


1996

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Recommended Citation

D. B. Keene, *Transportation Conformity and Land-Use Planning: Understanding the Inconsistencies*, 30 U. Rich. L. Rev. 1135 (1996).
Available at: <http://scholarship.richmond.edu/lawreview/vol30/iss4/9>

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COMMENT

TRANSPORTATION CONFORMITY AND LAND-USE PLANNING: UNDERSTANDING THE INCONSISTENCIES

*The basic problem in all environmental land use decisions is that land is a finite resource. There must be room not only for houses, shopping malls, and paper mills, but for wetlands, beaches, barrier islands, and snail darters. Industrial and economic growth are considered desirable, but so are clean air and water. Somewhere a balance must be struck.*¹

I. INTRODUCTION

Since the boom of federal environmental laws in the early 1970s, Congress, federal administrative agencies, and the states have grappled with how best to obtain the lofty goals of these laws.² As evidence of this struggle, Congress has made substantial amendments to several major environmental laws on one or more occasions in order to achieve these goals,³ and the

1. DONALD G. HAGMAN & JULIAN CONRAD JUERGENSMEYER, URBAN PLANNING AND LAND DEVELOPMENT CONTROL LAW § 13.1, at 379 (2d ed. 1986).

2. See, e.g., 16 U.S.C. § 1531(b) (1994) ("The purposes of [the Endangered Species Act] are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved. . . ."); 33 U.S.C. § 1251(a) (1994) ("The objective of [the Clean Water Act] is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."); 42 U.S.C. § 7401(b) (1994) ("The purposes of [the Clean Air Act] are—(1) to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population. . . .").

3. See, e.g., Federal Water Pollution Control Act, Pub. L. No. 92-500, 86 Stat. 896 (1972), amended by Pub. L. No. 95-217, 91 Stat 1566 (1977), renumbered by Pub.

states have followed suit in order to keep pace with the changes on the federal level. The resulting mass of state and federal environmental laws and regulations has led to a series of complex, and often confusing, layers of laws and regulations that perplex private developers, environmentalists, and government officials alike. Further, almost everyone involved in environmental regulation questions whether or not the federal environmental laws are accomplishing their lofty goals.⁴

Much of the criticism of environmental regulation has been towards its medium-specific approach, whereby the environmental law is focused to address specific media—such as air or water⁵—rather than looking at the environment as an integrated ecological system that is affected by many types of human activity.⁶ Mindful of this criticism, Congress has taken steps to integrate the planning functions of different federal agencies with the regulatory functions carried out by the Environmental Protection Agency. Unlike the duties of federal agencies to

L. No. 100-4, 101 Stat. 76 (1987) (codified as amended at 33 U.S.C. §§ 1251-1387 (1994)); Clean Air Act, Pub. L. No. 91-604, 84 Stat. 1705 (1970), *amended by* Pub. L. No. 95-95, 91 Stat. 385 (1977), *amended by* Pub. L. No. 101-549, 104 Stat. 2684 (1990) (codified as amended at 42 U.S.C. §§ 7401-7671q (1994)).

4. See, e.g., Joel B. Eisen, *Toward a Sustainable Urbanism: Lessons From Federal Regulations of Urban Stormwater Runoff*, 48 J. URB. & CONTEMP. L. 1, 86 (1995) ("To continue to view Washington as the ultimate arbiter of stormwater quality ignores the reality that in areas developing into Edge Cities, the process . . . will not take place within the confines of the federal program."); Jonathan Poisner, *A Civic Republican Perspective on the National Environmental Policy Act's Process for Citizen Participation*, 26 ENVTL. L. 53, 87 (1996) ("The typical NEPA process also fails to meet the goal of encouraging discussion about the common good, as that term is understood by advocates of deliberation."); Theodora Galactos, Note, *The United States Department of Justice Environmental Crimes Section: A Case Study of Inter- and Intra-branch Conflict Over Congressional Oversight and the Exercise of Prosecutorial Discretion*, 64 FORDHAM L. REV. 587, 595 (1995) ("Deep partisan and philosophic differences over goals and policy—within Congress and between Congress and executive agencies—have further stymied the environmental protection program."); D. Brennen Keene, *The Inconsistency of Virginia's Execution of the NPDES Permit Program: The Foreclosure of Citizen Attorneys General From State and Federal Courts*, 29 U. RICH. L. REV. 715, 716 (1995) ("[T]he goal of public involvement is lost in the confusion caused by this poorly drafted and astonishingly imprecise statute." (quoting *E. I. duPont deNemours & Co. v. Train*, 541 F.2d 1018, 1026 (4th Cir. 1976), *aff'd in part and rev'd in part*, 430 U.S. 112 (1977)).

5. See *supra* note 2.

6. See Fred P. Bosselman & A. Dan Tarlock, *The Influence of Ecological Science on American Law: An Introduction*, 69 CHI.-KENT L. REV. 847, 863 (1994); A. Dan Tarlock, *Local Government Protection of Biodiversity: What Is Its Niche?*, 60 U. CHI. L. REV. 555, 555-57 (1993).

prepare environmental impact statements as required by the National Environmental Policy Act,⁷ these integrated functions specifically disallow federal actions that would cause a violation of another environmental protection law. Most prominently, the Clean Air Act Amendments of 1990⁸ require federal actions to conform⁹ with certain requirements of the Clean Air Act. The conformity provisions include a requirement that all transportation improvement plans conform with state implementation plans for areas that are in violation of the federal clean air standards.¹⁰

Although this attempt to integrate transportation planning with the requirements of state implementation plans seems to address the implicit contradiction of making transportation plans without considering the effects on air pollution, this approach fails to recognize one of the contributing causes of air pollution from transportation. Increasingly, as populations grow and communities grapple with how best to accommodate that growth, the land-use decisions made by local governments significantly affect the transportation choices made by private individuals in conducting their everyday affairs. These decisions then affect the transportation development decisions made by state and federal governments. These land-use decisions not only affect transportation conformity determinations, but they also affect state compliance with other federal environmental statutes.¹¹ Thus, it becomes clear that the land-use decision-making process should be focused more on the goals that have been envisioned in the federal environmental statutes.

As this article discusses,¹² the traditional Euclidean¹³ sys-

7. National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370d (1994).

8. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990) (codified as amended in scattered sections of 42 U.S.C.).

9. See 42 U.S.C. § 7506(c) (1994).

10. *Id.*

11. See John R. Nolon, *Comprehensive Land-Use Planning: Learning How and Where to Grow*, 13 PACE L. REV. 351, 353 (1993) ("Increasingly, state and federal statutes attempt to protect threatened estuaries, aquifers, air quality, wetlands, and transportation systems by dealing with the effects of the land use patterns without harmonizing the direction or substance of local land-use plans themselves.")

12. See *infra* part IV.A.

13. The term "Euclidean" land-use planning is derived from the seminal land-use case of *Village of Euclid v. Ambler Realty*, 272 U.S. 365 (1926). This case upheld as a legitimate use of the police power a zoning ordinance that segregated uses in the

tem of zoning sometimes operates against some of the goals of the federal environmental statutes. Some states have recognized this conundrum and have instituted a land-use planning scheme that has transformed the traditional Euclidean zoning process into a regional approach to land-use planning. These regional approaches seem to alleviate some of the problems by integrating environmental concerns into land-use planning. However, only a handful of states have adopted the regional approach,¹⁴ and it is not clear that this approach works efficiently within the federal framework of the transportation conformity requirements.

This article explores the transportation conformity requirements as they relate to the traditional and regional approaches to planning. Part II discusses the problems associated with transportation, urban sprawl, and air pollution. Part III of this article discusses the transportation conformity requirements and the different federal requirements for transportation planning. Part IV discusses the prevalent land-use approaches and how they interact with federal environmental laws. Part V discusses transportation conformity in practice and how it affects land-use decisions in the traditional and regional planning schemes. This section also discusses which approaches work more consistently within the transportation conformity framework. Part VI discusses two alternatives to the present framework. Part VII concludes that the Euclidean model works against the goals of transportation conformity, and that the growth management approach, in theory, works more consistently with the conformity requirements.

II. LAND DEVELOPMENT: THE PROBLEMS

Before we analyze the ways in which government attempts to alleviate the environmental problems related to land development, it is important to understand what the problems are. This part focuses on land development and transportation, and

Village of Euclid. For an interesting discussion of this case, see Michael Allan Wolf, *The Prescience and Centrality of Euclid v. Ambler*, in *ZONING AND THE AMERICAN DREAM* 252 (Charles M. Haar & Jerold S. Kayden eds., 1989).

14. See *infra* part IV.C.

how each contributes to the problem of air pollution.

A. Transportation, Air Pollution, and Urban Sprawl: The Relationship

The automobile serves as one of the primary sources of air pollution in the United States. Automobiles emit pollutants such as sulfur oxides, nitrogen oxides, and hydrocarbons as a result of the combustion of petroleum as fuel.¹⁵ "In the Southern California air basin alone, an estimated eighty-five percent of carbon monoxide emissions are caused by fuel combustion from automobile use, while fifty-two percent of nitrogen oxide-reactive organic emissions are caused by on- and off-road vehicles."¹⁶ Further, transportation in the United States accounted for twenty-seven percent of oil consumption in 1987, and "highway travel accounts for about three-fourths of direct transportation energy use. . . . Despite vehicle fuel efficiency improvements over the last two decades, overall transportation fuel consumption continues to increase at a rate of approximately 2.6 percent per year."¹⁷ These facts should be expected considering the fact that the United States is the most automobile-reliant country in the world.¹⁸

Much of this reliance on the automobile is not surprising. Beginning with President Eisenhower's Interstate Highway System in the 1950s,¹⁹ federal and state policies have strongly

15. See Robert H. Freilich & S. Mark White, *Transportation Congestion and Growth Management: Comprehensive Approaches to Resolving America's Major Quality of Life Crises*, 24 LOY. L.A. L. REV. 915, 919 (1991).

16. *Id.*

17. F. Kaid Benfield, *Running on Empty: The Case for a Sustainable National Transportation System*, 25 ENVTL. L. 651, 655 (1995). The enormous amount of petroleum consumed in the United States is staggering considering that the

United States consumes more than one-third of the world's transport energy, almost all (ninety-six percent) of it in the form of oil products. . . . The average resident of the U.S. consumes nearly five times as much energy for transportation as does the average resident of Japan and nearly three times as much as the average resident of western Europe. This is, in part, because the average American undertakes the highest level of personal travel (13,500 miles per person, including nondrivers, per year) and owns the most vehicles per person (0.6, including nondrivers) in the world.

Id.

18. See Freilich & White, *supra* note 15, at 922.

19. Federal-Aid Highway Act of 1956, ch. 462, 70 Stat. 374 (1956) (codified as

avored highway construction and use as the primary mode of transportation.²⁰ As a result of this favoritism, the United States has what many see as an inefficient transportation system. According to the Natural Resources Defense Council (NRDC), passenger ground transportation costs Americans between \$1.2 and \$1.6 trillion each year.²¹ In its report, the NRDC states that costs associated with automobile travel equal between fifteen and twenty percent of the Gross Domestic Product (GDP) in the United States, while aggregate rail and bus transportation equals only about two percent of the GDP.²²

The inefficient use of energy and money in the present transportation system has helped lead to what many see as an inefficient use of land around our urban areas. Highway construction has made it easier for people to move away from the urban centers while continuing to work there.²³ Easy access to the countryside has allowed developers to locate projects outside of the urban centers where land is less expensive.²⁴ This movement to the countryside perpetuates the development of transportation services and has many other societal costs:

The relationship between transportation facilities and development is well established. New roadways are a major stimulant of development. The construction of roadways in outlying urban areas for the past generation has fostered urban sprawl, which represents an inefficient growth pattern with enormous economic, housing and environmental costs. Furthermore, urban sprawl induces the consumption of natural resources and environmentally sensitive land. Suburban low-density shopping, office activity centers, and residential development also contribute to traffic congestion. The traditional pattern of low-density residential development induces automobile reliance by consuming land on the urban fringe and minimizing the density needed to make

amended in scattered sections of 23 U.S.C.).

20. See Robert H. Freilich & Stephen P. Chinn, *Transportation Corridors: Shaping and Financing Urbanization Through Integration of Eminent Domain, Zoning and Growth Management Techniques*, 55 UMKC L. REV. 153, 158 (1987).

21. See Benfield, *supra* note 17, at 654 (citing PETER MILLER & JOHN MOFFETT, NATIONAL RESOURCES DEFENSE COUNCIL, *THE PRICE OF MOBILITY: UNCOVERING THE HIDDEN COSTS OF TRANSPORTATION* (1993)).

22. See *id.*

23. See Freilich & Chinn, *supra* note 20, at 157-58.

24. See *id.* at 158.

public transit financially feasible. Consequently, such housing fails to facilitate public transportation.²⁵

The continuation of urban sprawl has left the urban centers with a diminished tax base, and the low-density sprawl has increased governmental costs associated with the need for expanded highway capacity, construction of additional links in the highway system, and public services such as water, sewer, and garbage disposal.²⁶ Further, urban sprawl has led to an ever-increasing problem with traffic congestion, and "[i]n many rapidly growing areas, citizens perceive traffic congestion as the greatest public problem, outdistancing crime, the economy and housing shortages."²⁷

25. Freilich & White, *supra* note 15, at 918-19.

26. See Freilich & Chinn, *supra* note 20, at 157-58. This phenomenon, known as urban sprawl, has led to a change in the demographics of this country from urban to suburban:

Since World War II the greatest proportion of national growth has taken place in the urban-rural fringe area of major metropolitan centers. As the white middle class retreated to the suburbs, the inner city was left to the poor. With an impoverished tax base, the city was handicapped in its efforts to combat overcrowding, high crime rates, abandonment and deterioration of buildings, and racially and fiscally unbalanced schools. As the center city was becoming a less desirable place to live, the exodus to the suburbs was further encouraged by the federal government's housing, tax, and highway policies. Federally insured mortgage money and tax advantages of home ownership provided incentives for construction of low density, detached single-family housing. Construction of the extensive federal interstate highway system—providing easy access to suburban areas where land was cheaper, expansion possible, and property taxes lower—allowed further out-migration of business and industry.

Id.

27. Freilich & White, *supra* note 15, at 917. The authors explain how congestion is caused by land-use patterns:

While the automobile serves as the primary means of mobility, it is also a catalyst for numerous land use problems. Such problems include traffic congestion and deterioration of metropolitan air quality. Traffic congestion is a function of the imbalance between the capacity of roadway facilities and the demand for those facilities created by increasing automobile reliance and new growth and development.

Id.

Increases in traffic congestion are caused by a combination of factors, including land use patterns, changes in travel behavior and modal split. Urban decentralization and the imbalance between jobs and housing are major contributors to congestion. Population growth on the urban fringe increases trip lengths to job destinations in the urban core and introduces congestion to once-quiet suburban neighborhoods. In addition, the imbalance between jobs and housing forces consumers to increase

B. *Air Pollution: A Regional Problem*

Because of our reliance on the automobile, the number of vehicle miles traveled (VMTs) in the United States continues to increase each year.²⁸ In addition, automobile reliance fosters more problems with urban sprawl, traffic congestion, and automobile-produced air pollution. As a result, there is an interrelationship between land development, transportation, and air pollution that must be considered when solving any one of these problems. Understanding this interrelationship becomes difficult due to the transient nature of air pollution. Simply put, air pollution cannot be contained within the arbitrary and limited jurisdictional boundaries of cities, counties, or even states. Air pollution is a regional rather than local problem.²⁹ Congress recognized this fact in the Clean Air Act Amendments of 1990.³⁰ In the amendments, Congress created the Northeast Ozone Transport Region to combat an ozone pollution problem that affects practically the entire northeastern United States.³¹

automobile trip lengths on freeways. Suburban employment centers, with their liberal parking requirements and auto-intensive commercial and retail uses, create an incentive for congestion by making automobile commuting more attractive than public transit. Decentralization and the jobs-housing imbalance, when combined with the relative accessibility of automobiles and fuel, have combined to make the United States the most auto-reliant nation in the world.

Id. at 921-22.

28. See Benfield, *supra* note 17, at 655.

29. See Patrick Del Duca & Daniel Mansueto, *Indirect Source Controls: An Intersection of Air Quality Management and Land Use Regulation*, 24 LOY. L.A. L. REV. 1131, 1136 (1991).

30. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990) (codified as amended in scattered sections of 42 U.S.C.).

31. 42 U.S.C. § 7511c (1994). The Northeast Ozone Transport Region (OTR) includes the states of Connecticut, Delaware, Maine, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, the District of Columbia, and the portion of northern Virginia which is within the Consolidated Metropolitan Statistical Area of the District of Columbia. *Id.* § 7511c(a). The OTR has been the subject of a heated debate over how best to solve the problem with ozone in the region. The debate has centered on an initiative to implement California's Low Emission Vehicle (LEV) program in the Northeast. See Tara A. Stanton, *The Battle Over the Electric Car: The Big Three Vs. The Northeastern States*, 8 TUL. ENVTL. L.J. 553 (1995) (describing the automobile industry's opposition to New York's adoption of the California LEV program). Under the CAA, California is permitted to administer its own standards for motor vehicle emission as long as the "standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal

Congress has been concerned with air pollution caused by automobiles since it enacted its first major initiative to control air pollution in the Clean Air Act of 1972 (CAA).³² In its initial approach to automobile-induced air pollution, Congress imposed strong limitations on the amount of pollutants emitted by automobiles.³³ In the Clean Air Act Amendments of 1990, Congress continued this approach by setting levels of pollution reduction which auto-makers must achieve over a period of time.³⁴ Further, Congress recognized that transportation projects affect air pollution, and required any federally funded project to conform with a State Implementation Plan (SIP) for attainment of the National Ambient Air Quality Standards (NAAQS).³⁵

Standards." 42 U.S.C. § 7543(b)(1) (1994). Further, any other state can opt to adopt and enforce the California standards rather than the federal standards, so long as the state's enforcement of those standards would force an automobile manufacturer to "take any action of any kind to create, or have the effect of creating, a motor vehicle or motor vehicle engine different than a motor vehicle or engine certified in California under California standards (a 'third vehicle') or otherwise create such a 'third vehicle.'" *Id.* § 7507.

32. Clean Air Act, Pub. L. No. 91-604, 84 Stat. 1705 (1970), amended by Pub. L. No. 95-95, 91 Stat. 385 (1977), amended by Pub. L. No. 101-549, 104 Stat. 2684 (1990) (codified as amended at 42 U.S.C. §§ 7401-7671q (1994)).

33. See Clean Air Act, § 202(a).

34. 42 U.S.C. § 7521 (1994).

35. For example, a conference committee report that accompanied the House of Representatives version of the 1990 amendments stated that "mobile source air pollution can only be evaluated at the regional systems planning level." COMM. ON PUBLIC WORKS AND TRANSP., CLEAN AIR ACT AMENDMENTS OF 1990, CONFERENCE REPORT TO ACCOMPANY H.R. 3030, H.R. REP. NO. 101-490, at 6 (1990). The CAA requires the Environmental Protection Agency (EPA) to set NAAQS for acceptable pollutant levels to protect the public health and welfare. 42 U.S.C. § 7408(a)(2), (b) (1994). States that have regions within the state's jurisdiction that violate the NAAQS are required under the Act to adopt a SIP for attainment of the NAAQS. *Id.* § 7410(a). The areas that are found to be in nonattainment of the NAAQS are classified into five categories (marginal, moderate, serious, severe, and extreme), and states are given a specific number of years to reach attainment of the NAAQS under each category. *Id.* § 7511(a)(1). A state that wants to be redesignated to a different category of nonattainment, or redesignated as an area of attainment, may do so by application to the EPA. *Id.* § 7407(d). Once a state is redesignated as an attainment area, it must submit a revised SIP that is to provide for the maintenance of that attainment status for a ten-year period. *Id.* § 7505a.

III. TRANSPORTATION CONFORMITY

A. *Defining Transportation Conformity*

The CAA states that "[n]o department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to . . . [a state] implementation plan. . . ."³⁶ This general conformity requirement applies to all federal actions that could affect air quality. The CAA also contains a specific requirement relating to federally funded transportation projects. It states that "[n]o Federal agency may approve, accept or fund any transportation plan, program or project unless such plan, program or project has been found to conform to any applicable implementation plan. . . ."³⁷ In short, these provisions disallow federal funding for a transportation plan³⁸ or a Transportation Improvement Program (TIP)³⁹ unless it conforms with the SIP. According to a conference report prepared for the 1990 amendments:

Through the evaluation of the air quality impacts of proposed projects before they are undertaken, the conformity provision is intended to foster long range planning for the attainment and maintenance of air quality standards, and to assure that Federal agencies do not take or support actions which are in any way inconsistent with the effort to achieve NAAQS or which fail to take advantage of opportunities to help in the effort to achieve NAAQS.⁴⁰

36. 42 U.S.C. § 7506(c)(1) (1994). For a brief discussion of state implementation plans, see *supra* note 35.

37. 42 U.S.C. § 7506(c)(2).

38. "Transportation plan means the official intermodal metropolitan transportation plan that is developed through the metropolitan planning process for the metropolitan planning area, developed pursuant to 23 C.F.R. part 450." 40 C.F.R. § 93.101 (1995).

39. "Transportation improvement program (TIP) means a staged, multiyear, intermodal program of transportation projects covering a metropolitan planning area which is consistent with the metropolitan transportation plan, and developed pursuant to 23 C.F.R. part 450." *Id.*

40. H.R. REP. NO. 101-490, at 269 (1990). The committee went on to state:

The Committee expects that the new conformity provisions will be especially helpful in assuring that air quality considerations play a greater role in Federally supported transportation planning efforts, which can have a major impact on air quality and, in some severely polluted areas, are essential as part of the program for achieving NAAQS.

The CAA defines conformity to mean "conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations" of the NAAQS and achieving timely attainment of the NAAQS.⁴¹ More specifically, the Act states that conformity requires that the federal activity does not "cause or contribute" to a violation of the NAAQS,⁴² "increase the frequency or severity of any existing violation" of the NAAQS,⁴³ or "delay timely attainment" of the NAAQS.⁴⁴ The CAA requires conformity determinations to be based upon the most recent emissions estimates considering "population, employment, travel and congestion estimates as determined by the metropolitan planning organization or other agency authorized to make such estimates."⁴⁵

B. *State and Federal Transportation Planning*

The federal government plays a significant role in highway construction projects on a state and local level by appropriating federal funds for those projects.⁴⁶ As a condition of securing

Id.

41. 42 U.S.C. § 7506(c)(1)(A) (1994).

42. *Id.* § 7506(c)(1)(B)(i). Cause or contribute to a new violation means:

(1) To cause or contribute to a new violation of a standard in the area substantially affected by the project or over a region which would otherwise not be in violation of the standard during the future period in question, if the project were not implemented, or

(2) To contribute to a new violation in a manner that would increase the frequency or severity of a new violation of a standard in such area.

40 C.F.R. § 93.101 (1995).

43. 42 U.S.C. § 7506(c)(1)(B)(ii). "Increase the frequency or severity means to cause a location or region to exceed a standard more often or to cause a violation at a greater concentration than previously existed and/or would otherwise exist during the future period in question, if the project were not implemented." 40 C.F.R. § 93.101.

44. 42 U.S.C. § 7506(c)(1)(B)(iii).

45. *Id.* § 7506(c)(1)(B).

46. *See, e.g.,* Eric Pianin, *Scorecard of Clinton's 1995 Budget Requests*, WASH. POST, Oct. 10, 1994, at A21 (stating that transportation was a "big winner" in the 1995 budget allocations, receiving \$14.26 billion). According to the article, the appropriation for fiscal year 1995 exceeded the 1994 fiscal year appropriation by \$590 million. *Id.* Although the Republican-controlled Congress has been on a budget-cutting spree recently, a House subcommittee recommended that transportation spending be

funds from the federal government for transportation projects, states are required to follow a set of specific requirements. These requirements include provisions for planning to be undertaken by the state⁴⁷ or the metropolitan planning organization (MPO)⁴⁸ that is to receive federal highway funds. In order to understand the conformity requirements, it is helpful to understand the planning mechanisms for statewide and MPO transportation planning.

1. The Statewide Transportation Plan

In order to receive federal highway funds, states are required to develop transportation plans and programs for the development of transportation facilities.⁴⁹ The regulations state that the plans and programs should provide for transportation facilities that function as the state's intermodal transportation system.⁵⁰ The statewide transportation planning process involves consideration of a number of factors, several of which are relevant to this discussion.

The regulations require the state to consider and reflect certain factors in developing its transportation plan.⁵¹ For instance, "[e]ach State shall, at a minimum, *explicitly consider, analyze as appropriate and reflect* in planning process products

increased by \$522.5 million over fiscal year 1995, which would give approximately 44 states a funding increase. Don Phillips & Dan Morgan, *House Panel Boosts Highway, Airport Spending*, WASH. POST, June 22, 1995, at A13.

47. See 23 C.F.R. § 450.200-224 (1996). For a discussion of the relevant regulations for this article, see *infra* part III.B.1.

48. See 23 C.F.R. § 450.300-336. For a discussion of the relevant regulations for this article, see *infra* part III.B.1.

49. 49 U.S.C.A. § 5303(a) (1996).

50. *Id.* "The process for developing such plans and programs shall provide for consideration of all modes of transportation and shall be continuing, cooperative, and comprehensive to the degree appropriate, based on the complexity of the transportation problems." *Id.* Congress specifically endorsed the intermodal approach to transportation planning in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). Pub. L. No. 102-240, 105 Stat. 1914 (1991) (codified as amended in scattered titles and sections of 16 U.S.C., 23 U.S.C., 26 U.S.C., 49 U.S.C., and other titles). One of the goals of ISTEA is to "include significant improvements in public transportation necessary to achieve national goals for improved air quality, energy conservation, international competitiveness, and mobility for elderly persons, persons with disabilities, and economically disadvantaged persons in urban and rural areas of the country." Pub. L. No. 102-240, § 2, 105 Stat. 1914.

51. 23 C.F.R. § 450.208(a) (1996).

the following factors in conducting its continuing statewide transportation planning process. . . .⁵² Several of the factors include provisions for consideration of transportation as it affects environmental concerns and land-use development. Those factors require consideration of, *inter alia*, the following: the overall effects of transportation decisions on society, the economy, energy use, and the environment;⁵³ the effect transportation decisions have on land use and land development;⁵⁴ coordination of the statewide plan with plans developed by MPOs to ensure connectivity within transportation systems;⁵⁵ and the transportation needs of non-metropolitan areas.⁵⁶ These regulations require a sort of sliding-scale approach to consideration and analysis of these factors, because the degree of consideration depends on the scale and complexity of the issues presented.⁵⁷

The planning requirements call for coordination of the statewide transportation plan with plans made by MPOs and the planning functions of "Indian tribal governments, environmental, resource and permit agencies, [and] public transit operators. . . ."⁵⁸ The purpose of this coordination is to "pro-

52. *Id.* (emphasis added).

53. *Id.* § 450.208(a)(11).

54. *Id.* § 450.208(a)(14). The regulation specifically requires consideration of the following:

The effect of transportation decisions on land use and land development, including the need for consistency between transportation decision-making and the provisions of all applicable short-range and long-range land use and development plans (analyses should include projections of economic, demographic, environmental protection, growth management and land use activities consistent with development goals and transportation demand projections). . . .

Id.

55. *Id.* § 450.208(a)(21).

56. *Id.* § 450.208(a)(5). This provision requires the state to consult with the "local elected officials with jurisdiction over transportation." *Id.*

57. *See id.* § 450.208(b).

The degree of consideration and analysis of the factors should be based on the scale and complexity of many issues, including transportation problems, land use, employment, economic development, environmental and housing and community development objectives, the extent of overlap between factors and other circumstances statewide or in subareas within the State.

Id.

58. 23 C.F.R. § 450.210(a) (1996).

vide for a fully coordinated process. . . ."⁵⁹ These requirements involve coordination of the following: "data analysis used in development of plans and programs . . . with land use projections . . .",⁶⁰ "[c]onsideration of intermodal facilities with land use planning";⁶¹ and "[t]ransportation planning with analysis of social, economic, employment, energy, environmental, and housing and community development effects of transportation actions. . . ."⁶² Again, much like the regulations that delineate the factors to be considered in the statewide transportation plan,⁶³ the regulations pertaining to coordination require a sliding-scale determination based upon the complexity of the issues.⁶⁴

Once the state has gone through the process of considering the applicable factors,⁶⁵ and the state has executed the required coordination with the participating organizations,⁶⁶ the regulations require the state to develop a statewide transportation plan.⁶⁷ Interestingly, despite the requirements that the state consider environmental and land-use issues when creating the plan, the regulations only require that the plan:

Reference, summarize or contain any applicable short range planning studies, strategic planning and/or policy studies,

59. *Id.*

60. *Id.* § 450.210(a)(3). The regulation requires coordination as follows:

Data analysis used in development of plans and programs, (for example, information resulting from traffic data analysis, data and plans regarding employment and housing availability, data and plans regarding land use control and community development) with land use projections, with data analysis on issues that are part of public involvement relating to project implementation, and with data analyses done as part of the establishment and maintenance of managements systems developed in response to 23 U.S.C. 303. . . .

Id.

61. *Id.* § 450.210(a)(4). Coordination under this provision includes consideration of "land use activities carried out by local, regional, and multistate agencies. . . ." *Id.*

62. *Id.* § 450.210(a)(12).

63. *See supra* note 54.

64. 23 C.F.R. § 450.210(b) (1996). "The degree of coordination should be based on the scale and complexity of many issues including transportation problems, land use, employment, economic, environmental, and housing and community development objectives, and other circumstances statewide or in subareas within the State." *Id.*

65. *See supra* notes 51-57 and accompanying text.

66. *See supra* notes 58-64 and accompanying text.

67. 23 C.F.R. § 450.214(a) (1996).

transportation need studies, management system reports and any statements of policies, goals and objectives regarding issues such as transportation, economic development, housing, social and environmental effects, energy, etc., that were significant to development of the plan. . . .⁶⁸

No reference needs to be made to land-use development studies or considerations taken during the planning process. Furthermore, the regulations do not require the state to include land-use development considerations or environmental considerations in the final statewide transportation plan.⁶⁹

2. Metropolitan Planning Organizations and Transportation Planning

In addition to the statewide planning procedures, states are required to organize metropolitan planning organizations (MPOs) for each urbanized area within the state with a population in excess of 50,000.⁷⁰ The MPO designation must be created by agreement of the governor of the state and the local government units that represent seventy-five percent of the affected population.⁷¹ An urban area that has a population in excess of 200,000 is designated as transportation management area (TMA),⁷² and the membership of the MPO for the TMA must include "local elected officials, officials of agencies which administer or operate major modes of transportation in the metropolitan area . . . and appropriate State officials."⁷³

When an MPO develops a transportation plan, it must consider several factors, including: the relief of and prevention of congestion;⁷⁴ the potential effect of "transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short- and long-term land use development plans";⁷⁵

68. *Id.* § 450.214(b)(5).

69. *See id.* § 450.214.

70. *See* 23 U.S.C.A. § 134(b)(1) (1996).

71. *See id.*

72. *See id.* § 134(i)(1).

73. *Id.* § 134(b)(2).

74. *See id.* § 134(f)(3); *see also* 23 C.F.R. § 450.316(a)(3) (1996).

75. 23 U.S.C.A. § 134(f)(4); *see also* 23 C.F.R. § 450.316(a)(4).

and the "overall social, economic, energy, and environmental effects of transportation decisions."⁷⁶ If the metropolitan area for which the MPO is responsible is in nonattainment for ozone or carbon monoxide under the CAA, the MPO must "coordinate the development of [the] long range plan with the process for development of the transportation control measures" contained in the SIP.⁷⁷ Furthermore, TMAs classified as ozone or carbon monoxide nonattainment areas are ineligible for federal funds for highway projects that will significantly increase "carrying capacity for single-occupant vehicles unless the project is part of an approved congestion management system."⁷⁸ For areas not designated as a TMA that are in attainment of the NAAQS, the MPO is required to develop a plan and program in cooperation with state and transit operators to be submitted by the state for approval by the Federal Highway Agency and the Federal Transit Agency.⁷⁹ Among the considerations to be made in developing these plans and programs, the MPO must consider air quality in creating its plan, especially in areas experiencing fast growth.⁸⁰

C. *Conformity Decisions*

The regulations implementing the transportation conformity requirement in the Clean Air Act⁸¹ state that conformity determinations are required for statewide and MPO transportation plans and TIPS.⁸² Furthermore, the regulations require that transportation conformity determinations be made in all nonattainment and maintenance areas for the criteria pollutants related to transportation.⁸³ The state or MPO must first

76. 23 U.S.C.A. § 134(f)(13); *see also* 23 C.F.R. § 450.316(a)(13).

77. 23 U.S.C.A. § 134(g)(3).

78. *Id.* § 134(l).

79. *See* 23 C.F.R. § 450.316(c).

80. *See id.*

81. 40 C.F.R. § 93.100-.136 (1996). The transportation conformity requirements were not promulgated until November 30, 1993. *See Determining Conformity of General Federal Actions to State or Federal Implementation Plans*, 58 Fed. Reg. 63, 214 (1993) (codified at 40 C.F.R. § 93.100-.136). The CAA had mandated that the regulations be promulgated by November 15, 1991. 42 U.S.C. § 7506(c)(4)(A) (1994).

82. 40 C.F.R. § 93.102(a)(1)(i-ii) (1995).

83. *Id.* § 93.102(b)(1). The regulations state that the criteria pollutants related to transportation include ozone, carbon monoxide, nitrogen dioxide, particles with an

determine whether the transportation plan or TIP developed by the state or MPO conform with the SIP.⁸⁴ Once that conformity determination is made, the state or MPO must make new conformity determinations at least every three years for both transportation plans and TIPs.⁸⁵

Transportation conformity determinations must be based upon the "most recent planning assumptions in force at the time of the conformity determination."⁸⁶ These assumptions are derived from the latest estimates of "current and future population, employment, travel, and congestion most recently developed by the MPO or other agency authorized to make such estimates. . . ."⁸⁷ The determinations must also discuss how transit operating policies and ridership have changed since the previous conformity determination.⁸⁸ Furthermore, the regulations require that the conformity determination use the latest information regarding the effectiveness of TCMs which have already been implemented under prior implementation plans.⁸⁹

Whenever a state or MPO must revise its SIP or transportation plan, the transportation conformity regulations require that MPOs, state departments of transportation, and the Federal Department of Transportation consult with the EPA and state and local air quality agencies before making conformity determinations.⁹⁰ The procedures for interagency consultation must include provisions for defining the "roles and responsibilities assigned to each agency at each stage in the implementation plan development process and the transportation planning process";⁹¹ an organizational level for regular consultation;⁹² a process for circulating draft documents and supporting materi-

aerodynamic diameter less than or equal to nominal 10 micrometers (PM sub10), volatile organic compounds (VOCs), and nitrogen oxides. *Id.* § 93.102(b).

84. *See id.* § 93.104(b)(1).

85. *See id.* § 93.104(b)(4), (c)(4).

86. *Id.* § 93.110(a).

87. *Id.* § 93.110(b).

88. *Id.* § 93.110(c).

89. *Id.* § 93.110(e).

90. *See id.* § 93.105(a)(2). Before EPA can approve the SIP revisions, "MPOs and State departments of transportation before making conformity determinations must provide reasonable opportunity for consultation with State air agencies, local air quality and transportation agencies, DOT, and EPA. . . ." *Id.*

91. *Id.* § 93.105(b)(2)(i).

92. *Id.* § 93.105(b)(2)(ii).

als;⁹³ the frequency of consultation meetings and responsibilities for establishing agendas;⁹⁴ procedures for responding to significant comments of the involved agencies;⁹⁵ and “[a] process for the development of a list of the TCMs which are in the applicable implementation plan.”⁹⁶ Conflicts between state agencies and MPOs are to be “escalated” to the governor of the state if the heads of the involved agencies cannot resolve the conflict.⁹⁷

IV. LAND-USE PLANNING: THE FOUR PREDOMINANT SCHEMES

In part II,⁹⁸ this article discusses the interrelationship between land-use development and air pollution. An important component in understanding that relationship is understanding the different ways in which state governments control the development of land and land planning. The purpose of this section is not to give an exhaustive discussion of the nuances of land-use planning. This section focuses on four different approaches to land-use planning and how these approaches incorporate (or fail to incorporate) environmental concerns in land-use decisions. Each approach will be discussed in turn.

A. *Euclidean Zoning*

Since the United States Supreme Court’s seminal decision in *Village of Euclid v. Ambler Realty Co.*,⁹⁹ zoning for the most part has been a practice whereby local governments segregate specific land uses.¹⁰⁰ Today the land-use approach known as Euclidean zoning serves several arguably legitimate and ille-

93. *Id.* § 93.105(b)(2)(iii).

94. *Id.* § 93.105(b)(2)(iv).

95. *Id.* § 93.105(b)(2)(v).

96. *Id.* § 93.105(b)(2)(vi).

97. *Id.* § 93.105(d).

98. *See supra* part II.B.

99. 272 U.S. 365 (1926); *see* Wolf, *supra* note 13.

100. New York City enacted the first comprehensive zoning ordinance in 1916. *See* HAGMAN & JUERGENSMEYER, *supra* note 1, § 2.7, at 20. In the early zoning ordinances, “[t]he purposes of zoning were to segregate residential uses from more intensive uses of land, such as industrial, and thereby to provide safer, more quiet areas for family life.” *Id.* § 2.7, at 20-21; *see also* ALEXANDRA D. DAWSON, *LAND USE PLANNING AND THE LAW* 37 (1982).

gitimate functions, including the prospective protection of the public from certain perceived nuisances,¹⁰¹ the promotion of economic development,¹⁰² the promotion of affordable housing,¹⁰³ and the exclusion of certain "undesirable" people or uses.¹⁰⁴ The process by which these purposes are fulfilled begins with the master plan and ends with actual zoning.

1. The Master Plan

The framework in which land-use decisions are made under the Euclidean model begins with the master plan. The plan has four principal characteristics:

First, it is *future-oriented*, establishing goals and objectives for future land use and development, which will be attained incrementally over time through regulations, individual decisions about zoning and rezoning, development approval or disapproval, and municipal expenditures for capital improvements such as road construction and the installation of municipal utilities.

Second, planning is *continuous*, in that the plan is intended not as a blueprint for future development which must be as carefully executed as the architect's design for a building or the engineer's plan for a sewer line, but rather as a set of policies which must be periodically reevaluated and amended to adjust to changing conditions. A plan that is written purely as a static blueprint for future development will rapidly become obsolete when circumstances change.

Third, the plan must be based upon a *determination of present and projected conditions* within the area covered by the plan. This requirement ensures that the plan is not simply a list of hoped-for civic improvements. . . .¹⁰⁵

101. See HAGMAN & JUERGENSMEYER, *supra* note 1, § 2.10, at 25 (stating that the master plan is "future-oriented, establishing goals and objectives for future land-use development. . .").

102. See *id.*

103. See James H. Wickersham, *The Quiet Revolution Continues: The Emerging New Model for State Growth Management Statutes*, 18 HARV. ENVTL. L. REV. 489, 506 (1994).

104. See, e.g., *Southern Burlington County NAACP v. Township of Mount Laurel*, 336 A.2d 713 (N.J.) (*Mount Laurel I*), *appeal dismissed and cert. denied*, 423 U.S. 808 (1975).

105. HAGMAN & JUERGENSMEYER, *supra* note 1, § 2.10, at 25.

And:

Fourth, planning is *comprehensive*. . . . The courts have recognized this role of planning, in defining planning as concerned with "the physical development of the community and its environs in relation to its social and economic well-being for the fulfillment of the rightful common destiny, according to a 'master plan' based on 'careful and comprehensive surveys and studies of present conditions and the prospects of future growth of the municipality,' and embodying scientific teachings and creative experience."¹⁰⁶

This process, referred to as the "rational planning process," requires four steps: "*data gathering, setting of policies, plan implementation, and plan re-evaluation.*"¹⁰⁷ The product of rational planning does not lead to a plan "effective for all time," but rather is re-evaluated so as to judge its success in reaching

106. *Id.* § 2.10, at 26 (quoting *Angermeier v. Borough of Sea Girt*, 142 A.2d 624, 629 (N.J. 1958)).

107. *Id.* This planning process, usually executed by planners who have no political function, usually follows this course:

During the first step of the process, the planner preparing the comprehensive plan performs research and analysis of a wide range of present, and projected, physical, economic, and sociological conditions of the municipality. . . . Statistical surveying, population forecasting, mapping of existing conditions in land use, transportation, and environmentally-sensitive areas, mathematical modeling of economic trends, analysis of traffic flows on major highways, and techniques borrowed from other professions such as economics, geography and engineering have formed a part of the methods employed by planners in data gathering and analysis. . . .

Analysis of the data then leads naturally to the second phase, setting of policies for the plan. In this phase, the planner ceases being a data gatherer, and assumes a policy formation role. Working closely with the planning commission and sometimes the local legislative body, the planner examines and proposes alternative means of solving or averting the problems identified in the first phase of the process. . . .

The mere statement of policies and objectives will not, in itself, ensure that action is taken. Thus, the third stage of the planning process, implementation of the plan, becomes the most important stage. Implementation involves three discrete steps: developing public support of the plan . . . ; securing adoption of the plan . . . ; and action by the legislative body to implement the policies and objectives.

Id. § 2.10, at 27-28.

the policies behind the plan.¹⁰⁸ Final adoption of the plan requires approval by the particular legislative body in that locality.¹⁰⁹

In a majority of states that enable localities to prepare comprehensive plans, the plan serves merely as guidance for the governing body to make zoning decisions and does not have the force of law.¹¹⁰ However, the trend has been towards making the plan a dispositive document for zoning decisions.¹¹¹

2. Zoning and the Master Plan

Zoning, in theory, is the process whereby the comprehensive plan is put into effect. The local legislative body that makes zoning decisions divides districts within the locality into zones, and the legislative body defines, *inter alia*, the height, building size, lot size, population density, location, and use of buildings that are permissible in the particular zone.¹¹² The designation of these zoning districts disallows the development of property within the zone unless the landowner would suffer an undue hardship, whereby the landowner may be able to obtain a variance from the zoning ordinance from the legislative body or a quasi-judicial body known as a board of zoning appeals.¹¹³

Often, state enabling statutes require the zoning to be "in accordance with a comprehensive plan."¹¹⁴ Courts have grappled with the meaning of the "in accordance" requirement, especially where the enabling statute does not require the drafting

108. *Id.* § 2.10, at 26.

109. *See id.*

110. *See id.* § 2.11, at 28.

111. *See, e.g.,* Edward J. Sullivan, *The Plan as Law*, 26 URB. LAW. 753, 774-75 (1994) (reporting the trend in several states for the judiciary to accept the comprehensive plan as the "dispositive expression of local government land-use policy").

112. *See* DANIEL R. MANDELKER, *LAND USE LAW* §§ 4.17-.18 (2d ed. 1988).

113. *See* DAWSON, *supra* note 100, at 38. The types of districts typically designated under the ordinance are agricultural, residential, business, industrial and floodplain. *Id.* at 43. These district designations may be divided into parts within each designation, such as a residential district that is limited to single-family detached dwellings, as opposed to multi-unit apartment dwellings in other residential districts. *See* HAGMAN & JUERGENSMEYER, *supra* note 1, § 4.3.

114. HAGMAN & JUERGENSMEYER, *supra* note 1, § 2.13, at 31 (quoting Charles M. Haar, *The Master Plan: An Impermanent Constitution*, 20 LAW & CONTEMP. PROBS. 353, 366 (1955)).

of a comprehensive plan. In those states, the courts have been willing to divine a plan from the zoning ordinance itself.¹¹⁵ However, other states require the preparation of a comprehensive plan before the adoption of a zoning ordinance. In these states, "[n]ot only does this mean that the plan and regulations promulgated under it must be consistent, it also means . . . that any development orders and permits issued must be consistent with the local plan."¹¹⁶

3. Euclidean Zoning: The Criticisms

States that permit localities to draft a comprehensive plan under the traditional Euclidean model usually require the plan to promote some or all of the following goals: protection of the public health, safety, morals, convenience, prosperity, the general welfare, and efficient economic development.¹¹⁷ Con-

115. See *id.* § 2.13, at 32.

116. *Id.*

117. See, e.g., ALA. CODE § 11-19-10(a) (1995) (pertaining to flood-prone areas) ("It shall be the function and duty of the county planning commission . . . to prepare comprehensive plans . . . as will best promote the public health, safety, morals, convenience, prosperity or the general welfare as well as efficiency and economy in the development of the flood-prone area of the county."); ARIZ. REV. STAT. ANN. § 11-806(B) (1995) ("The comprehensive plan shall be developed so as to conserve the natural resources of the county, to insure efficient expenditure of public funds, and to promote the health, safety, convenience, and general welfare of the public."); IND. CODE ANN. § 36-7-4-501 (West 1995) ("A comprehensive plan shall be approved . . . for the promotion of public health, safety, morals, convenience, order, or the general welfare and for the sake of efficiency and economy in the process of development."); N.C. GEN. STAT. § 160A-383 (1995) ("Zoning regulations shall be made in accordance with a comprehensive plan and designed to . . . secure safety from fire, panic and other dangers; to promote health and the general welfare; . . . and to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements."); OHIO REV. CODE ANN. § 303.02 (Banks-Baldwin 1995) ("For the purposes of promoting the public health, safety, and morals, the board of county commissioners may in accordance with a comprehensive plan regulate . . . the uses of buildings and other structures. . . ."); 53 PA. CONS. STAT. ANN. § 14754 (West 1995) ("Such regulations shall be made in accordance with a comprehensive plan, and designed to lessen congestion in the streets, to secure safety from fire, . . . to promote health and the general welfare, . . . to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements."); TEX. LOC. GOV'T CODE ANN. § 211.004(a) (West 1995) ("Zoning regulations must be adopted in accordance with a comprehensive plan and must be designed to . . . (3) promote health and the general welfare; (4) provide adequate light and air; . . . or (7) facilitate the adequate provision of transportation, water sewers, schools, parks, and other public requirements."); VA. CODE ANN. § 15.1-446.1 (Michie Cum. Supp. 1996) ("The

spicuously absent from these requirements are any provisions that the comprehensive plan consider and incorporate specific goals from state or federal environmental statutes. A fundamental flaw in the Euclidean system of land-use planning is its inability to take account of the different interests that are affected by the land-use decisions made under this system. There are four different issues that illustrate this point.¹¹⁸

a. The Problem With Arbitrary Jurisdictional Boundaries

According to an abstract of the 1972 census, there are approximately 3000 county governments, 18,500 municipalities, and 17,000 townships in the United States.¹¹⁹ Approximately 14,000 of these jurisdictions exercise some form of land-use control.¹²⁰ As already discussed, there are a number of environmental problems that do not recognize the arbitrary boundaries that define the geographic limitations of states, cities, and counties.¹²¹ Much of the urban sprawl that has happened over the years has led to a spillover of land uses from one jurisdiction to another, usually from the urban area to surrounding farmland.¹²² Furthermore, "[e]conomics and the political pressures it generates make any vision of an incorporated zone of

comprehensive plan shall be made with the purpose of guiding and accomplishing a coordinated, adjusted and harmonious development of the territory which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants."); W. VA. CODE § 8-24-16 (1995) ("The comprehensive plan shall be made with the general purpose of guiding and accomplishing a coordinated, adjusted and harmonious development of the area which will . . . best promote the health, safety, morals, order, convenience, prosperity or general welfare of the inhabitants, as well as efficiency and economy in the process of development. . . .").

118. See ROBERT G. HEALY & JOHN S. ROSENBERG, *LAND USE AND THE STATES* 7-13 (2d ed. 1979).

119. See *id.* at 7 (citing U.S. BUREAU OF THE CENSUS, *STATISTICAL ABSTRACT OF THE U.S.* (1972)).

120. See *id.* (citing ALLEN D. MANVEL, *NATIONAL COMM'N ON URBAN PROBLEMS, RESEARCH REPORT NO. 6, LOCAL LAND AND BUILDING REGULATIONS: HOW MANY AGENCIES? WHAT PRACTICE? HOW MUCH PERSONNEL?* (1968)).

121. See *supra* note 31 and accompanying text; Eisen, *supra* note 4, at 8-9 ("We need a new land ethic that attempts to find an equilibrium between the wilderness and the manufactured landscape and views the city and countryside as a single system linked by the processes of nature."); Nolon, *supra* note 11, at 404 (describing the regional impact of development on water pollution).

122. See HEALY & ROSENBERG, *supra* note 118, at 8-9.

farms surrounded by other urbanized municipalities a utopian prospect."¹²³

b. Different Interests in Different Jurisdictions

Under the Euclidean model of zoning, the decision of whether to permit a certain use on a particular parcel usually falls to an elected official. This fact can be derived from common sense:

In editorializing in favor of state review and veto power over local planning decisions, a North Carolina newspaper commented, "Anyone familiar with zoning procedures knows why it is difficult for local officials to protect broad public interests. A friend or customer comes before the local board, makes his request and explains that his livelihood depends on the approval of the request. If the board members do not comply, they have made an enemy for life—not one that lives in Raleigh, either, but one that lives close by."¹²⁴

In addition, the possibility that a real estate developer may locate a project in a jurisdiction and bring with it the associated property taxes, jobs, and other benefits gives the locality a great deal of incentive to be compliant with zoning requests, regardless of the consequences the project will have for neighboring jurisdictions.¹²⁵

c. Rural Areas and the Inability to Stem the Tide

As urban sprawl encroaches on rural areas, those rural areas have been forced to react to the tide of urban growth. However, in the typical situation, the rural area has lacked the planning and staff resources to control growth effectively and to enforce zoning decisions.¹²⁶ In addition, rural areas that have large tracts of undeveloped and inexpensive land are attractive areas for large developments that bring "complex environmental and social effects."¹²⁷ Furthermore, the prospect of the associated

123. *Id.* at 9.

124. *Id.* at 10 (quoting RALEIGH NEWS-OBSERVER, Dec. 8, 1973).

125. See Del Duca & Mansueto, *supra* note 29, at 1137.

126. See HEALY & ROSENBERG, *supra* note 118, at 11.

127. *Id.* at 12.

income from large developments is often too enticing for money-strapped rural areas.¹²⁸

d. State Investments and Other Policies

As discussed earlier, state governments are primarily involved in transportation planning for their state.¹²⁹ This state-sponsored highway planning and development often spurs land development along the highway.¹³⁰ Thus, the state's policies for highway development strongly influence the need for developable land in localities, and the state usually does not consider the consequences of influencing this development.¹³¹ Furthermore, when states give huge tax incentives to different industries so that those industries will locate within the state, local land-use planning is affected and the locality loses some control over its land development.¹³²

B. *The Intermediate Steps: Regulating Major Projects and Protection of Critical Resources*

Under the Euclidean scheme of land-use control, the states ceded to localities the power to control the uses of land. Because of a growing awareness that this approach fails to recognize, and even exacerbates, regional problems, some states have begun to wrest some control of land development back from localities. Three specific approaches have evolved from this take-back of land-use planning authority. Two of those ap-

128. See *id.* As the Task Force on Land Use and Urban Growth put it:

Local officials and residents of rural localities . . . are likely to recognize that new development means income, in purchases at local stores, in construction by local contractors, in mortgages by local banks and services by local lawyers and surveyors. But they may be oblivious to the later costs that experienced localities know about—the dollar costs of providing roads and sewers and other services for scattered projects, the personal costs of congestion and changed lifestyles and disruption of cherished countryside, and the social costs of a new urban and affluent population settling among small town people and farmers.

Id. (quoting CITIZENS' ADVISORY COMM. ON ENVTL. QUALITY, TASK FORCE ON LAND USE AND URBAN GROWTH, THE USE OF LAND 279 (William K. Reilly ed., 1973)).

129. See *supra* part III.B.1.

130. See *supra* note 26 and accompanying text.

131. See HEALY & ROSENBERG, *supra* note 118, at 12.

132. See *id.* at 13.

proaches—the regulation of major projects and the regulation of critical resources—represent intermediate steps from the Euclidean model towards the growth management model (which will be discussed later).

1. The Regulation of Major Developments

By regulating major development projects, state regulators seek to inject regional concerns and perspectives into local land-use development. Although there are some general principles that are important to understanding this process, it is helpful to look at an example of how one state has changed its regulation of major development projects.

a. Example: Florida

The Florida statute regulating environmental land and water management requires the state land planning agency to recommend specific statewide guidelines and standards to the Administration Commission—the body responsible for making the statewide guidelines and standards—for the Commission to adopt for the regulation of developments of regional impact (DRIs).¹³³ The statute defines a DRI as “any development which, because of its character, magnitude, or location, would have a substantial effect upon the health, safety, or welfare of citizens of more than one county.”¹³⁴ The statute requires the Commission to consider, *inter alia*, the development’s potential effect on environmental problems, including air and water pollution.¹³⁵

133. FLA. STAT. ANN. § 380.06(2)(a) (West 1988 & Supp. 1996); see also Wickersham, *supra* note 103, at 515-16 (discussing the Florida statute relating to DRIs).

134. FLA. STAT. ANN. § 380.06(1).

135. *Id.* § 380.06(2)(b)(1). The statute requires the Commission to consider seven different factors:

1. The extent to which the development would create or alleviate environmental problems such as air or water pollution or noise.
2. The amount of pedestrian or vehicular traffic likely to be generated.
3. The number of persons likely to be residents, employees, or otherwise present.
4. The size of the site to be occupied.
5. The likelihood that additional or subsidiary development will be

When the locality receives an application for development approval of a DRI, the developer is required to forward the application to the regional planning agency as well.¹³⁶ Once the regional planning agency finds that the application is sufficient to meet the goals of the state comprehensive plan, the agency notifies the local government so that the local government can set a public hearing date.¹³⁷ The regional planning agency then makes a report to submit to the local government, and the report includes the agency's recommendations on the regional impact of the proposed development.¹³⁸ In making its determination whether to approve a DRI the locality must consider whether:

- (a) The development unreasonably interferes with the achievement of the objectives of an adopted state land development plan applicable to the area;
- (b) The development is consistent with the local comprehensive plan and local land development regulations;
- (c) The development is consistent with the report and recommendations of the regional planning agency submitted pursuant to subsection (12); and
- (d) The development is consistent with the State Comprehensive Plan. . . .¹³⁹

Once the locality approves the development, it must forward copies of the order to the state planning agency, the regional planning agency, and the owner of the affected property.¹⁴⁰ If the state land planning agency, the regional planning agency, or the developer, disagree with the contents of the locality's order, they can appeal the order to the Florida Land and Water Adjudicatory Commission for final resolution.¹⁴¹

generated.

6. The extent to which the development would create an additional demand for, or additional use of, energy, including the energy requirements of subsidiary developments.

7. The unique qualities of particular areas of the state.

Id. § 380.06(2)(b)(1-7).

136. *Id.* § 380.06(10)(a); *see also* Wickersham, *supra* note 103, at 516.

137. FLA. STAT. ANN. § 380.06(10)(c).

138. *Id.* § 380.06(12)(a).

139. *Id.* § 380.06(14)(a-d).

140. *Id.* § 380.07(2).

141. *Id.*

2. Critical Resource Regulation

Recognizing the need to protect interjurisdictional environmental resources of regional and statewide importance, some states "have stepped in to regulate specific resources, from wetlands and scenic rivers to farmlands and historic districts."¹⁴² Many of these provisions are driven by the requirements contained in federal law.¹⁴³ However, the issues accompanying this type of regulation are troublesome on many levels. "Industrial and economic growth are considered desirable, but so are clean air and water. Somewhere a balance must be struck."¹⁴⁴ The state of Florida, in recognition of this problem, has enacted laws to protect critical resources in a comprehensive fashion. The following is a description of the Florida system of critical resource protection.

a. Example: Florida

The Florida statute permits the state land planning agency to recommend that an area be designated as an area of critical state concern.¹⁴⁵ Regional planning agencies and local governments can recommend to the state planning agency that an area in its jurisdiction be considered as an area of critical state concern.¹⁴⁶ The statute defines an area of critical state concern as

[a]n area containing, or having significant impact upon, environmental or natural resources of regional or statewide

142. Wickersham, *supra* note 103, at 515; see also HAGMAN & JUERGENSMEYER, *supra* note 1, § 13.14 (discussing state and local wetlands regulations); MANDELKER, *supra* note 112, § 12.02 (describing state legislation protecting coastal and inland wetlands); *id.* § 12.09 (discussing the preservation of agricultural land).

143. See HAGMAN & JUERGENSMEYER, *supra* note 1, § 13.14 (citing 42 U.S.C. § 1344 (1994) (protection of wetlands)); *Id.* § 13.19 (citing Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464 (1994)).

144. *Id.* § 13.1, at 379.

145. FLA. STAT. ANN. § 380.05(1)(a) (West 1988 & Supp. 1996). ("In its recommendation, the agency shall include recommendations with respect to the purchase of lands situated within the boundaries of the proposed area as environmentally endangered lands and outdoor recreation lands. . . .").

146. *Id.* § 380.05(3).

importance, including, but not limited to, state or federal parks, forests, wildlife refuges, wilderness areas, aquatic preserves, major rivers and estuaries, state environmentally endangered lands, Outstanding Florida Waters, and aquifer recharge areas, the uncontrolled private or public development of which would cause substantial deterioration of such resources.¹⁴⁷

Once the state land planning agency makes the recommendation, the Administration Commission must either reject the recommendation or adopt it by rule to designate the area of critical state concern.¹⁴⁸ The rule must contain detailed boundary descriptions of the area, "principles for guiding development," a statement of purpose for designation of the area, and a "precise checklist of actions which, when implemented, will result in repeal of the designation by the Administration Commission, and the agencies or entities responsible for taking those actions."¹⁴⁹ Once the rule to designate an area as an area of critical state concern has been adopted, it must be submitted to the state legislature so that the legislature may "reject, modify, or take no action relative to the adopted rule."¹⁵⁰

After adoption of a rule designating an area of critical state concern, the local government having jurisdiction over that area is required to submit to the state land planning agency its existing comprehensive plan and land-development regulations, or the locality can "prepare, adopt, and submit the new or modified regulations and plan" that take into account the principles set forth in the rule designation.¹⁵¹ The local development plan and regulations must be approved by the state land planning agency before they take effect.¹⁵² If the state land planning agency finds the regulations and development plan insufficient, or the locality fails to submit the regulations and development plan, then the state land planning agency is required to draft regulations and a development plan for the locality, and

147. *Id.* § 380.05(2)(a).

148. *Id.* § 380.05(1)(b).

149. *Id.* § 380.05(1)(b)(1)-(4).

150. *Id.* § 380.05(1)(c).

151. *Id.* § 380.05(5).

152. *Id.* § 380.05(6).

submit it to the Administration Commission for its approval.¹⁵³ Presumably the purpose of these provisions is to allow the state to ensure the consistency of the local land development plan and regulations with the designation of the area of critical state concern.

C. *Growth Management Statutes*

The most radical departure from the Euclidean model of land-use regulation has been the use of growth management statutes. Although there are only three states that have had substantial experience with these statutes,¹⁵⁴ they have received a great deal of attention because of their change in approach from the Euclidean model.¹⁵⁵ These statutes generally involve planning at state, regional, and local levels, and the statutes generally require consistency between these plans.¹⁵⁶ Although several states have adopted growth management statutes, Oregon's growth management statute serves as the model for other states.¹⁵⁷ For this reason, the following section discusses the Oregon statute as it relates to state, regional and local planning.

1. Example: Oregon

The Oregon statute begins with the proposition that "[u]ncoordinated use of lands within this state threaten the

153. *Id.* § 380.05(8).

154. See Douglas R. Porter, *State Growth Management: The Intergovernmental Experiment*, 13 PACE L. REV. 481 (1993) (stating that Oregon, Florida, and Rhode Island have had at least two decades of experience with growth management programs).

155. See DAWSON, *supra* note 100, at 94-95; HAGMAN & JUERGENSMEYER, *supra* note 1, § 9.1; Porter, *supra* note 154, at 481; Henry R. Richmond, *Does Oregon's Land Use Program Provide Enough Desirable Land to Attract Needed Industry to Oregon?* 14 ENVTL. L. 693 (1984); Wickersham, *supra* note 103, at 523-24; Note, *State-Sponsored Growth Management As a Remedy For Exclusionary Zoning*, 108 HARV. L. REV. 1127 (1995).

156. See Porter, *supra* note 154, at 483.

157. See Wickersham, *supra* note 103, at 523.

orderly development, the environment of this state and the health, safety, order, convenience, prosperity and welfare of the people of this state."¹⁵⁸ Furthermore, the statute states that "[i]n order to assure the highest possible level of liveability in Oregon, it is necessary to provide for properly prepared and coordinated comprehensive plans for cities and counties, regional areas, and the state as a whole."¹⁵⁹ From this basis, the statute sets out to create a structure to address these legislative findings and policies.

Oregon's statute calls for the creation of the Land Conservation and Development Commission (LCDC).¹⁶⁰ The LCDC's duties include, *inter alia*, adoption of goals for cities, counties and regions;¹⁶¹ the preparation of statewide planning guidelines;¹⁶² review of comprehensive plans for compliance with the goals;¹⁶³ and coordination of planning efforts of state agencies "to assure compliance with goals and compatibility with city and county comprehensive plans."¹⁶⁴ When the LCDC adopts a goal or guideline, it is required to consider "the existing comprehensive plans of local governments and the plans and programs affecting land use of state agencies and special districts in order to preserve functional and local aspects of land conservation and development."¹⁶⁵ In return, cities and counties are required to "[p]repare, adopt, amend and revise comprehensive plans in compliance with goals approved" by the LCDC.¹⁶⁶ At present, Oregon has nineteen goals that have been adopted as administrative rules.¹⁶⁷

158. OR. REV. STAT. § 197.005(1) (Supp. 1994).

159. *Id.* § 197.010(1).

160. *Id.* § 197.030(1). The LCDC is a part of the Department of Land Conservation and Development. *Id.* § 197.075.

161. *Id.* § 197.040(2)(a).

162. *Id.* § 197.040(2)(c).

163. *Id.* § 197.040(2)(d).

164. *Id.* § 197.040(2)(e).

165. *Id.* § 197.230(1)(a) (Repl. Vol. 1991).

166. *Id.* § 197.175(2)(a) (Supp. 1994). The goals and guidelines are prepared by the LCDC "for use by state agencies, local governments and special districts in preparing, adopting, amending and implementing existing and future comprehensive plans." *Id.* § 197.225.

167. See Henry R. Richmond, *From Sea to Shining Sea: Manifest Destiny and the National Land Use Dilemma*, 13 PACE L. REV. 327, 340 n.74 (1993). The goals involve the following interests:

1. Citizen Involvement;
2. Land Use Planning;
3. Agricultural Lands;
- 4.

Once the LCDC implements its goals, land-use regulations and comprehensive plans already adopted by local governments and any programs, rules, or regulations by state agencies or special districts that affect land use must be in compliance with the goals.¹⁶⁸ If any comprehensive plan adopted by a local government, or any plan, program, rule, or regulation affecting land use by a state agency or special district does not comply with the goals, the LCDC can order the offending party to comply with the goals.¹⁶⁹ The LCDC can enforce its order by either: (1) limiting, prohibiting or requiring local government approval of applications for subdivisions, partitions, building permits, and land-use decisions until a determination of compliance has been determined;¹⁷⁰ or (2) ordering that grant funds be withheld from the local government until compliance has been determined.¹⁷¹

In addition to these planning procedures, district councils have adopted urban growth boundaries for each city in each district.¹⁷² The urban growth boundary is used so that the city or county can take account of land already in use and decide how much land the city will need for future growth.¹⁷³ This approach allows the locality to identify what areas it needs to use in order to have managed growth.¹⁷⁴

In addition to the requirements that the state and local governments coordinate their land-use plans, the LCDC has promulgated regulations to implement procedures for transporta-

Forest Lands; 5. Open Spaces, Scenic and Historic Areas, and Natural Resources; 6. Air, Water, and Land Resources Quality; 7. Areas Subject to Natural Disasters and Hazards; 8. Recreational Needs; 9. Economic Development; 10. Housing; 11. Public Facilities and Services; 12. Transportation; 13. Energy Conservation; 14. Urbanization; 15. Willamette River Greenway; 16. Estuarine Resources; 17. Coastal Shorelands; 18. Beaches and Dunes; 19. Ocean Resources.

Id.

168. OR. REV. STAT. § 197.250 (Repl. Vol. 1991).

169. *Id.* § 197.320(1)-(2) (Supp. 1994).

170. *Id.* § 197.335(3)(a). In addition, the LCDC "can issue an order that requires review of local decisions by a hearings officer or the [LCDC] before the local decision becomes final." *Id.*

171. *Id.* § 197.335(4).

172. *Id.* § 268.390(3) (Repl. Vol. 1993).

173. See Richmond, *supra* note 167, at 341.

174. See *id.*

tion planning. Under the regulations, transportation planning is divided into two phases: (1) transportation system planning; and (2) transportation project development.¹⁷⁵ "Transportation system planning establishes land use controls and a network of facilities and services to meet overall transportation needs. Transportation project development implements the TSP by determining the precise location, alignment, and preliminary design of improvements included in the TSP."¹⁷⁶

The regulations strongly encourage alternative forms of transportation and land use designations to achieve regional transportation needs. For instance, local governments in MPO areas with a population larger than one million are required to "evaluate alternative land use designations, densities and design standards to meet local and regional needs."¹⁷⁷ In evaluating and selecting the alternatives, the local government or MPO must consider, *inter alia*, a transportation system that is consistent with state and federal standards for the air pollution abatement, including the requirements under a SIP required under the CAA.¹⁷⁸ The regulations specifically state that the "transportation system shall avoid principal reliance on any one mode of transportation and shall reduce principal reliance on the automobile."¹⁷⁹ The regulations further promote this principle by requiring MPOs and regional and local TSPs to adopt plans that show the following: no increase of vehicle miles traveled (VMTs) per capita within ten years of adoption of the plan; a ten percent reduction of VMTs within twenty years of adoption of the plan; and a twenty percent reduction in VMTs per capita within thirty years from adoption of the plan.¹⁸⁰

175. OR. ADMIN. R. § 660-12-010(1) (1995).

176. *Id.*

177. *Id.* § 660-12-035(2).

178. *Id.* § 660-12-035(3)(a)-(b).

179. *Id.* § 660-12-035(3)(e).

180. *Id.* § 660-12-035(4)(a)-(c).

V. TRANSPORTATION CONFORMITY AND LAND-USE DECISIONS (ONE LOSS, ONE NO DECISION, AND ONE WIN—MAYBE)¹⁸¹

“Second generation environmental protection policy has two basic objectives: the prevention and remediation of pollution risks and the promotion of biodiversity and sustainable development.”¹⁸² This statement is reflected in the goals and priorities that the federal government has set in transportation planning. The federal government wants to promote efficient transportation systems that incorporate intermodal travel, while at the same time it wants to make sure that those systems do not contribute further to the problem of air pollution that is inherent in automobile-related transportation.¹⁸³ Furthermore, some states have realized that their land-use policies should be focused on these two objectives.¹⁸⁴

But what happens when the federal policies that seek to achieve the two objectives interact with local land-use planning? This section discusses the interaction between local land-use planning and transportation conformity, and discusses how this interaction affects the two objectives.

A. *Euclidean Zoning and Transportation Conformity: One Loss*

Although the Euclidean planning model is supposed to be future-oriented, continuous, based upon determinations of present and projected conditions, and comprehensive,¹⁸⁵ most state statutes that adopt the Euclidean model do not require the locality making the land-use decision to consider the environmental effects of that decision.¹⁸⁶ Since localities have no obligation to consider environmental concerns, it is easy for them to treat those concerns as an externality that need not be con-

181. This subtitle paraphrases a heading in Michael Allan Wolf, *Takings Term II: New Tools for Attacking and Defending Environmental and Land-Use Regulation*, 13 N. ILL. U. L. REV. 469, 471 (1993).

182. Tarlock, *supra* note 6.

183. *See supra* part II; *supra* part III.

184. *See supra* part IV.B.; *supra* part IV.C.

185. *See supra* notes 105-106 and accompanying text.

186. *See supra* note 117 and accompanying text.

sidered in the land-use planning process or individual land-use decisions.¹⁸⁷ Furthermore, the low-density land development that has been the hallmark of traditional land-use planning and development helps to perpetuate the need for more highways, and dependence on automobiles.¹⁸⁸

One may argue that, in effect, the transportation conformity requirement trumps this problem. First, transportation planners are required to consider the effect of transportation decisions on land-use and development.¹⁸⁹ Second, the conformity requirements disallow transportation plans that do not conform to the state implementation plan.¹⁹⁰ Thus, the government will not construct urban-sprawl-inducing transportation projects since they will not conform with the SIP. In addition, this will give transportation planners the opportunity to implement intermodal transportation projects that emit less pollution—such as light rail—and thus will help achieve the goals of ISTEA.¹⁹¹

Although transportation planners in areas like Los Angeles may very well be forced to incorporate more transit options in transportation plans due to the incredible amount of pollution caused by automobiles,¹⁹² this argument ignores the objectives of environmental regulation: the prevention and remediation of pollution risks and the promotion of biodiversity and sustainable development.¹⁹³ This argument also ignores the frame-

187. See Del Duca & Mansueto, *supra* note 29, at 1135-36; Freilich & White, *supra* note 15, at 920.

188. See *supra* notes 23-27 and accompanying text.

189. See 23 C.F.R. § 450.208(a)(14) (1995). The regulation specifically requires consideration of the following:

The effect of transportation decisions on land use and land development, including the need for consistency between transportation decision-making and the provisions of all applicable short-range and long-range land use and development plans (analyses should include projections of economic, demographic, environmental protection, growth management and land use activities consistent with development goals and transportation demand projections). . . .

Id.

190. See *supra* notes 36-40 and accompanying text.

191. See *supra* note 50.

192. See *supra* notes 15-17 and accompanying text.

193. See *supra* text accompanying note 182.

work of proper planning—that is, planning that has the characteristic of being future-oriented, continuous, based upon determinations of present and projected conditions, and comprehensive. This argument fails because it does not recognize the inherent weakness in the one-dimensional view that is created by the Euclidean model.

Transportation conformity determinations are only made for transportation projects in nonattainment areas. Transportation planners in attainment areas need not consider the potential effect of the transportation project on future air pollution. Thus, the objective of prevention is thwarted, and there is no consideration of the future-oriented approach to planning. The lack of concern for air pollution in transportation planning in attainment areas also ignores the need to base planning decisions on present and projected conditions. Furthermore, even though transportation planners are required to look at land use and development in creating a transportation plan, local land-use planners under the Euclidean model do not have a reciprocal relationship to consider the goals of the transportation plan when making the local land-use plan.¹⁹⁴

One way to address the lack of reciprocity of planning between localities and state governments is to amend state enabling legislation to require localities to comply with the spirit and goals of the state or federal environmental law. Presumably such an amendment would require localities to plan in such a way that local land-use decisions comply or conform to state planning decisions. This approach would resemble the present conformity requirements that the federal government imposes on state governments for the state's implementation plan. The effect of this approach would be to force the local land-use planner to take environmental concerns into account so that state actions to prevent and remediate pollution problems are not compromised.

Although this approach seems to address the problem with the lack of concern for environmental planning by localities, the nature of local planning and the intractable nature of pollution

194. See 23 C.F.R. § 450.208(a)(14) (1995).

shows this option to be an undesirable solution. First, as has already been stated, planners of one locality are limited by the jurisdictional boundaries of that locality, and the arbitrariness of that boundary limits how much of a regional environmental problem that the locality can consider in its planning decision.¹⁹⁵ Further, even if the local planner considers extra-jurisdictional environmental factors, she may not be equipped with the staff or financial resources to make the proper determinations as to the effect of a particular land-use plan on the environment.¹⁹⁶

These concerns are especially true in rural areas. Rural areas in need of a tax base and jobs will give incentives to the developers that can no longer locate their projects in urban areas that have more stringent environmental controls.¹⁹⁷ As stated earlier, planners in rural areas lack the resources to manage this growth and to plan effectively for future growth.¹⁹⁸ Further, state policies that give incentives to industries to locate in the state almost serve as a pipeline of development towards rural areas that are unprepared for the growth.¹⁹⁹

These problems will continue as long as urban sprawl continues toward rural areas. Furthermore, the phenomenon identified by Joel Garreau in his book *Edge City* will help perpetuate this movement.²⁰⁰ As our urban centers are pushed out from their original place in the first generation of American cities to

195. See *supra* notes 29-35 and accompanying text; see also *supra* notes 119-23 and accompanying text; Michael Allan Wolf, *Fruits of the "Impenetrable Jungle": Navigating the Boundary Between Land-Use Planning and Environmental Law*, 50 WASH. U. J. URB. & CONTEMP. L. 5, 43-45 (1996) (noting the difficulties localities face when presented with land-use planning and environmental problems).

196. See *supra* notes 126-28 and accompanying text; see also Wolf, *supra* note 195, at 43.

197. See *supra* notes 124-25 and accompanying text. Environmental controls in urban areas presumably would be more stringent since environmental degradation typically is a greater problem in urban areas. See, e.g., *supra* notes 28-31 and accompanying text. State environmental planning is usually addressed to prevent and remediate pollution in areas that are considered already to be pollution problems. See *supra* notes 36-45 and accompanying text.

198. See *supra* notes 126-28 and accompanying text.

199. See *supra* notes 129-32 and accompanying text.

200. JOEL GARREAU, *EDGE CITY: LIFE ON THE NEW FRONTIER* (1991).

the new "edge cities" found in suburbia,²⁰¹ it will be even easier for the daily commuter to move out into the country to live the "country life" and work in the new edge city.²⁰² Urban sprawl and its accompanying environmental problems will continue as long as there are incentives to build on undeveloped, inexpensive land. Furthermore, the transportation conformity requirements are incapable of halting this problem when the Euclidean model is the predominant land-use scheme used by a majority of the states.

B. *Developments of Regional Impact, Areas of Critical State Concern, and Transportation Conformity: One No Decision*

Developments of regional impact (DRIs) and areas of critical state concern fare somewhat better under this analysis than the Euclidean model. First, when making determinations relating to DRIs and areas of critical state concern, the state agency making the decision is required to consider the environmental effects of its decision.²⁰³ Thus, there is at the outset an affirmative duty to at least consider the environmental impacts of the decision being made.

The question, however, is what environmental effects do small projects have that are not large enough to be designated DRIs?²⁰⁴ For instance, for a retail establishment to be consid-

201. *Id.* at 4.

202. *See, e.g., supra* note 26.

203. *See* FLA. STAT. ANN. § 380.05(2)(a)(1) (outlining considerations of environmental and natural resources in areas of critical state concern determinations); FLA. STAT. ANN. § 380.06(2)(b)(1) (West 1988 & Supp. 1996) (listing determinations by state agencies concerning DRIs and their effect on air pollution); *see also supra* note 143 (DRIs); *supra* note 147 (areas of critical state concern).

204. *See* Wickersham, *supra* note 103, at 518 (citing HEALY & ROSENBERG, *supra* note 118, at 155) ("Some criticism has surrounded the large size thresholds in the Florida statute, which permit many sizable projects to slip through unreviewed."). As noted by Healy and Rosenberg:

The current regulations fail to cover such significant projects as highways, hotels, commercial strips, and the opening up of new areas to piecemeal development. In one important case, an appeals court agreed with the Division of State Planning that a 9,000-acre well field in Pasco County, meant to serve Pinellas County and Saint Petersburg, was *not* a DRI because it was covered by the act establishing water management districts, and not by the Environmental Land and Water Management Act. Another example was a proposal to build four, forty-story buildings

ered a DRI, it must encompass "more than 400,000 square feet of gross area, occup[y] more than forty acres of land; or provide [] parking spaces for more than 2,500 cars."²⁰⁵ How many strip malls or convenience stores would fall under this category? In addition, under the Florida statute, a residential development cannot be classified as a DRI unless more than twenty-five percent of the development is "located within [two] or less [sic] miles of [a] less populated adjacent county."²⁰⁶ Presumably a large-scale residential development would not fall under DRI analysis unless the developer made the mistake of placing the development close to the county line. Furthermore, the residential developer would have a strong incentive to purchase and develop land in a less populated (and presumably rural) county. Thus, this approach would not address the cumulative effect of low-density development and the problem with continued urban sprawl encroaching into the countryside.²⁰⁷

The problem of smaller developments accumulating into a larger, regional problem, presents the problem that DRI statutes presumably are designed to address. In addition, even though the DRI determination includes consideration of air pollution and the possible traffic congestion that could be caused by the project,²⁰⁸ the local government has no affirmative duty to consider transportation issues related to the smaller projects. Further, the state's comprehensive plan can only incorporate transportation planning and conformity determinations into the comprehensive plan insofar as the comprehensive plan deals with DRIs. Smaller developments simply are not included in the state comprehensive plan's coverage. Thus, the same problems identified with the Euclidean model and transportation conformity apply to a slightly lesser extent to the scheme that involves determinations of DRIs.²⁰⁹

Protection of areas of critical state concern suffers from nar-

on a small island off Miami. Under current rules this 1000-unit project would not have been *nearly* large enough to qualify as a DRI.

HEALY & ROSENBERG, *supra* note 118, at 155.

205. FLA. STAT. ANN. § 380.0651(3)(f)(1)-(3); *see also supra* note 134; *supra* note 203.

206. *Id.* § 380.0651(3)(j).

207. *See* HEALY & ROSENBERG, *supra* note 118, at 155.

208. *See* FLA. STAT. ANN. § 380.06(2)(b)(1)-(2).

209. *See supra* part V.B.

row coverage. One of the problems with urban sprawl is that it is responsible for eating away at valuable farmland found on the urban fringe. The Florida statute does not include farmland—arguably a critical resource—in its coverage as an area of critical state concern. This type of designation could possibly help retard the outward growth of urban areas into vital farmland.²¹⁰ A consequence of such a designation could be the infilling of urban areas because of the reduction in available, undeveloped land. Unfortunately, legal and political battles have hampered the effectiveness of these provisions in Florida.²¹¹ Thus, it is unlikely that area of critical state concern designations could be effective deterrents to urban sprawl.

C. Growth Management Statutes and Transportation Conformity: One Win—Maybe

Oregon's Land Conservation and Development Commission (LCDC)—the organization charged with the duty of setting planning goals for the entire state—has established nineteen goals for planning in Oregon.²¹² Goal Twelve²¹³ addresses transportation planning; it states that localities “must plan to ‘provide and encourage a safe, convenient and economic transportation system.’”²¹⁴ “The needs of the state, region and locality must be considered in the plan, as well as the use of various transportation systems including mass transit, air, rail, bicycle and pedestrian.”²¹⁵ This seems to be the plan envisioned in the transportation conformity regulations. The approach here is integrated, and the plans are consistent to the extent that both the state and local governments are working from the same page to pursue the same goals.

In theory, this process allows Oregon to coordinate state, local and federal transportation planning in order to reach an integrated approach to transportation planning. In fact, local

210. See, e.g., MANDELKER, *supra* note 112, § 12.09.

211. See Wickersham, *supra* note 103, at 519-20.

212. See *supra* note 167 and accompanying text.

213. See *supra* note 167.

214. Richmond, *supra* note 167, at 344 (quoting OREGON LAND CONSERVATION AND DEV. COMM'N (LCDC), STATEWIDE PLANNING GOALS (1993)).

215. *Id.*

planners in certain MPO regions are required by the Oregon regulations to consider land-use impacts and federal requirements when executing a transportation plan.²¹⁶ This would include any conformity requirements that must be considered with the state's implementation plan.²¹⁷

The Oregon approach satisfies both of the objectives identified at the beginning of this section. First, it seeks to prevent and remediate pollution risks by utilizing future-oriented planning to reduce the amount of automobile-produced pollution. By setting specific requirements to utilize both transportation and land-use alternatives to reduce VMTs, the Oregon approach directly regulates one of the biggest contributors of urban air pollution.²¹⁸ Second, by electing to increase urban use densities²¹⁹ and set urban growth boundaries,²²⁰ the LCDC seeks to protect undeveloped lands and promote sustainable development. This type of comprehensive planning approach fits well within the federal transportation planning requirements as well as the transportation conformity requirements.

The uncertainty involved in the growth-management approach, as embodied in the Oregon statute, stems from the fact that it is relatively rare. There are only three states that have substantial experience with growth-management statutes.²²¹ Furthermore, the evidence available to us about the performance of these statutes is scarce.

[D]espite the large literature that has developed on state-wide and regional land-use and growth-management legislation, there are few systematic evaluations of the costs and benefits of such laws. Neither proponents nor opponents are able to offer much solid evidence in support of their contentions. In part, the paucity of empirical evidence is due to the normative difficulty of stipulating and then measuring costs and benefits. Land-use and growth-management decisions are preeminently value choices that deeply affect public interests and private rights.²²²

216. OR. ADMIN. R. § 660-12-035(2) (1995).

217. *Id.* § 660-12-035(3)(b).

218. *See supra* note 180 and accompanying text.

219. *See* OR. ADMIN. R. 660-12-035(2)(a).

220. *See supra* notes 172-73 and accompanying text.

221. *See supra* note 154 and accompanying text.

222. John Kincaid, *Regulatory Regionalism in Metropolitan Areas: Voter Resistance*

There are other potential problems with the Oregon approach. One of the criticisms of this approach has been that the legislature has not given the LCDC sufficient direction to make its policy decisions.²²³ Also, there have been questions about the effectiveness of the Oregon approach in meeting some of its goals.²²⁴ Further, the Oregon model has been criticized because of the slow response by local governments who were required to submit land-use plans for state approval.²²⁵ This would at least indicate a similar problem as identified under the Euclidean system—the abilities and resources available to local governments to comply with state-imposed environmental “goals” may be so limited as to negate their effectiveness.²²⁶ On the other hand, the use of urban growth boundaries has been cited as a catalyst for a more efficient and successful approach to land-use planning and design in the Portland, Oregon area.²²⁷

The lack of evidence as to the effectiveness of the Oregon approach warrants, at a minimum, a measure of caution when deciding whether or not the growth-management approach best serves the goals of state and federal environmental statutes. Although the structure of the growth-management statutes seems to favor consistent operation with the federal transporta-

and Reform Persistence, 13 PACE L. REV. 449, 478 (1993).

223. See Edward J. Sullivan, *Panel Discussion with Edward J. Sullivan, Norman Williams, Jr., and Bernard H. Siegan*, 14 ENVTL. L. 843, 844 (1984). (“Legislators expect too much when they pass broad legislation without ‘fleshing out’ for the agency the exact direction a policy should take. This may be because legislators have constituents. These factors have caused political and administrative problems.”).

224. See *id.* at 848 (“The inability to protect natural resources in forested areas is the single greatest disappointment in the program.”).

225. See Porter, *supra* note 154, at 490 (“Oregon’s program was administered for twelve years before all cities and counties had completed state-approved plans.”).

226. See *supra* notes 126-28 and accompanying text; see also Wolf, *supra* note 195, at 43.

227. See PETER CALTHORPE, *THE NEXT AMERICAN METROPOLIS: ECOLOGY, COMMUNITY, AND THE AMERICAN DREAM* 123 (1993) (“Transit-Oriented Development (TOD) patterns were used to show that land use can effectively reduce auto dependence, increase mobility, minimize air quality impacts, and create more affordable communities.”). Calthorpe states that a computer model used to test the land-use plan “show[ed] a four fold increase in walking and two and one-half times more transit use.” *Id.* at 124.

tion conformity requirements, the evidence of the approach in practice is inconclusive.

VI. THE ALTERNATIVES

In brief, there are two possible alternatives to the existing land-use planning schemes. The following section discusses these alternatives and how they may or may not be suitable replacements to the existing schemes.

A. *Federally Imposed Regional Land-Use Planning*

Congress has created several federal statutes that impose specific requirements on states to undertake environmental and transportation planning and regulation.²²⁸ Although a particular statute may give the state the option of undertaking environmental regulation, Congress' power to appropriate federal funds to states gives the states a strong incentive to exercise this option.²²⁹ This approach could prove to be useful in promoting regional land-use planning by states.

In order to promote land-use planning that is consistent with federal environmental statutes and goals, Congress could require states to institute regional land-use planning. If the state failed to comply, Congress could withdraw any funding that would relate to land-use planning, including funds for transportation construction. Further, Congress could require a federal agency to draft regulations that would require coordination between state, local, and federal transportation planning functions so that the goals of regional planning would be consistent with the goals of environmental remediation and prevention.

228. See *supra* part III (discussing conformity planning and transportation planning under the Clean Air Act); 33 U.S.C. § 1342(b) (1994) (giving states the option of issuing water discharge permits rather than the federal government issuing such permits).

229. To paraphrase a colloquialism, this approach involves the federal government taking its ball (federal funding for specific projects) and going home (denying funding for specific projects in a particular state) when the state does not play along as the federal government wants it to play. For instance, if a state does not conform a transportation plan to a state implementation plan, then the federal government will not give funds for that transportation plan to the state. See 42 U.S.C. § 7506(c)(2) (1994).

This would create a consistent system of planning that would put all states on an equal level while negating any concerns as to "the race of laxity" in land-use regulation.²³⁰

The problem with this approach is that it merely replaces one system with another almost identical system. This approach does not differ substantially from the existing growth management scheme discussed earlier,²³¹ except that the party making the regional planning rules is the federal government and not the state government. The growth-management approach does have some specific advantages over the Euclidean scheme,²³² but the problems associated with the growth-management scheme²³³ will not simply go away because the federal government is making the rules rather than the state government. Thus, federally imposed regional land-use planning may not address the problems presented by land-use planning in any of its existing forms.

B. *Design Alternatives*

Rather than regulate the problem, one solution may be to eliminate the problem. Congress recognized this approach, at least in principle, in the Clean Air Act of 1972, when it required auto-makers to significantly reduce automobile emissions.²³⁴ This approach sets standards of performance for the market to achieve, and gives the market the duty of finding a way to solve the problem.

The focus on the cause of the problem rather than on how to mitigate the problem requires a new type of thinking and new design concepts. This is not a simple task.

This new balance calls for the integration of seemingly opposing forces. Community and privacy, auto and pedes-

230. See, e.g., ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW AND SOCIETY 726-27 (1992) (stating that states had a "race of laxity" in order to attract businesses who were looking for as few environmental regulations as possible).

231. See *supra* part V.C.

232. See *supra* part V.C.

233. See *supra* notes 223-27 and accompanying text.

234. See Clean Air Act, Pub. L. No. 91-604, § 202(a), 84 Stat. 1690 (1970).

trian, large institution and small business, suburban and urban; these are the poles that must be fused in a new pattern of growth. The design imperatives of creating the post-suburban metropolis are complex and challenging. They are to develop a regional growth strategy which integrates social diversity, environmental protection, and transit; create an architecture that reinforces the public domain without sacrificing the variety and character of individual buildings; advance a planning approach that reestablishes the pedestrian in mixed-use, livable communities; and evolve a design philosophy that is capable of accommodating modern institutions without sacrificing human scale and memorable places.²³⁵

This focus on design rather than regulation should not be limited to land-use planning, but can be incorporated in other planning areas as well. For instance, increased and more efficient use of communications can reduce the number of trips that people must make by automobile.²³⁶ Included in this use of communications could be telecommuting, whereby a person works at home by connecting a computer to his or her home office. This would reduce the need to drive to work, thus reducing VMTs. Furthermore, design concepts could lead to the development of automobiles that emit no pollutants, so-called zero-emission vehicles, and such automobiles could serve as a replacement for present automobiles.²³⁷

The principle focus in design is sustainability. Sustainability can be addressed in regulation, through encouraging better designs without requiring specific designs as designated by regulation. Government can require design concepts only to the extent that designers have created the design concept. Rather than setting parameters by which planners and designers must operate as is the case with transportation planning—government could encourage innovation in transportation and land-use planning. This approach would be prospective

235. CALTHORPE, *supra* note 227, at 17.

236. See WILLIAM McDONOUGH + PARTNERS, THE HANNOVER PRINCIPLES: DESIGN FOR SUSTAINABILITY 25 (1992). One of McDonough's goals in the Hannover Principles was to increase the "attendance" at the Hannover Expo by "advances in Virtual Presence [so that] it may be possible to link up people in very distant places through three-dimensional interactive computer environments." *Id.*

237. *Id.* at 23.

rather than remedial, and it would allow the people most responsible and capable for planning and design to be creative in addressing federal, state, and local environmental concerns. Although a framework for implementation of the design would have to be in place (such as a regional government that would implement the land-use design for a particular region), the focus would be placed on the source of the problem rather than the problem itself.

VII. CONCLUSION

Striking a balance between growth and environmental concerns will continue to perplex environmental and land-use regulators. As history has shown, when an environmental concern has confronted government, government has reacted to that concern in specific ways. When the first zoning ordinances were enacted, local governments were reacting to public nuisances so that they could segregate people from those nuisances.²³⁸ When the first comprehensive environmental statutes were developed, the federal government was reacting to a number of specific environmental problems.²³⁹ Today, as scientists discover and define the interrelations that occur in natural systems,²⁴⁰ regulators are beginning to find ways to integrate environmental and other forms of regulation with the goal of remediating and preventing pollution in complex natural systems. Transportation conformity is one example of this attempt to integrate environmental regulation with another form of regulation: land-use regulation.

238. See *supra* note 100 and accompanying text.

239. See *supra* note 2 and accompanying text.

240. See, e.g., Bosselman & Tarlock, *supra* note 6, at 863 (1994) ("[E]cology remains the foundation of environmental law because it inform[s] society about the adverse consequences of a wide range of human activity."); Tarlock, *supra* note 6, at 562. But see James E. Krier & Mark Brownstein, *On Integrated Pollution Control*, 22 ENVTL. L. 119, 126 (1992) ("In short, it is silly to conclude that 'we are compelled to treat the environment as a whole' because treating the environment as a whole is impossible." (quoting Lakshman Guruswamy, *Integrating Thoughts: Re-opening of the Environmental Mind?*, 1989 WIS. L. REV. 463, 510)).

We learn conflicting lessons from looking at the interaction between transportation conformity and environmental regulation. When we look at the traditional Euclidean model and its interaction with transportation conformity, it becomes apparent that the Euclidean model works against transportation conformity. Transportation conformity even has a way of possibly enhancing the negative aspects of urban sprawl that are so prevalent under the Euclidean model. In short, transportation conformity is merely a small band-aid on a large wound in the majority of states that have adopted the Euclidean model.

The news gets a little better when we look at the regulation of developments of regional impact and areas of critical state concern on the one hand, and transportation conformity on the other. The goals of transportation conformity do not suffer as woefully as they do under the Euclidean model, but transportation conformity's interaction with DRIs suffers some of the same defects found under the Euclidean model. Ultimately, this approach will prove unsatisfactory for the regulator who seeks to remediate heavily polluted areas and to prevent pollution in other geographic areas.

The most promising partner for transportation conformity in the existing land-use planning realm is the growth-management approach. Growth-management statutes require a more integrated approach to planning in general, and growth-management statutes take into account the very regional considerations that are necessary to understanding and attacking regional air pollution. The approach, in theory, is superior to the other land-use schemes when considering transportation conformity determinations and goals. The problem is that the growth-management approach suffers from a lack of evidence supporting its proponents' claims. We simply do not know for sure that it will work. In addition to this, we do not know if the transportation conformity regulations themselves will work as intended. The conformity regulations are complex, and they are simply addi-

tions to an already complex transportation planning system that altogether requires coordination and consolidation of no fewer than five different plans.²⁴¹

Congress could step in to require a new form of regional planning to address some of the problems presented by the existing land-use schemes. However, this approach would offer nothing new except for a new set of regulations. Ultimately, the lesson of this discussion is that the best way to prevent pollution is not to pollute at all. The concept is very simplistic, but getting there is difficult. This will require a change in strategy and priorities when deciding how to remediate and prevent environmental pollution. It may be time to get the regulators out of the business of regulating land use and to let the designers use their creativity to think of new ways to approach these problems. In the words of William McDonough, "[w]e need a new design."²⁴²

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241. Those plans include: the statewide transportation plan, the statewide transportation improvement plan, the MPO transportation plan, the MPO transportation improvement plan, and the state implementation plan.

242. Robert Frenay, *Biorealism: Reading Nature's Blueprints*, AUDUBON, Sept.-Oct. 1995, at 70, 70 (interview with William McDonough).