

LEGAL ASPECTS
OF
LAND USE REGULATION OF LAKE SHORELANDS BY STATE AND LOCAL
GOVERNMENTS FOR THE PROTECTION OF LAKES

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ABSTRACT

This report presents the results of a comprehensive survey and analysis of the legal aspects of land use regulation by state and local governments of shorelands for the protection of lakes. Representative early limited purpose programs and all modern comprehensive lake shorelands programs in the United States were examined. Significant variations in programs were identified, with special reference to innovative features of modern programs.

Descriptors:

Lakes, Land Use, Law, Local Governments, Regulation, Shorelands, States

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LEGAL ASPECTS OF LAND USE REGULATION OF LAKE SHORELANDS BY STATE AND LOCAL GOVERNMENTS FOR THE PROTECTION OF LAKES

I. Introduction and Background

This report presents the results of a comprehensive survey and analysis of the legal aspects of land use regulation by state and local governments of shorelands of lakes for the protection of lakes. Artificial, as well as natural, lakes are embraced by this study. Land use problems are similar for both types of lakes, although water quality in stream reservoirs is influenced significantly by the quality and quantity of water flowing into the lake from the stream, as well as by water draining into the lake from its watershed. No attempt is made here to cover land use programs for flowing streams, coastal waters or ground waters. However, references are made to analogous aspects of those programs when it is helpful to this study to do so. Similarly, no attempt is made here to cover every governmental land use program having any impact, however remote, upon lakes. This study focuses upon land use programs that are substantially and uniquely related to lakes.

As this survey has revealed, the term shorelands does not have a precise or uniformly accepted meaning. For the purpose of this study, shorelands mean all lands extending landward from lakes to whatever distance any government has deemed proper to constitute a sound regulatory area for lake-protection-oriented land use controls.

Several states and local governments have programs expressly designated as "shorelands," "shoreline" or "shorezone" programs. These constitute

the major subject of this study. But other programs similar in content, however named, also are considered.

The term "protection of lakes" refers to all interests in lakes recognized by any state or local government as public interests deserving governmental protection. The list of such interests includes navigability, water quality, water supply, biological integrity, recreational opportunity in natural environments, natural visual resources and protection from floods. This report is concerned with land use regulations intended to protect any public interest in lakes.

The purposes of land use regulation for lake protection, manifested expressly or implicitly in such laws, have expanded over time with respect both to the range of public interests deemed worthy of protection and the range of perceived threats to those interests. Increasing concern for recreational opportunity in natural environments, biological integrity and natural visual resources has been accompanied by increasing awareness that serious harm is often threatened by land uses that have only indirect impacts upon water.

Methods of lake shorelands regulation also have undergone change. Single-purpose programs predominated in the past, while modern programs tend to have multiple objectives. Early programs also relied almost entirely upon absolute prohibitions of objectionable land uses, later programs made use of the traditional land use controls of zoning and subdivision control, and still more recent programs have utilized administrative permits and environmental standards.

Another significant trend is the growing involvement during the last decade, by state governments, many of which have insisted that local governments regulate shorelands pursuant to state guidelines or submit to direct state regulation. This trend, of course, is merely one aspect of the general trend in land use control of recapture, in part, by states of powers delegated to local governments. Indeed, the latter trend appears to be absorbing the former. In the future, state shorelands programs will probably be merely a component of general state land use or environmental protection programs, rather than a separate program of the sort now existing in several states. This does not mean, of course, that shorelands regulation will become less significant. Essentially the same problems will remain, though they may be approached from a broader perspective.

This report is intended to be helpful to state and local government officials considering adoption or modification of lake shorelands programs. A broad range of alternative approaches and methods is presented. Their strengths and weaknesses are identified. This report does not, however, cover every legal matter that a particular state or local government would need to consider in enacting any of the laws referred to here. Officials of a local government must determine that it has the authority under the constitution and statutes of its state to enact shorelands ordinances of the kind desired. In addition, they and officials of state governments must be careful to conform their programs to the requirements of acts of Congress and the United States Constitution.

The nature of lakes and their susceptibility to harm from land uses have been described by the Department of Ecology of the State of Washington as follows:

"A lake can be defined broadly as a body of standing water located inland. Lakes originate in several ways. Many lakes are created each year by man, either by digging a lake basin or by damming a natural valley. Natural lakes can be formed in several ways: by glaciers gouging basins and melting and depositing materials in such a way as to form natural dams; by landslides which close off open ends of valleys; extinct craters which fill with water; changes in the earth's crust, as can happen during earthquakes, forming basins which fill with water; or by changes in a river or stream course which isolate parts of the old course forming lakes, called oxbow lakes.

A lake, like its inhabitants, has a life span. This lifetime may be thousands of years for a large lake or just a few years for a pond. This process of a lake aging is known generally as eutrophication. It is a natural process which is usually accelerated by man's activities. Human sewage, industrial waste, and the drainage from agricultural lands increases the nutrients in a lake which in turn increases the growth of algae and other plants. As plants die, the chemical process of decomposition depletes the water's supply of oxygen necessary for fish and other animal life. These life forms then disappear from the lake, and the lake becomes a marsh or swamp.

Shallow lakes are extremely susceptible to increases in the rate of eutrophication resulting from discharges of waste and nutrient-laden-runoff waters. Temperature stratification does not normally occur in shallow lakes. Efficient bottom-to-surface circulation of water in these shallow lakes moves nutrients to the surface photosynthetic zone encouraging increased biotic productivity. Large quantities of organic matter are produced under these conditions. Upon decomposition, heavy demands are made on the dissolved oxygen content of shallow lakes. Eventually, the oxygen level drops and some fish and other life forms die.

The entire ecosystem of a lake can be altered by man. By removing the surrounding forest for lumber or to provide a building site or farm land, erosion into the lake is accelerated. Fertilizers, whether agricultural or those used by homeowners, can enter the lake either from runoff or leaching along with other

chemicals that interfere with the intricate balance of living organisms. The construction of bulkheads to control erosion and filling behind them to enlarge individual properties can rob small fish and amphibians of their habitats. The indiscriminate construction of piers, docks and boathouses, can deprive all of the waterfront owners and the general public of a serene natural view and reduce the lake's surface."¹

II. Limited Purpose Regulation

Probably every facet of shorelands regulation has been the subject of a single-purpose law, at some time in some jurisdiction. A thorough coverage of such laws at this point would duplicate subsequent portions of this report, and therefore will not be undertaken. A few of the more common and representative types of laws have been selected for illustrative treatment here.

A. Protection of Municipal Water Supplies.

Municipal ordinances purporting to prohibit land uses that might pollute a source of municipal water supply have long been common. Typically, land use is only one of several subjects dealt with in such ordinances and it is referred to in brief and general terms. In addition, these ordinances usually are penal in nature and do not provide for any administrative regulation. For example, one such ordinance provided:

"It shall be unlawful, and is hereby prohibited, for any person, firm or corporation to throw or deposit in the water of [Lake Lavinia], any refuse, decayed vegetable or animal matter, to permit any drainage into said lake from a cess pool, or any other sewage disposal unit from the surrounding land, or to permit any other use of the surrounding land of Lake Lavinia that would tend to cause said lake to be polluted from its use, or to permit any substance to enter said lake that would tend to pollute the water of said lake and thereby cause same to be unwholesome and detrimental to public health."²

This is a patently ineffective approach to land use control. No guidance is provided the developer. He must decide at his peril whether his proposed land use will "tend" to cause the lake to be "polluted." On the other hand, the city will probably be unable, for legal or practical reasons, to take action until after the allegedly harmful land use has occurred, and then, in order to obtain any relief, must overcome a very heavy burden of proof.

Traditional statutes authorizing municipalities to enact ordinances for protection of municipal water supplies may be construed as authorizing little more than the above ordinance. For example, a Texas statute enumerating the powers of home rule cities recites that:

"Each city shall have the power . . . to prohibit the pollution of any stream, drain or tributaries thereof, which may constitute the source of water supply of any city and to provide for the policing of the same as well as to provide for the protection of any watersheds and the policing of same. . . ."3

Even if the strict construction doctrine generally applicable to legislative grants of power to local governments is not applied, a local government would understandably be reluctant to rely solely upon the above language for authority to enact a comprehensive land use control program for water supply protection.

Some ordinances are directed at specific threats to public water supplies. A Utah city enacted an ordinance in 1924 declaring it unlawful for any person to permit livestock to run at large within 300 feet of a creek used by the city.⁴ Similar laws involved in litigation were a California statute making it a misdemeanor to keep livestock corralled "on, over, or on the borders of" a stream constituting a public water supply,⁵ and a Colorado law prohibiting the

maintenance of a pigsty "or any place or premises of whatever kind, the drainage from which is capable of contaminating" on the "banks" of a river for a distance of five miles upstream from a dam.⁶ A North Carolina statute making unlawful certain forestry practices that might cause fire damage to any watershed of a municipal water supply was upheld by the United States Supreme Court in 1919.⁷ The siting of cemeteries within a stated distance from a municipal water supply has been banned.⁸ Also commonly prohibited is the construction of on-site sewage disposal facilities within a specified distance from a public water supply.⁹

B. Encroachments.

Many laws manifest concern for harms that may be done to lakes by activities occurring within the water-covered portion of lakes. Prominent among such activities are construction of various kinds of structures, filling, dredging and mining.

Even in the absence of legislation, courts have long acted, relying on the common law, to enjoin or abate structures and landfills that endanger navigation or some other public interest in public waters.¹⁰ Such waters, which need not (at least in some states) be navigable if declared public by constitution or statute, are regarded as being held by the state in trust for the public.¹¹ The list of interests protected by the public trust doctrine is lengthy and elastic. As the Minnesota Supreme Court put it, the "broad interest of the public in the beneficial use of the numerous and varied lakes of Minnesota does not lend itself to cataloguing the countless ways in which any particular

interference with public waters may be detrimental to public use and enjoyment."¹² Suits to protect the public trust may be maintained not only against private parties, but also against government entities.¹³ Suits may be maintained by the attorney general of the state or by any affected member of the public.¹⁴ Private ownership of land underlying public waters has been held not to entitle the landowner to exclude the public from fishing in public waters over his land¹⁵ or to fill such lands, which has the effect of excluding the public.¹⁶ Some states, however, may have granted submerged lands to private owners in terms that arguably preclude regulation of structures or landfills without exercise of the power of eminent domain.¹⁷

Even as to lakes and other waters that are not public, courts may intervene to settle controversies among riparians over encroachments. In one such case, the Washington Supreme Court held that the riparian right to make reasonable uses of the lake did not authorize construction of an apartment house extending into or over the lake.¹⁸

Despite the existence of a substantial body of common law on the subject, legislatures and local governments have enacted laws concerning construction of structures and other activities in public waters. The principal reason for doing so was the desirability of establishing effective procedures and sanctions. Some statutes imposed penal sanctions and undertook to require removal of prohibited structures. An example is a Connecticut statute that not only provides for imposition of a fine, but also authorizes "any person" to remove the offending structure or material at the expense of the person who placed it

there.¹⁹ Some statutes were directed at narrow problems, such as the New Hampshire statute providing that "no person shall, by means of a rack, screen, weir or other obstruction, . . . prevent the passage of fish."²⁰

Although riparian and littoral owners were accorded a right at common law of access to the water over public land and water and were allowed to exercise this right by "wharfing out," this right is subject to the limitation that public interests not be impaired,²¹ and it is also subject to reasonable regulation for protection of the public interest.²²

Flat prohibitions of encroachments have been supplanted or supplemented by permitting or licensing systems for certain kinds of land uses. These involve varying degrees of administrative discretion. An ordinance of the City of Austin, Texas, is illustrative. It provides: "It shall be unlawful for any person to erect. . . any pier, dock, wharf, float, island or other structure in or along the shores of Lake Austin, in the area below a contour elevation of 504.9 feet above mean sea level. . . without having. . . obtained a permit" from the building inspector.²³ Permits are to be denied if the structure would constitute a hazard to navigation, but this seems to be the sole basis, assuming compliance with ordinances of general application to the municipality.²⁴ Broader concerns are indicated by another provision that: "No business, such as a restaurant, dance hall, concession stand or any other enterprise for the sale of goods, wares and merchandise, and no living quarters of any character shall be erected on any pier or similar structure extending into or above. . . Lake Austin, except upon special permit issued

by the city council. . . ."25 However, no standards are specified for this action by the city council, which is the city's legislative body.

Some modern ordinances and statutes contain explicit standards and require findings as to a broad range of concerns, encompassing far more than the traditional concerns of navigation and flood control. An example is Connecticut legislation vesting the permitting authority in the commissioner of environmental protection and directing him to make findings concerning "preservation of the natural resources and ecosystems of the state," as well as other matters.²⁶ Massive filling of San Francisco Bay gave rise to legislative concerns which included air pollution and anticipated shrinkage of the bay to the point of extinction, and led to creation of the San Francisco Bay Conservation and Development Commission.²⁷ Legislative standards governing issuance of permits for filling in San Francisco Bay are extremely restrictive. Filling, which is defined broadly to include pilings, structures on pilings and floating structures, is authorized "only when public benefits from fill clearly exceed public detriment from the loss of water area," is limited to "water-oriented" uses and is authorized "only when no alternative upland location is available for such purpose."²⁸

Encroachments also have been subjected by some local governments to their general zoning ordinances. An example is the zoning ordinance of the Town of Islip, New York, providing that "'underwater land shall be considered in the same district as the abutting upland' for a distance of 100 feet unless otherwise classified (Islip Code § 68-12)."²⁹ This would forbid the construction and use of commercial docks in the underwater portion of lands zoned for

residential use.³⁰ This approach is less flexible and is narrower in scope than the permitting technique.

On occasion courts have had to construe encroachments statutes that were not carefully drafted. In one such case, a statute forbidding encroachments "in" specified waters without a permit was construed as applicable to a power transmission line 111 feet above the body of water.³¹ A more literal-minded court could easily have reached the opposite conclusion.

A prime objective of some statutes regulating dredging and mining is assurance of payment to the state for the removal of minerals and other things owned by the state. An example is the Texas statute requiring a permit and payment for the removal of sand gravel and other specified minerals, but forbidding issuance of a permit if the parks and wildlife department finds that oysters, oyster beds, fish or navigability would be injured by such removal.³² Payment need not be made for removal of materials other than those enumerated in the statute.³³ But, according to the attorney general of the state, a permit is nevertheless required for the protection of aquatic life and navigability.³⁴ Many statutes regulating dredging are concerned entirely with matters other than the state's proprietary interests. These are similar in purpose and method to regulations of encroaching structures and landfills, and often are covered by the same statute or ordinance.³⁵ Concern for changes in lake contours is indicated by a Minnesota statute declaring unlawful any change of the "cross-section of any public water" without a permit, which was construed as forbidding any "widening, filling or deepening" that would detrimentally affect a public interest in public waters.³⁶

III. Comprehensive Shorelands Programs

A. Kansas.

Kansas appears to have been the first state to enact into law a lake shorelands program that could be considered to be comprehensive. In 1963, the Kansas legislature authorized counties to establish park districts, within which lakes might be created,³⁷ and also authorized regulation of private lands near such lakes, in the following terms:

"If a lake containing more than three hundred (300) acres is established within the district, the board is authorized to adopt zoning regulations to restrict and regulate lands surrounding such lake within an area of two hundred (200) yards from the nearest point of the shore line of the lake as established by the board. No improvements other than farm improvement, may be made within two hundred (200) yards of the nearest point of the shore line of the lake, in any case, without the approval of the park district board. No plats of land which include property located within two hundred (200) yards of the nearest point of the established shore line of the lake shall be approved by the board of county commissioners."³⁸

For lakes owned by such park districts, the authorized land use controls have a very broad sweep and could severely restrict land uses, but the legislature provided no guidance concerning the nature of the zoning authorized or the standards governing the park district board in approving improvements. No comparable regulatory programs have been established or authorized by the Kansas legislature for lakes situated outside county park districts.

B. Wisconsin.

A much broader and more detailed program was authorized by the Wisconsin legislature in 1966.³⁹ It not only authorized, but required, all counties to adopt a shorelands ordinance approved by the Department of

Natural Resources (or submit to direct regulation by the department) applicable to all lands in unincorporated areas within a strip 1,000 feet wide around lakes and 300 feet wide along streams (or to the landward side of the flood plain, whichever distance is greater). The declared purposes of the legislation were: "to further the maintenance of safe and healthful conditions; protect spawning grounds, fish and aquatic life; control building sites, placement of structure and land uses and reserve shore cover and natural beauty."⁴⁰ The legislature declared that it was not only exercising its traditional police powers, but also was acting in fulfillment of the state's "role as trustee of its navigable waters," a concept relied upon later by the Wisconsin Supreme Court in rejecting an attack upon the act.⁴¹

The Department of Natural Resources was directed to prepare a comprehensive plan, based on a use classification of navigable waters and their shorelands, governed by the following general standards:

- "1. Domestic uses shall be generally preferred.
2. Uses not inherently a source of pollution within an area shall be preferred over uses that are or may be a pollution source.
3. Areas in which the existing or potential economic value of public, recreational or similar uses exceeds the existing or potential economic value of any other use shall be classified primarily on the basis of the higher economic use value.
4. Use locations within an area tending to minimize the possibility of pollution shall be preferred over use locations tending to increase that possibility.
5. Use dispersions within an area shall be preferred over concentrations of uses or their undue proximity to each other."⁴²

Pursuant to this statute, the Wisconsin Department of Natural Resources established shoreland regulation standards and criteria⁴³ and also drafted a model shoreland protection ordinance incorporating such standards and criteria.⁴⁴ These documents incorporate zoning, subdivision control and sanitary regulations.

Three zoning districts are established: (1) conservancy; (2) recreational-residential; and (3) general purpose. These shorelands zoning districts are superimposed upon whatever general zoning may exist in the county, which will remain in effect except when in conflict with "greater restrictions" in the shorelands zoning ordinance.

The conservancy district, applicable to wetlands, is extremely restrictive. Only the following uses are permitted in a conservancy district without a special exception permit:

1. "The harvesting of any wild crop such as marsh hay, ferns, moss, wild rice, berries, tree fruits and tree seeds,"
2. "Forestry,"
3. "Utilities such as, but not restricted to, telephone, telegraph and power transmission lines,"
4. "Hunting, fishing, preservation of scenic, historic and scientific areas, wildlife preserves,"
5. "Non-residential buildings used solely in conjunction with the raising of waterfowl, minnows, and other similar lowland animals, fowl or fish,"
6. "Hiking trails and bridle paths,"
7. "Accessory uses,"
8. "Public and private parks, picnic areas, golf courses and similar uses, and"
9. "Signs" of carefully prescribed types.

The following additional uses are allowed by special exception permit in a conservancy district:

1. "General farming provided farm animals shall be housed at least 100 feet from any non-farm residence. Farm buildings, housing animals, barnyards or feedlots shall be at least one hundred (100) feet from any navigable water and shall be so located that manure will not drain into any navigable water."
2. "Dams, power plants, flowages, ponds."
3. "Relocation of any watercourse."
4. "Filling, drainage or dredging wetlands" to the extent allowed by a general regulation of the ordinance, which prohibits such activities if they "would result in substantial detriment to navigable waters by reason of erosion, sedimentation, or impairment of fish and aquatic life. . . ."
5. "Removal of topsoil or peat."
6. "Cranberry bogs."
7. "Piers, docks, boathouses."
8. "Solid waste disposal" if permitted by state law.

Special exception permits are granted by the board of adjustment, which is required for any zone to "evaluate the effect of the proposed use upon:

- "(1) The maintenance of safe and healthful conditions.
- (2) The prevention and control of water pollution including sedimentation.
- (3) Existing topographic and drainage features and vegetative cover on the site.
- (4) The location of the site with respect to flood plains and floodways of rivers or streams.
- (5) The erosion potential of the site based upon degree and direction of slope, soil type and vegetative cover.

- (6) The location of the site with respect to existing or future access roads.
- (7) The need of the proposed use for a shoreland location.
- (8) Its compatibility with uses on adjacent land.
- (9) The amount of liquid wastes to be generated and the adequacy of the proposed disposal systems.
- (10) Locational factors under which:
 - (a) Domestic uses shall be generally preferred;
 - (b) Uses not inherently a source of pollution within an area shall be preferred over uses that are or may be a pollution source;
 - (c) Use locations within an area tending to minimize the possibility of pollution shall be preferred over use locations tending to increase that possibility."

The board of adjustment may attach to special exception permits any conditions "that it deems necessary in furthering the purposes of this ordinance," which conditions may include "specifications for, without limitation because of specific enumeration: type of shore cover, increased setbacks and yards; specified sewage and water supply facilities; landscaping and planting screens; period of operation; operational control; sureties; deed restrictions; locations of piers, docks, parking and signs; type of construction or any other requirements necessary to fulfill the purpose and intent of this Ordinance."

Within the recreational-residential district, single-family dwellings are permitted uses, in addition to uses permitted in the conservancy district, but other land uses are allowed only by special exception permit. Among these are hotels, resorts, motels, restaurants, dinner clubs, taverns, private clubs, philanthropic or educational institutions, recreational camps and campgrounds,

gift and specialty shops "customarily found in recreational areas," marinas, boat liveries, sale of bait, fishing equipment, boats and motors, fish farms, forest industries, mobile home parks and travel trailer parks (which must meet detailed standards, including screening) and boathouses "provided they are set back _____ feet from the water's edge and are of a height and color so as not to detract from the natural beauty of the shoreline and shall not be used for human habitation."

Within the general purpose district, commercial, agricultural, residential, forestry and recreational uses are permitted uses, subject to certain restrictions, including a requirement that farm buildings housing animals, barnyards or feedlots shall be at least 100 feet from any navigable water and "shall be located that manure will not drain into any navigable water." Industrial uses and solid waste disposal may be permitted by special exception permit.

It is not required by the ordinance that the zoning map for the shorelands around each lake show some land within each of the three districts. Around some lakes, conceivably there would be only one or two districts.

Significant land use regulations applicable to all zones include:

(1) Setbacks of building and other structures from the waterline (75 feet "except piers, marinas, boathouses and similar uses which require a lesser setback, as determined by the Board of Adjustment");

(2) Restriction of tree-cutting in a strip thirty-five feet wide along the water's edge (no more than thirty percent of the length of this strip may be

clear cut to the depth of the strip; cutting of this thirty percent shall not create a clear cut opening in this strip greater than thirty feet wide for every one hundred feet of shoreline; in the remaining seventy percent length of this strip, cutting must leave sufficient cover to screen cars, dwellings, accessory structures, except boathouses, as seen from the water; natural shrubbery shall be preserved as far as practicable, and if removed shall be replaced with other vegetation that is equally effective in retarding runoff, preventing erosion and preserving natural beauty; the removal of natural shrubbery and its replacement shall require the granting of a special exception by the board of adjustment; and the width of the strip within which tree cutting is restricted may be increased for bodies of water having "unique characteristics because of outstanding fish and aquatic life, shore cover, natural beauty or ecological attributes");

(3) Allowance of filling, grading, lagooning and dredging in many areas only by special exception permit by the board of adjustment, which may attach numerous conditions;

(4) Specification of minimum dimensions of lots (for lots not served by public sanitary sewer, the minimum lot area is 20,000 square feet and the minimum lot width is 100 feet at the building line and also at the water's edge, and this minimum may be increased for certain soil conditions or "to protect natural characteristics (such as scenic beauty);" cluster residential development and planned unit developments are allowed, but it is required that the siting of structures and the deed restrictions on use of common areas be "such

as to preserve the ground cover of the shoreland and the scenic beauty of the navigable water and prevent erosion: and be consistent with other policies of the act) .

The subdivision regulations of the model shorelands ordinance contain a land suitability provision: "No land shall be subdivided which is held unsuitable for the proposed use by the County Planning Agency for reason of flooding, inadequate drainage, soil and rock formations with severe limitations for development, severe erosion potential, unfavorable topography, inadequate water supply or sewage disposal capabilities or any other feature likely to be harmful to the health, safety or welfare of the future residents of the proposed subdivision or of the community. . . ." Another noteworthy subdivision regulation of the model shorelands ordinance requires that subdivisions abutting a navigable lake or stream "provide access at least 60 feet wide to the high water mark so that there will be public access, which is connected to existing public roads at least at one-half mile intervals as measured along the lake or stream shore" with certain exceptions. The storm drainage provision of the subdivision regulations requires that in "designing storm drainage facilities, special consideration shall be given to protection against shoreland erosion and siltation of surface waters. . . ."

The sanitary provisions of the model shoreland ordinance include detailed requirements concerning water supply, waste disposal and sewage disposal.

A Wisconsin state official stated in 1972 that: "Since the Water Resources Act, all counties have adopted some form of shoreland regulations. As of June

24, 1971, 70 counties have adopted sanitary codes; 70 adopted subdivision regulations; and 71 adopted shoreland zoning ordinances. Hearings are now being held for the state enactment of sanitary and subdivision regulation for the one delinquent county."⁴⁵

Difficulties encountered in drafting the model ordinance are detailed by Jon A. Kusler in an article in the Wisconsin Law Review.⁴⁶ As Kusler put it, a key question was: "could generalizations be formed about the possible pollution contributions of various shoreland uses and the effects of these contributions upon water bodies?"⁴⁷ The drafters concluded that such generalizations could not be supported, and they therefore adopted, in the main, a case-by-case approach to land uses with pollution potential, the critical decisions to be made by the zoning board of adjustment. Kusler recognized that zoning boards of adjustment, which are part-time, citizen-agencies, are ill-prepared to make the scientific and technical decisions required of them, but he suggested that a mitigating factor is the availability to such boards of expert assistance from state agencies.

Kusler also observed that several important shoreland sources of indirect pollutants are not covered by the ordinance, including "sediment contributions from agricultural uses and road buildings, the use of pesticides, nutrients from both manufacturing practices on farm lands and commercial fertilizers, and the disposal of storm water runoff."⁴⁸ He suggested "establishment of performance standards for direct polluters," formulation of "more stringent regulations for storm water drainage, agricultural practices, and private waste disposal systems," and an affirmative measure--dredging--to

deal with sedimentation, which will occur to some extent even if the best possible regulatory program is in place.⁴⁹ A performance standard approach had been considered by the drafters for industrial uses, but was rejected for several reasons, including a belief that "local units of government would not generally have the necessary expertise to devise and administer rational performance standards."⁵⁰

The Wisconsin Supreme Court upheld in 1972 an ordinance of Marinette County adopted under this program.⁵¹ An owner of land within a conservancy zone filled his land without seeking the required permit and sought a declaratory judgment that the ordinance was unconstitutional. The county sought an injunction against further filling and recovery of a fine for the filling that had occurred. The court not only held that the landowner was required to obtain a permit, but it also wrote an opinion that makes it very unlikely that any landowner can challenge such ordinances successfully on the ground that the conservancy district is so restrictive as to constitute an unconstitutional "taking."⁵² The Marinette County conservancy district is even more restrictive than the model ordinance in at least one respect. The former does not allow within a conservancy district (even by special exception permit) public and private parks, picnic areas, golf courses and similar uses.⁵³ The landowner's attorney has reported that the landowner sold his land following this decision and that the county "is not issuing permits for cottages on any of the Justs or similar properties. Prior to the commencement of the litigation, the Justs did not make any application for re-zoning, variance, or permit to fill, because such remedies were being refused by the County in 100 percent of the

applications and also because of a confusing precedent in our State, which held that a party embracing such remedies under an ordinance had waived his right to subsequently challenge the constitutionality of that ordinance.⁵⁴

C. Minnesota.

In 1969, the Minnesota legislature enacted a shorelands regulation statute almost identical to the Wisconsin act, the major differences being that the Minnesota statute is applicable to land within municipalities as well as to land within unincorporated areas and that it directs that "land use controls for land other than shoreland in the vicinity of shoreland shall be, to the maximum extent practical, compatible with planning and land use controls for shoreland. . . ."55

The Statewide Standards and Criteria for Management of Shoreland Areas of Minnesota promulgated by the Commissioner of Conservation manifest more marked differences from the Wisconsin program.⁵⁶ The entire program rests upon a classification by the commissioner of all public waters, consisting of (1) environment lakes and streams, (2) recreational development lakes, (3) general development lakes and streams, and (4) critical lakes. The classifications are explained as follows:

"(2) Management Goals and Objectives

(aa) Natural Environment Lakes and Streams; to preserve and enhance high quality waters by protecting them from pollution and to protect shorelands of waters which are unsuitable for development; to maintain a low density of development; and to maintain high standards of quality for permitted development.

(bb) Recreational Development Lakes: to provide management policies reasonably consistent with existing development and use; to provide for the beneficial use of public waters by the general public, as well as the riparian owners; to provide a balance between the lake resource and lake use; to provide for a multiplicity of lake uses; and to protect areas unsuitable for residential and commercial uses from development.

(cc) General Development Lakes and Streams: to provide minimum regulations of areas presently developed as high density, multiple use areas; and to provide guidance for future growth of commercial and industrial establishments which require locations on public waters.

(dd) Critical Lakes: to provide a more restrictive set of standards for badly deteriorated lakes which cannot be reasonably managed in any of the public waters classes defined above. These lakes, designated by the Commissioner, shall be studied in further detail to determine appropriate standards for shoreland development for each individual lake. Until such studies are completed, these lakes shall be subject to the standards applied to Natural Environment Lakes and Streams.

(3) Criteria for determining the classification of any public water shall be:

(aa) Size--relating to available space for development on the shore and for use of the water space.

(bb) Crowding Potential--relating to the ratio of lake surface area to the length of shoreline.

(cc) Amount and type of existing development.

(dd) Existing natural characteristics of the public waters and surrounding shorelands.

(ee) County and regional public waters needs."⁵⁷

Land use zoning is to be based upon the compatibility of land uses with the public waters classifications. For example, minimum lot sizes are:

"(aa) For Natural Environment Lakes and Streams: at least 80,000 square feet (approximately 2 acres) in area and at least 200 feet in width at the building line and at least 200 feet in width at the water line for lots abutting a public water.

(bb) For Recreational Development Lakes: at least 40,000 square feet in area (approximately 1 acre) and at least 150 feet in width at the building line and at least 150 feet in width at the water line for lots abutting a public water.

(cc) For General Development Lakes and Streams: at least 20,000 square feet in area and at least 100 feet in width at the building line and at least 100 feet in width at the water line for lots abutting a public water."⁵⁸

Also, minimum setbacks for all structures (except boat houses, piers and docks) are: 200 feet for natural environment lakes and streams; 100 feet for recreational development lakes; and 75 feet for general development lakes.

The model shoreland management ordinance drafted by the commissioner for the guidance of Minnesota counties provides for the following land use zoning districts: (1) special protection district; (2) residential-recreational district; (3) commercial-recreational district; and (4) general use district.⁵⁹ The special protection district may include areas other than wetlands. Its declared purpose is "to manage areas unsuitable for development due to wet soils, steep slopes, or large areas of exposed bedrock; and to manage areas of unique natural and biological characteristics in accordance with compatible uses." Uses allowed without permit within such districts are: (a) all general pasture and minimum tillage cropland uses, except that no wetlands shall be drained to facilitate cultivation of shoreland areas within specified distances of lakes or streams depending upon topography; (b) forestry; (c) parks, way-sides and golf courses which do not maintain overnight camping facilities; (d) nature areas, hiking and riding trails, wildlife preserves, and designated official wetland areas; and (e) designated historical sites. Land uses allowed in the special protection district by conditional use permit issued by the board

of adjustment are: (a) all approved aerial or underground utility line crossings which cannot be reasonably located elsewhere; (b) non-residential structures "used solely in conjunction with raising wild animals or fish provided the structures are of a design approved by the county board as being compatible with other general allowable uses of the district:" and (c) others added by the county and approved by the commissioner.

D. Vermont.

The Vermont legislature, in enacting shorelands legislation in 1969, borrowed the statement of purpose in the Wisconsin Shorelands Act, but in most respects did not track the Wisconsin Act.⁶⁰ State officials and agencies were authorized to engage in planning, to promulgate standards for municipal shoreland protection laws, and to review the status of such local laws and report thereon to the legislature. Municipalities were authorized to enact shorelands regulations applicable to lands "between the normal mean water mark of a lake or pond exceeding 20 acres and a line not less than 500 feet nor more than 1,000 feet from such mean water mark."⁶¹ Within those limits, municipal discretion would determine the boundaries of the regulated area.

The Vermont Agency of Environmental Conservation in 1974 issued a "Model Shoreland Zoning Report" for the guidance of Vermont municipalities.⁶² Included in this document are model interim and permanent shoreland zoning ordinances. Only one zoning district, a shoreland district, is authorized by the permanent ordinance and it is to be superimposed upon general zoning. Prohibited in shoreland districts are: the storage or processing of "materials that are pollutants, buoyant, flammable, poisonous, explosive, or could be

injurious to human, animal, and fish and aquatic life;" and garbage and "waste disposal facilities." Permitted uses in shoreland districts are:

(1) agricultural uses, provided a prescribed buffer strip of vegetation is maintained; (2) open-space recreation uses; (3) open-space residential uses (lawns, etc.); and (4) residences that meet minimum lot size and setback standards for specified soil groups on specified classifications of lakes. Classifications of lakes are: natural and pristine lakes and ponds; recreational lakes and ponds; general development lakes and ponds; and endangered lakes and ponds. Six soil groups are identified, "according to their major limiting factors for private on-site sewage disposal." These are: favorable, steep, wet, shallow, impermeable and moderately well-drained. For example, the agency's recommendation for pristine or natural lakes or ponds is that land within the favorable soil group be developed on 4-acre sites for on-site sewage disposal and 80,000 square foot sites for public sewage disposal, and that structures be set back from the water's edge 400 feet. For land on such lakes within the shallow soil group or the impermeable soil groups, the minimum lot size is 10 acres if sewage is to be disposed of on the site. For land on such lakes within the steep soil group or wet soil group, no development is allowed. In addition to the permitted uses, specified uses may be allowed by conditional use permit by the board of adjustment. This list includes commercial development and filling, draining or dredging of wetlands, but not industrial uses. A list of criteria is provided for the guidance of boards of adjustment in passing upon applications for such permits. Among the criteria included are: the need for the proposed use to be located in the shoreland, the

erosion potential of the site and whether the proposed use is inherently a source of pollution.

A suggested form of interim zoning for shorelands by municipalities was issued by the Vermont Agency of Environmental Conservation in 1973.⁶³ It differed significantly from the permanent ordinance proposed in 1974. The former provided for six land use districts: (1) shoreland district; (2) conservation zoning ("which may be regarded essentially as some combination of the following"); (3) agricultural zoning; (4) cluster zoning; (5) residential-recreation (low density) zoning; and (6) general use district. The interim ordinance also relied much more upon performance standards. Some examples follow. Storage ponds for feedlot wastes "shall be so located as to avoid pollution of other waterbodies and supplies through seepage and/or drainage." Buildings "shall be oriented with respect to the natural landscape features, including shorelands, scenic areas, topography, and natural drainage areas." Subdivisions "should be designed at a level of density of site coverage and of occupancy compatible with the physical capabilities of the shoreland and water, as well as preserving shoreland open space." Subdivisions also "should be designed so as to adequately protect the water and shoreland aesthetic characteristics." "The design of a structure shall not interfere with any scenic view significant to a given area or enjoyed by a significant number of people." "Marinas should be designed to minimize impact on aquatic habitat." "Marinas and docks should be constructed so as not to interfere with the natural flow of water."

Some of the above performance standards manifest a major concern for visual resources of lakes. This concern is also manifested elsewhere in the document. Introductory comments "encourage local governments to control two things: first, the way or manner in which the property is used. . . ; secondly, and most important to the cause of preservation, the appearance of the property."⁶⁴

The differences between the model interim and permanent ordinances evidently indicate changes in the agency's position concerning effective regulatory approaches, rather than an agency position that interim and permanent ordinances should reflect these differences.

General land use programs of the State of Vermont may also have substantial effects upon land use of lake shorelands. Vermont legislation effective in 1970 required that major land subdivisions and developments (as defined in the act) be undertaken only after issuance of a permit from one of seven regional commissions established by the act.⁶⁵ Such permits cannot be granted without findings that the proposed use will not, among other things: "result in undue water or air pollution" or "have an undue adverse effect on the scenic or natural beauty of the area." "Shorelines" of lakes and other waters ("Shorelines shall include the land between the mean high water mark and the mean low water mark of such surface waters.") can be subdivided or developed only when it is "demonstrated by the applicant that, in addition to all other criteria, the development or subdivision of shorelines must of necessity be located on a shoreline in order to fulfill the purpose of the development or subdivision, and the development or subdivision will, insofar as possible and reasonable

in light of its purpose: (i) retain the shoreline and the waters in their natural condition, (ii) allow continued access to the waters and the recreational opportunities provided by the waters, (iii) retain or provide vegetation which will screen the development or subdivision from the waters, and (iv) stabilize the bank from erosion, as necessary, with vegetation cover." Another provision relevant to lake protection is mandatory denial of a permit if "it is demonstrated by any party opposing the applicant that a development or subdivision will destroy or significantly imperil necessary wildlife habitat or any endangered species, and (i) the economic, social, cultural, recreational, or other benefit to the public from the development or subdivision will not outweigh the economic, environmental, or recreational loss to the public from the destruction or imperilment of the habitat or species, or (ii) all feasible and reasonable means of preventing or lessening the destruction, diminution, or imperilment of the habitat or species have not been or will not continue to be applied, or (iii) a reasonably acceptable alternative site is owned or controlled by the applicant which would allow the development or subdivision to fulfill its intended purpose." Also relevant to lake protection is the legislative mandate that planning include a "land capability and development plan," based upon "ecological considerations" and other matters.⁶⁶

E. Michigan.

Michigan's Shorelands Protection and Management Act, which became effective in 1971, and was amended in 1974, is directed primarily at erosion of shores of the Great Lakes or connecting waterways, but also deals with

flooding and habitats of fish and wildlife.⁶⁷ It is applicable only to such portions of a shorelands strip 1,000 feet wide as have been designated by a state agency to be either "high risk" or "environmental" areas. The former are defined as areas determined to be subject to erosion and the latter are defined as areas determined to be necessary for the preservation and maintenance of fish and wildlife. Counties, townships and municipalities are authorized to effect the policies of the act by enacting zoning ordinances, which must be reviewed by a state agency. A plan for use and management of all shorelands is to be prepared by a state agency. In the absence of an approved local zoning ordinance, "any person or local governmental agency proposing a new shoreland use within a high risk area or environmental area shall submit to the director [of the Department of Natural Resources] for his approval, a site plan for the proposed shoreland use. The site plan shall contain: (a) the nature of type of shoreland use proposed and the extent and location of the shoreland which shall be altered by such use; (b) the procedures which will be undertaken for the proposed shoreland use and the length of time required therefor; and (c) the means by which the proposed shoreland use will be undertaken to prevent property loss in high risk areas or to prevent damage to the environmental area in accordance with shoreland use restrictions promulgated. . . ."68

"Shoreland use" is defined administratively as "any use of the undeveloped, unplatted shorelands in a high risk area or an environmental area above the ordinary high water mark which in any way alters the existing natural conditions of the lands or waters associated therewith necessary for the prevention

of erosion damage or for the preservation and maintenance of fish and wildlife, including structural development, filling and dredging, mining, quarrying, highway or road construction, agriculture, logging, and marina development. Shoreland use, in a high risk erosion area, means the construction of a permanent residential, commercial, or industrial building."⁶⁹

Another Michigan act, the Inland Lakes and Streams Act of 1965, is applicable to all navigable inland lakes and streams, but is limited to dredging, filling and other activities on lands "below the ordinary high water mark."⁷⁰

F. Maine.

The Maine legislature enacted in 1971 a "Mandatory Zoning and Sub-division Control" law for "shoreland areas," defined as "land within 250 feet of the normal high water mark of any pond, river or salt water body."⁷¹ The declared purposes substantially track the Wisconsin act and the general approaches of the two acts are similar. Local governments are required to adopt shoreland regulations approved by a state agency and, if they fail to do so, the state agency may impose such regulations. The Maine statute offers very little guidance, which is left largely to the discretion of a state agency. The Maine statute goes perhaps further than any other shorelands statute in providing for enforcement. It provides that if "a municipality fails to administer and enforce zoning ordinances adopted by it or the State, pursuant to the requirements of this chapter, the Attorney General shall seek an order of the Superior Court of the county in which the municipality lies, requiring the municipal officials to enforce such zoning ordinance."⁷²

Guidelines were issued by state agencies in the form of a "Minimum Shoreland Zoning Ordinance."⁷³ This ordinance provides for three districts: (1) resource protection district, (2) general development district, and (3) limited residential-recreational district. Uses allowed in the various districts are shown on a chart, reproduced here as Figure I.

Figure 1

Land Use Districts
 Minimum Shoreland Zoning Ordinance
 State of Maine Guidelines for Municipal Shoreland Zoning Ordinances
 (1973)

Land Uses	Resource Protection District	Limited Residential- Recreation- al District	General Development District
1. Non-intensive recreational uses not requiring structures, such as hunting, fishing and hiking	yes	yes	yes
2. Motorized vehicular traffic on roads and trails, and snowmobiling	yes	yes	yes
3. Forest management activities except for timber harvesting	yes	yes	yes
4. Timber harvesting *	CEO permit	yes	yes
5. Fire prevention activities	yes	yes	yes
6. Wildlife management practices	yes	yes	yes
7. Soil & water conservation practices	yes	yes	yes
8. Mineral exploration *	yes	yes	yes
9. Surveying & Resource analysis	yes	yes	yes
10. Emergency operations as defined	yes	yes	yes
11. Harvesting of wild crops	yes	yes	yes
12. Agriculture *	PB permit	yes	yes
13. Principal structures *			
Residential dwelling units	no	PB permit	PB permit
Commercial structures	no	no	PB permit
Industrial structures	no	no	PB permit
14. Structures accessory to permitted uses	CEO permit	CEO permit	yes
15. Road construction *	PB permit	yes	yes
16. Small non-residential facilities for educational, scientific or nature interpretation purposes	PB permit	yes	yes
17. Public and private parks and recreation areas involving minimal structural development	PB permit	yes	yes

(continued on next page)

Figure 1 (cont'd.)

Land Uses	Resource Protection District	Limited	
		Residential- Recreation- al District	General Development District
18. Campgrounds	no	PB permit	PB permit
19. Piers, docks, wharves, breakwaters, causeways, marinas, bridges over 20 ft. in length, and uses projecting into water bodies.			
Temporary	CEO permit	CEO permit	CEO permit
Permanent	PB permit	PB permit	PB permit
20. Clearing for approved construction	CEO permit	yes	yes
21. Essential services accessory to permitted uses	yes	yes	yes
22. Private sewage disposal systems	no	CEO permit	CEO permit
23. Public utilities, including sewage collection & treatment facilities	PB permit	PB permit	PB permit
24. Signs *	yes	yes	yes
25. Filling or other earth-moving activity of less than 10 cubic yds	CEO permit	yes	yes
26. Filling or other earth-moving activity of more than 10 cubic yds	PB permit	CEO permit	CEO permit
27. Uses similar to permitted uses	CEO permit	CEO permit	CEO permit
28. Uses similar to uses requiring a CEO permit	CEO permit	CEO permit	CEO permit
29. Uses similar to uses requiring a PB permit	PB permit	PB permit	PB permit

Key: Yes Allowed (no permit required)
 No Prohibited
 BP permit Requires permit issued by Planning Board
 CEO permit Requires permit from Code Enforcement Officer
 * Subject to specific Land Use Standards

The minimum ordinance sets forth very detailed land use standards for all districts. Agricultural practices are covered. No tilling of soil within 50 feet of the "normal high water mark of any lake or pond" is allowed. In specified areas, tillage "shall be carried out in conformance with the provisions of a Conservation Plan which meets the standards of the State Soil and Water Conservation Commission, and is approved by the appropriate Soil and Water Conservation District." "All spreading or disposal of manure shall be accomplished in conformance with the 'Maine Guidelines for Manure and Manure Sludge Disposal on Land' published by the University of Maine and the Maine Soil and Water Conservation Commission, in July 1972 or subsequent revisions thereof."

Very specific standards are applied to timber harvesting, including: a requirement that harvesting activities shall not create single openings greater than 7,500 square feet in the "forest canopy," nor remove more than 40% of the volume of trees in any "stand" in any 10-year period; restriction on accumulation of slash; and a requirement that an "unscarified filter strip" be maintained between the water and any area where logging operations result in the "exposure of substantial areas of mineral soil," the width of this strip varying in relation to slope.

A standard for soil suitability provides: "All land uses shall be located on soils in or upon which the proposed uses or structures can be established or maintained without causing adverse environmental impacts, including severe erosion, mass soil movement, and water pollution, whether during or after construction. Proposed uses requiring subsurface waste disposal, and

commercial or industrial development and other similar intensive land uses, shall require a soils report, prepared by a State-certified soil scientist or geologist based on an on-site investigation. Suitability considerations shall be based primarily on criteria employed in the National Cooperative Soil Survey as modified by on-site factors such as depth to water table and depth to refusal."

Piers and similar structures must meet the following standards:

- "1. Access from shore shall be developed on soils appropriate for such use and constructed so as to control erosion.
2. The location shall not interfere with developed beach areas.
3. The facility shall be located so as to minimize adverse effects on fisheries.
4. The facility shall be no larger in dimension than necessary to carry on the activity and be consistent with existing conditions, use, and character of the area."

Other standards relate to beach construction, campgrounds, clearing, erosion and sedimentation control, mineral exploration, dimensions of residential lots and open space on such lots, road construction, sewage disposal, signs, setback-from-water and elevation of structures, and storage of polluting substances.

The minimum ordinance requires that many land uses be undertaken only upon issuance of a permit by the local planning board, which may grant a permit only if it makes a "positive finding" that the proposed use:

- "a. Will not result in unsafe or unhealthful conditions;
- b. Will not result in erosion or sedimentation;
- c. Will not result in water pollution;
- d. Will not result in damage to spawning grounds, fish, aquatic life, bird and other wildlife habitat;

- e. Will conserve shoreland vegetation;
- f. Will conserve visual points of access to waters as viewed from public facilities;
- g. Will conserve actual points of public access to waters;
- h. Will conserve natural beauty;
- i. Will avoid problems associated with flood plain development and use; and
- j. Is in conformance with the provisions of Section II, Land Use Standards."

Implementation of the Maine program was reported upon in 1975 by the State Planning Office.⁷⁴ Less than 30 municipalities has complied by the initial deadline of July 1, 1973. Aided by outside funding of preparation of base maps, and other factors, this figure rose to 235 by August 7, 1974. For the remaining 201 municipalities, an "Imposition Ordinance" was adopted by the state. This ordinance zoned all eligible shorelands in the Resource Protection District, which amounted to a temporary moratorium on all new residential, commercial or industrial structures. A more recent communication from the State Planning Office (August, 1976) reported that preparation of zoning maps had continued to be a problem, but had finally been completed "for the 126 municipalities that failed to enact a local ordinance."⁷⁵

G. Washington.

Washington's Shoreline Management Act of 1971, as amended, is applicable broadly to "all of the water areas of the state, including reservoirs, and their associated wetlands, together with the lands underlying them," subject to certain exceptions spelled out in the act.⁷⁶ The act distinguishes "shorelines" and "shorelines of state-wide significance." Both are regulated, but in somewhat different ways. As far as lakes are concerned, the former category includes all lakes of 20 acres or more in size (and their associated wetlands),

while the latter category includes lakes, "whether natural, artificial or a combination thereof, with a surface acreage of one thousand acres or more measured at the ordinary high water mark." Wetlands are defined as including lands "extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high water mark; and all marshes, bogs, swamps, floodways, river deltas, and flood plains associated with the streams, lakes and tidal waters which are subject to the provisions of this chapter; the same to be designated as to location by the department of ecology." Thus, the regulatory band around lakes would appear to be 200 feet wide as a minimum and wider where "associated" marshes, etc., are wider.⁷⁷

The act requires local governments to prepare and adopt "master programs for both classes of shorelines, pursuant to Department of Ecology guidelines. Master programs are submitted for approval to the department, which may - for shorelines of "state-wide significance" - "adopt an alternative to the local government's proposal if in the department's opinion the program submitted does not provide the optimum implementation to satisfy the state-wide interest." Local governments may seek review of departmental actions by a state Shorelines Hearings Board.

The act declares that no "development" shall be undertaken that is inconsistent with legislative policies, departmental guidelines and regulations, and master programs. No "substantial development" shall be undertaken without a permit from the appropriate local government. "Development" is defined as "a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel

or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to this chapter at any state of water level." "Substantial development" covers most land uses which cost or are worth over \$1,000 or "materially interfere with the normal public use of the water or shorelines of the state," with certain exceptions, including "construction of a barn or similar agricultural structure on wetlands," and construction on wetlands by an "owner, lessee or contract purchaser of a single family residence for his own use or for the use of his family, which residence does not exceed a height of thirty-five feet above average grade level."

"Master programs" ("when appropriate") must contain elements specified by the legislature, as well as conform to departmental guidelines and general legislative policies. The prescribed elements relate to: location and design of facilities "particularly dependent on their location on or use of the shorelines of the state;" public access; recreation; circulation; land uses on shorelines and "adjacent areas;" conservation (including scenic resources); and historic, cultural, scientific and educational interests. The act also provides that guidelines and master programs for "shorelines of statewide significance" shall "give preference to uses in the following order of preference which:

- (1) Recognize and protect the state-wide interest over local interest;
- (2) Preserve the natural character of the shoreline;
- (3) Result in long-term over short-term benefit;

- (4) Protect the resources and ecology of the shoreline;
- (5) Increase public access to publicly owned areas of the shorelines;
- (6) Increase recreational opportunities for the public in the shoreline;
- (7) Provide for any other [of the master program elements] ."

Master programs also must contain variance and conditional use provisions as well as provisions to "assure that construction pursuant to a permit will not begin or be authorized until thirty days from the date the final order was filed. . . ." Periodic review of master programs by local governments and by the department is mandated, but no timetable is specified.

In addition to the list of preferred uses, the act contains several declarations of policy. One of these, which seems to state the essence of the general policy of the act, is that "uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the state's shorelines." The act is quite specific as to timber cutting. Only selective commercial timber cutting is allowed within the 200-foot strip (no more than 30% of the merchantable trees may be harvested in any 10-year period), unless the cutting is "solely incidental" to the preparation of land for other authorized uses. A height limitation provides: "No permit shall be issued pursuant to this chapter for any new or expanded building or structure of more than thirty-five feet above average grade level on shorelines of the state that will obstruct the view of a substantial number of residences on areas adjoining such shorelines except where a master program does not prohibit the same and then only when overriding considerations of the public interest will be served." All state and

local governmental units are directed to apply policies to land "adjacent" to shorelines that are consistent with the shorelines program and the department "may develop recommendations for land use control of such lands."⁷⁸ The act is declared to be applicable to shorelines "owned or administered" by all units of state and local government. Finally, the act provides that the "restrictions imposed by this chapter shall be considered by the county assessor in establishing the fair market value of the property."

Development permits may be issued only when the proposed development is consistent with legislative policies, departmental guidelines and master programs. The burden of proof on this issue is on the applicant. Local governments are required to notify the public of all applications for permits and methods of notification are specified. Any ruling on an application for a permit must be filed with the department and the Attorney General. A permit may be rescinded by the issuing authority upon a finding that a permittee has not complied with the conditions of a permit. Appeals from the granting or denial of a permit may be taken to the Shorelines Hearings Board, the burden of proof being on the appellant.

The Shorelines Hearings Board is unique. No counterpart is found in any other shorelands act. The board is declared to be a quasi judicial body that reviews appeals from "any person aggrieved by the granting or denying of a permit on shorelines of the state, or rescinding a permit," providing that the Department of Ecology or the Attorney General has certified that the appellant has "valid reasons to seek review." Such reviews may also be initiated by either the department or the Attorney General.⁷⁹ As noted above,

the board is also authorized to review master programs and actions by the department, including its guidelines. The role of the board was strengthened by a holding of the Supreme Court of Washington that a decision by the board was not to be disturbed by the courts unless "clearly erroneous."⁸⁰

The Department of Ecology promulgated guidelines in 1972, and thereafter, for preparation of master programs and for permit application review.⁸¹ The guidelines contain extensive provisions on citizen involvement, repeat the master program elements mandated by the legislature, direct that shorelines are to be classified into four "distinct environments (natural, conservancy, rural and urban)," present "brief and general descriptions of the natural geographic systems around which the shoreline management program is designed," specify criteria for categories of uses (agriculture, aquaculture, forest management, commercial, marinas, mining, signs, residential, utilities, ports and water-related industry, bulkheads, breakwaters, jetties and groins, landfill, solid waste disposal, dredging, shoreline protection, roads and railroads, piers, archeological areas and historic sites, and recreation), and spell out standards for variances and conditional uses.

Although the act and the guidelines rely on a development permit approach and do not even mention the traditional land use control of zoning, the guidelines do require that master programs be based upon a classification of shorelines into natural, conservancy, rural and urban "environments" for the purpose of providing a "uniform basis for applying policies and use regulations within distinctively different shoreline areas." Designations are to be based on "the existing development pattern, the biophysical capabilities and limitations of

the shoreline being considered for development and the goals and aspirations of the local citizenry. "It is further declared by the guidelines that the "basic intent of this sytem is to utilize performance standards which regulate use activities in accordance with goals and objectives defined locally rather than to exclude any use from any one environment." The classes of environments are described briefly in the guidelines. Development would be severely limited in an area designated as a natural environment: "Any activity which would bring about a change in the existing situation would be desirable only if such a change would contribute to the preservation of the existing character." "The primary determinant for designating an area as a natural environment is the actual presence of some unique natural or cultural features considered valuable in their natural or original condition which are relatively intolerant of intensive human use." Development would be less severely limited in an area designated as a conservancy environment, within which the "preferred uses are those uses which are nonconsumptive of the physical and biological resources of the area," such as "diffuse outdoor recreation activities, timber harvesting on a sustained yield basis, passive agricultural uses such as pasture and range lands, and other related uses and activities."

A central feature of the guidelines is the statement of criteria for regulation of specified categories of land uses. These are exceptionally rich in detail. Some of these criteria will be referred to here. Where agricultural practices are involved, local governments are directed to "encourage the maintenance of a buffer of permanent vegetation between tilled areas and associated water bodies which will retard surface runoff and reduce siltation."

The guidelines recognize that this directive, and some others, cannot be accomplished through the permit system (in view of the act's definition of "development"), but nevertheless should be "dealt with in the comprehensive master program in a manner consistent with policy and intent of the Shoreline Act." How this should be done is not indicated. The criteria for forest management deal not only with traditional concerns, but also with scenic impacts of tree cutting operations and with the role of shade in insulating water from "detrimental temperature change and dissolved oxygen release." Commercial uses preferred are those which are "particularly dependent on their location and/or use of the shorelines of the state." "An assessment should be made of the effect a commercial structure will have on a scenic view significant to a given area or enjoyed by a significant number of people." "Parking facilities should be placed inland away from the immediate water's edge and recreational beaches." "When feasible, signs should be constructed against existing buildings to minimize visual obstructions of the shoreline and water bodies." "Subdivisions should be designed at a level of site coverage and of occupancy compatible with the physical capabilities of the shoreline and water." "Subdivisions should be designed so as to adequately protect the water and shoreline aesthetic characteristics." "Subdividers should be encouraged to provide public pedestrian access to the shorelines within the subdivision." "Residential development over water should not be permitted." Adequate water supplies for residential developments should be available "so that the ground water quality will not be endangered by overpumping." "Prior to allocating shorelands for port services, local governments should consider statewide needs

and coordinate planning with other jurisdictions to avoid wasteful duplication of port services within port-service regions." "The construction of bulkheads should be permitted only where they provide protection to upland areas of facilities, not for the indirect purpose of creating land by filling behind the bulkhead." Fills and cuts should be "designed and located so that significant damage to existing ecological values or natural resources, or alteration of local currents will not occur, creating a hazard to adjacent life, property, and natural resources systems." "Dredging of bottom materials for the single purpose of obtaining fill material should be discouraged." Construction of roads and railroads "can limit access to shorelines, impair the visual qualities of water-oriented vistas, expose soils to erosion and retard the runoff of flood waters." They generally should be located "away from shorelands, except in port and heavy industrial areas." Plans for land-use and transportation facilities should be coordinated. "Master programs should address the problem of proliferation of single-purpose private piers," which on lakes can have the "effect of substantially reducing the usable water surface." "Priority should be given to the use of community piers and docks in all new major waterfront subdivisions." "In areas known to contain archeological data, local governments should attach a special condition to a shoreline permit providing for a site inspection and evaluation by an archeologist to ensure that possible archeological data are properly salvaged." "Shoreline permits, in general, should contain special provisions which require developers to notify local governments if any possible archeological data are uncovered during excavation." "Attention should be directed toward the effect the development

of a recreational site will have on the environmental quality and natural resources of an area." "In locating proposed recreational facilities such as playing fields and golf courses and other open areas which use large quantities of fertilizers and pesticides in their turf maintenance programs provisions must be made to prevent these chemicals from entering water. If this type of facility is approved on a shoreline location, provisions should be made for protection of water areas from drainage and surface runoff."

Standards for variance and conditional use permits are spelled out in the guidelines. A very significant requirement is that such permits must be submitted to the department for approval or disapproval. The standards appear to be typical. For example, an applicant for a conditional use must establish, inter alia, that the proposed use "will cause no unreasonably adverse effects on the environment or other uses" and a variance can be granted only if the applicant shows, inter alia, that he cannot make any reasonable use of his land and that the hardship is "specifically related to the property of the applicant."

Excerpts from the Snohomish County Shoreland Management Master Program (June, 1974)⁸² indicate heavy reliance on performance standards. Unlike the treatment in traditional zoning, all uses permitted in the various "environments" are subject to regulatory controls, although some uses are flatly excluded. See the compatibility matrix in Figure II. In addition to being subject to regulations (general and specific), proposed uses must be evaluated for consistency with several sets of policies - "environment" policies, "shoreline use" policies and "use activity" policies. Most of the stated policies and

regulations track the statute and the guidelines. A few, however, appear to go beyond the statute and the guidelines, at least in specificity. For example, this county program absolutely prohibits filling of "water bodies or their associated wetlands for the purpose of subdivision construction." Also prohibited is residential development "for which flood control, shoreline protection measures, or bulkheading will be required to protect residential lots." A general policy stated is to permit "only those uses or conditions which allow optional uses for future generations, unless identified benefits clearly compensate for the physical, social and/or economic loss to future generations." It is declared that a list of use priorities will be established for each environment, based upon the relationship of uses to shorelines, with special reference to the degree of dependency of the various uses upon shorelines as well as to the nature of impacts of uses on shorelines. It is expressly recognized that "continuing biological, geological, ecological, and economic studies of shoreline systems will be needed to "provide a continuously updated data base against which the impact of any proposal relative to the Snohomish County Master Program can be judged." Perhaps implicit in this statement is a recognition that performance standards, to be completely effective and fair, should be stated in more specific terms than they are currently stated in the county's master program.

Figure II

USE ACTIVITY - SHORELINE ENVIRONMENT
COMPATIBILITY MATRIX

USE ACTIVITY	URBAN	SUBURBAN	RURAL	CONSERVANCY	NATURAL
Agricultural Practices	0	0	0	0	0
Aquaculture	0	0	0	0	Δ
Archeological Areas and Historic Sites	*	*	*	*	*
Breakwaters	0	0	0	*	X
Bulkheads	0	0	0	*	X
Commercial Development	0	*	*	*	X
Dredging	0	0	0	*	X
Forest Management Practices	Δ	Δ	0	0	*
Jetties and Groins	0	0	0	*	X
Landfill and Solid Waste Disposal	*	*	*	*	X
Marinas	0	Δ	0	*	X
Mining	0	X	0	*	X
Piers	0	0	0	*	*
Ports and Water Related Industry	0	X	Δ*	Δ*	X
Recreation	0	0	0	0	0
Residential Development	0	0	0	*	X
Roads and Railroads	0	*	*	*	X
Shoreline Stabilization and Flood Protection	0	0	0	Δ	Δ
Signs	0	0	0	0	*
Utilities	0	0	0	0	*

- 0 Use permitted in the environment subject to regulatory controls
- X Use prohibited in the environment
- Δ Use permitted as a Conditional Use in the environment
- * See regulations for special circumstances

[Snohomish County Shoreland Management Master Program (June, 1974),
reprinted in Thurow, Toner & Erley, Performance Controls for Sensitive
Lands: A Practical Guide for Local Administrators, App. IV-d (1975).]

H. Montana.

In 1975, the Montana legislature enacted a statute for the protection of natural lakes having a water surface area of at least 160 acres for at least six months in a year of average precipitation, not used exclusively for agricultural uses, and navigable by canoes and small boats.⁸³ Other bodies of water are not covered by the act. The regulated area extends twenty "horizontal feet" from the "mean annual high water elevation." Anyone who "proposes to do any work which will alter or diminish the course, current, or cross-sectional area of a lake or its lakeshore must first secure a permit for the work from the local governing body." Local governments are required to adopt criteria governing the issuance of permits, the only statutory guidance being that:⁸⁴

"The regulations shall favor issuance if the proposed work will not, during either its construction or its utilization:

- (a) materially diminish water quality,
- (b) materially diminish habitat for fish or wildlife,
- (c) interfere with navigation or other lawful recreation;
- (d) create a public nuisance, or
- (e) create a visual impact discordant with natural scenic values, as determined by the local governing body, which such values form the predominant landscape elements."

No state agency is authorized to issue guidelines or to review actions of local governments under this statute. The Department of Natural Resources and Conservation may adopt regulations for a particular lake and enforce them "until the governing body adopts the necessary regulations" if a petition of five owners or thirty percent of the owners of land abutting a lake, whichever is smaller, so requests.

The act requires that a "governing body which proposes to grant a variance from its regulations under this act shall first prepare an environmental impact statement at the expense of the applicant which conforms to the requirement of regulations adopted pursuant to this act, distribute this statement to interested residents, and conduct a public hearing on the proposed action."

The act also provides that one who "performs work in a lake. . .without a permit for that work shall, if required by the local governing body or the district court, restore the lake to its condition before he disturbed it."

This statute is quite limited in detail.

I. Tahoe Regional Planning Agency.

The Tahoe Regional Planning Agency, authorized by interstate compact to "adopt and enforce a regional plan of resource conservation and orderly development" for the Lake Tahoe region (covering parts of three Nevada counties and two California counties), is specifically empowered to adopt regulations establishing a "minimum standard applicable throughout the basin" for a broad range of subjects, including "watershed protection" and "shoreline development."⁸⁵ The governing body of the agency has adopted ordinances on land use, grading, signs, subdivisions, tree conservation, timber harvesting and "shorezones." All of these ordinances are related to preservation of lakes in the region, but the shorezone ordinance⁸⁶is most directly related.

The shorezone ordinance applies to the "nearshore, foreshore and backshore." The nearshore consists of land below the "low water elevation" of Lake Tahoe; the foreshore is the "zone of wave run-up above the lake surface;" and the backshore is "contiguous to the shoreline above the high

water elevation and extending normal to the shoreline for a lateral distance of three hundred (300) feet or the total lateral distance of the littoral parcel of land, whichever is the lesser amount."

A permit is required for nearly every construction or use within the nearshore or foreshore. Within the backshore, any "new construction or use" which "involves the creation of coverage of an area greater than two hundred (200) square feet" requires a permit. A permit is also required for other specified activities, including filling and dredging, anywhere in the shorezone. No permit shall be granted unless "the applicant shows, and the Agency finds, that the proposed construction or use will not cause significant harm to:

(1) The shorezone and underlying land; (2) Fish and aquatic habitats and fish spawning ground; (3) The natural beauty of the area; (4) Navigation, safety or health; and (5) The water quality of the lake. . . ." The applicant must also satisfy other standards. For example, he must show that there are sufficient accessory facilities to accommodate the proposed construction or use. He must show that granting the permit will not result in "substantial interference" with public use of the lake's navigable waters. An applicant may be required to submit extensive information, including "scientific analysis and expert opinion" when the proposed construction or use "poses substantial environmental hazards." Permits may be conditional and "when there is evidence that the structure or use may cause significant environmental harm," the permit shall contain an "environmental concern" designation. Permits having such designations require renewal at such time as the agency deems appropriate.

In addition to the permit system, the ordinance contains an environmental zoning system. Eight "shorezone tolerance districts" are established. Each district is described in environmental terms. For example, shorezone tolerance district 3 is described as follows: "Armored granite shorezones with slopes exceeding thirty percent (30%). High erosion potential immediately above the shore with moderate potential for disturbance in steep nearshore zone. Removal of vegetation in backshore will lead to mass movement and erosion." For each district, there are specified permitted uses and structures and development (performance) standards. For district 3, the permitted uses and structures in the backshore are: "As otherwise permitted, except to the extent feasible no new structures shall be constructed on slopes greater than fifteen percent (15%), and no vegetation shall be removed except such minor removal as specifically allowed in the applicable permit." Development standards for district 3 include restriction of access to shoreline to planned footpaths and preservation of vegetation.⁸⁷

Several standards are stated for any shorezone tolerance district. One, aimed at the proliferation of piers and docks, prohibits in specified situations construction of such structures for the sole use of one family. Marinas are not to be permitted where: "beach erosion is likely to occur; unstable conditions; or where there is no demonstrable public need for such facilities." They also should be located to the extent possible: "(1) In deeper water for lower water temperature and to avoid dredging; (2) In harbors to avoid use of breakwaters; (3) In conformity with the Recreation, Conservation and Open Space Plan of the Agency." In addition, review of proposed marinas

should encompass "both onshore and water-oriented facilities to assure adequacy of the development as a whole." Filling and dredging standards are very tight. In general, neither is allowed unless "found to be beneficial to existing shoreline conditions." Structures permitted are subject to "reasonable conditions" with respect to shape, exterior appearance (including colors and materials), siting and size. In imposing such conditions, the unique characteristics of the site shall be considered and there should be achieved to the "maximum extent feasible: (1) The protection of significant vistas; (2) Minimizing the visual impact of the proposed construction or use on the shorezone and area surrounding the site; and (3) The preservation of the site and shorezone from environmental harm both during and after construction."

Shoreline protective structures shall be used "only where protection of the backshore is of greater importance than beach preservation." Jetties and breakwaters "shall not be permitted where beach erosion or loss of sediment from the shorezone is likely." Jetties and breakwaters must usually be constructed with "openings which allow adequate free circulation of water and sediment." "Sloping permeable revetments are the preferred shoreline protective structures." "Where a shoreline protective structure is necessary, it shall be of sufficient strength and depth to prevent movement of backfill materials into lake waters." "Artificial beach replenishment is the preferred solution to beach erosion and shall be of non-organic, chemically and biologically inert material." Construction of lagoons and islands is prohibited.

Houseboats are excluded from both the lake and the shorezone.

Owners of structures in the shorezone are required to maintain them in a "proper and safe" condition. The agency may enforce this obligation by performing repairs or removing structures at the expense of the owner and will have a lien in the land of the owner to secure such obligations.

The ordinance declares it to be a "public nuisance and unlawful" to do anything that "has any of the following effects within the shorezone of a lake: (1) The erosion or discharge of solid or liquid waste materials (e.g., soil, silt, clay or sand) into lake waters; (2) Impair water quality; (3) Impair water clarity; (4) Impair fish spawning areas." The agency may abate such nuisances and will have a lien for the costs of abatement.

Variations may be granted by the agency governing body, but not by agency staff, and only "if it is found that because of special circumstances applicable to the property involved a strict application deprives such property of privileges or safety enjoyed by other similarly situated property" and if the variance will "not create significant probabilities of harmful environmental consequences."

Nonconforming uses in the nearshore or foreshore are allowed to continue only if permits for them are issued, but most existing structures may be continued in use until December 31, 1999.

Other regulations and documents issued by the agency, besides the shorezone ordinance, are also applicable to land within the shorezone. Especially significant are the "Shorezone Plan," which is incorporated by reference at many points in the ordinance, and the "Land Use Ordinance."

Lake protection is the major thrust of the Land Use Ordinance,⁸⁸ as is evident in the stated purposes of this ordinance:⁸⁹

"(1) To protect ecologically fragile areas and the quality of the lakes of the Tahoe Region.

(2) To maintain the natural scenic quality of the Lake Tahoe Region.

(3) To assure population levels within the Region that will maintain an equilibrium between the Region's natural endowment and its manmade environment."

The Land Use Ordinance provides for overlapping use districts and land capability districts. The use districts are: general forest, recreation, rural estates, low density residential, medium density residential, high density residential, tourist commercial, general commercial public service, conservation reserve, and medium tourist residential. The land capability districts are designated by numbers 1 through 7. District number 1 has the least capacity to withstand "disturbance without risk of substantial harmful consequences" and district number 7 has the greatest such capacity. The term "harmful consequences" refers to erosion and sedimentation.⁹⁰ The major determinants of land capability classification are soils types and land forms.⁹¹ The regulatory aspect of land capability districting takes the form of limiting the amount of impervious land coverage allowed for each land parcel in each district. See Figure III.

This approach was justified as follows:⁹²

"Control of impervious surface alone does not solve all environmental problems. It is deemed, however, to be the most critical element in the land disturbance that has created the basic environmental problems facing the Lake Tahoe basin - water quality degradation, flooding and erosion. It is also considered the most accurately measurable and constant expression of development impact."

The Land Use Ordinance also superimposes upon the two-tier districting system a permit requirement for most types of development.⁹³ A permit may be issued only upon a finding that the proposed use "will not cause harmful environmental consequences" or other specified harms.⁹⁵ There also are specific restrictions of height of structures⁹⁵ and maximum number of dwelling units per acre.⁹⁶

To prevent circumvention of the impervious coverage limits and residential density limits, the ordinance provides:

"9.30 Creation of Lots or Parcels

No person shall create a lot or parcel upon which there will exist more than the maximum number of dwelling units or maximum percentage of land coverage permitted by this ordinance, provided, however, that more than such maximums may be created in connection with a subdivision, the tentative map of which is approved by the Agency pursuant to the provisions of the Tahoe Regional Planning Agency Subdivision Ordinance.

- 9.31 Where a lot or parcel is divided, the person making the division shall calculate the number of dwelling units and land coverage allocable to each of the resulting lots or parcels and shall note such allocations in the deeds to such resulting lots or parcels and on the lot or parcel map, if any, that is used to record such division."

Figure III

Limits on Impervious Land Coverage
Land Use Ordinance (Sec. 6.20)
Tahoe Regional Planning Agency

<u>Capability District Number</u>	<u>Permissible Coverage</u>
1	1%
2	1%
3	5%
4	20%
5	25%
6	30%
7	30%

J. New York's Adirondack Park.

The land use and development plan adopted by the New York legislature for the 3.7 million acres of private lands within Adirondack Park, a six-million-acre forested mountain region, contains "shoreline restrictions" to "provide adequate protection of the quality of lakes, ponds, rivers and streams of the park and the visual qualities of their shorelines."⁹⁷ "Shoreline" is defined narrowly as "that line at which land adjoins the waters of lakes, ponds, rivers and streams within the Adirondack park at mean high water."⁹⁸ However, the reach of regulatory powers for the protection of shorelines extends landward to include "any new land use or development or subdivision of land that involves any shoreline." (emphasis added)⁹⁹ Specific standards are stated for minimum lot width at the shoreline, minimum setback of buildings and on-site sewage disposal facilities, removal of vegetation within a strip 35-feet wide along the shoreline, and "minimum shoreline frontages" for "deeded or contractual access to all such lakes. . .for five or more lots, parcels or sites or multiple family dwelling units not having separate and distinct ownership of shore frontage."¹⁰⁰

Clustering of buildings may be allowed by permit in lieu of satisfaction of lot width requirement, subject to "overall intensities of principal buildings (other than boat houses) per linear mile of shoreline or proportionate fraction thereof."¹⁰¹ These maximum intensities vary for different land use zones. See Figure IV. Similarly, the lot width and setback requirements also vary for different land use zones.

The plan is administered by the Adirondack Park Agency and local governments.

Lawsuits challenging the Adirondack Park program have met with little success. In one, McCormick v. Lawrence,¹⁰² aesthetic considerations alone were deemed sufficient to uphold the following conditions attached to a permit for a residential development on lakefront lots:

"No boat houses shall be constructed on the shore of Oseetka Lake. Any dock that may be constructed shall be of a type and size that is compatible with the existing rustic shoreline of this portion of the lake."

A factor important to the court was the relatively undeveloped state of the shorelands of the lake, especially in the vicinity of the proposed development. In Wambat Realty Corp. v. Adirondack Park Agency,¹⁰³ the court was generally supportive of the program, but held invalid a section of the act¹⁰⁴ providing that a "local land use program may be more restrictive than the overall intensity guidelines," on the ground that this was a grant of "unlimited" regulatory power. An amendment to the act seemingly could easily meet the court's objection without compromising the goals of the act.

Figure IV

Overall Intensities of Principal Buildings Along Shorelines
Adirondack Park Agency Act
N.Y. Exec. Law § 806 (5) (McKinney Supp. 1975)

<u>Land Use Areas</u>	<u>Principal Buildings Per Linear Mile</u>
Hamlet	106
Moderate Intensity	53
Low Intensity	42
Rural Use	36
Resource Management	26

IV. Comparative Analysis of Programs

A. Scope of the Regulated Territory.

All of the comprehensive programs except the Adirondack Park Plan rely entirely or partially upon the technique of establishing a regulatory strip of uniform width around each regulated lake. The specified width varies from 20 feet in Montana to 1,000 feet in Michigan, Minnesota and Wisconsin. It is impossible to justify any specific width, but the broader the strip, the greater the opportunity for effective control. It is also difficult to justify the concept of a regulatory strip of uniform width, since it ignores varying land and water characteristics. This concept is likely to be used when adequate data about those characteristics is not available.

The Adirondack Park Plan encompasses action on any land that "involves" any shoreline.¹⁰⁵ This amounts to no boundary at all, short of the boundaries of Adirondack Park. This approach would be unworkable except where shorelands regulation is only one facet of a comprehensive regulatory program for a region - such as Adirondack Park. Even in such programs, it may result in confusion.

The Tahoe Regional Planning Agency shorezone ordinance specifies that the regulatory band is 300 feet "or the total lateral distance of the littoral parcel of land, whichever is the lesser amount."¹⁰⁶ The apparent purpose of this definition is to avoid practical difficulties resulting from inclusion within the regulatory area of narrow strips of upland parcels. This may be justified on the grounds that the land touching the water's edge is the most important to shorelands control, that all land within the Tahoe Basin is subject to land use

regulations for the benefit of the lakes within the basin, and that boundaries of the regulatory area are readily ascertainable from existing surveys. The last of these justifications would be more fully applicable if the maximum stated width of 300 feet had been eliminated. Such a method was adopted for an ordinance of the City of Austin, Texas, requiring a permit for specified types of development on "any land, tract, parcel or lot which is adjacent to or crossed by a waterway."¹⁰⁷ This ordinance is silent as to whether the territorial jurisdiction of the ordinance is fixed permanently by land boundaries existing at the effective date of the ordinance or shifts with subsequent subdivisions and mergers of parcels. If the latter is the meaning of this provision, an inviting avenue for evasion of the ordinance may have been created. This avenue could be partially blocked by specifying a minimum width for the regulatory area. This was done in a surface water runoff ordinance of Marion County, Florida, as follows:

"Those properties on each side of Blue Run [River] extending from the Ordinary High Water Elevation in a Landward Direction of 500 feet or to ownership limits, but in no event less than 150 feet from the Ordinary High Water Elevation."¹⁰⁸

It is necessary to fix the lakeside boundary of the regulated area as well as the landward boundary. Most of the comprehensive lake shorelands statutes and ordinances draw the lakeside line at the water's edge, but use varying terms in doing so. Precision in this regard, especially for lakes having fluctuating water levels, can be very significant. If the lakeside boundary is not clearly established, the landward boundary will also be uncertain, since it typically is defined as being a specified distance from the

lakeside boundary. Administration of some regulations, such as setback regulations, also is made difficult by uncertainty as to the location of the lakeside boundary.¹⁰⁹ There is also the possibility that a carelessly defined lakeside boundary will be so construed as to leave unregulated some strips of land having the greatest need for regulation. Most of the comprehensive lake shorelands programs refer to the "normal" or "ordinary" or "mean annual" high water mark as the lakeside boundary (Maine, Michigan, Minnesota, Montana, Washington and Wisconsin). One (Vermont) refers to the "normal mean watermark." Another (Adirondack Park) refers ambiguously to "that line at which land adjoins the waters" of lakes and other bodies of water. Only one (Lake Tahoe) draws the lakeside boundary so as to include land always covered by water. The shorezone ordinance of the Tahoe Regional Planning Agency provides that the "nearshore" segment of the shorezone extends "from low water elevation of Lake Tahoe to an elevation of 6,193.0 feet Lake Tahoe Datum, but in no case a lateral distance less than three hundred and fifty (350) feet normal to the shoreline. In other lakes of the region the depth shall extend to twenty-five (25) feet below the low water elevation."¹¹⁰ This approach has the merit of eliminating the possibility of a gap in the regulated area.

The rigidity of the regulatory strip of uniform width is relaxed somewhat by a few programs which reach out beyond the defined strip to embrace lands having characteristics appropriate for inclusion in a shorelands regulation program. The Minnesota and Wisconsin programs include the floodplain of a lake, even though it may extend more than 1,000 feet from the water's edge.

The Washington program, still more inclusive, embraces not only floodplains, but also marshes "associated" with lakes and other covered waters.

Ideally, the regulatory area should embrace all land draining directly into the lake and perhaps some land draining indirectly into the lake. The Lake Tahoe and Adirondack Park land use control programs are substantially that comprehensive, though the shorelands components of those programs are not. In a realistic sense, the entire Lake Tahoe land use control program is a shorelands program, since its primary purpose is lake protection, the shore-zone ordinance being merely one component.

Variations in the territorial scope of shorelands programs occurs in another sense. Such a program may be applicable to one lake or to all lakes (usually of a minimum size) within a region or a state. Also, riverine and coastal shorelands may be included in the same, or similar programs, with lake shorelands. Comprehensiveness in this sense makes possible planning for differential treatment of various shorelands to meet regional or state-wide needs. One example is the distinction in the Washington statute between "shorelines" and "shorelines of state-wide significance." Another is the classification of lakes and other bodies of water by some programs, such as the Minnesota program, which classifies all public waters in the state into: environment lakes and streams; recreational development lakes; general development lakes and streams; and critical lakes. The public interest may be better served by this approach than by applying uniform regulations to shorelands of all bodies of water in the region or state.

B. Goals.

A comparison of stated goals of shorelands statutes and regulations is difficult because such statements are on varying levels of generality and completeness. But when implicit goals are considered, most of the comprehensive shorelands programs appear to have substantially similar goals. Exceptions are the Kansas program, which contains no stated goal and provides scant basis for inferring goals, and the Michigan program, which is concerned primarily with shore erosion.

At least five general goals of shorelands programs may be identified.

(1) An overriding concern is premature destruction of lakes by siltation and accumulation of vegetable matter. Any shorelands use that may result in soil erosion or generation of wastes containing nutrients is suspect. (2) A second goal, closely related to the first, is maintenance of water quality in lakes suitable for beneficial uses of water. (3) A third goal is prevention of harms to aquatic life and other interests resulting from activities within the lake, such as filling, dredging and building of structures. (4) A fourth goal of lake shorelands programs is the allocation of shorelands, viewed as a scarce resource, to preferred uses. Types of uses commonly preferred are those dependent upon, or particularly benefited by, proximity to lakes - such as habitats for wildlife, some forms of recreation (including access to lakes and enjoyment of natural scenery), and structures such as piers and docks (subject to regulation). Other uses preferred by one or more shorelands programs are: residential uses over commercial and industrial uses; single-family

residences over multi-family residences; uses serving state-wide interests (in state programs); uses serving long-term goals; non-intensive uses; and dispersed uses over concentrated uses (and vice versa as to clustering of residences). (5) A fifth goal of lake shorelands programs is the prevention of harm from floods and other natural hazards. Finally, in addition to these lake-oriented goals, shorelands programs have many of the same goals as other land use programs, such as the minimizing of conflicts among land uses.

The significant difference among shorelands programs are to be found, not in their goals, but in their methods of achieving goals.

C. Regulatory Approaches.

1. Zoning

Zoning, in some form, is incorporated in all comprehensive lake shorelands programs, except the Montana program. Even though the territorial extent of shorelands programs is quite limited, there appears to be a consensus that application of uniform land use regulations throughout the entire regulated area would be undesirable. However, the prevailing types of shorelands zoning depart from traditional urban zoning and there also are many variations of shorelands zoning.

The most prevalent shorelands zoning scheme establishes one district within which development is limited severely (perhaps as severely as the police power is thought to allow) and a few other districts in which rural, recreational, residential, commercial and perhaps industrial land uses may be allowed, often subject to issuance of development permits pursuant to lake

protection standards. The Vermont model permanent shorelands zoning ordinance establishes a single shorelands district. Within this district, only specified types of open-space uses are allowed as of right, and other uses are allowed only by permit. The zoning concept does show up in the Vermont ordinance, but in the forms of classification of lakes and soils, which is discussed below. The Montana program relies entirely on permitting. There would seem to be much merit in the Vermont and Montana approaches, especially where the regulated shorelands strip is narrow. Districting on the basis of classification of land uses seems unnecessary for shorelands protection, fails to focus attention on factors relevant to lake protection, and may encourage planners to find some place in the shorelands area for every land use classification. The prevalence of land use zoning in shorelands programs may be a product of excessive timidity in departing from traditional urban land use controls.

Classification of lakes is an aspect of the Minnesota and Vermont state-wide programs. Vermont's categorization of lakes as (1) natural and pristine, (2) recreational, (3) general development and (4) endangered, is similar to Minnesota's. This approach recognizes that lakes vary in their suitability to meet various public interests and that it is not necessary (and may even be harmful) to require that every lake serve the full range of public interests in lakes.

An entirely different sort of lake classification is incorporated in the Washington distinction between "shorelines" and "shorelines of state-wide

significance." The evident purpose of this type of classification is to obtain a satisfactory adjustment of state-local governmental relations. It has been reported that proponents of the Washington program in the state legislature invented this distinction for the purpose of making the legislation more palatable.¹¹¹

Districting on the basis of soils types is a significant aspect of the Vermont and Lake Tahoe shorelands programs. In the Vermont program, six soil groups are identified: favorable soil group; steep soil group; wet soil group; shallow soil group; impermeable soil group; and moderately well-drained soil group. A combination of the soils classification and lake classification determines whether development is permitted, minimum lot size (for both sewered and unsewered areas) and setbacks for structures and on-site sewage facilities. There is still greater reliance upon soils types and land forms in the Lake Tahoe program. Both the Land Use Ordinance and the Shorezone Ordinance for the Lake Tahoe region make use of classifications of soils types and land forms. The Land Use Ordinance establishes seven land capability districts, which overlap eleven land use districts, and the Shorezone Ordinance establishes eight shorezone tolerance districts, which overlap a unique zoning of the shorezone into three districts based upon land-water relationships (near-shore, foreshore and backshore). The regulatory consequences of environmental districting in the Lake Tahoe program are most significant. The extent to which land may be covered by impervious surfaces is determined by the land capability districts. Types of permissible land uses and development

standards are determined by the shorezone tolerance districts. Environmental zoning of this nature is highly relevant to protection of lakes against major threats. It is superior, for lake protection, to traditional land use zoning in both effectiveness and capacity to meet court challenges.

A zoning classification of Adirondack Park land into districts designated as hamlet, moderate intensity, low intensity, rural use, and resource management, is used, *inter alia*, to establish overall (as opposed to land parcel) limits of densities of "principal" buildings along shorelines, stated in terms of the maximum number of buildings allowed per linear mile in each district. The Tahoe land use ordinance also establishes maximum gross density limits for dwelling units per acre for each of its eleven use districts. To avoid circumvention of limits on gross dwelling units and gross impervious coverage by subdivision of land, the Tahoe land use ordinance: requires that every deed conveying a parcel carved from a larger tract show the share of those maximums allocable to each parcel; and prohibits subdivisions that would result in exceeding those maximums, except as allowed under the Tahoe subdivision ordinance.

Set-backs, which are a form of zoning, are established in many shorelands programs. They usually apply to structures, sewage disposal facilities and removal of vegetation. In Maine, tilling of the soil is forbidden within 50 feet of the water's edge. In Washington, parking lots, roads and railroads must be set back. In their typical form, set-backs appear to be too rigid. If they are based upon variations in soils conditions and land forms, they are

better adapted to dealing with siltation and runoff of pollutants. The purposes of lake set-backs, however, go beyond attempts to meet those problems. Preservation of natural scenery along the lake shore and screening of structures are no doubt major objectives of lake set-backs. For these purposes, apparently the only feasible alternative to a fixed set-back is *ad hoc* review of site plans. The latter is more effective, but entails greater administrative costs.

2. Subdivision Regulation

Regulation of the process of creating land parcels has been adapted to the objectives of lake protection.

A common element of subdivision regulation in lake shorelands programs is the mandating of minimum lot size for the purpose of assuring sufficient soil absorption area to handle on-site sewage disposal. As noted in the discussion of zoning, such regulation is more likely to succeed if standards are based upon soil and land form characteristics.

Minimum lot-size requirements, whether imposed by subdivision or zoning ordinances, also may be employed for the purpose of controlling the density of residences. When one considers the relatively small lot sizes allowed by shorelands programs (one-half to two acres), compared with the larger minimum lot-size requirements of some general zoning ordinances,¹¹² it is evident that the full potential of this device for shorelands protection is not being realized.

Minimum lot width at the water's edge is also mandated by some shorelands programs, for the obvious purpose of preventing crowding of structures and other land uses along that line.

Potentially the most drastic subdivision regulation is the denial of approval of plats on the ground that the land proposed to be subdivided is naturally unsuitable for the proposed development. Wisconsin's model shorelands ordinance contains such a provision. Such provisions must be carefully drafted to avoid or meet anticipated legal challenges based upon alleged confiscation, arbitrariness or discrimination. Discretion of plat-reviewing officials should be restrained as tightly as possible by standards stated in the most specific terms. Also, such officials should be required to support their decisions on suitability by detailed written findings. The availability to plat-reviewing officials of extensive and reliable environmental data is essential. Some shorelands programs put the burden of supplying such data upon the developer.

3. Development Permits

All comprehensive lake shorelands programs rely, at least in part, upon some form of discretionary permit system of regulation. The preference for the permit system appears to be greater in shorelands regulation than in traditional urban land use control programs. This may be due, to some extent, to a realization by drafters that insufficient environmental data exist to support mandatory standards for some subjects of regulation.¹¹³ There are significant variations among permit systems in shorelands programs.

The choice of the agency to pass upon applications for development permits is a matter of some importance. For many local government shorelands programs, the zoning board of adjustment has been chosen, while for others, the local planning commission has been chosen. Both are composed of citizens who typically are neither professional planners nor elected officials. The function of passing upon applications for development permits is similar to the traditional functions of boards of adjustment of granting special exceptions, conditional use permits and variances. On the other hand, the wide range of discretion involved in processing shorelands development permits and the heavy reliance on such permits in shorelands ordinances indicate that a planning-oriented agency such as the planning commission would be better suited to the task than would be the essentially adjudicative board of adjustment. Ideally, perhaps, a separate shorelands agency or an environmental agency should be assigned this task. This has

been done at state and regional levels in some instances, but has not occurred at municipal or county levels.

Another important matter is the range of discretion of the agency processing applications for development permits. Perhaps excessive discretion is conferred by some programs (Wisconsin and Minnesota are examples) that merely require the agency to consider a number of specified factors. Some other programs (e.g., Maine) require that the agency make findings on a number of relevant issues before granting permits.

The scope of administrative discretion could be reduced drastically if standards were stated in quantifiable terms against which the applicant's proposal could be measured in a largely mechanical way. Performance standards in this form are strongly advocated,¹¹⁴ but are rare. The difficulty is that quantifiable environmental performance standards cannot easily be stated for most relevant environmental factors. A recent study has undertaken to show, however, that this has been done for runoff control and can be done for erosion and sedimentation control and perhaps other controls.¹¹⁵ An example of a runoff control performance standard offered by the above study is the Sewer Permit Ordinance of the Metropolitan Sanitary District of Greater Chicago providing in part:¹¹⁶

" . . . [N]o permits shall be issued for sewer construction in unsewered areas when construction of the facilities to be served by the proposed sewer would result in runoff in excess of that from its natural or undeveloped state."

This is a performance standard, as distinguished from a specification standard, since it allows the applicant to use any method that will accomplish the

stated standard of performance, which in this instance should be ascertainable with precision from studies of runoff in the area. Analogous standards, requiring maintenance of the "natural surface water flow regime," have been promulgated for some of Florida's wetland areas of critical concern, an example being the following regulation of drainage facilities in the Big Cypress Area of Critical Concern, which goes beyond the above sewer permit ordinance by suggesting (but not requiring) specific methods of meeting the standard:¹¹⁷

"New drainage facilities shall release water in a manner approximating the natural local surface flow regime, through a spreader pond or performance equivalent structure or system, either on site or to a natural retention, or natural filtration and flow area. New drainage facilities shall also maintain a ground water level sufficient to protect wetland vegetation through the use of weirs or performance equivalent structure or system. . . ."

Some programs place a heavy burden of proof upon the applicant.

An example is the Tahoe shorezone ordinance requirement that the applicant establish that the proposed development "will not cause significant harm" to specified public interests in the lake. A need for shorelands location must be shown by the applicant in some programs. The burden of furnishing environmental impact data is also sometimes placed upon the applicant, either by the shorelands regulations or by a general state environmental impact law.

The reviewing agency is commonly allowed to attach conditions to its permits requiring the permittee to take specified steps for environmental protection, such as landscaping, providing shore cover and limiting periods of operation of the proposed facility. Continuing supervision by the agency

of activities of the permittee is authorized by some programs, which make permits subject to rescission or renewal. The renewal approach may be more effective than the rescission approach in preventing claims of vested rights in permits.

Opportunity for public participation in permit processing is enhanced by the requirements of some programs that the public be notified of applications and be given an opportunity to participate.

Local agency discretion in permit processing is subject to administrative review at the state level in the Washington program, which includes a separate Shorelines Hearing Board to review appeals from the granting, denial or rescission of permits.¹¹⁸ This appears to be a sensible approach to assuring that permits granted by local authorities conform to state policies and at the same time to avoid the consequences of vesting the review function of a state mission-oriented agency that might manifest excessive zeal.

4. Sanctions

To obtain compliance by landowners, drafters of lake shorelands programs have relied upon traditional sanctions commonly utilized in land use regulation, including one or more of the following: fines, imprisonment, civil penalties, damages for injuries to public or private property, abatement of conditions declared public nuisances, declaratory judgments, injunctions (prohibitory and mandatory), and damages for the cost of restoration.

The most severe sanctions are not necessarily the most effective, as there may be reluctance to impose them. It may be significant that the New

York legislature in 1976 moved to substitute civil for criminal penalties for violations of the Adirondack Park Agency Act.¹¹⁹

Recent land use regulations for the protection of waters other than lakes contain some modern sanctions that would be appropriate for lake protection. The California Coastal Act of 1976¹²⁰ authorizes "any person" to sue for injunctions restraining violations of the act (without posting bond), to compel performance of non-discretionary governmental duties (without posting bond) and to recover heavy civil penalties. Detailed administrative sanctions, such as issuance of stop orders to prevent deviations from approved development plans, as provided in a Florida ordinance, are useful.¹²¹

5. Meeting the Taking Issue

In view of the likelihood that the severely restrictive portions of shorelands regulations will be challenged as "takings," i.e., as confiscatory and therefore invalid, a drafter of such regulations must consider how best to meet such anticipated challenges. Aside from the obvious precautionary measures of avoiding imposition of unneeded restrictions and basing standards upon adequate data, little has been done to this end in existing lake shorelands programs. Possibly of some help is the invocation of the public trust doctrine, as in the Wisconsin statute.

Some land use control legislation (other than lake shorelands programs) attempt to deal with the problem by defining "taking" in a manner calculated to minimize the risk of decisions that a taking has occurred.¹²² Another approach is legislative provision for compensation of landowners, in lieu of

invalidation of a challenged regulation, in the event of a court decision that a taking has occurred.¹²³ Since the law of taking is constitutional law, legislative approaches such as these may not be very effective in avoiding decisions adverse to the regulations and, unless carefully drafted, could be construed as restricting the scope of the regulations.¹²⁴

FOOTNOTES

1. Wash. Admin. Code 173-16-050.
2. Hurley, Wis., Ordinance 130, § 3, Oct. 12, 1954, as quoted in *Bino v. Hurley*, 273 Wis. 10, 76 N.W. 2d 571 (1956), holding invalid another section of the ordinance.
3. Tex. Rev. Civ. Stat. art. 1175(19) (Supp. 1975).
4. Ordinance paraphrased and held valid in *Bountiful City v. De Luca*, 77 Utah 107, 292 P. 194 (1930), which limited the ordinance ban, however, to unreasonable grazing.
5. *People v. Borda*, 105 Cal. 636, 38 P. 1110 (1895).
6. *City of Durango v. Chapman* 27 Colo. 169 (1900).
7. *Perley v. North Carolina*, 249 U.S. 510 (1919).
8. *City of New York v. Kelsey*, 158 App. Div., 143 N.Y.S. 41 (1913), *aff'd mem.*, 213 N.Y. 638, 107 N.E. 1074 (1914) (one-half mile); *Philadelphia v. Westminster Cemetery Co.*, 162 Pa. 105, 29 A. 349 (1894) (one mile).
9. E.g., Austin, Tex., Code § 29-49(c), providing: "No part of a septic tank drainfield shall be constructed, located or operated closer than seventy-five feet measured horizontally to the control elevations specified hereinbefore."
10. See *Hartford Electric Light Co. v. Water Resources Commission*, 162 Conn. 89, 101, 291 A. 2d 721, 729 (1971).
11. *State v. Kuluvar*, 266 Minn. 408, 123 N.W. 2d 699 (1963).
12. *Id.*, 266 Minn. at 417, 123 N.W. 2d at 705, 706.
13. E.g., *State v. Columbia Water Power Co.*, 82 S.C. 181, 63 S.E. 884 (1909).
14. E.g., *Diversion Lake Club v. Heath*, 126 Tex. 129, 86 S.W. 2d 441 (1935).
15. *Id.*
16. *Wilbour v. Gallagher*, 77 Wash. 2d 306, 462 P. 2d 232 (1969).

17. Note, Private Fills in Navigable Waters: A Common Law Approach, 60 Cal. L. Rev. 225 (1972). The public trust doctrine is generally discussed in Sax, The Public Trust Doctrine in Natural Resources Law, 68 Mich L. Rev. 471 (1970).
18. Bach v. Sarich, 74 Wash. 2d 575, 445 P. 2d 648 (1968).
19. Conn. Gen. Stat. Ann. § 19-313 (1969).
20. N.H. Stat. Ann. 211:8 (1964).
21. Doemel v. Jantz, 180 Wis. 225, 193 N.W. 393 (1923).
22. Shorehaven Golf Club, Inc. v. Water Resources Commission, 146 Conn. 619, 153 A. 2d 444 (1959); Petty v. City of San Antonio, 181 S.W. 224 (Tex. Civ. App. - San Antonio, 1915, writ ref'd).
23. Austin, Tex., Code § 29-12. The "normal water level" of this lake is declared to be 492.8 feet above mean sea level. Id. § 29-46.
24. Id. § 29-21.
25. Id. § 29-21(f).
26. Conn. Gen. Stat. Ann. § 25-4a (1975).
27. Cal. Gov't Code § 66601 (West Supp. 1976).
28. Id. § 66605.
29. Town of Islip v. Powell, 358 N.Y.S. 2d 985 (Sup. Ct. 1974).
30. Id.
31. Hartford Elec. Light Co. v. Water Resources Commission, 162 Conn. 89, 291 A. 2d 721 (1971).
32. Tex. Rev. Civ. Stat. Ann. art. 4051 et seq. (1966).
33. Amdel Pipeline, Inc. v. State of Texas, 530 S.W. 2d 647 (Tex. Civ. App. - Beaumont 1975).
34. Tex. Atty. Gen. Op. No. WW-151 (1957).
35. E.g., McKinney's Env. Cons. Law §§ 15-0503, 15-0505, 15-0511 (1973).
36. State v. Kuluvar, 266 Minn. 408, 123 N.W. 2d 699 (1963).

37. Kan. Gen. Stat. Ann. § 19-2882 et seq. (1974).
38. Id. § 19-2893 (1974).
39. Wis. Stat. Ann. §§ 59.971, 144.26 (Supp. 1975).
40. Id. § 144.26.
41. *Just v. Marinette County*, 56 Wis. 2d 7, 201 N.W. 2d 761 (1972).
42. Wis. Stat. Ann. § 144.26 (Supp. 1975).
43. Wis. Admin. Code ch. NR 115.
44. Wis. Dept. of Nat. Res., Shoreland Protection Ordinance (1967). See also the department's Shoreland Regulation Administration Manual.
45. Lee, Wisconsin's Shoreland Management Program, 98 J. Urban Planning & Development Div. (Proceedings, ASCE, No. UPI. July 1972) 45, 52.
46. Kusler, Water Quality Protection for Inland Lakes in Wisconsin: A Comprehensive Approach to Water Pollution, 1970 Wis. L. Rev. 35, 67-78.
47. Id. 68.
48. Id. 76.
49. Id. 76-78.
50. Id. 65, n. 140. The Wisconsin program is also discussed in: Yanggen & Kusler, Natural Resource Protection through Shoreland Regulation, Wisconsin, 44 Land Econ. 73 (1968); Kusler, Artificial Lakes and Land Subdivisions, 1971 Wis. L. Rev. 369, 405-414, 445.
51. *Just v. Marinette County*, 56 Wis. 2d 7, 201 N.W. 2d 761 (1972).
52. See Note, 86 Harv. L. Rev. 1582 (1973).
53. The pertinent provisions of the ordinance are set out at 201 N.W. 2d at 765, notes 3 & 4.
54. Letter from Wayne R. Peterson to Corwin W. Johnson, dated April 28, 1976.
55. Minn. Stat. § 105.485 (Supp. 1976).

56. Minn. Reg. Cons. 70-84 (1970).
57. Id. 71.
58. Id. 73.
59. Id. 77.
60. Vt. Stat. Ann. tit. 10, §§ 1421 et seq. (1976 Supp.), tit. 24, § 4411 (1975), § 4410 (1976 Supp.).
61. Id. tit. 10 § 1422.
62. Vermont Agency of Environmental Conservation, Model Shoreland Zoning Report (1974).
63. Id. 5.
64. Id. 9.
65. Vt. Stat. Ann. tit. 10, § 6001 et seq. (1973), amended (Supp. 1976).
66. For a recent report on implementation of the Vermont land use legislation, see Heeter, Act 240: Alive and Basically Well, 28 Land Use Law & Zoning Digest 5 (No. 3, 1976).
67. Mich. Stat. Ann. §§ 13.1831 et seq. (Supp. 1975).
68. Mich. Ad. Code R. 281.11 (Supp. 1974).
69. Mich. Dep't. Nat. Res., Gen. Rules - Great Lakes Shorelands, Rule 1(f) (Mar. 24, 1976).
70. Mich. Comp. Laws Ann. §§ 281.731-.747 (1967). The act is discussed in Bartke, Dredging, Filling and Flood Plain Regulation in Michigan, 17 Wayne L. Rev. 861 (1971).
71. Me. Rev. Stat. Ann., tit. 12, § 4811 et seq. (1974), amended, (Supp. 1976).
72. Id. § 4814.
73. State of Maine Guidelines for Municipal Shoreland Zoning Ordinances (Adopted by the Board of Environmental Protection and the Land Use Regulation Commission pursuant to the administrative direction of the State Planning Office, 1973).

74. State Planning Office, Executive Department, State of Maine, Shoreland Zoning in Maine (1975).
75. Letter from Rich Rothe, Shoreland Zoning Coordinator, State Planning Office, Executive Department, State of Maine, to Corwin W. Johnson, August 4, 1976.
76. Wash. Rev. Code Ann. §§ 90.010 et seq. (Supp. 1975); Wash. Laws 1975-1976, 44th Leg., 2d Ex. Sess., ch. 51, p. 167. The act is discussed in Crooks, *The Washington Shoreline Management Act of 1971*, 49 Wash. L. Rev. 423 (1974).
77. A designation of wetlands by the department was upheld in *Juanita Bay Valley Community Assoc. v. City of Kirkland*, 9 Wash. App. 59, 510 P. 2d 1140 (1973).
78. This provision was relied upon in a holding that, where a proposed development embraces land both within and without the shoreline area, the entire project may be enjoined pending approval of the application for a permit. *Merkel v. Port of Brownsville*, 8 Wash. App. 844, 509 P. 2d 390 (1973). Cf. *Narrowview Preservation Assoc. v. Tacoma*, 84 Wash. 2d 416, 526 P. 2d 897 (1974).
79. *Hama Hama Co. v. Shorelines Hearings Board*, 85 Wash. 2d 441, 536 P. 2d 157 (1975).
80. *Department of Ecology v. Ballard Elks Lodge No. 827*; 84 Wash. 2d 551, 527 P. 2d 1121 (1974), noted 51 Wash. L. Rev. 405 (1976).
81. Wash. Ad. Code 173-16. See also *Id.* 173-14; 173-19.
82. Thurow, Toner & Erley, *Performance Controls for Sensitive Lands: A Practical Guide for Local Administrators*, App. IV-d (1975).
83. Mont. Rev. Code §§ 89-3701 et seq. (Supp. 1976).
84. *Id.* § 89-3704.
85. Cal. Gov't Code §§ 66800 et seq. (West Supp. 1976). See Ayer, *Water Quality Control of Lake Tahoe: Dissertation on Grasshopper Soup*, 58 Calif. L. Rev. 1273 (1970).
86. Tahoe Regional Planning Agency, Ordinance No. 76-3 (1976).
87. The nature of studies of land capability in the Lake Tahoe region is described in Bailey, *Land Capability Classification of the Lake Tahoe Basin, California-Nevada* (Forest Service, U.S. Dep't of Ag., 1974).

88. Tahoe Regional Planning Agency, Land Use Ordinance (Ordinance No. 4) (1972).
89. Id. § 7.11.
90. R. Bailey, Land-Capability Classification of the Lake Tahoe Basin, California-Nevada 1, 5, 25 (Forest Service, U.S. Department of Ag. 1974).
91. Id. 5.
92. Id. 25.
93. § 4.00.
94. § 8.33.
95. § 7.13.
96. § 8.32.
97. N.Y. Exec. Law §§ 800 et seq., 806 (McKinney Supp. 1975). The plan is discussed in Note, Preserving Scenic Areas: The Adirondack Land Use Program, 84 Yale L.J. 1705 (1975).
98. Id. § 802(56).
99. Id. § 806(1).
100. Id. § 806(1)(a)(3).
101. Id. § 806(5).
102. 372 N.Y.S. 2d 156 (N.Y. Sup. Ct. 1975).
103. 6 Env. Law Rep. 20690 (N.Y. Sup. Ct. 1976).
104. § 807-2-c.
105. N.Y. Exec. Law § 806(1) (McKinney Supp. 1975).
106. Tahoe Regional Planning Agency, Ordinance No. 76-3, § 3.00 (1976).
107. City Code of Austin § 29.3 (1969).
108. Marion County, Florida Ord. 73-9 (reprinted in Thurow, Toner & Erley, Performance Controls for Sensitive Lands: A Practical Guide for Administrators 490 (1975)).

109. See Maloney & Ausness, The Use and Legal Significance of the Mean High Water Line in Coastal Boundary Mapping, 53 N.C.L. Rev. 185 (1974).
110. Tahoe Regional Planning Agency, Ord. No. 76-3, § 3.00 (1976).
111. Crooks, The Washington Shoreline Management Act of 1971, 49 Wash. L. Rev. 423, 432, n. 52 (1974).
112. E.g., a 5-acre minimum was upheld in County Commissioners of Queen Anne's County v. Miles, 246 Md. 355, 228 A.2d 450 (1967).
113. See text at note 47, *supra*.
114. Thurow, Toner and Erley, Performance Controls for Sensitive Lands: A Practical Guide for Local Administrators (1975).
115. *Ibid*.
116. *Id.* at 456.
117. Fla. Ad. Code 22F-3.07 (Supp. No. 38).
118. See text at note 79, *supra*.
119. See Wambat Realty Corp. v. Adirondack Park Agency, 6 Env. Law Rep. 20690, 20692 (N.Y. Sup. Ct. 1976).
120. SB 1277 (enacted Aug. 23, 1976), as amended by A.B. 2948 (enacted Aug. 25, 1976).
121. Leon (Florida) Ordinance No. 72-10, § 7 (concerning erosion, sedimentation and runoff), reported in Thurow, Toner & Erley, Performance Controls for Sensitive Lands: A Practical Guide for Local Administrators, App. A-4 (1975).
122. See the discussion of North Carolina legislation by Glenn, The Coastal Area Management Act in the Courts: A Preliminary Analysis, 53 N.C.L. Rev. 303, 327, 328 (1974).
123. *Id.* at 338, 339. See also J.M. Mills, Inc. v. Murphy, 352 A. 2d 661 (R.I. 1976) and Kusler, Open Space Zoning: A Valid Regulation or an Invalid Taking, 57 Minn. L. Rev. 1, 65-81 (1972).
124. For an optimistic view, see Haigler, McInerny & Rhodes, The Legislature's Role in the Taking Issue, 4 Fla. St. U. L. Rev. 1 (1976).