

ARTICLES

The Clean Water Act Returns (Again): Part I, TMDLs and the Chesapeake Bay

by Oliver A. Houck

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Editors' Summary

The CWA, with multiple paths to its destination, is reinventing itself once more. Enacted in modern form in 1972, the next quarter century saw EPA focused on the development of technology standards for industrial and municipal point sources. In the mid-1990s, prodded forward by a stream of citizen suits, the Agency started to address nonpoint sources of pollution through water quality standards and the TMDL program. This movement stalled from 2000-2009, and the current revival raises the question whether EPA, at last, can make nonpoint and ambient-based controls effective. The answers are being tested in two venues where the problems are among the most acute and their solutions the most resisted: the Chesapeake Bay and Florida. As go the Chesapeake and the Sunshine State, so will go the future of clean water for years to come.

The objective of this chapter is to restore and maintain the chemical, physical and biological integrity of the Nation's waters.

—Clean Water Act, 33 U.S.C. §1251(a)

The Clean Water Act (CWA)¹ has emerged from an eight-year slumber.² New initiatives are everywhere: upgraded standards for coal-fired power plants that have enjoyed minimal controls for 30 years³; practice requirements for stormwater, which is currently out of control⁴; for concentrated animal operations, which are only marginally under control⁵; for mountaintop mining, which has bounced between the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (the Corps) for more than a decade⁶; new proposals for mercury, the leading toxin in the nation's waters⁷; for endocrine disruptors, the chemicals that change our bodies⁸; for the oceans,

1. 33 U.S.C. §§1251-1387, ELR STAT. FWPCA §§101-607.
2. The slumber could have been worse: while the CWA lay unattended, the Clean Air Act (CAA) faced significant challenges. See OMBWatch.org, *The Bush Legacy: An Assault on Public Protections* (Jan. 2009), available at <http://www.ombwatch.org/files/bushlegacysmallfile.pdf>; Patrick Parenteau, *Anything Industry Wants: Environmental Policy Under Bush II*, 14 DUKE ENVTL. L. & POL'Y F. 363 (2004).
3. See Linda Roeder, *EPA Plans Proposal in 2012 to Reduce Pollution From Coal-Fired Power Plants*, 40 ENVTL. REP. 2197 (Sept. 18, 2009). The U.S. Environmental Protection Agency's (EPA's) initial best available technology (BAT) regulations for the steam electric power category covered suspended solids and thermal discharges, 39 Fed. Reg. 36186 (Oct. 8, 1974). EPA amended these regulations in 1982 to add copper, iron, zinc, chromium, and phosphorous. 47 Fed. Reg. 52290 (Nov. 19, 1982).
4. See Linda Roeder, *EPA Official Cites Stormwater Runoff as Leading Agency Regulatory Priority*, 41 ENVTL. REP. 1191 (May 28, 2010); Linda Roeder, *EPA Developing Surveys to Help Write Rule to Curb Stormwater From Development*, 95 DAILY ENV'T REP. (BNA), A-13 (May 19, 2010).
5. See Press Release, U.S. EPA, *New Requirements of Controlling Manure, Wastewater, From Large Animal Feeding Operations* (Oct. 31, 2008); see also Linda Roeder, *New EPA Guideline Clarifies Requirements for Concentrated Animal Feeding Operations*, 105 DAILY ENV'T REP., A-15, June 30, 2010.
6. See *Coeur Alaska Inc. v. Southeast Alaska Conservation Council*, 129 S. Ct. 2458, 39 ELR 20133 (2009) (holding that the Corps' issuance of permit under CWA §404 permit displaces new source performance standards applicable to pollutant discharges under CWA §402); Tom Zeller, *EPA to Limit Water Pollution From Mining*, N.Y. TIMES, Apr. 1, 2010 (imposing surface runoff controls, the practiced result of which will "make it far more difficult for so-called valley-fill gradations"); Alan Kovski, *EPA Gets Much Support, Opposition for Plan to Alter or Kill Big Mountaintop Mine Permit*, 108 DAILY ENV'T REP., A-6 (June 8, 2010) (having lost §402 jurisdiction over the mining activity to the Corps, EPA is now proposing to veto a Corps §404 permit under CWA §404(c). 33 U.S.C. §1344(c)).
7. See Andrew Childers, *EPA Proposals Call for Boiler Operators to Cut Mercury Emissions by 50 Percent*, 41 ENVTL. REP. 973 (May 7, 2010); New England Interstate Water Pollution Control Commission, *Northeast Regional Mercury TMDL*, available at <http://www.neiwppcc.org/mercury/mercury-docs/FINAL%20Northeast%20Regional%20Mercury%20TMDL.pdf>.
8. See *Endocrine Disruptor Screening Program: Tier 1 Screening Order Issuing Announcement*, 74 Fed. Reg. 54422 (Oct. 21, 2009). For information about the current status of the Endocrine Disruptor Screening Program (EDSP), Status of EDSP Orders/DCIs (Apr. 15, 2010) [hereinafter Status of EDSP Orders/DCIs], visit <http://www.epa.gov/endo> (follow link "Status of EDSP Orders/DCIs") (last visited June 18, 2010). A citizen petition by the Center for Biological Diversity could prompt EPA's action on endocrine

which are rapidly acidifying from atmospheric carbons⁹; and a renewed emphasis on enforcement promising actual consequences in states and regions where they had been all but forgotten.¹⁰ A rainbow of actions driving, once more, toward the Act's overriding goal: clean water.¹¹

The initiatives with the highest stakes, however, are playing out under a very old concept of the CWA, a concept that indeed predated it and led its predecessors to failure: ambient water quality standards. Ground zero is the forty-million-acre watershed of the Chesapeake Bay, the largest water restoration project in America, indeed the world.

I. The Missing Years

Water quality standards—the backbone of earlier pollution control programs—were retained in the 1972 Act as a concession to state water administrators, discharge industries, and congressmen suspicious of federal intrusion.¹² They lay unused for the next two decades, during which EPA struggled with one of the most massive tasks in all of environmental law: the promulgation of best available technology (BAT) limits for every industrial and municipal point source in the country. The Agency faced daunting deadlines and court challenges every step of the way.¹³ Its neglect of water quality standards and the total maximum daily load (TMDL) program designed to imple-

ment them was quite understandable, indeed inevitable.¹⁴ In 1975, EPA promulgated a set of skeletal TMDL regulations and went back to work on BAT.¹⁵ Water quality standards remained, in theory at least, a backup for point source permitting,¹⁶ but the TMDL program—intended to identify polluted waters, target load reductions, and begin the process of remediation—went off radar.

One result of EPA's focus on point source standards was that nonpoint sources grew out of control and began eating up the hard-won gains of the national pollutant discharge elimination system (NPDES) program.¹⁷ Some badly polluted waters made noteworthy recoveries during this time,¹⁸ but overall, the water quality trend was downward. In the mid 1980s, environmental groups in places where nonpoint sources were a serious problem discovered the TMDL program and took both EPA and the states to court for ignoring it.¹⁹ A flurry of lawsuits forced the action

disruptors under the CWA. See Ctr. for Biological Diversity, "Petition for Water Quality Criteria for Endocrine Disrupting Chemical Under §304 of the Clean Water Act, 33 U.S.C. §1314, Before the Environmental Protection Agency" (Jan. 11, 2010), http://www.biologicaldiversity.org/campaigns/pesticides_reduction/endocrine_disruptors/pdfs/EPA_304_EDC_petition.pdf [hereinafter CBD Petition WQC EDC].

9. Linda Larson & Meline MacCurdy, *EPA to Consider Ocean Acidification Under §303(d) of the Clean Water Act*, MARTEN LAW (Apr. 1, 2010), available at <http://www.martenlaw.com/newsletter/20100401-cwa-ocean-acidification>.
10. See Linda Roeder, *EPA Administration Tells House Committee Agency Will Refocus on Water Enforcement*, 40 ENVTL. REP. 465 (Oct. 23, 2009); Charles Duhigg, *Clean Water Laws Are Neglected, at a Cost in Suffering*, N.Y. TIMES, Sept. 13, 2009:

In the last five years alone, chemical factories, manufacturing plants and other work places have violated water pollution laws more than half a million times. . . . However, the vast majority of those polluters have escaped punishment. State officials have repeatedly ignored obvious illegal dumping, and the Environmental Protection Agency, which can prosecute polluters when states fail to act, has often declined to intervene.
11. The original and never-amended goal of the CWA is worth repeating: "The objective of this chapter is to restore and maintain the chemical, physical and biological integrity of the Nation's waters." 33 U.S.C. §1251(a).
12. See Oliver A. Houck, *The Regulation of Toxic Substances Under the Clean Water Act*, 21 ELR 10528, 10531-33 (Sept. 1991) (describing congressional rejection of water quality standards approach); OLIVER A. HOUCK, *THE CLEAN WATER ACT TMDL PROGRAM: LAW, POLICY, AND IMPLEMENTATION* at 14-20 (2d ed., Envtl. L. Inst. 2002) (2000) (describing state and industry insistence on its retention).
13. See *E.I. DuPont de Nemours & Co. v. Train*, 541 F.2d 1018, 6 ELR 20371 (4th Cir. 1976) (approving accelerated EPA approach to BAT development due to accelerated deadlines). In the ensuing process, industry and trade associations sued to invalidate each BAT promulgated for over 50 categories and such categories of dischargers. See Houck, *The Regulation of*

Toxic Substances, *supra* note 12, at 10537 n.144 (providing a partial list of industry challenges).

14. The TMDL program was a late-adopted compromise in the CWA, providing a mechanism to upgrade waters that did not meet state water quality standards. See HOUCK, *THE CLEAN WATER ACT*, *supra* note 12, at 20-24. Section 1313(d) of the Act requires states to identify these waters, prioritize them, and allocate (reduced) pollution loadings that will achieve the standards. 33 U.S.C. §1313(d). EPA is to approve each step, including the allocations "necessary" to meet state standards, and to prepare its own TMDL if the state proposal is inadequate. *Id.* States were then to incorporate the TMDLs into their ongoing water management programs. *Id.* §1313(c).
15. See U.S. EPA, *Preparation of the Water Quality Management Plan*, 40 Fed. Reg. 55344 (Nov. 28, 1975), codified at 40 C.F.R. §131(1); Plan Content, 40 Fed. Reg. 55346 (Nov. 28, 1975), codified at 40 C.F.R. §131.11. In fact, EPA was only propelled to take these modest steps by an environmental lawsuit, *NRDC v. Train*, 396 F. Supp. 1386, 1392-93, 5 ELR 20405 (D.D.C. 1975). Despite their advocacy for the primary of water quality-based programs, the states strongly resisted EPA efforts to implement them. See Jeffrey M. Gaba, *Federal Supervisor of State Water Quality Standards Under the Clean Water Act*, 36 VAND. L. REV. 1167, 1189-90 (1983); WILLIAM H. RODGERS JR., *ENVIRONMENTAL LAW: AIR AND WATER* 289, n.3 (1986); William F. Pederson, *Turning the Tide in Water Quality*, 15 ECOLOGY L.Q. 69, 99, 102 (1988); see also *Mississippi Comm'n Nat'l Res. v. Costle*, 625 F.2d 1269, 10 ELR 20931 (5th Cir. 1980).
16. Under the CWA, water quality standards were also to be used as a safety net to upgrade NPDES permits where BAT limits were insufficient to meet state standards. 33 U.S.C. §§1311(b)(1)(C), 1312. See also Gaba, *supra* note 15, at 1189-90; RODGERS, *supra* note 15, n.3.
17. See U.S. EPA, "Clean Water Act Plan: Setting the Stage: Successes, Challenges and New Directions," <http://www.epa.gov/cleanwater/action/cla.html> ("Agriculture is the most extreme source of water pollution, affecting 70 percent of impaired river and streams and 49 percent of impaired lake areas") (last visited Feb. 26, 1998) (on file with author). Although published in 1997, and summarizing data from previous years, were the report written today, its conclusions would be much the same.
18. Two of the most celebrated turnarounds have been the Hudson River and Lake Erie, both objects of obvious point source pollution and aggressive, citywide organized cleanup campaigns. See JOHN CRONIN & ROBERT F. KENNEDY JR., *THE RIVERKEEPERS* (1997) (describing the efforts and results of the Hudson River Fisherman's Association and other citizen and legal assistance groups).
19. The first TMDL citizen suit cases came out of Illinois: *Scott v. City of Hammond*, 530 F. Supp. 288 (N.D. Ill. 1981), *aff'd in part, rev'd in part* by 741 F.2d 992, 14 ELR 20631 (7th Cir. 1984) ("[T]he CWA should be liberally construed to achieve its objectives—in this case to impose a duty on the EPA to establish TMDLs when the states have defaulted by refusal to act

forward, requiring lists of impaired waters and load allocations, which put considerable strain on EPA and states unaccustomed to this kind of pressure.²⁰ Struggling to get ahead of the curve, EPA began to develop comprehensive new regulations for this stepchild program. It convened a Federal Advisory Committee of stakeholders to assist, which soon turned into a tar baby of its own.²¹ Nonpoint industries led by row crop agriculture, animal feeding operations, and timber companies wanted nothing to do with TMDLs, and, after a year of fruitless negotiating, EPA went forward without them.

The final EPA regulations of 2000 established fixed deadlines for the preparation of TMDLs.²² More controversially, they added a requirement for plans to implement them,²³ and “reasonable assurances” based on “reliable delivery mechanisms” that the load reductions predicted by the documents would be achieved.²⁴ Nonpoint industries immediately sued to challenge EPA’s authority for these requirements,²⁵ an issue that could have gone either way. The statute neither prescribed nor prohibited such plans; EPA would argue that its duty to approve elements “necessary” to meet water quality standards implied the power, indeed the responsibility, to assess whether the load allocations were sufficient.²⁶ Events, however, took a different turn. Nonpoint industries raised a firestorm of protest and carried it to Capitol Hill, which in the waning months of the Clinton Administration was a ready audience.²⁷ The U.S. Congress passed an appropriations rider blocking the regulations. The Administration countered by waiting until the last minute to sign the bill while it rushed its regulations to the Government Printing Office. On paper, EPA won the shootout.

It was a pyrrhic victory. One of the first acts of the incoming Bush Administration was to place the TMDL regulations on hold, from which they never again emerged.²⁸ The new EPA Administrator for Water—whose job required,

inter alia, some measure of optimism—characterized the program as “a kind of information-based strategy” that would “energize” citizens and state agencies to do the right thing.²⁹ What it did, without a doubt, was produce a great deal of paper, more each year as the show continued. Once states and nonpoint industries realized that the TMDL program was merely informational and required no more than a set of numbers for load reductions that might or might not be achieved, the furor died down. “Implementation plans” were off the agenda. “Reasonable assurances” for nonpoint source reductions went off the agenda as well. The states were elaborating hypotheticals that they were then free to deal with or file on the shelf.

Environmental litigation, which brought the parties to this dance some 15 years earlier, also, seemingly, ran out of gas. Litigation had compelled the process forward, but later courts were reluctant to gainsay the pace or the substance,³⁰ leaving environmental groups to play around the edges of a program that seemed to have no ace in the hole. Two significant cases of this interregnum required EPA to approve “daily,” as opposed to monthly or otherwise averaged loads (disallowing the practice of burying bad days, during high runoff for example, under good ones),³¹ and required EPA to ensure that *point* sources discharging into TMDL waters ensure controls over *nonpoint* sources sufficient to meet the attainment of water quality standards.³² This latter case, limited as it is to point source permits, is to date the only enforceable federal abatement requirement for agriculture, timber, and the nonpoint world. Most state laws exempt agriculture and silviculture from water quality requirements altogether.³³ No fewer than 17 states prohibit state agencies from imposing *any* environmental requirement stricter than the federal baseline.³⁴ Now, at least where a point source sought a new permit in waters polluted by

over a long period.”) and Oregon, *NW Envtl. Def. Ctr. v. Thomas*, No. 86-1578 BV (consent decree, filed June 3, 1987).

20. See HOUCK, *THE CLEAN WATER ACT*, *supra* note 12, at 49-64.

21. *Id.* at 82-84 (describing FACA process).

22. U.S. EPA, Revisions to Water Quality Management Regulation and Revisions to the National Pollution Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation, 65 Fed. Reg. 43586 (July 13, 2000).

23. 40 C.F.R. §130.32(c) (purpose and elements of implementation plans).

24. 40 C.F.R. §130(p) (reasonable assurances).

25. American Farm Bureau v. Whitman, No. 00-1320 QCD (July 18, 2000). The list of plaintiffs, included a who’s who of the nonpoint discharge world: the American Farm Bureau Federation, the American Forest and Paper Association, the American Crop Protection Association, the National Pork Producers Council, the National Corn Growers Association, the National Chicken Council, the National Cattlemen’s Beef Association, the National Cotton Council of America, and the Fertilizer Institute.

26. EPA has subsequently made this argument to support watershed implementation plans for the Chesapeake Bay. See Letters from the Regional Administrator, U.S. EPA Region III, *infra* notes 92, 109, 115, 123.

27. See HOUCK, *THE CLEAN WATER ACT*, *supra* note 12, at 166-70 (discussing the imbroglio that followed). For an EPA insider’s review of these events, see Robert H. Wayland III, *The TMDL Fracas* (Aug. 27, 2009), originally posted on the EPA Alumni Association’s website, available via macarthur1@mac.com. Mr. Wayland served as Director of the Office of Wetlands, Oceans, and Watersheds in EPA’s Office of Water during this time.

28. HOUCK, *THE CLEAN WATER ACT*, *supra* note 12, at 169-70.

29. Testimony of G. Tracy Mehan III, Assistant Administrator for Water at EPA, Before Subcommittee on Water Reserves and the Environment of the Committee on Transportation and Infrastructure, U.S. House of Representatives (Nov. 15, 2001), available at <http://www.epa.gov/water/speeches/111501tmdls.pdf>. Mr. Mehan, walking into a lion’s den where TMDLs were concerned, may have genuinely believed that information and good will would clean up the nation’s waters, but he was also making the best of an adverse political situation.

30. See Hayes v. Whitman, 264 F.3d 1024 (10th Cir. 2001) (any number of TMDL submissions, no matter how few, suffice); Potomac Riverkeeper v. EPA, 2206 U.S. District LEXIS 14837 (Mar. 31, 2006) (same); Sierra Club v. Leavitt, 488 F.3d 904, 37 ELR 20138 (11th Cir. 2007) (approving reduced Florida list that excluded certain impaired waters).

31. Friends of the Earth v. EPA, 446 F.3d 140 (D.C. Cir. 2006). *But see* NRDC v. Muszynski, 268 F.3d 91, 32 ELR 20203 (2d Cir. 2001) (holding that “daily” loads produced “absurd results”).

32. Friends of Pinto Creek v. EPA, 504 F.3d 1007, 37 ELR 20255 (9th Cir. 2007). This case follows and should be understood in conjunction with *Pronsolino v. Nastri*, 291 F.3d 1123, 32 ELR 20689 (9th Cir. 2002), which affirmed the application of §1313(d) to waters impaired solely by nonpoint sources, but also held that these TMDLs were not required to include implementation plans.

33. See William L. Andreen, *Federal Climate Change Regulation and Preemption*, 3 ENVTL. & ENERGY L. & POL’Y J. 261, 279-80 (2008). The CWA specifically allows state standards in excess of federal requirements, 33 U.S.C. §1370; see also PUD No. 1 of Jefferson City v. Wash. Dept. of Ecology, 511 U.S. 700, 24 ELR 20945 (1994).

34. While the CWA explicitly allows state standards more rigorous than federal requirements, 33 U.S.C. §1370, few seem eager for the challenge. Andrew Hecht, *Obstacles to the Devolution of Environmental Protection: States’ Self-*

nonpoints as well—even one dominated by nonpoints—EPA would have something to say about it.³⁵

The results of the TMDL process to date depend largely on whether one counts by beans or clean water. In the second half of the 1990s, the numbers of approved TMDLs ranged in the low hundreds.³⁶ Ten years later, they were coming in at 4,000-plus a year, reaching 9,241 in 2008.³⁷ As the smoke clears, we have over 41,000 completed documents for some 44,000 listed impaired waters, pretty much a full deck.³⁸ In many states, the story ends here: Mission Accomplished. In others, the narrative has carried farther, leading, for example, in California, Florida, and Virginia to types of implementation plans that include a selection of management practices, largely voluntary and government-funded.³⁹ Some states have come up with rather imaginative applications: load allocations in Los Angeles and the District of Columbia for common trash⁴⁰ and in the Northeast for pavement.⁴¹ More routinely, however, states have tended to avoid allocating reductions to point sources (which would then have to reflect them in their NPDES permits) by relying on rather fanciful reductions from non-point dischargers (which, because they have no permits, can be as fanciful as one wishes).⁴² Many waters, meanwhile, have been dropped from TMDL listing altogether due to “insufficient information” or a determination that the prevailing standards are “unattainable”⁴³; waters a state succeeds in delisting, it does not have to deal with at all.

Imposed Limitations on Rulemaking, 15 DUKE ENVTL. L. & POL'Y F. 105 (2004).

35. See *supra* note 32. Beyond these two cases, two yet more recent filings of interest are *Conservation L. Found. v. EPA*, No. 2:2008cv00238 (D. Vt.) (filed Oct. 28, 2008) (complaint for Declaratory and Injunctive Relief, claiming no reasonable assurances of nonpoint controls in mixed point/nonpoint water body), and *In re Montpelier WWTF Discharge Permit*, No. 22-2-08, (Vt. Env't Ct. June 30, 2009) (invalidating TMDL baseline assumptions).
36. U.S. EPA, National Summary of State Information, National Cumulative Number of TMDLs, <http://www.epa.gov/waters/ir/index.html> (search for “Most Current Available” and manually find chart “Cumulative Number of TMDLs” or follow hyperlink “Cumulative Number of TMDLs.”) (last visited June 20, 2010).
37. *Id.*
38. *Id.*, “Approved TMDLs by State.”
39. See U.S. EPA, AN URGENT CALL TO ACTION: REPORT OF THE STATE-EPA NUTRIENT INNOVATIONS TASK GROUP D-49 (California) and D-7 (Florida) (Aug. 2008), available at <http://www.epa.gov/waterscience/criteria/nutrient/nitreport.pdf>.
40. Carolyn Whetzel, *EPA Proposes Daily Pollution Limits for Impaired Lakes in Los Angeles Area*, 93 DAILY ENV'T REP. A-8, May 17, 2010; Jeff Day, *EPA, Maryland, District Agencies Consider Trash Removal Goals for Potomac Tributary*, 79 DAILY ENV'T REP., A-5 (Apr. 27, 2010).
41. See Trout Brook TMDL, cited in Dave Owen, “Urbanization, Water Quality and the Regulated Landscape,” unpub., on file with author, quoted with author's permissions, Brook Trout Discussion at TAN 181.
42. See Lisa Jordan, Supervising Attorney, Tulane Environmental Law Clinic, “Comments on May 2008 Draft TMDLs for Nitrogen and Phosphorous in the Yazoo River Basin, Mississippi Department of Environmental Quality,” June 16, 2008; Lisa Jordan, Supervising Attorney, Tulane Environmental Law Clinic, “Comments on May 2009 Draft TMDL for Nitrogen and Phosphorous in the Pearl River Basin,” Mississippi Department of Environmental Quality, June 12, 2009.
43. Mississippi, for example, magically dropped from 490 listed waters in 2002 to 197 in 2008. Compare U.S. EPA, 2002 Section 303(d) List Fact Sheet for MISSISSIPPI, Waters Listed by Watershed, http://iaspub.epa.gov/tmdl_waters10/state_rept.control?p_state=MS&p_cycle=2002 (last visited Jan. 20, 2011) with 2008 Section 303(d) List Fact Sheet for MISSISSIPPI, Wa-

Given these limitations, what we have succeeded in doing here is produce a great number of documents that could be useful, depending upon what implementation, if any, comes next. Which is where the program disappears from view. No one really knows, although EPA has made recent efforts to find out.⁴⁴ It is not an easy inquiry. Unlike the first applications of BAT that sent pollution plummeting and a 30% jump in water quality,⁴⁵ TMDL results are far more difficult to measure, either by on-the-ground practices or their impacts, which are also influenced by federal subsidies, e.g., corn for ethanol production, and soil conservation programs, e.g., those of the National Conservation Resource Service, to say nothing of temperature, rainfall, and other factors. One study of TMDL implementation in Ohio and West Virginia shows something less than one-half of watersheds with TMDL-driven responses, about one fifth with partial water quality improvement, and 3% of the waters now in attainment.⁴⁶ The exercise is clearly not futile, but its results remain, at best, a glass half-full or half-empty. On the other hand, it has unequivocally helped to nudge the issue beyond denial (for some sectors, at least), and to focus resources on abatement. If we are going to have to pay farmers not to pollute, at least we know which ones should head the line.

Looking at water quality data more comprehensively, the results are yet more troublesome. Comparing information from biennial compilations of state reports in 1998, 2002, and 2008 for two dominant water categories, setting aside the numbers on “threatened” waters (thereby improving the portrait), and rounding to nearest thousand, we find the following⁴⁷:

44. As of 2007, EPA had little idea what, if anything, states were doing to implement their TMDLs. See U.S. EPA, Office of Inspector General, Total Maximum Daily Load Program Needs Better Data and Measures to Demonstrate Environmental Results (Sept. 19, 2007), <http://www.epa.gov/oig/reports/2007/20070919-2007-P-00036.pdf>. Recent studies include: Brian Benham et al., “TMDL Implementation: Lessons Learned,” 2007 (progress depends on amount of funding and local buy-in . . . which, in a non-regulatory program, cannot be surprising); Douglas J. Norton et al., “Sampling TMDL Implementation Rates and Patterns in the North Central US,” 2000 (estimating that 80% of TMDLs were “partially implemented,” but that “full implementation was uncommon”); John Hoornbeek et al., “Implementing Total Maximum Daily Loads: Understanding and Fostering Successful Results,” 2008 (reviewing programs of Ohio and West Virginia).
45. See U.S. EPA, “Water Quality Improvement Study,” 1989, on file with author. Table I-2 shows dramatic reductions in total suspended solids (TSS) and oxygen demand, e.g., coal mining from 224 million pounds of TSS to 1.6 million; pulp and paper from 10 million pounds to 0.8 million. Table and Figure 3-1 show equally dramatic stream quality improvements. *Id.* As disliked as it is by the industrial sector and Chicago-school economists, BAT works.
46. See Hoornbeek et al., *supra* note 44.
47. The data that follow are taken from U.S. EPA, National Summaries of State Information, for the year 1998, 2002, and 2010, available at <http://www.epa.gov/waters/ir/index.html> (search for “Most Current Available,” “2002,” and “1998” and then find category “Assessed Waters of United States” for each reporting year).

	Rivers and Streams (miles)	Lakes and Ponds (acres)
1998		
Impaired	291,000	7,900,000
Total assessed	842,000	17,390,000
Percent impaired	34.7	41
Percent assessed	23	42
2002		
Impaired	309,000	6,947,000
Total assessed	694,000	14,832,000
Percent impaired	44.5	46.8
Percent assessed	19.6	36.0
2008		
Impaired	463,000	11,602,000
Total assessed	934,000	17,576,000
Percent impaired	49.2	65.2
Percent assessed	26.4	42.2

Starting with the good news, states are assessing more waters, up by some 10% in recent years. This about ends the good news. Lifting up just that rim of the rock, one notes that we—the wealthiest country in the world, after more than 50 years of water quality programs—are able to assess fewer than one-third of our waters. One also sees wide swings in data that result from chronically underfunded monitoring programs, even accepting the once-a-month drive-by samplings of a few pollutants that characterize much of the process.⁴⁸ One thing is certain about these data: the states are not *over*-reporting impaired waters; indeed, they have every incentive to reduce their lists (and their TMDL obligations). These qualifications noted (and ignoring the soon-to-be-polluted “threatened waters” category), the fact is that impairment is not going *down*. It is going *up*. The impaired category for rivers and streams has increased to nearly half a million segments and to almost 50% of all monitored waters over the past decade. The picture for lakes is even bleaker, rising to 11 million acres and a whopping two-thirds of all lakes measured. In short, the past 10 years spent grinding out TMDLs have not yet been game changers.

To be sure, there are some positive results. Elsewhere in these same reports is a yearly count of the number of previously impaired waters that have now been declared to meet state standards. From lows of 23 in the year 2002 and 4 the following year, the figures rise to as many as 331 in 2008, dropping to 103 in 2009.⁴⁹ Over eight years, the average

is about 130 cleanups per year. On the other hand, there are more than 41,000 identified waters in nonattainment across the country, with more coming in each year as more are assessed. Even were 41,000 a final count, at the pace we are going, it would take 315 years to achieve the national goal: clean water. We are not catching our tail.

Why would this be? The obvious answer, which is also a correct one, is that the dominant causes of pollution today are not regulated at any level: they are nonpoint sources and they believe they are God, for good reasons. The first is the feeling of entitlement that comes from outright exemptions to federal and state laws. Existing government approaches are all carrot and no stick, voluntary measures and cash payouts that have become a second entitlement.⁵⁰ Even where controls are necessary to attain water quality standards in critically impaired watersheds,

the farm industry expects to get paid. The entitlement, of course, is not sustainable. Nor is a world dependent on benevolent volunteers,⁵¹ nor a world where Fort Knox itself is opened to reimburse farmers for every winter cover, cattle fence, riparian leave area, and chicken manure container in America. A 2008 study showed that payments at \$45 an acre for cover crops to reduce runoff on all Maryland farmland would come to \$34 million a year⁵²; that is for just one state, for just one of several abatement practices, for twelve

48. See G. Tracy Mehan III, “Flying Blind No More: Data and Monitoring as Indispensable Tools of Water Management,” address to National Water Quality Monitoring Council (Apr. 26, 2010) (“We have collected years of data of all types and sources, yet today we cannot decide, in a scientifically definable way, the quality of our waters.” *Id.* at 8) (on file with author).

49. See “Numbers of Waters Attaining” in U.S. EPA, National Summaries of State Information (2002), *supra* note 47. The data that follow are taken from this source.

50. CWA §319 provides grant assistance to state nonpoint source management programs. 33 U.S.C. §319. For efforts to target this assistance on nonpoint source pollution and their (very) modest effect, see HOUCK, *THE CLEAN WATER ACT*, *supra* note 12, at 30-31, 60-63, 98-99, 183-84, and sources cited therein. For information on U.S. Department of Agriculture programs, traditionally funding farmland ditches, drainage tiles, and channels to the significant impairment of receiving waters, see Peter Harnik, “Channelization: Streamlining Our Nation’s Rivers,” *Environmental Action*, Mar. 4, 1972 (on file with author) (Department had channelized 6,000 miles of streams by 1971, more than 12,000 additional miles authorized, and another 175,000 stream miles “needing” channelization treatment). In June 2010, the Department announced “new conservation practices” for its Conservation Stewardship Program to reduce farm runoff, providing, again, cash payments for voluntary measures; the emphasis remains on public monies and voluntary compliance. Bill Pritchard, “Agriculture Department Stewardship Program to Focus on Air, Land, Water Improvements,” 106 *DAILY ENV’T REP.* (BNA), A-6, June 4, 2010.

51. See Dennis M. King, Prof. of Economics, Univ. of Maryland, *Compelling Look at Why Voluntary Strategies Aren’t in Patuxent’s Best Interest*, *CHESAPEAKE BAY J.* (Feb. 2007), available at <http://www.bayjournal.com/article.cfm?article=3017> (“Economic theory predicts and the evidence shows that without credible enforcement and meaningful penalties, many private decision-makers will not only ignore appeals for voluntary environmental restraints, but will also ignore environmental laws.”).

52. Michelle Perez, Env’t Working Group, *Facing Facts in the Chesapeake Bay* 18-20 (2009), <http://www.ewg.org/files/chesapeake-bay-pollution.pdf>. This study also points out that it is environmental groups, not agriculture, that seek federal appropriations for these farm practices. *Id.* at 20. Nonpoint sources are not included in the CWA NPDES Program. See 33 U.S.C. §§1311(a), 1342(a); *Friends of Everglades v. S. Fla. Water Mgmt. Dist.*, 570 F.3d 1210, 39 ELR 20118 (11th Cir. 2009). Irrigation return flows are explicitly exempted. 33 U.S.C. §1344(f). For state exemptions, see discussion, *supra* note 33.

months, ad infinitum. Applied to the 50 states, a suite of needed practices would come in topping \$10 billion a year, and \$10 billion the next, and the next. We were not paying these amounts by several orders of magnitude prior to the current recession. In today's economic climate, they seem a fantasy.

There is one other answer: the failure of the TMDL program to self-correct at the end of the Clinton Administration. Like them or not, the 2000 regulations offered the only new blueprint for making water quality standards work to restore the waters of America, and for bringing nonpoint industries into the process. Its two assumptions—implementation plans and reasonable assurances that they would be effective—were the key. The political lesson of the 2000 TMDL imbroglio was that neither EPA nor anyone else was going to be able to do this, against an opposition so entrenched, through nationwide regulation. The approach was too broad brush, it brought in too many enemies, and it had too few friends.

It is little wonder, then, that the Obama Administration, whose EPA included several veterans of the earlier fight, would pick its targets more carefully. With a boldness that has become a hallmark of the current EPA, they picked a huge estuary with critical water quality problems, so badly and publicly battered that everyone knew it, right under the nose of Congress: the Chesapeake Bay. The plan was ambitious: a 64,000-square-mile TMDL for six states and the District of Columbia to save the Bay. It would be the most ambitious water quality restoration project in history. If it worked, others lay in the wings, a prospect that appalls the nonpoint source community.

II. The Chesapeake

A. Something Old

America grew up around its great estuaries. The Hudson, the Lower Mississippi, the Sacramento-San Joaquin, and Puget Sound are among them, but the largest of all 130 such bodies of water bordering the country is the Chesapeake Bay.⁵³ Over 200 miles long and fed by 100,000 streams and tributaries as far away as the Adirondack and Appalachian Mountains,⁵⁴ the Chesapeake is iconic for its flocks of ducks and geese that once shadowed the sun; its blue crabs, the “beautiful swimmers” that made Maryland a dining destination⁵⁵; and its oysters, whose reefs at the time Captain John Smith navigated them were so thick and numerous that wooden ships had to take precaution to avoid tearing themselves apart.⁵⁶

The decline of the Chesapeake over this past century was precipitous and uninterrupted. It is little better today. Virtually the entire Bay and its tidal branches remain water quality-limited; over one-half of all its tributaries are in either “poor” or “very poor” condition.⁵⁷ The best we can say is that, after 30 years of studies, pronouncements, solemn commitments, and related machinations, the curve is no longer dropping. Smaller numbers of Canada geese and winter waterfowl still come into the refuges, but the blue crabs were nearly eliminated by pollution and overharvesting,⁵⁸ and the oysters, even more so, are commercially gone.⁵⁹ The latest report of the state-federal Chesapeake Bay Program finds overall water quality levels “very poor” and meeting just 24% of their target parameters.⁶⁰ A University of Maryland analysis, using different indicators, rates Bay water quality at no better than 28 out of 100, a level at which it has hovered around for the past eight years.⁶¹ The Chesapeake Bay Foundation, combining its findings in a Bay-wide graph, depicts a bottom line with minimal variations in conditions, even a slight decline, since 1986.⁶² The greatest estuary on the East Coast remains deep in the danger zone.

The Chesapeake's pollution problems arise from a number of familiar factors, among them the very nature of an estuary, where the rivers dump their loads and flushing is rarely complete. This challenge is compounded by shallow depths, averaging about 20 feet when a few deep trenches

53. Chesapeake Bay Program (CBP), *Facts and Figures*, <http://www.chesapeakebay.net/factsandfigures.aspx?menuitem=14582> (last visited Jan. 20, 2011).

54. CBP, *The Bay Watershed*, <http://www.chesapeakebay.net/thebaywatershed.aspx?menuitem=13942> (last visited Jan. 20, 2011).

55. The Chesapeake's blue crab culture is captured in William H. Warner's Pulitzer Prize winning book, *Beautiful Swimmers: Watermen, Crabs and the Chesapeake Bay* (1976).

56. University of Maryland, Ctr. for Env't Science, Chesapeake Bay Oysters, available at <http://www.umces.edu/2002Session/oyster.html>.

57. CBP, “Watershed Health,” http://www.chesapeakebay.net/status_watershedhealth.aspx?menuitem=26057 (last visited June 20, 2010).

58. Long the Bay's most valuable commercial crop, blue crab harvests, once in the hundreds of millions of pounds a year, plummeted in the 1980s and 1990s. TED Case Studies: The Blue Crab: A Declining Resource, <http://www1.american.edu/ted/bluecrab.htm> (last visited Jan. 20, 2011). Severe fishing restrictions, vigorously opposed by the crabbing industry at the time, led to a rebound in 2009. See Timothy B. Wheeler, *Chesapeake Bay: Crab Population Up by 60 Percent*, BALT. SUN, Apr. 15, 2010. Pollution has figured equally large in the crab's decline. Chesapeake Bay dead zones eliminate every year an estimated 75,000 tons of benthic organisms—primary food sources of the crab. Oxygen depleted waters drive masses of crabs into the shallows and onshore in a “jubilee.” R. Denen, *Is It Time We Put the Ailing Bay on Diet?*, THE FREE LANCE STAR, Oct. 30, 2009.

59. Bay oystermen have declined in the past 20 years from 6,000 to fewer than 500. Virginia Inst. of Marine Science, Research—Shellfish Diseases (Mar. 16, 2007), available at <http://vims.edu/env/research/shellfish/> (last visited Feb. 22, 2008) (on file with author). The oyster reefs that once menaced John Smith's boats, measuring 200,000 acres, are down to 36,000 acres and falling, David A. Fahrenthold, *Md. Gets Tough on Chicken Farmers*, WASH. POST, Sept. 12, 2008, available at <http://www.washingtonpost.com/wp-dyn/content/article/2008/09/11/AR2008091103841.html> (last visited Jan. 20, 2011). The University of Maryland report, *Chesapeake Bay Oysters*, includes the following illustration of the oyster's decline: “A paper by UM-CES scientist Roger Newell in 1987 made the dramatic point that oyster populations at the beginning of the century could have filtered the entire Chesapeake in several days, while the populations remaining at the end of the 20th century would take more than a year.” University of Maryland, *supra* note 56.

60. CBP, Bay Water Quality, http://www.chesapeakebay.net/status_waterquality.aspx?menuitem=19837 (last visited Jan. 20, 2011).

61. Chesapeake Eco-Check, *Water Quality Index*, http://www.eco-check.org/reportcard/chesapeake/2009/indicators/water_quality_index/ (last visited Jan. 20, 2011).

62. Chesapeake Bay Foundation, *State of the Bay 2008*, <http://www.cbf.org/Document.Doc?id=170> (last visited Jan. 20, 2011). The Foundation also grades the state of overall pollution, on a scale of 1 to 100, as 17 (an F) in nitrogen, 23 in phosphorous (D⁻), 14 in dissolved oxygen (F, down two points from 2007), and 14 in clarity (F, no change). *Id.*

are figured in. Otherwise, a six-foot-tall fisherman could wander over nearly three-quarters of a million acres of Bay bottoms and never get his hat wet.⁶³ What goes into the Bay, then, largely stays there and gets cooked by the sun.

Nonetheless, the Chesapeake, like all other estuaries, lived in equilibrium until humans started adding their wastes and destroying its natural filters of bottom grasses, adjacent wetlands, and upstream vegetation.⁶⁴ Pollution sources include the usual suspects, adjacent industries, municipal treatment systems, stormwater runoff, and surprisingly high loadings from air emissions, but the lion's share is from agriculture, both row crops and animals.⁶⁵ Focusing on the three primary pollutants—nitrogen, phosphorous, and sediments—agriculture leads all contributors to the Bay: 39% of nitrogen loadings (17% of that from manure, 15% from commercial fertilizers, and 6% agricultural air emissions); 45% of phosphorous inputs (26% livestock, 19% fertilizers); and a whopping 60% of sediments.⁶⁶ It seems obvious that unless something different is done with the agricultural sector, there is no hope to recover the Bay. Which has been obvious for a long time.

As early as the 1960s, citizen movements were forming around restoring the Bay,⁶⁷ from which emerged a remarkable politician, Sen. Charles Mathias (R-Md.), dubbed by the Majority Leader as the “conscience of the Senate.”⁶⁸ Senator Mathias had grown up on the Bay, witnessed its decline, and secured a \$27 million appropriation to study the causes.⁶⁹ The study's results—fingering nutrient pollution—led to the Chesapeake Bay Agreement of 1983, a skeletal document signed by the governors of Maryland, Pennsylvania, and Virginia, and the District of Columbia's mayor, agreeing to work together on cleanup.⁷⁰ Sev-

eral years of wheel-spinning produced the Agreement of 1987, promising with more specificity to cut nitrogen and phosphorous loadings by 40% before the year 2000.⁷¹ Positive steps followed to ban phosphate detergents and crack down on sewage treatment systems⁷²; little, however, was done with agriculture. That same year, 1987, Congress moved to support the Agreements with the Chesapeake Bay Program,⁷³ directing EPA to provide informational assistance and grant monies to the partners. It was all very cooperative, and beguiling.

In the years following, the Chesapeake Bay Program reported that it was working effectively to clean up the estuary.⁷⁴ In 1997, EPA declared that the projected reductions in nitrogen and phosphorous would be met by the year 2000.⁷⁵ In an attempt to maintain momentum, and funding, they were gilding the lily.⁷⁶ As the head of the Program later said: “There wasn't enough going on, and there wasn't enough money behind it, and there wasn't enough regulation behind it.”⁷⁷ It is somewhat telling that he waited to say this until he was safely out of office. His language was also telling: he had dared pronounce the dreaded “r” word: regulation.

The reckoning came in the year 2000, with admissions that over 15 years of effort had reduced phosphorous by only 25%—largely from the detergent bans—and nitrogen by only 13%.⁷⁸ It was better than nothing, but not a whole lot. The result was yet another Chesapeake Bay Agreement in 2000 that promised to cut phosphorous further and attack nitrogen and sediments with sufficient vigor to “remove the Bay and its tributaries from the list of impaired waters under the Clean Water Act” by the year 2010.⁷⁹ A stated goal was to work with local and community interests to “develop and implement locally-supported watershed plans,”⁸⁰ language that would come back to the parties with a bite a few years down the line.⁸¹ The subsequent process accomplished modest further reductions in phosphorous and nitrogen, but not even one-half that projected as necessary in 1987.⁸² A report by the U.S. General Accounting Office (GAO) in 2006 concluded that the Chesapeake would remain polluted “for decades”⁸³; a year later, the GAO reported that due to a boom in uncon-

63. CBP, *Facts and Figures*, *supra* note 53.

64. Since the arrival of Captain John Smith and the settlement of the Bay, its forests, wetlands, and underwater grasses have declined by nearly 100%. Chesapeake Bay Foundation, *State of the Bay Report* (2008), <http://www.cbf.org/Document.Doc?id=170>.

65. See U.S. EPA, Chesapeake Bay Executive Order §502 Guidance 1-2 (May 15, 2010), available at http://www.epa.gov/nps/chesbay502/pdf/full_03_15_2010.pdf. The animal loadings are significant: the Pocomoke River watershed on Maryland's eastern shore alone produces more than a million chickens a year. In 1996, the river was closed after 30,000 fish died, soon followed by a nearby outbreak of *Pfiesteria piscicida*, a toxin that flourishes in eutrophic waters. Margaret Kriz, *Pfiesteria Hysteria*, 29 *Nat'l J.* 1783 (1997); Margaret Kriz, *Fish and Fowl*, 30 *Nat'l J.* 450 (1998).

66. See Michelle Perez, *Facing Facts in the Chesapeake Bay*, *supra* note 52, at 5 (citing “Simulated Source of N Load (2007),” “Simulated Source of P Load (2007),” and “Simulated Source of Sediment Load (2007),” provided by Nita Sylvester, Chesapeake Bay Program Model).

67. The Chesapeake Bay Foundation was originated in 1967; the Chesapeake Bay Alliance, in 1971. Also in 1971, the Calvert Cliffs' Coordinating Committee—composed of Bay residents and scientists from Johns Hopkins University concerned about the impact of thermal discharges on blue crab populations—challenged a nuclear power plant to be located on the estuary and changed American environmental law history. See “Calvert Cliffs,” in Oliver A. Houck, *Unfinished Stories*, 73 *U. COLO. L. REV.* 867, 880 (2002).

68. Matt Schudel, *Former U.S. Senator Charles McC. Mathias Jr. of Maryland Dies at 87*, *WASH. POST*, Jan. 26, 2010. Among other things, Senator Mathias advocated U.S. withdrawal from Vietnam, voted against an expanded missile system, and marched with Bella Abzug and Gloria Steinem in favor of the Equal Rights Amendment. *Id.*

69. CBP, *History of the Chesapeake Bay Program*, <http://www.chesapeakebay.net/historyofcbp.aspx?menuitem=14904> (last visited Jan. 20, 2011).

70. CBP, “1983 Chesapeake Bay Agreement,” available at http://www.chesapeakebay.net/content/publications/cbp_12512.pdf.

71. CBP, *History of the Chesapeake Bay Program*, *supra* note 69.

72. *Id.*

73. 33 U.S.C. §1327(a)-(d).

74. David Farenthold, *Failing the Chesapeake Bay*, *WASH. POST*, Dec. 27, 2008 (citing an EPA 1995 State of the Bay Report).

75. *Id.* (citing EPA 1977 “reevaluation”).

76. Federal financing was the driver. *Id.* (“They wanted to keep trying. The more they could maintain a hope, the more they could motivate federal policy makers to do the right thing.”) (quoting CBP Chair William Matuszeki).

77. *Id.* (quoting Matuszeki).

78. *Id.*

79. Chesapeake 2000, *The Renewed Bay Agreement*, at 3.1.2, available at http://dnrweb.dnr.state.md.us/bay/res_protect/c2k/c2k_request.asp?rn1=3 (follow hyperlink “3.1.2”) (last visited Jan. 20, 2011).

80. Chesapeake Bay 2000 Agreement, Water Quality Protection and Restoration, at 6, available at http://www.chesapeakebay.net/content/publications/cbp_12081.PDF.

81. See discussion *infra* TAN, 93, 94S.

82. Farenthold, *supra* note 74.

83. U.S. GOVERNMENT ACCOUNTABILITY OFFICE (GAO), *CHESAPEAKE BAY PROGRAM: IMPROVED STRATEGIES ARE NEEDED TO BETTER ASSESS, REPORT*

trolled development, the Bay's conditions were actually going backwards.⁸⁴ By the time the Bush Administration was winding down, it became clear to (nearly) all that the program had failed. And it became clear why: the parties eventually concluded, "there was no way to meet the deadline without exceeding the law or turning to stricter regulations that would force farmers to go under."⁸⁵ Whether or not the conclusion about forcing farmers to go under was correct is irrelevant for the moment. The Chesapeake Bay states, whose laws were, after all, in their own hands, were not going to touch agriculture, even at the cost of losing the Bay.

What collapsed here was more than the Chesapeake Bay cleanup. What collapsed as well was a cherished political theory dismissive of regulation and wedded to the notion that stakeholders would and could band together to solve common problems. The very process of working together, it was said, would smoke out the free riders and embarrass slackers forward, even though the obstacles at the heart of the problem were cemented in centuries of social tradition, economic practice, and law.⁸⁶ Academics proclaimed the advent of "neo Madisonism" and took heart in, indeed relied on as proof, the optimistic reports of the Chesapeake Bay Program for the previous 20 years.⁸⁷ Facts, however, are stubborn things, and eventually they took a bath together, the theory and its example. Which left the Obama Administration with a choice.

B. The Transition

Environmental litigation, once again, forced the envelope, and it was launched from a familiar launch pad: TMDLs. Although the TMDL process was in full swing by the end of the 1990s, the state of Virginia had not quite gotten the word, nor had the District of Columbia, both significant dischargers to the Bay. In 25 years, neither entity had proposed a single TMDL document to EPA. To no one's surprise, a reviewing court found Virginia's record to be a submission of "zero" impaired waters, the approval of which, by EPA, was unlawful.⁸⁸ In 2000, the parties agreed on a 10-year time frame for TMDLs across the state, for-

malized by the court in order to save the process, in its words, from being rendered "a dead letter by state subterfuge and recalcitrance."⁸⁹ Strong language from a conservative jurisdiction. That same year, the District of Columbia fared no better; it too was placed on a deadline for, most importantly, the Potomac and Anacostia TMDLs.⁹⁰ At this point, all of the Bay's contributing states were in the TMDL program, but each one addressing only a piece of the problem.

In 2009, the Obama Administration took advantage of the TMDL litigation settlements to announce a bolder and more comprehensive approach: a Chesapeake Bay-wide TMDL.⁹¹ It would be the largest such endeavor ever attempted. Understandably, the Chesapeake Bay Agreement states had questions about how this process would work and what it would mean for them. In September 2009, EPA Region III, on point for the Bay Program, replied in a straightforward letter that presaged the game plan to follow. EPA would use the mega-TMDL as the vehicle "to accelerate" restoration of the Bay.⁹² It would "fairly and transparently allocate nutrient and sediment loads" and "provide accountability" for needed reductions.⁹³ Due to the "unprecedented amount of work" on the Bay already undertaken by the Agreement states, there was already "significant knowledge regarding needed implementation mechanisms" that went beyond the usual.⁹⁴ This new TMDL, then, would exceed the expectations for normal ones. For this reason, the Agency would work with its partners to develop not only this TMDL, "but also the necessary implementation plans, commitments and evaluations" to ensure that the job got done.⁹⁵ There, it was said: implementation plans, redux. The Agency, however, was not relying here on the old, failed script.

At the time of the 2000 Chesapeake Bay Agreement, Congress had also moved the ball forward. At the urging of Maryland's Sen. Ben Cardin (D-Md.), who took up where Senator Mathias left off, it amended the Chesapeake Bay Program in a subtle but important way. Declaring the Bay to be "a national treasure and a resource of worldwide significance" (words lifted from the 2000 Agreement), new CWA §117(g)(1) directed EPA "in consultation with"

AND MANAGE RESTORATION PROGRESS (July 12, 2006), available at www.gao.gov/new.items/d0696.pdf.

84. U.S. GAO, DEVELOPMENT GROWTH OUTPACING PROGRESS IN WATERSHED EFFORTS TO RESTORE THE CHESAPEAKE BAY (Sept. 10, 2007), available at <http://www.epa.gov/oig/reports/2007/20070910-2007-P-00031.pdf>.

85. Farenthold, *supra* note 74.

86. See Jonathan Cannon, *Choices and Institutions in Watershed Management*, 25 WM. & MARY ENVTL. L. & POL'Y REV. 379 (2000) (supporting collaborative, consensus-building decisionmaking as allowing for frank exchange to occur and facilitating bargaining).

87. *Id.*; Jonathan Cannon, *Checking in on the Chesapeake: Some Questions of Design on the Chesapeake*, 40 U. RICH. L. REV. 1131 (2006) (ditto, despite the unimpressive outcomes, because the collaboration itself has been successful); Annecoos Wiersema, *A Train Without Tracks: ReThinking the Place of Law and Goals in Environmental and Natural Resources Law*, 38 ENVTL. L. 1239 (2008) (hailing the CBP's "holistic" and "watershed" approach to decisionmaking). This author does not mean to gainsay the value of consensus; rather, to say that on problems this intractable, one needs more.

88. *American Canoe Ass'n v. EPA*, 30 F. Supp. 2d 908, 29 ELR 20383 (E.D. Va. 1998).

89. *American Canoe Ass'n v. EPA*, 54 F. Supp. 2d 621, 624, 29 ELR 21474 (E.D. Va. 1999) (approving consent decree and settlement).

90. *Kingman Park Civic Ass'n v. EPA*, 84 F. Supp. 2d 1, 30 ELR 20017 (D.D.C. 1999).

91. See Karl Blankenship, *TMDLs Are Coming, Like It or Not*, CHESAPEAKE BAY J. (June 2008), <http://www.bayjournal.com/reprints/TMDL.pdf>; U.S. EPA, Clean Water Act Section 303(d): Preliminary Notice of Total Maximum Daily Load (TMDL) Development for the Chesapeake Bay, 74 Fed. Reg. 47792 (Sept. 17, 2009) ("This TMDL is being delayed consistent with the requirements of the Consent Decrees setting the following lawsuits: *American Canoe Association, Inc. and the American Littoral Society v. EPA*, Civil No. 98-979-A (E.D. Va.) and *Kingman Park Civic Association, et al. v. U.S. Environmental Protection Agency, et al.*, No. 1:98CV00758 (D.D.C.).").

92. Letter from Donald S. Welsh, U.S. EPA Region III Administrator, to Hon. John Griffin, Md. Dept. of Natural Resources (Sept. 11, 2008), 1, available at http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/EPARegionIIIlettertoP-SC091108.pdf.

93. *Id.*

94. *Id.*

95. *Id.*

state representatives to “ensure that management plans are developed and implementation is begun” by these state signatories, in order to “achieve and maintain,” inter alia, the Agreement’s nutrient and phosphorous goals.⁹⁶ Two phrases jump off the page. The first is EPA’s role, which in this provision morphed from supporter of the Agreement signatories to “ensurer” of their actions. The second is the mention of “management plans.” To be sure, a goal of the 2000 Agreement has been to develop and begin implementation of watershed plans to meet assigned load goals,⁹⁷ but this goal was, if a commitment at all, not one seemingly enforceable. Here, EPA was ordered to “ensure” it.

For the next eight years, federal environmental requirements of all stripes were shelved⁹⁸ and, as we have seen in

96. 33 U.S.C. §117(g)(1). Section 117(g)(1) traveled a lengthy legislative road. Initially proposed in the Senate in 1997 with co-sponsors from each of the Chesapeake Bay Agreement states, it required the EPA Administrator to “ensure that management plans are developed and implementation is begun” by signatories to the Agreement. See THE LIBRARY OF CONGRESS, Thomas, <http://thomas.loc.gov/home/LegislativeData.php?&n=BSS&c=105> (search for “The Chesapeake Bay Restoration Act of 1997,” follow link for “S.618,” then follow link for “All Congressional Actions.”) (last visited Jan. 8, 2011). A complementary House Bill was also proposed. See *Introduction of Bills and Joint Resolutions*, 43 CONG. REC. S3348-S3349, 1997 WL 185746 (Apr. 17, 1997); see also THE LIBRARY OF CONGRESS, Thomas, <http://thomas.loc.gov/home/LegislativeData.php?n=BSS&c=105> (search for “The Chesapeake Bay Restoration Act of 1997,” follow link for “H.R. 1578,” then follow link for “All Congressional Actions.”) (last visited June 8, 2010). A bill with similar language (“ensure that signatory jurisdictions update, expand and begin implementing their tributary specific management strategies”) passed the Senate the following year, but not the House. See S. REP. NO. 105-273 (July 29, 1998), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=105_cong_reports&docid=fsr273.105.pdf. In 1999, the measure reappeared in the Chesapeake Bay Restoration Act of 1999, with Sen. Paul S. Sarbanes (D-Md.) stating that it “continued the federal-state partnership.” See 145 CONG. REC. 3347 (daily ed. Mar. 2, 1999) (statement of Sen. Paul S. Sarbanes) (introducing the Chesapeake Bay Restoration Act of 1999). See also *Estuary and Coastal Habitat Conservation: Hearing on S. 492, S. S. 522, S. 835, S. 878, S. 1119, and H.R. 999 Before the S. Comm. on Environment and Public Works*, 106th Cong. 45 (1999) [hereinafter *Hearing on S. 492*]. Meanwhile, Sen. John Warner (R-Va.) expressed his opposition to “EPA regulation.” See *Hearing on S. 492*, at 3-4. The president of the Chesapeake Bay Foundation, in turn, having played an active role in drafting §117(g)(1), warmly endorsed it (“it is important for the Environmental Protection Agency to take a stronger leadership role in assuring that the participants are held accountable for their commitments.”) See 145 CONG. REC. 3351. See also 145 CONG. REC. 3348 (discussing The Chesapeake Bay Foundation’s assistance in drafting §117(g)(1)). The companion House bill, while imposing the same duty to ensure on EPA, also said, somewhat contradictorily, that EPA was to do this through grants and with no new regulatory authority. See H.R. REP. NO. 106-550 (2000), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=106_cong_reports&docid=fhr550.106.pdf. The Estuaries and Clean Waters Act of 2000 resolved the matter in favor of the Senate, dropping the previous year’s House caveat. See *Estuaries and Clean Water Act of 2000*, Pub. L. No. 106-457, 114 Stat. 1957 (2000), available at THE LIBRARY OF CONGRESS, Thomas, http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=106_cong_bills&docid=fs835enr.txt.pdf. Several supporting senators, nevertheless, stressed the “cooperative” and “voluntary” nature of the new provision. See *Proceedings and Debates of the 106th Congress, Second Session: Chesapeake Bay Restoration Act of 1999* (Apr. 12, 2000), 146 CONG. REC. H2156-01, H2156-H2157, 2000 WL 373168 (statements by Rep. James Oberstar (D-Minn.); *id.* at H2159 (statement by Rep. Ron Kind (D-Wis.)). On the other hand, as Justice Antonin Scalia might observe, the statute says what it says. One could argue, of course, that “management plans” are not the same as “implementation plans,” but it seems clear from the purpose and language of the legislation (“plans are developed and implementation is begun”) that implementation was its central value-added, and that EPA was to “ensure” it.

97. See *supra* TAN 77.

98. See *supra* note 2.

the case of the Chesapeake, replaced by optimistic reports of progress. Little happened with this new amendment. In 2008, however, with a new Administration coming in, the Chesapeake Bay Foundation and allies that included both commercial fishers (with whom the Foundation had often sparred over fish stocks and catch levels) and a former governor of Maryland filed a lawsuit to declare EPA in violation of §117(g).⁹⁹ The Agency was not ensuring Bay cleanup. This lawsuit, going beyond TMDLs, opened yet a new door.

The complaint itself was a bit of a reach. Section 117(g) could be read, and doubtless had been read by the previous EPA, to require only that the participating states have some plans and begin steps to execute them—which, of course, they always had and did; the problem was that they were minimal, soft, and ineffective. The lawsuit relied on the statutory language that followed, “to achieve the goals” established in the Agreement, which were objective (inter alia, 40% reductions in nitrogen and phosphorous), measurable, and in no way being achieved.¹⁰⁰ It could have made for an interesting legal argument. Instead, the Obama Administration stepped to the plate and unleashed a series of letters and directives that set a new stage for the Bay. To ice the cake, the Administration took the precaution to cement these actions in a settlement agreement with the Chesapeake Bay Foundation and other parties,¹⁰¹ ending the lawsuit and providing some assurance that its initiatives would not be rendered a dead letter by current or later actors. The deal was complete.

C. Something New

The first thing to strike the eye about the Obama Administration’s approach to the Chesapeake Bay is the extent to which the federal government assumes responsibility. The approach begins with a presidential Executive Order. It continues through the exposition of a federal Strategy, and then through the issuance of detailed letters from EPA to the Chair and Members of the Chesapeake Bay Program that, while characterized as the Agency’s “expectations,” read equally as orders from HQ. One cannot imagine such a shift in tone and tactics without at least tacit support from the states in the equation. One phenomenon common to environmental law is that fixed requirements are often the bureaucrat’s best friend, their shield from unhappy constituencies (“we’d like to help you here, but the regulations say . . .”); they are rarely, however, the politician’s best friend (particularly at the gubernatorial level where states’ rights sensitivities and campaign contributors carry maximum

99. C. Bernard Fowler v. EPA, No. 1:09-CV-00005-CKK, Complaint, p. 26, ¶ 94 (Jan. 5, 2009), available at <http://www.cbf.org/Document.Doc?id=311> (last visited Jan. 20, 2011). See also Jeff Day, *Lawsuit Against EPA Seeks Tough Action to Ensure Cleanup, Restoration by 2015*, 2 DAILY ENV’T REP. A-1 (Jan. 6, 2009); John Sherman, WBALTV.com, *Group Sues EPA Over Chesapeake Bay Cleanup* (Jan. 5, 2009), available at <http://www.wbalv.com/news/18413803/detail.html>.

100. Fowler v. EPA, No. 1:09-CV-00005-CKK.

101. Jeff Day, *EPA Agrees to Legally Enforceable Settlement to Undergrid Bay Restoration Strategy*, 90 DAILY ENV’T REP., A-9 (May 12, 2010).

weight). Some people high in state water agencies here had to have seen EPA's intervention as the only way to move the ball forward, even at the price of oversight from the feds.¹⁰² None of this is to say that EPA would be moving unilaterally, it would be insane to try, but it is clear that the Agency assumed a measure of control. Let the chips fall where they may.

Five major documents followed, each issued in direct language and a sequence almost too rapid to brook objection. On May 12, 2009, President Obama led with an Executive Order that reiterated the status of the Chesapeake as a "national treasure" and tasked a Federal Leadership Committee with committing themselves to the cleanup.¹⁰³ EPA, Agriculture, Transportation, Commerce, and Defense each received its assigned task; they were to produce, within 120 days, reports on their efforts to this end.¹⁰⁴ The Executive Order placed a priority on deadlines, accountability, and enforcement, to the point of requiring that an auditor independent of the agencies and states involved monitor the implementation process.¹⁰⁵ The Leadership Committee's Strategy came a few months later,¹⁰⁶ within which a section entitled "What's Different?" began: "These [federal] efforts include a focus on expanded regulation of pollution sources, as well as an emphasis on ensuring that current regulations are met."¹⁰⁷ This was an Administration unafraid of the "r" word.

EPA under Administrator Lisa Jackson was tasked with the biggest job—water quality—and it was ordered to report on "the full use of its authorities" to restore the Bay.¹⁰⁸ Within weeks of the Strategy, on November 3, November 4, and December 29, EPA's Region III issued a series of letters to the Chair of the Chesapeake Bay Program that reflected President Obama's insistence on goals, timelines, and accountability. The November 3 letter¹⁰⁹ set basinwide goals for the two dominant pollutants: 200 million pounds of nitrogen (up from an earlier 170 million pound target, an apparent compromise)¹¹⁰ and 15 million pounds of phosphorous, each necessary in order to meet dissolved oxygen standards in the Bay.¹¹¹ The respective states would receive sub-target goals that they were free, within limits, to trade within their jurisdictions (but not,

yet, with other states).¹¹² This first letter also laid out the preparation of a total Bay TMDL on a very tight schedule: an initial draft by June 2010, a final document by December, and the incorporation of TMDL target loads into state plans within the following year.¹¹³ To follow were 92 separate TMDLs under this umbrella for water bodies surrounding the Bay.¹¹⁴ It was not mission impossible, but it was certainly mission ambitious.

A day later, Region III sent a second letter that went further to describe the most important element of this process, watershed implementation plans (WIPs).¹¹⁵ Perhaps sensing that it was on unplowed ground here, EPA took pains to explain that WIPs were necessary to provide "reasonable assurances" that "necessary" reductions were included in the TMDL (its argument from an earlier TMDL day),¹¹⁶ and to fulfill the Agency's duty under §117(g)(1) to ensure that management plans were developed and implementation plans begun.¹¹⁷ The WIPs would include "a description of the authorities, actions, and to the extent possible, control measures that will be implemented to achieve these point source and nonpoint source target loads and TMDL allocations."¹¹⁸ These control measures could include "permits or contracts for voluntary or incentive based practices," so long as they were enforceable and binding.¹¹⁹ For the 2000 Agreement signatories—Maryland, Pennsylvania, Virginia, and the District of Columbia—the requirement for enforceable control actions applied to *all* major sources of pollution, point and nonpoint alike.¹²⁰ They had committed to them in their Agreement of 2000, and Congress had ratified them in federal law. Three later-joining states to the Agreement—Delaware, New York, and West Virginia (who subscribed in principle only)—were "expected" but not required to meet the enforceability requirement.¹²¹ All states, however, were required to, on set deadlines, focus down their TMDLs and WIPs to individual dischargers. It was projected to take 15 years.¹²²

The third letter was the most difficult and, perhaps, the most critical. Without compliance, all that had just transpired was mere words. On December 29, 2009, Region III described to its state partners an "accountability framework" for the Bay.¹²³ The issue was on everyone's mind.

102. Several state officials are reported as believing that they would be "unlikely to get support for needed Bay actions without the threat of a stronger federal 'hammer,'" Karl Blankenship, *As Talk of TMDL's Moves to Action Here's What You Should Know*, CHESAPEAKE BAY J. (Jan. 2010).

103. Exec. Order No. 13508, §201 (May 12, 2009), available at http://www.whitehouse.gov/the_press_office/Executive-Order-Chesapeake-Bay-Protection-and-Restoration/ (last visited Jan. 20, 2011).

104. *Id.* §§301, 302.

105. *Id.* §§206, 302.

106. Fed. Leadership Comm. for the Chesapeake Bay, EXEC. ORDER NO. 13508 DRAFT STRATEGY PROTECTING AND RESTORING THE CHESAPEAKE BAY (Nov. 9, 2009), available at <http://executiveorder.chesapeakebay.net/file.axd?file=2009%2f11%2fChesapeake+Bay+Executive+Order+Draft+Strategy.pdf>.

107. *Id.* at 6.

108. Exec. Order No. 13508, *supra* note 103, §301.

109. Letter of William C. Early, Acting Regional Administrator, Region III, EPA, to the Honorable L. Preston Bryant Jr., Secretary of Natural Resources, Richmond, Virginia, Nov. 3, 2009, available at http://www.epa.gov/reg-3wapd/pdf/pdf_chesbay/Bay_TMDL_Loads_Letter.pdf.

110. *See id.* at 1-2.

111. *Id.* at 2.

112. *Id.*

113. *Id.* at 2-3.

114. Jeff Day, *Final Bay Restoration Strategy Replaces Voluntary State Actions With Mandates*, 41 ENVTL. REP. 1069 (May 13, 2010).

115. Letter from William C. Early, Acting Regional Administrator, Region III, EPA, to the Honorable L. Preston Bryant Jr., Secretary of Natural Resources, Richmond, Va., Nov. 4, 2009, available at http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/tmdl_implementation_letter_110409.pdf.

116. *Id.* at 14. *See also supra* notes 24-26; *see also* HOUCK, THE CLEAN WATER ACT, *supra* note 12.

117. *Id.*

118. *Id.* at 4.

119. *Id.* at 29.

120. *Id.* at 2.

121. *Id.*

122. *Id.*

123. Letter of Shawn M. Garvin, Regional Administrator, Region III, EPA, to the Honorable L. Preston Bryant Jr., Secretary of Natural Resources, Richmond, Va., Dec. 29, 2009, available at http://www.epa.gov/region03/chesapeake/bay_letter_1209.pdf.

While EPA had strong statutory command over point sources, point sources in the Chesapeake Bay were a relatively small part of the problem. EPA had weak financial leverage over states, and less leverage yet where the problem lay, over nonpoint sources, which had just a few years earlier been whipped into a Tea Party-like frenzy at the very mention of the Agency's name.¹²⁴ EPA began by acknowledging that it was identifying federal authorities here in order "to strengthen our individual and collective resolve" to make "the difficult choices and decisions" ahead.¹²⁵ There were no new tools, but their aggregation in one place and the threat to apply them more stringently to a wider range of sources was impressive, as was the Agency's apparent determination to follow through; the question now became, with this game plan in motion, what Congress might do.

D. Congress (Almost) Intervenes

As seen, the renewed Chesapeake Bay Program, phase four of a decades-long journey, had been driven forward largely on the initiative of the Administration and EPA. One challenge to all such initiatives, however, is securing them against the inevitable blowback from affected pollution sources and future administrations. While a degree of insulation may be provided by court orders in certain cases, these decrees are limited to the issues at hand. The most obvious answer was legislation.

The moment seemed propitious. In 2008-2009, the Administration, members of Congress, environmental groups, and others who had been trying to advance Chesapeake cleanup for nearly a lifetime saw, for the first time in memory, favorable majorities in both the U.S. House of Representatives and the U.S. Senate, a popular president, and overwhelming documentation of the need for more affirmative remedies. They also had, at that time, support from the governors of the principal affected states, including Virginia, which was considered key. Beyond the urgency of the Chesapeake, they also had a logical goal, a process that not only looked like, but would in fact act like, the nation's ambient air control program.¹²⁶ It made sense. There has never been a good reason to offer one

set of tools for air quality and another for water quality (other than skepticism on the part of CWA sponsors that ambient-based programs could work at all, leading them to technology standards instead).¹²⁷ The objective would be to, in this respect, for this one great watershed, bring the CWA closer to parity.

In October 2009, Senator Cardin introduced Senate Bill 1816, the Chesapeake Bay Clean Water and Ecosystem Restoration Act.¹²⁸ It was a strong proposal, which is no surprise given the fact that Chesapeake Bay environmental groups, with one suspects EPA personnel in the background (the language is too sophisticated not to have received their input), assisted in drafting it. The bill, in pertinent part, ratified EPA's duties under the Obama Executive Order,¹²⁹ imposed similar responsibilities on other federal agencies,¹³⁰ codified the Bay-wide TMDL,¹³¹ required "enforceable or otherwise binding" load allocations for point and nonpoint sources,¹³² set binding deadlines,¹³³ and authorized, in total, over a billion dollars to put the show in motion.¹³⁴ Getting to the heart of the matter, the bill focused on the WIPs, upping EPA's authority from ensuring that management plan implementation was "begun" (Congress' 2000 amendment language),¹³⁵ to ensuring that such plans were "implemented."¹³⁶ The plans themselves were to meet a shopping list of criteria, including interim schedules, funding and enforcement mechanisms, and assurance that a 60% reduction in nutrients and sediments would be achieved within eight years, and that 50% of the measures designed to achieve this target would be in place at the time the WIPs were submitted.¹³⁷ To anchor the process, the bill imposed sanctions for state failure to comply, including loss of funds and EPA authority to develop fed-

124. HOUCK, *THE CLEAN WATER ACT*, *supra* note 12, at 166-70.

125. *See supra* note 121, at 2. These authorities included:

- Expanding NPDES permit coverage over currently unregulated sources, most importantly concentrated animal feeding operations (CAFOs) and municipal stormwater permits (MS4s).
- Tighter review of state and federal discharge permits, which had become rather lax in the previous Administration.
- "Net improvement" offsets for new or increased discharges, in lieu of merely replacing existing loadings.
- Finer scale load allocations in TMDLs, requiring states to focus on specific, individual sources.
- Additional reductions from point sources, notably municipal treatment plants (POTWs).
- Increased and targeted enforcement opportunities (which had gone from lax to absent in the previous Administration).
- Targeted grants for effective WIPs.
- Nutrient water quality standards to protect downstream sources, i.e., the Bay.

126. 42 U.S.C.A. §§7401, 7409 (National Ambient Air Quality Standards), 7410 (State Implementation Plans).

127. *See supra* note 124; Houck, *The Regulation of Toxic Substances*, *supra* note 12.

128. *See* Library of Congress, Thomas, Bill Summary & Status, 111th Congress (2009-2010), S. 1816, <http://thomas.loc.gov/cgi-bin/bdquery/z?d111:SN01816>: (last visited Jan. 8, 2011); Govtrack.us, <http://www.govtrack.us/congress/bill.xpd?bill=s111-1816> (last visited Jan. 8, 2011); Open Congress, <http://www.opencongress.org/bill/111-s1816-actions> (last visited Jan. 8, 2011). Senator Cardin represented that Gov. Martin O'Malley of Maryland and Gov. Tim Kaine of Virginia supported the bill. *See* 157 CONG. REC. S10573 (Oct. 20, 2009) (introductory statement of Sen. Cardin), available at Library of Congress, Thomas, Congressional Record: 111th Congress (2009-2010), [http://thomas.loc.gov/cgi-bin/query/B?r111:@FIELD\(fld003+S\)+@field\(ddate+20091020\)](http://thomas.loc.gov/cgi-bin/query/B?r111:@FIELD(fld003+S)+@field(ddate+20091020)) (follow link on item 41, Statements on Introduced Bill and Joint Resolutions) (last visited Jan. 20, 2011). Rep. Elijah Cummings (D-Md.) introduced a companion bill, H.R. 3852, which was cosponsored by Reps. Eleanor Norton (D-D.C.), Michael Castle (R-Del.), Gerald Connolly (D-Va.), Donna Edwards (D-Md.), Raul Grijalva (D-Ariz.), Maurice Hinchey (D-N.Y.), Steny Hoyer (D-Md.), Edie Johnson (D-Tex.), Carolyn Maloney (D-N.Y.), James Moran (D-Va.), James Oberstar (D-Minn.), Dutch Ruppersberger (D-Md.), John Sarbanes (D-Md.), Robert Scott (D-Va.), Paul Tonko (D-N.Y.), and Christopher Van Hollen (D-Md.).

129. S. 1816, 111th Cong. §117(g).

130. *Id.* at (g), (f).

131. *Id.* at (i).

132. *Id.* at (i)(1)(B).

133. *Id.* at (j).

134. *Id.* at (d), (e), and (q). In addition, the Bill mandated development of a nutrient trading program, see S. 1819 at (i)(6); *see also* discussion TAN 216-227.

135. *See supra* note 94 and accompanying text.

136. S. 1816, 111th Cong. §117(h)(i).

137. *Id.* at (j) (WIP requirements); *id.* at (k) (EPA review and approval).

eral WIPs on its own.¹³⁸ Anticipating, perhaps, a change of heart in future Agency leadership, such failures would also be considered violations of the CWA and subject to enforcement actions by citizen suits.¹³⁹ Nothing significant seemed omitted.

Save an error in calculus, followed by a scramble to cover the hole. The political analysis behind the Cardin bill overlooked the reality of the numbers. While Democrats controlled both houses of Congress, their hold on the Senate was marginal, even more so as political divisions hardened and it became clear that any such bill would need a measure of support from the Republican side, which exercised almost complete hegemony over its members. Democrats in the Southern states, further, voted like Republicans on most environmental issues, and this is before one began to tally the number of midwestern and farm state congressmen who might not live by the farm vote but could certainly die from it. Great fear permeated the ranks of agribusiness and its representatives in Congress that, as went the Chesapeake, might then go the rest of the country¹⁴⁰; they might actually be required to abate nonpoint pollution. Given this volatile mix, only one influential Republican dissenter could queer the dew. As luck would have it, just such a champion was available, a member who spoke openly of environmentalists as the incarnation of evil,¹⁴¹ likened EPA to the Gestapo,¹⁴² and relished the opportunity to put a stake in its heart. Sen. James Inhofe (R-Okla.) sat with Senator Cardin on the Water and Wildlife Subcommittee of the all-determinative Senate Committee on the Environment and Public Works. Politically, in Senator Cardin's view, he stood at the pass.

Inhofe had already made his opposition to Senator Cardin's bill plain.¹⁴³ Raising arguments familiar to anyone following his record over the years, or simply reading his references to climate change ("the second greatest hoax ever perpetuated on the American people"),¹⁴⁴ he characterized the bill as a "hostile agenda aimed squarely at rural America."¹⁴⁵ Armed with statements from the Maryland State Builders Association, the Virginia Agribusiness Council, the Virginia and Maryland Grain Producers Association, the New York and National Corn Growers

Association, the National Association of Wheat Growers, and the National Association of Beef Producers—none of them favorable to the legislation—Senator Inhofe et al. invoked the specter of economic collapse, unsound science, federal takeover,¹⁴⁶ judicial takeover—the allegations hardly changing from climate change to nonpoint source discharge controls. Which would not have mattered, except that Senator Cardin wanted his vote.

The price was steep. Senators Cardin and Inhofe went into a huddle and an amended bill emerged, badly bruised, but alive. Among many changes, it eliminated the endorsement of the Chesapeake Bay TMDL (indeed it deleted the entire section pertaining to it), made state submission of watershed improvement plans voluntary,¹⁴⁷ limited EPA authority to enforce them, and keyed them to the achievement of water quality standards.¹⁴⁸ It offered a \$2.5 billion carrot in state assistance,¹⁴⁹ but with the economy in free fall, no one could think that monies near that scale would be appropriated. Defending the compromise from further attack from the right, Senator Cardin declared that it "puts the states front and center . . . they are responsible for designing our watershed implementation plans and making adjustments."¹⁵⁰ EPA's role was to provide the targets and act as referee. "We are not seeking to give EPA any new authority," he explained.¹⁵¹

If the compromise was intended to win over nonpoint source industries and their backers in Congress, while retaining the environmental community, it was not wildly successful. The Virginia Farm Bureau called the amendment's changes "window dressing," and began recruiting

138. *Id.* at (k).

139. *Id.* at (o).

140. See S. 1816, additional remarks of Sens. John Barrasso (R-Wyo.) and David Vitter (R-La.) ("we are concerned that . . . S. 1816 will inevitably be used for waters outside the Chesapeake Basin").

141. Jim Meyers, *Heat Wave Has Senators Sticking to His Beliefs*, TULSA WORLD, Dec. 23, 2009 ("a third Reich").

142. Chris Mooney, *James Inhofe Proves That "Flat Earth" Doesn't Refer to Oklahoma*, AM. PROSPECT, Apr. 13, 2004 (referring to EPA as "the Gestapo").

143. Legislative Hearing on Great Water Body Legislation: S. 1816 and S. 1311: Hearing Before the S. Comm. on Env't. and Public Works, Subcommittee on Water and Wildlife, available at http://www.epw.senate.gov/public/index.cfm?FuseAction=Minority.PressRelease&ContentRecord_id=da84a3ea-802a-23ad-432a-b7095e7c268d&Region_id=&Issue_id=

144. Charles P. Pierce, *In Praise of Oklahoma*, AM. PROSPECT, Sept. 2006. Senator Inhofe has also called for a criminal investigation of climate change scientists, Suzanne Goldberg, *U.S. Senate's Top Climate Skeptic Accused of Waging "McCarthyite Witch Hunt"*, GUARDIAN.CO.UK, Mar. 1, 2010, <http://www.guardian.co.uk/environment/2010/mar/01/inhofe-climate-mccarthyite>.

145. See *supra* note 142.

146. *Id.* See, e.g., Virginia Agribusiness Council, Industry Letter on Chesapeake Bay Reauthorization (S. 1816), Nov. 2009, [http://www.va-agribusiness.org/public/files/Bay_Wide_Industry_Organizations_Comment-S_1816_Senate_EPW_Hearing_\(11-9-09\).pdf](http://www.va-agribusiness.org/public/files/Bay_Wide_Industry_Organizations_Comment-S_1816_Senate_EPW_Hearing_(11-9-09).pdf); Virginia Agribusiness Council, Council Letter on Chesapeake Bay Reauthorization (S. 1816), Nov. 2009, [http://www.va-agribusiness.org/public/files/VAC_Comments-S_1816_Senate_EPW_Hearing_\(11-9-09\).pdf](http://www.va-agribusiness.org/public/files/VAC_Comments-S_1816_Senate_EPW_Hearing_(11-9-09).pdf). The council includes similar grievances in its Position Paper on the Senate Bill. "The Executive Order should not be codified because it will not become final until 2010; it is a precedent setting document with questionable authority"; "[The TMDL] should not be codified because it is under development with unknown outcomes and codification would bypass the authority of the Virginia General Assembly"; "The Chesapeake Bay Milestones should not be codified because they are not established by each state individually and beyond the current two-year cycle are not yet established"; "Civil suits cannot be codified because they will generate unnecessary suits that are simply intended to sop a project or prolong the issuance of permits"; "Federal intervention will be disruptive to established industries." See *id.* Position on Chesapeake Bay Program Reauthorization, Oct. 2009, http://www.va-agribusiness.org/public/files/CB_PROGRAM_REAUTHORIZATION.pdf.

147. The U.S. Department of Justice expressed concern that mandating WIPs might violate the 10th Amendment, see Choose Clean Water memorandum, *infra* note 149. See also *New York v. United States*, 505 U.S. 144, 22 ELR 21082 (1992) (prohibiting the "commandeering" of state resources).

148. See S. 1816, 111th Cong., §117(j) & (k), as amended, (June 30, 2010), available at <http://www.choosecleanwater.org/cms/documents/epwversion/cardininhofe.pdf>. Senators Cardin and Inhofe also offered substantive amendments to other sections of the legislative proposal, including a nitrogen and phosphorus trading program.

149. See Memorandum of Choose Clean Water Coalition, Changes to Cardin Legislation, 2 (July 28, 2010), (on file with author).

150. Linda Roeder, *Bills to Restore Chesapeake, Great Lakes, Other Water Bodies Clear Senate Committee*, DAILY ENV'T REP. (BNA), 125 DEN, A-18, July 10, 2010.

151. *Id.*

farmers around the state to lobby against the bill.¹⁵² Sample news headlines read “Treatment Plant Operators Concerned About Draft TMDL,”¹⁵³ “Builders ask for six-month extension for comments on Bay pollution proposal,”¹⁵⁴ “N.Y. lawmakers lash out at ‘drastic,’ ‘unfair’ EPA cleanup plan,”¹⁵⁵ “Local Officials, Agriculture Groups Urge EPA to Delay, Rethink Plan to Restore Bay,”¹⁵⁶ “House lawmakers seek delay in cleanup plan,”¹⁵⁷ “Farm lobby urges Senate not to take up Bay cleanup bill in lame-duck session.”¹⁵⁸ Senator Inhofe, facing blowback for his participation in such a compromise, announced that, while he supported the bill because “Cardin gave up so much,” he still had his concerns.¹⁵⁹ There was “still work to do,” he said.¹⁶⁰

For the environmental organizations that had worked so hard, and successfully, on the original bill, the glass was half full or half empty. The Chesapeake Bay Foundation “unequivocally” supported the amendment,¹⁶¹ finessing the diminution in EPA oversight as unimportant given the Agency’s track record of soft enforcement under the Clean Air Act (CAA).¹⁶² The key, to Foundation President Will Baker, was that if such an amendment were not enacted, a future EPA could cancel the entire program “with a stroke of a pen.”¹⁶³ To others such as the Waterkeeper organizations, which tend to think more along the line of enforcement, the losses were dramatic; they now opposed the bill.¹⁶⁴ As they saw it, the TMDL program, on which the Chesapeake Bay restoration was now hinged, had been a requirement of the CWA since 1972, and specifically applied to the Bay and its tributaries by court orders.¹⁶⁵ No one’s pen could cancel it.

The environmental community also split over different understandings of the role of water quality standards in cleaning up the Bay. The Chesapeake Agreement states had forged a major breakthrough in science, if not in action, by relating needed Bay water conditions to the abatement

of nitrogen, phosphorous, and sediments. Starting in the 1980s, they committed to reductions of 40%. The early calculations were a combination of best-science and best-guess—no one had a better guess—but these targets hung over the parties like a minimum speed limit. Under the EPA directives of 2008, as some saw them, the reductions would be effectuated through the WIPs, and voilà. The agonizing process of determining impacts on water quality standards case-by-case—the Achilles’ heel of forerunners of the CWA—seemed to be relegated to the back burner. Most Chesapeake Bay states did not *have* numeric standards for phosphorous and nitrogen, and their narrative standards were nearly useless.¹⁶⁶ When the Waterkeeper Alliance and others saw the Cardin-Inhofe bill shift away from numerical reduction targets to the “achievement of water quality standards,” they feared the worst.¹⁶⁷ The bill might provide a more solid legal structure, but it would surround a sump.

Their fear was partially justified, but not completely. A TMDL, by definition, is keyed to the attainment of water quality standards.¹⁶⁸ Once TMDLs were set in motion for the Bay and its watersheds, abatement would perforce be based on the predicted impacts of each watershed’s waste load (for point sources) and load (for nonpoint sources) allocations. During the George W. Bush presidency, EPA, while lying low on new pollution control initiatives, had been developing better computer models for Bay water quality and the load reductions needed to achieve it.¹⁶⁹ The good news was that, using existing criteria for dissolved oxygen and a form of chlorophyll as surrogates for nitrogen and phosphorous (and water clarity as a surrogate for sediments), the Agency arrived at results that, although

152. Jeff Day, *Compromises in Senate Bay Restoration Bill Dismay Some Allies, Fail to Sway Farm Lobby*, DAILY ENV’T REP. (BNA), 171 DEN A-5, Sept. 7, 2010.

153. Jeff Day, *Treatment Plant Operators Concerned About Draft TMDL, Attorney, Regulator Say*, 186 DAILY ENV’T REP. (BNA), 186 DEN A-11, Sept. 28, 2010.

154. Linda Roeder, *Builders Ask EPA for Six-Month Extension for Comment on Bay Pollution Proposal*, DAILY ENV’T REP. (BNA), 202 DEN A-9, Oct. 10, 2010.

155. Paul Quinlan, *N.Y. Lawmakers Lash Out at “Drastic,” “Unfair” EPA Cleanup Plan*, GREENWIRE, Oct. 15, 2010.

156. Jeff Day, *Local Officials, Agriculture Groups Urge EPA to Delay, Rethink Plan to Restore Bay*, DAILY ENV’T REP. (BNA), 216 DEN A-15, Nov. 10, 2010.

157. Paul Quinlan, *House Lawmakers Seek Delay in Cleanup Plan*, GREENWIRE, Oct. 15, 2010.

158. Jeff Day, *Farm Lobby Urges Senate Not to Take Up Cleanup Bill in Lame Duck Session*, DAILY ENV’T REP. (BNA), 218 DEN A-11, Nov. 15, 2010.

159. Day, *supra* note 153.

160. Roeder, *supra* note 150.

161. Day, *supra* note 158.

162. 42 U.S.C. §§7401-7671q, ELR STAT. CAA §§101-618. *Id.* (quoting the Chesapeake Bay Foundation legislative director as stating that EPA had never used its ultimate authority under the CAA to issue a federal implementation plan—an observation that, while true, ignores the leveraging power of such latent authority).

163. *Id.* (quoting Chesapeake Bay Foundation President Will Baker).

164. Day, *supra* note 156. Information Sheet, Waterkeeper Alliance, undated (comparing existing CWA with amended Cardin bill) (on file with author).

165. *Id.*

166. See Memorandum, Implications of Substituting Water Quality Standards for Total Maximum Daily Loads in Chesapeake Bay Reauthorization Legislation, Center for Progressive Reform, 4, July 14, 2010, presenting the following chart:

State	Nitrogen	Phosphorous	Chlorophyll-a ⁸	Clarity	Dissolved Oxygen
Delaware	No	No	No	No	Yes
D.C.	No	No	Yes, for specific water bodies		Yes
Maryland	No	No	No	Yes, for specific water bodies	Yes
New York	Yes, for specific water bodies		No	No	No
Pennsylvania	No	No	No	No	No
Virginia	No	Yes, for certain water bodies			Yes
West Virginia	No	No	No	No	No

167. See Rena Steinzor, Out of the Scrum, a Bad Deal for the Chesapeake Bay, Center for Progressive Reform, July 6, 2010, <http://www.progressivereform.org/CPRBlog.cfm?idBlog=A8807A37-B3D8-1BEC-A94B-95D7569A5A04> [hereinafter CPR Report]; Letter from law professors Robert W. Adler, William Andreen, Robert Glickman, and Rena Steinzor, to Sens. Benjamin L. Cardin and James M. Inhofe, Aug. 23, 2010 (criticizing bill for water quality standards and other issues) (on file with author).

168. See 33 U.S.C. §1313(d)(1)(c) (“such load shall be established at a level necessary to implement the applicable water quality standards”).

169. Conversation with J. Charles Fox, Special Assistant to EPA Administrator for the Chesapeake Bay Program, Nov. 22, 2010.

adjusted for particular watersheds, confirmed the earlier targets that had been guiding the program for the past 30 years.¹⁷⁰ The bad news was likewise that, with no objective standards for nitrogen or phosphorous,¹⁷¹ the model hinged on surrogates. Given the money at stake for agribusiness, real estate developers, and the full suite of industries in the mix, “best science” challenges to unwanted TMDL allocations seemed inevitable.¹⁷²

At this point in the discussions, however, the national economic crisis and its rambunctious politics intervened. When the dust had cleared, Republican capture of the House and ascendancy in the Senate seemed to assure that Cardin-Inhofe, and indeed the Chesapeake restoration bill itself, were dead.¹⁷³ Senator Inhofe may have signed off on the compromise, but he left himself all the room he needed to wriggle out of it. A new mood of denying the Administration success on any front was not only apparent, it was announced as policy by the Senate Minority Leader.¹⁷⁴ The House, for its part, appeared out to stymie EPA across-the-board.¹⁷⁵ Given the mood of Congress, the Chesapeake bill will likely be the high watermark of legislative support for cleaning up the Bay in any foreseeable term. Were there to be new legislation, unless vetoed, it will almost certainly derogate from the status quo, providing greater flexibility, minimal monies, longer time frames, and a seat in the rear for EPA.¹⁷⁶

E. The Chesapeake Bay TMDL

On December 29, 2010, adhering to a deadline that seemed impossible when it was first announced, EPA issued a final TMDL for the full 64,000-square-mile watershed and the Bay waters themselves.¹⁷⁷ The Agency’s Region III Administrator might be forgiven his enthusi-

asm as he declared it “the most comprehensive road map for restoration in the nation, or dare I say, the world.”¹⁷⁸ Nearly 40 years after cleanup intentions were first announced, there was now an overall game plan, smaller scale game plans to follow for 92 tributary watersheds across this enormous land and waterscape.

The TMDL did several significant things. The first was to encapsulate under the CWA specific reduction requirements for nitrogen (25%), phosphorous (24%), and sediments (20%), further allocated to states and major river systems, that were heretofore artifacts of the Chesapeake Bay Program.¹⁷⁹ The states were now not only committed to each other through the Program, they were committed in law to EPA and the public at large. On the cloudier side, the actual reduction goals, from 20 to 25%, are well short of the 40% reductions first declared necessary by EPA and the Chesapeake Bay partners decades ago and reiterated continuously since. To some extent, better science and modeling may have refined the estimates. Bay improvements, however marginal, may likewise have changed the numbers. One suspects, however, that the reductions reflect the practicalities of reaching for the full monte at this point. For the moment, five-eighths of a loaf may look better than none.

The second achievement was to blend the TMDL with implementation plans, the missing link of all other TMDL efforts to date. While EPA kept the TMDL and WIP processes nominally separate, the WIPs were the “cornerstone of the accountability framework” tool for making projected load reductions happen.¹⁸⁰ Not surprisingly, their development was a bumpy road. Under both its §117(g) (WIP) and §1313(d) (TMDL) authorities, the Agency called for state measures that in the aggregate would (1) bring down pollution loadings to target levels, and (2) provide “reasonable assurances” that they would be achieved and maintained.¹⁸¹ The state draft WIPs submitted in September 2010 fell far short of the mark. Even EPA, which was not looking to cross swords with state governments at this early date, found that only two of seven states proposed reductions sufficient to meet their targets, and zero of seven offered reasonable assurances of their implementation.¹⁸² Obviously difficult conversations followed, some states in open defiance,¹⁸³ EPA for its part rattling the sword of its “backstop measures” that as we have seen would basically mean a far harder time for point source dischargers in underperforming jurisdictions.¹⁸⁴ When the dust settled, the final WIPs, which preceded the final TMDL by a mat-

170. *Id.*

171. See CPR Report, *supra* note 167.

172. This said, EPA may be on firmer legal and scientific ground keying water quality impacts primarily on dissolved oxygen than in attempting to nudge the states toward adopting specific nutrient water quality criteria, a process certain to provoke even more litigation and delay, as it has in Florida, which will be treated in a subsequent article.

173. Heroic attempts to segue the Chesapeake into a huge \$18 billion, 110-bill, omnibus water, lands, and wildlife failed at the end of the lame duck session, Senate Republicans, led by Senator Inhofe, lobbying strongly against. Paul Quinlan, *Democrats Target GOP Allies to Press Water, Land and Wildlife Omnibus*, E&E DAILY, Dec. 3, 2010; Paul Quinlan, *GOP Leaders Blast Reid’s Public Lands, Water Omnibus*, E&E DAILY, Dec. 20, 2010.

174. See Tommy Christopher, *White House Appears to Want to Shame the Shameless Mitch McConnell and Company*, MEDIATE, Oct. 27, 2010 (quoting the Minority Leaders stating: “The single most important thing we want to achieve is for President Obama to be a one-term president.”).

175. Ascendant Republicans have made no secret of their intent to curb EPA initiatives across the board. See Steven D. Cook, *House Forum on EPA Regulations Signals Stiff Opposition if Republicans Win Majority*, DAILY ENV’T REP. (BNA), 188 DEN A-16, Sept. 30, 2010 (quoting Rep. Doc Hastings (R-Wash.): “It’s time for EPA to ease its iron grip on rural America.”). See also Sara Abruzzese, *GOP Governors-Elect Lodge Complaint About EPA*, E&E DAILY, Dec. 21, 2010.

176. See Paul Quinlan, *Obama’s Monumental Restoration Push Hits Major Obstacles*, GREENWIRE, Jan. 12, 2011 (quoting Senator Cardin’s aide as saying: “For the most part, we’re looking at making sure we’re not going to lose any ground.”).

177. Jeff Day, *EPA Issues “Biggest-Ever” TMDL in Plan to Clean Up Bay With Watershed-Wide Action*, DAILY ENV’T REP. (BNA), 249 DEN, Dec. 30, 2010.

178. *Id.*

179. U.S. EPA, Chesapeake Bay TMDL Executive Summary, ES-1, Dec. 29, 2010, http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/FinalBayTMDL/BayTMDLExecutiveSummaryFINAL122910_final.pdf.

180. *Id.* at ES-8.

181. *Id.* at ES-8, 9.

182. *Id.* at ES-9.

183. See *infra* notes 229-31 and accompanying text.

184. See *supra* note 123.

ter of weeks, were by all reports an improved lot.¹⁸⁵ How much improved can be debated.

EPA, for its part, took credit for negotiating substantial changes in state WIPs, almost all of them in point source practices over which it exercises stronger “backstop” leverage.¹⁸⁶ In some cases, the Agency succeeded in moving some proposed reductions from the “load allocation” (nonpoint source) to the “waste load allocation” (point source) category, in effect imposing permit scrutiny.¹⁸⁷ Most state programs relied on ratcheting down on municipal treatment systems, stormwater runoff, and the larger concentrated animal feeding operations (CAFOs).¹⁸⁸ As in the past, however, nudge come to shove, even hard nudge, state agencies were still not ready to confront the dominant source of nitrogen, phosphorous, and sediment pollution: agricultural practices. For this sector, in the main, they identified their preexisting nonpoint source authorities and programs, largely voluntary, largely hinged on the “pay-the-farmer” approach that has categorized agricultural pollution control since 1972 with less than sensational results. Illustrative of the sensitivity of this issue, two of the primary Bay-loading states, Maryland and Virginia (and Delaware) committed only to “consider the implementation” of further mandatory requirements for agriculture if, by 2013, their cleanups lagged behind¹⁸⁹—which is neither a commitment nor an objective standard. If, one may fear, even this “consideration” will hinge on tracking ambient water quality, we could be back to the you-can’t-prove-it contests of yesteryear.

An independent review of the state WIPs is less sanguine. Taking the documents at face value—i.e., what is said is in place is in place, and what is said will happen will happen—three law professors of the Center for Progressive Reform evaluated their design capability to achieve the TMDL-identified reductions in eight parameters, e.g., permitting, CAFOs, nonpoint, and the transparency of their methods and results.¹⁹⁰ Professors tend to give out grades, and these were not good, C/Ds for Maryland (head of the class) and New York, two Ds for Delaware, D/F for Pennsylvania, and two Fs for Virginia and West Virginia.¹⁹¹ The grades were weighted by each jurisdiction’s proportional contributions to the Bay, highlighting that three states (Maryland, Pennsylvania, and Virginia, together averaging in the low-D range) contribute 87% of the nitrogen and 88% of phosphorous entering the Bay.¹⁹² A notable charac-

teristic of all state programs was the degree to which they relied on voluntary nonpoint source controls, although several states were credited for, in some cases, imposing mandatory requirements, usually accompanied by government financial assistance.¹⁹³ One suspects that, quietly, EPA would agree with these assessments as well. On the other hand, the Agency is committed to advancing the process, and full candor may not be the best way forward.

Were this—more modestly calibrated TMDL and WIPs that promised to consider more serious steps for their dominant causes of Bay pollution, perhaps, three years from now—one might perceive more mouse than mountain here. Which would be incorrect, because the process is far from over. The Agency has already announced its intention to develop a revised and more finely tuned TMDL,¹⁹⁴ and time lines for more detailed WIPs in the years ahead.¹⁹⁵ This planning will be advanced by two-year assessments of progress, 60% of needed controls to be in place within seven years, all in place by 2025.¹⁹⁶ Unlike TMDLs elsewhere in the country, more like CWA NPDES standards, which (in theory) are to be upgraded continuously over time, the Chesapeake TMDL-cum-WIP process is not once-done-and-out but, rather, an iterative one as further squeezes on point sources reach marginality, as they surely will. At which juncture, and within relatively short time frames, state by state, we may finally come face to face with the gorilla in the closet, agricultural sources. There will be no other recourse and, from here on, the clock is ticking.

Pausing here, one senses the earth shifting. On the Chesapeake Bay, with assists from a dedicated scientific community, environmental groups,¹⁹⁷ state agencies, congressional leadership, the media, and a few well-placed citizen lawsuits, EPA has been able to confect a structure that had failed to hold for the TMDL program as a whole at the end of the Clinton Administration: a TMDL with implementation plans based on controls for point and nonpoint sources of pollution. It is what Congress hoped would happen in the TMDL program back in 1972 (at least those who had faith in a water quality-based approach), only it left out the beef.¹⁹⁸ At last, in this one key region of the country, something similar to state air quality plans finally

185. Three state programs, for New York, Pennsylvania, and West Virginia, still came up short in allocations and/or assurances, leaving EPA to make “backstop” adjustments. TMDL Executive Summary, *supra* note 179, at ES-10,11.

186. *Id.* at 10.

187. For example, EPA shifted much of West Virginia’s animal feeding allocations to possible CAFO permit regulation. *Id.* at ES-11.

188. *Id.* at ES-10.

189. TMDL Executive Summary, *supra* note 179, at ES-2.

190. Center for Progressive Reform, Ensuring Accountability in Chesapeake Bay Restoration: Metrics for the Phase I Watershed Implementation Plans, 1-11 (undated).

191. Center for Progressive Reform, Missing the Mark: A Report Card for the Phase I Watershed Improvement Plans, 2 (undated).

192. *Id.* at 8.

193. Telephone Conversation with Yee Huang, Yee Huang, Analyst, Center for Progressive Reform, Jan. 4, 2011.

194. Quinlan, *supra* note 176; Jeff Day, EPA, States Mull Pushing Back Deadlines for State-Country Pollution Reduction Plans, DAILY ENV’T REP. (BNA), 5 DEN A-9, Jan. 7, 2011.

195. TMDL Executive Summary, *supra* note 179, at ES-14.

196. *Id.* at ES-13, 14.

197. It would be hard to overstate the staying power and effectiveness of the Chesapeake Bay—focused environmental organizations over the years, including (at the risk of omitting deserving organizations) the Chesapeake Bay Foundation, Chesapeake Bay Alliance, Chesapeake Legal Alliance, Environmental Working Group, Natural Resources Defense Council, Sierra Club, National Wildlife Federation, Center for Progressive Reform, and several watershed Riverkeepers, aided by law clinics of Maryland and Georgetown University.

198. See HOUCK, THE CLEAN WATER ACT, *supra* note 12, at 21-24. The 1972 Act left TMDL implementation to state watershed programs, see §1313(e), at the insistence of state water agencies that they had the knowledge, resources and commitment to tackle agriculture, timber and other nonpoint sources without the backup of federal law. *Id.* This assumption was, in most states, patently incorrect.

emerges—with all of their problems in standard setting, monitoring, funding, gaming the system, and enforcement—the necessary geography of ambient-based pollution controls.

III. The Future

A midyear 2010 progress report on the Chesapeake showed key states falling short of previously agreed milestones for December 2011, including “little headway” in efforts to encourage cover crops (Maryland), stream-side cattle fencing (Virginia), and nutrient management plans (Pennsylvania).¹⁹⁹ The Chesapeake Bay Foundation's year-end 2010 State of the Bay Report showed nearly imperceptible progress on water quality, up from a score of 15 to 16, and ecosystem health, up to 31, out of a perfect score of 100, earning a “D-minus” grade.²⁰⁰ With the Chesapeake TMDL fully implemented (by the year 2025), in all jurisdictions, a condition never attained in any aspect of environmental law, Bay health would reach a score of 50.²⁰¹ No one ever said fixing Humpty Dumpty was easy.

Cooperation. We start nonetheless with several significant advantages for the Bay, the first of which is the long-standing cooperation among EPA and the major jurisdictions involved.²⁰² There is investment and pride on the line. As important is their long-standing agreement on quantified load reductions necessary to restore the Bay. Having formally committed to abatement on this scale, energy spent fighting the TMDLs and WIPs designed to achieve it will be perceived as a breach, at least of faith.

Another benefit from the existing agreements is the impetus to address land use issues that are clearly important to limiting Bay impacts but, setting aside pollution discharge and wetland permitting, beyond the federal domain. Several studies culminating in a recent GAO report demonstrate that unmanaged growth will defeat hard-won gains for the Bay; indeed, it is already doing so.²⁰³ The Chesapeake Bay Commission has announced plans for the conservation of two million acres within the Bay watershed by 2025. While the plan has stimulated controversy and alternative strategies,²⁰⁴ the states are at least moving to achieve land use goals that would be unthinkable in other circumstances.

CAFOs. Increased controls over CAFOs can provide significant momentum for parts of the Bay, particularly along the Maryland and Virginia shores.²⁰⁵ While the U.S. Court

of Appeals for the Second Circuit rejected EPA's attempt to regulate open-field disposal of CAFO wastes (because they were not, yet, discharging into the water—a rather crabbed interpretation of the Act),²⁰⁶ the Agency retains wide authority to increase the number of regulated CAFOs (by sizing down their thresholds), elevate control requirements, regulate non-enclosed animal husbandry as point sources, and implicate offsite corporate owners who have largely insulated themselves from the mess. The CAFOs, of course, will not concede without a fight.²⁰⁷ EPA's available legal tools, however, have yet to be fully unsheathed.

Stormwater. Similar gains can be made in stormwater, which will loom yet larger as other sources come under control.²⁰⁸ Bay watersheds now hold 17 million people and rising.²⁰⁹ Stormwater runoff already accounts for nearly 20% of Bay loadings.²¹⁰ The first flush from streets, lawns, and parking lots can be dramatic in content and volume; analysis of similar stormwater discharges into Lake Pontchartrain, Louisiana, showed concentrations of phenols and heavy metals greater than that from neighboring chemical plants, no slackers in these departments.²¹¹ To date, the Agency has largely slept on its authority over stormwater sources under §402(p) of the Act, which requires reduc-

URAL RESOURCES DEFENSE COUNCIL, AMERICA'S ANIMAL FACTORIES HOW STATES FAIL TO PREVENT POLLUTION FROM LIVESTOCK WASTE, Chapter 11: Maryland (Dec. 1998), available at <http://www.nrdc.org/water/pollution/factor/stmar.asp#notes8> (last visited June 21, 2010):

A chief component of this agricultural pollution is found on Maryland's Eastern Shore, where hundreds of chicken houses produce about 300 million chickens each year. The industry's annual production of 720 million pounds of chicken manure contains twice as much phosphorus as the human waste generated by Maryland's entire population annually. Manure contributes an estimated 40 percent of the nitrogen and 48 percent of the phosphorus entering the Chesapeake Bay from Maryland's Eastern Shore.

(Internal citations omitted.) See also *id.* Chapter 27: Virginia:

Virginia has classified 712 miles of state waters as “impaired” due to diffuse sources of agricultural pollution. According to Virginia Tech, “Soils in some parts of the Shenandoah Valley contain as much as eight times the phosphorus needed by crops, the result of years of over-application.” On Virginia's Eastern Shore, close to one third of the nitrogen and two-fifths of the phosphorus nutrients entering the Chesapeake from that region are attributed to animal waste pollution.

(Internal citations omitted.)

206. See *Waterkeeper Alliance v. EPA*, 399 F.3d 486, 35 ELR 20049 (2d Cir. 2005).

207. Among other things, faced with a lawsuit from the Maryland Environmental Law Clinic over chicken wastes, Perdue had a bill filed in the most recent state legislative session limiting funding for the law school. See David A. Farenthold, *Md. Legislature Scrutinizing Law Clinic Over Chicken Farm Suit*, WASH. POST, Mar. 28, 2010. A similar bill sponsored by the Louisiana Chemical Association to defund the Tulane Environmental Law Clinic was debated in the Louisiana Senate. See James Gill, *Polluters Have Had Enough of Law Clinics*, TIMES PICAYUNE, May 12, 2010. Both efforts, for the moment, have failed.

208. See Draft Strategy, *supra* note 106, at 28.

209. See U.S. GAO, *supra* notes 83, 84.

210. See Chesapeake Bay Program Phase 4.3 Watershed Model, Sources of Sediment to the Bay (2009), http://www.chesapeakebay.net/status_sediment-sources.aspx?menuitem=20800 (last visited Jan. 21, 2011).

211. See OLIVER A. HOUCK ET AL., TO RESTORE LAKE PONTCHARTRAIN: A REPORT TO THE GREATER NEW ORLEANS EXPRESSWAY COMMISSION ON THE SOURCES, REMEDIES, AND ECONOMIC IMPACTS OF POLLUTION IN THE LAKE PONTCHARTRAIN BASIN 34-36 (Apr. 28, 1989) (showing elevated levels of five heavy metals in municipal runoff) (on file with author).

199. See Jeff Day, *States Failing in Efforts to Meet 2001 Goals, Considering New Milestones, Officials Say*, 106 DAILY ENV'T REP. (BNA), A-16 (June 4, 2010).

200. Jeff Day, *Bay Health Improved, but Recovery Requires Big Cuts in Nutrients, Sediment, CBF Says*, DAILY ENV'T REP. (BNA), Dec. 2010.

201. *Id.* The Foundation also predicted that the Bay's score of 50 would further improve “on its own” to a score of 70.

202. In this and to this extent, I join my academic colleagues cited *supra* note 85.

203. See U.S. GAO, DEVELOPMENT GROWTH OUTPACING PROGRESS IN WATERSHED EFFORTS TO RESTORE THE CHESAPEAKE BAY, *supra* note 84.

204. See Jeff Day, *Final Bay Restoration Strategy Will Seek Permanent Protection of 2 Million Acres*, 88 DAILY ENV'T REP. (BNA), A-5 (May 10, 2010).

205. Ian Urbina, *In Maryland, Focus on Poultry Industry Pollution*, N.Y. TIMES, Nov. 28, 2008, available at http://www.nytimes.com/2008/11/29/us/29poultry.html?_r=1&pagewanted=all (last visited Jan. 20, 2011); NAT-

tions to the “maximum extent practicable.”²¹² The Obama Administration has upped the ante, calling for nationwide reduction practices to include retention ponds and pervious pavement²¹³—the same kind of low-tech, common-sense measures one finds best for farm sources. It has, as expected, run into a firestorm of now-familiar objections (“bad science,” “one-size-fits-all,” “unfunded mandate”) from municipalities and real estate developers, equally wedded to the status quo.²¹⁴ The leverage, however, remains.

Point sources. Relatively small gains seem available from existing point sources that, industrial and municipal combined, account for about 20% of Bay loadings (19% of nutrients, 21% phosphorous).²¹⁵ Nearly all are on individual permits (over 92% in Maryland and Pennsylvania, as compared to 84% nationally), and they have been squeezed down on a great deal over the past 20 years—in part, in order to avoid having to do something serious about non-point sources.²¹⁶ There may not be a lot more juice left, at least not at acceptable price tags. On the other hand, as noted earlier, their adherence to best technology standards is a statutory requirement, and technology improves every year. As Region III’s letter of September 2008 to its Chesapeake Bay Program partners concluded, “requiring further point source upgrades to the limits of technology is an option of last resort” and is “avoidable if the Bay partners use our creative energies to deliver sufficient nonpoint pollution reduction commitments.”²¹⁷ Avoidable, perhaps, but available and still, apparently, from the states’ perspective, a path of least resistance.

Compliance. Greater compliance with existing permits, on the other hand, holds promise, and for the current EPA it is not just lip service. The Administrator has stated enforcement—code word “accountability”—to be

a centerpiece of her approach to all environmental law,²¹⁸ and the Chesapeake Bay has received priority attention. A 2010 EPA document, entitled *Progress in Chesapeake Bay Enforcement*, covering 248 facilities in the region, identifies 73 enforcement actions since 2009, leading as of April 2010 to 10 civil settlements and 36 administrative orders, \$7.2 million in penalties, and \$731 million in new controls, and taking some 2,100 pounds of nutrients and 82 million pounds of sediments out of the environment.²¹⁹ None of this solves the problem, of course, but if one throws in the deterrent effect of these actions on other point source dischargers, it is not just whistling Dixie.²²⁰

Trading. EPA and others project further gains to be made from nutrient trading regimes, already experimenting their way forward in several states including Maryland, Pennsylvania, and Virginia.²²¹ Indeed, a mandatory trading program was a centerpiece of the Cardin bill.²²² The prospect is not without promise, nor problems. Proponents are undoubtedly correct that, all things equal, it is better to invest in least-cost abatement measures that may be encouraged through trading. Existing regimes allow trading of nutrient and sediment credits between point sources, so long as existing technological requirements are not compromised²²³ and both entities are under permit for the pollutants at issue.²²⁴ Point-to-point trading, then, is a tool, if a limited one, for meeting Bay region water quality standards beyond BAT, including those imposed on point

212. 33 U.S.C. §1342(p).

213. See Linda Roeder, *EPA Cites Stormwater Runoff as Leading Agency Regulatory Priority*, 41 DAILY ENV’T REP. 1191 (May 28, 2010) (identifying “green infrastructure” approaches). See also Memorandum of James A. Hanlon, Director, EPA Office of Wastewater Management to Water Management Division Directors, “Revisions to the November 22, 2002 Memorandum” Establishing Revisions to the November 22, 2002 Memorandum, “Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs,” Nov. 12, 2010 (relating stormwater runoff to quantified parameters and TMDLs).

214. See Susanne Pagano, *Real Estate Interests, Cities Urge Caution as EPA Looks to Overhaul Stormwater Rules*, 41 ENV’T REP. 220 (Jan. 29, 2010).

215. See Chesapeake Bay Program Phase 4.3 Watershed Model, Sources of Phosphorous Loads to the Bay (2009), http://www.chesapeakebay.net/status_phosphorusloads.aspx?menuitem=19801 (last visited Jan. 21, 2011); *id.* Sources of Nitrogen Loads to the Bay, http://www.chesapeakebay.net/status_nitrogensources.aspx?menuitem=19797 (last visited Jan. 21, 2011).

216. See EPA Permit Compliance Systems, Percentage of Facilities Covered by Current Permits in Maryland, Dec. 2000-Dec. 2003; EPA, Permit Compliance Systems, Percentage of Facilities Covered by Permits in Pennsylvania, Dec. 2000-Dec. 2003.

217. Letter from Donald Welsh, *supra* note 92, Enclosure A, Response to Questions Directed to EPA Region III. With two exceptions. Municipal and some industrial, e.g., pulp and paper, loadings of nutrients and phosphorus remain high—a fact that has led the Natural Resources Defense Council and other environmental groups to petition the Agency for tighter technology controls for municipal dischargers. NRDC, PETITION FOR RULEMAKING UNDER THE CLEAN WATER ACT: SECONDARY TREATMENT STANDARDS FOR NUTRIENT REMOVAL (Nov. 27, 2007), http://www.iawpca.org/about/govt_affairs/2007-11-27nrdcprpt.pdf.

218. See Linda Roeder, *EPA Administration Tells House Committee Agency Will Refocus on Water Enforcement*, *supra* note 10.

219. U.S. EPA, “Progress on Chesapeake Bay Enforcement,” Apr. 28, 2010, available at <http://www.epa.gov/compliance/civil/initiatives/progress-chesapeakebay.html> (last visited June 21, 2010).

220. Keeping the pressure on enforcement, the Waterkeeper Alliance has petitioned EPA to revoke Maryland’s NPDES authority for failure to sanction permit violators. See Kathy Lundy Springuel, *Waterkeeper Groups Petition EPA to Revoke Maryland’s Authority Over Discharge Permits*, 233 DAILY ENV’T REP. (BNA), A-10, Dec. 8, 2009.

221. U.S. EPA, AN URGENT CALL TO ACTION, *supra* note 39, at D-43 (Ohio), D-40 (Maryland), D-34 (Connecticut) and D-45 (Pennsylvania) (describing state trading initiatives); *Virginia Allows Treatment Plants to Purchase Credits*, 39 DAILY ENV’T REP. (BNA), A-11 (Mar. 2, 2010); Va. Dept. of Env’t Quality, Get the Facts: Nutrients and the Chesapeake Bay, <http://www.deq.state.va.us/export/sites/default/info/documents/GetTheFacts-NutrientsAndCB.pdf>; W.Va. Dept. of Env’t Protection, Nutrient Credit Trading in West Virginia’s Potomac River Watershed, <http://www.wri.nrcce.wvu.edu/programs/pwqb/pdf/brochure%20draft%20100119.pdf>. See also Cy Jones et al., How Nutrient Trading Could Help Restore the Chesapeake Bay, Working Paper, World Institute Resources Institute, Feb. 2010. Described summaries of nutrient trading programs in Maryland, Pennsylvania, and Virginia by Mr. Jones and colleagues are also available at <http://www.wri.org/publications/author/334>.

222. See S. 1819 at (i)(6).

223. See 33 U.S.C. §1314(a), requiring the application of technology and water quality derived limits in permits. Trades allowing a point source to discharge above a technology-based standard are not allowed under current law.

224. EPA guidance is cautious in this regard. See U.S. EPA, Water Quality Trading Toolkit for Permit Writers, Appendix B: U.S. EPA Office of Water, Water Quality Trading Policy, B-4, available at http://www.epa.gov/npdes/pubs/wqtradingtoolkit_app_b_trading_policy.pdf (“All water quality trading should occur within a watershed or a defined area for which a TMDL has been approved.”; “EPA supports trading that involves nutrients (e.g., total phosphorus and total nitrogen) or sediment loads.”). *But see id.* (“EPA supports cross-pollutant trading for oxygen-related pollutants where adequate information exists to establish and correlated impacts on water quality.”).

sources by TMDL allocations. Limited as it is, it can be quality-controlled.

The tricky part comes with nonpoint sources, which at present are under no obligation to play ball. Phase two of nutrient trading schemes, then, allows point sources, primarily publicly owned treatment works (POTWs), to in effect pay nonpoints to play, buying from farm sources nutrient reductions that they would otherwise have to achieve through more costly mechanical or biological treatment.²²⁵ Trading certainty for uncertainty is a risky deal, and these trades raise real-world challenges with measuring, monitoring, corroborating, and backstopping the success of on-farm practices across the landscape. The Chesapeake Bay TMDL tries to circumscribe these risks with detailed criteria for trading schemes,²²⁶ but significant slippage, as with all diffuse-source trading programs, will be inevitable. A Delmarva Poultry Institute newsletter recently described nutrient trading as “a program [that] has been created to help farmers to earn money while providing polluters the opportunity to increase their pollution to the Chesapeake Bay.”²²⁷ One can see why such a proposal, even if somewhat mischaracterized by the chicken growers, draws skeptics.

There is also a question of fairness. One might ask why municipal residents, many of them at the low end of the wage scale, already paying for sewage treatment of their own wastes, should have also to pay farm sources not to pollute.²²⁸ The agriculture sector includes some of the wealthiest (and most heavily subsidized) enterprises in America.²²⁹ Proponents point out that, with trades, at least the POTWs will pay less than they otherwise would for upgrades.²³⁰ This observation, while correct, still begs the question whether this practice is sustainable, and fair. At bottom, agriculture’s position that “if you want me to stop polluting, show me the money,” is inconsistent with every

other tenet of pollution control in the United States.²³¹ Even a cursory look at the numbers shows that it will not be possible to curb agricultural discharges in a comprehensive way, either by best management practices, fertilizer caps, runoff discharge fees, or other needed measures if the supposition is that they will be funded by the public taxpayers, no matter what the vehicle.²³² Point-to-nonpoint trading, however effective in the short run, postpones a more long-term answer.

Nonpoint-to-nonpoint trading is also mentioned, but remains an illusion unless and until controls are put on nonpoint discharges that, in turn, stimulate the trades. Without a cap, there is no trade. The prospect of such trades may, nonetheless, offer a pot-sweetener for mandatory farm practices as, through the new WIPs, they become the option of last resort. Of course, as purely nonpoint trading is approved, the potential for “gaming” the system will further increase. On the other hand, since agriculture reductions are under this scenario required, trading should help ease the blow.

Voluntary measures. Whether paid for or not, whether traded or not, voluntary abatement measures have been the hallmark of nonpoint source pollution management since 1972. Faced now with providing “reasonable assurances” that their proposed TMDL and WIP targets can be achieved, the question becomes the extent to which these measures will be seen as providing such assurance.

EPA’s directives in this regard are opaque. On the one hand, they explicitly acknowledge voluntary compliance as a part of the overall strategy, so long as it is backed by enforceable mechanisms.²³³ Which seems a challenging concept; how does one enforce voluntary?²³⁴ To complicate matters, there is little empirical evidence on the relative effectiveness of voluntary compliance schemes. Virginia, perhaps the most reluctant partner in the program, has launched an effort to identify, and prove, just how effective its voluntary measures have been.²³⁵ Pennsylvania has claimed that its voluntary measures, prompted by cash payments to farmers, have outlasted the period of the payments, leading EPA to overestimate the need to make further load reductions.²³⁶ The states’ hope, it seems clear, is that EPA will accept the voluntary-cum-cash payments in lieu of more fixed requirements.

We do not know, at a time when most states are in fiscal crises of their own, where cash payments will come from

225. Maryland, Pennsylvania, and Virginia allow point-to-nonpoint trading under varying conditions, with West Virginia soon to join. Telephone Interview with Cy Jones, Senior Associate, World Resources Institute (Jan. 14, 2011).

226. See Chesapeake Bay TMDL, “Implementation and Adaptive Management,” Section 10.1.2, 10.1.3, and 10.2, and Appendix S (“Offsetting New or Increased Loadings of Nitrogen, Phosphorous, and Sediment to the Chesapeake Bay Watershed”). Proposed safeguards include objective measures, credit calculation, verification, legal authority, and enforceability.

227. Memorandum, Questions and Answers for the “Cardin Bill,” Waterkeeper Alliance (undated) (on file with author).

228. See Kurt Stephenson et al., *An Evaluation of Nutrient Nonpoint Offset Trading in Virginia: A Role for Agricultural Nonpoint Sources?*, 46 WATER RESOURCES RESEARCH 11 W 04519 (2010).

229. For the wealth of one agricultural sector with a heavy impact on the Chesapeake, see U.S. GAO, ANIMAL AGRICULTURE, WASTE MANAGEMENT PRACTICES: A REPORT TO THE HON. TOM HARKIN, RANKING MINORITY MEMBER, COMM. ON AGRIC., NUTRITION, AND FORESTRY, U.S. SENATE 1 (July 1999) (“The production of livestock and poultry animals, also known as animal agriculture, is important to the economic well-being of the nation, producing \$98.8 billion per year in farm revenue.”). For the \$10-30 billion in direct subsidies agricultural industry receives as a whole, see Edwards, *infra* note 242.

230. Telephone Interview with Cy Jones, *supra* note 225 (taking the pragmatic portion that, since POTWs can be compelled in law to pay, better that they have the cheaper option), see *supra* note 225.

231. It is also inconsistent with the policy of Europe, where environmental programs are premised on the principle that “environmental damage should as a priority be rectified at the source and that the polluter should pay.” See Consolidated Version of the Treaty on the Functioning of the European Union, art. 191, 2008 O.J. (C 115) (47) (Sept. 5, 2008).

232. See *supra* notes 49, 50 and accompanying text.

233. See Region III letter, *supra* note 115, at 29.

234. EPA answers his question proposing, by way of example, contracts between voluntary participants and state agencies. *Id.*

235. *Virginia to Launch Nutrient Management Database*, 60 DAILY ENV’T REP. (BNA), A-12 (Mar. 31, 2010).

236. See Jeff Day, State Officials Fault EPA’s Daily Load Plan: Commission Urges State Former Deference, 87 DAILY ENV’T REP. (BNA), A-11 (May 7, 2010); Jeff Day, *State Officials Say Farmers Fear Impact of Efforts to Cut Pollution Flowing to Bay*, DAILY ENV’T REP. (BNA), 174 DEN A-8, Sept. 10, 2010.

nor how effective they will be. Over 35 years of treating nonpoint sources on a voluntary basis and watching them take water quality south, however, does offer us some clues. EPA, for its part, seems to be taking a we'll-accept-them-if-you-prove-their-effectiveness approach to voluntary measures, government financed or no. Setting aside the question of which party under these circumstances bears the burden of proof, we have the ingredients for a leveraged jawboning over these assurances in which the Agency may well accept some risk in outcomes as a price of moving forward on a cooperative basis.

Enforcement. The Chesapeake Bay Program asks states and the sectors of their economies that have long avoided CWA requirements to change deeply ingrained practices, indeed, mind-sets. As seen earlier, EPA's leverage boils down to further limits on point sources that are within its domain, and funding cuts to state water programs that fail to rise to the occasion.²³⁷ The limits of their leverage are not lost on the agribusiness community, which has taken a pugnacious, "bring it on!" stance. The Virginia Farm Bureau Federation announced that, while cleaning up the Chesapeake would be a "good thing," when you "add total maximum daily loads" and enable EPA to "regulate every molecule of water," it became "unacceptable."²³⁸ The Federation's Director of Government Affairs, added that withholding state program monies would solve nothing, and if EPA tried to impose additional consequences, "they would be tied up in litigation for years."²³⁹ Shortly thereafter, the Virginia Department of Natural Resources denied that EPA has any authority over its watershed plans at all.²⁴⁰

It is worth noting that nothing in the Cardin bill proposed to bridge this gap. The legislation was said to be modeled after the CAA state implementation plan program, but left out an important piece; under the CAA, a recalcitrant state may lose something it really cares about: highway funding.²⁴¹ These are major monies, and much beloved. While transportation is not at issue in water quality programs, the relevant federal monies here are subsidies that extend to every sector of agriculture, with a marked imbalance toward large corporations.²⁴² Setting

aside compelling economic reasons to trim this largesse, every environmental reason exists to at least condition it upon effective nonpoint pollution controls. None of this is rocket science. It is, however, political science and, beyond the controls currently mandated by a few select (and temporary) farm programs such as Swampbuster and Sodbuster, it seems beyond the legislative imagination. Not so in Europe, by way of contrast, which is now proposing to overhaul its farm support regime to insist, at the least, on nonpoint practices as a *quid pro quo*.²⁴³

All of which leaves EPA with its current statutory authority, and technical assistance from the U.S. Department of Agriculture,²⁴⁴ the power of persuasion, and the good faith of state agencies and agricultural actors who genuinely want to clean up the waters around them. The strength of this amalgam is about to be tested. One can be sure that the Administrator had this in mind when she said, in announcing the new Bay initiatives, that if they did not work, then Congress would need to act.²⁴⁵ She would be taking current law as far as it would go.

Litigation. To some, of course, she has gone too far, and it seems inevitable they will challenge the entire process in court.²⁴⁶ Of the many comments to EPA on the draft TMDL and WIPs, the prize for Best Available Lawyering may go to those of the "Federal Water Quality Coalition," which, in Orwellian fashion, turns out to be the American Coke and Chemicals Institute, the American Forest and Paper Association, American Iron and Steel Institute, American Petroleum Institute, Ford Motor Company, Freeport-McMoRan Copper and Gold, Mid America Crop Life Association, National Association of Homebuilders, International Council of Shopping Centers, Real Estate Roundtable, and the Weyerhaeuser Company.²⁴⁷ Although some of these industries have little or no presence on the Bay, they all obviously fear the precedent. They can equally obviously afford a lawsuit, and their joint comments lay out, in effect, a soup-to-nuts complaint.

Among the highlights: no de facto submission or rejection of a state TMDL having been made, EPA has no authority to issue a Bay-wide TMDL or sub-TMDLs for most Bay watersheds²⁴⁸; nor has it the authority under

237. See *supra* note 124 and accompanying text.

238. Jeff Day, *Virginia Farm Bureau Leaders Oppose New EPA Plans for Restoration of Bay*, 231 DAILY ENV'T REP. (BNA), A-10 (Dec. 4, 2009).

239. *Id.*

240. Jeff Day, *States Uncertain Over Who Controls Bay Watershed Implementation Plans*, 175 DAILY ENV'T REP. (BNA), A-10, Sept. 13, 2010 (quoting Antony Moore, Virginia's Deputy Secretary of Natural Resources for the Chesapeake Bay).

241. Section 179 of the CAA imposes automatic highway sanctions for specified failures by states, 42 U.S.C. §7509; Section 100(m), 42 U.S.C. §7410m of the Act allows EPA to impose additional sanctions for other, less serious violations.

242. Chris Edwards, "Agricultural Subsidies," The Cato Institute, June 2009: The U.S. Department of Agriculture distributes between \$10 billion and \$30 billion in cash subsidies to farmers and owners of farmland each year. The particular amount depends on market prices for crops, the level of disaster payments, and other factors. More than 90 percent of agriculture subsidies go to farmers of five crops—wheat, corn, soybeans, rice, and cotton. More than 800,000 farmers and landowners receive subsidies, but the payments are heavily tilted toward the largest producers.

(Citations omitted.)

243. Stephen Gardner, *European Commission Proposes Tailoring Farm Subsidies to Environmental Goals*, DAILY ENV'T REP. (BNA), A-5, Nov. 22, 2010.

244. Technical assistance, and moral support, from NRCS personnel is a major, underlooked ingredient of successful nonpoint controls. As for funding, the Department has not only added major monies to the Chesapeake pot but, to Upper Mississippi River states as well. See News Release, "Agriculture Secretary Vilsack Announces Major Initiative to Improve Health of Mississippi River Basin", Sept. 24, 2009. The targeting of these monies for pollution abatement is sure to draw fire from communities accustomed to assistance on other fronts.

245. Jeff Day, *Jackson Says Agency May Need Additional Authority of Guide Bay Restoration Efforts*, 2 DAILY ENV'T REP. (BNA), A-6, Jan. 6, 2010.

246. As this Article goes to press, the American Farm Bureau Federation has filed suit challenging, inter alia, EPA's authority to issue a Bay-wide TMDL. *Chesapeake Bay: Farm Groups Sue EPA Over Pollution Diet*, GREENWIRE, Jan. 11, 2011.

247. Federal Water Quality Coalition, Comments of Federal Water Quality Coalition on the Draft Chesapeake Bay Total Maximum Daily Load (undated) (on file with author, who regrets omitting the names of several other members, including the Western Coalition of Arid States).

248. *Id.* at 2.

§1313(d) to require implementation plans, which under §1313(e) are delegated exclusively to the states²⁴⁹; nor does it have similar authority under §117(g), which disavows conferring additional regulatory authority on the Agency²⁵⁰; nor has it the authority to exige directly, or by threat of sanctions on point source dischargers, particular TMDL or WIP conditions²⁵¹; nor has EPA demonstrated that attainment of Bay water quality standards is achievable²⁵²; nor, if achievable, would not result in widespread adverse economic and social impact²⁵³; nor was EPA's modeling accurate²⁵⁴; nor was the 45-day opportunity to review and comment on a TMDL this complex adequate in law.²⁵⁵ Other, more particularized comments, such as those of the Virginia Municipal Stormwater Association (which states it supports "good science and good public policy . . . including a balanced approach to environmental and fiscal sustainability") challenge EPA's assumptions and analysis in local watersheds.²⁵⁶ EPA may have bought time with the states by the acceptance of less than convincing WIPs, but not so with a wide range of industries.

There may be more issues, and it will be years before they play out in district and appellate courts, but a few observations at this early juncture may be timely. One would be that, while no state has authority to prepare or fail to prepare a TMDL for the Bay, the Chesapeake Bay Agreement states collectively do, and they have called for and agreed to the TMDL and WIP processes. How else, further, could one ever address the whole? As for the implementation plans, EPA has been careful to design them under its §117(g) duty to "ensure" that implementation plans are developed and begun; it has now done that, not through asserted regulatory authority (unless one views the entire program as "regulation") but, rather, through state planning processes. While the Agency has no power to require specific measures, it does have §117(g) responsibility to see that these plans are adequate to meet the agreed-upon Bay reduction targets (the stated purpose of the WIPs)²⁵⁷ and, under §1313(d), to determine if proposed load reductions are adequate to meet water quality standards.²⁵⁸ It is true that the Agency has not conducted a formal "use attainability" analysis, but the entire Chesapeake Bay Program can be viewed as just such an analysis; as a practical matter, the affected states have been committed to attaining their own designated use, and reduction targets, for decades.

Which leaves the more technical and procedural arguments, whose resolution may be as much determined by

the perspective of a particular court as by the merits. Pollution control by ambient quality standards has never been easy, nor particularly successful in any medium: water, air, or soils.²⁵⁹ The demands on baseline information, measurement, monitoring, and scientific interpretation are voracious, as are the costs of maintaining a bureaucracy to carry them out. The conclusions reached are always questionable, and where the consequences are significant, they are always questioned. This was a primary reason that federal pollution control programs migrated over time to technology-based controls.²⁶⁰ The arrival of computer modeling has added a useful tool, but the assumptions of the model and its factual inputs can still be flyspecked with ease, and can always be improved. The more complex and multifaceted the model, the more avenues to attack it under the banner of "sound science"—hence the vigorous endorsement of sound science by development and discharge industries. See their responses to climate change.²⁶¹ This so, it is impossible to predict outcomes. Some industries, through the courts, managed to ward off BAT standards—a more straightforward process—for years.²⁶²

The procedural complaint, for its part, insufficient time for comment, may turn on whether the court considers only the formal comment time frame or, rather, the full year of development accompanying the TMDL and WIPs that was done in a remarkably transparent manner with 18 public hearings, 14,000 public comments, web-based updates, "webinar" information sessions, live-time Q&A, and a running conversation with the states.²⁶³ The charge may also be blunted by EPA's continuing update of the TMDL as errors are identified and more information is available. All the frustrations of dealing, in law, with a moving target like "adaptive management" are here. As is the legal question whether, because the process is iterative, it is "final," and even if considered "final," is more than a target and a plan, i.e., ripe for review at this time.²⁶⁴ It is the development community's turn, for a change, to complain of the new jurisprudence postponing judicial review to later points down the line when, as environmentalists often

249. *Id.* at 3.

250. *Id.* at 5-6.

251. *Id.* at 7.

252. *Id.* at 13.

253. *Id.* at 15.

254. *Id.* at 19.

255. *Id.* at 17.

256. Virginia Municipal Stormwater Association, Comments of the Virginia Municipal Stormwater Association, Inc., regarding EPA's Draft of Chesapeake Bay, TMDL and Virginia's Draft Chesapeake Bay TMDL WIP, 1 (undated) (on file with author).

257. See *supra* note 95.

258. See §1313(d) ("a level necessary to achieve the applicable water quality standards").

259. See Houck, *supra* note 12.

260. See *Weyerhaeuser v. Costle*, 590 F.2d 1011, 9 ELR 20284 (D.C. Cir. 1978).

261. See Republican political strategist Frank Luntz, Memorandum on climate change to party members ("The scientific debate is closing [against us] but not yet closed. There is still a window of opportunity to challenge the science"). See National Environmental Trust, *Luntz Speaks*, <http://www.luntz-speak.com/memo4.html>.

262. See Houck, *supra* note 12, at 10538, 10539.

263. See TMDL Executive Summary, *supra* note 179, at ES-1. See U.S. EPA, Chesapeake Bay TMDL Events, 2010 Webinar Series, http://www.epa.gov/reg3wapd/tmdl/ChesapeakeBay/CalendarOfEvents_2009.html?tab1=1&tab3=12 (last visited Jan. 21, 2011) (archiving audio of webinar series from 2009 and 2010 for future, public access). See also Jeff Day, *EPA Website Will Track Development of Watershed-Wide Nutrient Limit for Bay*, 161 DAILY ENV'T REP. (BNA), A-8 (Aug. 24, 2009).

264. See *Ohio Forestry Association v. Sierra Club*, 523 U.S. 726, 28 ELR 21119 (1998) (forest plan not ripe for review); *Atlanta Coalition on the Transp. Crises v. Atlanta Regional Commission*, 559 F.2d 1333, 9 ELR (5th Cir. 1979) (ditto highway plan); *Norton v. Southern Utah Wilderness Alliance*, 124 S. Ct. 2373, 34 ELR 20034 (2004) (public lands plan).

contend, the actual courses of action, if not their details, have been fixed.²⁶⁵

In brief, litigation over the Chesapeake Bay Program will occur in all probability on several fronts, for several years. Depending on the model challenges, load targets may change, but they will in any event change, iteratively, with or without the lawsuits. Other procedural issues may delay the process,²⁶⁶ but the WIPs to which all participating states have now subscribed will go forward. So long as Virginia, for example, has committed to take certain steps with certain classes of dischargers, that would seem to be dispositive unless that commitment failed to comply with state law. What happens were Virginia, again by way of example, under whatever political or industry pressure, to leave the reservation entirely is a question that one hopes will never arise. Or, rather, *some* hope does not arise.

Forecast. It is true, we are on the cusp of the most ambitious water restoration ever attempted in America, perhaps the world.²⁶⁷ New age, however, does not make old age go away. Blowback from the expected quarters is as severe, even extreme, as it was to the TMDL regulations back in the year 2000. Farm and point source industry lobbies and their representatives in Congress, having vilified

EPA and its pollution control initiatives for years (“hostile agenda,”²⁶⁸ “ruling with an iron grip”),²⁶⁹ now declare their constituents to be “paranoid”²⁷⁰ and “scared out of their wits.”²⁷¹ Small wonder.²⁷²

The wonder is, rather, that the Agency has stood its ground, providing direction and even cover for willing Chesapeake Agreement partners. If they are not blocked by legislation, litigation, budget cuts, appropriations riders, investigations, oversight hearings, defecting states, or compromises traded for progress on other Administration priorities, they have a fair chance of bringing back the Bay.²⁷³ If they succeed, and once tools are in place we should know what progress is being made relatively soon, they could set a model for other ambitious cleanups on every coast, lifeless waters caused by agricultural practices hundreds of miles away. To many, this is a prospect of great hope. To others, a prospect of great trepidation.

The die is now cast. We may restore the Chesapeake or we may not, but at least, at last, in this one place, for at least this moment, we can say that we really tried.

265. See Oliver A. Houck, *How'd We Get Divorced: The Curious Case of NEPA and Planning*, 39 ELR 10645 (July 2009).

266. Also lurking in the background is the question whether the Chesapeake program guidance developed over the past 18 months required notice-and-comment rulemaking under the Administrative Procedure Act. 5 U.S.C. §553. The requirement applies to actions that have “the force and effect of law” to include restrictions on private interests by “constricting the discretion of agency officials.” See *Appalachian Power Co. v EPA*, 208 F.3d 1015, 30 ELR 20560 (D.C. Cir. 2000); *National Mining Ass’n v Jackson*, No. 10-1220 (RBW) (D.D.C. 2011). On the other hand, it does not apply to “interpretative rules” or “general statements of policy,” 5 U.S.C. §553(b), to include a wide range of administrative communications intended to clarify and harmonize a program; indeed, that is why it is called guidance. Which do we have? Viewed as a whole, the Chesapeake program will restrict private interests at a later date, when TMDL load allocations are assigned and state WIPs are implemented, but that is not the point here; rather, it is whether EPA guidance to the states setting out the Agency’s expectations went over the line. TMDLs themselves are not rulemaking (although their approvals are federal actions subject to judicial review); they implement duly promulgated CWA regulations, including the requirement for “reasonable assurances.” Given the size of the endeavor, however, the Chesapeake TMDL was first issued in draft and went through extensive public comment and participation before it was finalized, as did the WIPs. Which reduces the question to the particulars of EPA’s framework guidance, including the letters from Region III, that were in several aspects (to begin with, deadlines) undeniably prescriptive. Of course, the participating states were asking for guidance and EPA was careful from the start to frame it under both TMDL and WIP authority. States, further, had the option of developing WIPs that met the Agency’s expectations via one of several strategies (i.e., for reasonable assurances and for nutrient trading regimes, both of which left room for alternative implementation schemes), or living with alternative load allocations (i.e., “backstops”) imposed by EPA (this was, after all, a federal TMDL) on point sources. Viewed as part of the TMDL, and as a statement of expectations and options to meet TMDL goals, the WIP guidance should pass muster.

267. In the United States, only the Everglades restoration comes close, and it, too, has been in controversy for the last 40 years. See also the restoration of the Sacramento Delta, well into its third decade of turmoil.

268. See *supra* note 148.

269. See Cook, *supra* note 175.

270. Jeff Day, *State Officials Say Farmers*, *supra* note 236 (quoting Dan McNutt, manager of the Lancaster County Conservation District, Pennsylvania).

271. *Id.* (quoting Sen. Mac Middleton (D-Md.)).

272. For some, one suspects beating back the Chesapeake program is not the goal; it is beating back EPA. See Quinlan, *supra* note 176, quoting the American Farm Bureau Federation President’s address to its annual meeting: “Our message to the new Congress is clear; it is time to stop the EPA.” See also industry comments, *supra* note 238. Many of these industries have nothing to do with the Chesapeake and little to do with TMDLs. They are after bigger game.

273. Of these threats, funding cuts for the Chesapeake Bay Program led by the House, and Administration compromises seem the most likely. EPA-bashing rhetoric in the House mounts. See Katie Howell, *Barton Vows Monthly Probes of EPA if Chosen as Energy Chairman*, E&E DAILY, Dec. 7, 2010 (“EPA economy-strangling regulation is our foremost concern”); Press Release, *Lucas to Chair Agriculture Committee in Next Congress*, Dec. 8, 2010 (castigating “[EPA]’s fondness for overreaching regulations that defy Congressional intent”). As former EPA Administrator William Reilly under President George H.W. Bush recently observed, “the prospects of a standoff, or a decision to defund the agency in a number of areas, I think are pretty large. Looking ahead, it’s going to be a ship to steer.” Juliet Eilperin, *Jackson Says She Will Not Back Down Despite Opposition*, WASH. POST, Dec. 1, 2010. For a ray of hope, see Paul Quinlan, *Va. Republican Introduces Bill to Boost Restoration Budgeting*, MGMT., ENVTL. & ENERGY NEWS, Jan. 12, 2011 (H.B. 258 introduced by Rep. Rob Whitman (R-Va.)).