

An Environmental Understanding of the Local Land Use System

by John R. Nolon

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Summary

This Article is adapted from Chapter Three of JOHN R. NOLON, *PROTECTING THE ENVIRONMENT THROUGH LAND USE LAW: STANDING GROUND*, published in 2014 by ELI Press. The book updates and expands on the author's previous work, describing in detail how localities are responding to new challenges, including the imperative that they adapt to and help mitigate climate change and create sustainable neighborhoods. This Article outlines a comprehensive framework for understanding how traditional local land use authority can be used to preserve natural resources and environmental functions at the community level.

I. Planning, Zoning, and Land Development Basics

A. *The Basics of Land Use Planning*

Lawyers and planners who understand the workings of the local land use system will find many ways to use it to protect environmental resources. Stripped to its essentials, the local land use system starts with the adoption of a comprehensive plan, moves to zoning that conforms to and implements that plan, and supplements these with land development regulations that can protect the environment. Environmentally inclined municipalities initiate their environmental law initiatives by inserting an environmental protection component in their comprehensive plan. This provides legal support for adopting zoning districts, such as a conservation residential zone, to protect natural resources. Subdivisions and site plans, or land development regulations, can be amended to prevent soil erosion and sedimentation or to protect habitats and wetlands. Local planning boards can use informal protocols in reviewing land development proposals to encourage developers to adjust their proposals to avoid environmental degradation.

This Article is for those who wish to take advantage of traditional land use techniques such as land use planning, zoning, and land development regulations to protect the environment. It also orients the reader to a number of more innovative and flexible techniques that can be used to designate and protect vulnerable environmental areas and assets to achieve the proper balance between conservation and development. This balance has been one of the key objectives of the American land use system from its inception over 100 years ago.

B. *The Rapid Rise of Zoning*

At the beginning of the 20th century, cities needed new techniques to control private development to prevent fires, promote public safety, and protect property values. In New York City, Fifth Avenue merchants were upset with the encroachment of other land uses, such as garment factories and offices, into their high-end retail neighborhood. There was broad sentiment that the city was becoming too densely settled, largely because of the spread of skyscrapers. In 1913, the city appointed a commission to investigate a completely new idea: the division of the city into land use districts.

Based on the commission's recommendations, the nation's first comprehensive zoning ordinance was adopted by New York City in 1916. It divided the city into multiple land use districts, or zones. These districts allowed private landowners to use their land only for the purposes permit-

The Root of American Planning

"Modern man did not have to allow the blind chances of nature to determine the course of evolution; the use of his intelligence could shape its direction." This was, in a nutshell, the root assumption of the American urban planning movement as it took form at the turn of the century. For decades thereafter, zoning was thought to be the prime instrument of that movement.

SEYMOUR I. TOLL, *ZONED AMERICAN* 18 (1969), *partially quoting* OSCAR HANDLIN, *THE AMERICAN PEOPLE* 333 (1963).

ted in the applicable district. This protected Fifth Avenue retailers, for example, from the incursion of garment factories—an industrial use—in that retail zone.

This concept spread quickly. In 1922, the U.S. Department of Commerce issued a model law called the State Zoning Enabling Act.¹ The intent of the Act was to be considered and adopted by state legislatures to make it clear that the adoption of zoning laws is within the legal authority of municipal governments. By the mid-1920s, nearly 400 local governments had adopted comprehensive zoning laws. All 50 states adopted some variation of this statute delegating authority to municipalities to regulate private land uses. Over time, these statutes have been changed; today the states vary in how broadly they empower local governments, to what extent they guide them, and when they foreclose local action through preemptive, statewide laws. From the beginning, however, the state enabling acts made it clear that one of the purposes of zoning is to achieve the most appropriate use of the land, which—then and now—includes protecting the environment and the natural resources it harbors.

C. Land Development Regulations and Plan Consistency

Developments that conform to zoning standards must also comply with the specific provisions of local site plan and subdivision regulations, and other land development regulations applicable to specific projects. Developers submit current proposals to local planning boards, which review

The Scope of Modern Zoning

Zoning now includes regional housing needs and indirect taxation, provision for scenic vistas and conservation of special habitats, among a host of current applications. Many of these new zoning issues have only the remotest connection to the division of a community into districts that would preserve the health, safety, and welfare of local inhabitants.

Peter L. Abeles, *Planning and Zoning*, in *ZONING AND THE AMERICAN DREAM: PROMISES STILL TO KEEP* (Charles M. Haar & Jerold S. Kayden eds., 1989).

them, applying these standards and then approving the project proposals, with or without conditions, or denying permission to build for failure to comply with these legislated land use controls.

In most states, zoning and other land use regulations must conform to a locally adopted comprehensive plan, which is not itself regulatory, but charts the desired course of land development and conservation for the future. Localities vary greatly in how much detail they place in their comprehensive plan, how many topics it covers, and how often and comprehensively it is updated. Communities that wish to adopt aggressive environmental protections are well advised to put the rationale for such regulations in their comprehensive plans.

II. Land Use Plans and the Environment

A. The Comprehensive Plan

The comprehensive plan creates a blueprint for the future development and preservation of a community. It is the policy foundation upon which communities are built. A truly comprehensive plan guides not only the physical and economic development of the municipality, but also accommodates social, environmental, and regional concerns.

The planning process offers an opportunity to look broadly at local programs such as housing, economic development, provision of public infrastructure and services, as well as environmental protection. The plan explains how these issues relate to one another by presenting a "big picture" look at the community currently and articulating goals for the future. The local comprehensive plan contains a number of long-term goals, shorter-term objectives related to each goal, strategies to achieve each objective, and implementation techniques for carrying out each strategy. These components are then used to guide the local legislature in adopting zoning and land use regulations and planning capital budgets for infrastructure needed for future development. Private sector developers benefit when plans clearly articulate the desires and aspirations of a community, create a community that is well engineered, environmentally sound, and livable, and chart a path that they can reliably follow.

B. Development of the Plan

The local comprehensive land use plan is developed pursuant to state statutory authority and practices vary from state to state. One typical pattern is for the local legislative planning body to appoint either the planning board or a special board or committee to develop a proposed plan for adoption, ultimately, by the legislative body. Good planning practice incorporates significant public participation in the process of developing the plan. Public participation is important to gather intelligence on local conditions and issues and to build a constituency for support of the plan after its adoption. At a minimum, the public must

1. DEP'T OF COMMERCE ADVISORY COMMITTEE ON ZONING, A STANDARD STATE ZONING ENABLING ACT (1926).

be invited to at least one public hearing to provide input and guidance to policymakers. The traditional approach of public hearings simply to garner input is no longer the accepted norm in practice. Modern planning processes seek to engage public input from the start of the planning process through, for example, facilitated workshops, surveys, and questionnaires, much of it done through social media methods.

C. Content of the Plan

State statutes vary widely in terms of directing the content to be covered in local plans. To guide the setting of goals and objectives and help select needed strategies and implementation techniques, several things are needed. Most plans contain:

- an inventory of existing land use conditions;
- an analysis of public facilities such as sewer and water, roads and other transportation networks, educational facilities, emergency services, parkland and other recreation areas, and other utilities, commercial and industrial facilities;
- and, importantly, a description of natural resources and an assessment of environmental conditions, including agricultural, historic, cultural, coastal, and other local issues of importance.

Existing housing resources and future housing needs should be discussed in conjunction with a consideration of population, demographic, and socio-economic trends including future projections, with an eye toward providing needed affordable housing. Economic and job development, of course, are key concerns of all comprehensive plans, which focus on current commercial land uses, market opportunities, and prospects for growth in the commercial sector. The plan should take into account regional environmental, residential, and commercial needs and the existing plans of neighboring jurisdictions and programs of state and federal agencies; local plans should describe how the community will coordinate with these outside agencies to leverage needed assets and ensure that greater than local concerns are considered.

It is easy to see, given the variety of topics that a plan can cover, how it can be used to achieve balance between development and conservation as a matter of policy. Those favoring more emphasis on protecting environmental assets must lobby for the inclusion of environmental content in their local plans, including the identification of critical landscapes and the protection of vital environmental functions.

D. Environmental Benefits of Plan Consistency

State law generally requires consistency between the comprehensive land use plan and zoning regulations. Since the requirement that zoning be “in conformance” with the

plan is statutory, the failure of a zoning law to conform to the plan is beyond the authority of the locality to adopt, or *ultra vires*. Land use regulations are often challenged as “not in accordance with a comprehensive plan” and such a charge, when well founded, renders the challenged regulation invalid.²

When there is a written, up-to-date, and detailed plan, the court is best able to discern whether a challenged regulation is a permissible exercise of local authority. These plans are given great weight, and courts are hesitant to invalidate a regulation adopted to implement such a plan. There is seldom doubt that a regulation that accomplishes an express objective of the comprehensive plan “substantially advances a legitimate public objective,” the judicial standard by which challenged regulations are measured.³ Some courts do not hold municipalities to a literal interpretation of the “in accordance with a comprehensive plan” requirement. For example, in *Bone v. City of Lewiston*, the Idaho Supreme Court noted that to do so would elevate the comprehensive plan and land use map to the status of a zoning ordinance and that it would be illogical to conclude that a projected pattern of land use identified in a plan equates to an entitlement for a property owner with respect to present day zoning.⁴ In *Haines v. City of Phoenix*, an Arizona court stated that when considering whether a rezoning was consistent with the general plan, it will look for evidence that the legislative body made a proper determination that the rezoning was in “basic harmony” with the plan.⁵

By working to insert environmental goals, objectives, strategies, and implementation measures in the local comprehensive plan, environmental advocates set the stage for the adoption of protective land use regulations. First, they build a constituency for such measures by working together on plan amendment. Second, they draw the connections between environmental protection and the public welfare. Third, they provide the legal foundation needed to support environmental laws when they are challenged. When such laws conform to and carry out provisions of the comprehensive plan they are more likely to be upheld as valid exercises of the local police power.

E. Periodic Review

A municipality may engage in comprehensive planning at any time and it may review and amend the plan whenever necessary. Although many plans contain long-term strategies for community development and conservation, comprehensive plans need to be revisited as change occurs. Planners recommend reviewing the plan every five to 10 years and updating it as necessary. State statutes may require localities to set forth in the comprehensive plan the intervals at which the plan shall be reviewed. The Ameri-

2. *Elysian Heights Residents Association, Inc. v. City of Los Angeles*, 227 Cal. Rptr. 226 (Cal. Ct. App. 1986).
3. *See Pennsylvania Transp. Co. v. City of New York*, 438 U.S. 104 (1978).
4. *Bone v. City of Lewiston*, 693 P.2d 1046 (Idaho 1984).
5. *Haines v. City of Phoenix*, 727 P.2d 339 (Ariz. 1986).

can Planning Association recommends that local governments employ benchmarks as part of the periodic review process to ensure accountability in planning.

Tending to the comprehensive plan is a key component of local environmental advocacy. The rate of change in local landscapes and the degradation of environmental functions can be quite rapid in developing communities. Monitoring these changes and suggesting intelligent strategies in response to them helps support arguments that the environmental component of the comprehensive plan should be amended and then followed by corresponding changes in local land use regulations: zoning or land development regulations.

F. Area Specific Plans

Municipalities may adopt other special purpose land use plans such as neighborhood plans or “specific plans” covering a discrete area, open space plans, coastal zone management plans, transit area plans, and disaster mitigation plans. These plans may be separate from comprehensive land use plans because they are adopted pursuant to a federal or state requirement as a prerequisite for funding or other benefits. However, these plans should be considered part of the ongoing comprehensive planning process, with area-specific plans fitted into the comprehensive planning of the community. Otherwise, it is difficult to integrate and implement the community’s strategy for balancing conservation and development.

A modern manifestation of this exists as a coastal community on a passenger rail line with two transit stations conducts area-specific planning. As part of the federal Coastal Zone Management Act, the community is urged and incentivized to adopt a coastal plan, sometimes called a local waterfront plan, to provide for development in a way that protects coastal ecosystems and accommodates projected sea level rise and storm surges.⁶ This may require more zoning control and less density in the coastal neighborhoods. At the same time, the regional Metropolitan Planning Organization, established under federal transportation law, may encourage the creation of discrete station area plans demonstrating how increased density can be accommodated to provide greater transit ridership and design a walkable community. When transit stops are located in coastal areas, these seemingly conflicting objectives must be coordinated.

Proceeding with these separate neighborhood plans without gauging and anticipating their collective impact on the local population and economy misses many opportunities to optimize both special plans and the overall comprehensive plan for the community. It may be possible to protect property rights of coastal owners by transferring existing development rights from vulnerable beachfront parcels to underutilized downtown lots. There are many land use techniques available to accomplish this result, but they would not be considered unless the special plans are

tied into and considered in the context of the larger comprehensive plan.

G. Intermunicipal, Regional, and Interstate Planning

Because critical landscapes often transcend local, sometimes even state, political boundaries, planning must be intermunicipal, regional, and, in some cases, interstate. Fortunately, the law of most states provides many mechanisms for environmental advocates to use to achieve comprehensive landscape protection.

Local governments are authorized in nearly every state to cooperate to carry out a number of municipal responsibilities, including planning. In the land use context, this provides an opportunity to plan for and manage more than local issues. It also presents an opportunity to maximize scarce fiscal resources. Local governments with a shared watershed, for example, may opt to develop joint comprehensive land use plans or establish a joint overlay zoning district imposing uniform development restrictions there. Municipalities may decide to jointly hire a full-time code enforcement officer to monitor conditions and enforce land use restrictions in that watershed.

Compact planning, a method of voluntary area-wide planning, has met with some recent success. Through the compact process, participating local governments agree that they will prospectively adopt local plans and plan amendments consistent with a county, regional, or state plan. Ultimately, the participating municipalities agree on the direction for growth and preservation in the region, and to conform their actions to advance the shared vision and goals. States may specifically allow for compact planning and may provide technical assistance and incentives for voluntary participation.

Congress may enact interstate compacts to empower two or more states to join planning efforts to protect sensitive natural areas that cross state boundaries. The Lake Tahoe Regional Planning Agency is an example of an effort resulting from an interstate compact between California and Nevada, created to develop and enforce (through the adoption of regulations) a regional plan that covers land use, transportation, conservation, recreation, and public services and facilities. The broad authority granted to the Lake Tahoe Regional Planning Agency over the power of individual local governments in the area was upheld by the California Supreme Court in *People ex rel. Younger v. County of El Dorado* on the basis of the significant state interests in protecting and preserving the Lake Tahoe region.⁷

III. Zoning and the Environment

A. Definition and Legal Authority

Zoning separates a community into districts and specifies the land uses and building dimensions permitted in

6. Coastal Zone Management Act, 16 U.S.C. §1451 (2012).

7. *People ex rel. Younger v. County of El Dorado*, 487 P.2d 1193 (Sup. Ct. Cal. 1971).

each zone. Zoning was originally designed to separate incompatible land uses and to protect the general population from the perils of fire, unsanitary conditions, unsafe buildings, and uncontrolled traffic. In response to modern challenges, zoning regulations are used to regulate the redevelopment of urban centers, manage suburban sprawl, prevent visual blight in rural areas, and protect threatened natural resources and critical environmental areas.

Local governments have no inherent power to adopt local laws of any kind. They are not sovereign entities, but legal creatures of their states, dependent on state granted charters or state adopted laws that delegate specific power to them. In most states, municipalities are authorized by state law to adopt zoning regulations. This delegated authority is found in provisions of the zoning enabling act in each state, most of which are patterned after the model act promulgated by a federal commission as discussed above.⁸ These statutes authorize local governments to protect the health, safety, morals, and general welfare of the community by regulating land development. Among the purposes for which zoning can be adopted is to provide for the most appropriate use of the land, a purpose that is frequently used to justify the adoption of local environmental laws to protect resources and assets.

Power to Protect the Physical Environment in New York

Local power to protect the physical environment in New York principally derives from the New York Municipal Home Rule Law, §10, which details the general powers of local governments to adopt and amend laws. Section 10(1)(a)(1) provides that “every local government, as provided in this chapter, shall have power to adopt and amend local laws not inconsistent with the provisions of the constitution or not inconsistent with any general law, [for] . . . the protection and enhancement of its physical and visual environment.”

N.Y. MUN. HOME RULE LAW §10(1)(a)(1) (McKinney 2014).

Despite the common source of local zoning law authority, there is great variety in terminology and practice encountered from state to state, even from locality to locality in individual states. The form of municipal government adopted in each state varies depending on the customs of those who settled the territories and the date of their statehood. In some states, counties have been given zoning authority. In other states, counties do not exist. In Colorado, for example, there are “home rule” cities and counties, which have vast authority to create both local land use processes and standards, as well as “statutory” cities, townships, and counties, which have much less legal flexibility and must follow the structure of state statutes.

What municipalities are called, whether they have charters containing land use powers, and what is contained in the statutes that provide them their basic authority differ in both kind and degree. Boroughs may exist here, villages there; towns in one state may be called townships in others. The power of cities may vary depending on their

size and classification. Regardless of the variations, all zoning laws contain standards that dictate what, where, and how building occurs on the land. The owner of a parcel of land consults the zoning map, which is adopted as part of the zoning ordinance, finds the location of her property, notices that it is in a designated zoning district, such as a single-family residential, one acre zone, and then consults the texts and tables of the ordinance to find the dimensional—and perhaps environmental—requirements that govern construction on her land.

The enabling statutes require that local zoning regulations be made in accordance with a comprehensive plan and allow them to accomplish a number of objectives including conserving the value of buildings; maintaining the character of zoning districts; facilitating the provision of transportation, water systems, sewage treatment, schools and parks; lessening traffic congestion; preventing overcrowding; providing adequate light and air; and containing damage from fires, floods, and other dangers.

The local legislative body is authorized to divide the community into zoning districts. The zoning ordinance sets forth land uses and the intensity of development allowed within each zoning district. Permitted uses, special permit uses, and accessory uses for each district are specified. Local governments are empowered to regulate lot sizes, the height and size of buildings, the percentage of building lots that may be occupied, development densities, open space set-asides, and the location and use of buildings for retail and wholesale trade, industry, residence, or other purposes. New York’s highest court has stated that “the decision as to how a community shall be zoned or rezoned, as to how various properties shall be classified or reclassified, rests with the local legisla-

tive body; its judgment and determination will be conclusive, beyond inference from the courts, unless shown to be arbitrary.”⁹ Where this kind of flexibility exists, local governments can create land uses, lot sizes, building standards, and landscape protection standards for the specific purpose of protecting environmental assets such as wetlands, watersheds, habitats, and ridgelines.

Municipal zoning authority can be used to preserve open space and protect natural resources.¹⁰ Zoning districts can be established specifically to protect environmentally sensitive areas. Conservation districts, with boundaries encompassing such areas, can prohibit land uses that are harmful to natural resources and threatened wildlife. By superimposing an overlay district over existing zoning districts, additional restrictions and incentives can be added to protect critical environmental areas. Supplemental zoning and land development regulations

9. *Rodgers v. Village of Tarrytown*, 302 N.Y. 115 (1951).

10. See JOHN R. NOLON, *PROTECTING THE ENVIRONMENT THROUGH LAND USE LAW: STANDING GROUND*, Ch. 5 (ELI 2014) [hereinafter *STANDING GROUND*].

8. DEP’T OF COMMERCE ADVISORY COMMITTEE ON ZONING, *A STANDARD STATE ZONING ENABLING ACT* (1926).

often include stormwater management standards, erosion and sedimentation controls, and use restrictions limiting excavation, tree harvesting, or other activities potentially harmful to the environment.¹¹

Lot coverage and density restrictions can be incorporated into zoning regulations to preserve open space and critical landscapes. Lower density development can be achieved by requiring landowners to exclude environmentally sensitive areas, such as steep slopes and wetlands, from density calculations. Lot coverage restrictions, which limit how much of a specific parcel can be covered by structures or impervious surfaces, such as roads and parking areas, can improve on-site water filtration and help to eliminate the potential for polluted runoff. Height and architectural requirements can be calibrated to preserve scenic views and ridgelines, and preserve the character of the surrounding area.

B. *Examples of Local Zoning That Protects the Environment*

Municipalities across the nation are incorporating natural resource preservation principles into their zoning ordinances. They are not doing so uniformly, but their collective progress is impressive. Some local legislatures describe the protection of the natural environment as a specific purpose of zoning. Localities may create open space in zoning districts by adjusting applicable density, lot size, and setback restrictions. For example, conservation zoning districts permit only private land uses that are compatible with the natural environment, while agricultural zoning districts preserve agricultural land for farming purposes and open space.

Municipalities in several states have identified environmental protection as a purpose or goal of their zoning regulations. A purpose of the Durham County, North Carolina, zoning ordinance, for example, is to promote the health, safety, and general welfare of the residents of the city and county by conserving land and water resources, providing adequate light and air, and preventing overcrowding of land and undue concentrations of population.¹² The zoning ordinance of the city of Manhattan, Kansas, includes in its statement of purpose a specific reference to the conservation of natural resources, including open space preservation.¹³

In Pennsylvania, the township of West Manchester amended its single-family residential district regulations to require open space preservation in undeveloped areas. Before amending the ordinance, the local legislature prepared maps showing potential future development under the existing conventional zoning. This exercise, often described as a “build-out analysis,” illustrated the great amount of existing open space and farmland that would be lost under the present zoning ordinance. In addition, the legislature mapped anticipated open space preserva-

tion “to show landowners and developers exactly what was envisioned: interconnected open spaces crossing parcel lines.”¹⁴

In Santa Monica, California, one of the purposes of the zoning regulation is to protect and enhance the quality of the natural and built environment, and to ensure adequate park and public open space.¹⁵ Each of the city’s zoning districts has certain property development standards. These standards include maximum unit density, lot coverage, building height, minimum lot size, setback requirements, and building spacing, as well as a requirement for open space. For example, in the Ocean Park residential zoning district there is a requirement that at least “one hundred square feet per housing unit of usable common open space [be] accessible and available to all project residents for outdoor activities.”¹⁶ Development in any of the city’s residential districts must provide “usable” common open space, private open space, or both.

Zoning Can Exclude Vulnerable Lands From Development

The zoning commission in New Milford, Connecticut, amended its zoning to exclude all wetlands, watercourses, and steep slopes from the calculation used to determine the minimum lot area required for development. Landowners sued, claiming that such a provision lacked a rational connection with legitimate local police power objectives. Pointing to language in the state of Connecticut’s zoning enabling statute that permits municipalities “to encourage the most appropriate use of the land” through zoning provisions, the court determined that the amendment had a “reasonable relationship to the legitimate goal of balancing development and conservation.”

Harris v. Zoning Comm’n of the Town of New Milford, 259 Conn. 402 (2001).

The zoning regulations of the town of Wallingford, Connecticut, require “that existing trees are to be preserved to the maximum extent possible.”¹⁷ Trees and landscaping are to be preserved and provided under the town’s regulations “to reduce excessive heat, glare, and accumulation of dust; to provide privacy from noise and visual intrusion; and to prevent the erosion of the soil, excessive run-off of drainage water, and the consequent depletion of the ground water table and the pollution of water bodies.”¹⁸

Conservation district zoning is used to carry out local environmental objectives. In Cumberland, Maryland, the Conservation District regulations provide that “no structure shall be erected, nor shall any material or equipment be stored, nor shall any fill be placed, nor shall the elevation

11. See *id.*, ch. 4, for specific examples of these regulations.

12. DURHAM CITY-COUNTY, N.C., UNIFIED DEV. ORDINANCE §1.2.1.

13. CITY OF MANHATTAN, KAN., ZONING ORDINANCE §2-101.

14. Richard Arendt, PlannersWeb, *Open Space Zoning: What It Is and Why It Works*, <http://plannersweb.com/1992/07/open-space-zoning-what-it-is-why-it-works/> (last visited Apr. 8, 2014).

15. SANTA MONICA, CAL., ZONING ORDINANCE §9.04.02.020(b), (d).

16. *Id.* §9.04.08.50.060.

17. WALLINGFORD, CONN., ZONING ORDINANCE §7.2(E).

18. *Id.* §6.14(A).

of any land be substantially changed” except for certain permitted uses.¹⁹ These include agricultural, horticultural, and forestry uses; public and private parks; recreation areas; historic areas; conservation areas; and other similar uses employing open land with open structures, gardening, and outdoor plant nurseries. All residential uses are prohibited in the zoning district.

In Cheltenham Township, Pennsylvania, a Soil Conservation overlay district was created to protect steep slopes from inappropriate development and excessive grading, and to permit and encourage the use of these areas for open space purposes. Among the many objectives of this regulation is to “permit only those uses in steep slope areas that are compatible with the preservation of existing natural features . . . by restricting the grading of steep slope areas,” and to protect individuals and adjacent landowners in the township from the possible harmful effects of inappropriate grading and development on steep slopes.²⁰ Permitted uses in this zoning district are limited to passive recreational activities, wildlife sanctuaries, game farms, pastures, crop cultivation, and related uses. In Wells, Maine, a coastal community, a Resource Protection District was created to protect and preserve fragile environmental areas from intrusions that would upset ecological systems, or create potential public health or safety problems.²¹ Passive recreation is a permitted use in the district, while aquaculture, municipal facilities, piers, docks, and wharves are also permitted, subject to site plan approval.

Putnam Valley, New York—Preservation District (PD)

Land within the PDs is primarily to be used for open space purposes, or very low density/intensity recreational purposes. The purpose and intent of the PD is to:

Preserve, protect, and enhance the value of natural resources in all respects including topographical and geological features, vegetation, wildlife, watersheds and wetlands, areas of scenic beauty, and other land and community resources whose retention is necessary for the continued maintenance of the quality of the environment, and to [d]iscourage development on land with ecologically important resources, land subject to flooding, areas with excessive slopes, or other land features that could, if not properly protected, endanger human life or property.

PUTNAM VALLEY, N.Y., ZONING CODE §65-11(A).

comprehensive plan that identify environmental concerns and delineate the zoning and other land use regulations that are needed in response.

In most states, the power to amend the zoning ordinance and change district lines, or the use designations in the zoning map, provide a degree of flexibility in adjusting land use law to local changes and the need for new or different land uses. Amendments are tested by essentially the same standards that courts apply to determine the validity of the zoning ordinance itself: whether the new provision bears a reasonable relationship to the public health, safety, welfare, or morals and conforms to the comprehensive plan.

The court upheld a legislative zoning change that applied to a single parcel in *Bartram v. Zoning Commission of City of Bridgeport*.²² The parcel in question was limited to residential use. The owner sought to build a drug store, hardware store, grocery store, bakeshop, and beauty parlor in a residential neighborhood removed from the nearest shopping district. The amendment was granted, challenged by the neighbors, and invalidated by the trial court. On appeal, the Connecticut Supreme Court held that the rezoning was valid, noting that the means of achieving the purposes of zoning are within the discretion of the zoning authority and not subject to review of the courts unless the authority abused its discretion; “a court is without authority to substitute its own judgment for that vested by the statutes in a zoning authority.”

The zoning change in the 1949 *Bartram* decision was innovative for its time. To alleviate downtown traffic congestion, the city council decided to allow more services and retail products in small shopping centers in residential neighborhoods, much to the displeasure of nearby homeowners. By providing local goods and services, the neighborhood became more walkable, vehicle trips and vehicle miles traveled were reduced, and air quality in the downtown improved. In today’s environment, we see such a zoning change as mitigating climate change by reducing greenhouse gas emissions, approximately 80% of which is carbon dioxide. Adjusting zoning to the realities of global warming and climate variation to mitigate its effects and adapt to its consequences is driving many zoning amendments in coastal and urban communities.

C. Zoning Amendments

Where environmental conditions in the community are worsening, local zoning can be amended. This Article discloses a number of land use regulations that have been adopted in response to environmental degradation or a growing imbalance between the forces of development and conservation. Such changes should be preceded by a community process that leads to appropriate changes in the

IV. Land Development Regulations

A. Site Plan Regulations

Local governments have authority to adopt site plan regulations governing the development of individual parcels of land. Site plan regulations involve more detail than

19. CUMBERLAND, MD., ZONING ORDINANCE §6.12.

20. CHELTENHAM TWP., PA., ZONING ORDINANCE §295-164(A).

21. WELLS, ME., ZONING ORDINANCE §145-32.

22. *Bartram v. Zoning Comm’n of City of Bridgeport*, 68 A.2d 308 (Conn. 1949).

zoning, which typically specifies permitted land uses and required lot sizes and lot coverage, and mandatory setbacks. To obtain a site plan approval, the developer must show sidewalks and utilities, roads and curbs, driveways and their intersections with streets, and, in some communities, how on-site habitats will be protected and stormwater managed. Construction cannot begin until the site plan is reviewed and approved by the locally designated review board and any required permits are issued. Site plan regulations can be written to give local boards the power to ensure that the environmental impact of site development is mitigated.

A site plan portrays in detail the relationship of structures to the parcel and its surrounding environment. Local regulations require a site plan: a drawing, prepared in accordance with local specifications, which shows the “arrangement, layout, and design of the proposed use of a single parcel of land.”²³ Proposed developments such as gas stations, drive-in theaters, office parks, condominiums, and apartment buildings are typically subject to site plan approval. Large gated communities proposed in the middle of a green field or on former agricultural land can be subject to site plan regulation if the ownership of the parcel remains in a single entity.

Localities are authorized to impose conditions on site plan approval, require the reservation of parkland or require the payment of a sum of money in lieu thereof (in some states), and require the posting of a performance bond to secure the completion of improvements, including environmental infrastructure, on the parcel. Local regulations are to specify the elements or features to be represented on site plan drawings and the standards to be applied to guide review by the planning board.

Local legislatures have considerable flexibility to regulate development through site plan review. Although site plan review is most often reserved for nonresidential or multifamily residential development, it can also be required for development proposals in floodplain zones, in areas with steep slopes, or in historic preservation districts. More stringent review procedures can be applied to applications that have major environmental impacts.

The types of information developers must submit include vehicular access, screening, signs, landscape, architectural features, location of buildings, adjacent land uses, and physical features. Local site plan regulations can require the landowner to identify wildlife species, indicate how open space or adjacent physical features will be protected, and demonstrate that the development protects the character of the community. The site contours, lighting, parking, utilities, and curbs and sidewalks are aspects of the site plan that can be designed to be environmentally friendly. A landscaping plan can require landscaping to conform to the natural environment and character of the neighborhood. Detailed stormwater, erosion, and sediment control plans may also be required.

Ultimately, the site plan application can be denied if the planning board determines that the site plan fails to meet the standards set forth in the zoning and site plan regulations. To ensure that development is carried out in accordance with an approved site plan, approval conditions may provide for inspection of the site work during construction.

Local authority to review and approve site plans may be expressly delegated through state legislation or may be deemed by the courts to be an implied power of local governments. Connecticut statutes expressly grant local site plan review and approval authority.²⁴ This state legislation provides that a site plan may be modified or denied only if it does not meet zoning, site plan, or inland wetland regulations. In Michigan and Pennsylvania, in the absence of express legislative authority, state courts have determined that local site plan review authority is implied.²⁵

Many states authorize local governments to use the local site plan review process to protect natural resources and preserve open space. Some states authorize localities to consider possible environmental and aesthetic impacts as part of the review process, while other states require local legislatures to include standards to protect the environment in site plan regulations.

Site plan regulations may require open spaces and green spaces of adequate proportions. In New Hampshire, local legislatures are authorized to provide for open spaces, as well as green spaces, in their site plan regulations. The site plan review statute authorizes local planning boards to provide for the harmonious and aesthetically pleasing development of the locality and its environs.²⁶ New Jersey's site plan statute requires local governments to adopt local standards to preserve existing natural resources on the site, and to ensure adequate screening and landscaping.²⁷ Other provisions of the New Jersey statute promote flexibility and economy in site plan layout and design.

Typically, minimum open space requirements are set forth in local zoning regulations. As part of the site plan review process, the planning board is guided by these minimum standards. Some localities, however, retain considerable discretion to determine an appropriate reservation of open space on a case-by-case basis. An East Providence, Rhode Island, ordinance requires preliminary site plans for planned unit developments to include “plans for ownership, maintenance, and preservation of” open space.²⁸ An objective of the ordinance is “to encourage the provision of open space and public access and give due consideration to the quality and design of landscaping.”²⁹ As part of the development approval process, the local legislature has authority to negotiate

23. N.Y. GEN. CITY LAW §27-a (McKinney 2014).

24. CONN. GEN. STAT. §8-3(g).

25. *Charter Twp. of Harrison v. Calisi*, 329 N.W.2d 488 (Mich. Ct. App. 1982); *Sun Oil Co. v. Zoning Bd. of Adjustment*, 169 A.2d 294 (Pa. 1961).

26. N.H. REV. STAT. §674:44.

27. N.J. STAT. ANN. §40:55D-41.

28. EAST PROVIDENCE, R.I., REV. ORDS. ch. 19, art. V, §19-364(j).

29. *Id.* §19-361(b)(7).

Environmentally Sensitive Lands Protected Under Site Plan Regulations

The site plan regulations of the town of Somers, New York, incorporate standards to encourage the preservation of the environment. In approving site plans, the regulations require that the town's planning board consider, among other matters, the effect of the proposed development on environmentally sensitive lands such as wetlands, watercourses, floodplains, aquifers, and steep slopes. The board must take into consideration the preservation of trees and existing vegetation. Site plan drawings submitted by applicants must identify certain natural features such as soil type and environmentally sensitive lands, drainage systems, and measures for controlling erosion and sedimentation. The town's conservation board, an advisory board, must also review site plans and submit its recommendations regarding the impact of the proposed development on the local environment.

SOMERS, N.Y., CODE ch. 144 (1977).

with the developer to set aside open space. Ultimately, to ensure that parts of the parcel remain "open," the developer is required to either (1) retain title and agree to preserve the open space; or (2) convey title of the open space to the locality or a nonprofit conservation organization. The ordinance further provides that any agreement to conserve open space by easement must "ensure that the open space [will] never be developed for other than the intended uses and not be built upon or developed for accessory uses such as parking or roadway."³⁰

By requiring that natural resources be depicted on site plan drawings, localities can protect these resources as part of the site plan review process. In Martin County, Florida, local regulations require that site plan drawings show the location of watercourses, water surfaces, ditches, wooded areas, swamps, marshes, wetlands, tidal lands, and mangroves. Additionally, the locations, dimensions, and areas of all land proposed to be reserved for park or playground purposes, or other public use must be represented in the site plan.³¹ According to the code of the city of Steamboat Springs, Colorado, "proposed development shall minimize its adverse impacts on the natural environment, including water quality, air quality, wildlife habitat, vegetation, wetlands, and natural landforms."³²

B. Subdivision Regulations

Subdivision regulations are similar to site plan regulations, but they apply where developers propose projects that will divide parcels of land into two or more lots for sale or development. They focus on the creation of building lots and the provision of public infrastructure to service those lots, imposing standards in addition to those found in local zoning laws. The authority that local legislatures have to enact local subdivision regulations is delegated directly under state statutes, which allow localities to designate an administrative agency to review applications from land-

owners and developers who propose the subdivision of land.

Subdivision regulations enable municipalities to control the appearance and environmental character of a neighborhood and developing community by providing criteria for design review of a proposed development. The regulations also make it possible for municipalities to articulate the standards by which public improvements in the area are to be made by examining the need for, and provision of, adequate public infrastructure, ensuring that street patterns are consistent, and making certain that local resources are available to meet community needs. Over the years, subdivision regulation has evolved from an early method of facilitating

orderly land sales to a critical land use planning and control technique increasingly used to address issues resulting from suburban sprawl, including the need to protect and preserve open space and critical environmental areas.

The authority of local governments to regulate a subdivision is well established as a valid exercise of the police power. In *Ridgefield Land Co. v. Detroit*,³³ the Michigan Supreme Court upheld a road dedication as a reasonable condition on a subdivision approval. The condition required the developer to provide streets of a certain width consistent with the city's master street plan. The dedication of streets and highways as a condition of subdivision approval was controversial, with many applicants unsuccessfully arguing that the conditions amounted to an uncompensated taking of their property. The courts were quick to uphold the subdivision review process, and the resulting conditions imposed, by focusing on the fact that these requirements were in exchange for the privilege of having the subdivision approved and the plat recorded, allowing the developer to construct and sell the proposed development.

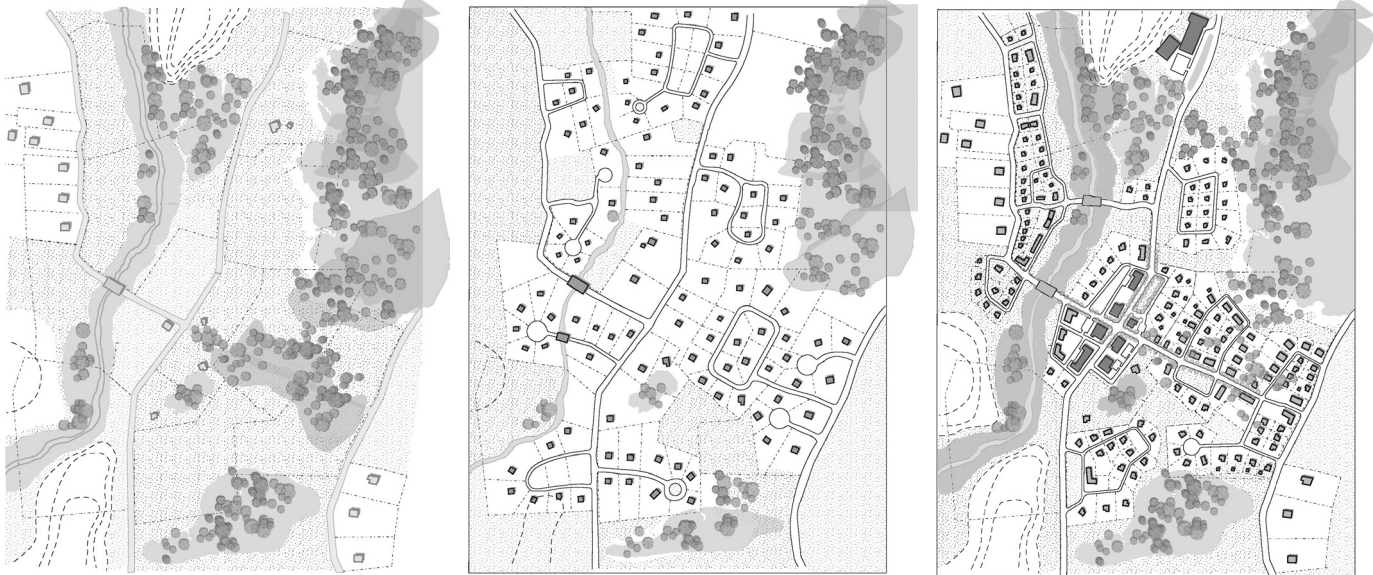
Modern issues in subdivision control focus on the conditions that the local review body attaches to a proposed subdivision approval. Such conditions might require developers to install certain public facilities, set aside certain land within the subdivision for public purposes, or control the impact of development on natural resources, including wetlands, riverbanks, slopes, or habitats. As long as environmental standards are included in local subdivision regulations to support such conditions and the conditions imposed are designed to mitigate the adverse impact of development on the community, they will likely withstand legal attack.

30. *Id.*

31. MARTIN COUNTY, FLA., CODE §33-73(d)(2)(k)-(q).

32. STEAMBOAT SPRINGS, COLO., CODE §26-65(d)(5).

33. *Ridgefield Land Co. v. Detroit*, 241 Mich. 468 (Mich. 1928).



Subdivision regulations enable municipalities to control the appearance and environmental character of a developing community by providing criteria for design review of a proposed development. Through this process, localities may ensure that new neighborhoods develop in a sustainable manner. The figures show existing (top) and typical (middle) development patterns. The image on the right shows the preferred development pattern. RPA.

C. Cluster Development and Conservation Subdivisions

As a means of promoting flexible design and development that preserves the natural and scenic qualities of open space, state statutes may authorize local governments to either request or require a subdivision applicant submit a cluster development. Under cluster statutes, development can vary from the traditional subdivision plat, where lots must conform to all the lot size and coverage requirements of zoning. A local cluster law allows the modification of the dimensional requirements set forth in the zoning law and permits lots that are smaller and buildings that are closer together to accommodate the otherwise allowable number of housing units, while conserving areas of open space within the subdivision. Clustering of residential units also may encourage interaction in the community by designing the units closer to the street, providing for public gathering places, and encouraging use of parks and community facilities as focal points in the neighborhood. Some developers see financial advantages to cluster subdivisions because, by placing the buildings closer together, there is a cost savings

on expenditures for roadways, sidewalks, sewer extensions, and other on-site infrastructure.

In response to an increasing number of housing developments in South Brunswick, New Jersey, the planning board adopted a cluster zoning ordinance that was challenged in *Chrinko v. South Brunswick Township Planning Board*.³⁴ The purpose of this provision, innovative when it was first adopted, was to provide a method of development of residential land to preserve desirable open spaces, school sites, recreation and park areas, and land for other public purposes. The plaintiffs claimed that the ordinance was enacted to benefit the developer and not to accomplish the stated purpose of the zoning enabling statute. The court held that giving developers the option of using cluster development reasonably advanced the legislative goal of providing for open space even if the developer derives an incidental benefit—such as lower costs of development for street and utility installation.

State law varies widely regarding clustering. Some states do not allow localities to cluster at all, while in others clustering can be a requirement. Certain states allow clustering only if the developer volunteers to comply, while others actively provide incentives for developer compliance. For example, some state statutes allow localities to provide applicants with an incentive for the clustering by increasing the otherwise allowable density in exchange for the provision of open space. Under this arrangement, if the developer would normally have been permitted to create 40 lots in a traditional plat, the applicant with a cluster plat may be able to site 44 lots. The local subdivision review agency, usually a planning board or commission, may impose conditions on its approval of a clustered subdivision as to use, maintenance, and ownership of the preserved open lands shown on the cluster plat.

Subdivision Defined

The New York statutes define subdivision as “the division of any parcel of land into a number of lots, blocks or sites, as specified by local ordinance, law, rule or regulation . . . for the purpose of sale, transfer of ownership or development.” State law sets forth requirements for the creation, submission, and review of subdivision plats in order to ensure that land is developed and used to benefit individual landowners as well as the community at large.

N.Y. TOWN LAW §276-278 (McKinney 2014); N.Y. VILLAGE LAW §§7-728-7-730 (McKinney 2014); N.Y. GEN. CITY LAW §§32-34 (McKinney 2014).

34. *Chrinko v. South Brunswick Twp. Planning Bd.*, 187 A.2d 221 (N.J. 1963).



Clustering as a development technique can preserve critical open spaces. RPA.

New Hampshire permits cluster development and encourages its use as an innovative land use control.³⁵ Under state granted authority, the town of Peterborough, New Hampshire, adopted a cluster development provision in its zoning code which seeks to “permit greater flexibility in the design of housing projects; discourage development sprawl; facilitate the economical and efficient provision of public services; [and] preserve more usable space, agricultural land, recreational areas, and scenic vistas.”³⁶ Peterborough permits residential clustering as a special exception in its General Residence and Rural Districts and as-of-right in its Retirement Community District. The maximum number of dwelling units permitted in a clustered development may not exceed the density allowed in the zoning district where the parcel is located. The town’s cluster development provision requires that a minimum of 30% of the total land area be dedicated as common open space. To ensure that the open space remains undeveloped, title to the open space must be deeded to a neighborhood association, the town, or to a conservation organization. The regulations require that the development be situated so as to minimize alteration of the parcel’s natural features and to protect the surrounding landscape and the character of adjacent development.

Closely related to traditional cluster subdivision, conservation subdivisions also permit flexibility of design in order to promote environmentally sensitive and efficient uses of land. They tend to focus on preservation of unique or sensitive natural resources such as groundwater, floodplains, wetlands, streams, steep slopes, woodlands, and wildlife habitats, as well as the preservation of important historic and archaeological sites. They may permit clustering of houses and structures on less environmentally sensitive soils, which will reduce the amount of infrastructure, including paved surfaces and utility easements, necessary for residential development, and reduce erosion and sedi-

mentation by minimizing land disturbance and removal of vegetation. In addition, conservation design may provide needed space for walking trails and bike paths, both for within the subdivision and connected to neighboring communities, businesses, and facilities, reducing reliance on automobiles.

V. The Review and Approval of Land Development Proposals

A. Local Land Use Boards

A local administrative body, designated by the local legislature to perform that task, must review all land development proposals. Usually a local planning board or planning commission is assigned this responsibility. As administrative agencies, planning boards are authorized to enforce standards that are adopted by the legislative body; they are not permitted to create standards themselves. Most development proposals take the form of subdivision or site plan applications by private developers and are subject to the regulations discussed in the previous section. Whether and to what extent the planning board can require land development proposals to protect on-site or nearby environmental assets and functions is dependent on whether the local legislature has adopted zoning, site plan, and subdivision regulations that contain environmental protections. If they have, then the planning board legally can require that individual projects, as a condition of their approval, be designed, located, and built to protect the environment. Similarly, when planning boards are authorized to review and mitigate the adverse environmental impacts of development proposals, they may impose conditions on their approvals that clearly lessen such impacts.

In most states, administrative agencies must have a public hearing prior to acting on a land development proposal. They must give the public notice of the hearing and organize the hearing so that all interested members of the public can be recognized and heard. Developers present the details of their project and explain how they conform to the zoning ordinance, land development regulations, and any laws adopted locally to protect the environment. Members of the public, in turn, are allowed to submit evidence of their own regarding the impact of the project on them, their neighborhood, or the environment, and offer their opinion about whether the proposal adequately meets legislated standards, including those that protect the environment.

B. Approving Projects to Protect the Environment

Based on the requirements of local regulations and the evidence provided in public meetings and hearings, the planning board has three options regarding each development proposal: approve it, approve it conditionally, or deny it. In deciding to impose conditions on development proposals, the administrative body has to be certain that it is enforcing

35. N.H. REV. STAT. ANN. §674:21.

36. PETERBOROUGH, N.H., CODE §245-26(A).

standards adopted by the local legislative body in its land development regulations and that the conditions are reasonable, meaning that they are designed to mitigate the adverse impacts of the proposal on the community or the environment.

Planning boards, operating in this fashion, “adjudicate” the matter before them. They review the standards applicable to each development, listen to the developer’s presentation and those of representatives of the public, hear the advice of their planner and attorney, review all factual evidence presented, and then make a decision. When an administrative agency adjudicates an application for approval in this manner, normally the courts presume that their actions are legal and constitutional and impose a burden on any aggrieved party who challenges the decision to prove that it is illegal; given the judicial presumption of validity, this is a difficult burden to carry. This presumption and burden apply, as well, to conditions imposed on the project to protect the environment. It is the challenger’s responsibility to show that such conditions are unreasonable.

On the other hand, when a developer is required by a planning board to give the public access to its land or to convey title of a proportion of the land to the community, courts impose a burden on the administrative agency, rather than the landowner, to show that the condition is reasonable. The courts in these instances exercise a higher level of judicial scrutiny because they want to be certain that taking such fundamental property rights is not a guise for escaping the just compensation requirement of the Takings Clause of the Fifth Amendment. Normally, to “take” an affirmative easement, giving the public the right to access private property, or to take title to land, would require the exercise of eminent domain and the payment of just compensation. Courts look more closely at such requirements in order to protect developers’ rights to compensation when fundamental property rights, such as the right to exclude the public, are taken.

The tests used when this heightened level of scrutiny is employed by the courts are whether there is an *essential nexus* between the impact of the proposed project on the community and the condition imposed, whether the condition bears a *roughly proportional* relationship to the impact of the project, and whether the agency made an *individualized determination* regarding these impacts and their mitigation by the conditions imposed.³⁷ To meet these tests, the planning commission must exercise particular care to be certain that the record of its proceedings contains facts, not allegations, and evidence, not opinions,

Higher Level of Judicial Scrutiny Applied to Certain Conditions Imposed on Development Proposals

Both *Nollan* and *Dolan* involved Fifth Amendment takings challenges to adjudicative land use exactions—specifically, government demands that a landowner dedicate an easement allowing public access to her property as a condition of obtaining a development permit . . . In each case, the Court began with the premise that, had the government simply appropriated the easement in question, this would have been a *per se* physical taking. The question was whether the government could, without paying the compensation that would otherwise be required upon effecting such a taking, demand the easement as a condition for granting a development permit the government was entitled to deny. The Court in *Nollan* answered in the affirmative, provided that the exaction would substantially advance the same government interest that would furnish a valid ground for denial of the permit. The Court further refined this requirement in *Dolan*, holding that an adjudicative exaction requiring dedication of private property must also be “rough[ly] proportiona[l]” . . . both in nature and extent to the impact of the proposed development.”

Lingle v. Chevron U.S.A. Inc., 544 U.S. 528, 546-47 (O’Connor, J.) (internal citations omitted).

which prove that the challenged condition is needed and is reasonable, applying these three tests.

Conditions of this type are said by some courts to constitute *unconstitutional conditions*. The unconstitutional conditions doctrine may even apply to concessions discussed informally in the approval process and may apply to any condition that requires a developer to pay money or surrender profits. Whether and to what extent informal discussions about project modifications and developer contributions to the community to protect the environment are subject to these tests is uncertain under current U.S. Supreme Court decisions, which are fraught with ambiguity and doctrinal inconsistency.

VI. Balancing Conservation and Development

A. Area Designation and Growth Management

The creators of the land use system in America have tried to achieve balance between growth and conservation since its inception.³⁸ The basic concept of zoning districts in the 1920s was to achieve a proper balance between commercial, industrial, manufacturing, multifamily, and single family uses at various densities to create a diversified economy, population, and environment in each locality. Beginning in the 1960s, planners and lawyers put labels on various movements in land use starting with the adoption of neo-Euclidian zoning techniques following the Korean War, the Growth Control movement of the 1970s and 1980s, Smart Growth in the 1990s and early 2000s, and, lately, Sustainable Community Development, Livable Communities, and Climate Change Management. All of

37. See *Nollan v. California Coastal Comm’n*, 483 U.S. 825 (1987); see also *Dolan v. City of Tigard*, 512 U.S. 274 (1994).

38. See *STANDING GROUND*, *supra* note 10, ch. 1.

these movements were designed to shape human settlements to balance land uses.

Each movement provided a popular label for a growth strategy that addresses concerns about evolving problems such as traffic congestion, disappearing open space, non-point source pollution, the high cost of housing, increasing local property taxes, longer commutes, consumptive energy use, increased greenhouse gas emissions, the need for resiliency in the face of sea level rise and storm surges, and the diminishing quality of community life.

In general, to accomplish balanced growth, regulators focus on two related actions. The first is the designation of discrete geographical areas into which private market growth pressures are directed. The second is the designation of other areas for recreation, conservation, and environmental protection. With regard to growth areas, land use planners and lawyers create strategies to mitigate the impacts of greater densities with green infrastructure, urban agriculture, and public amenities that make neighborhoods sustainable and livable. With respect to conservation areas, planners design methods of allowing limited development but softening it using techniques such as clustering and conservation subdivisions.

The Growth Management and Smart Growth movements attempted to reign in the ill effects of sprawling land use patterns, which result gradually as the land use blueprint contained in the municipal zoning ordinance is built out, one project at a time. If local governments are to revise their basic blueprint and accomplish smarter growth, how should they proceed? State law provides numerous planning tools for municipalities to use in designating growth and conservation areas. The principal among these, of course, is the comprehensive plan, the ideal document to account for the rational allocation of land use.

Local plans, properly drafted to balance growth and conservation, recommend and lead to the adoption of a host of land use techniques that are capable of creating smarter, less wasteful, and more economically efficient development patterns. These include, among others, the adoption of any of a number of land use controls: cluster zoning, overlay zoning, floating zones, incentive zoning, planned unit development zoning, environmental impact review, transit-oriented development, transit-efficient development, mixed use high density districts, and the transfer, purchase, and leasing of development rights. In addition, comprehensive plans can guide the creation of capital budgets that fund infrastructure (water, sewer, roads, lighting, sidewalks, green infrastructure, and schools) in areas where denser development is needed.

In *Steel Hill Development, Inc. v. Town of Sanbornton*, a developer sought to develop land in a rural community of New Hampshire for conventional and cluster housing to be sold as vacation homes—uses that were permitted by local land use controls when the land was purchased.³⁹ Prior to final approval by the town, zoning amendments placed 70% of the developer's property in the Forest Conservation District and increased the minimum lot size to six acres from less than one acre, reducing the allowable density considerably. The developer challenged the ordinance as unconstitutional because it bore no rational relationship to the health, safety, morals, or general welfare of the community in violation of the state zoning enabling statute. The developer also alleged that the zoning constituted a compensable taking and that it was a violation of the Equal Protection Clause of the Fourteenth Amendment. The district court held for the town and the court of appeals affirmed.

EPA Defines Smart Growth: “Vibrant Places to Live, Work, and Play”

Smart growth strategies create sustainable communities by siting development in convenient locations and designing it to be more efficient and environmentally responsible. Communities across the country are using creative strategies to develop in ways that preserve natural lands and critical environmental areas, protect water and air quality, and reuse already-developed land. They conserve resources by reinvesting in existing infrastructure and reclaiming historic buildings. By designing neighborhoods that have shops, offices, schools, churches, parks, and other amenities near homes, communities are giving their residents and visitors the option of walking, bicycling, taking public transportation, or driving as they go about their business. A range of different types of homes makes it possible for senior citizens to stay in their homes as they age, young people to afford their first home, and families at all stages in-between to find a safe, attractive home they can afford. Through smart growth approaches that enhance neighborhoods and involve local residents in development decisions, these communities are creating vibrant places to live, work, and play. The high quality of life in these communities makes them economically competitive, creates business opportunities, and improves the local tax base.

U.S. EPA, *About Smart Growth*, http://www.epa.gov/smartgrowth/about_sg.htm (last visited Apr. 1, 2014).

B. Balance Over Time—Phasing Public Facilities

An important dimension of local land use control is the relationship between zoning and capital improvements. Zoning prescribes where development is to go and how much of it there is to be in any given place. As land is developed according to the zoning law and map, new homeowners and business operators need public services including water, sewer, transportation, schools, libraries, firehouses, police protection, etc. The cost of most of this infrastructure is borne either by the new residents and business owners who pay the developer for installing

39. *Steel Hill Dev., Inc. v. Town of Sanbornton*, 469 F.2d 956 (1st Cir. 1972).

on-site improvements, or by the taxpayers of the community, who must bear the cost of public services. By adopting detailed plans for infrastructure construction and expansion, and coordinating such plans closely with the provisions of zoning, the community can control how much development will occur in any given part of the community and thereby limit its capital facility and public service costs, and balance growth and conservation over time.

Growth control measures, including goals, objectives, and techniques contained in the comprehensive plan—then adopted into a variety of local laws—were validated over 40 years ago by the New York Court of Appeals in *Golden v. Planning Board of Ramapo*.⁴⁰ In *Golden*, the town of Ramapo adopted a comprehensive plan and zoning law that restricted the growth of development until the town could meet the resulting increased pressure on the infrastructure. The developer plaintiffs argued that the phased development controls were intended to prohibit subdivisions and restrict population growth, which is not authorized under the zoning enabling legislation. New York's highest court disagreed, holding that "phased growth is well within the ambit of existing enabling legislation." The court further held that Ramapo was not acting to close its borders to growth, but was trying to prevent the negative effects of uncontrolled growth. It found that Ramapo's zoning was not in violation of the federal or state constitution because a rational basis for phased growth exists where "the existing physical and financial resources of the community are inadequate to furnish the essential services and facilities which a substantial increase in population requires."

In response to the same growth pressures faced by Ramapo on the east coast, the city of Petaluma, California, adopted a moratorium on development and then adopted resolutions to control the housing development growth rate. The resolutions were termed the "Petaluma Plan" and extended over a five-year period. The plan limited the number of new dwelling units to 500 per year and established a "greenbelt" to control urban expansion. The city argued that the plan was intended to ensure reasonable and orderly development over the five-year period while the petitioner claimed that the actual purpose of the plan was to close city borders to unwanted growth. In *Construction Industry Ass'n of Sonoma County v. City of Petaluma*, the landowners claimed that the plan was arbitrary and unreasonable and in violation of the Due Process Clause of the Fourteenth Amendment.⁴¹ The Ninth Circuit Court of Appeals held that the ordinance was a valid exercise of the police power. The court noted that "public welfare" was broad enough to cover "Petaluma's desire to preserve its small town character, its open spaces and low density of population, and to grow at an orderly and deliberate pace."

Gradual Growth Validated by Courts

The city of Livermore, California, enacted an ordinance that conditioned the issuance of residential building permits on the availability of educational, sewage disposal, and water supply facilities. In *Associated Home Builders of the Greater Eastbay, Inc. v. City of Livermore*, developers challenged the constitutionality of the ordinance claiming that it sought to stop population growth within the city. The superior court agreed with the developers and issued a permanent injunction. The Supreme Court of California reversed and held the ordinance was valid. The court noted that the test is not whether there is a compelling state interest, but rather if the ordinance is "reasonably related to the welfare of the region affected by the ordinance." Because the developer-plaintiffs did not prove that the ordinance lacked a reasonable relationship to the regional welfare, the court could not find the ordinance to be unconstitutional.

Associated Home Builders of the Greater Eastbay, Inc. v. City of Livermore, 557 P.2d 473 (1976).

The decisions in *Golden*, *Petaluma*, and *Livermore* show that timed and sequential growth ordinances will be upheld as long as they are within the authority of enabling legislation, serve to promote the public welfare, possess legitimate features designed to permit orderly growth, and do not give rise to unconstitutional exclusion. Within the ambit of the public welfare are restrictions aimed at promoting orderly growth, a rural environment, a small town atmosphere, and conservation of natural resources. Decisions such as these, however, give rise to the question of whether regional or state planning should be utilized to control and direct urban growth. The *Petaluma* opinion points out that if every municipality in the region surrounding Petaluma were to adopt a plan such as the Petaluma Plan, the impact on the housing market would be substantial. The court in *Ramapo* pointed out that decisions regarding growth control should not be made by the courts but by the state through statewide and regional planning.

C. Environmental Impact Review

In some states, local governments are required to conduct environmental reviews prior to the adoption of their comprehensive plans, zoning, and other land use regulations. Some of these states also require that the environmental impact of significant land development proposals be reviewed by local agencies before they are approved. The states requiring this separate level of review include California, Hawaii, Massachusetts, Minnesota, New York, and Washington. The California and New York statutes require local land use agencies to consider alternatives to proposed projects and to consider and impose mitigation conditions on the development to protect the environment on and around the affected site.

40. *Golden v. Planning Bd. of Ramapo*, 285 N.E.2d 191 (N.Y. 1972).

41. *Construction Indus. Ass'n of Sonoma County v. City of Petaluma*, 522 F.2d 897 (9th Cir. 1975).

For states that do not have such requirements, the *Growing Smart Legislative Guidebook*, published by the American Planning Association, recommends that local planning agencies be required to conduct an “environmental evaluation” in which they consider and evaluate the environmental impacts of their comprehensive plans before the plans are adopted officially.⁴² In South Carolina, local governments may adopt local laws that require impact reviews of locally reviewed projects before they are approved.⁴³

D. Incentive Zoning

Under statutes in some states, local legislatures may allow developers to build at greater densities than allowed under existing zoning in exchange for public benefits such as the preservation of open space. The town of LaGrange, New York, for example, awards a 40% density bonus when a developer promises to preserve 80% of a site for farming purposes.⁴⁴ The New York statute also allows communities to receive cash payments in exchange for the zoning incentives awarded to a developer.⁴⁵ This allows localities to use the cash to achieve the public benefit directly. The community is then able to purchase development rights, or conservation easements, on valuable open space land using the cash contributed by a developer who has been granted zoning incentives to build in an appropriate location that can absorb the development impacts.

The city of Suffolk, Virginia, uses incentive zoning to conserve natural resources. Located in the southeast corner of the state along the James River, the city contains extensive woods, lakes, rivers, and rolling terrain. Under Suffolk’s incentive zoning ordinance, developers may receive density bonuses—in some instances up to 140% of the existing density—in exchange for providing a variety of public amenities. Density bonuses may be provided for the creation of public parks; the preservation of open space, agricultural land, or critical environmental areas; the construction of retirement housing; the redevelopment of existing commercial strip centers; the construction of traditional neighborhood development; or clustering. Determination of the density bonus is based upon a formula established under the city’s Unified Development Ordinance.⁴⁶

Intermunicipal Incentive Zoning

In two neighboring communities in New York, incentive zoning was used to encourage development in appropriate locations while protecting valuable farmland. The village of Warwick agreed to annex land in the adjacent town of Warwick, leaving the town’s three acre single-family zoning in place. The village’s zoning law would be amended, under this proposal, to provide incentive zoning, up to eight dwelling units per acre, on the annexed land. In exchange for this bonus density, developers would contribute \$25,000 per unit of density increase to a trust fund, jointly maintained by the village and the town. Sixty-five percent of the fund would benefit the village, allowing it to extend its public water and sewer system into the annexed land and to build and operate needed urban parks. Thirty-five percent of the fund would be spent in the town to purchase development rights on farmland, supplementing a \$9.5 million fund created by the town through the issuance of municipal bonds for the purchase of open space. Both communities mutually benefit from the conservation and development activities made possible by this intermunicipal incentive zoning arrangement.

WARWICK, N.Y., ZONING CODE §164-47.4.

E. Overlay Zoning

Overlay zoning is a flexible zoning technique that allows a municipality either to encourage or to discourage development in certain areas. An overlay zone is defined as a mapped overlay district superimposed on one or more established zoning districts. A parcel within the overlay zone will thus be simultaneously subject to two sets of zoning regulations: the underlying and the overlay zoning requirements.

The overlay district is most often thought of, and is sometimes defined, as a technique for conserving a fragile natural resource area such as a pine barren, wetland, watershed, or tidal basin. Notwithstanding, overlay districts can be used for identifying areas for development and providing incentives or additional standards to encourage growth there. The two forms of overlay zoning can be used in tandem. For example, the locality can adopt a conservation overlay district in one or more environmentally constrained areas and a development area overlay district in a transit station neighborhood to provide for greater density and more cost-effective development patterns. A simple strategy for balancing development and conservation in a community is to identify one or two conservation overlay zones and one or two development overlay zones and implement them at the same time.

Albuquerque, New Mexico, created a Historic Overlay Zone and an Urban Conservation Overlay Zone as a means of preserving areas that have high artistic value. Areas in the Historic Overlay are suitable for preservation for historical, architectural, or cultural reasons. Areas in the Urban Conservation Overlay Zone have “distinctive characteristics that are worthy of conservation.”⁴⁷ For both types of overlay districts the ordinance requires that the city council identify the area’s distinctive characteristics

42. AMERICAN PLANNING ASSOCIATION, *GROWING SMART LEGISLATIVE GUIDEBOOK* (2002) [hereinafter *GROWING SMART*].

43. An in-depth consideration of the legal authority and processes involved in environmental review under the law of several states may be found in *STANDING GROUND*, *supra* note 10, Ch. 9.

44. LA GRANGE, N.Y., CODE ch. 240, art. III, §240-31.

45. See N.Y. TOWN LAW §261-b (McKinney 2014); N.Y. VILLAGE LAW §7-703 (McKinney 2014); N.Y. GEN. CITY LAW §81-d (McKinney 2014).

46. See SUFFOLK, VA., UNIFIED DEV. ORDINANCE §31-409.

47. ALBUQUERQUE, N.M., ZONING CODE §14-16-2-28(C)(1).

and create general preservation guidelines. Specific development guidelines must be adopted by the landmarks and urban conservation commission, which must also issue a certificate of appropriateness before any development activity begins.

Upland Preservation Overlay Zone

The Upland Preservation Overlay district adopted by Brookfield, Wisconsin, is intended to preserve "all significant woodlands, wildlife habitat areas, areas of rough topography and related scenic areas." In addition to maintaining "the natural beauty of the city," the overlay is intended to control erosion and sedimentation and maintain water quality. The ordinance contains a conservation deed restriction requirement for subdivision plats prohibiting the erection of structures, the removal of vegetation, and any filling or excavating of land within the overlay, which runs with the land in perpetuity.

BROOKFIELD, WIS., MUN. CODE §17.96.

Limington, Maine, includes an Endangered Species and Critical Areas Overlay in its zoning ordinance to protect plants, fish, and animals in areas identified by the state as habitat for endangered species and for certain waterfowl, wading birds, and shorebirds, as spawning areas for Atlantic salmon, and as deer wintering areas.⁴⁸ Except for non-intensive recreational uses, new structures and uses within the overlay require a conditional use permit. A report by a wildlife biologist on the probable effects of the proposed use on habitat and species may be required as part of the permit application.

In *Franchise Developers, Inc. v. City of Cincinnati*, the Supreme Court of Ohio upheld the denial of a permit for a Wendy's restaurant in a commercial neighborhood designated for preservation and enhancement.⁴⁹ The city council had adopted an overlay zone, called an Environmental Quality District, with special standards designed to prevent businesses from locating in designated urban neighborhoods where the characteristics of the environment are of significant public value and are vulnerable to damage by development permitted under conventional zoning. The court found support for the denial in the city's adopted Urban Design Plan, which provided that fast food restaurants were not appropriate in this district. By reading the underlying zoning provisions, the standards of the Environmental Quality District, and the adopted plan together, the court found that the property owner was put on notice of the restriction and that the restriction, plan, and ordinance accomplished a valid public purpose of preserving the quality of this urban neighborhood.

Alachua County, Florida, designated the Cross Creek area as a "special study area." The county commissioners subsequently adopted an amendment to the Alachua County Comprehensive Plan creating specific develop-

ment guidelines for the area. The guidelines categorized parcels within the area as wetland zones, exceptional upland habitat zones, hammock zones, or active use zones. Specific development requirements were created in each zone. In *Glisson v. Alachua County*,⁵⁰ affected property owners challenged the regulations arguing that the county was exercising eminent domain under the guise of its police power. The court held that the regulations were not facially unconstitutional and did not constitute a taking because landowners were not denied all beneficial use of their land, and the amendment was a valid exercise of the police power to address conservation concerns.

F. Planned Unit Development Zoning

Planned unit development (PUD) zoning provisions permit large lots to be developed in a more flexible manner than is allowed by the underlying zoning. PUD ordinances allow developers to mix land uses, such as residential and commercial, on a large parcel and to develop the parcel at greater densities, and with more design flexibility, than is otherwise allowed by the underlying zoning district. PUD provisions often require developers to mitigate the impacts of their projects by setting aside significant and usable open space, providing infrastructure needed to service the development, or offering other community facilities and services. PUD ordinances typically leave the underlying zoning in place and offer an alternative to landowners to develop the site in accordance with the PUD provisions.

A developing community that anticipates receiving a rezoning or site plan application for the development of a large shopping mall or discount warehouse could use a mixed-use PUD law to negotiate significant design and use changes in the development. Instead of ending up with another faceless commercial strip, the community may use its PUD provisions to provide the leverage, incentives, and processes necessary to encourage the development of a better commercial project, reinforced by the addition of some residential uses, community facilities, and attractive landscaping and building designs.

The same community, faced with the prospect of one or more large residential developments, could avoid the proliferation of single-lot subdivisions or uniform condominium developments by using PUD provisions to provide for some on-site shopping and services for homeowners. This can be accomplished by adopting a residential PUD provision that allows mixing a variety of housing types and styles with some neighborhood commercial uses. Through design flexibility and control, a sustainable neighborhood can be created, properly serviced by infrastructure and appropriately landscaped and designed to protect surrounding areas from its impacts.

An urban community could adopt a PUD ordinance as a means of attracting developers of unique large lots. By offering a mix of land uses and flexible design options, developers are free to create a project that is economically

48. LIMINGTON, ME., ZONING ORDINANCE §6.6.1.

49. *Franchise Developers, Inc. v. City of Cincinnati*, 505 N.E.2d 966 (1987).

50. *Glisson v. Alachua County*, 558 So. 2d 1030 (Fla. App. 1983).

and environmentally viable for the site. In a similar way, a rural community could adopt PUD provisions, in advance of development, as its way of indicating the areas that are appropriate for mixed-use and more intense development.

Although PUD development is designed for large-lot improvements, this does not necessarily mean that its use is limited to communities with one or more large lots that are under single ownership. The PUD provisions can be drafted to present an opportunity to the owners of several medium-sized or smaller lots to work together to combine ownership and take advantage of the PUD development options.⁵¹

G. Transfer of Development Rights

The transfer of development rights (TDR) has been used successfully, in limited instances, across the country to prevent the development of open space, foster the preservation of natural resources, and maintain the agricultural viability of farmland. Where authorized by state law to do so, localities can provide for the transfer of the right to develop property under current zoning provisions from one part of the community to another. This technique is often used to preserve critical environmental areas, farms and forests, or valuable open spaces. As of 2012, 239 communities with TDR programs have been discovered, and it is estimated that there are still more programs yet unaccounted for.⁵² Programs have been established in rural communities and in some of the country's largest cities, including New York and Chicago.

There are three basic elements to a TDR program: the sending district, the receiving district, and the TDR credits themselves. The sending district consists of the area to be protected from development. The receiving district is located where additional density can be absorbed and supported with existing or expanded infrastructure and services. The owners of parcels in a receiving district are authorized to purchase the development credits and use them to increase the density permitted on their land. The TDR credits are a legal representation of the development rights that will be severed from property in the sending district and grafted onto property in the receiving district. The TDR credits are traded in a free market, although a TDR bank may be established to facilitate exchanges. When a TDR credit is purchased from a property owner in the sending district, that property owner records a deed restriction prohibiting development on the property.

In the Long Island Pine Barrens in New York, a TDR program was created under state legislation adopted in response to bitter division among stakeholders regarding future development over the fragile Pine Barrens aquifer. The plan establishes receiving districts into which development credits may be transferred. Developers who own land in these receiving districts may purchase credits from

landowners in sending districts. Each purchased credit allows the developer to build one housing unit over that permitted by the receiving district's zoning. In this TDR program, a 52,500-acre sending district and a 47,500-acre receiving district were established that crossed the jurisdictions of three towns and two villages. The receiving areas in this program are structured to provide a demand for credits in the receiving sites that exceeds the number of credits created in the sending sites by a ratio of 2.5 to 1. This ratio was calculated to create sufficient competition to insure an active market for the development credits in the sending districts.

Where the courts broadly construe states' zoning enabling acts, local TDR programs can be established under them. Several states (*e.g.*, Florida, Georgia, Kentucky, Maryland, New York, Pennsylvania) have adopted specific TDR enabling acts. State enabling acts must be read very carefully to determine precisely how and for what purposes local TDR laws may be enacted. In *City of Hollywood v. Hollywood, Inc.*, the court found that protecting the aesthetic value of a pristine coastal area was a legitimate public purpose and that transferring the right to residential development was a reasonable method of accomplishing that objective.⁵³ A similar result was reached when the New Jersey Pinelands TDR program was attacked⁵⁴ and when a Florida TDR law was challenged.⁵⁵ An early challenge that the new TDR development pattern violated the uniformity requirement of the zoning enabling act was also unsuccessful.⁵⁶ Similarly, the court in *Fur-Lex Realty v. Lindsay* rejected a challenge that TDR constitutes illegal spot zoning.⁵⁷

TDR has also been applied to assist with the preservation of historic landmarks. In *Penn Central Transportation Co. v. New York City*, the city's landmark commission denied Penn Central's request to develop in the airspace above Grand Central terminal.⁵⁸ The city's zoning ordinance offered the terminal's owner the right to transfer the right to build over the station to nearby properties: an early TDR scheme. *Penn Central* challenged the restriction on development as a taking and argued that the grant of TDR rights did not constitute adequate compensation. The Supreme Court found that a taking had not occurred, using a multifactor balancing test for determining whether a taking has occurred. The Court has not had the opportunity to rule whether, if a taking is found, TDR credits can be considered as compensation. State courts differ as to whether TDR credits provide adequate compensation for a regulatory taking. In *Aptos Seascapes Corp. v. Santa Cruz County*, availability of such credits was found to preclude a finding that a taking occurred.⁵⁹

51. See *STANDING GROUND*, *supra* note 10, Ch. 5 (exploring means by which PUD development may be used to further the goal of carbon sequestration).

52. See ARTHUR C. NELSON ET AL., *THE TDR HANDBOOK* 131 (2012).

53. *City of Hollywood v. Hollywood, Inc.*, 432 So. 2d 1332 (Fla. App. 1983).

54. *Gardner v. New Jersey Pinelands Comm'n*, 593 A.2d 251 (1991).

55. *Glisson v. Alachua County*, 558 So. 2d 1030 (Fla. App. 1990).

56. *Dupont Circle Citizens Ass'n v. District of Columbia Zoning Comm'n*, 355 A.2d 550 (D.C. App. 1976), *cert. denied*, 429 U.S. 966 (1977).

57. *Fur-Lex Realty v. Lindsay*, 367 N.Y.S.2d 388 (Sup. Ct. 1975).

58. *Penn Central Transp. Co. v. New York City*, 438 U.S. 104 (1978).

59. *Aptos Seascapes Corp. v. Santa Cruz County*, 138 Cal. App. 3d 484, 496 (1982).

Transfer of Development Rights

In Chesterfield Township, New Jersey, for example, the TDR ordinance allows for the shifting of development pressure from agricultural, environmentally sensitive, or open space areas of the township to villages designated for growth. The program allows the township to maintain its rural character while encouraging planned development and minimizing potential conflicts between farmers and non-farming neighbors.

CHESTERFIELD TWP., N.J., CODE §130.

An Arizona court, however, held that TDR credits did not constitute compensation.⁶⁰

H. Sustainable Neighborhood Development

Sustainable development emphasizes smart growth notions that focus on the conservation of energy consumed in constructing and operating buildings and reducing carbon dioxide emissions from passenger vehicles. These objectives have become ascendant as policymakers have discovered that climate change is real, is caused in large part by contemporary human actions, and that its consequences are tangible and frightening. This realization has turned their attention to a large number of initiatives that will reduce the use of fossil fuel: solar and wind energy, geothermal facilities, and imposing greater standards of efficiency on power generation plants. Less obvious, but with great potential, are strategies to create walkable, mixed-use, compact, transit-oriented neighborhoods. The residents of such communities are responsible for much less per capita fossil fuel consumption because of the type of human settlement in which they live: their buildings are more thermally efficient and they own fewer cars, take fewer daily automobile trips, and drive many fewer miles than their suburban and rural counterparts. This has turned the attention of land use lawyers and planners to urban form as a significant element of climate change mitigation. As demonstrated above, local zoning can be amended to create the densities and mixed uses needed to support transit and to reduce car dependency. In addition, subdivision, site plan and other local land use regulations can be amended to incorporate standards and protocols that reduce vehicle miles traveled (VMT).

The larger concept into which these land use regulations fit is sustainable neighborhood development, a concept promoted by the United States Green Building Council (USGBC), the Natural Resource Defense Council (NRDC), and the Congress for New Urbanism (CNU). These organizations collaborated to develop

a green building rating system known as the Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND). This rating system contains hundreds of standards that accomplish sustainability at the neighborhood level.⁶¹ According to USGBC, the LEED-ND rating system encourages smart growth by promoting the location and design of neighborhoods that reduce VMT, where jobs and services are accessible by foot or public transit.⁶²

Since the advent of zoning in the 1920s, localities have lacked competent guidance from respected standard-setting agencies when drafting local regulations to fit their needs. Some states and professional organizations have provided guidance and technical assistance to local governments, but few have attempted to standardize the protocols that should be followed in adopting local development regulations. The need for such guidance is particularly evident in the response of localities to the complex demands of sustainable development and climate change mitigation.

The purpose of the LEED-ND rating system is to provide private developers with standards they can choose to meet to qualify for certification by USGBC's rating institute as having created sustainable development in a neighborhood context. Local governments, however, are free to use LEED-ND standards as a checklist to evaluate their comprehensive plans, zoning and land development regulations, capital budgets, and other activities to determine whether and to what extent they achieve neighborhood sustainability, and how they can be improved without imposing undue costs on the development community. Working in cooperation with USGBC and NRDC, the Land Use Law Center at Pace Law School created a Technical Guidance Manual for municipal counsel and planners to use the LEED-ND rating system as a source of best



Smart growth emphasizes strategies to create walkable, mixed-use, compact, transit-oriented neighborhoods with connected green elements. University of British Columbia, James Taylor Chair in Landscape and Livable Environments.

60. *Corrigan v. City of Scottsdale*, 720 P.2d 528 (Ct. App. 1985), *aff'd in part and vacated in part*, 720 P.2d 513, *cert. denied*, 479 U.S. 986 (1986).

61. See U.S. Green Building Council, *LEED for Neighborhood Development*, <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148> (last visited Mar. 7, 2014).

62. LEED Online, *ND-Specific Guidance*, <https://www.leedonline.com/irj/servlet/prt/portal/prtroot/docs/guid/30a0a343-df18-2d10-5a85-fe6a8528385b> (last visited Mar. 7, 2014).

practices to use in evaluating and reforming local development standards and practices.⁶³

To the extent that local governments adopt these standards, they make it easier for developers to achieve LEED-ND certification, and they promote the development of sustainable neighborhoods at the same time. Points under the rating system can be earned for projects located in neighborhoods with proper street networks, for example, and for those that provide for district heating systems. Engineering streets to ensure greater connectivity, minimizing building uses that require vehicle drive-through activity on sidewalks (like banks and fast food establishments), providing more pedestrian use and amenities, building paths for bikes and scooters, and planning energy systems at the district level are more easily accomplished if fostered by local comprehensive planning, capital spending, and land use regulations. There are dozens of standards in this rating system that apply to on-site construction methods and features that reduce energy use and increase walkability, strategies directly aimed at climate change mitigation.

The rating system requires projects to meet “prerequisites” and allocates credits for achieving certain project standards in five different categories: Smart Location and Linkage; Neighborhood Pattern and Design; Green Infrastructure and Buildings; Innovation and Design Process; and Regional Priority Credits. In the Smart Location and Linkage category, for example, the prerequisites require development within established communities and near public transit. Zoning standards and local laws that foster development in existing neighborhoods or encourage the use of distressed or underutilized older buildings or brownfields will help projects seeking certification to satisfy LEED-ND smart location requirements.

Prerequisites in a LEED-ND category called Neighborhood Pattern and Design also promote livability, walkability, and transportation efficiency, as well as communities that are physically well connected with services and amenities in the neighborhood beyond the immediate vicinity of buildings for which developers are seeking certification. Points in this category can be earned by increasing the density permitted by zoning to accommodate a transit agency’s need for riders. LEED-ND, for example, requires that projects have a minimum floor-area-ratio of .80 for commercial buildings or a minimum of seven dwelling units per acre for residential structures.⁶⁴ These standards are needed to provide sufficient ridership to support transit services. In order to provide transit services or linkages required by LEED-ND, municipalities can require developers, in appropriate cases, to provide vans or shuttles or to incorporate bus stops in their site plans. Embedded in these standards is the type of guidance municipalities need to create sustainable neighborhoods.

Localities and Developers Partner to Create Sustainable Neighborhoods

Traditionally, site plan and subdivision regulations include on-site requirements that govern street widths, pavement materials, curbs, sidewalks, and driveways, among other street features. These requirements may conflict with the development of more sustainable neighborhoods and can be altered to achieve greater compatibility with emerging sustainability standards, including reducing car dependency. Among the steps that can be taken in partnership with developers are improving street connectivity; increasing transit access; providing bicycle networks and parking; establishing street widths that enhance streetscape; installing bus stops; building walkable sidewalks and driveways; and implementing traffic-calming measures.

VII. The Sustainable Development Law Movement: Reacting to Climate Change

A. New Environmental Challenges

This Article discusses many innovative land use techniques that are being used to assure that conservation areas are designated and protected, that environmental assets are retained, and that environmental functions, vital to communities, are protected. These techniques are balanced by a host of other strategies being used today to direct development towards growth areas. Strategies that have developed as land use movements have evolved, particularly as land use officials have taken note of the serious consequences of climate change and the potential of land use law to mitigate and adapt to these consequences. These most recent influences on land use greatly favor efforts to balance growth and conservation, but in new and dramatic ways—and with a real sense of urgency. These changes are sparking a new movement toward sustainable development law and practice.

Here’s why land use matters in this new context. The principal cause of climate change is the emission of greenhouse gasses, about 85% of which are carbon dioxide (CO₂), much of which is caused by the construction and operations of buildings and land use development patterns that consume the sequestering environment and require long commutes as well as frequent vehicle trips.⁶⁵ In 2010, residential and commercial buildings accounted for 40% of CO₂ emissions released in the United States.⁶⁶ Personal vehicles are responsible for 65% of total emissions.⁶⁷ Currently, undeveloped landscapes sequester 15% of CO₂

63. See U.S. GREEN BLDG. COUNCIL, TECHNICAL GUIDANCE MANUAL FOR SUSTAINABLE COMMUNITIES 2012 (2012).

64. *Id.* at 42.

65. U.S. EPA, *Overview of Greenhouse Gas Emissions*, <http://www.epa.gov/climatechange/ghgemissions/gases/co2.html> (last visited Mar. 7, 2014).

66. U.S. DOE, *Buildings Energy Data Book: Carbon Dioxide Emissions for U.S. Buildings, by Year (million metric tons)*, <http://buildingsdatabook.eren.doe.gov/TableView.aspx?table=1.4.1> (last visited Apr. 1, 2014).

67. U.S. EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS & SINKS: 1990-2011, ES-11 (2013).

emissions.⁶⁸ Vehicle trips and miles traveled have increased dramatically in the past three decades as development patterns have spread out, consuming land at much greater rates than the rate of population growth and creating energy consumptive building types, notably large, single-family homes.⁶⁹

The U.S. population will increase by 42% between 2010-2050.⁷⁰ To house this expanding population and provide work places for them, millions of new homes and billions of square feet of non-residential development will be needed.⁷¹ It is projected that the amount of urbanized land will more than double by 2050.⁷² Because local governments control land development through legally adopted land use plans and regulations, they are integral players in the process of ensuring the sustainability of buildings and communities generally.

"If you're looking to stave off climate perturbations that I don't believe our culture is ready to adapt to, then significant reductions in CO₂ emissions have to occur right away."

Justin Gillis, *Heat Trapping Gas Passes Milestone, Raising Fears*, N.Y. TIMES, May 10, 2013, quoting Dr. Mark Pagani, a Yale geochemist who directs the Yale Climate and Energy Institute.

The increasing population will necessitate the addition of 52 million housing units, whose residents will travel to live, work, and shop in new buildings provided for them, consuming energy on-site and en route, and emitting CO₂ if they travel by car.⁷³ The construction and operation of new buildings, as well as the vehicle miles traveled by car for daily work, errands, and pleasure, will therefore account for a significant percentage increase in annual energy consumption and CO₂ emissions by mid-century. If this prospective building and traveling takes place in the spread-out settlement pattern that characterizes much of the American landscape, these new people will consume huge amounts of energy and emit enormous amounts of CO₂. The international community has agreed that atmospheric concentrations of carbon should be between 350 and 385 parts per million (ppm) to limit increases of global temperatures to no more than 1.5 to 2 degrees Centigrade. In the spring of 2013, CO₂ levels passed the 400 ppm threshold.⁷⁴ The importance of getting the human settlement dimension of climate change mitigation right and doing it now could not be greater.

B. Opportunity for Sustainable Development

Sustainable development is the key to creating buildings, neighborhoods, and communities that will help mitigate climate change. Sustainable development law and practice, largely created by local governments, focuses on shaping land and economic development to impose a lighter impact on the environment. Sustainable development uses less material, avoids consuming wetlands or eroding watersheds, consumes less energy, emits less CO₂, lessens stormwater runoff, reduces ground and surface water pollution, and creates healthier places for living, working, and recreating.

For a variety of reasons, the majority of households in America's expanding will be inclined to live in dynamic, walkable neighborhoods in urban areas.⁷⁵ Key among these shifts is the housing preference among the growing number of older households who currently live in single-family homes on individual lots. Today there are 40 million senior citizen households; by 2040 that number will swell to approximately 80 million.⁷⁶ As these senior households age, many find single-family suburban living unsuitable, and seek to move into neighborhoods where goods, services, and entertainment are nearby—places where they can live independently and age in place.⁷⁷ Sixty percent of senior citizens prefer to rent rather than buy new homes when they move, increasing the demand for rental housing—very little of which has been produced over the past 20 years.⁷⁸

As a growing number of senior citizens offer their homes for sale, the supply of single-family homes available for purchase will increase, while the demand will shrink.⁷⁹ Other newly forming households in the decades ahead will be composed of younger individuals and couples, mostly without children, who seek urban neighborhoods as well and are not inclined to purchase energy-consuming single family homes involving long commutes to employment, entertainment, and services. Only a quarter of households will still have children by 2030.⁸⁰ This imbalance in supply and demand for single-family homes will significantly reduce the market for newly constructed suburban and exurban single-family housing.⁸¹

These demographic trends are bolstered by economic realities. Subprime mortgages, involving low down payments, and flexible rate mortgages are a thing of the past.⁸² Available mortgages today generally require a 20% down payment, cash available for closing costs, and a strong

68. JESSICA SPRAJCAR, PA. DEP'T OF CONSERVATION & NATURAL RES., CREATING SUSTAINABLE COMMUNITY PARKS AND LANDSCAPES: A GUIDE TO IMPROVING QUALITY OF LIFE BY IMPROVING NATURAL RESOURCES 6 (2010).

69. REID EWING ET AL., URBAN LAND INST., GROWING COOLER: EVIDENCE ON URBAN DEVELOPMENT AND CLIMATE CHANGE 2-3 (2008).

70. U.S. EPA, OUR NATURAL & BUILT ENVIRONMENTS: A TECHNICAL REVIEW OF THE INTERACTIONS AMONG LAND USE, TRANSPORTATION, & ENVIRONMENTAL QUALITY 31-32 (2d ed. 2013).

71. *Id.*

72. *Id.*

73. *Id.*

74. See Justin Gillis, *Heat Trapping Gas Passes Milestone, Raising Fears*, N.Y. TIMES, May 10, 2013.

75. ARTHUR NELSON, RESHAPING METROPOLITAN AMERICA: DEVELOPMENT TRENDS & OPPORTUNITIES TO 2030 27-28 (2013).

76. Genevieve Giuliano, *Land Use and Travel Patterns Among the Elderly, in TRANSPORTATION IN AN AGING SOCIETY: A DECADE OF EXPERIENCE* 204 (2004).

77. *Id.*

78. Mary Umberger, *Get Ready for Great Senior Sell-Off*, CHI. TRIB., Apr. 1, 2013.

79. ROLF PENDALL ET AL., BIPARTISAN POLICY CTR., DEMOGRAPHIC CHALLENGES AND OPPORTUNITIES FOR U.S. HOUSING MARKETS 12 (2012).

80. NELSON, *supra* note 75, at 21.

81. *Id.* at 27.

82. *Id.* at 12-13.

New Americans and Sustainable Neighborhoods

A report, *America in 2013*, released by the Urban Land Institute underscores the influence that growing demographic groups in the United States—in particular Generation Y, African Americans, and Latinos—will have on reshaping urban growth patterns by spurring more development of compact, mixed-use communities with reliable, convenient transit service. On the whole, the report suggests that demand will continue to rise for infill residential development that is less car-dependent, while demand could wane for isolated development in outlying suburbs. The survey found that among all respondents, 61% said they would prefer a smaller home with a shorter commute to a larger home with longer commute. Fifty-three percent want to live close to shopping; 52% would prefer to live in mixed-income housing; and 51% prefer access to public transportation.

URBAN LAND INST., *AMERICA IN 2013* (2013), available at http://uli.org/wp-content/uploads/ULI-Documents/America_in_2013_web.pdf.

credit rating.⁸³ These changes in the mortgage market mean households seeking to purchase housing will buy smaller homes or choose to rent because they lack the cash and credit needed to qualify for a loan to purchase. The cost of transportation from home to work is beginning to rival the cost of housing in many metropolitan markets for moderate and middle-income families, further propelling households toward neighborhoods with transit or ones that are closer to employment centers.

These demographic changes mean that market forces will support the movement of future populations into urban settlements and away from single-family neighborhood living and greenfield development. This natural movement of the population away from non-urban areas will have profound consequences in terms of land use planning and zoning at the local level in remote locations. Shifting ground toward more climate and energy-friendly urban living is not a matter of social engineering through policy and legal change; it is an economic inevi-

tability. Consequently, legal strategies will reorient themselves toward creating transit-oriented developments, energy-efficient, mixed-use and compact building types, and sustainable neighborhoods. Legal techniques for remediating distressed properties, developing workforce and equitable housing, and insinuating urban amenities and excellent design in redevelopment areas will be ascendant, as will methods of redeveloping countless commercial and office buildings and strips in older suburbs.

These movements in demographics and markets have an equally significant impact on lower density communities whose challenges are changing from adapting to sprawl to becoming more efficient, low-density communities. Efficiency is integral to the sustain-

able development law movement. As population orients more toward older developed suburbs and revitalizing cities, lower density places must become more economically and environmentally efficient. This will require rethinking zoning laws that designate most of the community for single-family housing and reorient local officials to consider mixed-use hamlet development—including affordable housing, expansive and flexible agricultural zoning that allows owners of fertile soils to adjust to the market for local foods and farm stands, open space preservation that fosters organic carbon sequestration, and allowing a range of housing types, particularly clusters of smaller homes, suitable for retiring seniors and the needs of younger households. In short, many of the techniques discussed in this Article will be needed to respond effectively to rapidly evolving changes in climate, markets, and the environment.

83. *Id.* at 13.