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OVERLAY ZONING, PERFORMANCE STANDARDS, AND ENVIRONMENTAL PROTECTION AFTER NOLLAN

Robert J. Blackwell*

I. INTRODUCTION

For well over half a century, local governments have been empowered to regulate land use within their boundaries.¹ In 1926, the United States Supreme Court, in Euclid v. Ambler Realty,² upheld the right of municipalities to divide land into various use districts, based on the broad police power of protecting the health, safety, welfare, and morals of the public.³ Euclidean zoning, however, is ineffective in its protection of environmentally sensitive lands because it focuses on social and economic values rather than on natural resources.⁴ In addition, Euclidean zoning is often too inflexible to accommodate the irregular boundaries of environmentally sensitive areas.⁵ Other land use controls, including the National Environmental Policy Act (“NEPA”),⁶ purchasing and condemnation, donation and dedication, nuisance law, and protective covenants also suffer from one or more deficiencies that render them inadequate in protecting environmental areas.⁷

[References]

¹ See Fulton, A New Era for Private Property Rights, CALIFORNIA LAWYER, Nov. 1987, at 28 [hereinafter CALIFORNIA LAWYER].
² 272 U.S. 365 (1926).
³ Id. at 391–92, 397.
⁵ See infra notes 36–42 and accompanying text for a discussion of the inflexibility of Euclidean zoning.
⁷ See infra notes 46–108 and accompanying text for a discussion of the deficiencies of these land use controls.
In contrast, overlay zoning more effectively protects natural resource areas. Overlay zones are those that are specifically tailored to protect the environmental area at issue, whether it be a reservoir, aquifer, forest, or beach area.\(^8\) An outgrowth of Euclidean zoning, overlay zones in effect circumscribe an environmental area that is already subject to Euclidean regulation, and impose additional requirements thereon.\(^9\) Overlay zones are more effective than other land use controls in environmental protection because of their flexibility, their concentrated focus on specific environmental areas, and their use of performance standards.\(^10\)

Performance standards are criteria established to control and minimize offensive by-products of land uses, such as noise, odor, pollutants, and runoff.\(^11\) There are two types of performance standards: primitive and precision.\(^12\) Precision standards, for purposes of this Comment, are defined as those that contain both a scientifically developed means of measurement and a scientifically known and accepted level of performance.\(^13\) For example, an agency such as the United States Environmental Protection Agency may scientifically develop maximum pollutant discharge levels for an industry that may be subsequently adopted by a local community in its zoning ordinance.\(^14\)

Primitive standards are more general than precision standards, and include standards based on nuisance law as well as those with some quantifiable standards that do not meet both scientific criteria for precision standards.\(^15\) A primitive standard, for example, is one that prohibits land uses that produce an “objectional level of emis-

\(^{8}\) See infra notes 138–48 and accompanying text for a discussion of environmental overlay zones.

\(^{9}\) See D. Callies & R. Freilich, Cases and Materials on Land Use 80 (1986) [hereinafter Callies & Freilich].

\(^{10}\) See infra notes 149–67 and accompanying text for a discussion of the effectiveness of overlay zoning.


\(^{15}\) Cf. 2 R. Anderson, American Law of Zoning (3d) § 9.45, at 240–42 (1986) [hereinafter Anderson (3d)] (noting performance standards grounded on “levels of tolerance”); see also McDougal, supra note 13, at 270 (citing commentators who define precision standards as those that contain both scientific criteria).
Another example of a primitive standard is a hillside performance standard for erosion control. These standards are not scientifically substantiated, but are based on expert studies.

Courts have upheld both primitive and precision standards as valid exercises of the police power. Primitive standards, however, because of their less substantiated bases, do not afford ideal protection against possible arbitrariness in government regulation. Because they may be couched in general nuisance language or may not meet both scientific criteria, primitive standards are more likely to be subject to broad interpretation by local governments, and hence, to be arbitrarily interpreted.

Currently, the validity of primitive standards is questionable. Recent United States Supreme Court decisions may signify a trend toward judicial curtailment of the broad discretion afforded local governments under the police power. Specifically, in Nollan v. California Coastal Commission, the Court stated that land use regulation must "substantially advance" the government's interest in that area, and that there must be an adequate "nexus" between the regulation and the state land use objective. Thus, it is arguable that because primitive standards are not as narrowly drawn as precision standards, and are therefore more likely to be subject to arbitrary enforcement by local governments, they do not advance the government's interest as "substantially," nor do they have as close a "nexus" to such interests, as do precision standards. Consequently, the imposition of primitive standards under Nollan may be deemed an unconstitutional taking of land. Overlay zones that contain primitive standards may also, in turn, be invalidated. The elimination of these zones will effectively eliminate a key protection of environmentally sensitive lands.

This Comment presents an overview of many land use devices, including overlay zoning and performance standards, their respec-

16 Cf. Phillips Petroleum Co. v. Anderson, 74 So. 2d 544, 545 (Fla. 1954). This ordinance contains primitive standards because its language is couched in terms of nuisance law. See infra notes 183-95 and accompanying text for a discussion of the characteristics of primitive standards.
17 See INFORMATION REPORT Nos. 307, 308, supra note 14, at 97.
18 Id.
19 See generally Gillespie, supra note 12, at 751 (discussing various aspects of primitive performance standards and noting their validity).
21 See id.
23 Id. at 3146, 3148.
24 Id. at 3148.
tive capacities for environmental protection, and a discussion of the possible effects of *Nollan* on primitive standards. Section II discusses the ineffectiveness of most land use regulations in protecting the environment. Section III discusses the use of overlay zoning in affording relatively greater environmental protection. In Section IV, this Comment focuses on a crucial component of environmental overlay zones—performance standards—and discusses the validity of both primitive and precision standards. Section V discusses *Nollan* and advances four arguments why, after *Nollan*, primitive standards should remain a valid and viable land use control. This Comment concludes that, in conjunction with overlay zoning, primitive standards substantially protect environmentally sensitive lands. Such zones, already in use in several jurisdictions, offer the best environmental protection possible.\(^{25}\)

### II. THE FAILURE OF CURRENT LAND USE REGULATION TECHNIQUES TO PROTECT ENVIRONMENTALLY SENSITIVE AREAS

**A. Euclidean Zoning**

Euclidean zoning, the traditional land use development and regulation technique used in the United States, derives its name from the landmark United States Supreme Court case *Euclid v. Ambler Realty*.\(^{26}\) In *Euclid*, an owner of vacant land brought suit against the village for enacting a comprehensive zoning ordinance that classified the owner's land as residential.\(^{27}\) The owner claimed that such a classification reduced the value of his property and was an unconstitutional restriction of its use.\(^{28}\) The Court disagreed, and its opinion supporting zoning as a valid police power function set the stage for nationwide proliferation of zoning ordinances.\(^{29}\)

Currently, within municipalities and counties, Euclidean zones are fixed by legislative action.\(^{30}\) These zones specify the uses that are allowed on parcels of land within each zone. They also provide bulk

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\(^{25}\) See *infra* notes 367–70 and accompanying text for examples of proposed or existing environmental overlay zones that utilize performance standards.

\(^{26}\) 272 U.S. 365 (1926).

\(^{27}\) *Id.* at 384.

\(^{28}\) *Id.*

\(^{29}\) See *id.* at 394–97.

\(^{30}\) See, e.g., MASS. GEN. LAWS ANN. ch. 40A, §§ 1–17 (West 1979) (empowers local governments to divide and maintain land in various use districts).
requirements for parcels, that is, size, area, shape, density, setback, and other requirements.31

Although Euclidean zoning has been upheld by the United States Supreme Court as a means to protect the health, safety, welfare, and morals of the public,32 it has nonetheless been inadequate to protect environmentally sensitive lands.33 By focusing primarily on protecting economic and social values, Euclidean zoning addresses the immediate use of land within the municipality, but ignores the cumulative effect of all the permitted uses of the land upon the environment.34 For example, in Rhode Island, concerned citizens and environmentalists complain that current zoning regulations do not address long-term projections regarding development in watershed areas.35

31 3 R. ANDERSON, supra note 11, at 37.
32 272 U.S. 365, 396 (1926) ("[A]n ordinance can be declared unconstitutional [if] its provi­sions are clearly arbitrary and unreasonable, having no substantial relation to the public health, safety, morals or general welfare."). Two years later, the Court limited the states' broad regulatory power by holding that an otherwise valid zoning ordinance may be unconstitutional as applied to a specific parcel. See Nectow v. City of Cambridge, 277 U.S. 183, 189 (1928).

There seems to be no limit as to what may be included in the police power. Today, "general welfare" encompasses a "wider range of issues [that have] been brought into zoning—including esthetics, historic values, low-income housing and the need to increase opportunities for minority populations. Zoning is stretched to protect social, fiscal, and environmental goals that were not traditionally its goals. As the theory of the public interest expands, zoning expands." LAW ENFORCEMENT ASSISTANCE ADMINISTRATION, U.S. DEP'T OF JUSTICE, AN ANALYSIS OF ZONING REFORMS: MINIMIZING INCENTIVES FOR CORRUPTION, 11 (1979) [hereinafter ZONING REFORMS].

33 See Palmer, supra note 4, at 26–27. "Environmentally sensitive lands" are those "whose destruction or disturbance will immediately effect [sic] the life of a community by either (1) creating hazards such as flooding or landslides, or (2) destroying important public resources such as water supplies and the water quality of lakes and rivers, or (3) wasting important productive lands and renewable resources." INFORMATION REPORT Nos. 307, 308, supra note 14, at 34.


34 See Save the Pine Bush, Inc. v. City of Albany, 70 N.Y.2d 193, 206, 512 N.E.2d 526, 531, 518 N.Y.S.2d 943, 948 (1987) (re zoning of environmental area held invalid because town did not consider cumulative impact of development on the area); see also Palmer, supra note 4, at 26–27. Euclidean zoning tends to focus on protecting social and economic values and not the environment. See id.

35 New England Sierran, May 1987, at 1, col. 1. According to David Goleliewski, chief
Zoning also fails to protect environmentally sensitive land because zoning is specifically addressed to the needs of a single community, while the effects of such zoning are felt outside that community.\textsuperscript{36} In many instances, environmentally sensitive areas that are located adjacent to towns are indirectly affected by a town’s zoning ordinances.\textsuperscript{37} Even though a development is in full compliance with the town’s zoning laws, it might, for example, increase the amount of drainage and runoff flowing into catch basins and flood areas outside its boundaries and thus affect land outside the town.\textsuperscript{38} Such development might also increase traffic on roadways through natural resource areas in surrounding municipalities.\textsuperscript{39}

Euclidean zoning also fails to protect reservoirs and aquifers because towns usually get their water from outside their boundaries. Thus, the receiving town’s zoning laws will not ensure the quality of the water it receives from the reservoir or aquifer of a neighboring town.\textsuperscript{40} In addition, because environmentally sensitive areas, such as forests\textsuperscript{41} or water bodies, may transcend the boundaries of several municipalities, zoning designed to regulate land use in a single community will not effectively protect the entire area of environmental concern.\textsuperscript{42}

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\textsuperscript{37} See id.
\textsuperscript{38} See id.
\textsuperscript{39} See id.
\textsuperscript{40} New England Sierran, \textit{supra} note 35, at 1, col. 4. For example, on Cape Cod, Massachusetts, all of the Cape’s fifteen towns share a single aquifer. See Palmer, \textit{supra} note 4, at 54–56. Because population and development explosions as well as gasoline contamination threatened the integrity of this sole source of drinking water for the Cape, the Cape Cod Planning and Economic Development Commission proposed a model ordinance, a type of overlay zone, to protect the aquifer. \textit{Id.} The fifteen towns have virtually ignored the model and have continued enforcing their existing zoning ordinances, resulting in continued degradation of the aquifer. \textit{Id.}
\textsuperscript{41} See, \textit{e.g.}, Boston Globe, Feb. 7, 1988, (Magazine), at 21 (discussion of unique tropical rain forests in Hawaii).
\textsuperscript{42} See, \textit{e.g.}, \textit{Information Report Nos. 307, 308, supra} note 14, at 3 (citing example of San Jacinto area of Texas in which ineffective land use regulations allowed industries to pump out excessive water from aquifer causing the subsidence of land in surrounding residential communities which sat atop same aquifer); see also \textit{State Resources Known to be Affected by Activities Beyond Zone, Panetta Says}, 18 Env’t Rep. (BNA) 1446 (Oct. 2, 1987) ("Activities outside of state coastal waters affect air and other resources in the coastal zone . . . ."); Save a Valuable Environment (SAVE) v. City of Bothell, 89 Wash. 2d 862, 576 P.2d 401 (1978) (court invalidated city’s rezoning of farmland for construction of shopping mall because the
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The environment also suffers due to Euclidean zoning because there is no financial incentive for developers to actively seek to protect the environment.\textsuperscript{43} Developers are often interested in maximizing profits, and they will generally build to the maximum level permitted by local ordinances.\textsuperscript{44} Because there are no provisions in traditional Euclidean zoning to discourage development to the maximum level allowable, the pursuit of maximum profits causes environmental damage that affects the ecological, health, and aesthetic benefits of natural resources.\textsuperscript{45}

\textbf{B. The National Environmental Policy Act}

In addition to the failure of Euclidean zoning to properly protect environmentally sensitive lands, the National Environmental Policy Act of 1969 ("NEPA")\textsuperscript{46} is also ill-equipped to adequately protect the environment from poorly controlled land use decisions.\textsuperscript{47} NEPA provides that any federal action taken that will have an adverse impact on the environment should only continue if proper steps are taken to safeguard the environment and maintain its preservation.\textsuperscript{48}

NEPA requires that all federal agencies proposing a major development plan prepare an Environmental Impact Statement ("EIS") describing the anticipated effects of the proposed development on the environment.\textsuperscript{49} An agency must also demonstrate in the EIS that

\textsuperscript{43} See \textit{INFORMATION REPORT}, Nos. 307, 308, \textit{supra} note 14, at 3 ("[T]he real estate market does not adequately consider these costs and benefit of protecting [environmental resources]."). For example, the benefit that one receives from keeping a wetland on one's property (naturally occurring filtering mechanism for upland runoff) is public in nature, and will probably be outweighed by the profits one can receive by draining and filling the wetland so as to have more land to develop. \textit{See id.}

\textsuperscript{44} New England Sierran, \textit{supra} note 35, at 1, col. 4.

\textsuperscript{45} Palmer, \textit{supra} note 4, at 27.


\textsuperscript{47} \textit{See} Palmer, \textit{supra} note 4, at 27–29; \textit{see also} W. FISCHEL, THE ECONOMICS OF ZONING LAWS: A PROPERTY RIGHTS APPROACH TO AMERICAN LAND USE CONTROLS 223–24 (1985).

\textsuperscript{48} 42 U.S.C. § 4331(a) (1982)

\ldots [T]he continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

\textit{Id.}

\textsuperscript{49} \textit{Id.} at § 4332(2)(C). All federal government agencies shall
action to be taken by the proponents will include mitigation of the project’s adverse environmental impact.\(^5\)

Although NEPA’s scope is limited to actions taken by federal agencies,\(^5\) many states have adopted measures similar to NEPA to regulate local developments, proposed by either governmental or private developers, that affect the natural environment.\(^5\) An EIS is generally required from the developer, although some states require the EIS from the governmental agency that is ultimately responsible for granting the permit for the project.\(^5\)

Despite the good intentions of Congress and the state and local governments in requiring the EIS, it is not a useful tool for protecting the environment for several reasons. On the federal level, there are no exacting standards for the contents of an EIS.\(^5\) The result is that the agency proposing the project is the same agency drafting the EIS.\(^5\) Thus, there is no incentive for the agency preparing the EIS, which merely wants to see its project approved quickly, to be objective in its findings, and thereby to adequately consider potential environmental harm.\(^5\)

\[\ldots\] include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on —

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

\[Id.,\]

\(^5\) Id. at § 4332 (2)(G), (H).

\(^5\) See Scientists’ Inst. for Pub. Information, Inc. v. Atomic Energy Comm’n, 481 F.2d 1079, 1088–89 (D.C. Cir. 1973) (NEPA’s impact statement requirements held to apply where a federal agency, even through third parties, takes action that affects the environment).


\(^5\) See id. at 224; see also J. Petulla, supra note 52, at 103.
NEPA's EIS process is also faulty in that the review process for a federal agency's EIS is practically non-existent at both the administrative and judicial levels. Thus, there is usually no check on an agency's discretion. Another criticism of NEPA is that disagreements often arise among scientists about the environmental ramifications of a proposed project. The lack of definite standards for an EIS threatens its credibility and utility because it is often difficult to reach a consensus on possible environmental ramifications. Political, procedural, and bureaucratic problems plague the EIS process.

The local EIS process is subject to the same criticism as its federal counterpart. State NEPA policies also lack significant statutory guidance to delineate proper and specific guidelines for an EIS. In addition, state NEPA policies, especially those dealing with projects at the local level, demonstrate less expertise on environmental matters than federal policies. EIS administration is also an expensive, drawn-out process that provides only questionable benefits to the environment. It is clear that NEPA and its state and local counterparts, with their inherently weak EIS programs, are ineffective at minimizing environmental impact from proposed development.

57 See Palmer, supra note 4, at 29.
58 See id.
60 See J. PETULLA, supra note 52, at 100.
61 See id. at 94-106.
62 Palmer, supra note 4, at 32.

Further, the state EIS process affords a broad opportunity for citizen challenge to an EIS. See W. FISCHEL, supra note 47, at 224. Such challenges open developers up to attacks from interest groups, which may cause them to delay and perhaps ultimately abandon their projects. See id. While this result may be desirable to eliminate environmentally damaging projects, it nevertheless shows a failure of NEPA to implement an objective standard for the contents of an EIS. See id.
64 See Palmer, supra note 4, at 31.
65 See W. FISCHEL, supra note 47, at 223-24. The author recommends reform of NEPA. Id. The Planning Advisory Service, moreover, recommends, for example, that the Environmental Protection Agency offer more assistance and education to local governments in implementing programs under § 208 of the Federal Water Pollution Act Amendments of 1972. See INFORMATION REPORT Nos. 307, 308, supra note 14, at 2.
C. Outright Purchasing and Condemnation

Although Euclidean zoning and NEPA fail to adequately address concerns regarding the effects of development on environmentally sensitive lands, there are other methods at the local level that may help to preserve the environment. For example, if a particular piece of land in or adjacent to an environmentally sensitive area becomes available, a local government may purchase the land outright. 66 Suffolk County, New York, for instance, purchased 24,000 acres of pinelands for $157 million to protect the groundwater beneath the pines from contamination. 67 Local governments may also pool their efforts in such purchases. For example, Massachusetts towns banded under an organization called the “Bay Circuit” and working closely with the state’s Department of Environmental Management, have been purchasing parcels of open land to create a 100 mile long greenbelt around metropolitan Boston. 68

There is no guarantee, however, that such lands will be available for purchase. For example, an impasse may be reached with the sellers of such land regarding purchase price, or a crucial piece of land may not be placed on the market. A local government may then wish to use its power of condemnation to purchase such land. 69 Although the local government cannot invoke its condemnation power without a proper public purpose, 70 courts define “public purpose” very broadly, and thus make condemnation a viable option. 71 Condemnation may be used, for example, to justify the local government’s forced sale of property to protect a conservation area. 72

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68 See Boston Globe, Jan. 20, 1988, at 26, col. 3. Exorbitant real estate prices have similarly encouraged a coalition of California environmental groups to get a $770 million bond issue on the ballot to help localities purchase and protect natural resource areas. See CALIFORNIA LAWYER, supra note 1, at 31.
69 See CALLIES & FREILICH, supra note 9, at 641 (condemnation is the government’s exercise of its eminent domain powers, which is the taking of private property with just compensation for a proper public purpose).
70 See supra note 32 and accompanying text.
71 See Berman v. Parker, 348 U.S. 26, 33 (1954) (“Subject to specific constitutional limitations, where the legislature has spoken, the public interest has been declared in terms well-nigh conclusive. In such cases, the legislature, not the judiciary, is the main guardian of the public needs . . . .”) (emphasis added); see also CALLIES & FREILICH, supra note 9, at 647 (police power has been expanded to include growth management, aesthetics, rural and agricultural preservation, environmental protection, and transferable development rights).
72 See, e.g., City of Tacoma v. Welcker, 65 Wash. 2d 677, 399 P.2d 330 (1965) (upheld right
As long as there is some substance to the town’s claim that the conservation area needs to be protected from development, the action will likely be held valid.\textsuperscript{73}

When a local government purchases land through condemnation, however, it must pay for the highest and best use possible for the land—that is, the most economically profitable, yet reasonable, use of the land.\textsuperscript{74} Given the tremendous rise in real estate prices in recent years, local governments faced with limited budgets cannot purchase every environmentally sensitive parcel through condemnation proceedings.\textsuperscript{75} In addition, local governments may decide against utilizing formal condemnation proceedings because they are lengthy and politically unpopular.\textsuperscript{76}

\section*{D. Donation and Dedication}

Another way that local governments can attempt to preserve natural resource areas is to rely on private citizens to donate such property.\textsuperscript{77} The donors receive sufficient tax benefits through real estate and charitable donation deductions for their gifts of land\textsuperscript{78} and thus have a strong incentive to donate.\textsuperscript{79} Donation is, however, an unreliable method for local governments to use to protect the environment. Landowners might be hesitant to donate, even if they have a desire to help preserve the environment, because they are unaware of the tax benefits received from such donation.\textsuperscript{80} They might also be unaware that the donated land can be maintained for the benefit of the environment, as the donor so intended, through the use of reversionary deeds and donation to reliable entities, such as conservation groups.\textsuperscript{81}
Dedication of environmentally sensitive lands to the public is another possible local-level land use control and is similar to a donation in that it involves giving land to the public. It differs, though, in that landowners do not give land on a voluntary basis, but rather are required to do so by either statute or common law principles whenever they attempt to subdivide land. Assuming the local governmental entity is receiving such land in order to protect legitimate state objectives under the police power, the dedication requirement is legitimate. In addition, as with donations, the dedicators, or subdividers, receive a benefit from the dedication in that they are no longer liable for the upkeep or taxes on the dedicated land.

Dedication is not always a viable option in every jurisdiction because some local governments require a stronger nexus than a general public safety and welfare test to authorize a dedication. Dedication in these jurisdictions is allowed only if the need created for the land is “specifically and uniquely attributable” to the subdivision in question.

Most environmental harm caused by the inadequacies of Euclidean zoning is attributable to the culmination of effects from a variety of developments over a period of time rather than from a single developer. Thus, courts are not likely to uphold dedication in “uniquely totalling more than 17,500 acres, all of them open to the public. See The Trustees of Reservations, (Conserving the Massachusetts Landscape), 1986 Annual Report 1 (1987).

82 Livingston, supra note 66, at 781.
83 Id.
84 See, e.g., Ayres v. City Council of City of Los Angeles, 34 Cal. 2d 31, 207 P.2d 1 (1949) (upheld city council’s requirement that subdivider dedicate portion of land for traffic safety purposes).
85 Id. at 34, 207 P.2d at 3 (required dedication of land to prevent a traffic hazard that would result if development were allowed as planned on a small triangular piece of land surrounded by major thoroughfares).
86 See Livingston, supra note 66, at 783. Landowners, however, are still liable for the taxation and upkeep of the land (because they retain fee simple title) if the dedication is merely a common law implied easement of public access. Id.
87 See, e.g., Pioneer Trust & Sav. Bank v. Village of Mount Prospect, 22 Ill. 2d 375, 382, 176 N.E.2d 799, 801 (1961) (court struck down dedication requirement of 6.7 acres of land for use as elementary school when subdivision plan showed only 250 residential units planned); R.G. Dunbar Inc. v. Toledo Plan Comm’n, 52 Ohio App. 2d 45, 52, 367 N.E.2d 1193, 1195 (1976) (city could not require dedication of right-of-way for major highway that was not attributable to plaintiff’s subdivision but rather was for public’s general benefit); Frank Ansuini, Inc. v. City of Cranston, 107 R.I. 63, 74, 264 A.2d 910, 913 (1970) (small size of subdivision did not merit dedication of “at least 7%” of subdivision’s land to city for use as recreation area).
88 See Pioneer Trust, 22 Ill. 2d at 381, 176 N.E.2d at 802.
89 See New England Sierran, supra note 35, at 1, col. 2.
attributable” jurisdictions if the environmental harm sought to be prevented is not solely attributable to a particular parcel. For example, an aquifer may run beneath several communities each containing countless parcels of land which may or may not discharge into the aquifer. Because of the uncertain flow of groundwater, no one can be certain from where the pollutants will come. In such areas, a “uniquely attributable” dedication cannot be required from landowners. Thus, dedication is not a universally effective protector of natural resource areas because jurisdictions vary in their thresholds for when they will require dedication, leaving some natural areas unprotected.

Moreover, dedication, like donation, is ineffective at environmental protection because it requires that local governments wait passively for private real estate transactions to occur before they can engage in such protection. A passive stance affords minimal environmental protection because the real estate market does not operate to preserve the environment.

E. Nuisance Law

Another method a local government may rely on to address environmental needs is nuisance law. A branch of tort law, nuisance law operates under the general principle that landowners may use their property in any way desired, so long as they do not injure others. Although nuisance law predates zoning as a land use control,

. . . it is not a land use control in the modern sense. A nuisance is defined as a specific activity and it must be shown to exist and actually cause some harm before a court will hear the case. It becomes a land use control only as a result of the effects of

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90 Pioneer Trust, 22 Ill. 2d at 381–82, 176 N.E.2d at 802–03.
91 See generally Davis, Groundwater Pollution: Case Law Theories for Relief, 39 Mo. L. Rev. 117 (1974).
92 Cf. INFORMATION REPORT Nos. 307, 308, supra note 14, at 3–4 (active government involvement, not waiting for private real estate transactions, is necessary to afford proper environmental protection).
93 See id.
94 See W. Fischel, supra note 47, at 27. The word “nuisance” is generally undefinable and encompasses such offensive items as “an alarming advertisement to a cockroach baked in a pie.” PROSSER AND KEETON ON TORTS § 86, at 616 (5th ed. 1984) [hereinafter PROSSER AND KEETON].
95 See Bove v. Donner-Hanna Coke Corp., 236 A.D. 37, 38, 258 N.Y.S. 229, 231 (1932) (allegations that gases and odors from plant entered plaintiff’s property).
spatial proximity of incompatible activities, such as hog farms and most anything else.  

Nuisance law, therefore, can only be an appropriate land use control in situations where offensive activities are located adjacent to fragile environmental areas. Further, nuisance law is helpful for preventing the demise of sensitive lands only where a private landowner decides to sue a neighbor. Thus, the doctrine's application in environmental protection is limited.

Under the doctrine of public nuisance, however, a governmental unit may sue to enjoin an environmentally offensive land use from harming the surrounding natural resources. If, for example, discharge from a parcel into a river both killed fish and polluted the water, and it was deemed harmful to the public health and comfort, then it could be labelled as a public nuisance and the owner of the parcel could be prosecuted.

Public nuisance law, however, currently has limited utility as a land use regulation. It has been virtually pre-empted by zoning laws. Furthermore, nuisance offers little prospective control, is expensive to litigate, presents problems of proof, and tends towards the "extreme" remedy of injunction instead of monetary damages.

F. Protective Covenants

Another land use device for the protection of the environment is the protective covenant. Protective covenants are generally pri-

96 W. Fischel, supra note 47, at 27.
97 See generally Prosser and Keeton, supra note 94, § 90, at 643-45 (listing various interferences with public health, including the pollution of a stream, as potential nuisances). A landowner may, however, in certain jurisdictions, bring an anticipatory nuisance action requesting injunctive relief for a nuisance that does not currently exist, but where it is obvious that a future land use by a neighbor will result in harm to that landowner's parcel. See generally Comment, An Ounce of Prevention: Rehabilitating the Anticipatory Nuisance Doctrine, 15 B.C. ENVTL. AFF. L. REV. 627 (1988). The doctrine of anticipatory nuisance, however, is generally not accepted by state courts, and only two states have statutes that provide injunctive relief for anticipatory nuisances. See id. at 644-45.
99 See Prosser and Keeton, supra note 94, § 86, at 618. Nuisances may be of the public or private variety. Id. Private nuisances usually refer solely to interference with a private right to use and enjoy land, while public nuisances refer more broadly to an interference with the rights of the community at large. Id.
100 See id. § 90, at 643.
102 W. Fischel, supra note 47, at 27.
103 See id.
104 Id.
vate agreements between landowners, usually in the form of formally binding contracts or servitudes that, in effect, prescribe uses and restrictions upon neighboring lands.\textsuperscript{105} While covenants are legally binding, they are usually drawn up among private parties for their own private benefit.\textsuperscript{106} Because private landowners are often guided by profit motives, they often have no financial incentive to protect the environment by covenants or other regulatory devices.\textsuperscript{107} Moreover, private land use controls, by focusing on only a few parcels, are too narrow in scope to create an effective solution to the widespread nature of environmental problems.\textsuperscript{108} In sum, like nuisance law, covenants depend on private actions and force the government into a passive role in land use. Thus, covenants are also ineffective in protecting against environmentally harmful land use and development.

Overall, there are various land use devices that a local government can use to protect natural resource areas: Euclidean zoning, EIS's, purchasing and condemnation, donation and dedication, nuisance law, and protective covenants. Each, however, suffers from one or more deficiencies that reduces its effectiveness in protecting the environment. Environmental overlay zones, another land use device, address the most salient of these inadequacies and are, in effect, more environmentally sensitive land use devices.

\section*{III. The Use of Overlay Zones}

\textbf{A. Overlay Zones in General}

A land use technique that addresses some of the shortcomings of previously suggested techniques is overlay zoning. Overlay zones are those zones, created by local legislative enactment, that are coterminous\textsuperscript{109} or circumscribed by an existing Euclidean zoning district, and that impose additional regulations on the underlying zone.\textsuperscript{110} A parcel within an overlay zone will thus be simultaneously

\begin{footnotesize}
\textsuperscript{105} Id.
\textsuperscript{106} See id. (noting that covenants can be used to acquire air, mineral, and travel rights on another's land).
\textsuperscript{107} See supra notes 43–45 and accompanying text.
\textsuperscript{108} See \textsc{Information Report} Nos. 307, 308, supra note 14, at 3 ("The necessity for governmental involvement in environmentally sensitive lands comes from the essentially public character of those land resources.").
\textsuperscript{109} Having the same or coincident boundaries. \textsc{Webster's Third New International Dictionary} 516 (1981).
\textsuperscript{110} See \textsc{Callies & Freilich}, supra note 9, at 80. Overlay zoning "derive[s] its name from being drawn on tracing, mylar, or other translucent paper which was then placed or 'laid over' the official zoning map." \textit{Id.}
\end{footnotesize}
subject to two sets of zoning regulations: the underlying and the overlay zoning requirements.\footnote{111}{See J. Cook, ZONING FOR DOWNTOWN URBAN DESIGN 21 (1980). Municipalities can combine different types of zoning by use of “an overlay zone, a zone with special requirements (such as review procedures, height limits, or aesthetic review requirements) that covers more than one zoning district and does not change the underlying use and density standard.” Id.}

Overlay zoning, like any other zoning ordinance, must meet legal formalities by being rationally related to the health, safety, welfare or morals of the general public.\footnote{112}{See supra note 32 and accompanying text. For a general discussion of the constitutionality of environmental preservation zoning, see Kusler, Open Space Zoning: Valid Regulation or Invalid Taking?, 57 MINN. L. REV. 1 (1973).} Although the case is known for its creation of “classic” Euclidean zoning, \textit{Euclid v. Ambler Realty}\footnote{113}{272 U.S. 365 (1926).} also indirectly upheld the validity of the less conventional overlay zoning.\footnote{114}{See id. at 380–84.} By approving the City of Euclid’s zoning ordinance, which divided the town into six classes of use districts and superimposed upon them three classes of height districts and four classes of area districts, the Court approved overlay zones along with traditional zones.\footnote{115}{See id.}

If conflicts arise between the requirements of the overlay zone and the underlying zone, a municipal code will usually indicate which regulation will prevail.\footnote{116}{See, e.g., Franchise Developers, Inc. v. Cincinnati, 30 Ohio St. 3d 28, 33, 505 N.E.2d 966, 970–71 (1987) (ordinance in question stated that “in the case of a conflict between the provision of an underlying zoning district and [the overlay district in question], the provision of the [overlay] district shall prevail”).} The overlay regulations generally prevail because they are usually more restrictive.\footnote{117}{E.g., Id. at 33, 505 N.E.2d at 971 (overlay zone designed “to prohibit certain land uses that are otherwise permitted in the underlying zoning regulation”); see also PRINCE GEORGE'S}
"map out" areas of concern, sometimes with the help of outside experts, and then implement an appropriate overlay zoning ordinance.

An overlay zone, due to its inherent flexibility, presents an attractive alternative to a municipality that has already zoned the entire town and needs only to alter the zoning for the benefit of a specific area. An overlay zone is flexible because it may be specifically tailored to apply only to the underlying parcels requiring regulation. This flexibility saves the municipality the trouble and expense of amending the underlying zoning for just a few parcels, and does not affect the applicability of the underlying zoning regulations to every parcel in the district. In addition, overlay zones may be utilized on a state- or region-wide basis to control land use in districts that extend over municipal boundaries.

Further, an overlay zone is flexible because there is no precise format it must follow. Rather, overlay zoning simply encompasses any additional zoning regulations that govern or modify the uses of any underlying district.

COUNTY, MD., PROPOSED CHESAPEAKE BAY CRITICAL AREA PLAN AND POLICY OVERVIEW 2-7 (May 21, 1987) [hereinafter CHESAPEAKE BAY OVERVIEW] ("The overlay zoning technique allows for the modification or augmentation of specific regulations while, for the most part, existing regulations remain intact."); COTTAGE GROVE, MINN., CITY CODE art. VIII, § 28-69(c) (Supp. 1983) ("Within the overlay district, all uses shall be permitted in accordance with the regulations for the underlying zoning district(s); provided, that such uses shall not be entitled to or issued the appropriate development permit until they have first satisfied the additional requirements established in this article.").

118 See INFORMATION REPORT Nos. 307, 308, supra note 14, at 2.
119 See infra notes 367–70 and accompanying text. In the event that the environmental area to be regulated transcends the boundaries of one or more towns, overlay zones may be implemented on a county, regional, or state level. Such legislation often delegates substantial responsibility to the municipalities included in the zone. See id.
120 See A-S-P Associates v. City of Raleigh, 298 N.C. 207, 210, 258 S.E.2d 444, 455–57 (1979) (98-acre historic overlay zone did not apply to modern State Medical Society building). This classification of regulated and non-regulated parcels must meet an equal protection challenge. Therefore, the classification must have a rational relation to the purpose and subject matter of the legislation. See id. at 911, 258 S.E.2d at 456.
121 See INFORMATION REPORT Nos. 307, 308, supra note 14, at 1.
122 See A-S-P Associates, 298 N.C. at 212, 258 S.E.2d at 458 ("that the creation of an overlay historic district may impose additional regulations on some property within an underlying use district and not on all of the property within it, does not destroy the uniformity of the regulations applicable to the underlying use district").
123 See infra notes 367–68, 370 and accompanying text for a discussion of overlay zones that protect environmentally sensitive areas that transcend municipal boundaries.
125 Franchise Developers, Inc. v. Cincinnati, 30 Ohio St. 3d 28, 33, 505 N.E.2d 966, 968 (1987) (court upheld the enactment of "environmental quality districts" which regulate land in addition to underlying zoning).
B. Overlay Zones Used for Specific Purposes

Overlay zones are flexible not only in their form, but also in the various land uses they can regulate.\textsuperscript{126} For example, overlay zones are widely used to preserve historic buildings and areas in historic districts.\textsuperscript{127} Other common overlay districts include airport noise impact zones,\textsuperscript{128} highway corridor overlay districts,\textsuperscript{129} agricultural overlay districts,\textsuperscript{130} and planned unit development (PUD) overlay zones.\textsuperscript{131}

Local jurisdictions may also create special overlay zones tailored to their individual needs.\textsuperscript{132} For example, Albuquerque, New Mexico, has established a “Wall Overlay Zone” that regulates the height of walls or fences which are necessary or desired in front yards.\textsuperscript{133} Anaheim, California, utilizes a “Scenic Corridor Overlay Zone” to protect areas deemed to have distinctive scenic importance from poorly planned growth that would rob such areas of their aesthetic charm.\textsuperscript{134} Other specialized uses of overlay zones are interface ov-

\textsuperscript{126} See infra notes 126–48 and accompanying text.

\textsuperscript{127} See, e.g., FAIRFAX COUNTY, VA., CODE OF ORDINANCES § 7-200 (1977); OKLAHOMA CITY, OKLA. MUNICIPAL CODE art. II, § 25-11.1 (1977); TUCSON, ARIZ., MUNICIPAL ORDINANCES art. I, div. 28 (1977). Historic overlay zones are a means to enhance the educational, cultural, and economic welfare of a local jurisdiction by protecting groups of remaining buildings from a historic era in a municipality’s history. See TUCSON, ARIZ., MUNICIPAL ORDINANCES art. I, § 23-455 (1977).


\textsuperscript{129} See FAIRFAX COUNTY, VA., CODE OF ORDINANCES § 7-600 (1977). Highway corridor overlay zones are invoked to limit, for example, for safety and aesthetic reasons, “the number of automobile-oriented uses” on highways. See id. at § 7-601.

\textsuperscript{130} See, e.g., TOWN OF MUSKEGO, WAUKESHA COUNTY, WISC., ZONING ORDINANCES ch. 17, § 9.05 (1985). For protection of existing agricultural areas, and areas of mixed use in which agriculture still has an important role, local governments may invoke agricultural overlay districts. Id. See also Ridgewood Phosphate Corp. v. Perkins, 487 So. 2d 40, 41 (Fla. Dist. Ct. App. 1986) (example of agricultural zone with mineral extraction overlay).

\textsuperscript{131} See Amcon v. City of Egan, 348 N.W.2d 66, 71 n.4 (Minn. 1984) (noting example of PUD overlay).

\textsuperscript{132} See infra notes 133–44 and accompanying text for a discussion of specialized overlay zones.

\textsuperscript{133} CITY OF ALBUQUERQUE, N.M., COMPREHENSIVE CITY ZONING CODE ch. 7, art. 14 § 39(A) (1987).

\textsuperscript{134} ANAHEIM, CALIF., MUNICIPAL CODE, ZONING CHAPTER § 18.84 (1987).
Another more specialized use of such zones is the environmental overlay zone. In fact, most of those municipalities that have enacted local environmental regulatory programs have utilized overlay zones. For example, San Diego, California, uses an overlay zone to protect the Tecolote Canyon Natural Park area from uncontrolled residential development. Birmingham, Alabama, and New Hanover County, North Carolina, have enacted more general natural resource conservation overlay districts to protect important environmental resources that are located throughout the underlying zones.

Spokane County and the City of South Tacoma, both in Washington state, have enacted overlay zones specifically to protect the quality of the regions' drinking water contained in groundwater aquifer systems. In addition, Cottage Grove, Minnesota, has iso-

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135 See, e.g., Explanatory Paper on Interface Zoning, presented by City of Merced, Calif. to Second Annual Zoning Institute, American Institute of City Planners (1982). The interface zone is used to achieve a compatible buffer zone for points at which heavy impact zoning directly borders upon light impact zoning. Id.
136 See, e.g., MESA, ARIZ., ORDINANCE 1905 tit. XI, ch.3 § 11-3-9.5 (1985). Such zones are used to provide for planned retirement communities for senior citizens. Id.
137 See, e.g., ZONING DISTRICT OF THE CITY OF BOSTON art. 27, § 27-1 (1984). These zones are used to suspend existing zoning in an underlying district until new zoning ordinances are enacted to deal more accurately with the jurisdiction's zoning needs. Id.
138 See INFORMATION REPORT Nos. 307, 308, supra note 14, at 4 (Environmental overlay zones must be specialized since "the function of [these] resources is highly localized . . . . [T]he functions will vary from site to site due to local conditions.").
139 See id. The following objectives of regulatory programs for environmentally sensitive lands are generally within the police power: protection against landslides, flooding, and drought; prevention against harmful by-products of land uses such as erosion, runoff, and water pollution. See id. Protection against air pollution and other offensive by-products of land uses are also within the police power. See infra note 168 and accompanying text.
140 See L.A. Times, Sept. 1, 1985, § J, at 1, col. 1 (San Diego County ed.).
141 See BIRMINGHAM, ALA., GEN'L CITY CODE art. 23, § 11 (1981); NEW HANOVER COUNTY, N.C., GEN'L COUNTY CODE (ZONING) § 59.4 (modified Feb. 3, 1986). New Hanover County's conservation overlay zone exists specifically for the preservation of ecological resources such as swamp forests, natural ponds, primary nursery areas, and salt marshes. It thus subjects development within or affecting such areas to the requirements of both the underlying district and the overlay zone. See NEW HANOVER COUNTY, N.C., GENERAL COUNTY CODE (ZONING) §§ 59.4-2 to 54.4-3(1). Specific regulations within the ordinance regulate density requirements, conservation space preservation, buffer strips, conservation space setbacks, and retention of runoff from developed areas. Id. at §§ 59.4-4 to 59.4-5.
142 See GENERAL COMPREHENSIVE PLAN FOR SPOKANE COUNTY, WASH., Section 10 (Water Quality), § 4.16A.000 (1983); SOUTH TACOMA, WASH. MUNICIPAL CODE ch. 13.09, § 010 (1985). While both jurisdictions' overlay zones focus on the regulation of development within the
lated a single environmental area within its borders, the Mississippi River, and has chosen to protect it through the use of an overlay zone.\textsuperscript{143} In this zone, Cottage Grove regulates growth in the vicinity of the river to protect the river's transportation, ecological and recreational benefits to the area.\textsuperscript{144} Other environmental overlay zones may regulate floodplain areas,\textsuperscript{145} quarries,\textsuperscript{146} greenbelts,\textsuperscript{147} and seashore areas.\textsuperscript{148}

\section*{C. Overlay Zones as Efficient Protectors of Natural Resources}

Overlay zoning is more effective at protecting environmentally sensitive lands than other land use controls because it adequately addresses the weaknesses of those controls\textsuperscript{149} and takes an additional step to further protect the environment.\textsuperscript{150} Overlay zoning meets the shortcoming of pure Euclidean zoning—protecting social and economic values while ignoring environmental values—\textsuperscript{151} by allowing municipalities to create zones specifically for regulating the treatment and effects of development on the environment.\textsuperscript{152}

areas of aquifers, their main concentration is on the regulation of storage and disposal of toxic chemicals in the underlying zones. Spokane County's plan in particular is explicit in guiding those who are required to apply for permits to use certain toxic materials on their property by providing a list of virtually hundreds of "critical materials" and required EPA categorization of such materials. \textit{See General Comprehensive Plan for Spokane County, Wash., Section 10 (Water Quality) § 4.16A.080 (1983)}. The plan also sets standards for disposal, mining, and usage of such materials in the zone. \textit{See id.} at §§ 4.16 A.070, 4.16A.080.\textsuperscript{143} Cottage Grove, Minn., Zoning Ordinances art. VII, § 28-69(b) (1983) (Mississippi River Corridor Critical Area Overlay District).

Overlay zoning also makes up for the shortcomings in federal, state, and local NEPA's which suffer from subjective EIS reports. Overlay zones utilize objective standards rather than developer-imposed standards to measure environmental impact. In addition, overlay zones correct another shortcoming of the NEPA process—lack of administrative and judicial review of EISs—in that all zoning action is subject to administrative review through a designated appeals board and then, once administrative appeals are exhausted, an aggrieved party may have access to the courts. Overlay zoning, in effect, mimics the EIS process, which is NEPA's attempt to superimpose environmental consideration upon land use regulation. Overlay zones, however, do so with objective standards that help eliminate conflicts of interest and are more attuned to environmental protection.

The utilization of overlay zones also makes up for the inadequacy of local governments' other alternatives for protecting environmentally sensitive lands. First, overlay zones, although requiring the cost of studies and the time taken in order to enact them, are much less expensive to implement than outright purchases of land required under condemnation. Further, because the government takes an active stance in land use control, overlay zones make up for the inadequate passive stance a local government takes when relying upon donation or dedication as a means of land use control. Conservation overlay zones, involving government action, also make up for the inefficiencies of private covenants, because the

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153 See supra notes 54–65 and accompanying text.
154 Id. Overlay zones use performance standards which provide government-imposed standards with which developments must comply. See infra notes 167–71 and accompanying text.
155 See Palmer, supra note 4, at 29.
156 See, e.g., MASS. GEN. LAWS ANN. ch. 40A, §§ 15–17 (West 1979) (Massachusetts Zoning Act's provisions for zoning board approval and judicial review of board decisions).
157 See Palmer, supra note 4, at 33.
158 Cf. supra notes 54–56 and accompanying text (discussing the subjectivity of the NEPA process and its attendant problems).
159 See infra notes 160–66 and accompanying text.
160 See INFORMATION REPORT Nos. 307, 308, supra note 14, at 1.
161 See New England Sierran, supra note 35, at 1, col. 3 (noting increasing real estate prices).
162 See Livingston, supra note 66, at 780.
163 See supra notes 82–93 and accompanying text.
164 W. FISCHEL, supra note 47, at 27.
zoning enables a locality to actively formulate an environmentally protective plan with a view toward the entire district.\textsuperscript{165} Lastly, overlay zoning, with its inherent flexibility,\textsuperscript{166} is a more desirable tool for land use than is rigid nuisance law. Thus, overlay zones overcome all the most salient deficiencies of other traditional land use controls. Further, as will be set forth in Section IV, overlay zones utilize performance standards which provide additional environmental protection.

\section*{IV. Performance Standards}

\subsection*{A. General Discussion}

Not only do overlay zones meet most of the inadequacies of other land use controls, but they also go one step further in protecting environmentally sensitive areas by establishing performance standards.\textsuperscript{167} Performance standards are defined as "criteri[a] established to control noise, odor, smoke, toxic or noxious matter, vibration, fire, and explosive hazards, and glare or heat generated by or inherent in uses of land or buildings."\textsuperscript{168} Performance standards can also be used to regulate stormwater runoff, soil erosion, and vegetation protection.\textsuperscript{169} Communities utilizing overlay zones maintain existing Euclidean zoning but add another level of regulation through special use provisions.\textsuperscript{170} Through these provisions, . . . landowner[s] must use [their] land for uses other than those specified in the [Euclidean zoning] ordinance if [they] meet specific environmental performance criteria. These criteria generally delineate the key functions that the community wishes to preserve, such as the water retention capabilities of wetlands. [Landowners are] allowed to develop the land any way [they wish] if [they] can show that it will not adversely affect these natural processes.\textsuperscript{171}

\begin{thebibliography}{10}
\bibitem{165} See \textit{supra} note 103 and accompanying text (noting inadequacy of passive land use controls).
\bibitem{166} See \textit{supra} notes 120--25 and accompanying text for a discussion of the flexibility of overlay zoning.
\bibitem{167} See \textit{Information Report} Nos. 307, 308, \textit{supra} note 14, at 96 (development of performance controls takes place on the second level of Euclidean zoning).
\bibitem{168} See \textit{Information Report} Nos. 307, 308, \textit{supra} note 14, at 5 (provides standards for all three areas).
\bibitem{169} See \textit{id.} at 96.
\bibitem{170} \textit{Id.}
\end{thebibliography}
Performance standards are a supplement to and not a replacement for overlay zones.\textsuperscript{172} The overlay segregates the environmental area to be protected, and the performance standards preserve natural functions or processes independent of the zonal designation.\textsuperscript{173} Thus, the protection of environmentally sensitive lands occurs on two levels: the delineation of the areas to be preserved (overlay zoning) and the creation of performance standards for all such land similarly situated.\textsuperscript{174}

Performance standards were created initially to represent a more environmentally sensitive type of land use control.\textsuperscript{175} Performance standards, like overlay zones, were developed to combat the inflexibility of Euclidean zoning in light of increasing land demands of industrial development and its attendant population growth.\textsuperscript{176} Specifically, performance standards compensate for conventional zoning ordinances' lack of standards for protecting land uses from adverse impact from adjoining land uses.\textsuperscript{177}

Although no local government has totally abolished its Euclidean zoning districts,\textsuperscript{178} many have adopted performance standards to compensate for the major shortcomings of Euclidean zoning.\textsuperscript{179} Specifically, performance standards address the inherent weaknesses in traditional ordinances that define permitted and prohibited uses in a zone.\textsuperscript{180} Because this list-type zoning cannot possibly encompass all uses that may exist in the future, and because it ignores the wide variations of impact of different uses, it is inherently inefficient.\textsuperscript{181} Performance standards rectify this situation by allowing all uses as long as each and every use meets the standards for that district.\textsuperscript{182}

\textsuperscript{172} See id. at 97.
\textsuperscript{173} See id.
\textsuperscript{174} See id. Performance standards used in an overlay zone further protect the environment because they require all landowners in a buffer zone, not just those within or immediately adjacent to the protected area, to adhere to the standards. Id.
\textsuperscript{175} See Gillespie, supra note 12, at 741. While performance standards are often required in industrial zones, they are also used in other zones, including residential zones. See id. at 764; see also Nair v. Thaw, 156 Conn. 445, 449–50, 242 A.2d 757, 758–59 (1968) (air conditioner in residential neighborhood found violative of performance standards implied in zoning ordinance); Goodfriend, \textit{Noise Protection in Residence Zones}, 15 ZONING DIG. 233 (1963) (noting noise pollution abatement capacity of performance standards).
\textsuperscript{176} See Gillespie, supra note 12, at 741.
\textsuperscript{177} L. KENDIG, \textit{PERFORMANCE ZONING} 10 (1980).
\textsuperscript{179} See ANDERSON (3D), supra note 15, at 238–39 (1986).
\textsuperscript{180} See id.
\textsuperscript{181} See id. at 239.
\textsuperscript{182} See id. Performance standards can also be combined with the typical "list-type" zoning.
Performance standards are either of the "primitive" or "precision" variety, and environmental overlay zones can contain both types. Primitive standards have a more general character. For example, an ordinance that prohibits "[land uses] which will emit any offensive odor, dust, noxious gas, noise, vibration, smoke, heat or glare beyond the boundaries of the lot on which such use is conducted" is a primitive variety because violations are defined by the general term "offensive." Primitive standards have their roots in the common law of nuisance. Thus, an Illinois court upheld an ordinance that required that the noise and fumes of manufacturing plants not be "disagreeable or annoying." The court reasoned that the statute merely codified the common law of nuisance. Primitive standards also include standards developed from the basis of four variables: open space ratio, impervious surface ratio, density, and floor area ratio.

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See Dube v. Chicago, 7 Ill. 2d 313, 317-18, 131 N.E.2d 9, 11-12 (1955), cert. denied, 350 U.S. 1013 (1956) (court held constitutional an ordinance that listed permissible uses and required that such uses meet performance standards).

See Gillespie, supra note 12, at 751.

See infra notes 367-70 and accompanying text.

Cf. Gillespie, supra note 12, at 751 (noting that primitive standards are less objective and less technically explicit than precision standards).

State v. Zack, 138 Ariz. 266, 268, 674 P.2d 329, 331 (1983) (term "offensive vibration" used in ordinance defining heavy industrial uses was definable and hence not unconstitutionally vague).

Id. at 268, 674 P.2d at 332.

See Gillespie, supra note 12, at 748-49 (noting numerous cases utilizing nuisance language). For a brief general discussion of the law of nuisance, see supra notes 94-103 and accompanying text.


See id.

L. KENDIG, supra note 177, at 25. For purposes of this Comment, such standards based on these variables are also classified as primitive, even though they are measured numerically, because they do not meet the definition of true precision standards. See infra notes 199-202 and accompanying text.

L. KENDIG, supra note 177, at 26. The open space ratio measures the proportions of a site, excluding land occupied by private lots or road right-of-ways, which remain undeveloped and is specifically designated as open space. Id. To calculate, one must divide acres of open space by gross site area. Id.

Id. at 27. The impervious surface ratio measures the proportion of impervious land of a site. Id. To calculate, one must divide acres of impervious surface area by gross site area. Id.

Id. at 28. Density measures dwelling units per acre. Id. To calculate, one must divide the number of dwelling units by the gross site area. Id.

Id. at 29. Floor area ratio measures density in non-residential areas. Id. To calculate, one must divide the area of all floors of a building by the total area of the site. Id.
Conversely, precision standards are grounded in scientific data and are measured by quantifying values. For example, the Soil Conservation Service has scientifically developed a model to measure the volume of runoff of a proposed development based on storm flow records. In addition, the American Planning Association has developed technical methodology to compute minimum road widths for planning purposes.

Some commentators further distinguish true precision standards as those containing both scientifically developed means of measurement and a scientifically known and accepted level of performance. In light of this definition of true precision standards, and given the fact that advances in technology have enabled scientists to precisely quantify acceptable performance standards, any standards that do not meet both criteria may be considered less than precise, and will be, in effect, primitive standards.

Thus, for purposes of this Comment, primitive standards are defined as those containing general language and based on nuisance law as well as those with some quantifiable standards that do not meet both scientific criteria. Compared to precision standards, primitive standards do not afford the best protection against possible arbitrary enforcement by local governments.

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196 Cf. Gillespie, supra note 12, at 751 (comparing precision and primitive standards and noting that precision standards contain scientific findings).
197 INFORMATION REPORT Nos. 307, 308, supra note 14, at 98. The formula is $Q = (I - 0.25)^2 / (I + 0.85)$ ($Q = \text{direct surface runoff in inches, } I = \text{storm rainfall in inches, } S = \text{the difference between the rainfall and the runoff}$). Id. The calculation of the S value is the critical factor in determining the effects of development on the volume of runoff produced. Id. Two Illinois jurisdictions, Chicago and Naperville, were among the first to adopt this precision standard. See id. at 98–99.
198 L. KENDIG, supra note 177, at 330.
199 See McDougal, supra note 13, at 270 (citing Schulze, Performance Standards in Zoning, 10 J. AIR POLLUTION CONTROL ASS'N 156, 158 (1960)).
200 See infra notes 243–45 and accompanying text.
201 Cf. McDougal, supra note 13. This Comment adopts the view cited by one commentator that true precision standards are those containing both scientific criteria.
202 Id. at 271.
203 Cf. id. at 270–71 (recognizing that courts have not required primitive standards to provide complete protection against arbitrariness). Other commentators, however, disagree with this strict two-step scientific requirement. McDougal argues that this requirement could not be met by a majority of existing industrial performance standards. Id. at 270. If these standards were then held to be arbitrary and unreasonable, performance standards would not be "a viable concept for providing adequate protection to uses of land from adverse by-products or other land uses." Id. For a discussion of the validity of primitive standards when compared to these scientific standards, see supra notes 200–03 and accompanying text.
B. General Validity of Performance Standards

Courts give great deference to municipalities in promulgating performance standards because such standards are derived from the police power. So long as the end is legitimate, courts will only inquire whether the means chosen are sufficiently related to that end in deciding whether to uphold the standards. The performance standards must not be arbitrary or capricious.

There are, however, only a small number of cases that directly rule on the validity of performance standards. Two Illinois decisions, Dube v. City of Chicago, and International Harvester Co. v. Chicago Zoning Board of Appeals, upheld the validity of a primitive ordinance that banned land uses which "cause substantial injury" to neighboring property values and violate general standards concerning noise, vibration, and other offensive land use by-products. The court in Dube found that such an ordinance was not arbitrary because it could be interpreted by using a nuisance standard, while the International Harvester court impliedly upheld the validity of the ordinance.

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204 See supra notes 205-21 and accompanying text.
205 See Decoals v. Board of Zoning Appeals of City of Westover, 284 S.E.2d 856, 858 (W. Va. 1981). The court held that performance standards are a legitimate way to regulate potentially offensive effects on land development. "So long as there is a reasonable basis in available information, and rationality in chosen courses of conduct to alleviate an accepted evil, there is no constitutional infirmity." Id. at 854 (citing United States v. Carolene Prod., 304 U.S. 144, 151-54 (1938)).
206 See ANDERSON (3D), supra note 15, at 240-42 (noting cases where courts have required some degree of definitiveness in statutory language). Although there are no cases that hold that a state's land use enabling legislation actually authorizes performance standards, judicial approval may be inferred from previous approval of such land use devices as conditional zoning, floating zones, planned unit developments, cluster zoning and exactions. Gillespie, supra note 12, at 745.
207 See 4 WILLIAMS, AMERICAN LAND PLANNING LAW § 103.02, at 414 (1986). The ensuing section of this Comment is a general discussion of the validity of overlay zones and does not necessarily refer to those performance standards used by overlay zones. This Comment will argue, however, that a combination of overlay zones and performance standards serves as an effective means of protecting environmentally sensitive lands. See infra notes 367-70.
210 See id. at 443-44, 193 N.E.2d at 858.
211 See Dube, 7 Ill. 2d at 327-28, 131 N.E.2d at 16 (court's decision based on testimony of six neighbors who testified about serious discomfort caused by noise from plant).
212 See International Harvester, 43 Ill. App. 2d at 450-51, 193 N.E.2d at 861 (ordinance not invalidated even though the court found performance standards in general to be "intricate and confusing" and to create difficulty in showing intended compliance).
A more recent West Virginia case directly supports the validity of performance standards. The court, in DeCoals, Inc. v. Board of Zoning Appeals of the City of Westover, upheld the city's industrial primitive standards that regulated dust and "objectional noise" by affirming the board's recision of a permit for a coal tipple. The court upheld the validity of the standards over a substantive due process claim because the ordinance was reasonable and closely related to the legitimate state goal of protecting the public from offensive land uses. Lastly, in 1983, an Arizona court upheld an ordinance that prohibited "offensive vibrations" because the term was easily definable and because the offensiveness could be measured in terms of a reasonable person standard. This case is representative of the judiciary's long-standing tradition of deference to performance standards.

214 Id.
215 Id. at 858. The ordinance in relevant part required that:

... (N)o dust of any kind produced by the industrial operations shall be permitted to escape beyond the limits of the property being used.

... A maximum level of 70 decibels at the property line is permitted. Noise is required to be muffled so as not to become objectionable due to intermittance, beat frequency or shrillness. Sound may equal but not exceed street traffic noise in the vicinity during a normal day shift work period.

Id. (quoting Westover, W.Va., zoning ordinance)
216 A coal tipple is an apparatus by which loaded coal cars are emptied, and sometimes include an elevated runway or framework upon which cars are run for tipping. WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 2398 (1981).
217 See DeCoals, 284 S.E.2d at 858 (quoting Caster v. City of Bluefield, 132 W. Va. 881, 54 S.E.2d 747, 750 (1949)).
219 See id.
220 Id.
221 Id. Other cases through the years have mentioned performance standards in dicta. See, e.g., City of Des Plaines v. Chicago & N.W. Ry. Co., 65 Ill. 2d 1, 357 N.E.2d 433 (1976) (adoption by state of Environmental Protection Agency standards of noise control regulations preempted city from adopting its own concurrent performance standards); Southern Rock Prod. Co. v. Board of Zoning Adjustment of Trussville, 282 Ala. 186, 210 So. 2d 419, 421 (1968) (ordinance referred to "objectional conditions"); Nair v. Thaw, 156 Conn. 445, 242 A.2d 747 (1968) (performance standards as applied to residential uses must comport with ordinary nuisance law); Fetsch v. Police J. Ct. of the Village of Sands Point, 7 A.D.2d 854, 181 N.Y.S.2d 904 (1959) (upheld ordinance that made it unlawful for any person to make any loud, unnecessary or unusual noise that disturbs the peace and quiet of the village); Township of West Bloomfield v. Chapman, 351 Mich. 606, 88 N.W.2d 377 (1958) (operation of noisy machine shop in agricultural zone held to violate expected performance standards of such zone).
The validity of performance standards, however, is not without its limits. In *Phillips Petroleum v. Anderson,* the court found an ordinance that stated that "no operation shall be carried on which is injurious to . . . other properties, or to the occupants thereof by reason of the objectional emission of cinders, dust, dirt, fumes, gas, odor, noise, etc. . . ." unconstitutionally vague and an invalid delegation of legislative power. The court's rationale was based solely on the broad language of the ordinance, which was found too vague to be enforced fairly. The "tendency of immediate neighbors to object" placed the landowner "wholly at the whim and mercy of his neighbors." The use in the ordinance of the words "public nuisance" to describe the offensiveness would have cured the ordinance of its vagueness because that term is a definable term of art.

The *Phillips* case, however, is from one of only a small minority of courts that reject outright primitive standards as arbitrary. Other courts have rejected primitive standards on grounds other than facial arbitrariness. In *Kenville Realty Corp. v. Board of Zoning Appeals of Briarcliff Manor,* for example, the court struck down an ordinance that prohibited uses that were "offensive, obnoxious or detrimental by reasons of vibration, dust, fumes, odor, noise, lights or traffic generation and resultant congestion." The *Kenville* court, however, treated primitive standards more favorably than did the *Phillips* court. The court's rationale was not that the primitive ordinance was generally arbitrary, but that less subjective noise control standards were feasible and necessary. The court's dicta suggested that the actual term "nuisance" does not have to appear in a statute in order for it to be valid.

Rather, the *Kenville* court stated that because such a term is generally understood by laypeople, and because in an industrialized
society more and more protection is being entrusted to public officials, performance standards do not have to be couched in precise language.\textsuperscript{235} The courts, instead, must find a middle ground between ""strait-jacketing" public officials and ensuring rule of law rather than by caprice."\textsuperscript{236} Courts should afford great flexibility to public officials and they should be presumed to be acting rationally and legally in promulgating primitive performance standards.\textsuperscript{237}

Another court struck down a primitive standard on grounds other than that the ordinance, as a primitive standard, was inherently arbitrary. In Beaver v. Borough of Johnsonburg,\textsuperscript{238} an ordinance that prohibited "[a]ll uses of land, building, and structures . . . that may be noxious or injurious by reason of the production or emission of dust, smoke, refuse matter, [etc.] . . . ." was invalidated.\textsuperscript{239} The court did not rule that the ordinance was vague on its face, but found that it did not contain the criteria a local administrative board would use to make permit decisions.\textsuperscript{240} Similarly, courts have invalidated other ordinances for failure to state definite standards.\textsuperscript{241}

Though there are exceptions, courts have generally upheld the validity of primitive performance standards.\textsuperscript{242} Lately, however, as the frontiers of technological expertise are expanding, performance standards are becoming increasingly precise.\textsuperscript{243} Various studies indicate that there has been an increase in the scientific regulation of the following nuisance conditions: noise, smoke, dirt and dust, toxic gasses, glare, heat combustible phenomena, electromagnetic interference, industrial sewage waste, and transportation modes.\textsuperscript{244} The onslaught of scientific or technological information has encouraged

\textsuperscript{235} See id.
\textsuperscript{236} Id.
\textsuperscript{237} See id.
\textsuperscript{239} Id. at 558.
\textsuperscript{240} See id.
\textsuperscript{241} See, e.g., Exton Quarries Inc. v. Zoning Bd. of Adjustment, 425 Pa. 43, 228 A.2d 169 (1967) (blanket restriction against quarries as they are dust producers found to be invalid because there was no evidence to support that dust created by quarry would be harmful to town); Commercial Properties, Inc. v. Peternel, 418 Pa. 304, 211 A.2d 514 (1965) (lack of certain and definite standards will invalidate zoning ordinances); Norate Corp. v. Zoning Bd. of Adjustment of Upper Moreland Township, 417 Pa. 397, 207 A.2d 890 (1965) (ordinance that allowed zoning board to grant special exceptions "as they may deem necessary" was so arbitrary as to be invalidated).
\textsuperscript{242} See supra notes 207–41 and accompanying text for a discussion of the general validity of primitive performance standards.
\textsuperscript{243} See Gillespie, supra note 12, at 755–57.
\textsuperscript{244} See id. at 756.
municipalities to adopt precise standards whenever possible.\footnote{245} Because there is overwhelming judicial approval of primitive standards that are clearly drafted, non-arbitrary, and couched in terms of public nuisance, more definite precision standards, meeting the same requirements, will more likely receive judicial approval.\footnote{246}

The judicial approval and widespread adoption of precise standards, however, might be a cause to question the adequacy, effectiveness, and validity of primitive standards.\footnote{247} In light of the clear-cut language and numerical terminology of precision standards, the general "reasonable person" language of primitive standards may seem relatively arbitrary.\footnote{248} In the same vein, standards that are not true precision standards—those that do not contain both a scientifically developed means of measurement and a scientifically known and accepted level of performance\footnote{249}—may also seem arbitrary.\footnote{250} Hence, the fate of overlay zones that utilize both kinds of performance standards is arguably uncertain, if one of the zones' components is found to be invalid and arbitrary.\footnote{251} These contingencies must be analyzed in the wake of recent land use decisions of the United States Supreme Court.

V. THE VALIDITY OF PRIMITIVE STANDARDS AFTER NOLLAN V. CALIFORNIA COASTAL COMMISSION

The outlook for the continued validity of primitive standards is uncertain after the Supreme Court's 1987 decision in \textit{Nollan v. California Coastal Commission}.\footnote{252} Essentially, \textit{Nollan} requires that land use regulations "substantially advance legitimate state interests"\footnote{253} and that there be an essential "nexus" between the land use regulation and the state's land use goals.\footnote{254}
A. Nollan v. California Coastal Commission

_Nollan_ involved oceanfront property owners who wished to replace their cottage with a larger home. The Nollans' lot, located in Ventura County, California, was situated between two public beaches, Faria County Park and an area known locally as "the Cove." The California Coastal Commission (the "Commission"), which had jurisdiction over beachfront development, issued a building permit to the Nollans with the condition that they allow a public easement to cross the ocean side of their property. The Commission instituted the condition on the grounds that the increase in private oceanfront structures prevented the public from having "psychological access" to the public beaches located nearby.

The Nollans sued for a writ of administrative mandamus, asking that the permit condition be stricken on fifth amendment grounds. Specifically, the Nollans argued that because the Commission did not prove that their proposed construction would directly affect beach access, the condition could not be legally imposed because it would amount to an unconstitutional taking. The Ventura County Superior Court agreed and the Commission appealed.

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255 Id. at 3143. The cottage, a rental home, had been in the family for over thirty years and had fallen into disrepair. Id. The Nollans wished to demolish it and replace it with a permanent three-bedroom home. Id.

256 Id.

257 See id. The permit was required under sections 30106, 30212, and 30600 of the California Public Resources Code. Id.

258 Id. Specifically, the permit required that the easement be granted to allow travel between an eight foot high seawall on the Nollan's property and the mean high tide line. Id. Ironically, the Nollans had always allowed some form of public easement on this part of their land. L.A. Daily J., June 29, 1987, at 6, col. 2. Said James Nollan, "So long as the people who've crossed [the easement] have been well-behaved, we've never had any need to remove anyone, but we've had a right to if there was a problem. We have no plans to fence off the property or do anything different [after the Supreme Court's decision]." Id.

259 Nollan, 107 S. Ct. at 3143. After a public hearing, the Commission found that "the new house would increase blockage of the view of the ocean, thus contributing to the development of a "wall" of residential structures' that would prevent the public 'psychologically . . . from realizing a stretch of coastline existing nearby that they have every right to visit." Id. at 3143-44 (quoting the Commission's report). The Commission also found that the construction would add to private use of the shorefront and hinder the public's ability to traverse the beaches. Id. at 3144.

260 Id. at 3144. The fifth amendment requires, _inter alia_, that no "private property [shall be] taken for public use without just compensation." U.S. CONST. amend. V.

261 Id. at 3143.

262 Id. at 3144.

263 Id. at 3143-44. During the appeal period, the Nollans began the construction on their home without informing the Commission. Id. at 3144.
In 1986, the California Court of Appeal reversed the lower court,\textsuperscript{264} holding that the permit condition was sufficiently related to burdens on public beach access created by the Nollans’ project, and was thus constitutional.\textsuperscript{265} Relying on the reasoning of \textit{Grupe v. California Coastal Commission},\textsuperscript{266} the court found that such conditions are valid even if the burdens on access are not created solely by the proposed project and the relationship between access and the project is merely an indirect one.\textsuperscript{267}

A year later, the Supreme Court reversed the Court of Appeal’s decision because a state land use regulation must substantially advance a state’s interest and must not deny an owner economically viable use of his land\textsuperscript{268} or it will “effect a taking of [the land].”\textsuperscript{269} The decision cites other Supreme Court cases in which the land use ordinances in question “substantial[ly] advance[d]” governmental purposes.\textsuperscript{270} In \textit{Euclid v. Ambler Realty},\textsuperscript{271} for instance, the governmental division of the city’s land into various use districts substantially advanced the protection of the health, safety, welfare, and morals of the public.\textsuperscript{272} Such division would, among other things, reduce the risks of fire and traffic accidents, decrease noise pollution, preserve the character of residential areas, and help to minimize urban blight.\textsuperscript{273}

The \textit{Nollan Court} also cites \textit{Penn Central Transportation Co. v. New York City.}\textsuperscript{274} There, the Court upheld the city’s rejection of plans to construct a fifty-three story office building over and to remove portions of the facade of the French beaux-arts style train station.\textsuperscript{275} The Court reasoned that a regulation restricting alterations that could be made to landmark buildings adequately advanced the government’s interest in preserving structures with special hist-
torical significance.\textsuperscript{276} The Court also cited \textit{Agins v. Tiburon},\textsuperscript{277} which held that zoning ordinances that restricted developments on a tract of land in a scenic preservation zone to five single-family residential units, accessory buildings, and open-space uses "substantially advanced" the government's goal of protecting against the "ill effects of urbanization."\textsuperscript{278}

The permit condition in \textit{Nollan}, however, did not adequately advance the government's land use goals. Justice Scalia, writing for the majority, found a lack of nexus between the permit conditions and the government's stated purpose of promoting public access to the beaches.\textsuperscript{279} It was inconceivable to Scalia "how a requirement that people already on the public beaches be able to walk across the Nollans' property reduce[d] any obstacles to viewing the beach created by the new house"\textsuperscript{280} or lessened any "psychological barrier" to use of the nearby public beaches.\textsuperscript{281}

The Court also stated that the easement would not help anyone on the road looking seaward realize that there was a public beach nearby because their view of beachgoers using the easement would be blocked by the Nollans' eight-foot high seawall.\textsuperscript{282} Further, such access would not serve to eliminate added congestion on the beach caused by the new house's construction.\textsuperscript{283} For these reasons, the easement condition on the Nollans' permit "utterly fail[ed] to demon­strate a nexus between the government regulation and the government objective of achieving psychological access to public beaches,"\textsuperscript{284} and was deemed to be an unconstitutional taking.\textsuperscript{285}

Justice Brennan vigorously dissented in an opinion in which Justice Marshall joined.\textsuperscript{286} The first argument was that the majority's deci-
sion was "an aberration,"287 and that the proper standard of review for the validity of a state land use regulation is not a "substantial advancement" test, but rather a "rational relations" test.288 For most of this century, the Court had rejected a standard more strict than a rationality test.289 In addition, it would be unrealistic to expect local governments making complex natural resource decisions to comply with such a strict standard.290

Brennan's other major argument was that even if the new "substantial advancement" test were applicable, the Commission's permit conditions met the test.291 The ability to see beachgoers traversing the dry sand in front of the Nollans' home would advance the Commission's goal of increasing the public's "psychological access" to the beaches.292 Further, the permit condition would also adequately support the Commission's other goal of reducing private domination of the shorefront.293

The majority responded to Brennan's "substantial advancement" argument by stating that the public's access would not be improved by the granting of the easement.294 Brennan's latter argument of reducing private use of the beachfront was not at issue before the Court.295 As it now stands, though, Nollan's "substantial advancement" test is the law, and land use regulations must be analyzed in that light.296

B. Testing the Validity of Primitive Standards After Nollan

Primitive and precision standards both serve to limit the offensive by-products of different land uses.297 It is arguable, however, that the Court's strict requirements for such regulation will adversely affect land use planning. Id. at 3163–64. Stevens proposed instead that traditional takings analysis be continued in order to afford more guidance and stability to the decisionmaking of land use planners. See id.

287 Id. at 3164 (Brennan, J., dissenting).
288 See id. at 3151–52. Justice Blackmun echoed this sentiment in his dissenting opinion: "The close nexus between benefits and burdens that the Court now imposes on permit conditions creates an anomaly in the ordinance requirement that a state's exercise of its police power be no more than rationally based." Id. at 3162–63.
289 Id. at 3151 (Brennan, J., dissenting).
290 Id. at 3162.
291 Id. at 3154.
292 See id.
293 See id. at 3155.
294 See id. at 3149–50; see also supra notes 279–85 and accompanying text.
295 See Nollan, 107 S. Ct. at 3155 n.4 (Brennan, J., dissenting).
297 See supra notes 168–69 and accompanying text.
primitive standards, when compared to the more justifiable precision standards, do not advance legitimate state interests as "substantially" as precision standards, because they leave more room for reasonable person interpretation.\textsuperscript{298} Further, the "nexus" between primitive standards and protection against offensive and disruptive land uses is not as close as that of precision standards.\textsuperscript{299} Thus, after Nollan, the imposition of primitive standards may be judged to be an unconstitutional taking of land. This Comment, however, advances four reasons why Nollan should not affect the validity of primitive performance standards.

1. Nollan May Be an Aberration

First, Nollan might not jeopardize the validity of primitive performance standards because the decision may be viewed as an aberration—not well-grounded in legal precedent—and thus may not have far-reaching ramifications for land use law.\textsuperscript{300} It is presently unclear to what extent Nollan will affect the right of a municipality to regulate land use, as the case has not been fully or adequately interpreted.\textsuperscript{301} Certain commentators have noted that Nollan, in conjunction with a case decided two weeks earlier, First English Evangelical Lutheran Church v. County of Los Angeles,\textsuperscript{302} signifies the start of a trend to cut back on the broad police power afforded the states in land use matters.\textsuperscript{303} In First English, the Court held that a newly enacted ordinance that prohibited a church from rebuilding its flood-damaged children's camp in a designated flood zone amounted to an unconstitutional taking.\textsuperscript{304} The church was denied "all use of [its] property" and therefore had to be compensated.\textsuperscript{305} First English indicates that states may have to pay landowners for temporary regulatory takings.\textsuperscript{306}

\textsuperscript{298} Cf. McDougal, supra note 13, at 270–71 (noting that the more scientifically based a performance standard is, the more likely it "reduce[s] the possibility of arbitrary and capricious decisionmaking to the lowest possible level").

\textsuperscript{299} Cf. id. at 271 (noting that primitive standards, as compared to precision standards, do not provide "the ultimate in protection against possible arbitrariness").

\textsuperscript{300} See infra notes 307–11 and accompanying text.

\textsuperscript{301} See CALIFORNIA LAWYER, supra note 1, at 31.

\textsuperscript{302} 107 S. Ct. 2378 (1987).

\textsuperscript{303} See CALIFORNIA LAWYER, supra note 1, at 28.

\textsuperscript{304} 107 S. Ct. at 2389.

\textsuperscript{305} Id.

\textsuperscript{306} See Merrill, supra note 296, at S-8, col. 1. The holding in First English that there had been a taking is not universally accepted. See id. at S-9 n.12. It is possible that "the Court either could have ruled that there was no taking as a matter of law, or it could have required
Other commentators, however, view the cases as not having a significant impact because they do not state any novel legal principles. These cases are also viewed as aberrations because it is rare for the often conservative Supreme Court to make any "revolutionary" shifts in land use ideology. Further, the shift is novel because for over a half of a century the Court had delegated land use regulation to state and local governments. Local planners reason that if the two cases stand for anything new, it is that local governments will be "require[d] . . . to state their demands on developers more clearly and directly." In addition, because the two cases originated in California, a state with a reputation for being quite deferential to land use regulation, the decision could be interpreted as requiring California courts to adopt a less deferential attitude toward land use regulations. If this interpretation of Nollan is correct, then Nollan's impact may be blunted and thus will arguably not affect the validity of primitive performance standards, which courts have historically upheld as a valid land use control.

Nevertheless, there are some indications that the Supreme Court is ushering in a more conservative era in land use regulation. Before the Nollan decision, the Court had not struck down a land use regulation since 1928. From 1979 to 1986, developers sought to have the Court review Agins v. Tiburon, in which the California Supreme Court held that a regulatory taking could not exist because the proper relief for such a claim is amendment or invalidation of the land use regulation. Although the Court reviewed four cases discussing that issue, it did not decide any case on the merits. The

the church to amend its complaint and develop a better record in support of its taking claim before ruling on the remedial issue." Id.

307 Cf. CALIFORNIA LAWYER, supra note 1, at 28 (language of First English “doesn’t make takings any easier to prove,” and after Nollan, public agencies still have “wide latitude . . . to impose conditions on development permits”). According to Stanford Law Professor Robert C. Ellickson, “For developers to have real power, they need to have a decision in the U.S. Supreme Court or the state Supreme Court that say overly strict land use regulations are a taking . . . . And that has not occurred.” Id.

308 See id.


310 CALIFORNIA LAWYER, supra note 1, at 28.

311 See id.

312 See id.

313 Nectow v. City of Cambridge, 277 U.S. 183 (1928).

314 24 Cal. 3d 266, 598 P.2d 25, 157 Cal. Rptr. 372 (1979), aff’d on other grounds, 447 U.S. 255 (1980); see also CALIFORNIA LAWYER, supra note 1, at 29.

315 See Merrill, supra note 296, at S-8, col. 1. The cases, in chronological order, are Agins v. Tiburon, 444 U.S. 255 (1980) (affirmed California Supreme Court’s judgment that proper
Court then reached the merits in *First English*. Although the holding was somewhat muddied, a clear rule emerged: when landowners are deprived, even temporarily, of all use of their property, a court may find that a regulatory taking has occurred.

This allegedly conservative approach to land use regulation culminated in the *Nollan* decision two weeks later. Although the *Nollan* decision may have been novel, as pointed out by the dissenters, some commentators suggest that it may not mean that the decision was incorrect. The decision can be read as a response to local land use regulations that have placed increasingly demanding conditions on developers and that are more tangentially related to their proposed projects. This practice has been ongoing since the 1970s as local governments tried to preserve areas that were sensitive to development and simultaneously required developers to absorb the social costs of development. Thus, in sum, if *Nollan* is viewed as an aberration, or a narrowly decided case, then the long-standing validity of primitive performance standards will probably not be jeopardized.

If, however, *Nollan* is not an aberration, but instead embodies the Court’s new attitude toward land use regulation, then primitive standards could constitute a regulatory taking because they do not meet the Court’s “nexus” threshold to the extent that precision standards do. Even if such a judicial trend has been initiated,
there are nevertheless three other reasons why the holding of *Nollan* should not affect the validity of primitive performance standards.

2. The *Nollan* Court Gave Tacit Approval to Primitive Performance Standards

Primitive performance standards should not constitute a taking even under *Nollan* because such standards arguably fall within *Nollan’s* permissible land use regulations. The implementation of performance standards has been challenged as an unconstitutional taking because it substantially reduces the property value of a claimant’s land.\(^{327}\) Given that the imposition of performance standards could limit the types or extent of possible development on a vacant tract of land, a buyer would probably pay much less for land restricted by the standards than for land absent such restrictions.\(^{328}\)

This takings argument has been used to test the validity of zoning in general and has not been successful.\(^{329}\) Zoning has been approved, in the landmark case of *Euclid v. Ambler Realty*,\(^{330}\) as a land use device that rationally deals with urban ills so as to be considered neither arbitrary nor unreasonable.\(^{331}\) despite the fact that it may have some imperfections.\(^{332}\) The separation of residential, commercial, and industrial use districts promotes safety, the integrity of residential neighborhoods, open spaces, and efficient utilization of

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\(^{327}\) See McDougal, *supra* note 13, at 268.

\(^{328}\) See id. at 268 n.3 (noting an example of such a situation).

\(^{329}\) See *Euclid v. Ambler Realty*, 272 U.S. 365 (1926) (unsucessful takings claim made against zoning on the grounds that zoning reduced the value of land by limiting its potential uses); see also *Lombardo v. City of Dallas*, 124 Tex. 1, 73 S.W.2d 475 (1934) (upheld city’s refusal of permit to erect gas station in residential zone); *City of Jackson v. McPherson*, 162 Miss. 164, 138 So. 604 (1932) (same); *State ex rel. Civello v. New Orleans*, 154 La. 271, 97 So. 440 (1923) (upheld ordinance forbidding business establishment in a designated residence district); *State ex rel. Carter v. Harper*, 182 Wis. 148, 196 N.W. 451 (1923) (upheld zoning ordinance that prohibited the enlarging of an existing business building in a residential zone).

\(^{330}\) 272 U.S. 365 (1926).

\(^{331}\) See id. at 394.

\(^{332}\) See McDougal, *supra* note 13, at 269 (“[E]ven if the findings [by experts concerning the desirable results to be achieved by zoning] did not sufficiently reflect the wisdom and sound policy of zoning, they were sufficiently cogent to prevent a finding that the ordinance was clearly arbitrary and unreasonable.”).
urban land.\footnote{272 U.S. at 394-95.} An increasingly urbanized society demands more organized and official land use regulation.\footnote{Id. at 386.}

The Nollan Court did not upset this long-standing principle, and in dicta stated that zoning in general meets its strict nexus requirement for police power actions.\footnote{Id. at 386.} Following this reasoning, performance standards, even primitive standards, cannot constitute a taking. The government's objective for using performance standards, both primitive and precision, is more substantiated than that for general zoning, because such standards are inherently more specifically tailored to protect the public welfare.\footnote{Id. at 386-87.} Performance standards, then, have even less room for arbitrary administrative implementation than a general zoning ordinance.\footnote{Id. at 386.
Until recent years urban life was comparatively simple; but with the great increase and concentration of population, problems have developed, and constantly are developing which require, and will continue to require, additional restrictions in respect of the use and occupation of private lands in urban communities.} Further, Euclid, which received Nollan's approval, left open the possibility that more stringent restrictions on land use than general zoning ordinances would be implemented in the future.\footnote{NoHan v. California Coastal Comm'n, 107 S. Ct. 3141, 3147 (1987) ("[A] broad range of governmental purposes and regulations satisfies [the Court's more stringent land use regulation] requirements ... Euclid v. Ambler Realty, 272 U.S. 365 (1926) (residential zoning) ... ") (emphasis added and citations omitted).} The stage was then set for the adoption of both primitive and precision standards.\footnote{See supra notes 179-82 and accompanying text.} Thus, it is logical to infer that because Nollan excludes Euclidean zoning from being an unconstitutional taking, it similarly excludes both primitive and precision standards because they are better substantiated than general zoning regulations.\footnote{See supra note 334.} The Nollan

\footnote{See supra note 334.

\footnote{See supra note 334, at 269.

\footnote{Moreover, given that Nollan involved an actual physical intrusion onto beachfront property, the case for performance standards is strengthened because their imposition does not entail such an invasion. Physical invasions are viewed more harshly by the Court than are regulatory takings. See, e.g., Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419 (1982) (forced installation of CATV equipment in apartment building constituted a taking). Given, however, the uncertain status of regulatory takings after First English, 107 S. Ct. 2378 (1987), the validity of this argument must await further judicial interpretation; see also supra note 306 and accompanying text.}}
Court gave its approval, albeit tacit approval, to primitive performance standards.

3. Primitive Performance Standards Satisfy Nollan’s New Takings Standard

Another reason to uphold primitive standards is that, even if Nollan’s new takings standard were interpreted to apply to primitive standards, primitive standards nevertheless meet that standard.341 Although Nollan merely requires that land use regulations substantially advance land use objectives,342 the opinion states directly that a broad range of governmental objectives—scenic zoning, landmark preservation, and residential zoning—and their corresponding ordinances satisfy this requirement.343 Regardless of whether a standard is primitive or precision, the governmental objective is the same: to protect neighboring land from potentially offensive land uses.344 These standards should enjoy the same status as scenic zoning, landmark preservation, and residential zoning.345

Not every performance standard, though, can be a truly scientific standard. As one commentator has noted, the number of performance standards that could actually comply with both scientific tests would be so few in number that performance standards would probably no longer be a viable environmental protection device.346

Many primitive standards can at most only substantially advance their purported state objective with less than precise scientific data.347 These primitive standards could either become more precise in time as technological knowledge expands, or are already now as

341 See infra notes 342–59 and accompanying text.
343 Id. at 3147.
344 See supra notes 168–69 and accompanying text.
345 See supra notes 336–40 and accompanying text.
346 McDougal, supra note 13, at 270.
347 See ZONING REFORMS, supra note 32, at 5. In practice, many performance zones regulating adverse effects of land use such as air pollution, noise, glare, or traffic “cannot translate their standards into strict numerical measures and it is up to the zoning administrators to determine whether a particular [zoning] proposal conforms or not.” Id. (emphasis added); cf. McDougal, supra note 13, at 270 (noting that the majority of performance standards cannot contain “both a scientifically valid means of measurement and a scientifically known and acceptable level of performance”).

Furthermore, performance standards can never be truly precise vis-à-vis a parcel’s ability to handle development—its “carrying capacity”—because the carrying capacity level for each parcel “depend[s] on the design skills employed by the developer, on investments in ameliorative features, and on particular characteristics of the site of proposed use type.” Fredland, supra note 36, at 682.
"precise" as they will ever be.348 Keeping in mind that primitive standards are a great improvement over often arbitrary or impracticable use lists,349 experts agree that primitive standards are "'neither simple to prepare nor easy to administer' but 'simply do a better job.'"350

Because Nollan does not speak in terms of an exact match, but merely in terms of a substantial advancement and nexus, it "would not seem to require precise criteria when [such criteria are] impossible or impracticable."351 Even though primitive standards appear less substantiated than precision standards, they still do not "utterly fail," as did the permit conditions in Nollan,352 to further the local government's objective of protecting against harmful by-products of land use. Primitive standards are merely less precise because a more

348 See ZONING REFORMS, supra note 32, at 5; see also McDougal, supra note 13, at 270 n.63 (standards such as those for odor can probably never be truly scientifically quantified, given the level of subjectivity involved in determining offensive levels of odor).

Furthermore, the American Planning Association, in its Proposed Model Performance Zoning Ordinance, utilizes primitive standards. See L. KENDIG, supra note 177, at 114. Section 3307 of the Proposed Ordinance, "Heavy Industrial District," recognizes that primitive standards are inherently necessary in performance zoning: "[T]he standards for this district are designed to accommodate very intensive industrial uses having severe nuisances which either cannot be handled by technology or which are nearly impossible to police." Id. (emphasis added).

349 See supra notes 180–82 and accompanying text.

350 Gillespie, supra note 12, at 764 (citing Salzenstein & McCrone, Performance Standards: Zoning Air Pollution, 5 INDUS. WASTES 47, 48 (June 1960)). Even the Environmental Protection Agency (EPA), which develops most current precision standards or serves as a model for jurisdictions that develop their own, allows for the coexistence of primitive and precision standards. See EPA Looks at Mandatory Treatment versus MCLs as Way to Control Lead Levels in Drinking Water, 18 Env't Rep. (BNA) 9–10 (May 1, 1987). Even though it would rather use "formal numerical values," the agency acknowledged that the less precise treatment requirement would be "easier to write and easier to live with" because even the precision standards are not totally reliable in furthering the EPA's objective of reducing water pollution levels. See id. See also Natural Resources Defense Council (NRDC) v. EPA, 822 F.2d 104, 110 (D.C. Cir. 1987) (agency used a less precise performance standard even though a precision standard for the same purpose existed). The NRDC court stated that "[w]henever a technology-based effluent limitation is insufficient to make a particular body of water fit for the uses for which it is needed, the EPA is to devise a water-quality based limitation that will be sufficient to the task." Id.

Further, the Planning Advisory Service, an organization which advises local planners, recommended to local administrators that in adopting environmental performance standards, they merely needed "specific and measurable" performance levels, not purely scientific ones. See INFORMATION REPORT Nos. 307, 308, supra note 14, at 2. The Planning Advisory Service mentioned, though, that the more precise the standards are, the less administrative problems are likely to occur. See id.

351 McDougal, supra note 13, at 273; see also Gillespie, supra note 12, at 757 ("The thrust of this wealth of scientific data would seem to be to compel communities to adopt precise standards where a basis for doing so exists.") (emphasis added).

scientific standard either does not exist or is not administratively feasible. Primitive standards thus advance the government's objective as effectively as is currently possible.

Moreover, even the validity of precision standards is questionable under *Nollan*. It is difficult to determine exactly what constitutes "scientific" standards because although the word "scientific" is defined as "exact science," it may also be defined as "systematic methods approximating those of scientists," among other definitions. Further, because of the subjective nature of human tolerance of various offensive by-products of land uses (odors, for example), often no objective standard exists to help establish a level of performance for that by-product. Thus, even with so-called "precision" standards, there is room for arbitrary implementation because great latitude remains for judicial construction in favor of performance standards. It would be incongruous under *Nollan* to invalidate only primitive standards for not "substantially advancing" the government's land use goals when precision standards may also be subject to the same criticism.

Assuming primitive performance standards are desirable, one can ensure their validity under *Nollan* by reading *Nollan* to require the inclusion of scientific measurement only if it exists and is administratively feasible. If precise scientific measurement is not possible, then courts should defer to the municipality's expertise in enacting the ordinance, provided that adequate planning, studies, details, and

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353 *See* McDougal, *supra* note 13, at 272-73.  
354 *See*, e.g., *INFORMATION REPORT* Nos. 307, 308, *supra* note 14, at 97, 103 (discusses example of erosion performance standards that are not quite precise but are nonetheless acceptable).  
355 McDougal, *supra* note 13, at 270 n.63.  
356 *See* id.  
357 *Id.*  
358 *See* NEWSLETTER, *supra* note 326, at 26. Although *Nollan* is read as imposing stricter standards on government land use regulations, it nevertheless "give[s] its collective blessing to impact fees, dedications, exactions, and other conditions of land use." *Id.* (emphasis added). These regulations and others, such as primitive and precision standards, will probably be upheld under *Nollan* as long as they "substantially advance" state land use objectives. *See* Nollan v. California Coastal Comm'n, 107 S. Ct. 3141, 3147-48 (1987). The permit condition in *Nollan* "utterly fail[ed]" to further the governmental objective not only because it was merely tangentially related to the objective, but because there were less disruptive alternatives to the condition imposed. *See* id. at 3148.  

In order to further the goal of providing "psychological access" to public beaches, the Commission could have imposed height or width limitations on the house, barred fences, forbade any construction on the house, or required the Nollans to place a designated viewing spot on their property for those beachgoers whose view they had obstructed. *See* id. at 3147-48. Primitive performance standards, on the other hand, have no less disruptive alternatives. *See supra* note 348 and accompanying text. Thus, as long as primitive standards are adequately substantiated they should survive *Nollan*. *See infra* note 359 and accompanying text.
explanatory reasons are given for its adoption, and it includes ade­quate procedural due process safeguards and provisions for updat­ing. Thus, primitive performance standards should be valid even under Nollan's new takings test because they substantially advance governments' land use objectives as best as is currently possible.

4. Proliferation of Primitive Performance Standards

An additional reason to uphold primitive standards if Nollan is not deemed an aberration is their widespread acceptance and adoption. Major cities such as Chicago, New York, and Baltimore have large-scale performance standards for industrial zones, most of which are expressed in precise terms. Other cities such as Boston, Columbus, Denver and Phoenix utilize a combination of precision and primitive standards. Less elaborate, and therefore more primitive, standards exist in smaller suburban cities and counties. Due to the widespread use of primitive standards, it would be administratively difficult to remove all such ordinances from the books. Towns would be left with no suitable replacement if more precise standards were not feasible. Even though administrative and monitoring problems exist, cities have shown their satisfaction with the validity of primitive standards, including those that coexist with more substantiated precision standards. This is a practical reason why Nollan should not be interpreted as invalidating primitive standards.

C. Primitive Performance Standards and Overlay Zones After Nollan

An ideal combination to preserve environmentally sensitive lands would be the use of an overlay zone, with its ability to be tailored

359 See McDougal, supra note 13, at 273-74. This Comment does not argue for the validity under Nollan of those non-precise standards which are not even valid under pre-Nollan standards. See supra notes 224-41 and accompanying text.

360 See 4 WILLIAMS, supra note 207, at 420-22 nn.10-16 (noting that both primitive and precision standards are used nationwide).

361 See id.

362 See id. at 421 n.11.

363 See id. at 421-22, nn.15, 16.

364 See McDougal, supra note 13, at 270.

365 See Williams, supra note 207, at 419-20 (general discussion of the problems of administering performance standards); see also Gillespie, supra note 12, at 757-64; McDougal, supra note 13, at 274-81. But see INFORMATION REPORT Nos. 307, 308, supra note 14, at 5 (discussing the relative ease of administering performance standards). This Comment focuses on the facial validity of performance standards. Discussion of the scholarly debates regarding their implementation and administration, and the intricacies thereof, are beyond the scope of this Comment.

366 See supra note 360 and accompanying text.
to fit closely over the often irregular shape of such lands, and the use of performance standards—both primitive and precision standards—to ensure that potentially offensive by-products from particular land uses will not reach environmentally harmful levels. Such a zone is proposed for Chesapeake Bay, Maryland, and similar zones already exist in the New Jersey Pinelands, Sanibel Island, Florida, and the coastal zones of Rhode Island.

If, after Nollan, primitive standards are invalidated, then communities could only utilize overlay zones containing precision standards. This would penalize those communities that are not capable, for whatever reason, of administering more precise standards. These

367 See CHESAPEAKE BAY OVERVIEW, supra note 117, at 2-7. The Chesapeake Bay Critical Area Commission developed criteria to preserve the environmental integrity of Chesapeake Bay. Id. It requires local governments in the critical area to develop their own land use programs that are consistent with this criteria. Id. at 1-1. Prince George's County, Maryland, chose to meet this requirement by creating three county-wide overlay zones: the Intense Development, the Limited Development, and the Resource Conservation Zones. Id. at 2-7. The zones will utilize precision as well as primitive performance standards. See id. at 3-13 (examples of precision standards); see also PRINCE GEORGE'S COUNTY, MD., PROPOSED CONSERVATION MANUAL FOR THE CHESAPEAKE BAY CRITICAL AREA 5-1 (May 15, 1987) (examples of primitive standards).


369 See Palmer, supra note 4, at 52. Sanibel Island engaged in a detailed scientific study of the ecology of the island and classified the entire island into four ecological zones that served as overlay zones on the existing zones. See CALLIES & FREILICH, supra note 9, at 878–79. The island's ecological plan also included future growth and impact considerations. See Palmer, supra note 4, at 52.

370 See STATE OF RHODE ISLAND, COASTAL RESOURCES MANAGEMENT PROGRAM (amended June 28, 1983) [hereinafter CRMP] (provides an effective, coherent, and unified overlay zone program for the management of the state's coastal resources that can be implemented through existing authorities and agencies); THE NARROW RIVER: SPECIAL AREA MANAGEMENT PLAN (adopted Dec. 8, 1986) (overlay zone management program detailing specific strategies to preserve integrity of the Narrow River and its surrounding ecosystem); RHODE ISLAND'S SALT POND REGION: A SPECIAL AREA MANAGEMENT PLAN (adopted November 27, 1984) (overlay zone management plan to protect sensitive salt ponds from the effects of development); PROVIDENCE HARBOR: A SPECIAL AREA MANAGEMENT PLAN (adopted November 22, 1983) (overlay zone management program to control water pollution in the harbor).

Although land use regulation in these overlay zones are governed by the Rhode Island Coastal Management Council, a state agency, the Council "[c]onsult[s] and coordinat[es] with local . . . and private interests." CRMP, supra, at 16 (emphasis supplied). The zones utilize a combination of use-lists and performance standards. See id. at 23, 67, 88.
communities would be affected even though they are able to enforce less than scientific standards, the validity of which is backed by adequate studies, forethought, and planning. Communities utilizing such zones would be rendered less effective in protecting environmentally sensitive lands, because the zones could only utilize an inefficient aspect of Euclidean zoning—zoning by lists. 371

The only real victim of such a Nollan interpretation and subsequent invalidation of primitive performance standards would be the environment, which would not enjoy the benefit of the protection of rationally computed yet not scientifically precise performance standards. As long as primitive standards work, and there are no current viable alternatives, it is best to leave them in place. As Justice Brennan pointed out in his dissent in Nollan, in light of the complex reality of natural resource protection, a court should not substitute its own narrow judgment for the land use expertise of state and municipal agencies. 372 Thus, even after Nollan, environmentally sensitive lands should have the benefit of overlay zones with the best performance standards possible, whether they be primitive or precision based.

VI. CONCLUSION

Overlay zoning compensates for the shortcomings of most other land use controls in protecting the environment from harmful land uses. It allows municipalities, sometimes with the guidance of state or county governments, to specifically tailor a land use without disturbing the underlying zoning. In addition, overlay zoning works especially well due to its utilization of performance standards, which enable a municipality to set limits on the offensive by-products of various land uses.

Performance standards, though, cannot always be scientifically detailed. Sometimes they will be primitive standards—expressed in terms of nuisance law or computed through the use of legitimate, yet not truly scientific, studies. As long as they are not arbitrarily enacted or enforced, and advance the government's environmental objectives as effectively as currently possible, there is no logical nor convincing reason for the Supreme Court's "edict" in Nollan to serve as a wholesale invalidation of primitive standards. This would be too high an environmental price to pay.

371 See supra note 181 and accompanying text.