or event, and then attributes that value to the object or event itself. This seems to assume that the only thing that can be valued or be good is the utility, or the preference-satisfaction, of individuals. What shall we say of this assumption? Does it state a view or express a preference? The difference between these activities should be plain.⁴¹

NEPA, as we have suggested, attaches an intrinsic merit or worth to the preservation of environmental quality and beauty; we value these things (so it seems) in themselves and not simply for the use we can make of them. The conception of value at work in NEPA involves love, reverence, and respect for our natural heritage. Valuation of this sort must be distinguished from—not assimilated to—self-interest. It expresses an objective view of what is desirable, not a subjective report of what is desired.

NEPA, in short, argues that the environment is valuable; hence we are willing to pay to protect it. A cost-benefit approach reverses the equation. It argues that we are willing to pay to protect the environment; hence it is valuable.

Those who defend the new techniques of cost-benefit accounting offer a forceful reply to these conceptual objections. They *concede* that these objections are logically sound. They argue, however, that a cost-benefit approach provides a rational basis on which policymakers can consider “qualitative” or “intangible” values. The alternative may be simply to ignore those values.

Thus, one commentator points out

that failure to quantify allegedly qualitative costs, however, results in their being excluded from technology assessments and environmental impact analyses. . . . If failure to quantify indeed causes us to ignore such factors, then non-quantification also results in a very practical sort of “economic Philistinism” and perhaps one more serious than that arising from imperfect attempts to assign cardinal or ordinal measures.⁴²

That is how the debate, at present, stands. We shall have to consider alternative

³⁸B. Williams, *Morality: An Introduction To Ethics* 97 (1972).

³⁹J. Kant, *Critique Of Judgment* 38 (J. Bernard trans. 1951). “A judgment upon an object of satisfaction may be quite *disinterested*, but yet very *interesting*, i.e., not based on an interest, but bringing an interest with it; of this kind are all pure moral judgments. Judgments of taste, however, do not in themselves establish an interest.” J. Kant, *Critique Of Judgment* 39, n.2 (J. Bernard trans. 1951).

⁴⁰The truth or falsity of the statement “5+5=10,” for example, is not to be determined by a market or by measuring willingness to pay among mathematicians. Statements which describe our will, character, and obligations as a nation are similarly objective. One gives reasons for one’s views; this is not the same thing as paying money to satisfy one’s desires.

⁴¹Thus, one would not ask a cost-benefit analyst how much he or she is willing to pay to for the nation to adopt efficiency as a criterion in environmental policy. A recommendation—whether for efficiency or some other criterion—represents a political statement to be backed by reasons, not a subjective preference to be backed by money.

⁴²K. Shrader-Frechette, *Science Policy, Ethics, And Economy Methodology* 200 (1985).

methods of NEPA enforcement before we can evaluate this reply.

§ 10:61 The market approach to NEPA—Individual or community choice?

At the Senate Hearings on NEPA, Stewart Udall, former Secretary of the Interior, testified that “we have an unmatched opportunity to reassess our national purpose and our national priorities.”¹ He added: “I believe the Nation has ahead of it, in the immediate years ahead, the best opportunity it has had in the entire postwar period to look at its national priorities and its national needs and perhaps to reshape them.”²

This sort of rhetoric, which refers to national purposes and priorities, occurs, one supposes, in many congressional debates. NEPA itself adopts this rhetoric in establishing “a national policy for the environment.”³ This language suggests the possibility that Congress, through a deliberative political process, sets goals or objectives for the community which may legitimately differ from outcomes individuals might reach by making trades among themselves, even in the most efficient markets.

One difference between NEPA and a cost-benefit approach to environmental policy, then, might be this: NEPA states a policy, or at least a general direction for policy to take. On the contrary, a market and, therefore, cost-benefit analysis, on the contrary, “has no inherent direction, no internal goal other than to satisfy the forces of supply and demand.”⁴ Amusingly, some analysts have observed that people become outraged when they learn that cost-benefit analysis or some other “rational” procedure has been adopted in community decisionmaking. Citizens become angry or resentful, according to this appraisal, because the use of these methodologies challenges their “Cherished Illusion” that policy objectives come from the minds of their political representatives, not from the computers of bureaucrats.⁵ This cherished illusion may be so strong—the resentment so great—that the use of cost-benefit analysis cannot be justified even on welfare grounds.⁶

It may be more than a cherished illusion, moreover, to suppose that as a democratic political community we can choose environmental goals and policies which go “beyond” efficiency in the allocation of resources. If so, cost-benefit or economic approaches to NEPA, which take their authority from the real or imagined functioning of markets, may provide more of an alternative to than a framework for democratic processes of decisionmaking.

The relevance of the efficiency criterion to the political process depends, in part, on what one takes “efficiency” to mean. Many economists define efficiency narrowly to refer to the outcome of a market in which all assets are owned and traded, and there are no externalities. These economists restrict the concept of an “externality” to refer only to actual loss or damage to person or property of the sort defined by the

[Section 10:61]

¹Hearings on S. 1075, S. 237, and S. 1752, National Env'tl. Policy, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st. Sess. 141 (1969).

²Hearings on S. 1075, S. 237, and S. 1752, National Env'tl. Policy, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st. Sess. 141 (1969).

³42 U.S.C.A. § 4321 (NEPA Preamble).

⁴R. Odell, *Environmental Awakening* 13 (1980) (quoting SRI International, *City, Size and Quality of Life*).

⁵Tarasovsky, *Cost-Benefit Analysis, Cherished Illusions and Anxiety: An Aspect of the Hickey Effect*, in *Frontiers of Economics* (G. Tullock ed. 1976).

⁶Cuyler, *The Quality of Life and the Limits of Cost-Benefit Analysis*, in *Public Economics and the Quality of Life* 141, 143 (L. Wingo & A. Evans eds. 1977).

common law of tort.⁷

These economists think of externalities as arising from the failure of markets to set prices for goods and services of the kind for which markets typically exist and are appropriate. Economists who define externalities in this narrow way—roughly as “spillovers” such as pollution—do not try to measure people’s “willingness to pay” for the sort of policy one argues for in a legislature, rather than what one bargains for in a market.

Analysts of this mind think of “externalities” as arising from a failure to have markets to deal with political, ethical, or communitarian goals or objectives. Thus, cost-benefit analysis of this sort seems consistent with democratic decisionmaking; it informs, but does not attempt to replace, the political process.

At about the time that NEPA was enacted, however, many economists began to replace the notion of a physical spillover with the notion of a bargaining cost as an identifying feature of a market externality. Due in part to the work of Ronald Coase,⁸ they began to ask “what is a cost of what?” rather than “what is a cause of what?” They could then “open up” the notion of an externality to include anything a person might be willing to pay for in a real or in a hypothetical market.⁹

Once the concept of an externality had widened in this way, economists developed all sorts of hypothetical markets, such as “bidding games” to “price” the moral, aesthetic, and political “externalities” of public investments.¹⁰ They could then claim that an efficient policy is the “right” policy because it takes account of the views and objectives individuals espouse as citizens, not simply the preferences or interests they pursue as consumers. At this point, cost-benefit analysis became continuous with the assumption of utilitarianism, namely, that all values are commensurable and can be reduced, at least in theory, to a common measure.

Whether one accepts or rejects this contention depends on one’s general political theory. Those who believe, with Kneese, that the government should function primarily as a prophylactic on markets may find this general assumption convincing. The alternative to economic analysis, namely, the political process, moreover, is not poetry in motion. Backscratching, log rolling, payoffs, ignorance, and chance are candidates to replace “rational” methodologies of decisionmaking.¹¹

Those who believe that there is something “sacred,” or at least legitimate, about the rule of law in a democratic society will reject “the paternalism of expertise.”¹² They will insist that the goals of a democratic community be chosen through a democratic process and that the goals cannot be reduced or analyzed into tradeoffs

⁷The usual example of an externality of this sort is pollution. *See, e.g.*, E. Mishan, *Introduction to Normative Economics* ch. 50 (1981).

⁸Coase, *The Problem of Social Cost*, 3 *J. Law & Econ.* 1 (1960).

⁹Kennedy writes: “Coase forced us to redefine an externality as a cost, associated with an activity, which is not reflected in the activity’s price because transaction costs prevent those on whom the loss falls from making a contract with whomever might prevent it.” Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 *Stan. L. Rev.* 387, 398 (1981) (footnote omitted).

¹⁰For a good review, see Cox, *Theory of Regulatory Benefits Assessment: Econometric and Expressed Preference Approaches*, in *Benefits Assessment* 85 (1986).

¹¹The same kind of objection can be registered, of course, against economic techniques, namely, that they may look good in theory, but they are likely to be abused in fact.

¹²*See* K. Shrader-Frechette, *Science Policy, Ethics, And Economy Methodology* 298 (1985) (quoting T. Roszak). “The key problem we have to deal with is the paternalism of expertise within a socio-economic system which is so organized that it is inextricably beholden to expertise. And, moreover, to an expertise which has learned a thousand ways to manipulate our acquiescence with an imperceptible subtlety.” K. Shrader-Frechette, *Science Policy, Ethics, And Economy Methodology* 298 (1985).

that might more effectively be reached in a market.¹³ At any rate, they will point out that the Constitution empowers Congress to choose the goals of the nation within broad constraints. Congress has not yet ceded this power to economists.¹⁴

We have now considered, in a general way, the economic approach to NEPA. Its acceptability may depend on its inevitability, that is, on whether there is any other way to make tradeoffs and take costs into account. We shall now turn to this question.

§ 10:62 Mitigation: Reconciling the moral and the market approaches to NEPA

Reviewing the decade which produced NEPA, Lynton Caldwell wrote:

By the early 1960s evidence of a changing public attitude could be read on the front pages of newspapers from New York to California. A cursory view of such popular periodicals as *Atlantic*, *Harper's*, *Saturday Review*, and *Life* reflected a growing belief that ugliness, disorder, and an unhealthy environment did not have to accompany economic growth. The assumption in these and other journals, as well as in the newspapers, was that the disfiguring or polluting aspects of the American industrial economy were largely the result of the failure of the civic conscience of the American people to use their technological capabilities wisely. Only a few commentaries . . . suggested that environmental degradation might be a "built-in" aspect of America's affluent society.¹

The idea that economic growth and environmental quality were reconcilable—that we could enjoy a high standard of living and a high quality of life—had an overwhelming political appeal at the time NEPA was enacted.² NEPA, according to the opinion of the day, would help us "apply our technological prowess in harmony with social and environmental quality goals; that is to pursue a policy of balanced growth."³

In introducing the original version of NEPA in Congress, Senator Jackson quoted a *Washington Post* editorial to this effect. The editorial said:

It is often man's crass indifference to the consequences of technological advance in exploiting nature which is leading to the despoiling of nature. That is to say, the gains from technology seem to run only one way—to profits rather than to preservation of a planet on which man may comfortably live.

. . . .

The time has come to turn around the thesis under which natural resources have long been regarded. Instead of deciding that we must exploit them because we are technically able to do so, we ought to postpone exploiting them until the need is or our knowledge of what damage exploitation may do is substantially greater.⁴

NEPA responded to the opinion popular at the time that a wise use of science and technology could solve the problems that careless use had provoked. This view

¹³For an excellent analysis of the conditions of participatory democracy, see Care, *Participation and Policy*, 88 *Ethics* 316 (1978).

¹⁴Congress may have flirted with the idea of doing so. See S. Rep. No. 305, 97th Cong., 1st Sess. (1981) (discussing the Regulatory Reform Act (S. 1080)).

[Section 10:62]

¹L. Caldwell, *Man and His Environment: Policy and Administration* 24 (1975) (footnote omitted).

²See, e.g., Radio Address of Richard M. Nixon, Republican Presidential Nominee, CBS Radio, October 18, 1968, *reprinted in* U.S. Senate, Comm. on Interior and Insular Affairs, *National Env'tl. Policy*, 91st Cong., 1st Sess. 101 (1969).

³Carpenter, *Goals and Policies for Environmental Improvement*, in *Congress and the Nation's Environment* 4 (1971).

⁴Hearings on S. 1075, S. 237, and S. 1752, *National Env'tl. Policy*, Senate Comm. on Interior and Insular Affairs, 91st Cong., 1st Sess. 24 (1969) (remarks of Senator Jackson).

became particularly strong in 1968, when, on Christmas Eve, the Apollo IX astronauts sent back the first pictures of the earth as seen from outer space. The image of “spaceship earth” became a powerful symbol for environmentalists. “If technoscience could place a man on the moon and return him to earth, why could not that same capability be employed to obtain the fruits of the earth without destroying the life-support system that made them possible?”⁵

NEPA enlists and develops scientific and technological knowledge in an effort to make publicly approved programs and projects consistent with national environmental objectives. It does this in two ways.

First, it seeks to advance scientific and especially ecological research,⁶ for example, by directing the Council on Environmental Quality “to conduct investigations, studies, surveys, research, and analyses relating to ecological systems and environmental quality.”⁷ The statute also directs federal agencies to “[i]nitiate and utilize ecological information in the planning and development of resource-oriented projects.”⁸

NEPA recognizes that no single science or discipline is adequate to explore the complex relationships in nature and between nature and man. It therefore requires agencies to “[u]tilize a systematic, interdisciplinary approach which will ensure the integrated use of the natural and social sciences and the environmental design arts in decisionmaking which may have an impact on man’s environment.”⁹

Second, NEPA lays particular stress on the responsibility of the agencies to consider “[a]lternatives to the proposed action.”¹⁰ The statute directs agencies to “[s]tudy, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involved unresolved conflicts concerning alternative uses of available resources.”¹¹

The general policy directive in NEPA is clear: Agencies are to determine whether, by using alternative means, including alternative technologies, they may carry out their missions in ways that “mitigate harmful environmental impacts.”¹² One court described the obligation to consider alternatives as the “linchpin” of the impact assessment process.¹³ It is the “heart” of the impact statement, according to the Council on Environmental Quality.¹⁴

The question before us is whether mitigation—the minimization and avoidance of environmental damage—provides a basis for reconciling moral and market motives in NEPA. Can the consideration of alternatives, along with the wise use of science and technology, provide methods by which agencies can pursue economic growth within ethical constraints? We conclude by considering this question.

⁵L. Caldwell, *Science and the National Environmental Policy Act: Redirecting Policy Through Procedural Reform* 46 (1982).

⁶One purpose of NEPA is “to enrich the understanding of ecological systems.” NEPA § 2, 42 U.S.C.A. § 4321.

⁷NEPA § 204(5), 42 U.S.C.A. § 4344(5).

⁸NEPA § 102(2)(G), 42 U.S.C.A. § 4332(2)(G).

⁹NEPA § 102(2)(B), 42 U.S.C.A. § 4332(2)(B).

¹⁰NEPA § 102(2)(C)(iii), 42 U.S.C.A. § 4332(2)(C)(iii). It is difficult to trace the legislative history of this provision. For early attempts to do so, see *Jordan, Alternatives Under NEPA: Toward an Accommodation*, 3 *Ecol. L.Q.* 705 (1973); *Picher, Alternatives Under NEPA: The Function of Objectives in an Environmental Impact Statement*, 11 *Harv. J. on Legis.* 595 (1974).

¹¹NEPA § 102(2)(D), 42 U.S.C.A. § 4332(2)(D).

¹²D. Mandelker, *Environment and Equity* 120 (1981). For a discussion of judicial review of the consideration of alternatives under NEPA, see *Mandelker, NEPA Law and Litigation* § 9:17.

¹³*Monroe County Conservation Council, Inc. v. Volpe*, 472 F.2d 693, 3 *Env'tl. L. Rep. (Env'tl. L. Inst.)* 20006 (2d Cir. 1972).

¹⁴40 C.F.R. § 1502.14.

§ 10:63 Mitigation: Reconciling the moral and the market approaches to NEPA—Science and technology

The discussion of environmental policy prior to NEPA reached near unanimity on one point: the need to support ecological research. The following testimony by Stewart Udall, Secretary of Interior in 1968, is typical:

No. 1, we must begin to work with, not against, the laws of the planet on which we live. (This is a little space ship, and that's about as accurately as I can describe it), rejecting once and for all the false notion that man can impose his will on nature. This requires that we begin to obey the dictates of ecology, giving this master science a new and central position in the Federal scientific establishment.¹

Ecology, like any science, might function in either of two ways to provide guidance to policymakers. These are not exclusive, but they are different. First, a science might describe situations in a way that makes it possible for policymakers to predict, manipulate, and control events to reach given objectives. Second, a science might contain concepts or terms or ideas that help policymakers decide what their objectives should be; in other words, what they should preserve and what they should try to change.²

Both kinds of science—or kinds of concepts—are perfectly legitimate, perfectly “scientific.” Which vocabulary one prefers has to do with the problems one wishes to solve or the purposes one has in mind.

If one wishes to maximize the economic yield, say, of an estuary, then one may apply the methods of engineering and technology to transform a natural ecosystem to the purposes of aquaculture.³ This approach is not likely to preserve the “authenticity” or “integrity” of the environment. Rather it will replace wild ecosystems with computer-controlled, artificially-maintained processes, which are likely to be far more efficient or more profitable.⁴

The carefully managed and manipulated systems by which Frank Perdue produces chickens, for example, can be duplicated, *mutatis mutandem*, in the production of fish. If this sort of economic yield is our goal, then we may rely on approaches in science and technology which help us to predict, control, manipulate, and eventually transform the natural environment. The computer may replace the tiller and the plow.

Stuart Udall, in the testimony quoted above, however, did not have this use of science and technology primarily in mind. The question is not whether man can or

[Section 10:63]

¹The testimony was given before a Joint House-Senate Colloquium to Discuss a National Policy for the Environment.

²Richard Rorty explains that there are two criteria we might apply to the vocabulary of a science: “(1) It should contain descriptions of situations which facilitate prediction and control; (2) It should contain descriptions which help one decide what to do.” R. Rorty, *Consequences of Pragmatism* 197 (1982).

³The historical trend in agriculture has been from less to more industrial methods of production. See W. Cochrane, *The Development of American Agriculture* (1979). Aquaculture, by replacing natural with artificial processes of production, illustrates the same trend. See Klausner, *Food From the Sea*, 3 *BIO/Technology* 32 (1985).

⁴The enormous efficiency of artificial or technological processes of agricultural and—soon—aquaculture production (greatly exceeding natural carrying capacity) accounts in large part for the surpluses, depressed prices, etc., that plague farming. For a description of the incredible efficiency of the “technological treadmill” in agriculture, see Kloppenburg, *The Social Impacts of Biogenic Technology in Agriculture: Past and Future*, in *The Social Consequences and Challenges of New Agricultural Technologies* 291 (G. Berardi & C. Geisler eds. 1984).

cannot impose his will on nature.⁵ Probably, he can. Advances in science and technology, particularly recombinant DNA research, in any event, have given human beings power over nature of a sort few could have imagined in 1969.

The question, rather, is whether we want to impose our will on nature. We might choose instead to preserve or protect the “integrity” or “authenticity” of nature because we admire, respect, or appreciate these aspects of the environment. We shall then try to develop scientific concepts, descriptions, and approaches which will help us identify and maintain the “health” of the “well-being” of ecosystems.⁶ These are not necessarily the kinds of concepts or approaches we would rely on to replace those systems with quasi-artificial processes or, therefore, to maximize the production of goods and services that nature provides man.⁷

Ecologists remarked on this conceptual distinction shortly after NEPA was enacted. Two prominent ecologists wrote:

Ecologists function at two conceptual levels. The first level is directly concerned with their day-to-day research, and the second constitutes a way of viewing the world. We contend that the nature of the crisis is such that the second kind of ecological thinking is the more significant, and that it determines the kind of solution ecologists (and others) should press for in solving the environmental crisis in the United States—and for that matter, on a global basis.⁸

Ecologists have attempted to describe a perspective on environmental policy which would give officials some way to ground the normative concepts with which they had to work.⁹ These attempts, however, failed to establish any “laws of the planet” which might help to define “harmony” between man and the environment.¹⁰ Efforts to define ecological “diversity” and to link it with “stability,” for example, while a staple of ecological research for many years, ended in frustration.¹¹ Likewise, concepts involving a putative “balance of nature” have receded in ecological thought.¹²

Ecologists have succeeded better in providing policymakers with environmental indices¹³ by which to estimate the divergence of ecosystems from some “natural” or

⁵During the 1960s, some environmentalists took the position that further attempts to transform nature to our purposes through technological intervention would be dangerous and disastrous. For an unfavorable review of this literature, see J. Maddox, *The Doomsday Syndrome* (1972). For an intelligent anthropological perspective on the environmental “millennialists,” see M. Douglas, *Implicit Meanings* (1975).

⁶Leopold blended ethics and ecology by pointing out that ethical concerns determined the properties of ecosystems ecologists studied. “That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics.” Leopold, *The Land Ethic*, in *People, Penguins, and Plastic Trees* 773, viii (D. VanDeVeer & C. Price eds. 1968).

⁷The problem of agricultural surpluses provides an important reason to protect natural environments, that is, to take them out of production. The issue is surplus, not scarcity, for many of the goods and services for the sake of which we justify maintaining or altering environments.

⁸Murdoch & Connell, *The Ecologist’s Role and the Nonsolution of Technology*, in *Ecocide—And Thoughts Toward Survival* 47, 47 (C. Fadiman & J. White eds. 1971). See also Auerbach, *Ecology, Ecologists, and the E.S.A.*, 53 *Ecology* 205 (1972); Hollander, *Scientists and the Environment: New Responsibilities*, 1 *AMBIO* 116 (1972) (assessing the role of ecologists after NEPA).

⁹For a history and an assessment of these efforts, see R. Macintosh, *The Background of Ecology: Concept And Theory*, chs. 6 & 8 (1985).

¹⁰Suter, *Ecosystem Theory and NEPA Assessment*, 62 *Bull. Ecological Soc’y Am.* 186 (1981).

¹¹See Goodman, *The Theory of Diversity-Stability Relationships*, 50 *Q. Rev. Biology* 237 (1975).

¹²Egerton, *Changing Concepts of the Balance of Nature*, 48 *Q. Rev. Biology* 322 (1973).

¹³See Train, *The Quest for Environmental Indices*, 178 *Sci.* 121 (1978) (describing scientific problems in enforcing NEPA).

historically authentic condition.¹⁴ A species list may constitute the best index of the “integrity” of an ecosystem, and, therefore, the best indication of what must be preserved if that ecosystem is to be protected.¹⁵ Several ecologists have written:

We suggest most strongly and seriously that the optimal definition available for any ecosystem is the list of species that has been found in that system. . . . We are asserting that knowledge about the component species is extremely useful as a first step to the understanding of the ecosystem for any purpose.¹⁶

Ecologists have not been particularly successful, however, in finding theoretical or other ways to predict the impact of projects or policies on the environment. Some commentators find this disconcerting. One writer, reviewing the law-science relationship under NEPA, remarked that “the essence of an environmental impact statement is prediction. Decisionmakers must predict and they ask for assistance in that function.”¹⁷ He added: “Ecology provides an adequate foundation for fascinating and detailed description, and this gives the impression of knowledge. Unfortunately, there are not many explanatory theories in ecology upon which to base prediction.”¹⁸

The widely recognized limitations of ecology as a predictive science, however, need not detract from its usefulness in relation to NEPA. To see why, one needs to recall the two functions a science may serve. It may serve to predict and, therefore, help policymakers to control or manage events. It may also serve to make recommendations and suggest what policymakers should do to mitigate possible impacts or otherwise maintain the “integrity” of the environment.

This distinction is illustrated in more than a decade of intensive litigation over the siting of energy facilities along the Hudson River. Teams of ecologists and other scientists attempted to predict the impact of electric power generation on populations of striped bass. After reviewing the unprecedented efforts of ecologists to model the relevant factors, the Atomic Safety and Licensing Board in 1972 concluded that the population biology of a complex system such as a river simply defied prediction.¹⁹

Six leading ecologists who worked on modeling bass populations in the Hudson say that this conclusion was as true in 1984 as in 1973. “After more than a decade of study and the expenditure of tens of millions of dollars, it was still not possible to draw definitive conclusions about the long-term effects of entrainment and impinge-

¹⁴These are the bases for baseline and process studies. For a critique, see Hilborn & Walters, *Pitfalls of Environmental Baseline and Process Studies*, 2 *Envtl. Impact Assessment Rev.* 265 (1981).

¹⁵The Clean Water Act relies on this criterion, *i.e.*, “the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife.” 33 U.S.C.A. §§ 1251, 1312.

¹⁶Slobodkin, Botkin, Maguire, Moore & Morowitz, *On the Epistemology of Ecosystem Analysis*, in *Estuarine Perspectives* 497, 500–01 (V. Kennedy ed. 1980).

¹⁷Carpenter, *Ecology in Court and Other Disappointments of Environmental Science and Environmental Law*, 15 *Nat. Resources Law* 573, 589 (1983).

¹⁸Carpenter, *Ecology in Court and Other Disappointments of Environmental Science and Environmental Law*, 15 *Nat. Resources Law* 573, 590 (1983).

¹⁹The Board wrote:

No one knows in detail what activities of life go on in the unseen depths of the Hudson River nor what the future response to changing inputs is going to be. Under these conditions the experts are free to choose those assumptions which best fit their beliefs about what may go on, and the arguments that follow produce thousands of pages of testimony and documents without providing answers that can be agreed upon, or that can provide clear guidance to a Board.

Atomic Safety and Licensing Appeal Board of the U.S. Atomic Energy Commission, *Decision in the Matter of Consolidated Edison Company of New York, Inc. (Indian Point Station Unit No. 2.)* 4 (Apr. 1974), *quoted in* Barnthouse, Christensen, Goodyear, Van Winkle & Vaughan, *Population Biology in the Courtroom: The Hudson River Controversy*, 34 *Biosci.* 14, 17 (1984).

ment of fish populations in the Hudson River.”²⁰

These ecologists then emphasized the distinction that offers guidance to anyone involved with the integration of environmental science with environmental law. The knowledge we need reliably to predict environmental impacts is not the knowledge we need to identify possible sources or causes of environmental damage and to recommend ways to avoid or to mitigate that damage. Rather, we need to be sensitive to our wider purposes and goals and operate within them, “rather than being deferred indefinitely in the hope that scientists will come up with definitive solutions.”²¹

These ecologists wrote:

The ultimate question, “what will be the long-term effects of once-through cooling on Hudson River fish populations?” was unanswerable. Attempts to answer it contributed to years of costly litigation and benefited neither the environment nor the public. Asking the alternative questions, “what are the available methods of reducing the impact of once-through cooling, and how can they be most effectively deployed?” enabled scientists to make a positive contribution to arranging a “Peace Treaty for the Hudson.”²²

It is fair to say that policymakers seek advice from scientists at least as much as they seek predictions.²³ As one observer said: “NEPA is an attempt to bring the legal framework closer to the ecological framework, to make policy decisions with the recognition of a multifaceted world as it is perceived by ecologists.”²⁴ The intention (or hope) expressed in NEPA is that agency officials and consultants, by adopting an ecological and—optimistically—interdisciplinary perspective, will be able to choose among possible projects and provide strategies to mitigate possible environmental deterioration. One official noted: “Consultants, and others who undertake impact assessments, should proceed beyond the objective reporting of results, and should provide recommendations on the most environmentally acceptable alternatives.”²⁵

Can the search for the “most environmentally acceptable alternatives” provide a general way to reconcile economic and ethical motives in NEPA? The statute, as we shall now see, suggests a generally affirmative answer to this question.

§ 10:64 Mitigation: Reconciling the moral and the market approaches to NEPA—The consideration of alternatives

An important Congressional White Paper issued in 1968 anticipated NEPA’s environmental impact statement requirement. The White Paper stated:

Alteration and use of the environment must be planned and controlled rather than left to arbitrary decision. Technological development, introduction of new factors affecting the environment, and modifications of the landscape must be planned to maintain the diversity of plants and animals. Furthermore, such activities should proceed only after

²⁰Barnthouse, Christensen, Goodyear, Van Winkle & Vaughan, *Population Biology in the Courtroom: The Hudson River Controversy*, 34 *Biosci.* 14, 18 (1984).

²¹Barnthouse, Christensen, Goodyear, Van Winkle & Vaughan, *Population Biology in the Courtroom: The Hudson River Controversy*, 34 *Biosci.* 14, 18 (1984).

²²Barnthouse, Christensen, Goodyear, Van Winkle & Vaughan, *Population Biology in the Courtroom: The Hudson River Controversy*, 34 *Biosci.* 14, 18 (1984).

²³This need for scientists to give advice within a social and economic framework, not simply to make predictions, underlies C.S. Holling’s popular “adaptive” method in assessment and management. See Holling, *Adaptive Environmental Assessment And Management* (1978).

²⁴Davies, NEPA Symposium, 3 *Nat. Resources Law*. 605, 607 (1984) (Panel Discussion).

²⁵G. Beanlands & P. Duinker, *An Ecological Framework For Environmental Impact Assessment in Canada* (1983) (anonymous interviewee). This superb study remains the best guide to the role of environmental science in the environmental impact assessment process, both in Canada and the United States.

an ecological analysis and projection of probable effects. Irreversible or difficult reversible chances should be accepted only after the most thorough study.¹

The apparent intent of this statement is not to rule out economic development even in environmentally sensitive areas, but to constrain development to respect environmental and other values. NEPA leads agencies procedurally to this goal by requiring them to “study, develop, and describe appropriate alternatives to recommended courses of action. . . .” According to an early court decision, this requirement seeks to ensure that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit analysis. Only in that fashion is it likely that the most intelligent, optimally beneficial decision will ultimately be made.²

The extent to which agencies are required to consider alternatives—both to the project³ and in the project⁴—is the subject of a vast NEPA jurisprudence we cannot consider in this section.⁵ This jurisprudence, however, goes to the heart of the question of how we are to balance environmental quality with economic growth. There is no expectation that society will give up its nonenvironmental goals even if they inevitably involve some environmental degradation. Yet the purpose of NEPA’s requirements is “to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means.”⁶

What is relevant here is that this requirement recognizes or establishes the nature of the priority of environmental over economic concerns in the formation of public policy. The economic goal or mission of an agency is given, for example, to provide nuclear power, lease oil fields, build bridges, or whatever. Environmental quality does not figure as another goal to be balanced with that one in a general calculus of costs and benefits. Rather, it constitutes a side-constraint, that is, a separate criterion under which alternative strategies for achieving that mission or goal are to be considered.

We may return to the rights analogy.⁷ Consider two ways of building a highway. In the first, the government throws people out of their homes and takes their property without respecting their Fifth Amendment right to compensation. This policy could be justified, perhaps, by a cost-benefit analysis, which shows that only transfer

[Section 10:64]

¹Staffs of Sen. Comm. on Interior & Insular Affairs & House Comm. on Science & Astronautics, Congressional White Paper on a National Policy for the Env’t, 90th Cong, 2d Sess. 18 (Comm. Print 1968).

²Calvert Cliffs’ Coordinating Comm., Inc. v. United States Atomic Energy Comm’n, 449 F.2d 1109, 1 Env’tl. L. Rep. (Env’tl. L. Inst.) 20346 (D.C. Cir 1971).

³A “primary” alternative to a proposed action would replace that action entirely with another which accomplishes its purpose in another manner. For the extent to which agencies must consider primary alternatives, see Mandelker, NEPA Law and Litigation § 10:26.

⁴A secondary alternative provides a different way of doing a project. Mandelker, NEPA Law and Litigation § 10:27.

⁵The leading case is Natural Resources Defense Council Inc. v. Morton, 458 F.2d 827, 2 Env’tl. L. Rep. (Env’tl. L. Inst.) 20029 (D.C. Cir. 1972). Its “rule of reason” doctrine was modified but affirmed in Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 8 Env’tl. L. Rep. (Env’tl. L. Inst.) 20288 (1978).

⁶Environmental Defense Fund, Inc. v. Corps of Eng’rs, 492 F.2d 1123, 4 Env’tl. L. Rep. (Env’tl. L. Inst.) 20329 (5th Cir. 1974).

⁷See § 10:58. We do not suggest, of course, that NEPA establishes a “right” to environmental quality.

payments are involved, so that the failure to compensate is efficient.⁸ A second strategy would attempt to buy the property or take it by eminent domain. That policy seeks an economic good, to wit, a highway, but it is constrained by a respect for constitutional rights.

NEPA, especially in requiring the intense consideration of alternatives, endows environmental values with a similar lexical priority over economic concerns. The nature of this priority is the same in kind, but not the same in degree, as that which attaches to rights. Thus, the most environmentally benign way of building a needed highway may not leave the environment entirely unscathed. Yet it is doubtful that a court would stop the project on those grounds, as it might if there were a violation of rights.

Environmental values after NEPA, then, should be seen as posing a side-constraint on agency decisions, rather than as presenting a group of non-consumer wants and preferences to be “balanced” along with consumer wants and preferences in the agency’s decision. The attempt to enter ecological and ethical considerations into cost-benefit analysis at the agency level may be useful and informative. It is no substitute, however, for the requirement that the agency accomplish its economic objectives in the most ecologically and environmentally acceptable ways.

The insistence on the consideration of alternatives, on the mitigation of environmental impacts, and on the development of science and technology for protecting, and not simply exploiting, the environment are the primary means by which NEPA reconciles the goals of economic growth and environmental quality. They also provide the background against which one may consider the subsequent history of environmental legislation.

III. THE COUNCIL ON ENVIRONMENTAL QUALITY*

§ 10:65 In general

The Council on Environmental Quality (CEQ) is the federal agency charged with the tasks of advising the President on environmental matters and coordinating the federal government’s compliance with the National Environmental Policy Act (NEPA).¹ Established in 1970 by Title II of NEPA, the Council was at first envisioned by some lawmakers to be the environmental ombudsman of the federal government, taking an activist role in pursuing better environmental policies and using its political leverage as part of the Executive Office of the President to cajole other federal agencies into accepting and implementing those policies. Others saw the new agency as capitalizing on its White House location to ensure that the President was presented with the environmental perspective on a full range of issues—necessarily a more discreet and less public, but potentially more influential, role.

Despite these high expectations and periods of activism, in recent years the Council has chosen instead to emphasize its advisory roles of reporting to the President on the state of the nation’s environment and providing guidance and regulations for federal agency compliance with the environmental assessment and impact statement requirements of NEPA. On a small scale, the Council has also in recent years taken on the function of mediating certain interagency environmental disputes. But CEQ’s role as mediator, like the other roles it has undertaken and

⁸For a discussion of the efficiency of paying and not paying compensation under the Fifth Amendment, see B. Ackerman, *Private Property and the Constitution* chs. 2, 3 (1977).

*By **Mark S. Tawater**; updated by **and Matthew G. Adams**.

[Section 10:65]

¹National Environmental Policy Act of 1969, Pub. L. No. 91–190, 83 Stat. 852 (1970), codified as amended at 42 U.S.C.A. §§ 4321 to 4370 [hereinafter cited as NEPA].

continues to play, is largely reactive rather than proactive.

§ 10:66 CEQ structure

The Council as created by NEPA envisioned three council members who are appointed for indefinite terms by the President, with the advice and consent of the Senate.¹ All three council members are full-time employees of the agency. One council member is designated by the President as chairman,² and that individual serves as the chief coordinating officer of the council and as primary advisor to the President. The Chair of CEQ³ also serves as Director of the Office of Environmental Quality (OEQ), which was established by companion legislation to NEPA for the purpose of providing staff assistance to the Council.⁴ Each President since George H.W. Bush has chosen to appoint a Chair only and has never appointed the other two members.

In addition to its Presidential appointee(s), CEQ, through its Office of Environmental Quality, employs a small staff of attorneys, economists, scientists, and policy analysts who carry on the day-to-day work of the agency. The height of CEQ's staff resources and activity occurred during its early years, in the Nixon and Ford Administrations, and then in the Carter Administration, when the agency enjoyed an annual operating budget of over \$3 million and employed a full-time staff of nearly fifty persons as well as detailees from other agencies, bringing its total staff to 70. During the Reagan Administration, CEQ's budget was cut so severely (to less than \$1 million for most years) that its staff dwindled to fewer than fifteen persons, making it one of the smallest federal agencies in existence.⁵ The total staff increased modestly in the first Bush and Clinton years and then diminished to fewer than 20 in the second Bush period. The Obama administration again enlarged the staff. President Trump has signaled an interest in cutting CEQ staff, budget, and responsibilities.

§ 10:67 CEQ duties

CEQ's duties, as conferred by NEPA and several executive orders issued since its inception, are primarily advisory in nature. The Council not only advises the President on environmental issues of national concern, but also attempts through advice and recommendations to coordinate and assist federal agencies in meeting their

[Section 10:66]

¹NEPA § 202, 42 U.S.C.A. § 4342.

²NEPA § 202, 42 U.S.C.A. § 4342.

³The first chairman, Russell Train, played a unique role in formulating federal policy when CEQ was still being organized and the major environmental statutes were being drafted; he later served as Administrator of EPA. The following is a roster of CEQ chairs since 1970 and their respective years of service: 1970–73—Russell Train; 1974–76—Russell Peterson; 1976–77—John Busterud; 1977–79—Charles Warren; 1980–81—Gustave Speth; 1981–1989—Alan Hill; 1989–93—Michael Deland; 1994–1998—Kathleen McGinty; 1998–2001—George Frampton; 2001–09—James Connaughton; 2009–2014—Nancy Sutley; and 2014–2017—Christy Goldfuss.

⁴The Environmental Quality Improvement Act of 1970, Pub. L. No. 91-224, 84 Stat. 114 (1970), codified as amended at 42 U.S.C.A. §§ 4371 to 4374.

⁵For fiscal year 1981, for example, CEQ's budget was cut from \$3.3 million to \$2.5 million and its forty-nine member staff cut to fifteen. Budget reductions then occurred in every subsequent fiscal year of the Reagan administration's first term. By fiscal year 1985, the CEQ budget stood at \$700,000, and the staff was down to thirteen persons; and throughout the Reagan administration's second term, the CEQ budget and staff resources continued to languish in neglect at approximately these levels.

obligations under NEPA.¹ The former role of preparing CEQ's annual environmental report was discontinued during the Clinton years.

§ 10:68 CEQ duties—Research and analytical duties

CEQ's research and analytical duties under NEPA include conducting special studies on the progress of NEPA compliance, on trends in environmental quality, and on specific environmental problems of concern to the nation.¹ However, Congress in cutting back on reports generally throughout the government has eliminated the requirement for CEQ's Annual Report.

CEQ's research efforts into specific environmental problems and trends have suffered from a lack of adequate funding and technical staffing, especially in recent years. In the 1970s, the most notable era for CEQ analytical activity, the Council employed a host of environmental professionals—ranging from lawyers, to economists, to scientists. During that time, CEQ's output of study material was substantial and of high quality. The agency, for example, played the leading role in the preparation of landmark studies entitled *The Global 2000 Report to the President* and *Global Future: Time to Act*.² But with severe budget cuts starting in 1981, the Council was forced to curtail substantially its volume of analytical activity and to contract out many of its remaining research projects to public and private consultants. During the subsequent administrations, the level of activity increased, but never to the bipartisan levels of the 1970s.

§ 10:69 CEQ duties—Coordinating federal agency compliance with NEPA

Apart from its analytical duties, the Council has also undertaken primary responsibility for coordinating federal agency compliance with NEPA. The statute's requirement that an environmental impact statement (EIS) be prepared for any major federal government action significantly affecting the quality of the human environment¹ applies to all federal agencies. Therefore, the need exists for a federal body to guide, assist, and coordinate federal agencies in their preparation of environmental assessments and environmental impact statements in terms of both substance and consistency. The Council has attempted to play the role of coordinator, first through the adoption of regulations governing the content and preparation of environmental impact statements, and, second, by review of certain EISs and interagency disputes that may arise from them.

During only one administration did CEQ have a significant role in dealing with the Justice Department's handling of litigation under NEPA. Justice habitually sees its role as representing client agencies which are sued under NEPA, which places Justice in the position of universally assuming a defensive position against

[Section 10:67]

¹For a relatively recent evaluation of CEQ, see Boyd Gibbons, *CEQ Revisited: The Role of the Council on Environmental Quality* (1995). For a current set of recommendations by a gathering of many of those who have been active with CEQ over the years—including most of the former chairs—see “Facing the Future: Recommendations on the White House Council on Environmental Quality—A Report to the President-Elect” (Mt. Vernon, Virginia, Oct. 2008).

[Section 10:68]

¹See generally NEPA § 204, 42 U.S.C.A. § 4344.

²Council on Environmental Quality & Department of State, *The Global 2000 Report to the President* (1980) (Gerald O. Barney, Study Director); Council on Environmental Quality & Department of State, *Global Future: Time to Act* (1981) (Nicholas C. Yost, Study Director).

[Section 10:69]

¹See NEPA § 102(2)(C), 42 U.S.C.A. § 4332(2)(C).

complaints that Federal agencies violated NEPA. The one exception was the Carter administration, where the Justice Department also recognized its client responsibilities to CEQ—the agency to which the Supreme Court says substantial deference is due on NEPA interpretation—by circulating all proposed NEPA pleadings for comment to CEQ as well as to the agencies that were sued.

§ 10:70 CEQ duties—Coordinating federal agency compliance with NEPA—CEQ regulations

The Council has adopted detailed regulations governing the decision on whether an agency must, in the first instance, prepare an environmental impact statement and then, if an EIS is deemed necessary, the steps required in actual preparation of the document.¹ The regulations also provide federal agencies guidance on the contents and scope of environmental impact statements, as well as guidance on the investigation and discussion of alternatives to a proposed federal action.

President Nixon in 1970 issued an executive order allowing the Council to adopt “guidelines” for the preparation of environmental impact statements.² CEQ published such guidelines in 1971 and 1973, although they never attained the status of formal regulations.

In 1977, President Carter modified the 1970 executive order, granting the Council full authority to issue regulations concerning the preparation of environmental impact statements.³ One year later, in 1978, CEQ promulgated regulations governing the EIS process. In 1979 the Supreme Court relied upon those regulations, characterizing them as “mandatory regulations applicable to all Federal agencies” and describing CEQ’s role interpreting NEPA as “entitled to substantial deference.”⁴ These regulations have remained substantially unchanged over the years.

§ 10:71 CEQ duties—Coordinating federal agency compliance with NEPA—EIS reviews and environmental referrals

In its missions of monitoring and coordinating NEPA compliance, the Council possesses the authority to review and comment on environmental impact statements.¹ Due to the large number of EISs prepared each year and the historic scarcity of staff resources at CEQ, however, the Council has not undertaken any systematic review of environmental impact statements over the years leaving that task to EPA, acting under its Clear Air Act § 309 authority. Instead, it has chosen to review only projects of national significance, and usually only when such projects have generated disagreements between federal agencies over their environmental impacts.

The process by which interagency disputes over the environmental impacts of proposed major federal actions are brought to the attention of CEQ is called the “referral” process. Although NEPA does not explicitly provide for referrals, CEQ’s dispute resolution responsibilities, including its referral activities, may be reasonably inferred from the statute’s mandate that CEQ oversee and coordinate major

[Section 10:70]

¹See 43 Fed. Reg. 55998 (1978), codified at 40 C.F.R. § 1500.

²Exec. Order No. 11514, 35 Fed. Reg. 4247 (1970), *reprinted in* 42 U.S.C.A. § 4321 app. at 508–10 (1982) (as amended by Exec. Order No. 11991).

³Exec. Order No. 11991, 3 C.F.R. 123 (1978). *See generally* Andrus v. Sierra Club, 442 U.S. 347, 9 Env’tl. L. Rep. (Env’tl. L. Inst.) 20390 (1979) (relying on the CEQ NEPA regulations and describing the process of their adoption).

⁴Andrus v. Sierra Club, 442 U.S. 347, 357–358 (1979).

[Section 10:71]

¹NEPA § 102(2)(c), 42 U.S.C.A. § 4332(2)(C).

federal actions significantly affecting the environment. The referral process allows federal agencies to bring to the Council interagency disagreements concerning proposed major federal actions which may cause unsatisfactory environmental effects. CEQ often attempts to resolve the disputes through mediation, sometimes assisted by its own independent fact-finding efforts. CEQ normally issues findings and recommendations on referrals, but its recommendations, although they carry great weight, are not legally binding on the parties to a dispute.

There are two routes by which referrals come to CEQ. First, under Part 1504 of CEQ's NEPA implementation regulations,² any federal agency or department may refer a proposed major federal action to CEQ within twenty-five days after a final environmental impact statement on the action has been made available to EPA, to commenting agencies, and to the public. A second referral route is provided by section 309 of the Clean Air Act.³ Under section 309, the EPA Administrator may refer to CEQ any proposed major federal action which he or she deems to be environmentally unsatisfactory.

Since the inception of the formal referral process under CEQ's 1973 "interim guidelines," the Council has received a small number of referrals of proposed federal actions, which has dwindled to none in the Obama administration. EPA has been the agency making the most referrals to CEQ. The fact that CEQ has received so few referrals is rather intriguing when one considers the vast number of federal and federally-assisted projects which are subject to the environmental impact statement requirements of NEPA.

There are probably two important reasons for the dearth of referral activity. First, since the beginning of the referral process, CEQ has discouraged the referral of interagency environmental disputes lacking elements of "national importance." This national importance standard is established in CEQ regulations as one of the basic criteria for determining the propriety of Council intervention.⁴ The rationale for this important limitation on CEQ jurisdiction appears to be a combination of limited Council resources and the fact that NEPA's apparent charge for CEQ is to address environmental concerns which are national in scope, rather than to pass judgment on highly politicized or purely local impacts of federal actions.

Another, and perhaps more important, reason for the small number of CEQ referrals is that the mere existence of the referral process and the threat of its use prompt agencies to seek early and informal resolutions of environmental disputes with would-be referring agencies. The existence of the referral process may also force federal agencies to more fully consider the environmental consequences of their actions and the objections of their sister agencies, to make accommodations when possible, and even to adopt less environmentally intrusive alternatives.⁵

²43 Fed. Reg. 55998 (1978), codified at 40 C.F.R. pt. 1504.

³42 U.S.C.A. § 7609.

⁴See 43 Fed. Reg. 55998 (1978), codified at 40 C.F.R. §§ 1504.3(c)(2)(iv), 1504.3(f)(4).

⁵For an evaluation of the effectiveness of the referral process as a mechanism for dispute resolution and for meeting the objectives of NEPA, see S. Rand & M. Tawater, *Environmental Referrals and The Council on Environmental Quality* (1986).

