Comments

BOUNDARIES OF THE COASTAL ZONE: A SURVEY OF STATE LAWS

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Abstract A survey of coastal state legislation reveals several types of statutes affecting activities occurring in coastal regions: coastal management statutes, wetland statutes, and shoreline statutes. Each coastal state has adopted methods to delineate coastal areas or features, whether an entire coastal zone, a limited feature such as wetlands, or shorelands. Boundary delineation is done according to linear measurements, political boundaries, roads and highways, vegetation, elevation, tidal flow, and other factors. An appendix is provided containing state statutory provisions relating to boundary-delineation techniques.

Definitive inquiry into the natural processes, benefits, and characteristics of the coastal zone began in earnest on a national level in 1968, when the coastal zone as an area of special concern was noted in the annual report of the National Council on Marine Resources and Engineering Development.[1] Impetus was added the following year with publication of the report of the Commission on Marine Science, Engineering and Resources entitled *Our Nation and the Sea* ("Stratton Report").[2]

During this same period, a series of studies were conducted under the auspices of the United States Department of the Interior. These studies concerned all aspects of estuarine areas, from biological and physical regimes

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[1] John M. Armstrong (ed.), *Dimensions of Coastal Zone Management* [Ann Arbor, Michigan: Advisory Services Division of the University of Michigan Sea Grant Program] 19 (1972).

[2] United States Commission on Marine Science, Engineering and Resources, *Our Nation and the Sea* [Washington: Government Printing Office], 1-305 (1969) [Hereinafter *Stratton Report*].

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through socioeconomic development, and were compiled into the *National Estuary Study*[3] and the *National Estuarine Pollution Study*.[4]

The Stratton Report and the two studies compiled by the Interior Department stated the principal concerns regarding coastal environments. These concerns and others were combined in the Federal Coastal Zone Management Act (CZMA).[5] This act provides monetary grants to coastal states to assist in the development of coastal zone management programs.[6] However, these Federal grants will not continue unless six mandatory provisions are contained in the state program.[7] This survey is concerned only with the first provision, which requires that the state program include: "an identification of the boundaries of the coastal zone subject to the [state] management program."[8]

The CZMA offers little guidance in defining the coastal zone. Coastal zone is described as:

> "The coastal waters (including the lands therein and thereunder) and the adjacent shore lands (including the waters therein and thereunder), strongly influenced by each other and in proximity to the shorelines of the several coastal states, and includes transitional and intertidal areas, in Great Lakes waters, to the international boundary between the United States and Canada and, in other areas, seaward to the outer limit of the United States territorial sea. The zone extends inland from the shore lines only to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters. Excluded from the coastal zone are lands the use of which is by law subject solely to the direction of or which is held in trust by the federal government, its officers or agents."[9]

The act is open as to precise limits because Congress intended that individual coastal states determine more precisely their own coastal zone boundaries. Federal rules and procedures for qualifying for development grants expressly state:

> "The definition of the coastal zone in the Act recognizes that no single geographic definition will satisfy the management needs of all coastal States, because designation of the coastal zone for management purposes must take into account the diverse natural, institutional, and legal characteristics that

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[3] United States Department of the Interior, *National Estuary Study*, reprinted as H.R. Doc. 374 and 286 [Washington: Government Printing Office] 1970.

[4] United States Department of the Interior, *National Estuarine Pollution Study* [Washington: Government Printing Office] 1970.

[5] Coastal Zone Management Act of 1972, *P.L.* 92-583, 86 *Stat.* 1280, 16 *U.S.C.* 1451 *et seq.*

[6] *Ibid.*, 16 U.S.C. 1456 (Supp. II 1972).

[7] *Id.*, 16 U.S.C. 1455 (Supp. II 1972).

[8] *Id.*

[9] *Id.*, 16 U.S.C. 1454 (Supp. II 1972).

are subject to decisions made in fulfillment of other requirements of the Act and this subpart. . . ."[10]

The purpose herein is to present state approaches which identify the boundaries of, or describe certain features of, the coastal zone. Many states have not yet enacted legislation dealing specifically with the coastal zone as anticipated under the CZMA. Therefore, definitions concerning wetlands and other coastal features are used. These other definitions are found primarily in dredge-and-fill legislation, site-selection laws, and certain zoning provisions.[11]

A close reading of the definition of coastal zone in the CZMA indicates that three aspects of the coastal zone should be identified in any subsequent state legislation seeking management program development grants. First, there must be a seaward limitation of the coastal zone not to exceed the outer limits of the territorial sea. Second, there should be an identification of coastal formations or physical features present in the coastal zone. Third, and perhaps most critically, a state should clearly and precisely establish the inland boundary of its coastal zone. It is principally within this latter context that state legislation defining or affecting the coastal zone is examined in the following sections.[12]

Thirty states, seven United States territories,[13] and the commonwealth of

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[10] Final rules, Coastal Zone Management Program Development Grants, 15 C.F.R., Pt. 960, N.O.A.A., Dept. of Commerce, 38 F.R. 33043 (Nov. 29, 1973) [Hereinafter *Final Rules*].

[11] This article was designed to present a wide spectrum of boundary delineation techniques used in coastal regions. Many state statutes have been enacted to handle certain aspects of coastal zone use, including criminal jurisdictional provisions, submerged lands legislation, and water pollution laws. It would have been impossible to locate every state statute which directly, or indirectly, might have affected the state's particular coastal area. Therefore, we selected state laws enacted in recent years which cover generic coastal zone management problems. It is believed that the types of statutes researched and the delineation techniques discussed are sufficiently broad to cover the available methods a state might use in defining the boundaries of its coastal zone.

[12] There are many ways to classify the boundary delimitation method employed by coastal states. For instance, one technique would be to use particular characteristics adopted by states (such as elevation, vegetation, or political boundaries) and group them according to similarities. This would take into consideration all types of state statutes which affect the coastal area. Another, the approach used here, is to view the general purpose for which the law was enacted and the boundary delineation technique used for that particular type of statute. The difficulty of classifying boundary delineation techniques stems from the different types of statutes passed by states, each of which affects different types of coastal resources (wetlands, beaches, shorelines). Once all states have a coastal zone bounded under the CZMA, a much more meaningful comparison can be made.

[13] The seven United States territories include the following islands: American Samoa, Guam, Johnston Atoll, Midway Islands, Navassa Island, Virgin Islands, and Wake Island. Two other political entities are also under partial jurisdiction of the United States. These are the Panama Canal Zone, which is a territory under United States jurisdiction and control, and the Trust Territory of the Pacific Islands, which is a United Nations trusteeship administered by the United States.

Puerto Rico border on the oceans or the Great Lakes. Some began legislative protection of their coastal areas even before passage of the CZMA. Today, nearly every coastal state has enacted statutory provisions to plan, regulate, or manage aspects of their coastal environments.

A coastal state matrix (Appendix A) has been prepared identifying types of legislation affecting activities likely to occur in the coastal region. Included in the matrix are selected coastal features which have been defined by various state laws and the method adopted by each state to designate inland and seaward coastal boundaries. Pertinent sections of each state statute which defines or describes the coastal zone appear alphabetically by state in Appendix B.

Seaward Boundaries

With the passage of the Submerged Lands Act[14] in 1953, Congress confirmed, granted, and quitclaimed to each coastal state the land, minerals or other natural resources underlying inland navigable waters, and ocean waters for a certain distance seaward of each state's coastline. Under the terms of that act, the Atlantic and Pacific coastal states were limited to seaward boundaries of 3 geographical miles.[15] Great Lakes states were permitted jurisdiction conterminous with the international boundary between the United States and Canada.[16] States in the Gulf of Mexico region were permitted the opportunity to prove a right to 3 leagues.[17] Only Texas[18] and Florida[19] have been successful in establishing a gulfward boundary at this 3-league mark. However, regardless of the outcome of current Submerged Lands Act litigation relating to seaward boundaries, Congress clearly restricted seaward limits of state coastal zones under the Coastal Zone Management Act to the outer limits of the United States territorial seas.[20]

[14] Submerged Lands Act, 67 *Stat.* 29, 43 *U.S.C.* 1301-1315 (1970).

[15] *Id.*, 43 *U.S.C.* 1302 (1970).

[16] *Id.*

[17] *Id.*

[18] United States v. Louisiana, et al., 363 U.S. 1, 136-140 (1960).

[19] *Id.*, at 147-148.

[20] 16 U.S.C. 1454 (Supp. II 1972). With regard to the territorial sea, the past policy of the United States has been to limit these seas to a breadth of three nautical miles from the baseline as determined under the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone, *done* Apr. 29, 1958, (1964) 2 U.S.T. 1606, T.I.A.S. No. 5639, 516 U.N.T.S. 205 (in force for U.S. Sept. 10, 1964). However, the United States is likely to extend their territorial seas policy to twelve miles as is indicated from the draft articles submitted for consideration at the forthcoming Third United Nations Conference on the Law of the Sea. Article I of that proposal states the following:

> 1. Each State shall have the right, subject to the provisions of Article II, to eastablish the breadth of its territorial sea within limits of no more than 12 nautical miles, measured in accordance with the provisions of the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone.
>
> 2. In instances where the breadth of the territorial sea of a State is less than 12

All coastal states are free to establish their seaward coastal zone boundaries according to any method they choose. However, those states which enacted the more comprehensive coastal zone legislation simply extended the seaward boundary to the limits of their territorial jurisdiction.[21]

Coastal Features and Inland Boundaries

The second and third aspects of the coastal zone include coastal features and inland boundaries and are covered simultaneously. This is necessary because many states use coastal features in describing, as well as delimiting, their coastal zones. Also, a number of states have statutes which relate to wetlands, marshlands, or other types of coastal features, rather than a specific coastal zone. The Stratton Report, the Coastal Zone Management Act, and the recently promulgated rules and procedures for obtaining development grants suggest guidelines for inland delimitation of the coastal zone. In the Stratton Report, it is suggested that the minimum inland boundary could be the landward extent of the tidal waters along the coast.[22] The final rules and procedures for obtaining grants, promulgated by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, offer several factors which should be considered by the state when establishing inland coastal zone boundaries.[23] These suggestions are not specific and ultimately leave inland boundaries to the determination of individual states.

For purposes of this discussion, state legislation has been divided into three subsections: coastal management statutes, wetlands statutes, and shorelands statutes. Coastal management statutes are found in ten states which define a coastal zone or coastal area. Most of these states have enacted legislation specifically designed to comply with CZMA grant provisions.

Wetlands statutes are found in states which have legislation relating to coastal wetlands or marshlands, without specifically seeking to develop comprehensive coastal management programs.

Shorelands statutes include primarily legislation in Great Lakes states which

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nautical miles, such State may establish a fisheries zone contiguous to its territorial sea provided, however, that the total breadth of the territorial sea and fisheries zone shall not exceed 12 nautical miles. Such State may exercise within such a zone the same rights in respect to fisheries as it has in its territorial sea. *Draft Articles on the Breadth of the Territorial Sea, Straits, and Fisheries Submitted to Sub-Committee II by the United States of America*, U.N. Doc A/AC. 138/SC. II/L.4 (1971). *From* Knight, *The 1971 United States Proposals on the Breadth of the Territorial Sea and Passage Through International Straits*, 51 *Ore. L. Rev.* 729, 760 *at* fn. 6.

[21] Ala. Act 1274-1973; Calif., 3 *Pub. Res. Code* 27000 *et seq.* (Deering 1973); Del., 7 *Del. C.A.* 7001 *et seq.* (1972); Fla., *Fla. Stat. Ann.* 370.0211 *et seq.* (1960); La., *La. Rev. Stat. Ann.* 51:1361.; Ore., Act 608-1971; R.I., *R.I. Gen. Laws. Ann.* §2-1-13 to 2-1-17 (1965); Tex., *Vernon's Ann. Civ. Stat.* art. 5415e-1 *et seq.* (Suppl. 3, 1973).

[22] *Stratton Report*, p. 51.

[23] *Final Rules*, 15 *C.F.R.* 960.11.

regulates certain aspects of their lands bordering on the Great Lakes. None of these have enacted coastal zone management legislation. Washington and Hawaii, although included in the final two subsections, have legislation which is not easily categorized. New Jersey, Maine, and Rhode Island also are discussed under two subsections because they have more than one statute which designates a specific coastal area for regulation.

Coastal Management Statutes

Eight of the ten state statutes presented in this subsection have been enacted to accommodate the federal act. They refer to the coastal zone variously as "coastal zone," "coastal wetlands," or "coastal area." Several approaches, or combinations of approaches, have been used to designate inland boundaries of these coastal regions.

Louisiana[24] and Florida[25] use the extent of maritime or marine influences as the landward boundary in their planning statutes. Both identify certain coastal formations, such as bays, estuaries, and lagoons, to illustrate what are considered minimal "influences." The planning commissions for both states said there was some difficulty involved in delimiting an area which was so vaguely defined.[26]

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[24] *La. Rev. Stat. Ann.* 51:1361.

[25] *Fla. Stat. Ann.* §370.0211.

[26] Louisiana created a two-year Advisory Commission on Coastal and Marine Resources (LACCMR) to prepare recommendations for a comprehensive coastal management plan. These recommendations were completed in September, 1973, and are embodied in the report entitled *Louisiana Wetlands Prospectus.*

During the Commission's first meetings, the impracticality of settling and defining simply "marine influences" became readily apparent. LACCMR originally considered as the inland boundary U.S. 190, an east-west highway that nicely divided the entire coastal region of Louisiana from the rest of the state. However, it was discovered that some of these areas were not coastal. Also, by dividing parishes in such a manner there became evident the likelihood of jurisdictional and enforcement problems. LACCMR also recognized that many activities arising distinctly beyond the coastal zone in other areas of the state could have a direct and significant impact on the coastal zone. The Commission finally resolved the problem by recommending a two-fold boundary approach. The coastal zone for planning purposes would consist of twenty-six coastal parishes in which one or more of several coastal features or influences could be traced. These coastal parishes constitute approximately one-half of the total number of parishes in the state. The jurisdiction of any coastal zone management commission (LACCMR suggested creating a single Coastal Resources Commission) was recommended to be statewide for all uses of lands and waters outside the coastal zone which might measureably alter or adversely affect the coastal zone.

Florida's Coastal Coordinating Council, directed by Mr. Bruce Johnson, found that such an area defies delineation. This Council was assigned the arduous task of delimiting maritime influences along Florida's hundreds of miles of Atlantic and Gulf coasts. After discarding use of salt-water flow, the Council found that such physical terms as drainage basins, flood zones, ancient shorelines, salt-water–fresh-water interface, or any other strictly physical consideration did not include compatible socioeconomic data. Stating that such data was an absolute necessity, "it was decided to use physical characteristics in combination with

Alabama[27] copies much of its definition from the CZMA and the Mississippi wetlands law,[28] neither of which is any more precise than the laws of Florida and Louisiana. The Alabama coastal area inland boundary is denoted as "inland from the shorelines . . . to the extent necessary to control shorelands. . .".[29] It is probable that Alabama, whose act became effective on February 21, 1974,[30] will experience the same difficulty in determining the inland boundary for management purposes met by Louisiana and Florida.

The new Wetlands Law[31] of Mississippi describes that state's coastal wetlands as all publicly owned lands subject to the ebb and flow of the tide and situated below ordinary high tide. Also included as coastal wetlands are all publicly owned accretions above the high water mark. A lengthy section in the act provides exemptions for a large number of coastal interests, including coastal wetlands within 5 feet of private property.[32] However, all persons exempt from the regulatory provisions are required to follow the policies set forth in the Wetlands Law and to advise the appropriate State agency[33] of the proposed activity. Similarly, Alabama provides a number of exemptions from its new law.[34]

Texas passed a Coastal Public Lands Management Act[35] which defines its coastal area as comprising all counties having any tidewater shoreline, including the bed and waters of the Gulf of Mexico within Texas jurisdiction.[36]

The Coastal Zone Act[37] of Oregon uses coastal counties to designate the coastal zone, which is divided into four districts.[38] Oregon and California[39]

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boundaries of selected Census Enumeration Districts." Defined in this way, Florida's coastal zone has an inland boundary varying from two to twenty-five miles from the coastline, with the seaward boundary being the limit of Florida's territorial sea.

B. Johnson, "The Role of State Government in Coastal Management Mapping—Florida, A Case History," in *Proceedings of a Symposium on Coastal Mapping*, American Society of Photogrammetry, Potomac Division (Falls Church, Virginia: American Society of Photogrammetry, 1972), pp. 40-41.

[27] Coastal Area Act, Ala. Act 1274 of 1973.

[28] *Miss. Code Ann.* §49-27-1 *et seq.*

[29] Coastal Area Act, §3, Ala. Act 1274 of 1973.

[30] *Id.*, §11.

[31] *Miss. Code Ann.* § 49-27-5.

[32] *Id.*, §49-27-7.

[33] *Id.*

[34] Coastal Area Act, §4, Ala. Act 1274 of 1973.

[35] Tex., *Vernon's Ann. Civ. Stat.* art. 5415e-1 *et seq.* (Supp. 3, 1973).

[36] *Id.*, art. 5415e-4.

[37] Coastal Zone Act, Ore. Act 608 of 1971.

[38] *Id.*, §4.

[39] Calif., 3 *Publ. Res. Code* 27000 *et seq.* (Deering 1973).

both define the eastern or landward boundaries of their coastal zones as the crest or highest elevation of the coastal mountain range. Both definitions have exceptions which designate a slightly different eastern boundary in three areas,[40] but none affect the substantive application of the two laws. California has also included a special interim permit area[41] which differs from its coastal zone. The California permit area is that portion of the coastal zone lying between the seaward limit of state jurisdiction and 1,000 yards landward from the line of mean high tide.[42] Although there are certain exclusions, the law specifically includes in the permit area tidal and submerged lands, beaches, and lots immediately adjacent to the inland extent of any beach, or of the mean high tide line where there is no beach.[43]

Delaware's Coastal Zone Act[44] and New Jersey's Coastal Area Facility Review Act[45] use a landward boundary described along a highway and roads system. Rhode Island, which was the first state to make application for federal funds under CZMA,[46] passed a Coastal Management Act in 1971.[47] This act created an agency with planning and management powers over development or operations within, above, or beneath tidal water below the mean high water mark, extending over land to areas necessary to conduct effective resources management programs.[48] New Jersey and Rhode Island have additional legislation pertaining to their wetlands, which are discussed below.

Wetlands Statutes

Many coastal states, which have not yet enacted coastal zone management statutes, do have legislation pertaining to dredge-and-fill and other activities that might occur in, or endanger, coastal wetlands and similar coastal features. Practically all of these use vegetation as one factor in delimiting the landward boundaries of their wetlands or marshlands.

One of the most comprehensive definitions of wetlands is that contained in the Tidal Wetlands Act[49] of Connecticut. This definition[50] lists sixty-one species of vegetation, including their popular and scientific names. Connecticut

[40] Coastal Zone Act, §4, Ore. Act 608-1971; Calif., 3 *Pub. Res. Code* 27000 (Deering 1973).

[41] Calif., 3 *Pub. Res. Code* 27104 (Deering 1973).

[42] *Id.*

[43] *Id.*

[44] 7 *Del. Code Ann.* 7001 *et seq.* (1972).

[45] Coastal Area Facility Review Act, N.J. Act 1429 of 1973.

[46] 5 *Coastal Zone Management* 7, February 13, 1974, at 1.

[47] *R.I. Gen. Laws. Ann.* §46-23-1 *et seq.* (Supp. 1972).

[48] *Id.*, §46-23-6B.

[49] *Conn. Gen. Stat. Ann.* §22a-28 *et seq.* (1972).

[50] *Id.*, §22a-29.

also limits areas which might otherwise qualify as wetlands to those areas whose surface is at or below an elevation of 1 foot above local extreme high water.[51]

Several other states use a similar vegetation-elevation method to define their wetlands, although most do not use the sixty-one flora species and 1-foot elevation of Connecticut. These states, with the number of plant species and elevation stated in parentheses, are: Georgia (three species, 5.6 feet above mean tide level),[52] New Hampshire (seventeen species, 3.5 feet above local mean high tide),[53] New Jersey (sixteen species, 1 foot above local extreme high water),[54] and Virginia (three species, 1.5 times the mean tide range at the site in question measured from mean low tide).[55]

North Carolina identifies its marshlands[56] on the basis of ten vegetation species, while New York identifies its tidal wetlands[57] on the basis of physical features; banks, bogs, salt marsh, swamps, meadows, flats, or lowlands subject to tidal action, in addition to ten vegetation species.

Three states use a linear approach in determining the inland extent of their coastal region. Rhode Island[58] limits its coastal wetlands to contiguous upland areas no more than 50 yards inland from coastal wetlands. Species of vegetation are used to determine which lands are considered coastal wetlands. Rhode Island legislation also defines an intertidal salt marsh as, prima facie, an area supporting one or more of nine named varieties of saline vegetation.[59]

Another state using a linear approach is Washington.[60] Washington considers as wetlands all lands within 200 feet in all directions from the ordinary high water mark. Several physical features (marshes, bogs, swamps, floodways, river deltas, and flood plains) which might be located at greater distances from ordinary high water are also defined as wetlands.[61]

Hawaii[62] also uses linear measurements to delimit boundaries in its coastal zone, both inland and seaward.[63] The approaches used by Hawaii and Washington are treated more thoroughly in the shorelands subsection below.

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[51] *Id.*

[52] *Ga. Code Ann.* §45-136 *et seq.* (1957).

[53] *N.H. Rev. Stat. Ann.* §483-A:1-a *et seq.* (Supp. 1972).

[54] Coastal Area Facility Review Act, N.J. Act 1429 of 1973.

[55] *Va. Code Ann.* §62.1-13.1 *et seq.* (Supp. 1970).

[56] *N.C. Gen. Stat.* §113-229 (1966) is incorporated by reference into the Wetlands Protection Act, *N.C. Gen. Stat.* §113-230 (1966).

[57] *N.Y. Env. Conserv. Law* §25-0101 *et seq.* (McKinney 1973).

[58] *R.I. Gen. Laws. Ann.* §2-1-13 to 2-1-17 (1965).

[59] *Id.*, §2-1-14.

[60] *Wash. Rev. Code Ann.* §90.58.010 *et seq.* (Supp. 1971).

[61] *Id.*

[62] *Hawaii Rev. Stat.* §205 *et seq.* (1950) *as amended by* Act 107 of 1973.

[63] *Id.*, §205-31 and 33.

Massachusetts,[64] Maryland,[65] and Maine[66] use other criteria to define the extent of their wetlands. Massachusetts uses physical coastal features as well as tidal flow to describe its coastal wetlands.[67] Maine and Maryland use only tidal action or tidal flow to describe their wetlands.[68] No physical features are used in either of the last two state statutes.

However, Maryland's Wetland Act[69] treats state wetlands differently from private wetlands.[70] The two types of wetlands differ primarily in ownership, with the added requirement that private wetlands must be able to support some form of aquatic growth.[71]

Shorelands Statues

Only Michigan, Minnesota, and Wisconsin of the eight states which border on the Great Lakes have implemented legislation designed to protect their shorelands, whether lake, pond, flowage, river, or stream, from overdevelopment or other significant activity. All three employ a shorelands definition that includes all lands within a stated distance inland from the shore of a water body.

Shorelands as defined by the Michigan Shorelands Protection and Management Act[72] include lands within 1,000 feet of the high water mark of a Great Lake or connecting waterway. However, several definitions[73] in that act must be read together to understand clearly the area intended for coverage.

Minnesota[74] and Wisconsin[75] use practically identical language in defining their respective shorelands. Both define their shorelands as land located within 1,000 feet of the normal high water mark of a lake, pond, or flowage, and land within 300 feet of a river or stream. Wisconsin's Shoreland Protection Act[76] adds the provision that if "the navigable water is a glacial pothole lake, the distance shall be measured from the high water mark thereof."[77]

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[64] *Mass. Ann. Laws* ch. 130, §105 (1972).

[65] *Md. Ann. Code* art. 66C, §718 *et seq.* (1970).

[66] *Me. Rev. Stat. Ann.* tit. 12, §4701 *et seq.* (1964).

[67] *Mass. Ann. Laws* ch. 130, §105 (1972).

[68] *Me. Rev. Stat. Ann.* tit. 12, §4701 (1964); *Md. Ann. Code* art. 66C, §719 (1970).

[69] *Md. Ann. Code* art. 66C §718 *et seq.* (1970).

[70] *Id.*, §719.

[71] *Id.*

[72] *Mich. Comp. Laws. Ann.* §281.631 (1970).

[73] *Id.*

[74] *Minn. Stat. Ann.* §105.485 (Supp. 4, 1973) *amending Minn. Stat. Ann.* §105.485 (1971).

[75] *Wis. Stat. Ann.* §59.971 *et seq.* (Supp. 1973).

[76] *Id.*

[77] *Id.*, §59.971.

Maine, as discussed above, also authorizes municipalities to zone land areas within a specified distance of a body of water. In Maine's case, this includes shoreland areas within 250 feet of the normal high water mark of any pond, river, or salt-water body.[78]

Washington and Hawaii, as noted above, are also unique in their manner of controlling coastal activities affecting shorelines. Washington manages its shorelines through the 1971 Shoreline Management Act.[79] A lengthy definition is provided in that statute, but basically shorelines means all water areas of the state, their associated wetlands, and the lands underlying them. Excepted from coverage are shorelines of state-wide significance, shorelines on stream segments upstream of a point where mean average flow is less than 20 feet per second, and shorelines and wetlands associated with lakes of less than 20 acres.[80]

The protected shoreline area in Hawaii includes all land area between the shoreline and the shoreline setback line.[81] Shoreline is defined as the upper reaches of the normal wash of waves or the upper line of debris left by the normal wash of waves. The setback line, to be established by the appropriate state or county agency, is to run from 20 to 40 feet inland from, and parallel to, the shoreline at a horizontal plane.

One provision in the Hawaii act prohibits certain activities within the setback area and the coastal waters immediately adjacent thereto.[82] More specifically, the new Act disallows removal of any beach materials within 1,000 feet seaward of the setback area or in ocean water 30 or less feet in depth. The act seems to define an area possessing inland and seaward boundaries, both of which are defined generally according to linear distances. One new element introduced by the Hawaiian legislation is the use of a certain water depth (30 feet or less) to designate parts of the seaward boundary limitation.[83]

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This article has described boundary delineation techniques used by coastal and Great Lakes states, territories, and possessions to define protected areas within the coastal and shoreland regions. As states continue the refinement or development of coastal or shoreland management programs, previous efforts at boundary delineation may be useful in future efforts at defining the coastal zone.

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[78] *Me. Rev. Stat. Ann.* tit. 12, §4811 (Supp. 4, 1973).

[79] *Wash. Rev. Code Ann.* §90.58.010 *et seq.* (Supp. 1971).

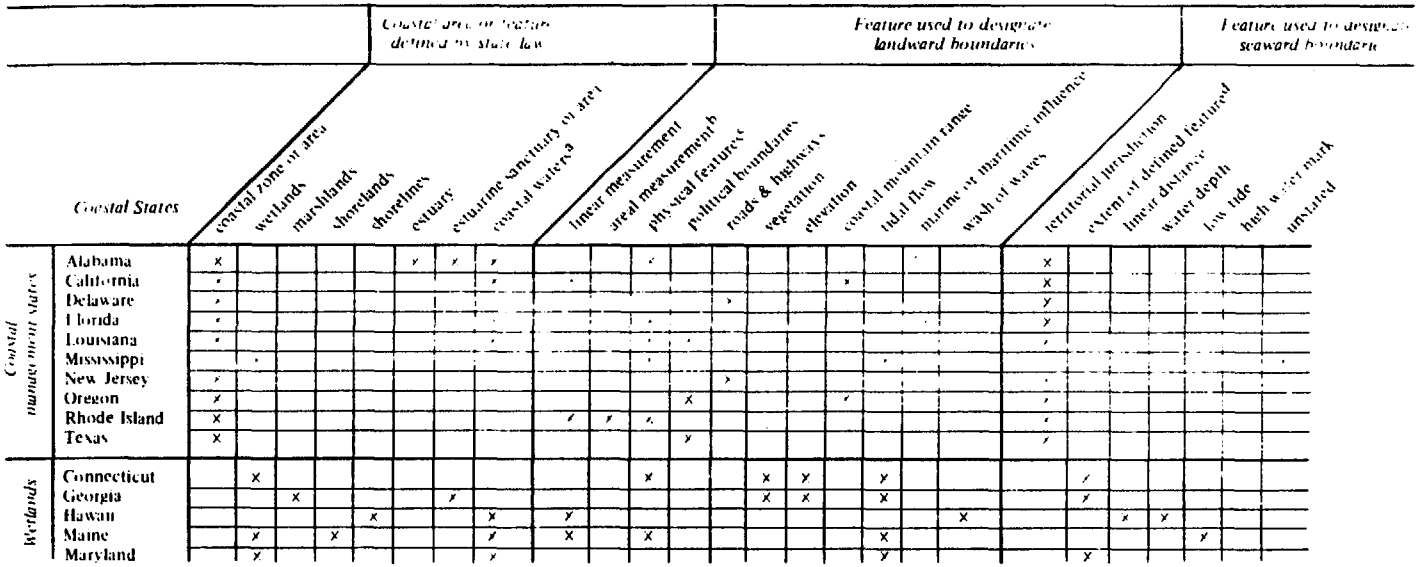
[80] *Id.*, §90.58.030.

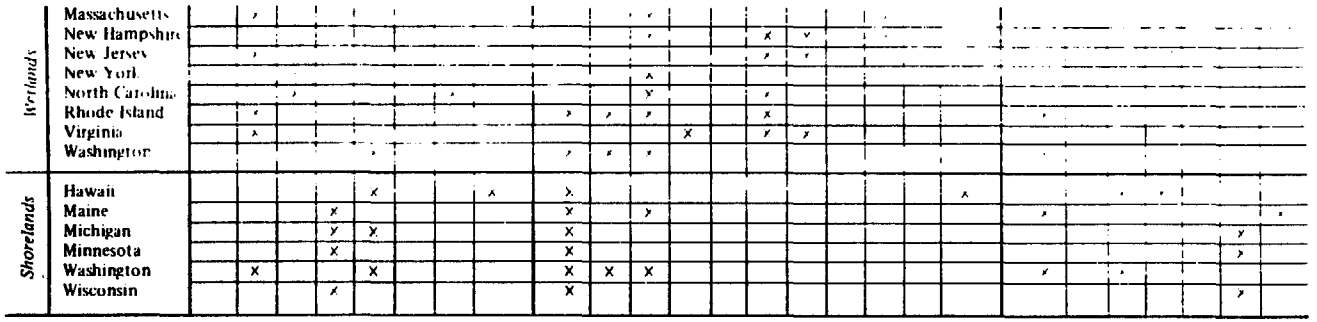
[81] *Hawaii Rev. Stat.* §205-31 (1950) *as amended by* Ha. Act 107 of 1973.

[82] *Id.*, §205-33.

[83] *Id.*

Appendix A
State Statutory Provisions for Boundary-delineation Techniques





[a]Coastal waters includes one or more of the following terms: coastal and tidal waters, sea, ocean, tidal flow or tidal influences, high and low tides, wave action, marine environment, waters and marine or maritime influences.

[b]This refers to statutes prescribing a minimum area (e.g., ponds of ten acres or more) before the feature is to be included within the application of the law.

[c]Physical Features include one or more of the following: marshes, bogs, swamps, floodways, river deltas, flood plains, streams, lakes, tidal waters, rivers, bays, sounds, lagoons, estuaries, inlets, ocean or coastal waters, flood basins, flats, meadows, shrub swamps, wooded swamps, salt marsh, lowlands, flowage, glacial pot-hole lake, bank, salt water, beach, island, soil types, and measurable quantity of sea water.

[d]This term often includes lands under or adjacent to tidal or tidally influenced waters.

APPENDIX B
State Legislation

ALABAMA

Coastal Area Act, Act 1274-73.

§3. Definitions.

a. "Coastal area" means the coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder) strongly influenced by each and in proximity to the shorelines of Alabama, and includes transitional and intertidal areas, salt marshes, wetlands, and beaches. The area extends seaward to the outer limit of the United States territorial sea and extends inland from the shorelines only to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters.

b. "Coastal waters" means those waters, adjacent to the shoreline, which contain a measurable quantity or percentage of sea water, including but not limited to, sounds, bays, lagoons, bayous, ponds and estuaries.

CALIFORNIA

Coastal Zone Conservation Act of 1972, 3 *Pub. Res. Code* 27000 *et seq.* (*Deering* 1973).

§27100. Coastal zone.

"Coastal zone" means that land and water area of the State of California from the border of the State of Oregon to the border of the Republic of Mexico, extending seaward to the outer limit of the state jurisdiction, including all islands within the jurisdiction of the state, and extending inland to the highest elevation of the nearest coastal mountain range, except that in Los Angeles, Orange, and San Diego Counties, the inland boundary of the coastal zone shall be the highest elevation of the nearest coastal mountain range or five miles from the mean high tide line, whichever is the shorter distance.

§27104. Permit area.

"Permit area" means that portion of the coastal zone lying between the seaward limit of the jurisdiction of the state and 1,000 yards landward from the mean high tide line of the sea subject to the following provisions:

(a) The area of jurisdiction of the San Francisco Bay Conservation and Development Commission is excluded.

(b) If any portion of any body of water which is not subject to tidal action lies within the permit area, the body of water together with a strip of land 1,000 feet wide surrounding it shall be included.

(c) Any urban land area which is (1) a residential area zoned, stabilized and developed to a density of four or more dwelling units per acre on or before January 1, 1972; or (2) a commercial or industrial area zoned, developed, and stabilized for such use on or before January 1, 1972, may, after public hearing, be excluded by the regional commission at the request of a city or county within which such area is located. An urban land area is "stabilized" if 80 per cent of the lots are built upon to the maximum density or

intensity of use permitted by the applicable zoning regulations existing on January 1, 1972.

Tidal and submerged lands, beaches, and lots immediately adjacent to the inland extent of any beach or of the mean high tide line where there is no beach shall not be excluded.

Orders granting such exclusion shall be subject to conditions which shall assure that no significant change in density, height, or nature of uses occurs.

An order granting exclusion may be revoked at any time by the regional commission, after public hearing.

(d) Each regional commission shall adopt a map delineating the precise boundaries of the permit area within 60 days after its first meeting and file a copy of such map in the office of the county clerk of each county within its region.

CONNECTICUT

Preservation of Tidal Wetlands, *Conn. G.S.A.* §§ 22a-28 *et seq.* (1972).

§ 22a-29 Definitions.

(2) "Wetland" means those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats, or other low lands subject to tidal action including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water, and upon which may grow or be capable of growing some, but not necessarily all, of the following: Salt meadow grass (Spartina patens), spike grass (Distichlis spicata), black grass (Juncus gerardi), saltmarsh grass (Spartina alterniflora), saltworts (Salicornia Europaea, and Salicornia bigelovii), Sea Lavendar (Limonium carolinianum), saltmarsh bulrushes (Scirpus robustus and Scirpus paludosus var. atlanticus), sand spurrey (Spergularia marina), switch grass (Panicum virgatum), tall cordgrass (Spartina pectinata), hightide bush (Iva frutescens var. oraria), cattails (Typha angustifolia, and Typha latifolia), spike rush (Eleocharis rostellata), chairmaker's rush (Scirpus americana), bent grass (Agrostis palustris), and sweet grass (Hierochloe odorata), royal fern (Osmunda cinnamomea), sensitive fern (Onoclea sensibilis), marsh fern (Dryopteris thelypteris), bur-reed family (Sparaganium curvcarpum, Sparganium and androcladum, Sparganium americanum, Sparganium chlorocarpum, Sparganium angustifolium, Sparganium fluctuans, Sparganium minimum), horned pondweed (Zannichelia palustris), water-plantain (Alisma triviale), arrowhead (Sagittaria subulata, Sagittaria graminea, Sagittaria eatoni Sagittaria engelmannianta), wild rice (Zizania aguatica), tuckahoe (Peltandra virginica), water-arum (Calla palustris), skunk cabbage (Symplocarpus foetidus), sweet flat (Acorus calamus), pickerelweed (Pontederia cordata), water star-grass (Heteranthera dubia), soft rush (Juncus effusus), false hellebom (Veratrum viride), slender blue flag (Iris prismatica pursh), blue flag (Iris versicolor), yellow iris (Iris pseudacorus), lizard's tail (Saururus cernuus), speckled alder (Alnus rugosa), common alder (Alnus serrulata), arrow-leaved tearthumb (Polygonum sagittatum), halberd-leaved tearthumb (Polygonum arifolium), spatter-dock (Nuphar variegatum, Nuphar advena), marsh marigold (caltha palustris), swamp rose (Rosa palustris), poison ivy (Rhus radicans), poison sumac (Rhus vernix), red maple (Acer rubrum), jewelweed (Impatiens capensis), marsh mallow (Hibiscus palustris), loosestrife (Lythrum alatum, Lythrum salicaria) red osier (Cornus stonolonifera), red willow (Cornus amomum), silky dogwood (Cornus obliqua), sweet pepper-bush (Clethra alnifolia), swamp honeysuckle (Rhododendron viscosum) highbush blueberry (Vaccinium corymbosum), cranberry (Vaccinium macrocarpon) sea lavender (Limonium nashii), climbing hemp-weed (Mikania scandens) joe pye weed (Eupatorium purpureum), joe pye weed (Eupatorium maculatum) thoroughwort (Eupatorium perfoliatum);

DELAWARE

Coastal Zone Act, 7 *Del. C.A.* 7001 *et seq.* (1972).

§7002. Definitions.

(a) "The coastal zone" is defined as all that area of the State, whether land, water or subaqueous land between the territorial limits of Delaware in the Delaware river, Delaware bay and Atlantic ocean, and a line formed by certain Delaware highways and roads as follows:

Beginning at the Delaware-Pennsylvania line at a place where said line intersects U.S. Route 13; thence southward along the said U.S. Route 13 until it intersects the right-of-way of U.S. Route I-495; thence along said I-495 right-of-way until the said I-495 right-of-way intersects Delaware Route 9 south of Wilmington; thence along said Delaware Route 9 to the point of its intersection with Delaware Route 273; thence along said Delaware Route 273 to U.S. 13; thence along U.S. 13 to Maintenance Road 409; thence along Maintenance Road 409 to Delaware Road 71; thence along Delaware Road 71 to its intersection with Delaware Road 54; thence along Delaware Road 54 to Delaware Road 896; thence along Delaware Road 896 to Maintenance Road 396; thence along Maintenance Road 396 to Maintenance Road 398; thence along Maintenance Road 398 to the Maryland state line; thence southward along the Maryland state line to Maintenance Road 433; thence along Maintenance Road 433 to Maintenance Road 63; thence along Maintenance Road 63 to Maintenance Road 412; thence along Maintenance Road 412 to U.S. 13; thence along U.S. 13 to Delaware 299 at Odessa; thence along Delaware Route 299 to its intersection with Delaware Route 9; thence along Delaware Route 9 to U.S. 113; thence along U.S. Route 113 to Maintenance Road 8A; thence along Maintenance Road SA to Maintenance Road 7 to the point of its intersection with Delaware Route 14; thence along Delaware Route 14 to Delaware Route 24; thence along Delaware Route 24 to Maintenance Road 331; thence along Maintenance Road 331 to Maintenance Road 334; thence along Maintenance Road 334 to Delaware Route 26; thence along Delaware Road 26 to Maintenance Road 365; thence along Maintenance Road 365 to Maintenance Road 84; thence along Maintenance Road 382A; thence along Maintenance Road 382A to Maintenance Road 389; thence along Maintenance Road 389 to Maintenance Road 58; thence along Maintenance Road 58 to Maintenance Road 395; thence along Maintenance Road 395 to the Maryland state line.

FLORIDA

Coastal Zone Management Act, *Fla. Stat. Ann.* 370.0211 *et seq.* (1960).

§370.0211(2)

(b) "Coastal zone" means that area of land and water from the territorial limits seaward to the most inland extent of maritime influences.

GEORGIA

Coastal Marshlands Protection Act of 1970, *Ga. C. Ann.* §45-136 *et seq.* (1957).

§45-137. Definitions.

(a) "Coastal marshlands" hereinafter referred to as "marshlands" means any marshland or salt marsh in the State of Georgia, within the estuarine area of the State, whether or not the tide waters reach the littoral areas through natural or artificial water courses. Marshlands shall include those areas upon which grow one, but not necessarily all of the

following: saltmarsh grass (Spartina alterniflora), black grass (Juncus gerardi), high-tide bush (Iva frutescens var. oraria). The occurrence and extent of salt marsh peat at the undisturbed surface shall be deemed to be conclusive evidence of the extent of a salt marsh or a part thereof.

(b) "Estuarine area" means all tidally-influenced waters, marshes and marshlands lying within a tide-elevation range from five and six tenths feet above mean tide level and below

HAWAII

Shoreline Setback Area Act, *Hawaii Rev. Stat.* §205 *et seq.* (1950), as amended by Act 107-73.

§205-31 Definitions.

(2) "Shoreline" means the upper reaches of the wash of waves, other than storm and tidal waves, usually evidenced by the edge of vegetation growth, or the upper line of debris left by the wash of waves.

(3) "Shoreline setback area" means all of the land area between the shoreline and the shoreline setback line.

(4) "Shoreline setback area" means all the land area seaward of the shoreline setback line.

(5) "Shoreline setback line" means that line established by the State land use commission or the county running inland from and parallel to the shoreline at a horizontal plane."

§205-33 Prohibitions.

(a) It shall be unlawful to remove sand, coral, rocks, soil, or other beach compositions for any purpose, except for reasonable domestic, non-commercial use, within the shoreline setback area or within 1,000 feet seaward of it or in ocean water of 30 or less feet in depth, except that any sand mining operation which has been legally in operation for a period of at least two years immediately prior to June 22, 1970, may be continued for a period not to extend beyond July 1, 1975. However, if during the period prior to July 1, 1975, the sand mining operation is substantially increased, it shall be unlawful to further continue such mining operation. This prohibition shall not apply to the commercial mining of sand or other minerals, or taking of coral or rock in the territorial ocean when such mining or taking is located 1,000 or more feet from the shoreline or in ocean water of 30 or more feet in depth and has the written permission of all governmental agencies having jurisdiction thereof.

LOUISIANA

Louisiana Coast and Marine Resources Conservation and Development Act, *La. Rev. Stat.* §51:1361 *et seq.* (1965).

§1361. Definitions.

B. The term "coastal zone" shall mean the lands, waters, tidal and submerged lands, bays, estuaries, marshes, coastal and intertidal areas, harbors, lagoons, inshore waters, and channels landward of the outer limit of the territorial sea of the United States or of

the state of Louisiana, or of other waters subject to the jurisdiction of Louisiana where other waters subject to the jurisdiction of Louisiana where greater than the territorial sea of the United States, and extending inland to the landward extent of marine influences.

C. The term "landward extent of marine influences" means the area extending landward from the high water mark which in contemplation of human activities and natural ecology may be considered to come under the influence of the adjacent sea.

MAINE

Wetlands Act, *Me. Rev. Stat. Ann.* tit. 12, §4701 *et seq.* (1974).

§4701.

. . . For purposes of this chapter, coastal wetland is defined as any swamp, marsh, bog, beach, flat or other contiguous lowland above extreme low water which is subject to tidal action or normal storm flowage at any time excepting periods of maximum storm activity.

Shorelands Management Act, *Me. Rev. Stat. Ann.* tit. 12 §4811 (Supp. 4, 1973).

§4811. Shoreland areas.

To aid in the fulfillment of the state's role as trustee of its waters and to promote public health, safety and the general welfare, it is declared to be in the public interest that shoreland areas defined as land within 250 feet of the normal high water mark of any pond, river or salt water body be subjected to zoning and subdivision controls. The purposes of such controls shall be to further the maintenance of safe and healthful conditions; prevent and control water pollution; protect spawning grounds, fish, aquatic life, bird and other wildlife habitat; control building sites, placement of structures and land uses; and conserve shore cover, visual as well as actual points of access to inland and coastal waters and natural beauty.

MARYLAND

Wetlands Act, *Md. Ann. Code* art. 66c, §718 *et seq.* (1970).

§719. Definitions.

(a) "State wetlands" means all land under the navigable waters of the State below the mean high tide, which is affected by the regular rise and fall of the tide. Such wetlands, which have been transferred by the State by valid grant, lease or patent or a grant confirmed by Article 5 of the Declaration of Rights of the Constitution of Maryland, shall be considered "private wetland" to the extent of the interest so transferred.

(b) "Private wetlands" means all lands not considered "State wetlands" bordering on or lying beneath tidal waters, which are subject to regular or periodic tidal action and which support aquatic growth. These include wetlands, which have been transferred by the State by a valid grant, lease or patent or a grant confirmed by Article 5 of the Declaration of Rights of the Constitution of Maryland, to the extent of the interest so transferred.

MASSACHUSETTS

Protection of Coastal Wetlands, *Mass. Ann. Laws* ch. 130, §105 (1972).

§105.
In this section the term "coastal wetlands" shall mean any bank, marsh, swamp, meadow, flat or other low land subject to tidal action or coastal storm flowage and such contiguous land as the commissioner reasonably deems necessary to effect by any such order in carrying out the purposes of this section.

MICHIGAN

Shorelands Protection and Management Act of 1970, *Compil. L. Ann.* §281.631 (1970).

Definitions.

(b) "Connecting waterway" means the St. Marys river, Detroit river, St. Clair river, Keeweenaw waterway or Lake St. Clair.

(f) "Land to be zoned" means the land in this state which borders or is adjacent to a Great Lake or a connecting waterway situated within 1,000 feet landward from the ordinary high water mark as defined in section 2 of Act No. 247 of the Public Acts of 1955, as amended, being section 322.702 of the Compiled Laws of 1948.

(h) "Shoreland" means the land, water and land beneath the water which is in close proximity to the shoreline of a Great Lake or a connecting waterway.

(i) "Shoreline" means that area of the shorelands where land and water meet.

MINNESOTA

Shorelands Protection Act, *Minn. Stat. Ann.* §105.485 (Supp. 4, 1973) *amending Minn. Stat. Ann.* §105.485 (1971).

subd. 2. Definitions.
(a) "Shoreland" means land located within the following distances from the ordinary high water elevation of public waters:

(1) Land within 1,000 feet from the normal high watermark of a lake, pond, or flowage; and

(2) Land within 300 feet of a river or stream or the landward side of flood plain delineated by ordinance on such a river or stream, whichever is greater.

MISSISSIPPI

Wetlands Law, *Miss. Code Ann.* §49-27-1 *et seq.* (1972).

§49-27-5. Definitions.
(a) "Coastal wetlands" means all publicly owned lands subject to the ebb and flow

of the tide and which are below the watermark of ordinary high tide and all publicly owned accretions above the watermark of ordinary high tide.

(b) The term "coastal wetlands" shall be interpreted to include the flora and fauna on the wetlands and in the wetlands.

NEW HAMPSHIRE

Tidal Waters, *N.H. Rev. Stat. Ann.* §483-A:1-a *et seq.* (Supp. 1972).

§483-A:1-a. Definition.

I. Wherever the tide ebbs and flows, it shall apply to all lands submerged or flowed by mean high tide as locally determined, and, in addition, to those areas which border on tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats or other lowlands subject to tidal action (including those areas now or formerly connected to tidal waters), whose surface is at an elevation not exceeding three and one-half feet above local mean high tide and upon which grow or are capable of growing some, but not necessarily all, of the following: Salt meadow grass (Spartina patens), spike grass (Distichlis spicata), black grass (Juncus gerardi), saltmarsh grass also known as cordgrass (Spartina alterniflora), saltworts (Salicornia spp.), sea lavender (Limonium caroliinianum), saltmarsh bulrishes (Scirpus maritimus, var. fernaldii and Scirpus paludosus var. atlanticus), sand spurrey (Spergularia marina and Spergularia canadensis), high-tide bush (Iva frutescens), spike rush (Eleocharis parvula and Eleocharis halophila), chairmaker's rush (Scirpus americana), bent grass (Argostis palustris), coast-blite (Suaeda spp.), orach (Atriplex patula), arrow-grass (Triglochin maritima) and seaside goldenrod (Solidago sempervirens). The occurrence and extent of saltmarsh peat at the undisturbed surface shall be evidence of the extent of jurisdiction hereunder within a saltmarsh.

II. Wherever fresh water flows or stands and in all areas above tidal waters not included in paragraph I of this section, it shall apply (in addition to great ponds or lakes of ten acres or more in natural area as provided for in RSA 482:41-e to 41-i and RSA 488-A), to those portions of great ponds or lakes created by the raising of the water level of the same whether by public or private structure, and to all surface waters of the state as defined in RSA 149:1 which contain fresh water including the portion of any bank or shore which borders such surface waters, and to any swamp or bog subject to periodical flooding by fresh water including the surrounding shore.

III. "Mean high tide" as used in this section shall be determined according to the published tables and standards of the United States Coast and Geodetic Survey, adjusted to the locality from such tables.

NEW JERSEY

Coastal Area Facility Review Act, Act 1429-1973.

§4.

4. The "coastal area" shall consist of all that certain area lying between the line as hereinafter described and the line formed by the State's seaward (Raritan Bay and Atlantic Ocean) territorial jurisdiction on the east thereof, the State's bayward (Delaware Bay) territorial jurisdiction on the south and southwest thereof, and the State's riverward (Delaware River) territorial jurisdiction on the west thereto. Beginning at the confluence of Cheesequake Creek with the Raritan Bay; thence southwesterly along the

center line of Cheesequake Creek to its intersection with the Garden State Parkway; thence southeasterly along the Garden State Parkway to Exit 117 at State Highway 36; thence northesasterly along State Highway 36 to the intersection of Middle Road (County 516); thence easterly along Middle Road to the intersection of Palmer Avenue (County 7); thence northeasterly on Main Street to the intersection of State Highway 36; thence easterly on State Highway 36 to the intersection of Navesink Avenue; thence southerly on Navesink Avenue to the intersection of Monmouth Avenue at Navesink; thence westerly on Monmouth Avenue to its intersection with Browns Dock Road; thence southerly on Browns Dock Road to its intersection with Cooper Road; thence southwesterly on Cooper Road to the intersection of State Highway 35; thence southerly on State Highway 35 to its intersection with State Highway 71; thence southeasterly on State Highway 71 to its crossing of the Central Railroad of New Jersey tracks; thence southerly along the Central Railroad of New Jersey tracks to its intersection of 6th Avenue (County 2); thence westerly on 6th Avenue (County 2) to the intersection of State Highway 33; thence westerly along State Highway 33 to the crossing of State Highway 18; thence southerly on State Highway 18 to its intersection of Marconi Road; thence southeasterly on Marconi Road to Adrienne Road, continuing south on Adrienne Road to Belmar Boulevard; thence easterly on Belmar Boulevard and 16th Avenue to the intersection of State Highway 71; thence southerly on State Highway 71 to the intersection of State Highway 35; thence northwesterly along State Highway 35 to State Highway 34 at the Brielle Circle; thence northwesterly along State Highway 34 to the Garden State Parkway at Exit 96; thence southwesterly along the Garden State Parkway to the intersection of the Monmouth, Ocean County boundary; thence westerly along said boundary to the intersection of the Central Railroad of New Jersey tracks; thence southwesterly along the tracks of the Central Railroad of New Jersey to its junction with the tracks of the Pennsylvania Railroad near Whiting; thence easterly along the tracks of the Pennsylvania Railroad to its intersection with the Garden State Parkway near South Toms River; thence southerly along the Garden State Parkway to its intersection with County Road 539 at Garden State Parkway exit 58; thence northerly along County Road 539 to its intersection with Martha–Stafford Forge Road; thence westerly along Martha–Stafford Forge Road to its intersection with Spur 563;

→ thence northerly along Spur 563 to its intersection with County Road 563; thence southerly along County Road 563 to its intersection with County Road 542 at Green Bank; thence northwesterly along County Road 542 to its intersection with Weekstown–Pleasant Mills road; thence southeasterly along Weekstown–Pleasant Mills Road to its intersection with County Road 563 at Weekstown; thence southeasterly along County Road 563 to its intersection with Clarks Landing Road leading to Port Republic; thence easterly along Clarks Landing Road to its intersection with the Garden State Parkway; thence southerly along the Garden State Parkway to its intersection with Alt. 559, and thence northwesterly along Alt. 559 to its intersection with County Road 559 at Gravelly Run; thence northwesterly along County Road 559 to its intersection with U.S. 40 and S.R. 50 at Mays Landing; thence westerly along combined U.S. 40 and S.R. 50 to its intersection with S.R. 50; thence southerly on S.R. 50 to its intersection with Buck Hill Road near Buck Hill; thence westerly along Buck Hill (River Road) Road to its intersection with S.R. 49; thence southeasterly along S.R. 49 to its intersection with S.R. 50; thence southeasterly along S.R. 50 to its intersection with County Road 585; thence southwesterly along County Road 585 to its intersection with S.R. 47 at Dennisville; thence northwesterly along S.R. 47 to its intersection with State Road 49 at Millville; thence through Millville along State Road 49 to its intersection with County Road 555; thence southerly along County Road 555 to its intersection with County Road 27; thence southerly along County Road 27 to its intersection with County Road 70; thence southerly on County Road 70 to the Center of Mauricetown; thence through Mauricetown; thence through Mauricetown westerly on County Road 548 to its intersection with the tracks of the Central Railroad of New Jersey; thence northwesterly on the

tracks of the Central Railroad of New Jersey to its intersection with County Road 98; thence easterly along County Road 98 to the intersection with County Road 38; thence northerly along County Road 38 to its intersection with S.R. 49 east of Bridgeton; thence westerly along S.R. 49 through Bridgeton to its intersection with County Road 5 (Roadstown Road); thence westerly along County Road 5 (Roadstown Road) to Roadstown; thence northwesterly along the Roadstown Road to County Road 47; thence southwesterly along County Road 47 to its intersection with County Road 19; thence along County Road 19 northwesterly to Gum Tree Corner; thence northwesterly along County Road 19 from Gum Tree Corner across Stowe Creek to its intersection with Salem County Road 59 (Hancock's Bridge Road); thence northwesterly along County Road 59 to its intersection with County Road 51 at Coopers Branch; thence northeasterly along County Road 51 to its intersection with S.R. 49 at Quinton; thence northwesterly along S.R. 49 to its intersection with County Road 50; thence southwesterly along County Road 50 to its intersection with County Road 58; thence southerly on County Road 58 to its intersection with County Road 24; thence westerly along County Road 24 to its intersection with County Road 65; thence northerly along County Road 65 (Walnut Street) to its intersection with County Road 4; thence westerly along County Road 4 and northerly along County Road 4 and thence easterly along County Road 4 to its intersection with State Road 49; thence northerly along State Road 49 (Front Street) to its intersection with County Road 57; thence easterly along County Road 57 to its intersection with State Road 45; thence northerly along State Road 45 to its intersection with County Road 540 at Pointers; thence northerly and northwesterly along Country Road 540 (Deepwater–Slopes Corner Road) to its intersection with the New Jersey → Turnpike; thence westerly along the New Jersey Turnpike to its intersection with County Road 33; thence southerly along County Road 33 to its intersection with State Road 49; thence southeasterly along S.R. 49 to its intersection with County Road 26; thence northwesterly along County Road 26 to the Killcohook National Wildlife Refuge; thence northwesterly along this northeasterly boundary to the limits of the State's territorial jurisdiction on the Delaware River; provided, however, that the coastal area shall not include all that certain area in Cape May County lying within a line beginning at the intersection of S.R. 47 and County Road 54; thence westerly on County Road 54; to the intersection of County Road 3; thence southeasterly on County Road 3 through the intersection of County Road 3 with County Road 13 to the intersection with County Road 47; thence easterly and northerly along County Road 47 to its intersection with State Road 9; thence northerly along State Road 9 to its intersection with State Road 47; thence westerly along State Road 47 to its intersection with County Road 54.

Wetlands Act, *N.J. Rev. Stat.* §13:9A-1 *et seq.* (*Supp.*, 1973).

§13:9A-2. Coastal wetlands defined.

For the purposes of this act the term "coastal wetlands" shall mean any bank, marsh, swamp, meadow, flat or other low land subject to tidal action in the State of New Jersey along the Delaware bay and Delaware river, Raritan bay, Barnegat bay, Sandy Hook Bay, Shrewsbury river including Navesink river, Shark river, and the coastal inland waterways extending southerly from Manasquan Inlet to Cape May Harbor, or at any inlet, estuary or tributary waterway or any thereof, including those areas now or formerly connected to tidal waters whose surface is at or below an elevation of 1 foot above local extreme high water, and upon which may grow or is capable of growing some, but not necessarily all, of the following: Salt meadow grass (Spartine patens), spike grass (Distichlis spicata), black grass (Juncus gerardi), saltmarsh grass (Spartina alterniflora), saltworts (Salicornia Europaea, and Salicornia bigelovii), sea lavender (Limonium carolinianum), var. atlanticus), sand spurrey (Spergularia marina), switch grass (Panicum virgatum), tall cordgrass (Spartina pectinata), hightide bush (Iva frutescens var. oraria), cattails (Typha angusti-

folia, and Typha latifolia), spike rush (Eleocharis rostellata), chairmaker's rush (Scirpus americana), bent grass (Agrostis palustris), and sweet grass (Hierochloe odorata). The term "coastal wetlands" shall not include any land or real property subject to the jurisdiction of the Hackensack Meadowlands Development Commission pursuant to the provisions of P.L.1968, chapter 404, sections 1 through 84 (C.13:17-1 through C.13:17-86).

NEW YORK

Tidal Wetlands Act, *N.Y. Env. Conserv. Law* §25-0101 *et seq.* (McKinney 1973).

§25-0103. Definitions.

1. "Tidal wetlands" shall mean and include the following:

(a) those areas which border on or lie beneath tidal waters, such as, but not limited to, banks, bogs, salt marsh, swamps, meadows, flats or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters;

(b) all banks, bogs, meadows, flats and tidal marsh subject to such tides, and upon which grow or may grow some or any of the following: salt hat (Spartina patcus and Distichlis spicata), black grass (Juncus gerardi), saltworts (Salicornia ssp.), sea lavender (Limonium carolinianum), tall cordgrass (Spartina pectinata and Spartina cynosuroides), hightide bush (Iva frutescens), cattails (Typha angustifolia and Typha latifolia), groundsel (Baccharis halimifolia), marsh mallow (Hybiscus palustris) and the intertidal zone including low marsh cordgrass (Spartina alterniflora).

NORTH CAROLINA

The definitions listed in the North Carolina dredge-and-fill law, *N.C. Gen. Stat.* §113-229 (1966), are incorporated by reference into the Wetlands Protection Act, *N.C. Gen. Stat.* §113-230 (1966).

§113-229(n). Definitions.

(3) "Marshland" means any salt marsh or other marsh subject to regular or occasional flooding by tides, including wind tides (whether or not the tide waters reach the marshland areas through natural or artificial watercourses), provided this shall not include hurricane or tropical storm tides. Salt marshland or other marsh shall be those areas upon which grow some, but not necessarily all, of the following salt marsh and marsh plant species: Smooth or salt water Cordgrass (Spartina alterniflora), Black Needlerush (Juncus roemerianus), Glasswort (Salicornia spp.), Salt Grass (Distichlis spicata), Sea Lavender (Limonium spp.), Bulrush (Scirpus spp.), Saw Grass (Cladium jamaicense), Cat-Tail (Typha spp.), Salt-Meadow Grass (Spartina patens), and Salt Reed-Grass (Spartina cynosuroides).

OREGON

Coastal Zone Act, Act 608-1971.

§4. Definition.

For the purpose of this Act the coastal zone is defined as that area lying between the Washington border on the north to the California border on the south, bounded on the west by the extent of the state's territorial jurisdiction, and on the east by the crest of the coastal mountain range, with the exception of:

(a) The Umpqua River basin, where the coastal zone shall extend to Scottsburg.
(b) The Rogue River basin, where the coastal zone shall extend to Agness.
(c) The Columbia River basin, where the coastal zone shall extend to the downstream end of Puget Island.

RHODE ISLAND

Coastal Wetlands Act, *R.I. Gen. Laws. Ann.* §2-1-13 to 2-1-17 (1965).

2-1-14. Definitions.
A coastal wetland shall mean any salt marsh bordering on the tidal waters of this state, whether or not the tide waters reach the littoral areas through natural or artificial water courses, and such uplands contiguous thereto, but extending no more than fifty (50) yards inland therefrom, as the director shall deem reasonably necessary to protect such salt marshes for the purposes set forth in §2-1-13. Salt marshes shall include those areas upon which grow some, but not necessarily all of the following: Salt meadow grass (Spartina patens), spike grass (Distichlie spicata), black grass (Juncus gerardi), saltmarsh grass (Spartina alterniflora), saltworts (Salicornia europaea, and Salicornia bigelevil), sea lavender (Limonium carolinianum), saltmarsh bulrushes (Scirpus robustus, and Scirpus paludosus var. atlanticus), sand spurrey (Spergularia marina), switch grass (Panicus virgatum), tall cordgrass (Spartina pectinata), high-tide bush (Iva frutescens var. oraria), cattails (Typha angustifolia, and Typha latifolia), spike rush (Eleocharis rostellata), chairmaker's rush (Scirpus americana), bent grass (Argostis palustria), and sweet grass (Hierochlee odorata). The occurrence and extent of saltmarsh peat at the undisturbed surface shall be construed to be true evidence of the extent of a salt marsh or a part thereof.

Intertidal Salt Marsh Act, *R.I. Gen. Laws. Ann.* §11-46-1 (1970).

§11-46-1.
For the purposes of this chapter an intertidal salt marsh shall be prima facie presumed to be those areas upon which grow some, but not necessarily all, of the following: salt marsh grass (Spartina alterniflora), black grass (Juncus gerardi), seaside lavender (Limonium carolinianum), saltwort (Salicornea europaea), salt meadow grass (Spartina patens), spike grass (Distichlis spicata), salt marsh bullrush (Scirpus maritima) and sand spurrey (Spergularia marina), and upon which exists salt marsh peat.

Coastal Management Act of 1971, *R.I. Gen. Laws Ann.* §46-23-1 *et seq.* (Supp. 1972).

§46-23-6B Implementation.
The council is authorized to formulate policies and plans and to adopt regulations necessary to implement its various management programs.
Any person, firm, or governmental agency proposing any development or operation within, above, or beneath the tidal water below the mean high water mark, extending out to the extent of the state's jurisdiction in the territorial sea shall be required to demonstrate that its proposal would not (1) conflict with any resources management plan or program; (2) make any area unsuitable for any uses or activities to which it is allocated by a resources management plan or program; or (3) significantly damage the environment of the coastal region. The council shall be authorized to approve, modify, set conditions for, or reject any such proposal.
The authority of the council over land areas (those areas above the mean high water mark) shall be limited to that necessary to carry out effective resources management programs. This shall be limited to the authority to approve, modify, set conditions for,

or reject the design, location, construction, alteration, and operation of specified activities or land uses when these are related to a water area under the agency's jurisdiction, regardless of their actual location. The council's authority over these land uses and activities shall be limited to situations in which there is a reasonable probability of conflict with a plan or program for resources management or damage to the coastal environment. These uses and activities are:

a) Power generating and desalination plants.
b) Chemical or petroleum processing, transfer, or storage.
c) Minerals extraction.
d) Shoreline protection facilities and physiographical features.
e) Intertidal salt marshes.
f) Sewage treatment and disposal and solid waste disposal facilities.

TEXAS

Coastal Public Lands Management Act of 1973, *Vernon's Ann. Civ. Stat.* art. 5415e-1 *et seq.* (Supp. 3, 1973).

§4. Definitions.

(b) "Coastal area" refers to the geographic area comprising all the counties of Texas having any tidewater shoreline, including that portion of the bed and waters of the Gulf of Mexico within the jurisdiction of the State of Texas.

VIRGINIA

Wetlands Act, *Va. Code Ann.* §62-13.1 *et seq.* (Supp. 1970).

§62.1-13.2. Definitions.

(d) "Tidewater Virginia" means the following counties: Accomack, Arlington, Caroline, Charles City, Chesterfield, Essex, Fairfax, Gloucester, Hanover, Henrico, Isle of Wight, James City, King George, King and Queen, King William, Lancaster, Mathews, Middlesex, Nansemond, New Kent, Northampton, Northumberland, Prince George, Prince William, Richmond, Southampton, Spotsylvania, Stafford, Surry, Sussex, Westmoreland, and York; and the cities of Alexandria, Chesapeake, Colonial Heights, Fairfax, Falls Church, Fredricksburg, Hampton, Hopewell, Newport News, Norfolk, Petersburg, Portsmouth, Richmond, Suffolk, Virginia Beach and Williamsburg.

(f) "Wetlands" means all that land lying between and contiguous to mean low water and an elevation above mean low water equal to the factor 1.5 times the mean tide range at the site of the proposed project in the county, city or town in question; and upon which is growing on July one, nineteen hundred seventy-two or grows thereon subsequent thereto, any one or more of the following: saltmarsh cordgrass (Spartina alterniflora), saltmeadow hay (Spartina patens), saltgrass (Distichlis spicata), black needlerush (Juncus roemerianus), saltwort (Salicornia spp.), sea lavender (Limonium spp.), marsh elder (Iva frutescens), groundsel bush (Baccharis halimifolia), wax myrtle (Myrica sp.), sea oxeye (Borrichia frutescens), arrow arum (Peltandra virginica), pickerelweed (Pontederia cordata), big cordgrass (Spartina cynosuroides), rice cutgrass (Leersia oryzoides), wildrice (Zizania aquatica), bulrush (Scirpus validus), spikerush (Eleocharis sp.), sea rocket (Cakile ecentula), southern wildrice (Zianiopsis miliacea), cattails (Typha spp.), three-squares (Scirpus spp.), bottom bush (Cephalanthus occidentalis), bald cypress (Taxodium distichum), black gum (Nyssa sylvatica), tupelo (Nyssa aquatica), dock (Rumex spp.), yellow pond lily (Nuphar spp.), marsh fleabane (Pluchea purpurascens), royal fern (Osmunda regalis), marsh hibiscus (Hibiscus moscheutos), beggar's ticks

(Bidens sp.), smartweeds (Polygonum sp.), arrowhead (Sagittaria spp.), sweet flag (Acorus calamus), and switch grass (Panicum virgatum).

The wetlands of Black Bay and its tributaries shall mean all marshes subject to regular or occasional flooding by tides, including wind tides, provided this shall not include hurricane or tropical storm tides and upon which one or more of the following vegetation species are growing or grows thereon subsequent to, the passage of this amendment: saltwater (saltmarsh) cordgrass (Spartina alterniflora), saltmeadow hay (Spartina patens), black needlerush (Juncus roemerianus), marsh elder (Iva frutescens), groundsel bush (Baccharis halimifolia), was myrtle (Myrica sp.), arrow arum (Peltandra virginica), pickerelweed (Pontederia cordata), big cordgrass (Spartina cynosuroides), rice cutgrass (Leersia oryzoides), wildrice (Zizania aquatica), bulrush (Scirpus validus), spike-rush (Eleocharis sp.), cattails (Typha spp.), threesquares (Scirpus spp.), dock (Rumex sp.), smartweeds (Polygonum sp.), yellow pond lily (Nuphar spp.), royal fern (Osmunda regalis), marsh hibiscus (Hibiscus moscheutos), beggar's ticks (Bidens sp.), arrowhead (Sagittaria spp.), and switch grass (Panicum virgatum).

WASHINGTON:

Shoreline Management Act of 1971, *Wash. Rev. Code Ann.* §90.58.010 *et seq.* (Supp. 1971).

§90.58.030. Definitions.

(2) Geographical:

(a) "Extreme low tide" means the lowest line on the land reached by a receding tide;

(b) "Ordinary high water mark" on all lakes, streams, and tidal water is that mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971 or as it may naturally change therafter: *Provided*, That in any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining, saltwater shall be the line of mean higher high tide and the ordinary high water mark adjoining fresh water shall be the line of mean high water;

(c) "Shorelines of the state" are the total of all "shorelines" and "shorelines of state-wide significance" within the state;

(d) "Shorelines" means all of the water areas of the state, including reservoirs, and their associated wetlands, together with the lands underlying them; except (i) shorelines of state-wide significance; (ii) shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second or less and the wetlands associated with such upstream segments; (iii) shorelines on lakes less than twenty acres in size and wetlands associated with such small lakes;

(e) "Shorelines of statewide significance" means the following shorelines of the state:

(i) The area between the ordinary high water mark and the western boundary of the state from Cape Disappointment on the south to Cape Flattery on the north, including harbors, estuaries, and inlets;

(ii) Those areas of Puget Sound and adjacent salt waters and the Strait of Juan de Fuca between the ordinary high water mark and the line of extreme low tide as follows:

(A) Nisqually Delta–from DeWolf Bight to Tatsolo Point,

(B) Birch Bay–from Point Whitehorn to Birch Point,

(C) Hood Canal–from Tala Point to Foulweather Bluff,

(D) Skagit Bay and adjacent area–from Brown Point to Yokeko Point, and

(E) Padilla Bay–from March Point to William Point;

(iii) Those areas of Puget Sound and the Strait of Juan de Fuca and adjacent salt waters north to the Canadian line and lying seaward from the line of extreme low tide;

(iv) Those 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;

(v) Those natural rivers or segments thereof as follows:

(A) Any west of the crest of the Cascade range downstream of a point where the mean annual flow is measured at one thousand cubic feet per second or more,

(B) Any east of the crest of the Cascade range downstream of a point where the annual flow is measured at two hundred cubic feet per second or more, or those portions of rivers east of the crest of the Cascade range downstream from the first three hundred square miles of drainage area, whichever is longer;

(vi) Those wetlands associated with (i), (ii), (iv), and (v) of this subsection (2)(e);

(f) "Wetlands" or "wetland areas" means those 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 act; the same to be designated as to location by the department of ecology.

WISCONSIN

Shorelands Zoning Act, *Wis. Stat. Ann.* §59.971 *et seq.* (Supp. 1973).

§59.971.

(1) To effect the purposed of s. 144.26 and to promote the public health, safety and general welfare, counties may, by ordinance enacted separately from ordinances pursuant to s. 59.97, zone all lands (referred to herein as shorelands) in their unincorporated areas within the following distances from the normal high-water elevation of navigable waters as defined in s. 144.26 (2)(d): 1,000 feet from a lake, pond or flowage; 300 feet from a river or stream or to the landward side of the flood plain, whichever distance is greater. If the navigable water is a glacial pothole lake, the distance shall be measured from the high watermark thereof.