

Appendix C: State Coastal Dunes Management Comparison

Bringing the Latest Science to the Management of Michigan's Coastal Dunes



Michigan Environmental Council
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	Purpose of Regulation	Extent of Regulation	How Determined	Regulated Activities	Permitting	State Role	Local Role	Program Links
Michigan	Balances critical dune protection with economic development	Specific to critical dune areas; 70,000 acres of a total of 275,000 acres, mapped in an Atlas of Critical Dunes	Critical dunes were defined by the Department of Natural Resources as barrier dunes, dunes exhibiting specific geomorphologic features, and dune areas supporting exemplary dune association plant communities (as designated by the Michigan Natural Features Inventory).	Construction of buildings, septic systems, water wells, driveways, excavation and filling, vegetation removal	Permits shall be approved unless the Department proves "unreasonable depletion or degradation of the diversity, quality or functions of the critical dune areas." Documentation of permit denials must be scientifically based.	The Department of Environmental Quality administers the Act unless a local jurisdiction makes a commitment to handle critical dune permitting.	Local governmental units (counties, cities, townships, villages) can administer the Act, but must be as protective and cannot be more restrictive than the state's permitting program.	http://www.michigan.gov/deg/0,4561,7-135-3311_4114_4236---00.html
Delaware	Storm protection; beach erosion	The beach is defined as the area extending from the Mean High Water line of the Atlantic Ocean and Delaware Bay seaward 2,500 feet, and landward 1,000 feet and from the Delaware/Maryland line at Fenwick Island to the Old Marina Canal north of Pickering Beach.	The state has established a Building Line parallel to the coast, designated on DNREC maps.	Construction of any structure or the alteration, digging, mining, moving, removal or disposition of any substantial amount of beach or other materials	No construction seaward of the Building Line without a Coastal Construction Permit or landward of the Building Line and within the beach area without a Coastal Construction Letter of Approval from the DNREC.	The Department of Natural Resources and Environmental Control (DNREC) administers the Beach Preservation Act that oversees coastal dune development issues.	There is no local governmental permitting.	http://www.dnrec.delaware.gov/swc/Shoreline/Pages/ShorelineConstruction.aspx
Florida	Protection of beach and dunes, erosion/storms, and reasonable use of private property	A Coastal Construction Control Line defines that portion of the beach-dune system subject to severe fluctuations based on a 100-year storm surge, storm waves, or other predictable weather conditions.	Historical weather data, engineering predictive models to determine the upland limits of the effect of a one-hundred year coastal storm.	Within an area defined by a coastal construction control line, there are special siting and design criteria for construction and associated activities.	Permits are approved or denied upon review of "potential impacts to the beach dune system, adjacent properties, native salt resistant vegetation, and marine turtles."	The Department of Environmental Protection (DEP) administers the state's Beach and Shore Preservation Act, the primary law governing development on the beach. The program most associated with dune protection is the Coastal Protection and Engineering Program.	There is no local governmental permitting.	http://www.dep.state.fl.us/BEACHES/programs/ccclprog.htm
Georgia	Protection of sand sharing and dynamic dune system, recreation, sustainable use	The jurisdictional area extends from the state boundaries, three miles offshore, west to the westward boundary of the Dynamic Dune Field. The Dynamic Dune Field is defined as running from the ordinary high water mark to the first occurrence of either a live native tree 20 feet in height or greater, or a structure existing on or before July 1, 1979. The landward boundary of the Dynamic Dune Field is the seaward most line connecting any such tree or structure if the distance between the two is a reasonable distance not to exceed 250 feet.	Defined in the statute	Structures that will impact jurisdictional shore areas, including beach renourishment, rock revetments, landscaping, dune crossovers, and any structure in the jurisdictional area	There are two permit processes related to dunes: one for building on stable sand dunes and one for building on beaches, eroding sand dune areas, and areas without stable sand dunes.	The Department of Natural Resources Shore Protection Committee administers the Shore Protection Program, which encompasses coastal dunes. The Shore Protection Act Committee is the permit issuing authority.	Local governmental units can administer shore protection permits if their ordinance meets or exceeds the state's standards and provisions	http://coastalgadnr.org/msp/ap/shore

Maine	Protection of natural resources, storms, erosion control	Most coastal sand dune systems have been identified by the Maine Geological Survey (MGS) and are shown on photos entitled Beach and Dune Geology Aerial Photos dated 2001.	Defined in statute: "Coastal sand dune systems" means sand and gravel deposits within a marine beach system, including, but not limited to, beach berms, frontal dunes, dune ridges, back dunes and other sand and gravel areas deposited by wave or wind action. Coastal sand dune systems may extend into coastal wetlands.	Dredging, bulldozing, removing or displacing soil, sand, vegetation or other materials; draining or otherwise dewatering; filling, including adding sand or other material to a sand dune; or any construction, repair or alteration of any permanent structure.	Permits are required when an "activity" will be located in, on or over any protected natural resource, or located adjacent to a coastal wetland, great pond, river, stream or brook or significant wildlife habitat contained within a freshwater wetland, or certain freshwater wetlands.	The state regulates its coast, including dune systems, primarily through its Natural Resources Protection Act, which regulates coastal sand dune systems and significant coastal wildlife habitat areas	The Mandatory Shoreland Zoning Act (MSZA) requires municipalities to adopt, administer, and enforce local ordinances that regulate land use activities in the shoreland zone, including controlling building sites, placement of structures and land uses.	http://www.maine.gov/dep/land/nrpa/dunes/
Maryland	Balance of protection and economic development	The law identifies the "Critical Area" as all land within 1,000 feet of the Mean High Water Line of tidal waters or the landward edge of tidal wetlands and all waters of and lands under the Chesapeake Bay and its tributaries.	The beach erosion control district is defined in the statute.	Land clearing, construction activity, construction of permanent structures within the beach erosion control district (on the Atlantic Ocean) is prohibited.	It appears that permitting is a local government role, specific to each jurisdiction's land use plan.	Maryland's Critical Area Program is made up of the Coastal Zone Management Program, the Chesapeake Bay Critical Area Act, and the Atlantic Coastal Bays Critical Area Act	Maryland's Critical Area Program requires local jurisdictions to develop and implement enforceable land use plans for development. Local programs must establish shoreline buffers and minimum setbacks. New developments must maximize the site's habitat potential through clustering, incorporating a wildlife corridor system, and limiting the clearing of existing vegetation. In addition, they must provide 100-foot setbacks from the mean high water line along tidal waters and tidal wetlands.	http://www.dnr.state.md.us/ccs/index.asp
Virginia	Coastal flooding, storms, and erosion, sand replenishment	The regulated coastal zone includes the state's 29 coastal counties. The law defines a dune as a mound of unconsolidated sandy soil which is contiguous to mean high water, whose landward and lateral limits are marked by a change in grade from ten percent or greater to less than ten percent and a list of plants that are growing by July 1.	Dunes are defined in the statute.	The legislature determined that: "No permanent alteration or construction upon any primary sand dune shall take place that would: Impair the natural function of the dune as described by the Act. Physically alter the contour of the dune." Destroy vegetation growing on the dune."	Developers need a permit for any development that has the potential for encroaching on or otherwise damaging coastal dunes or state-owned beaches. Permit applications are made to the Marine Resources Commission, local wetland boards, or both.	Virginia's Department of Environmental Quality manages coastal development. Dune protection is carried out pursuant to the Coastal Primary Sand Dune Protection Act and is intended to prevent destruction or alteration of primary dunes. This program is administered by the Marine Resources Commission or local wetland boards.	Permit applications can be made to local wetland boards.	http://www.deq.virginia.gov/Programs/CoastalZoneManagement.aspx http://www.mrc.virginia.gov/regulations/dune_guidelines.pdf

New Jersey		Dunes are defined in the Coastal Permit Rules.	“Dune” means a wind-or wave-deposited or man-made formation of sand that lies generally parallel to and landward of the beach, and between the upland limit of the beach and foot of the most inland slope of the dune. Dune includes the foredune, secondary and tertiary dune ridges, and all landward dune ridges and mounds, as well as man-made dunes where they exist.	Routine beach maintenance, emergency post-storm beach restoration, construction of seaside boardwalks, dune creation. Bulldozing, excavating, grading, vegetation removal or clearing, or relocating existing dunes.	Applicants of properties with a "special area" must demonstrate their proposed project conforms to the requirements for construction within that special area. In certain circumstances, if the property is immediately adjacent to a property containing a special area, compliance with rules for that area may be required also.	New Jersey's Department of Environmental Protection manages coastal development and regulates activities in "special areas," such as dunes via the Coastal Areas Facility Review Act.	There is no local governmental permitting.	http://www.nj.gov/dep/landuse/activity/dunes.html http://www.nj.gov/dep/landuse/activity/dunes.html http://www.nj.gov/dep/landuse/specialareas.html http://www.nj.gov/dep/rules/rules/njac7_7.pdf
New York	Coastal erosion	Natural protective feature areas (NPFAs) are areas that contain the following natural features: beaches, dunes, bluffs, and nearshore areas. NPFAs protect natural habitats, infrastructure, structures, and human life from wind and water erosion, along with storm induced high water.	The state has two coastal erosion areas; one encompasses dunes - natural protective feature areas. NPFAs are mapped by first identifying the most landward natural protective feature (beach, dune, or bluff) using aerial/satellite imagery, LiDAR, and field inspections. The following distances are then used to determine the landward limit of the NPFAs. Dunes: 25 feet from the landward toe of the dune.	Construction or placement of a structure, or any action or use of land which materially alters the condition of land, including grading, excavating, dumping, mining, dredging, or any disturbance of soil	Permit standards are: the proposed activity is reasonable and necessary, will not be likely to cause a measurable increase in erosion at the proposed site or at other locations; and prevents, or minimizes adverse effects on natural protective features and their functions and protective values as described in section 505.3 of this Part; existing erosion protection structures; and or natural resources, including, but not limited to significant fish and wildlife habitats and shellfish beds.	The New York Department of Environmental Conservation administers the Coastal Erosion Hazard Area (CEHA) Permit Program, as part of the Coastal Erosion Hazard Areas Law.	The law allows local communities to administer their own CEHA program. 42 of 86 communities administer their own program.	http://www.dec.ny.gov/lands/86541.html
North Carolina	Protect ecology, balanced use	A primary dune is the first mound of sand (measured from the ocean) that is six feet taller than the mean flood level for the area. Frontal dunes are the first mounds of sand that have enough vegetation, height and continuity to offer protection. The crest of the primary dune and the landward toe of the frontal dune are determined on a case-by-case basis by the Division of Coastal Management. The first line of stable natural vegetation is the first area on the oceanfront where natural dune-stabilizing plants are present.	Defined in Coastal Resource Commission rules.	The Coastal Resources Commission has approved development rules for each type of Area of Environmental Concern (AEC). Dunes are encompassed in an Ocean Hazard System Area of Environmental Concern.	There are three types of development permits: major permits, general permits and minor permits, based on the size and possible impacts of the project. Permits must meet Coastal Resource Commission rules and be consistent with the local government's land use plan.	The North Carolina Department of Environment and Natural Resources Division of Coastal Management administers the state's Coastal Management Act.	Permits must be consistent with the local government's land use plan.	http://www.dec.ny.gov/lands/86541.html http://portal.ncdenr.org/web/cm/types-of-permits
South Carolina	Protect the quality of the coastal environment; promote the economic and social improvement of the coastal zone	The critical area is defined as coastal waters, tidelands, beaches and beach/dune system.	Defined in the statute and Critical Area regulations.	Construction of docks, bulkheads, boat ramps or activities such as filling or dredging.	Alterations in a critical area must receive a permit from the Department.	The Department of Health and Environmental Control's Office of Ocean and Coastal Resource Management administers the state's Coastal Management Program	There is no local governmental permitting.	http://www.scdhec.gov/environment/WaterQuality/CoastalPermits/CoastalPermittingIntro/ http://www.scdhec.gov/Environment/WaterQuality/CoastalPermits/CriticalAreaPermitting/Overview/

Oregon	Protection of an "outstanding natural resource," resiliency	Oregon's federally approved Coastal Zone encompasses almost all watersheds that drain to the Pacific Ocean.	Defined in the statute and each local jurisdiction land use plan.	Permitting is different in each local jurisdiction. For example, Tillamook County has an overlay zone that implements Oregon's statewide Goal 18 (Beaches and Dunes). As part of this, development is not allowed in certain active dune areas.	Permitting or land use decisions are made by local governments in conformance with their state-approved plans.	Oregon's Land Conservation and Development Commission (LCDC) manages coastal development.	The state of Oregon has Statewide Planning Goals that are standards for comprehensive planning to be conducted by local governments (cities and counties). The state's Land Conservation and Development Commission sets overall rules for planning decisions and oversees the statewide planning program. Cities and counties are required to adopt plans that meet the statewide requirements. Several of the statewide planning goals apply to coastal areas, including one specific to beaches and dunes.	http://www.oregon.gov/LCD/OCMP/pages/ocmp_intro.aspx http://www.oregon.gov/LCD/OCMP/pages/index.aspx
Texas	Protection of beaches, erosion/storms	Each local government defines the regulated area, called a Dune Protection Line, to preserve at minimum, all critical dune areas identified by the General Land Office pursuant to the Dune Protection Act. Critical dune areas are those portions of the beach/dune system as designated by the General Land Office that are located within 1,000 feet of mean high tide of the Gulf of Mexico that contain dunes and dune complexes that are essential to the protection of public beaches, submerged land, and state-owned land, such as public roads and coastal public lands, from nuisance, erosion, storm surge, and high wind and waves. Critical dune areas include, but are not limited to, the dunes that store sand in the beach/dune system to replenish eroding public beaches.	Defined in the Dune Protection Act	Damage, destruction or removal of a sand dune or a portion of a sand dune seaward of the dune protection line, or destruction or removal of vegetation growing on a sand dune seaward of the dune protection line.	Local governments are required to provide permit applications for proposed construction to the Land Office for review and comment. After considering the comments from the Land Office, local governments can issue beachfront construction certificates and dune protection permits.	The Texas General Land Office ensures that construction on the Texas coast complies with the Open Beaches Act and the Dune Protection Act.	Coastal governments are required to adopt a Beach Access and Use Plan to protect and promote public access to the beach and a Dune Protection Plan to protect the beach dune system. They are also required to implement an Erosion Response Plan (ERP) to reduce public expenditures for erosion and storm damage losses to public and private property, including public beaches. The Texas General Land Office reviews these plans and certifies that they meet the minimum standards of Texas law.	http://www.glo.texas.gov/what-we-do/caring-for-the-coast/open-beaches/beach-access-plans.html http://www.glo.texas.gov/what-we-do/caring-for-the-coast/coastal-construction/beachfront-construction/index.html

<p>Washington</p>	<p>Accommodation of appropriate uses that require a shoreline location; protection of shoreline environmental resources; protection of the public's right to access and use the shorelines</p>	<p>Shorelands are defined in the statute as including those lands extending landward 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark. Local governments can expand this zone. The program applies to the fifteen coastal counties which front on salt water. Washington's beaches and their associated dunes lie along the Pacific Ocean coast between Point Grenville and Cape Disappointment.</p>	<p>Defined in the Shoreline Management Act.</p>	<p>Dune modification activities, such as the removal or addition of material to a dune, the reforming or reconfiguration of a dune, or the removal or addition of vegetation that will alter the dune's shape or sediment migration.</p>	<p>Although this was not specified, it appears that permits would be granted at the local governmental level. Proposed activities are required to be consistent with Shoreline Management Act guidelines: they are allowed only if they are consistent with state and federal flood protection standards and when it will not result in a net loss of shoreline ecological functions or significant adverse impacts to other shoreline resources and values.</p>	<p>Washington's Department of Ecology administers the Shoreline Management Act (SMA). The SMA establishes a balance of authority and partnership between local and state government. Towns, cities and counties are the primary regulators. The state Department of Ecology acts primarily in a support and review capacity. DEC provides technical assistance to local governments.</p>	<p>Under the Shoreline Management Act, local governments must develop Shoreline Master Plans to balance land use and preservation within 200 feet of the shore. The local Shoreline Master Plans must be consistent with statewide guidance and be updated regularly. They are to ensure "no net loss" of the shoreline's ecological function and to include a system for classifying the shoreline into six environmental designations: Natural, Rural Conservancy, Aquatic, High-Intensity, Urban Conservancy, and Shoreline Residential. The designations are based on the level and type of development present, the significance of shoreline resources in the area, the</p>	<p>http://www.ecy.wa.gov/programs/sea/sea-env.htm https://fortress.wa.gov/ecy/publications/publications/0306037.pdf http://www.ecy.wa.gov/programs/sea/SMA/guidelines/index.html</p>
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