

Town of Nantucket Beach Management Plan



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1. Introduction

The goals for the Town of Nantucket's Beach Management Plan are as follows:

- Provide guidelines for the management and use of Town-owned and managed beaches;
- Make available the local, state, and federal laws that pertain to beach management;
- Include relevant information regarding the protection of rare and endangered species and wildlife habitat; and
- Serve as a policy and planning resource for the Town of Nantucket agencies involved with beach management.

The legal requirements reflected in this Plan are subject to change in the ordinary course of lawmaking and agency interpretation. In determining precise requirements, or where questions of interpretation arise, the agencies charged with enforcing those requirements should be consulted.

2. Nantucket's Beaches

Nantucket's coastline constitutes approximately 46.3 miles of beach. Of that property, the Town of Nantucket owns approximately 10% and strives to expand the percentage of property open for public access. One of the large initiatives is the One Big Beach Project through the Board of Selectmen. Through this project easements will be granted to the Town by the private property owners; in return for the management of the property by the Town of Nantucket, the public gains another public access point to the water. The remaining beachfront property is divided amongst a number of public and private conservation entities and individual private owners. Due to the natural erosion process created by wind, water, and wave action during storm events and erosion caused by human impacts, Nantucket's beaches are ever changing. While some areas are naturally protected and can remain significantly stable over the course of 10-20 years, other areas of the Island's coastlines can exhibit drastic changes over a short period of time: a year, a week, even a day.

3. Definitions

The following definitions are collected from a variety of sources including local, state and federal laws, as indicated. They are included to guide an understanding of this Beach Management Plan and are not intended to alter the definitions in those sources or to affect interpretations of them.

Ancillary Beach Areas – areas in close proximity to beaches in the Town of Nantucket including but not limited to off-beach parking areas. [TON c. 56 Beach Regulations and as amended from time to time.]

All-terrain Vehicle (ATV) - any motorized off-highway vehicle 50 inches or less in width, having a dry weight of 600 pounds or less, traveling on three or more low pressure tires, designed for operator use only with no passengers, having a seat or saddle designed to be straddled by the operator, and having handlebars for steering control. (Florida State Statute 316.0274 (2))

Barrier Beach – a narrow, low-lying strip of land generally consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast. It is separated from the mainland by a narrow body of fresh, brackish or saline water or a marsh system. A barrier beach may be joined to the mainland at one or both ends. [CMR 10.29(2) and TON Wetland Regulations 2.04 and as amended from time to time.]

Beach – All land situated between Nantucket Sound and the Atlantic Ocean, on one side, and the primary coastal bank, the line of upland vegetation, on the other side, except that such term shall include all dunes, whether or not between such perimeters. [TON c. 56-2 and as amended from time to time.]

Beachfront – general term for areas bordering the ocean, bay, estuary, or great pond including intertidal zone, wrack, berm, dunes with opened and dense vegetation, scarps, and overwash fans.

Beach Event – any group, gathering or convergence of more than fifteen (15) persons on a designated beach area or ancillary beach area where any services provided for said event are substantially commercial in nature and which event is for social, recreational or commercial purposes. Family gatherings shall not constitute a beach event under this definition. [TON c. 56 Beach Regulations and as amended from time to time.]

Berm (Back Shore) – zone of dry sand, shell, cobble, and beach debris landward of the high water mark and to the water side of dunes banks and land subject to coastal storm flowage. [MGL c. 13, s. 40 and TON Wetland Protection Regulations and as amended from time to time.]

BMP – Beach Management Plan.

Breach – new inlet created when storm tides and overwash break through a barrier beach.

Coastal Bank – the seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland as the same is defined in 310 CMR 10.30 and TON Wetland Regulations 2.05, and as amended from time to time.

Coastal Beach – unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of an ocean, estuary, great pond, or tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bankline or the seaward edge of lines, whichever is closest to the ocean. [310 CMR 10.27(2) (a) and TON Wetland Regulations 2.02, and as amended from time to time.]

Coastal Conservation Land – any and all of ocean-front land(s) and land(s) along the great ponds, contiguous to the said Grantors land, subject to the easements granted herein, which said ocean-front land(s) and lands along the great ponds are owned by the Grantee or by the Nantucket Islands Land Bank, a governmental body established for the purpose of conservation (see c. 669 of the Massachusetts Acts and Resolves of 1983, as amended), and held for enjoyment by the general public, and for protecting the scenic and ecological character of the Nantucket shore.

Coastal Dune – any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control. [310 CMR 10.28(2) and TON Wetland Regulations 2.03, and as amended from time to time.]

Commercial Activity – Refers to any activity or event where money is paid to an individual or business entity for services rendered on a beach or area ancillary to a beach in the Town of Nantucket. Family gatherings shall not constitute a commercial activity under this definition. [TON c. 56 Beach Regulations and as amended from time to time.]

Daily Wrack – the fresh wet lines or clumps of seaweed and other vegetation deposits left at the peak of the last high tide (ocean, estuary, great pond, and bay). There can be multiple wrack lines.

Dense Vegetation – live or dead, thick and matted grasses, forbs, and/or shrubs, too thick for chicks to move through; 90% - 100% cover (ocean or bay).

Designated Beach Area – a geographic section of beach or area ancillary to a beach in the Town of Nantucket as determined by the Town Administrator and designated as such on a map on file with the Town Clerk and the office of the

Board of Selectmen. [TON c. 56 Beach Regulations and as amended from time to time.]

EPO – Environmental Protection Officer.

Essential Vehicle – The use of such vehicles may be considered essential for the minimal amount of activity necessary to provide for: Public safety, law enforcement, minimal maintenance of public property, access to private dwellings not otherwise accessible, rare species monitoring and management, and research (wildlife, plants, and geology). [CZM Guidelines for Barrier Beach Management in Massachusetts, c. 4.]

Foredune – slightly elevated areas of dry sand at the toe of coastal dunes (if any), well drained, and often covered with open vegetation.

Interdune - bare patches of sand, shell, and cobble among vegetated dunes.

Intertidal Zone – a zone between high and low tides.

Land Containing Shellfish – land under the ocean, tidal flats, rocky intertidal shores, salt marshes and land under salt ponds when any such land contains shellfish. [310 CMR 10.34(2) (a) and TON Wetlands Regulations 2.08; and as amended from time to time]

Land Under the Ocean – land extending from the mean low water line seaward to the boundary of the municipality's jurisdiction and including land under estuaries. [310 CMR 10.25(2) (a) and TON Wetlands Regulations 2.01; and as amended from time to time]

Management (managed) – when used within the context of Beach Management, the word management stands for the preservation, monitoring, and patrolling of the area by seasonal officers. The Town of Nantucket manages its own properties, properties under easements and conservation restrictions, and assists in the management of properties co-owned by other entities.

Mean High Water Line – the line where the arithmetic mean of the high water heights observed over a specific 19 year metonic cycle (the National Tidal Datum Epoch) meets the shore and shall be determined using hydrographic survey data of the National Ocean Survey of the U. S. Department of Commerce.

Mean Low Water Line – the line where the arithmetic mean low water heights observed over a specific 19 year metonic cycle (the National Tidal Datum Epoch) meets the shore and shall be determined using hydrographic survey data of the National Ocean Survey of the U. S. Department of Commerce.

Motor Vehicle – All land vehicle machines or devices which include an internal combustion engine or other mechanical nonhuman source of power. [TON c. 56-2 and as amended from time to time.]

Nearshore Areas – an area of land under the ocean means that land extending from the mean low water line to the seaward limit of a municipality's jurisdiction, but in no case beyond the point where the land is 80 feet below the level of the ocean at mean low water [310 CMR 10.25(2) (b) and as may be amended from time to time]

Night Time – The hours from 8:00 p.m. to 5:00 a.m. [TON c. 136-1 and as amended from time to time.]

Non-Essential Vehicle – vehicles that are driven to access the beach areas for recreational purposes. The drivers of these vehicles, both resident and non-, have no legal access rights. The Beach Management Program determines their access.

Open Vegetation – strips or clumps of vegetation, usually American Beach Grass (*Ammophila breviligulata*), which chicks may move through freely for foraging and cover (ocean and bay). It grows on dunes, foredunes, between the berm and dense vegetation, and around ephemeral pools.

ORV – An Off Road Vehicle is any motorized vehicle that is manufactured or constructed to be operated off the improved and unimproved street, road, or highway networks, and onto more challenging terrains.

Overwash Fan – a break in a continuous dune line or line of vegetation where storm tides carried sand from oceanside, to estuaries, great ponds, and bayside; often clears a vegetation-free path from ocean to inner water body.

Persons – Includes individuals, corporations, societies, associations, partnerships and trusts. [TON c. 137-1 and as amended from time to time.]

Recreation Vehicle – Any motor vehicle designed or modified for use over unimproved terrain. Such recreation vehicles are sometimes referred to as “off-road vehicles” (ORV) or “all-terrain vehicles” (ATV). Recreation vehicles excluded from the scope of MGL c. 90B are to the same extent excluded from this definition. [TON c. 56-2 and as amended from time to time.]

Rescue Personal – State and federal law enforcement officials, Nantucket Fire Department, Police Department, Marine and Coastal Resources Department personnel and Nantucket Sheriff's Department Dive Team members. [TON c. 137-1 and as amended from time to time.]

Salt Marsh – a coastal wetland that extends landward up to the highest high tide line, that is, the highest spring tide of the year, and characterized by plants that are well adapted to or prefer living in, saline soils. Dominant plants within salt marshes are salt meadow cord grass (*Spartina patens*) and/or salt marsh cord grass (*Spartina alterniflora*). A salt marsh may contain tidal creeks, ditches and pools. [310 Code of MA Regulations 10.32(2) (a) and TON Wetlands Regulations 2.06 as may be amended from time to time]

Shellfish –the following species: Bay Scallops (*Argopecten irradians*); Blue mussel (*Mytilus edulis*); Ocean quahog (*Arctica islandica*); Oyster (*Crassostrea virginica*); Quahog (*Mercenaria mercenaria*); Razor clam (*Ensis directus*); Sea clam (*Spisula solidissima*); Sea Scallop (*Placopecten magellanicus*); Soft shell clam (*Mya arenaria*). [310 Code of MA Regulations 34(2) (b) and as may be amended from time to time]

State Listed Species From Massachusetts Natural Heritage – designation for determining endangered, threatened, or special concern status; based on biological data including but not limited to, reproductive and population status and trends (whether the species is native or has been introduced), vulnerability (as determined by threats to the species or its habitat), specialization (as determined by unique habitat requirements), restricted distribution (as determined by limited or distinct geographic range), and rarity (as determined by a limited number of occurrences or by occurrence in limited numbers).

Endangered Species – any species of plant or animal in danger of extinction throughout all or a significant portion of its range including, but not limited to, species listed from time to time as ""endangered" under the provisions of the Federal Endangered Species Act of 1973, as amended, and species of plants or animals in danger of extirpation, as documented by biological research and inventory. [MGL 131A, § 1]

Fledge – When an adolescent bird has grown feathers, left its nest, is able to fly, and is believed prepared for the migration down south.

Habitat – Where wildlife find what they need to survive: food, water, cover from predators and weather, breeding and rearing areas and over-winter areas. Habitat includes any portion of any wetland resource area as defined in c. 136-3 of TON c. 136:

- A. Within which are located any species (plant or animal) recognized as significant by the Commission following a public hearing thereon;
- B. Which falls within any of the most recent state estimated habitat maps, adopted by the Commission following a public hearing thereon. [TON c. 136-1 and as amended from time to time.]

Significant habitat - specific areas of the commonwealth, designated in accordance with section four, in which are found the physical or biological

features important to the conservation of a threatened or endangered species population and which may require special management considerations or protection. [MGL 131A, § 1]

Species of special concern - any species of plant or animal which has been documented by biological research and inventory to have suffered a decline that could threaten the species if allowed to continue unchecked or that occurs in such small numbers or with such a restricted distribution or specialized habitat requirements that it could easily become threatened within the commonwealth. [MGL 131A, § 1]

Symbolic Fencing – permanent or temporary fencing to protect endangered species; *permanent symbolic fencing* consists of fence poles, with string strung between the poles; *temporary symbolic fencing* generally consists of galvanized metal poles, with twine strung between the poles. The location of this type of fencing may be change on a daily basis by the Town's Endangered Species Program Monitors.

Take – a “take” is applicable to any species of animal or plant listed as Endangered, Threatened or Species of Special Concern in Massachusetts.

- A. In Reference to Animals: to harass, harm, pursue, hunt, shoot, hound, kill, trap, capture, collect, process, or disrupt the nesting, breeding, feeding, or migratory activity or attempt to engage in any such conduct, or assist in such conduct.
- B. In Reference to Plants: to collect, pick, kill, transplant, cut or process or attempt to engage or to assist in any such conduct. [Massachusetts Endangered Species Act (MGL c. 131A; 321 Code of MA. Regulations 10.00)]

Threatened Species – any species of plant or animal likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range including, but not limited to, species listed from time to time as “threatened” under the provisions of the Federal Endangered Species Act of 1973, as amended, and any species declining or rare as determined by biological research and inventory and likely to become endangered in the foreseeable future; provided, however, that the inclusion of any species on the Federal Threatened Species list shall not limit the discretion of the director to list said species as “endangered”. [MGL 131A, § 1]

Storm Wrack – dried seaweed or other marine vegetation that is usually deposited along the storm high water line. There can be multiple wrack lines.

Tidal Flat - any nearly level part of a coastal beach which usually extends from the mean low water line landward to the more steeply sloping face of the coastal

beach or which may be separated from the beach by land under the ocean. [310 Code of MA Regulations 10.27(2) (b) and TON Wetlands Regulations 2.02 and as may be amended from time to time]

4. Town-owned and/or Managed Beaches

4.1 The following list of beaches are either owned, managed, or co-managed by the Town's Beach Management Program:

4.1.1 North Shore

- Fortieth Pole (w/ Land Bank)
- Francis St. (w/Parks and Recreation)
- Jetties Beach (w/Parks and Recreation)

4.1.2 East Shore

- Codfish Park (w/Parks and Recreation)
- Low Beach

4.1.3 South Shore

- Fisherman's Beach
- Miacomet (w/ Land Bank)
- Nobadeer (w/ Airport)
- Point of Breakers
- Surfside (w/Parks and Recreation)
- Cisco Beach (w/Land Bank)

4.1.4 West Shore

- Madaket Beach (w/ Parks and Recreation)
- Smith's Point

4.1.5 Harbor

- Children's Beach (w/Parks and Recreation)
- Francis St. Beach (w/Parks and Recreation)

4.1.6 Madaket Harbor

- Warren's Landing

Please see appendix "A" for descriptions of these beaches and appendix "L" for the location of these beaches on the Beach Map.

5. Public Use Activities

5.1 Beach Uses

The following describes a number of activities that are allowed to take place on Nantucket's beaches. Also included via the appendix are the applicable guidelines and restrictions, which may be amended from time to time.

5.1.1 Off-Road Vehicle (ORV) Access

ORV access is permitted on designated and posted beaches only. The driving hours are identified within the Beach Rules and Regulations (appendix "B"), and on the annual Beach Map. **All Vehicles on the Town managed beaches are required to have a current Town Beach Permit and must be operated in compliance with the Town Beach Rules and Regulations.**

5.1.2 Swimming

Swimming and/or bathing on any Nantucket Beach is done at the risk of the individual. Lifeguards are only on duty at the designated lifeguard/bathing beach areas. The designated lifeguard/bathing beach areas are listed within appendix "A" and can be recognized by the red flags on the beach. Rafts, tubes, flotation equipment, and snorkeling and diving equipment are prohibited in the designated lifeguard/bathing area.

5.1.3 Walking

All persons, their animals, and vehicles must stay out of all dune vegetation, marsh grass, posted bird or wildlife and fenced areas (in such areas it is best to walk along the waters edge).

5.1.4 Surfboarding

Surfing is prohibited within designated lifeguard areas.

5.1.5 Shellfishing

Recreational shellfishing season begins on October 1st and Commercial shellfishing season begins on November 1st, both recreational and commercial shellfishing seasons end on March 31st. Both recreational and commercial shellfishing on Nantucket requires individual shellfish permits that may be purchased at the

Marine & Coastal Resources Department. See appendix "C" for more regarding shellfishing on Nantucket.

5.1.6 Fin Fishing

Fishing is permitted at all of Nantucket's beaches, with the exception of the seasonal designated lifeguard areas during the hours of 9am and 5pm. Bait and remnants must be removed from the beach.

5.1.7 Bird Watching

Bird watching is encouraged on all of Nantucket's beaches. All bird watchers must stay out of all dunes, dune vegetation, marsh grass, posted bird or wildlife and fenced areas.

5.1.8 Picnicking

Picnicking is encouraged on all of Nantucket's beaches, but all food, garbage, or remains from the picnic must be removed from the beach.

5.1.9 Boating

No personal watercraft shall be transported to, or launched from, a public beach or public beach parking area, a public boat ramp or public boat ramp parking area except for those named in town bylaw chapter 137-21 subsection D and E; see appendix "D". No vessel of any kind (motorboats, sailboats, sailboards, kayaks, jet skis, etc.) is permitted within 150 feet of the beach.

5.1.10 Dog Walking

Dogs, providing they are leashed and licensed (TON Code Ch. 55, and as amended), are permitted on Nantucket's beaches with the exception of designated lifeguard areas. Owners are responsible for the removal of any droppings. No dogs or their owners are allowed within any dune vegetation, marsh grass, protected bird, wildlife and other fenced off areas at any time.

5.1.11 Kiteboarding

Kiteboarding is restricted in life guarded and posted state and federally listed species habitat areas. (appendix "B")

5.1.12 Hunting

Hunting on Nantucket's beaches must comply with all applicable laws and regulations. Among other restrictions, discharging firearms within 150 feet of roadways or within 500 feet of an occupied dwelling is prohibited.

5.1.13 Horseback Riding

Horseback riding is permitted, but it should be noted that the potential impacts of horseback riding are much like those of pedestrians. It is important for the rider to use caution and be aware of the sensitive barrier beach resource areas. The rider should also be considerate to others using the beaches and remove the horse's droppings.

5.1.14 Public Toilets

The Nantucket beaches with public toilets available are listed within appendix "A".

5.1.15 Parking

Parking is provided at a number of beaches or as posted in ancillary areas. Parking is restricted in areas where the destruction of natural vegetation or dune ranges may be at risk.

5.2 Beach Events

Any beach event, group, gathering, or convergence of more than fifteen (15) persons on a designated beach area or ancillary beach area where any services provided for said event are substantially commercial in nature and which event is for social, recreational, or commercial purposes. Family gatherings shall not constitute a beach event under this definition. (Town Code, c. 56 Regulations and as amended from time to time; appendix "B")

5.2.1 Clam Bakes

To hold a clam bakes require the beach event application noted above must be submitted. An additional section requiring specific signatures from the Town Administrator, Beach Manager and Fire Dept. must be completed to conduct a traditional (open fire) clam bake. The final beach permit must be available if asked to present it during the event. Failure to do so will result in a \$300.00 fine.

5.3 Prohibited Activities

5.3.1 ATV's

No person shall operate or allow to be operated upon any beach any two-, three-, or four-wheeled unregistered recreational vehicle without the expressed written permission of the property owner. (Town Code, c. 56-6a; appendix "B")

5.3.2 Fires

Bonfires and camping fires are not permitted on any of Nantucket's beaches. Only small contained fires that comply with M.G.L. c. 48, §13, (appendix "H") placed a minimum of twenty-five feet from any beach grass or vegetation and not on or in any dune area, are allowed, and if required a current permit must be obtained.

Charcoal grill permits are available at the Nantucket Fire Department. All fires must be completely extinguished after use, and all contents and fire debris shall be thoroughly doused and removed from the beach. Burying charcoal or other fire debris on the beach is prohibited.

5.3.3 Fireworks

Fireworks are prohibited, as per Massachusetts General Law.

5.3.4 Camping

Camping overnight on the Nantucket's beaches is prohibited, without the permission of the property owner. (Town Code c. 64, appendix "F")

5.3.5 Littering

All garbage, trash, and food scraps must be removed from the beaches by the user. Littering and dumping trash is prohibited on Nantucket's beaches.

5.4 Activities prohibited or restricted within Endangered Species Protected habitat areas (April 1st – August 31st):

5.4.1 Kites

Kite flying and other events that involve the use of kite-like objects (i.e. *Kiteboarding*) is prohibited within 200 meters of nesting or territorial adult or unfledged juvenile endangered/threatened

species (i.e. piping plovers) between April 1 and August 31. (appendix "B" and "J")

5.4.2 Pets

Pets shall be leashed and under the control of their current possessor at all times from April 1 to August 31 on beaches where endangered/threatened species (i.e. piping plovers) are present or have traditionally nested. (appendix "J")

5.4.3 Amplified Music

In accordance with the State's "Guidelines for Managing Recreational use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts," (appendix "J") amplified music is prohibited within areas where state listed species are present or have traditionally nested.

6. Town of Nantucket Departments Involved with Beach Management

6.1 Marine & Coastal Resources Department

- Responsible for shellfish propagation.
- Issuance of commercial licenses (scallops, oysters, quahogs, mussels and eels).
- Issuance of non commercial/family permits for all shellfish.
- Conducts a number of water quality studies throughout the year.
- Implements a resident seasonal permit mooring plan.
- Manages the Town Pier.
- Patrols all shellfish areas and the waters of Nantucket out to the 3-mile limit.
- Performs search & rescue missions individually and in support of the U.S. Coast Guard.
- Recovers lost and stolen boats.
- Incorporates the beach management program.

The Marine & Coastal Resource Department is located at 34 Washington St.; for more information call (508) 228-7261, e-mail marine@nantucket-ma.gov, or fax at (508) 325-5388.

6.1.1 Beach Management Program (BMP) – Beach Manager

- Manages and maintains the Town's beachfront property while keeping the lines of communication open between the public and private property owners.
- Strives to find a balance between the recreational uses and the environmental concerns of the beaches.
- Maintains the emergency beach location signs around the island's coasts.
- Beach Manager signs off on the necessary permits for any Town beach uses and events.
- Beach Manager communicates with the State and Federal representatives from U.S. Fish & Wildlife.
- Ensures the Town is in compliance with all the guidelines set forth for proper beach management and rare species habitat management.
- Implements and enforces the Endangered Species Program (ESP) during the summer months.
 - Involves approximately seven seasonal beach monitors who collect data on rare and endangered species.
 - Data collected is submitted to the State US Fish & Wildlife representative for the annual report.

The Beach Manager's Office is located at 37 Washington St.; for more information on the beach management program call (508)

325-5348, fax (508) 325-5388, or e-mail abixby@nantucket-ma.gov.

6.2 Parks & Recreation Department

- In charge of the food concessions.
- Supervise the lifeguards and the public bathroom facilities on the public beaches.
- Responsible for maintaining Children's Beach, Francis Street Beach, Jetties Beach, Dionis Beach, and Surfside Beach, with the collaborating efforts of the Marine Dept/Beach Management Program.

The Parks & Recreation Department is located on Bathing Beach Road; for more information call (508) 228-7213.

6.3 Nantucket Police Department (NPD)

- Assists with beach management through the provision of the All-Terrain Vehicle (ATV) officers.
 - Officers patrol the beaches seasonally as is required.
 - Officers help enforce the Town's rules and regulations regarding the beaches.
- Sells the beach permits for each calendar year and distributes the Town's beach maps.
 - Permits are sold to residents for \$50 and non-residents for \$100 between January 1st and May 31st, after which all permits regardless of residency, are \$100.

The Nantucket Police Department is located at 20 South Water St.; for more information call (508) 228-1212 or e-mail the department at police2004@town.nantucket.net .

6.4 Nantucket Fire Department (NFD)

- Provides Emergency Medical Technicians (EMT) to emergency calls on the beaches.
- Sell the permits required for charcoal and gas grills.
- Offers assistance when any fireworks are held on beachfront property or within proximity to rare species habitat.
- Provides assistance with the upkeep of the emergency beach location signs.
- Supplies beach, surf, and water rescue services.

The Nantucket Fire Department is located at 131 Pleasant St.; for more information call (508) 228-2323.

6.5 Department of Public Works (DPW)

- Maintains the public access to the beaches by grading the dirt access roads and sweeping sand off the paved roads.

- Assists in keeping the beach areas clean by collecting the garbage from the trash barrels on a frequent schedule in the summer.
- Provides appropriate traffic signs and gates when needed.

The Department of Public Works is located at 188 Madaket Road; for more information call (508) 228-7244, or e-mail nantdpw@nantucket-ma.gov.

6.6 Health Department

- Issues the licenses for all concession stands, including those within the beach areas.
- Performs water testing for the bathing beaches.

The Health Department is located at 37 Washington Street; for more information call (508) 228-7226 or fax at (508) 325-5727.

6.7 Conservation Commission

- Responsible for implementing the state Wetlands Protection Act (Ch. 131, §40) and regulations 310 CMR 10.00.
- Enforces the Nantucket Wetlands Bylaw (Ch 136, and regulations). See appendix "E" for TON Wetlands Protection by-law.

The Conservation Commission is located at 37 Washington Street; for more information call (508) 228-7230, fax at (508) 228-7232, or e-mail droggeveen@nantucket-MA.gov.

6.8 Visitor Services & Information Bureau

- Responsible for hiring and oversight of the cleaning of the Town beaches.
- Assists with the distribution of the town's beach maps.

The Visitor Services & Information Bureau is located at 25 Federal Street; for more information call (508) 228-0925, or e-mail towninfo@nantucket.net.

6.9 Other Regulatory Entities Involved with Beach Management

6.9.1 Environmental Police Officer

- Responsible for enforcing the state environmental laws and regulations.

The EPO may be reached at (508) 257-6932 or through the local police department at (508) 228 -1212.

6.9.2 Brant Point United States Coast Guard Station

- Provides emergency water rescue services.

The Coast Guard may be reached at (508) 288-0388.

6.9.3 Massachusetts State Police

- Enforces hunting and fisheries violations through the state statute and local by-laws.
- Maintains a vessel for patrol functions and for assisting other agencies for any violation on state waters.

The State Police may be reached at (508) 228-0706.

6.9.4 Town Administration

- Issuance of beach use permits.
- Approval of events.
- Permits surf concessionaires
- Final approval of the annual beach maps

The Town Administration Office is located at 16 Broad St. and may be reached at (508) 228-7255

7. Environmental Statutes and Regulations; Local, State, and Federal

Statutes, bylaws, and regulations at the local, state, and federal levels provide standards that, when properly applied, help protect the environmental resources of Nantucket's beaches. This chapter and noted appendices review these environmental safeguards and describes how they apply and are implemented on Nantucket.

7.1 Wetlands Protection Act/Barrier Beach Resources

The following has been paraphrased from the "Guidelines for Barrier Beach Management in Massachusetts."^{*} Force in 1994. The primary state legal requirements that the beach management plan must comply with are within the Massachusetts Wetlands Protection Act and Regulations (M.G.L c. 131 §40; 310 Code of MA Regulations 10.00). Under this Act and its Regulations, the various parts that create the barrier beach system have been legally defined, their functions have been specified, and their performance standards have been summarized (see appendix "I").

Nantucket Island's coastline is comprised of coastal wetland environments that are subject to the jurisdiction of the above mentioned Massachusetts Wetlands Protection Act. To better protect these wetlands, the Town of Nantucket has developed a bylaw, Chapter 136, which in many respects follows the state wetlands regulations and further protects wetland resources and interests with additional standards and procedures. The Nantucket Conservation Commission is responsible for implementing and enforcing these environmental safeguards. As a general matter, the Conservation Commission's jurisdiction encompasses any wetland resource area identified by 310 CMR 10.02(1) or by Chapter 136 of the Nantucket Bylaws, any area within 100 feet of a resource area, and any structure or activity that will alter any wetland resource area.

Nantucket's beaches consist of the following protected coastal wetland resource areas (see appendix "I"):

- Barrier Beaches
- Coastal Beaches & Tidal Flats
- Coastal Dunes
- Salt Marshes
- Land Containing Shellfish
- Land Under Salt Ponds
- Land Under Ocean
- Rare Species Habitat

* Massachusetts Barrier Beach Task Force, 1994 *Guidelines for Barrier Beach Management in Massachusetts*. Massachusetts Coastal Zone Management Office, Boston, pp. 37-70.

7.2 Local Jurisdiction

Nantucket's Marine & Coastal Resource Department/Beach Management Program implements the following Town of Nantucket Rules and regulations, which are described in the sections that follow:

- Beach Rules and Regulations
- Shellfish Rules and Regulations
- Harbor Rules and Regulations

Due to the department's responsibility to manage Nantucket's beaches, it must be cognizant of regulations that relate to the beaches. Such statutes include the state Wetlands Protection Act and local wetlands bylaw, the state and federal Endangered Species Acts, the state Fisheries and Wildlife statutes, and the federal Clean Water Act. These, along with the role of the local Historic District Commission, are summarized below.

7.2.1 Town of Nantucket, Beach Rules and Regulations

The Town of Nantucket's Beach Rules and Regulations (see appendix "B") contain specific language concerning the following activities on Nantucket's beaches: swimming, walking, boating, shellfishing, fishing, and hunting. Other use restrictions, including those associated with the drinking of alcoholic beverages, dogs, trash, bonfires, fireworks, camping, loitering, and un-permitted beach functions. The regulations include a detailed section on the use of over sand vehicles and endangered species habitat protection.

7.2.2 Town of Nantucket, Shellfish Rules and Regulations

The Town of Nantucket Shellfish Rules and Regulations (see appendix "C") describe the standards for the taking of shellfish, eels, and other species that fit under this description. They apply to all areas of Nantucket's beaches open to the harvest of these resources.

7.2.3 Town of Nantucket, Harbor Bylaw

The Town of Nantucket's bylaw on Wharves and Waterways (see appendix "D") applies to boating activities for the harbor and the municipal waterways of Nantucket. These regulations apply to all areas of Nantucket's beaches under the supervision of the Town's Marine & Coastal Resource Department/Beach Management Program.

7.2.4 Town of Nantucket, Historic District Commission

The Town of Nantucket's Historic District Commission is charged with reviewing applications for coastal construction. The Historic District Commission regulates structures in coastal environments such as decks, beach stairs, fencing, etc, and determines if a project will have a historic or archaeological effect.

7.3 State Jurisdiction

7.3.1 Architecture Access Board, 521 Code of MA Regulations 2.00-3.00; Building Code, 780 of MA Regulations1.00-34.00.

The above rules govern the construction of public and private facilities in federally mapped 100 year flood zones; construction of public facilities on bathing beaches; and access to such structures. Permits required. Contact Nantucket Building Department (508) 228-7222.

7.3.2 Clean Water Act, M.G.L. c. 21, §42. Code of Massachusetts Regulations 1.00-15.00.

Under Section 401 of the Federal Clean Water Act, the Massachusetts Department of Environmental Protection's Division of Wetlands and Waterways is required to certify that activities, for which federal permits are required (including filling of wetlands under section 404 of the federal statute), will not violate the Massachusetts Water Quality Standards. Water Quality Certificate(s) are required. The contact is Massachusetts Department of Environmental Protection's Division of Wetland and Waterways at (617) 292-5695.

7.3.3 Coastal Wetlands Restriction Act, M.G.L. c. 130, §105. 302 CMR 4.00.

Some coastal wetlands have deed restrictions that limit activities that would alter the wetlands. Work in these areas requires consistency with the coastal restriction as well as an Order of Conditions from the Nantucket Conservation Commission (508) 228-7230. Massachusetts Department of Environmental Protection's Conservancy Program (617) 292-5907.

7.3.4 Coastal Zone Management – M.G.L. c. 21A, §4A; 310 Code of MA Regulations 20.00 and 21.00.

CZM coordinates the state's coastal zone management program and provides a role in policy development; offers technical assistance to communities to develop and implement comprehensive coastal management plans. Coastal Zone Management reviews projects that require a federal permit, receive federal funds, or are a direct federal activity for consistency with Massachusetts Coastal Zone Management enforceable Program Policies. A Consistency Certificate may be required, contact the Executive Office of Environmental Affairs Coastal Zone Management Office at (617) 727-9530.

7.3.5 Endangered Species Act, M.G.L. c. 131A; 321 CMR 10.00.

This Act prohibits the “taking” of state-listed rare plants and animal species (see appendix “I”). Specific Significant Habitats can be designated and any alteration requires a permit. Massachusetts Division of Fisheries and Wildlife (617) 727-9194.

7.3.6 Executive Order Number 181 Barrier Beaches (1980)

This order acknowledges the importance of barrier beaches as migrating landform(s) providing storm damage prevention and flood control. The Executive Order Number 181 discourages development on barriers with state and federal grants, and encourages preparation of management plans. EOEA (617) 727-9530.

7.3.7 Executive Order Number 190 Regulation of Off-Road Vehicle Use on Public Lands Containing Coastal Wetlands Resources (1980).

This order directs state agencies to balance competing uses of public lands and minimizes degradation of the wetland resources due to off road vehicle use, through management and monitoring. Massachusetts EOEA's Coastal Zone Management (508) 362-1760.

7.3.8 Fish & Wildlife Regulations, M.G.L. c. 131; 321 CMR 1.00-9.00.

These regulations control the taking or possession of mammals, birds, reptiles, amphibians, and inland fish through regulation of allowable species, quantities, sizes, times, places, and methods of taking. Requirements for permits are included. Contact the

Massachusetts Department of Fisheries and Wildlife and Environmental Law Enforcement's Division of Fisheries and Wildlife at (617) 727-3151.

7.3.9 Massachusetts Historical Commission, 950 Code of Massachusetts Regulations 71.00.

This commission determines if a project that has been licensed or permitted by MDEP will have an effect on a historic or archaeological property which is listed in the State Register of Historic Places. Only projects that are likely to impact a geographical area and cause a change in the architectural, historical, archaeological, or cultural qualities of a property are affected by rules promulgated by this commission. Contact information for the Massachusetts Historical Commission is (617) 727-8470.

7.3.10 Marine Fisheries Regulations, M.G.L. c. 130; 322 CMR 1.00-12.00.

These regulations control the taking, possession, and distribution of marine finfish and shellfish through regulation of allowable species, quantities, sizes, times, places, and methods of taking. Enforcement's Division of Marine Fisheries (617) 272-3193.

7.3.11 Public Waterfront Act, M.G.L. c. 91; 310 CMR 9.00.

This Act codifies the Public Trust Doctrine (colonial ordinances of 1641-1647) and the public's right to fish, fowl, and navigate in the tidelands and great ponds. Subsequent case law supplements the understanding of this public right. The Act regulates activities below the mean high water line, including docks and piers, dredging, and beach nourishment. State policy for barrier beaches encourages the use of dredged material for beach nourishment, access for the public on the nourished beach. Massachusetts Department of Environmental Protection's (MDEP) Division of Wetlands and Waterways Program (617) 292-5695.

7.3.12 Title 5 of State Environmental Code – M.G.L c. 21A, §13; 310 Code of MA Regulations 15.00.

Title 5 authorizes the Massachusetts Department of Environmental Protection's Division of Water Pollution Control to regulate the design, construction, and maintenance of on-site subsurface disposal systems. Communities may adopt more stringent regulations when local conditions warrant higher standards. Permit

required. Contact municipal board of health or the Massachusetts Department of Environmental Protection's Division of Water Pollution Control at (617) 292-5673.

7.4 Federal Jurisdiction

7.4.1 Coastal Barrier Resource Act (1982), last amended 1990, 16 U.S. Code 3502 et seq.

This Act restricts future federal expenditures and federal financial assistance on designated undeveloped coastal barrier beaches, which have the effect of encouraging development of the barrier beach areas. Barrier units designated by Congress have been mapped by the U.S. Department of the Interior and typically include those areas that are undeveloped (approximately 1 house per 5 acres). There are 54 units on 90 Massachusetts barrier beaches. The following Nantucket sites are listed as Federal Coastal Barrier Resource system (COBRA) Units: Coatue Unit, Sesachacha Pond, Cisco Beach, Esther's Island, Tuckernuck Island (North Pond, East Pond), and Muskeget Island. Massachusetts Coastal Zone Management Office (617) 727-9530.

7.4.2 Coastal Zone Management Act (1972), last amended in 1990, 16 U.S. Code 1451 et seq.

The CZM Act is a national program overseeing the Coastal Zone Management Programs of member states, including Massachusetts.

7.4.3 Endangered Species Act (1973), last amended 1988, 16 U.S. Code 1531 et seq.

This Act authorizes the Secretary of Interior, through the U.S. Fish and Wildlife Service, to list fish, wildlife, and plants found to be of special concern, threatened, or endangered, such as piping plover, least tern, and provides for their protection and recovery (see appendix "I". This Act prohibits the "taking" of listed species. U.S. Fish and Wildlife Service (603) 225-1411

7.4.4 Marine Plastic Pollution Research and Control Act (1987), 33 U.S. Code 1901 et seq.

This Act prohibits all ships from dumping plastics into the sea and regulates other types of material that may be dumped within the waters of the United States. Contact is the U.S. Coast Guard at

(617) 223-3000 or the center for Marine Conservation at (202) 429-5609.

7.4.5 National Environmental Policy Act (1970), last amended 1984, 42 U.S. Code et seq.

This Act requires assessment of environmental impacts from federally sponsored projects with significant impacts and may result in the preparation of an environmental impact statement by the federal agency. Environmental Protection Agency (617) 565-3715.

7.4.6 National Flood Insurance Act (1968), 42 U.S. Code 4001 et seq.

This Act is implemented by the Federal Emergency Management Agency. Structures within the mapped 100-year floodplain are required to be built in accordance with federal standards and state building code, regarding floor elevations and flood proofing. Federal regulations are implemented through the state and local building code and enforced by the Nantucket Building Inspector. Federal Emergency Management Agency (617) 223-9561 or Nantucket Building Department (508) 228-7222.

7.4.7 Rivers & Harbors Act (1980), 33 U.S. Code 401 et seq.

This Act authorizes the U.S. Army Corps of Engineers to regulate structures below mean high water and work in navigable waters of the U.S. Permit required. U.S. Army Corps of Engineers 1-800-362-4367.

7.4.8 Submerged Lands Act (1953).

The federal government released and relinquished to the states all of its claims, rights, interest title, and ownership of the lands and resources beneath navigable waters within the territorial limits (3 miles) of the state's mean high water line.

7.4.9 Water Pollution Control Act (1972), 33 U.S. Code 1251 et seq.

This Act requires applicants to obtain a certification or waiver from the Massachusetts Department of Environmental Protection before the U.S. Army Corps of Engineers issues a permit for discharge of dredge or fill materials into waters and wetlands of the United States. Permit Required. U.S. Army Corps of Engineers 1-800-362-4367.

8. Conservation and Management

The island is often hit by powerful and unpredictable storms. These storms can result in severe beach erosion and dune and vegetation destruction. Although these storms can be devastating, they are a part of the natural and dynamic process that will over time help to restore and maintain the Island's beaches. Storms leave coastlines altered and more susceptible to many types of erosion: natural or human disturbance.

The Town of Nantucket strives to protect and maintain the natural state of its beachfront properties while finding a balance between the natural erosion process and recreational uses by the public. The following actions may be performed by the Town to sustain beach management and conservation.

8.1 Symbolic Signs and Fencing

The Town regularly posts signs to help educate and inform the public as to beach regulations, beach closures, habitat protection areas, vehicle access and/or prohibited areas, dune restoration, and shellfish closures (see appendix "K".) Galvanized posts and twine are typically used to block off areas that are closed due to erosion, safeguarding habitat, protection of fragile vegetation, or areas not accessible to vehicles.

8.2 Litter and Debris left from Storms

The Town regularly clears the public beaches of litter and debris left behind after a storm. In many cases this is performed manually. Through the Visitors Service Dept., most Town-owned beaches are seasonally cleaned by the Barber Surf Rake, an environmentally designed beach cleaning machine that allows the beach to be cleaned without removing the beach grass.

8.3 Snow Fence

The use of snow fencing serves to enhance the coastal resources for public use by managing sand accumulation patterns impacted by wave, pedestrian, and vehicular uses. In certain situations where erosion has accelerated, the Town will use snow fence to trap sand. Snow fence is used at the base of a dune or along a beach access point. By providing a defined path for vehicles to use, the vehicles are less likely to venture off and create new throughways and damage the surrounding dune area. Snow fence is used to block off any unwanted paths to fragile beachfront, such as areas that are sensitive to erosion, contain salt marshes or tidal flats. Once these areas are blocked off, the appropriate signage is posted to

encourage beach goers to use either another access or to park their vehicles and walk onto the beach.

8.4 Pond Openings

In 1993 a Home Rule Petition was passed by the Massachusetts Legislature that granted the Nantucket Board of Selectmen the authority to both close and construct channels between Nantucket's great ponds and the ocean without the need for permits or approvals from the Commonwealth. These areas include Hummock Pond, Long Pond, Miacomet Pond, and Sesachacha Pond. In order to open a pond the Town has to consult with the Conservation Commission and work with the Nantucket Conservation Foundation (NCF), Mass Audubon, Maria Mitchell, Land Bank, and the adjacent private property owners.

8.5 Beach Grass Planting

Due to coastal storms, human disturbance, and disease, beach grass and other dune vegetation may be destroyed. When such situations arise, it may be necessary to plant beach grass vegetation to help restore the area. Planting within endangered species habitat areas requires a prior consultation and approval by the Massachusetts National Heritage Program (MNHP).

8.6 Parking Areas

Parking areas are available at a number of the Island's beaches. Many of these areas are surrounded by the fragile moors. At no time is it permitted for vehicles to be parked on the moors, coastal heathlands containing areas of shrubs and grass, surrounding the beach parking areas. Some of the parking areas have trash receptacles at their location, but at no time is the disposal of household trash or littering permitted in the parking areas.

8.7 Essential Vehicles

Essential vehicle passes authorize an individual with the right or responsibility to access the beach area for purpose other than recreational use the right to use, the beach as an entryway, *if conditions allow*. Individuals issued an essential vehicle pass are typically the property owners and their guests, service and repair personnel, fire, police, and other emergency vehicles. Permits may be obtained from the Marine Department.

8.8 Carrying Capacity Limit

The number of vehicles accessing the beaches has risen. While areas have remained accessible to vehicles, these areas also maintain their natural delicate state. The Beach Management Plan's goal/mission is to ensure proper use and minimize the impact to the coastal beach and dune(s) environment. To date no "carrying capacity limit" for vehicles has been established. Increased demands for access may result in amendments to the Nantucket Beach Management Plan that, based on an environmental impact analysis, define and regulate vehicle "carrying capacity."

9. Town of Nantucket Endangered Species Program (ESP)

The goal of the Town of Nantucket's Endangered Species Program (ESP) is to protect piping plovers, least terns, American oyster catchers, and other endangered, threatened, or protected species while allowing reasonable vehicle access and other appropriate uses and activities to occur on Town-managed beachfront properties.

9.1 The History and Current Status of the Town of Nantucket's Endangered Species Program

In 1994 the State of Massachusetts gave the Town of Nantucket the choice to manage Smith's Point and the endangered species that inhabit it, or lose control of that property to the State. Within the following two years, the Town took an active role in monitoring the endangered and threatened species and created a beach management plan that complied with the state's regulations. The plan was drafted to suit Smith's Point's specific needs of that area; which at the time were two piping plover pairs and one colony of least terns with about 100 nests.

Now ten years later, Smith's Point has become a nesting area for as many as 6-12 piping plover pairs a year and colonies of terns that number in the thousands. The Town's ESP has expanded to cover two other locations, Low Beach and Jetties Beach. Although the three locations differ in geographic configuration, each provides adequate habitat for the different species.

How the Town's ESP is managed has also changed over the past ten years. What began with a single monitor, not affiliated with the Town, observing a number of different properties for separate conservation entities, has developed into a structured system. Depending on what the upcoming season necessitates and any topographic changes to the habitat, the Town's ESP is comprised of approximately seven seasonal beach monitors, a year-round Beach Manager, and continued support and assistance from the Marine Department.

9.2 Environmental Statutes and Regulations Applicable to Endangered/Threatened Species on Nantucket's Beaches

The following local, state, and federal laws provide protection for the piping plovers, terns, and other endangered, threatened, or protected species on Nantucket's beaches. Each law is summarized in chapter 7.

- Town of Nantucket Wetlands by-law (Ch.136 of the Nantucket Code)
- Town of Nantucket Beach Rules and Regulations (Ch. 56 of the Nantucket Code)

- Massachusetts Wetlands Protection Act (Ch.131)
- Massachusetts Endangered Species Act (M.G.L. Ch. 131A)
- Federal Endangered Species Act of 1973

9.3 Endangered Species Monitoring

The current species of concern that nest on the beaches the Town oversees are the piping plover, least tern, American oyster catcher and northern harrier. From their migration north until their migration south, the Town monitors these species and their habits. When monitoring endangered species, those observing are required to adhere to certain state recommended guidelines to ensure the safety of the species. The required protective procedures and the time frame for which they should be implemented differ for each species and the town takes great care to remain in compliance with the established guidelines. For more on the management and guidelines see appendix "J".

10. Public Education & Outreach

It is the provision of reliable educational information to the public so that they will understand the significant value of Nantucket's beaches is a strong component of the Town's beach management program. It is anticipated that as the public becomes informed and involved with the program, Nantucket's fragile coastlines and its community will benefit.

10.1 Marine & Coastal Resource Department and Beach Management Program

Members of the Marine & Coastal Resource Department and Beach Management Program regularly give informational presentations/lectures to various groups that have interests in Nantucket's beaches, waterfront, and marine life. A few examples of some groups that have been addressed recently are the Nantucket High School, the Cyrus Pierce Middle School and graduate classes from the University of Massachusetts.

The Beach Manager welcomes the opportunity to discuss beach management with a number of groups such as the Rotary Club, the Park and Recreation Commission, the local conservation groups, and a number of civic groups.

Announcements and interviews are made through the local newspapers, magazines, and television networks. With the collaborative efforts of the media and the Town, the public is able to be provided with up-to-date information on a regular basis.

10.2 Brochures

The Beach Manager annually develops an up-to-date beach map to provide beach goers with the rules and regulations, a brief description on beach etiquette, a map with the beach locations, and contact numbers for those involved with the beaches. See appendix "M" for the Town's beach map. These maps are distributed with every beach vehicle permit sold at the Nantucket Police Department and are also available at the Visitors' Services and Information Center, the Marine & Coastal Resources Department, the many vehicle rental companies and at the Smith's Point Gate House (when open).

The Marine & Coastal Resource Department/Beach Management Program also distributes informational brochures on the wildlife that inhabits Nantucket's coasts and the regulations that apply to both recreational and commercial shell- and fin-fishing.

10.3 Signage

Educational signs are used on the beaches for dune protection, wildlife habitat notification, vehicle restriction, information on deer ticks and the possible strong undertow during coastal storms. When nests are present during shorebird breeding season, signs explaining the different protective measures needed for the endangered or threatened nesting species are posted.

Emergency location signs are posted along the Islands coasts. These signs provide those responding to emergency calls from the beaches to know exactly where the individuals in distress are.

See appendix "K" for examples of the signs posted by the Town.

APPENDIX A

Chart of the Town Managed Beaches and their Amenities

Town of Nantucket Managed Beaches & Amenities

	Beach	Shore	Life Guarded	ORV Access*	Toilets	Concession Stand	Play Ground	Parking	NRTA**	Miles From Town	Surf***
1	Children's	Harbor	Yes	No	Yes	Yes	Yes	Yes	No	.5 mile	None
2	Cisco	South	Yes	No	No	No	No	Yes	No	4 miles	Heavy
3	Codfish Park	East	Yes	No	No	No	Yes	Yes	Yes	7 miles	Heavy
4	Dionis	North	Yes	No	Yes	No	No	Yes	No	3 miles	Minimal
5	Fisherman's	South	No	No	No	No	No	Yes	No	4 miles	Heavy
6	Fortieth Pole	North	No	Yes*	No	No	No	Yes	No	4 miles	Minimal
7	Francis St.	Harbor	No	No	No	No	Yes	No	No	.5 mile	None
8	Jetties	North	Yes	No	Yes	Yes	Yes	Yes	Yes	1 mile	Minimal
9	Low Beach	East	No	Yes*	No	No	No	Yes	No	7 miles	Heavy
10	Madaket	West	Yes	No	No	No	No	Yes	Yes	6 miles	Heavy
11	Miacomet E.	South	Yes	No	No	No	No	Yes	No	2.8 miles	Heavy
12	Nobadeer	South	No	Yes*	No	No	No	Yes	No	4 miles	Heavy
13	Point of Breakers	South	No	Yes*	No	No	No	Yes	No	2.5 miles	Heavy
14	Smiths Point	West	No	Yes*	No	No	No	Yes	No	6 miles	Ocean/Heavy Bay/ Minimal
15	Surfside	South	Yes	Yes*	Yes	Yes	No	Yes	Yes	3 miles	Heavy

The beaches listed above are either town owned or town managed. In a few cases the beach is owned by a separate beach management entity, but the collaborated efforts of the town continue to allow public access.

***ORV Access** is determined annually based on the current state of the beaches. Please note the annual Town Beach Map, which is provided with each beach access permit, to see which areas are open for ORV access and what the restrictions are.

****NRTA** is the Nantucket Regional Transit Authority. This shuttle service provides island wide transportation. For more information on NRTA services call (508) 228-7025 or go to www.shuttlenantucket.com.

*****Surf conditions** are not fixed and have been known to change on a daily basis or more frequently. Please use caution when entering any waters with surf.

APPENDIX "B"

Town of Nantucket's Code Ch. 56 and Regulations for the use of Town-owned Beaches

Chapter 56

BEACHES, REGULATION OF MOTOR VEHICLES ON

- | | |
|---|--|
| <p>§ 56-1. Purpose; applicability to private and public beaches.</p> <p>§ 56-2. Definitions.</p> <p>§ 56-3. Promulgation of rules and regulations.</p> | <p>§ 56-4. Exemptions.</p> <p>§ 56-5. Violations and penalties.</p> <p>§ 56-6. Prohibited activities.</p> <p>§ 56-7. Beach vehicle stickers; penalty.</p> <p>§ 56-8. Educational program.</p> |
|---|--|

[**HISTORY:** Adopted by the Annual Town Meeting of the Town of Nantucket 4-6-1987 by Art. 31, approved 7-15-1987. Amendments noted where applicable.]

§ 56-1. Purpose; applicability to private and public beaches. [Amended 5-5-1992 ATM by Art. 68, approved 5-28-1992; 4-30-2003 ATM by Art. 69, approved 6-30-2003]

The purpose of this chapter is to protect the beaches of Nantucket by controlling the use and operation of motor vehicles thereon as well as to regulate commercial activities on the beaches of Nantucket, as such uses, are deemed to have a significant effect on wetlands values, including but not limited to flood control, erosion control, storm damage prevention, fisheries, shellfish, wildlife and recreation; on beach scenic views; on excessive noise; on the natural, scenic, historic and aesthetic qualities of the beach environment on Nantucket; on the public safety and welfare; and on the preservation of peace and good order. Such protection is extended to private as well as public beaches as a correlate to owners giving express or implied consent to the use of beach area for commercial use and/or operation of motor vehicles thereon.

§ 56-2. Definitions.

In this chapter, the following terms, unless a contrary meaning is required by the context or as specifically prescribed, shall have the following meanings:

BEACH — All land situated between Nantucket Sound and the Atlantic Ocean, on one side, and the primary coastal bank, the line of upland vegetation, on the other side, except that such term shall include all dunes, whether or not between such perimeters.

COMMERCIAL ACTIVITIES — Refers to any activity or event where money is paid to an individual or business entity for services rendered on the beach. Not included in this definition is any commercial activity sponsored by the Town of Nantucket, the Nantucket Islands Land Bank, the Commonwealth of Massachusetts or the United States, and any instrumentality thereof. [Added 4-30-2003 ATM by Art. 69, approved 6-30-2003]

MOTOR VEHICLES — All land vehicle machines or devices which include an internal combustion engine or other mechanical nonhuman source of power.

RECREATION VEHICLE — Any motor vehicle designed or modified for use over unimproved terrain. Such recreation vehicles are sometimes referred to as "off-road vehicles"

(ORV) or "all-terrain vehicles" (ATV). Recreation vehicles excluded from the scope of MGL c. 90B are to the same extent excluded from this definition. [Added 5-17-1988 ATM by Art. 108; approved 9-28-1988]

§ 56-3. Promulgation of rules and regulations. [Amended 5-5-1992 ATM by Art. 68, approved 5-28-1992; 5-4-1993 ATM by Art. 51, approved 5-24-1993; 4-30-2003 ATM by Art. 69, approved 6-30-2003]

After due notice, the Board of Selectmen may promulgate rules and regulations relating to the use and operation of motor vehicles on Nantucket beaches and to regulate commercial activities on the beaches of Nantucket, to effectuate the purposes of this chapter. Failure by the Board to promulgate such rules and regulations or a legal declaration of their invalidity by a court of law shall not act to suspend or invalidate the effect of this chapter. Such rules and regulations relating to the use and operation of motor vehicles on Nantucket beaches shall be specifically detailed in materials given to purchasers of Town beach stickers when application is made for the sticker. Such rules and regulations relating to the permitting of commercial activity on Nantucket beaches shall be made available to applicants for commercial activity permits.

§ 56-4. Exemptions. [Amended 5-17-1988 ATM by Art. 108, approved 9-28-1988; 5-4-1993 ATM by Art. 51, approved 5-24-1993]

- A. This chapter shall not apply to any law enforcement, fire/rescue or official vehicle of the Town or Commonwealth of Massachusetts or any other vehicle engaged in any bona fide emergency response.
- B. This chapter shall not apply to electric wheelchairs or other disability-related mobility aids. [Added 4-12-1994 ATM by Art. 71, approved 4-29-1994]

§ 56-5. Violations and penalties. [Amended 5-5-1992 ATM by Art. 68, approved 5-28-1992; 5-4-1993 ATM by Art. 51, approved 5-24-1993; 4-30-2003 ATM by Art. 69, approved 6-30-2003]

- A. Whoever operates or allows to be operated a vehicle, which is in violation of this chapter or who violates any other section or provision of this chapter shall be punishable by a fine of \$300 for the first violation. Each day during which a violation occurs shall constitute a separate offense. Subsequent violations may result in revocation of a Town beach sticker, subject to the right of the offender to an appeal to the Board of Selectmen.
- B. Any police officer or Town beach monitor or beach manager is designated as enforcing persons who may utilize the noncriminal disposition specified in MGL c. 40, § 21D.

§ 56-6. Prohibited activities. [Added 5-17-1988 ATM by Art. 108, approved 9-28-1988; amended 5-5-1992 ATM by Art. 68, approved 5-28-1992; 5-4-1993 ATM by Art. 51, approved 5-24-1993]

- A. No person shall operate or allow to be operated upon any beach any two-, three- or four-wheeled unregistered recreational vehicle without the expressed written permission of the property owner. [Amended 4-30-2003 ATM by Art. 69, approved 6-30-2003]
- B. No person shall operate or allow to be operated upon any beach any vehicle which is in violation of § 56-3 or the rules and regulations promulgated under the authority granted to the Board of Selectmen herein. [Amended 4-30-2003 ATM by Art. 69, approved 6-30-2003]
- C. No person shall operate or allow to be operated upon any beach any vehicle which is in violation of any law, rule or regulation relevant to the safe operation of said vehicle.
- D. No person shall operate or allow to be operated upon any beach any vehicle which does not have a beach vehicle sticker issued and displayed in accordance with this chapter.

§ 56-7. Beach vehicle stickers; penalty. [Added 5-5-1992 ATM by Art. 68, approved 5-28-1992]

- A. Beach vehicle stickers shall be issued, upon payment of a fee to be set by the Board of Selectmen, to owners, lessees or lessors of four-wheel-drive motor vehicles having a valid motor vehicle registration. The applicant for said sticker shall complete and sign an application and provide such information as may be required, including proof of motor vehicle liability insurance. Such applicant shall also be required to indemnify and hold harmless the Town of Nantucket and any other property owner upon whose property such applicant operates a Motor Vehicle as a condition of receiving a Town beach sticker. The issued sticker shall remain the property of the Town and may be forfeited upon any violation of this chapter. All funds generated from the sale of Town beach stickers shall be deposited in a separate revolving account pursuant to MGL c. 44, § 53E 1/2, and used solely for the implementation and enforcement of this chapter and the cleaning, protection and conservation of beaches, the hiring and training of coastal resource personnel, purchase of equipment, education and training opportunities for beach users to be administered by the Board of Selectmen, and total funds to be expended shall not exceed collected revenue. [Amended 5-4-1993 ATM by Art. 51, approved 5-24-1993; 4-10-1995 ATM by Art. 65, approved 7-31-1995; 4-30-2003 ATM by Art. 69, approved 6-30-2003]
- B. The beach vehicle stickers, issued in pairs, shall be affixed on or near the front and rear bumpers of the vehicle. The sticker-issuing officer shall mark each sticker with the vehicle's registration or license plate number and the date issued. Stickers shall have a distinctive color for the calendar year of issue.
- C. Each pair of beach vehicle stickers shall bear a unique set of identifying letters or numbers and shall be kept affixed to the vehicle during its operation on a beach so that they are clearly legible in daylight. Stickers not properly displayed shall be invalid. [Amended 4-30-2003 ATM by Art. 69, approved 6-30-2003]
- D. Beach vehicle stickers are a privilege, conferring no property interest or other right, and may be revoked at any time by written notice or physical removal without due-process hearing. Beach vehicle stickers issued for a given vehicle are not valid if transferred to

another vehicle. Absent a violation, they shall be valid for the calendar year of issue. [Amended 5-4-1993 ATM by Art. 51, approved 5-24-1993]

- E. The Board of Selectmen shall determine the fee for beach vehicle stickers. The sticker fee shall be established to provide sufficient funds to cover budgeted expenses for beach management, including but not limited to purchase of materials, construction and maintenance of fencing, police patrol expenses and hiring of employees. The sticker fee for the lessors of four-wheel-drive rental vehicles shall be not more than five times the amount of the established sticker fee, and the replacement cost of any revoked sticker shall be not more than 10 times the established fee. The collected fees shall be placed in a separate account and disbursed for the purposes designated by this chapter. Budget development shall be overseen by Town Administration. [Amended 5-4-1993 ATM by Art. 51, approved 5-24-1993; 4-10-1995 ATM by Art. 66, approved 7-31-1995; 4-30-2003 ATM by Art. 69, approved 6-30-2003]
- F. ¹The Board of Selectmen may waive any provision of this chapter for good cause shown and may appoint an administrative hearing officer to hear any request or complaint of a person aggrieved by any provisions of this chapter or by an action taken hereunder.

§ 56-8. Educational program. [Added 5-5-1992 ATM by Art. 68, approved 5-28-1992]

- A. All operators of motor vehicles displaying beach vehicle stickers shall be notified, in writing, of the provisions of this chapter and of state laws and regulations applicable to motor vehicle use on beaches, public or private.
- B. The Town Administrator shall, prior to June 1 of each year, prepare and distribute for persons holding or obtaining beach vehicle stickers an annual map showing ways properly open for motor vehicles access to Nantucket beaches and any time or other limits upon beach access established under this chapter or other Town bylaw or by state law or regulation. [Amended 4-30-2003 ATM by Art. 69, approved 6-30-2003]
- C. A copy of the current map and notice shall be in the vehicle and available to the operator during every such use.²

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- 1. Editor's Note: Former Subsection F, regarding four-wheel-drive vehicles without valid stickers, was repealed 5-4-1993 ATM by Art. 51, approved 5-24-1993, which provision also redesignated former Subsection G as current Subsection F.
 - 2. Editor's Note: Former § 56-9, Promulgation of rules and regulations, added 4-10-1995 ATM by Art. 66, approved 7-31-1995, which immediately followed this subsection, was repealed 4-30-2003 ATM by Art. 69, approved 6-30-2003.

Chapter 56

BEACHES, REGULATION OF MOTOR VEHICLES ON

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| § 56-1. Purpose; applicability to private and public beaches. | § 56-4. Exemptions. |
| § 56-2. Definitions. | § 56-5. Violations and penalties. |
| § 56-3. Promulgation of rules and regulations. | § 56-6. Prohibited activities. |
| | § 56-7. Beach vehicle stickers; penalty. |
| | § 56-8. Educational program. |

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- A. Whoever operates or allows to be operated a vehicle, which is in violation of this chapter or who violates any other section or provision of this chapter shall be punishable by a fine of \$300 for the first violation. Each day during which a violation occurs shall constitute a separate offense. Subsequent violations may result in revocation of a Town beach sticker, subject to the right of the offender to an appeal to the Board of Selectmen.
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- B. The beach vehicle stickers, issued in pairs, shall be affixed on or near the front and rear bumpers of the vehicle. The sticker-issuing officer shall mark each sticker with the vehicle's registration or license plate number and the date issued. Stickers shall have a distinctive color for the calendar year of issue.
- C. Each pair of beach vehicle stickers shall bear a unique set of identifying letters or numbers and shall be kept affixed to the vehicle during its operation on a beach so that they are clearly legible in daylight. Stickers not properly displayed shall be invalid. [Amended 4-30-2003 ATM by Art. 69, approved 6-30-2003]
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hearing. Beach vehicle stickers issued for a given vehicle are not valid if transferred to another vehicle. Absent a violation, they shall be valid for the calendar year of issue. [Amended 5-4-1993 ATM by Art. 51, approved 5-24-1993]

- E. The Board of Selectmen shall determine the fee for beach vehicle stickers. The sticker fee shall be established to provide sufficient funds to cover budgeted expenses for beach management, including but not limited to purchase of materials, construction and maintenance of fencing, police patrol expenses and hiring of employees. The sticker fee for the lessors of four-wheel-drive rental vehicles shall be not more than five times the amount of the established sticker fee, and the replacement cost of any revoked sticker shall be not more than 10 times the established fee. The collected fees shall be placed in a separate account and disbursed for the purposes designated by this chapter. Budget development shall be overseen by Town Administration. [Amended 5-4-1993 ATM by Art. 51, approved 5-24-1993; 4-10-1995 ATM by Art. 66, approved 7-31-1995; 4-30-2003 ATM by Art. 69, approved 6-30-2003]
- F. ¹The Board of Selectmen may waive any provision of this chapter for good cause shown and may appoint an administrative hearing officer to hear any request or complaint of a person aggrieved by any provisions of this chapter or by an action taken hereunder.

§ 56-8. Educational program. [Added 5-5-1992 ATM by Art. 68, approved 5-28-1992]

- A. All operators of motor vehicles displaying beach vehicle stickers shall be notified, in writing, of the provisions of this chapter and of state laws and regulations applicable to motor vehicle use on beaches, public or private.
- B. The Town Administrator shall, prior to June 1 of each year, prepare and distribute for persons holding or obtaining beach vehicle stickers an annual map showing ways properly open for motor vehicles access to Nantucket beaches and any time or other limits upon beach access established under this chapter or other Town bylaw or by state law or regulation. [Amended 4-30-2003 ATM by Art. 69, approved 6-30-2003]
- C. A copy of the current map and notice shall be in the vehicle and available to the operator during every such use.²

1. Editor's Note: Former Subsection F, regarding four-wheel-drive vehicles without valid stickers, was repealed 5-4-1993 ATM by Art. 51, approved 5-24-1993, which provision also redesignated former Subsection G as current Subsection F.

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TOWN OF NANTUCKET
REGULATIONS FOR THE USE OF TOWN-OWNED BEACHES
EFFECTIVE: August 1, 2003
AMENDED: August 4, 2004

I. AUTHORITY, PURPOSE AND DEFINITIONS.

A. ADOPTION

THESE REGULATIONS ARE ADOPTED BY THE BOARD OF SELECTMEN OF THE TOWN OF NANTUCKET, TO BE EFFECTIVE ON AUGUST 1, 2003.

B. PURPOSE

1. THE PURPOSE OF THESE REGULATIONS IS TO MANAGE BEACH EVENTS OR COMMERCIAL ACTIVITIES ON THE BEACHES OR ANCILLARY AREAS TO THE BEACHES WITHIN THE LIMITS OF THE TOWN OF NANTUCKET AS SUCH USES ARE DEEMED TO HAVE SIGNIFICANT EFFECT ON WETLANDS VALUES, INCLUDING BUT NOT LIMITED TO FLOOD CONTROL, EROSION, STORM DAMAGE PREVENTION, FISHERIES, SHELLFISH, WILDLIFE AND RECREATION; ON BEACH SCENIC VIEWS; ON EXCESSIVE NOISE; ON THE NATURAL SCENIC, HISTORIC AND AESTHETIC QUALITIES OF THE BEACH ENVIRONMENT ON NANTUCKET; ON THE PUBLIC SAFETY AND WELFARE; AND ON THE PRESERVATION OF PEACE AND GOOD ORDER.

THE PURPOSE IS ALSO TO REGULATE USE AND OPERATION OF MOTOR VEHICLES ON BEACHES.

2. THESE RULES AND REGULATIONS APPLY TO BEACHES OWNED BY THE TOWN OF NANTUCKET OR THOSE BEACHES MANAGED BY THE TOWN OR ON BEACHES WHERE THE PROPERTY OWNER HAS GIVEN THE TOWN THE OWNER'S PERMISSION TO APPLY THESE RULES AND REGULATIONS.
3. BEACH EVENTS ON PRIVATE PROPERTY THAT HAVE THE EXPRESS WRITTEN PERMISSION OF THE PROPERTY OWNER ARE EXEMPT FROM THE APPLICATION PROVISIONS OF THIS SECTION. NOTWITHSTANDING THE PERMISSION OF A PRIVATE PROPERTY OWNER TO ALLOW A BEACH EVENT OR COMMERCIAL ACTIVITY THAT WOULD OTHERWISE REQUIRE A PERMIT FROM THE TOWN OF NANTUCKET, ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, BY-LAWS AND REGULATIONS SHALL CONTINUE TO BE APPLICABLE TO THE BEACH EVENTS AND COMMERCIAL ACTIVITIES DESCRIBED AND REGULATED HEREIN.
4. ADDITIONAL RESTRICTIONS OR LIMITATIONS MAY APPLY TO ANY APPROVED EVENT OR ACTIVITY (I.E. BEACH EROSION CONCERNS,

ENDANGERED SPECIES, ANTIPLICATED STORM EVENTS, REQUIREMENT OF SPECIAL POLICE DETAILS, ETC.)

C. DEFINITIONS

BEACH EVENT -- ANY GROUP, GATHERING OR CONVERGENCE OF MORE THAN FIFTEEN (15) PERSONS ON A DESIGNATED BEACH AREA OR ANCILLARY BEACH AREA WHERE ANY SERVICES PROVIDED FOR SAID EVENT ARE SUBSTANTIALLY COMMERCIAL IN NATURE AND WHICH EVENT IS FOR SOCIAL, RECREATIONAL OR COMMERCIAL PURPOSES. FAMILY GATHERINGS SHALL NOT CONSTITUTE A BEACH EVENT UNDER THIS DEFINITION.

COMMERCIAL ACTIVITY -- ANY ACTIVITY OR EVENT WHERE MONEY IS PAID TO AN INDIVIDUAL OR BUSINESS ENTITY FOR SERVICES RENDERED ON A BEACH OR ANCILLARY AREA TO A BEACH IN THE COUNTY OF NANTUCKET. FAMILY GATHERINGS SHALL NOT CONSTITUTE A COMMERCIAL ACTIVITY UNDER THIS DEFINITION.

DESIGNATED BEACH AREA -- A GEOGRAPHIC SECTION OF BEACH OR ANCILLARY AREA TO A BEACH IN THE TOWN OF NANTUCKET AS DETERMINED BY THE TOWN ADMINISTRATOR AND DESIGNATED AS SUCH ON A MAP ON FILE WITH THE TOWN CLERK AND THE OFFICE OF THE BOARD OF SELECTMEN.

ANCILLARY BEACH AREAS -- AREAS IN CLOSE PROXIMITY TO BEACHES IN THE TOWN OF NANTUCKET INCLUDING BUT NOT LIMITED TO OFF-BEACH PARKING AREAS.

II. **BEACH EVENTS AND COMMERCIAL ACTIVITIES**

1. THE USE OF NANTUCKET BEACHES FOR EVENTS OR ACTIVITIES INVOLVING A COMMERCIAL ENTERPRISE OR ACTIVITY, INCLUDING, BUT NOT LIMITED TO CATERING EVENTS OR OTHER SUCH BUSINESSES, SHALL REQUIRE A PERMIT FROM THE TOWN OF NANTUCKET.
2. UNLESS OTHERWISE AUTHORIZED BY THE TOWN ADMINISTRATOR, ONLY THREE (3) BEACH EVENTS PER WEEK AND ONLY ONE (1) EVENT PER DAY SHALL BE PERMITTED ON ANY DESIGNATED BEACH AREA IN THE TOWN OF NANTUCKET PURSUANT TO THESE REGULATIONS. PERMITS FOR BEACH EVENTS SHALL BE BASED ON A "FIRST-COME, FIRST SERVE BASIS". PERMITS FOR COMMERCIAL ACTIVITY WHERE MORE THAN ONE (1) COMMERCIAL ENTERPRISE APPLIES TO USE THE SAME BEACH ON THE SAME DATE WILL BE BASED UPON A "LOTTERY" SYSTEM AS DETERMINED BY THE TOWN ADMINISTRATOR.
3. NO BEACH EVENTS OR COMMERCIAL ACTIVITIES WITH AN EXPECTED ATTENDANCE OF MORE THAN TWO HUNDRED FIFTY (250) PEOPLE SHALL BE ALLOWED UNLESS A PUBLIC ASSEMBLY PERMIT APPLICATION HAS BEEN SUBMITTED AND APPROVED.
4. THE FEE FOR A BEACH EVENT PERMIT OR COMMERCIAL ACTIVITY PERMIT IS AS FOLLOWS: ONE HUNDRED DOLLARS (\$100.00) FOR EVENTS WITH AN EXPECTED

ATTENDANCE OF SIXTEEN (16) TO SEVENTY-FIVE (75) PEOPLE, AND TWO HUNDRED DOLLARS (\$200.00) FOR EVENTS WITH AN EXPECTED ATTENDANCE OF OVER (75) PEOPLE.

5. BEACH EVENTS OR COMMERCIAL ACTIVITIES WITH AN EXPECTED ATTENDANCE OF MORE THAN SEVENTY-FIVE (75) PEOPLE MAY REQUIRE A SPECIAL POLICE DETAIL AS DETERMINED BY THE TOWN ADMINISTRATOR.
6. THE FOLLOWING ACTIVITIES ARE PROHIBITED AT ALL BEACH EVENTS OR COMMERCIAL ACTIVITY AT BEACHES SUBJECT TO THESE RULES AND REGULATIONS:
 - A. ELECTRICAL GENERATORS
 - B. DANCE FLOORS
7. ALL APPLICATIONS SHALL BE SIGNED CONFIRMING THAT THE APPLICANT HAS READ AND UNDERSTANDS ALL REGULATIONS PERTAINING TO A PERMITTED BEACH EVENT OR COMMERCIAL ACTIVITY AND THAT SUCH APPLICANT WILL ABIDE BY SUCH REGULATIONS, LIMITATIONS AND CONDITIONS PLACED UPON SUCH EVENT OR ACTIVITY.
8. THE PERMITTEE SHALL BE REQUIRED TO OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE LIABILITY INSURANCE IN THE MINIMUM AMOUNT OF ONE MILLION DOLLARS (\$1,000,000) NAMING THE TOWN OF NANTUCKET AND ANY OTHER PROPERTY OWNER OF THE DESIGNATED BEACH AREA WHERE THE BEACH EVENT OR ACTIVITY IS TAKING PLACE AS AN ADDITIONAL INSURED.
9. INDIVIDUALS OR BUSINESSES THAT PROVIDE CATERING OR OTHER FOOD-RELATED SERVICES ON BEACHES SUBJECT TO THESE RULES AND REGULATIONS MUST BE LICENSED BY THE BOARD OF HEALTH. A COPY OF THE FOOD SERVICE LICENSE FROM THE BOARD OF HEALTH SHALL BE SUBMITTED WITH AN APPLICATION FOR A BEACH EVENT OR COMMERCIAL ACTIVITY.
10. THE PERMITTEE SHALL REMOVE ALL TRASH GENERATED BY THEIR BEACH EVENT OR COMMERCIAL ACTIVITY FROM THE BEACH AND DISPOSE OF IT PROPERLY AT THE LANDFILL. TOWN TRASH CANS OR DUMPSTERS MAY NOT BE USED.
11. UNLESS OTHERWISE AUTHORIZED, BEACH EVENTS OR COMMERCIAL ACTIVITIES MAY NOT BE SCHEDULED BETWEEN THE HOURS OF 8:30 AM AND 5:00 PM JUNE 15 THROUGH SEPTEMBER 15. ALL EVENTS OR ACTIVITIES SHALL END BY 10:00 PM.
12. BEACH EVENT OR COMMERCIAL ACTIVITY APPLICATIONS SHALL BE SUBMITTED TO THE TOWN ADMINISTRATOR FOR FINAL APPROVAL OR DENIAL ONLY AFTER SIGNED APPROVAL FROM THE POLICE CHIEF, BEACH MANAGER, FIRE CHIEF (IF APPLICABLE), HEALTH INSPECTOR (IF APPLICABLE) AND PARK AND RECREATION

DIRECTOR (IF APPLICABLE). PERMIT MUST BE AVAILABLE FOR INSPECTION BY LAW ENFORCEMENT PERSONNEL AS IDENTIFIED IN SECTION V (3).

13. A COVER LETTER EXPLAINING THE PURPOSE OF THE BEACH EVENT OR COMMERCIAL ACTIVITY SHALL BE SUBMITTED WITH THE APPLICATION.
14. APPLICATIONS SHALL BE SUBMITTED AT LEAST TWO (2) WEEKS PRIOR TO THE PROPOSED BEACH EVENT OR COMMENCEMENT OF COMMERCIAL ACTIVITY. DEPENDING ON CIRCUMSTANCES OR AVAILABILITY, THIS MAY BE WAIVED AT DISCRETION OF TOWN ADMINISTRATOR OR DESIGNEE.
15. THE TOWN ADMINISTRATOR IN CONSULTATION WITH THE BOARD OF SELECTMEN AND THE BEACH MANAGEMENT ADVISORY COMMITTEE SHALL PROMULGATE APPLICATION FORMS AS WELL AS A LIST OF DESIGNATED BEACH AREAS UPON WHICH BEACH EVENTS MAY BE PERMITTED.
16. ANY REGULAR ANNUAL COMMERCIAL ACTIVITIES, OTHER THAN FOOD-RELATED SOCIAL BEACH EVENTS (I.E. SURFBOARD RENTALS) SHALL REQUIRE A NEW APPLICATION, APPROVAL AND PERMIT FEE FOR EACH CALENDAR YEAR.

III. FIRES

1. THERE ARE NO "OPEN-AIR" FIRES ALLOWED EXCEPT AS ARE SUBJECT TO THE RESTRICTIONS, LIMITATIONS AND EXCEPTIONS OF M.G.L. C. 48, S. 13.
2. COOKING GRILLS OR FIRES THAT COMPLY WITH M.G.L. c. 48, s. 13 SHALL BE PLACED A MINIMUM OF TWENTY-FIVE (25) FEET FROM ANY BEACH GRASS OR VEGETATION AND SHALL NOT BE PLACED ON OR IN ANY DUNE AREA.
3. ALL FIRES SHALL BE COMPLETELY EXTINGUISHED AFTER USE AND ALL CONTENTS AND FIRE DEBRIS SHALL BE THOROUGHLY DOUSED AND REMOVED FROM THE BEACH. BURYING CHARCOAL OR OTHER FIRE DEBRIS ON THE BEACH IS PROHIBITED.
4. NO GLASS, ALUMINUM OR OTHER NON-FLAMMABLE MATERIAL SHALL BE PLACED OR DISPOSED OF IN ANY FIRE.

IV. MOTOR VEHICLE OPERATION AND USE

IT SHALL BE A VIOLATION OF THESE REGULATIONS FOR ANY PERSON TO USE OR OPERATE A MOTOR VEHICLE, REGISTERED OR OTHERWISE, ON ANY BEACH ON NANTUCKET:

1. IN EXCESS OF TWENTY (20) MILES PER HOUR;
2. IN EXCESS OF FIVE (5) MILES PER HOUR WITHIN ONE HUNDRED (100) YARDS OF A PEDESTRIAN;

3. BETWEEN THE HOURS OF 9:00 AM AND 5:00 PM ON ANY LIFEGUARDED BEACH OR OTHER BEACH DULY POSTED WITH SUCH TIME LIMITS;
4. IN ANY AREA MARKED AS A NESTING SITE, WILDLIFE PROTECTION AREA OR REFUGE OR MARKED AS A BEACH OR DUNE RESTORATION AREA OR SO AS TO HARASS BIRDS;
5. ON A PRIMARY COASTAL BANK OR DUNE OR IN AREAS OF BEACH GRASS AT ANY TIME, EXCEPT OVER CLEARLY ESTABLISHED AND REGULARLY TRAVELED MOTOR VEHICLE WAYS;
6. WITHOUT A VALID BEACH STICKER PROPERLY DISPLAYED ON THE VEHICLE;
7. IN ANY AREA PROPERLY POSTED AS "PRIVATE PROPERTY" OR "NO TRESPASSING".

V. **BEACH ACTIVITIES ADVERSE TO FEDERALLY PROTECTED BREEDING HABITAT**

1. NO PERSON WITHIN THE TERRITORIAL LIMITS OF THE TOWN SHALL USE, OPERATE OR OTHERWISE ALLOW THE USE OR OPERATION OF ANY KITEBOARD, KITE, OR OTHER AIRBORNE OBJECT OTHER THAN AIRCRAFT, IN ORDER TO PREVENT CONFUSION AS A PREDATOR TO ANY NESTING, TERRITORIAL ADULT OR UNFLEDGED JUVENILE ENDANGERED BIRD SPECIES, IN, OVER, OR UPON THE AREAS POSTED WITH SIGNAGE AS BIRD NESTING AREAS, DURING THE PERIOD OF APRIL 1 – AUGUST 31, IN ACCORDANCE WITH SECTION III, PARAGRAPH 7 OF THE "GUIDELINES FOR MANAGING RECREATIONAL ACTIVITIES IN PIPING PLOVER BREEDING HABITAT ON THE U.S. ATLANTIC COAST TO AVOID TAKE UNDER SECTION 9 OF THE ENDANGERED SPECIES ACT."
2. ALL PERSONS ARE PROHIBITED FROM ALLOWING AT ALL TIMES FROM APRIL 1 TO AUGUST 31 ANY NONHUMAN ANIMALS OR REPTILES SUCH AS PETS, INCLUDING DOGS, HORSES, CATTLE, CATS AND OTHER PET LIFE FORMS TO ENTER UPON, ROAM, OR OTHERWISE HAVE ACCESS TO THE AREAS POSTED WITH SIGNAGE AS BIRD NESTING AREAS, AND ALL SUCH LIFE FORMS MUST BE CONFINED IN CAGES OR TANKS, LEASHED, HALTERED, TETHERED, OR BRIDLED AND FIRMLY UNDER CONTROL AND NOT FREE TO ACCESS ANY SUCH POSTED NESTING AREA, IN ACCORDANCE WITH SECTION III, PARAGRAPH 6 OF THE "GUIDELINES FOR MANAGING RECREATIONAL ACTIVITIES IN PIPING PLOVER BREEDING HABITAT ON THE U.S. ATLANTIC COAST TO AVOID TAKE UNDER SECTION 9 OF THE ENDANGERED SPECIES ACT."
PLEASE NOTE THE TOWN OF NANTUCKET'S LEASH LAW, CHAPTER 55-4D OF THE TOWN CODE.
3. EXCEPT AS MAY OTHERWISE BE ALLOWED OR PERMITTED BY LAW, NO FIREWORKS, EXPLOSIVE DEVICE OR FLARE SHALL BE IGNITED, LIT, ENERGIZED OR FIRED, ANYWHERE IN, ON, OVER OR UPON ANY BEACH AREA DESIGNATED BY SIGNAGE AS A BIRD NESTING AREA DURING THE PERIOD SUCH SIGNS ARE IN

PLACE, IN ACCORDANCE WITH SECTION III, PARAGRAPH 8 OF THE "GUIDELINES FOR MANAGING RECREATIONAL ACTIVITIES IN PIPING PLOVER BREEDING HABITAT ON THE U.S. ATLANTIC COAST TO AVOID TAKE UNDER SECTION 9 OF THE ENDANGERED SPECIES ACT."

PLEASE NOTE UNAUTHORIZED FIREWORKS ARE ILLEGAL IN THE COMMONWEALTH OF MASSACHUSETTS.

4. EXCEPT FOR VEHICLES ENGAGED IN ACTUAL NECESSARY EMERGENCY RESPONSE FOR THE PUBLIC SAFETY OR THE SECURITY OF THE NATION, ALL TWO, THREE, OR FOUR-WHEELED VEHICLES ARE PROHIBITED FROM ENTERING, OPERATING, OR BEING PRESENT WITHIN ALL POSTED NESTING HABITAT IN ACCORDANCE WITH SECTION III, PARAGRAPH 12 OF THE "GUIDELINES FOR MANAGING RECREATIONAL ACTIVITIES IN PIPING PLOVER BREEDING HABITAT ON THE U.S. ATLANTIC COAST TO AVOID TAKE UNDER SECTION 9 OF THE ENDANGERED SPECIES ACT."

PLEASE NOTE THE TOWN OF NANTUCKET'S BYLAW CHAPTER 56-6A ON USE OF ALL TERRAIN VEHICLES.

VI. PENALTIES AND ENFORCEMENT

1. ANY VIOLATION OF THESE REGULATIONS SHALL RESULT IN A FINE OF \$300.00 AND REVOCATION OF THE PERMIT.
2. THESE REGULATIONS MAY BE ENFORCED BY NON-CRIMINAL DISPOSITION IN ACCORDANCE WITH CHAPTER 1-2 THROUGH 1-6 OF THE CODE OF NANTUCKET AND MGL CHAPTER 40, SECTION 21D.
3. ENFORCING PERSONS SHALL BE: ANY POLICE OFFICER, BEACH MANAGER, LAND BANK PROPERTY MANAGER, TOWN BIOLOGIST, MARINE SUPERINTENDENT, PARK & RECREATION DIRECTOR, ANY FIREFIGHTER, ANY DEPUTY SHERIFF.

APPENDIX "C"

Town of Nantucket's Code Ch. 122, Taking of Shellfish

Chapter 122

SHELLFISH, TAKING OF

§ 122-1.	Permit required.	§ 122-10.	Revocation or suspension of permit.
§ 122-2.	Permit conditions.	§ 122-11.	Family permits; fee.
§ 122-3.	Period of permit.	§ 122-12.	Rules and regulations regarding scallops.
§ 122-4.	Authorization of Clerk.	§ 122-13.	Restriction of scallop-taking areas.
§ 122-5.	Establishment of limits.	§ 122-14.	Violations and penalties.
§ 122-6.	Methods of taking.	§ 122-15.	Authorization of Selectmen to enforce.
§ 122-7.	Jet pumps prohibited.	§ 122-16.	Enforcement.
§ 122-8.	Days and hours to be fixed.		
§ 122-9.	Inspection; revocation upon refusal.		

[HISTORY: Adopted by the Special Town Meeting of the Town of Nantucket 6-16-1975 by Art. 7. Amendments noted where applicable.]

§ 122-1. Permit required.

No person without a permit from the Selectmen shall take any shellfish from the waters of the Town of Nantucket.

§ 122-2. Permit conditions.

No person shall receive a permit from the Selectmen for the taking of shellfish unless under the following conditions, viz (for commercial use):

- A. The applicant shall be at least 14 years of age.
- B. The applicant must live in the Town of Nantucket for at least one year and maintain a domicile therein.
- C. The applicant shall pay as a fee for said permit a sum to be set by the Selectmen from time to time, except that there shall be no fee charged to any resident applicant over 60 years of age who does not hold a state commercial permit and agrees not to sell his/her catch in the commercial market. The Selectmen may set fees for commercial and family licenses. **[Amended 4-13-1998 ATM by Art. 46, approved 7-31-1998]**
- D. The applicant shall complete the permit application and submit it to the Harbor and Shellfish Advisory Board for its review, together with any additional information or documentation requested by it to demonstrate eligibility. The applicant shall have the burden of demonstrating eligibility to the satisfaction of the aforementioned Board. Upon receipt of a completed application, the Board shall make a recommendation to the

Selectmen with respect to the issuance of the permit. This shall be done within 30 business days. [Added 4-6-1982 ATM by Art. 35, approved 10-4-1982]

- E. Applications for commercial scalloping permits shall be filed between January 1 and March 31 for the season beginning the following November 1. Late applications shall be subject to the following penalty: the permit shall be effective either as of December 1, or as of the 30th day after the date of application, whichever is later. [Added 4-8-1996 ATM by Art. 45, approved 7-15-1996]

§ 122-3. Period of permit.

Permits shall be issued for a period of one year from April 1.

§ 122-4. Authorization of Clerk.

The Town Clerk or other person designated by the Selectmen shall be authorized to issue and sign all permits.

§ 122-5. Establishment of limits.

The Selectmen shall, from time to time, establish limits of takings for commercial license holders and for family license holders and shall fix the same limits having due regard and consideration for the then-current supply and conditions for the propagation of shellfish.

§ 122-6. Methods of taking.

No person shall take scallops from the waters of Nantucket by any other method than hands, dredges, rakes and poles, and no person shall take shellfish other than scallops from the waters of Nantucket by any other method than hands, rakes and poles, except by special permission, which shall be designated on the permit and on the record maintained by the Board of Selectmen.

§ 122-7. Jet pumps prohibited.

No person shall take clams in the waters of Nantucket by the method known as "jet pumps."

§ 122-8. Days and hours to be fixed.

The Selectmen shall, from time to time, fix the days and hours during which shellfish may be taken and shall fix the same having regard for the supply of and conditions for the propagation of shellfish and may establish places for landing shellfish taken under a commercial license.

§ 122-9. Inspection; revocation upon refusal.

No person shall be granted any such permit for the taking of eels, sea worms and any and all kinds of shellfish unless he agrees (and the acceptance of such permit shall constitute such agreement) that he will, and that any other person who, for the time being, has or shall have in his custody or possession any building, boat, vehicle, barrel, box, tub, crate or any other vessel or receptacle, containing or suitable for containing shellfish, and belonging to him or being under his control, shall, at any time or place, when requested so to do by either of said Selectmen or by their authorized agent or by any Constable or Fish Warden of said Town, open any such building, vehicle, barrel, box, crate or other vessel or receptacle and fully expose to them or either of them the contents thereof for inspection; and if such holder of a permit or such other person as aforesaid, when so requested, refuses or neglects so to do, said Selectmen may revoke said permit or suspend the same for any stated time, at their discretion.

§ 122-10. Revocation or suspension of permit.

If any person having such permit for the taking of shellfish violates any law of the commonwealth or any regulation made by said Selectmen relating to shellfish or shellfisheries in said Town, said Selectmen may revoke said permit or suspend the same for any stated time, at their discretion.

§ 122-11. Family permits; fee.

- A. Family permits shall be issued for a period of one year from April 1 at a fee to be set by the Selectmen and shall be good for the taking of eels, sea worms and any and all kinds of shellfish and shall not allow the taking of shellfish of a size or at a season prohibited by law and shall be subject to such other rules and regulations as the Selectmen shall set from time to time.
- B. Notwithstanding the foregoing, nontaxpaying, nonresident family permits shall be issued for a fee of not less than \$25.

§ 122-12. Rules and regulations regarding scallops.

Notwithstanding any other rule or regulation established by the Board of Selectmen, scallops may only be taken from the waters of Nantucket subject to regulations consistent with the following further regulations:

- A. Commercial scallop season shall start November 1 and end March 31.
- B. Scallops may be taken under a commercial license daily except Sunday.
- C. Transfer of scallops from one commercial boat to another is prohibited, and it is unlawful to pick up another person with more than 3 1/2 bushels of scallops in the commercial boat.
- D. There shall be a limit of two commercial scallop licenses per boat. This subsection shall take effect for the 1995 - 1996 scalloping season. [Added 4-12-1994 ATM by Art. 67, approved 4-29-1994; amended 4-10-1995 ATM by Art. 69, approved 7-31-1995]

§ 122-13. Restriction of scallop-taking areas.

Wading for scallops by the family permit holder shall be prohibited by the Shellfish Warden or Constable if he is of the opinion that the area being fished is a seed area.

§ 122-14. Violations and penalties.

- A. Whoever takes any shellfish from the waters of said Town, except for family use as aforesaid or except as otherwise allowed by law, shall be liable to a penalty of not less than \$10 nor more than \$50.
- B. Whoever takes any shellfish from the waters in said Town without such permit, except for family use as aforesaid, or contrary to the provisions of such permit shall be liable to a penalty of not less than \$10 nor more than \$50.
- C. Any person taking scallops other than adult scallops from the flats or tide waters of said Town shall be liable to a fine of \$25. [Amended 4-13-1998 ATM by Art. 46, approved 7-31-1998]
- D. No person is allowed by law to take from the waters of said Town or to sell or to offer for sale or to have in his possession any quahogs measuring not less than two inches across, clams measuring not less than two inches across and oysters measuring not less than three inches across or along the widest part. Any person violating this provision of law shall be liable to a fine of not less than \$10 and not more than \$50. [Amended 4-6-1982 ATM by Art. 35, approved 10-4-1982]
- E. Any holder of a commercial license who shall violate these rules and regulations or any other rule or regulation established hereunder, in addition to any other penalties, shall have said license or permit suspended by the Shellfish Warden for not less than one day for a first offense and not less than five days for any succeeding offense.

§ 122-15. Authorization of Selectmen to enforce. [Added 4-6-1982 ATM by Art. 35, approved 10-4-1982]

The Selectmen shall have authorization to control, regulate or prohibit the taking of eels and any and all kinds of shellfish and sea worms within the Town and County of Nantucket.

§ 122-16. Enforcement. [Added 4-6-1987 ATM by Art. 33, approved 7-15-1987]

The Shellfish Warden and his deputies are hereby designated enforcing persons hereunder. The enforcing person may, as an alternative to initiating criminal proceedings, proceed to a noncriminal disposition of any violation of this chapter pursuant to the procedures set forth in MGL c. 40, § 21D.

APPENDIX "D"

Town of Nantucket's Code Ch. 137, Wharves and Waterways

Chapter 137

WHARVES AND WATERWAYS, TOWN

- | | |
|---|---|
| § 137-1. Definitions. | § 137-12. Waterskiing. |
| § 137-2. Town wharf use regulations. | § 137-13. Floats. |
| § 137-3. Additional use regulations. | § 137-14. Occupancy of vessels. |
| § 137-4. Mooring regulations. | § 137-15. Fish cars. |
| § 137-5. Mooring permits. | § 137-16. Speed. |
| § 137-6. Hazards to navigation. | § 137-17. Compatibility with other regulations. |
| § 137-7. Abandonment of vessels, moorings, etc. | § 137-18. Violations and penalties. |
| § 137-8. Diving from wharves prohibited. | § 137-19. Complaints. |
| § 137-9. Underwater divers. | § 137-20. Enforcement. |
| § 137-10. Town launching ramps. | § 137-21. Personal watercraft. |
| § 137-11. Pollution. | § 137-22. Exemptions. |

[HISTORY: Adopted by the Annual Town Meeting of the Town of Nantucket 4-5-1983 by Art. 28, approved 5-9-1984. Amendments noted where applicable.]

§ 137-1. Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

DIVER — Includes swimmers using fins and/or masks and/or snorkel tubes or self-contained underwater breathing devices and may include those diving without aids, where the circumstances are appropriate.

GRAY WATER — In Nantucket waters as defined above, gray water is a vessel's water/soap discharge, which is derived from galley, bath, showers, dishwashing and laundry equipment.
[Added 4-15-2003 ATM by Art. 62, approved 6-30-2003]

HARBOR MASTER (MARINE SUPERINTENDENT) — Chief Harbor Master, duly empowered by the General Laws of the commonwealth.

NANTUCKET WATERWAYS or WATERWAYS — Includes all of the navigable waters within the boundaries of the Town, which shall include all harbors, rivers, bays or ponds, including waterways which, from time to time, may be temporarily nonnavigable by reason of low tides, drought or seasonal weather and water conditions.

PERSONS — Includes individuals, corporations, societies, associations, partnerships and trusts.

RESCUE PERSONNEL — State and federal law enforcement officials, Nantucket Fire Department, Police Department, Marine and Coastal Resources Department personnel and

Nantucket Sheriff's Department Dive Team members. [Added 4-10-2000 ATM by Art. 56, approved 8-2-2000]

§ 137-2. Town wharf use regulations.

- A. Except in an emergency, no boats shall be made fast to any of the Town's wharves, floats or piers without the permission of the Harbor Master.
- B. There shall be no scaling or cleaning of fish or shellfish on any of the Town's wharves, ramps, floats or piers from Brant Point inward of Nantucket Harbor or in Hither Creek from Jackson's Point inward.
- C. No person shall leave any boat or vessel, fishing equipment, fish or any other personal property upon Town landing places, floats, wharves or pier for longer than is necessary in the act of loading or unloading the same to and from boats or vehicles.
- D. The Town shall not be responsible for any loss or damage to boats or vessels at the Town wharves, floats, pier or moorings. Owners will be held responsible for damage caused by them or their vessels to structures and pilings and related facilities owned by the Town.
- E. No warp or line shall be passed across the channels or any dock so as to obstruct or interfere with vessels navigating in the area.

§ 137-3. Additional use regulations.

- A. The Board of Selectmen shall have the power to establish standard contracts and contract terms and fees for the rental of wharves, slips, docks and moorings.
- B. Tug boats, cargo boats and any other boats used for commercial purposes (other than charter boats and commercial fishing boats) shall not be permitted to moor at the Nantucket Town pier or wharves in Madaket, except by permission of the Board of Selectmen or Harbor Master, as appropriate.
- C. All boats or vessels using the Town wharves shall observe all police, fire, health and sanitary regulations of the Town, and the owners or operators of such boats shall not permit acts contrary to good order, public safety or public health, including public profanity or obscene language or indecent exposure. Unnecessary noise, loud talking or playing of musical instruments between the hours of 11:00 p.m. and 8:00 a.m. is not permitted. No person upon such boats shall throw garbage, paper, refuse or debris of any kind into the harbor.
- D. No vessel or watercraft of any kind whatsoever which is unseaworthy or in badly deteriorated condition or which is likely to injure a person or damage private or public property or which might become a menace to navigation shall be permitted to moor in Town waters or tie up at the Town wharves. The Harbor Master may determine whether any watercraft is unseaworthy, dangerous or in a badly deteriorated condition to render it unsafe. Upon making such a determination, the Harbor Master shall give notice to the

owner, in writing, of such determination as follows: (a) if the owner is known, then by mail or hand-delivery; (b) if the owner is unknown, then by publication in a newspaper of general circulation within the Town. If, after 10 days following the publication or written notice as provided in the preceding sentence, the owner has failed to remedy the conditions leading to the determination, the Harbor Master may take appropriate steps for

removal of same. At any time, the Harbor Master, notwithstanding the foregoing, may act immediately in the event of an emergency to take appropriate steps for immediate removal of any watercraft that presents an eminent threat to life or property; provided, however, that as soon as practicable after taking such action, notice of the action taken shall be provided in the manner set forth in this section. If, after 90 days from the date of notice or publication, the owner of the removed vessel shall fail to reimburse the Town for removal costs, the vessel may then, at the discretion of the Harbor Master, be sold at public auction to cover the costs of removal. If said auction produces surplus proceeds after payment of the costs of removal, said surplus shall be held in a separate account and be paid over to the owner upon proof of ownership. This shall not be deemed to apply to vessels in immediate distress as a result of current emergencies. [Amended 4-12-1999 ATM by Art. 69, approved 8-10-1999]

- E. Advertising signs on vessels or wharves will not be permitted at any Town-owned wharf, ramp or pier.
- F. Repairing (other than emergency and maintenance repairs of minor nature), overhauling and/or remodeling of any watercraft at Town wharves or ramps is prohibited.
- G. All persons liable for injuring or damaging Town-owned wharves and properties shall forthwith reimburse the Town in an amount equal to the cost of repairing (new for old) such damage, as determined by the Marine Department or Board of Selectmen.
- H. Commercial or business use of any vessel or watercraft docked at any Town-owned dock, pier or wharf is prohibited, except:
 - (1) Charter or commercial fishing boats; or other uses defined as "water dependent" within the meaning of MGL c. 91, § 1, provided that such uses and the vessels employed in such uses are first allocated dock space in accordance with regulations to be adopted by the Board of Selectmen after a public hearing. [Amended 4-10-2000 ATM by Art. 57, approved 8-2-2000]
- I. Effective May 1, 1990, no vessel or watercraft of any kind whatsoever which is painted with paints containing butyltin compounds shall be permitted to moor in Town waters or tie up at the Town wharves, whether private or public. [Added 4-10-1989 ATM by Art. 117, approved 7-24-1989]

§ 137-4. Mooring regulations.

- A. Any person wishing to moor a boat or vessel in any harbor or waters within the Town of Nantucket must first obtain permission from the Harbor Master to place and maintain such a mooring.
- B. All moorings must be registered and no mooring shall be placed or maintained in any of the waters of the Town without the approval of and registration by the Marine Department. Only vessels owned by the person holding the permit or lawfully in the possession of persons lawfully entitled to possession and use of a boat for the season for which a mooring is granted, and displaying the proper sticker, will be allowed to fasten to the mooring. The permit may be issued for one or more vessels under common

control, but only one vessel can be fastened to a mooring at any time. Subletting of moorings is prohibited. [Amended 11-13-1990 STM by Art. 48, approved 3-19-1991; 4-10-2002] ATM by Art. 50, approved 7-31-2002]

- C. All applications for a permanent mooring space in any Nantucket harbor or waterway shall be submitted in writing on an approved form to the Marine Department. At the time of application if the applicant does not own a boat or is not a person lawfully entitled to possession and use of a boat for the season for which a mooring is granted, no mooring permit will be issued. If an individual holds a valid mooring permit and sells his/her rights to the boat with the intention of replacing it, he/she will have 12 months to replace the boat. If, at the end of 12 months, the boat has not been replaced, the mooring permit shall be forfeited. [Amended 4-10-2002 ATM by Art. 50, approved 7-31-2002]
- D. No boat shall use a mooring within the Town unless the mooring meets the following minimum standards:

Length of Boat (feet)	Mushroom Mooring (pounds)	Concrete Block Mooring
Under 14	50	
15 to 18	75	
19 to 22	100	Subject to individual approval
23 to 28	150	
29 to 32	200	
33 to 50	500*	
51 to 65	700	
Over 65	Subject to ruling by Harbor Master	

*NOTE: Three hundred to 400 pounds may be used where holding ground warrants, subject to Harbor Master approval.

- E. Scope and size of chain on moorings. Length of mooring chain shall be at least the vertical height above the sea bottom to four feet above mean high water. Moorings for boats up to 26 feet in length shall have a chain of 3/8 inch or larger; moorings for boats from 26 feet to 40 feet shall have a chain of 1/2 inch or larger; and mooring for boats from 40 feet or larger in overall length shall use a chain of 5/8 inch. Maximum length of chain shall be no more than 2.5 times the maximum depth of the water, except where the Harbor Master determines otherwise. The location of all moorings shall be determined from time to time by the Harbor Master. No mooring shall be located in the main stream or any channel of any of the harbors of the Town, unless, in the opinion of the Harbor Master, the particular circumstances require it. Moorings shall be located so that vessels lying on them shall not block any channel or approach to wharves or other moorings in the vicinity or create any other hazard to navigation. If used, pennant length shall be twice the distance from the bow chock to the water line. Pennant line size shall be 3/8

inch for boats up to 10 feet, 7/16 inch for boats 21 feet to 30 feet, 1/2 nylon for boats 31 feet to 40 feet.

- F. Any mooring may be inspected and its owner may be ordered by the Harbor Master to remove or relocate it whenever, in the judgment of the Harbor Master, the safety of other vessels or the optimum use of the area requires such action. The expense of such removal or relocation shall be the responsibility of the owner. Except in emergency situations, an owner shall have at least 14 days to relocate or remove a mooring when so ordered by the Harbor Master. All private moorings shall be removed from any shellfish areas prior to October 15. [Amended 5-4-1993 ATM by Art. 52, approved 5-24-1993]
- G. Each mooring buoy, both summer and winter, shall be painted white and have a minimum one-inch blue band visible above the water and shall be marked with numbers assigned by the Harbor Master Department. The numbers and/or letters shall be a minimum of three inches in height and be clearly visible at all times. Spar buoys shall be upright at all times and not less than 40° at any period of tide and not less than 18 inches exposed. Mooring buoys shall be of customary shape and materials, and the Harbor Master may order the removal of any buoys deemed to be inappropriate in form or appearance. A mooring permit sticker assigned by the Harbor Master shall be affixed to the port side of the bow or the port side of the mast on classic-design wooden sailboats. The number will correspond with the number on the mooring float. [Amended 11-13-1990 STM by Art. 48, approved 3-19-1991; 5-4-1993 ATM by Art. 52, approved 5-24-1993]
- H. Any existing mooring in place prior to April 5, 1983, shall be allowed to remain in place, provided that it meets the inspection criteria defined above. The owner of said mooring shall be allowed to upgrade to any new standards as defined by this chapter. Nothing in the Code of the Town of Nantucket shall affect the ability, power and duty of the Town and any other governmental entity to relocate moorings for the purpose of opening or maintaining a channel or main stream or for the Town and/or any other governmental entity to exercise rights, if any, to preserve and protect the public's right of navigation. [Amended 4-12-1999 ATM by Art. 69, approved 8-10-1999]
- I. A person who is neither a resident nor a taxpayer of the Town of Nantucket and who did not have permission for a mooring from the Harbor Master on January 1, 1989, shall not be permitted to place and maintain a mooring in any harbor or waters within the Town of Nantucket. [Added 4-10-1989 ATM by Art. 118, approved 7-24-1989]

§ 137-5. Mooring permits.

- A. Permits for the use of mooring spaces shall be for a period of one year, or any fraction thereof, terminating on December 31 of each year, unless revoked by the Harbor Master for good cause, and shall be renewable annually for one year. Payment for mooring permits shall be made in full before the permit will be issued. [Amended 4-10-2002 ATM by Art. 49, approved 7-31-2002]
- B. In areas where no additional spaces are available, applicants therefor shall be placed on a continuing waiting list maintained at the office of the Harbor Master. The waiting list shall be a public document and shall be posted conspicuously. The waiting list shall

include all applicants for moorings in chronological order of application, regardless of the applicants' preferences for particular mooring locations. The person at the top of the waiting list shall have priority to obtain the next available location, but may waive the right to the next available location if it is not in a place convenient for him or her without losing his or her place at the top of the waiting list. In the event of a waiver, the next person on the list shall be offered the location, and if that person waives the right to the location, the next successive person shall be offered the location, et cetera, until someone in succession on the list takes it and registers a mooring there. Notice to the person entitled to the next available mooring shall be in writing or by any reasonable method.

- C. All boats 10 feet or under, without power, shall be exempt from this section.

§ 137-6. Hazards to navigation.

Moorings, buoys, lobster pots, crab pots, eel pots or other obstacles that will cause or create a hazard to navigation shall not be placed in areas usually used as channels for navigation. In cases of doubt, the Harbor Master shall be consulted in advance before setting them in place. Hazards to navigation shall be subject to summary removal by the Harbor Master, without notice or hearing, and neither the Harbor Master nor the Town shall be responsible for any losses to the owners thereof caused by such removal.

§ 137-7. Abandonment of vessels, moorings, etc.

- A. Except in a maritime emergency currently affecting those aboard or others in the immediate vicinity, no vessel, mooring or other object shall be deliberately abandoned, sunk or otherwise placed in waters within the Town of Nantucket where it may constitute a hazard. Any abandoned, sunk or improperly placed vessel, mooring or object so found and any vessel otherwise improperly secured, swamped, sunk, washed ashore or found in a restricted area may be ordered by the Harbor Master to be removed or relocated. The Harbor Master shall give notice to the owner, in writing, of his order as follows: (a) if the owner is known, then by mail or hand-delivery; (b) if the owner is unknown, then by publication in a newspaper of general circulation within the Town. If, after 10 days following the publication or written notice as provided in the preceding sentence, the owner has failed to remedy the conditions leading to the order, the Harbor Master may take appropriate steps for removal or relocation of same. At any time, the Harbor Master, notwithstanding the foregoing, may act immediately in the event of an emergency to take appropriate steps for immediate removal or relocation of any watercraft that presents an imminent threat to life or property; provided, however, that as soon as practicable after taking such action, notice of the action taken shall be provided in the manner set forth in this section. If, after 90 days, the owner of the removed vessel shall fail to reimburse the Town for removal or relocation costs, the vessel may then, at the discretion of the Harbor Master, be sold at public auction to cover the costs of removal or relocation. If said auction produces surplus proceeds after payment of the costs of removal, said surplus shall be held in a separate account and be paid over to the owner upon proof of ownership. [Amended 4-12-1999 ATM by Art. 69, approved 8-10-1999]

- B. Nothing in the above shall be deemed to prevent emergency action by the Harbor Master with or without notice to the owner if, in his judgment, such action is necessary.

§ 137-8. Diving from wharves prohibited.

There shall be no diving from any public wharves, piers or from any bulkheads abutting any waterways of the Town.

§ 137-9. Underwater divers.

Divers using fins and/or masks and/or snorkel tubes or self-contained underwater breathing devices, except within designated and marked swimming areas, shall:

- A. While diving, display a standard diver's flag consisting of a red field with a white diagonal stripe of a size not less than 12 inches by 15 inches.
- B. Display such flag prominently on a float or other similar device which shall hold such flag upright and shall extend vertically a minimum distance of three feet from the surface of the water so as to be visible to passing boats.
- C. Stay within 100 feet of the aforementioned flag or move the flag on said float or device with him while he is submerged and return to the surface within 100 feet of said flag.
- D. No diver shall operate in properly marked or customary boat channels unless, for special purposes, permission is granted in advance by the Harbor Master. The diver shall have the responsibility to inquire of the Harbor Master about the location of customary boat channels if he is in doubt about the situation.
- E. On approaching a diver's flag, all boats must proceed with caution and shall remain outside a one-hundred-foot radius from said diver's flag.
- F. Divers operating at night shall be equipped with and use appropriate underwater lights, in addition to displaying the aforementioned diver's flag.

§ 137-10. Town launching ramps.

- A. The usage of Town launching ramps shall be controlled from time to time by rules established by the Board of Selectmen and posted. These rules may include control of temporary parking of boat trailers and motor vehicles at or near the approach to each ramp.
- B. With the exception of charter or commercial fishing boats or a storm/repair emergency, persons using Town ramps for hauling of larger boats requiring cradles shall do so only with permission, in advance, in writing, from the Harbor Master. Cradles and/or boats shall not remain on the Town ramps for more than one hour.

§ 137-11. Pollution. [Amended 5-17-1988 ATM by Art. 103, approved 9-28-1988; 4-10-1989 ATM by Art. 112, approved 7-24-1989; 5-4-1993 ATM by Art. 52, approved 5-24-1993; 4-12-1999 ATM by Art. 69; approved 8-10-1999; 4-10-2000 ATM by Art. 55, approved 8-2-2000; 4-30-2003 ATM by Art. 63, approved 8-27-2003]

- A. The dumping or discharge of oil, sewage, dead fish, garbage, waste, rubbish or debris of any kind anywhere so as to pollute the waters, shores or beaches of the Town is prohibited. The use of on-board laundry or mechanical dishwashing machinery with over-board discharge is also prohibited in Nantucket waterways as defined in § 137-1. In support of the August 17, 1992, federal designation of Nantucket waters as a federal no-discharge zone, the discharge from all vessels of any sewage, whether treated or not, into such waters is prohibited. By May 1, 1990, all commercial piers, private and public, shall be equipped with working pump-out facilities. Facilities at each pier shall be at least adequate to fully service the maximum number of maximum-sized vessels able to tie up at that pier. In addition, the facility at the Town Pier in Nantucket Harbor shall be adequate to fully service all vessels both moored in the harbor and tied up at that pier.
- B. Any violations of this section will incur penalties of \$300. Each day or part thereof during which a discharge or dumping occurs shall constitute a separate violation. Subsequent violations may result in a denial of use of Town of Nantucket-owned and/or -operated port facilities or moorings. Any such denial shall be issued by the Harbormaster, after a hearing, subject to the right of the offender to an appeal to the Board of Selectmen, or, if applicable to the Department of Environmental Protection, pursuant to MGL c. 91, § 10A.

§ 137-12. Waterskiing.

- A. Waterskiing is prohibited on all waterways of the Town, except outside of navigation channels and swimming and mooring areas on Nantucket Sound, Polpis Harbor and Madaket Harbor. Waterskiers and boats towing them shall not operate in or across navigation channels at any time.
- B. Waterskiing, as hereinbefore permitted, is subject to the provisions of the General Laws of the Commonwealth of Massachusetts and to the further restriction that there shall be no waterskiing within 400 feet of bathers, divers, piers, wharves, floats, other boats or of any shore. "Waterskiing" shall include motor-propelled surfboards and water bikes and the towing or manipulation of a surfboard or other similar device behind a motorboat. Waterskiing in approved areas shall only be done during daylight hours. [Amended 4-10-1989 ATM by Art. 110, approved 7-24-1989]
- C. Said propelled surfboards may navigate along regular channels of navigation to reach and return from open waters where they are permitted to operate but shall not interfere with the operation of other vessels.

§ 137-13. Floats.

The placement of outhauls, temporary floats and/or rafts held by anchors or bottom moorings shall be subject to written approval of the Harbor Master. All such outhauls, floats or rafts

will be identified with registration numbers assigned by the Harbor Master. Numbers assigned shall be permanently affixed to the land and seaward side of the float or raft in contrasting color and shall be a minimum of three inches in size.

§ 137-14. Occupancy of vessels. [Amended 5-4-1993 ATM by Art. 52, approved 5-24-1993]

No vessel, while said vessel is used as a residence, may remain overnight or be used as a residence in Nantucket harbors unless equipped with sewage holding tanks. All mooring permit applicants must provide the Harbor Master with a local contact who, within six hours' notice from the Harbor Master, will be available to aid the Harbor Master in the event of an emergency concerning the applicant's boat.

§ 137-15. Fish cars.

All fish cars in navigable waters of the Town shall be subject to the approval of the Harbor Master and shall be plainly marked according to law so that they shall be visible at all times. Stakes shall not be driven to be used for mooring any vessel or boat or for tying up any fish car, unless, in the judgment of the Harbor Master, their use will not be an obstruction. All cars shall be attached to a land point so that the attaching line does not exceed 10 feet beyond the mean low waterline. The Harbor Master may terminate any permission previously granted where, in his judgment, such termination is appropriate.

§ 137-16. Speed. [Amended 5-4-1993 ATM by Art. 52, approved 5-24-1993]

Within the outermost end of Jackson's Point inward and through the area defined within a line drawn from Coate Point to the West Jetty on a two-hundred-seventy-degree magnetic heading, marked by an appropriate informational buoy and signs maintained by the Town, with the exception of designated areas for waterskiing, vessels shall be operated at the speed of which they can maintain steerage way and create a minimum wake, and in no case shall they be operated at more than posted speed limits. This rule shall not apply to vessels engaged in emergency operations.

§ 137-17. Compatibility with other regulations.

Nothing contained herein shall be held or construed to supersede or conflict with or interfere with or limit jurisdiction of the United States government or limit or conflict with the laws and regulations of the Commonwealth of Massachusetts, except that in case of concurrent laws or regulations in any case, it shall be intended that the stricter, more restrictive rule or regulation shall apply.

§ 137-18. Violations and penalties.

Whoever violates any of the provisions of this chapter or refuses or neglects to obey the lawful and reasonable orders of those empowered to enforce the same, or resists them in the discharge of their duties, shall be fined not less than \$50 for the first violation and not more

than \$300 for each violation thereafter within the same calendar year. Where a vessel is or has been operated in violation of any provision of the chapter and the owner, operator or other responsible person cannot be found within a twenty-four-hour period or where it appears that the vessel and the person in violation will depart from the Town in order to avoid the enforcement of the penalties of this chapter, the Harbor Master may seize and hold said vessel as security and may move it to a safe place of storage, including dry land storage, until the violation has been disposed of administratively or judicially; and if a violation has been found, the costs of seizing and holding said vessel shall be assessed against the vessel, and the vessel shall be sold at public auction to pay such penalties and costs if not otherwise paid. If said auction produces surplus proceeds after payment of penalties and costs, said surplus shall be held in a separate account and be paid over to the owner of the vessel upon proof of such ownership.

§ 137-19. Complaints.

All complaints concerning the use of moorings and movements of such vessels on the waterways of the Town shall be submitted in writing to the Marine Department for its action. All complaints concerning waterway facilities, wharves, docks, ramps, dredging and related matters shall be submitted in writing to the Board of Selectmen. Neither the Harbor Master nor the Board of Selectmen shall be required to hold a hearing or take action on any matter not first submitted in writing.

§ 137-20. Enforcement. [Amended 4-6-1987 ATM by Art 32, approved 7-15-1987; 4-12-1999 ATM by Art. 69, approved 8-10-1999]

The Marine Superintendent, the Harbor Master and Assistant Harbor Masters are hereby designated enforcing persons hereunder. The enforcing person may, as an alternative to initiating criminal proceedings, proceed to a noncriminal disposition of any violation of this chapter pursuant to the procedures set forth in MGL c. 40, § 21D.

§ 137-21. Personal watercraft. [Added 4-12-1994 ATM by Art. 69, approved 4-29-1994; amended 4-10-2000 ATM by Art. 54, approved 8-2-2000; 4-10-2002 ATM by Art. 51, approved 7-31-2002]

No person shall engage in the business of renting to the public, for public operation, any personal watercraft, jet ski, surf jet, wet bike or any motorboat that uses an inboard motor powering a water jet pump or a propeller as its primary source of motive power and that is designed to be operated by a person sitting, standing or kneeling on the vessel rather than the conventional manner of sitting or standing inside a vessel within the waters of the commonwealth and within all coastal waters and inland bodies of water as lie within the limits of the Town of Nantucket without first having obtained a license to do so from the Town of Nantucket Board of Selectmen in compliance with this section and in compliance with all federal, state or local laws pertaining to their use.

A. As used in this section, the following terms shall include but are not limited to:

JET SKI — A ski propelled by machinery and designed to travel over water.

PERSONAL WATERCRAFT — A small vessel of less than 16 feet in length which uses an inboard motor powering a waterjet pump or a propeller as its primary source of motive power and that is designed to be operated by a person sitting, standing or kneeling on the vessel rather than the conventional manner of sitting or standing inside a vessel. This term includes jet skis, wet bikes and surf jets.

SURF JET — A surfboard propelled by machinery and designed to travel over water.

WET BIKE — A vessel designed to travel over water, supported by skis propelled by machinery.

- B. Subject to such approvals of the commonwealth as may be appropriate, the Board of Selectmen shall adopt rules, regulations and reasonable fees for the issuance of such licenses, renewals thereof and operation of licensees, including but not limited to:
 - (1) Adequate insurance for the protection of the public;
 - (2) An appropriately equipped chase boat required at all times;
 - (3) Personal safety equipment for the safety of users of rented equipment;
 - (4) Location of premises so as to be consistent with other water and harbor uses and with the Town's Harbor Plan;
 - (5) Loading, unloading and storage of petroleum products intended for use in personal watercraft, jet skis, surf jets or wet bikes in accordance with recommendations as may be made by the Chief of the Fire Department of the Town;
 - (6) Designated area for use consistent with navigation and other public uses;
 - (7) That if any of the rules and regulations are declared unlawful for any reason, the remaining rules and regulations shall continue in full force and effect.
- C. On land owned by the Town of Nantucket, the use of, the rental of and the operation of personal watercraft shall be prohibited.
- D. No person shall operate any personal watercraft jet ski, surf jet or wet bike within the waters comprising Nantucket Harbor, as shown on the National Oceanic and Atmospheric Administration (NOAA) navigational chart Number 13241, northerly to the end of the east and west jetties or in the established navigation lane between said jetties easterly to the Head of the Harbor, in Polpis Harbor or along any portion of the shoreline of Nantucket Harbor. Said personal watercraft shall be launched from the Children's Beach boat ramp and shall navigate through Nantucket Harbor along the most direct route as marked by buoys, to Nantucket Sound.
- E. No person shall operate any personal watercraft, jet ski, surf jet or wet bike within the waters bounded by a line drawn from "The Rock" off the "Fortieth Pole" and marked by a hazard buoy, northwesterly to the R-2 lighted bell buoy, northwesterly to the westernmost point of Muskeget Island, southeasterly to the westernmost tip of Smith's Point including the entire shorelines of Muskeget, Tuckernuck and New Smith's Point (Esther Island). Said personal watercraft shall be launched from the Walter S. Barrett and Jackson Point public access boat ramps and shall navigate through Hither Creek along

- the most direct route as marked by buoys, to the westernmost tip of Eel Point, thence north to Nantucket Sound or south to the Atlantic Ocean.
- F. No person shall operate any personal watercraft, jet ski, surf jet or wet bike within or on the waters of the great ponds or any interior body of water of less than 300 acres in size on Nantucket or Tuckernuck Islands or on New Smith's Point (Esther Island).
- G. No personal watercraft shall be transported to, or launched from, a public beach or public beach parking area, a public boat ramp or public boat ramp parking area except those named in Subsections D and E.
- H. Exemptions. In addition to the exemptions in § 137-22, personal watercraft may be operated within the waters described in Subsections D, E and F if the personal watercraft is needed for emergency purposes when there is reasonable belief that such use is necessary to protect persons, animals or property.
- I. And to authorize and direct the Board of Selectmen to take any other action necessary relating to any rules and regulations promulgated thereunder or take any other action related to the foregoing, subject to such approvals of the Commonwealth as may be required.

§ 137-22. Exemptions. [Added 4-10-2000 ATM by Art. 56, approved 8-2-2000]

Rescue personnel are exempt from § 137-21 while engaged in training exercises, emergency operations and ordinary law enforcement activities.

APPENDIX "E"

**Town of Nantucket's Code
Ch. 136, Wetlands**

Chapter 136

WETLANDS

§ 136-1.	Definitions.	§ 136-6.	Preacquisition violation.
§ 136-2.	Purpose.	§ 136-7.	Promulgation of rules and regulations.
§ 136-3.	Permit required; procedure.	§ 136-8.	Burden of proof.
§ 136-4.	Hearing; determination; enforcement orders; appeals; plan changes or modifications.	§ 136-9.	Security.
§ 136-5.	Emergency projects.	§ 136-10.	Violations and penalties; enforcement.

[HISTORY: Adopted by the Annual Town Meeting of the Town of Nantucket 4-5-1983 by Art. 29, approved 8-19-1983. Amendments noted where applicable.]

GENERAL REFERENCES

Zoning — See Ch. 139.

§ 136-1. Definitions.

A. The following definitions shall apply to the interpretation and implementation of this chapter:

AGRICULTURAL PRACTICES —

- (1) LAND IN AGRICULTURAL USE — Any qualifying wetland within a farm which is qualified or eligible to be qualified under the Farmland Assessment Act, MGL c. 61A, §§ 1 through 5.
- (2) QUALIFYING WETLAND — Only inland freshwater areas which are seasonally flooded basins or flats or inland fresh meadows.
- (3) NORMAL MAINTENANCE OR IMPROVEMENT OF LAND IN AGRICULTURAL USE:
 - (a) Shall mean only:
 - [1] Tilling practices customarily employed in the raising of crops.
 - [2] Pasturing of animals, including such fences and protective structures as may be required.
 - [3] Use of fertilizers, pesticides, herbicides and similar materials, subject to state and federal regulations covering their use.
 - [4] Construction, grading or restoring of field ditches, subsurface drains, grass waterways, culverts, access roads and similar practices to improve

drainage, prevent erosion, provide more effective use of rainfall and improve equipment operation and efficiency in order to improve conditions for the growing of crops.

- (b) "Improvement of land in agricultural use" may also include more extensive practices, such as the building of ponds, dams, structures for water control, water and sediment basins and related activities, but only where a plan for such activity approved by the Conservation District of the Soil Conservation Service is furnished to the Conservation Commission prior to the commencement of work. All such activity shall subsequently be carried out in accord with said plan. In the event that the work is not carried out in accordance with the required plan, the Conservation Commission may place a stop order on said work and have recourse to such measures as if the plan were an order of conditions.

ALTER — Includes, without limitation, the following actions when undertaken in areas subject to this chapter:

- (1) Removal, excavation or dredging of soil, sand, gravel or aggregate materials of any kind.
- (2) Changing drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns and flood-retention characteristics.
- (3) Drainage or other disturbances of water level or the water table.
- (4) Dumping, discharging or filling with any material which may degrade water quality.
- (5) Driving of piles or erection of buildings or structures of any kind.
- (6) Placing of obstructions, whether or not they interfere with the flow of water.
- (7) Destruction of plant life, including cutting trees.
- (8) Changing of water temperature, biochemical oxygen demand or other physical or chemical disturbances of the water.
- (9) Placing of fill, or removal of material, which would alter elevation. [Added 4-8-1996 ATM by Art. 47, approved 7-15-1996]
- (10) Any activities, changes or work which causes or contributes to the pollution of a body of water or groundwater. [Added 4-8-1996 ATM by Art. 47, approved 7-15-1996]
- (11) Application of herbicides, or fertilizers other than in agricultural use. [Added 4-8-1996 ATM by Art. 47, approved 7-15-1996]

- (12) Incremental activities which have a cumulative adverse impact on the interests protected by this chapter.¹ [Added 4-8-1996 ATM by Art. 47, approved 7-15-1996]

HABITAT — Where wildlife find what they need to survive: food, water, cover from predators and weather, breeding and rearing areas and over-wintering areas. Habitat includes any portion of any wetland resource area as defined in § 136-3 of this chapter: [Added 4-10-2000 ATM by Art. 62, approved 8-2-2000]

- (1) Within which are located any species (plant or animal) recognized as significant by the Commission following a public hearing thereon;
- (2) Which falls within any of the most recent state estimated habitat maps, adopted by the Commission following a public hearing thereon.

PERSON — Includes any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the commonwealth or political subdivision thereof to the extent subject to Town bylaws, administrative agencies, public or quasi-public corporations or bodies, the Town of Nantucket and any other legal entity, its legal representatives, agents or assigns.

- B. The Commission may adopt additional definitions not inconsistent with this section and its regulations promulgated pursuant to § 136-7 of this chapter.

§ 136-2. Purpose. [Amended 4-8-1996 ATM by Art. 47, approved 7-15-1996]

The purpose of this chapter is to protect the wetlands of the Town of Nantucket by controlling activities deemed to have a significant or cumulative effect upon wetland values, including but not limited to the following: public or private water supply, groundwater, flood control, erosion control, storm damage prevention, water pollution, fisheries, shellfish, wildlife, rare species, including rare, threatened or endangered plant species and animals and habitats, recreation and wetland scenic views (collectively, "the interests protected by this chapter"). This chapter is intended to utilize the Home Rule Authority of this municipality to protect additional resource areas for additional values, with additional standards and procedures in addition to those of the Wetlands Protection Act, MGL c. 131, § 40, and regulations thereunder, 310 CMR 10.00.

§ 136-3. Permit required; procedure.

- A. No person shall commence to remove, fill, dredge, alter or build upon or within 100 feet of any bank, freshwater wetland, coastal wetland, beach, dune, flat, marsh, meadow, bog, swamp or upon or within 100 feet of any estuary, creek, river, stream, pond or lake or upon or within 100 feet of any land subject to tidal action, coastal storm flowage, inland or coastal flooding or inundation or within 100 feet of the hundred-year storm line or within any area located within the geographic boundaries of the resource areas listed previously that is habitat for rare/significant wildlife and/or fauna, including Department

1. Editor's Note: The definition of "banks," which immediately followed this subsection, was repealed 5-17-1988] ATM by Art. 95, approved 9-28-1988.

of Environmental Protection certified vernal pools, without filing written application for a permit to remove, fill, dredge, alter or build upon, including such plans as may be necessary to describe such proposed activity and its effect on the environment, and receiving and complying with the permit issued pursuant to this chapter. Said resource areas shall be protected whether or not they border surface waters. The application and permit required by this chapter shall not be required for maintaining, repairing or replacing, but not substantially changing or enlarging, an existing and lawfully located structure or facility used in the service of the public and used to provide electric, gas, water, telephone, telegraph and other telecommunication services. [Amended 4-8-1996 ATM by Art. 47, approved 7-15-1996; 4-10-2000 ATM by Art. 62, approved 8-2-2000]

- B. The provisions of this section shall not apply to work performed for normal maintenance or improvement of land in agricultural use as defined under § 136-1A of this chapter.
- C. Such application may be identical in form to a notice of intent filed pursuant to MGL c. 131, § 40, shall be sent by certified mail or by hand delivery to the Town of Nantucket Conservation Commission (the "Commission") and must be filed concurrently with or after applications for all other variances and approvals required by the Zoning Bylaw,² the Subdivision Control Law or any other bylaw or regulation have been obtained. The Commission shall set filing fees for filings pursuant to this chapter by regulation, but no filing fee is required when the Town or County of Nantucket or Nantucket Islands Land Bank files an application for a permit. The Commission is authorized to require an applicant to pay the costs and expenses of any expert consultant deemed by the Commission necessary to enable the Commission to evaluate the application. This provision shall apply to all expert consultants providing services to the Commission with respect to the effects of the proposed work or activities on the environment, including, without limitation, services in the fields of environmental engineering and marine biology. The costs and expenses assessed to an applicant shall reflect the actual costs and expenses incurred by the Commission for such services. If the proposed project meets the definition of a "major commercial development," as defined in § 139-11B of the Code of the Town of Nantucket, or if such project includes more than four lots, the costs and expenses assessed to the applicant shall not, in any event, exceed \$5,000 per application. In all other instances, the costs and expenses assessed to the applicant shall not, in any event, exceed \$2,500 per application. Copies of the application shall be sent, at the same time, by certified mail, to the Board of Selectmen, the Planning Board and the Board of Health. [Amended 5-17-1988 ATM by Art. 95, approved 9-28-1988; 4-10-1989 ATM by Art. 126, approved 7-4-1989; 4-8-1996 ATM by Art. 47, approved 7-15-1996]
- D. Any person who desires a determination as to whether this Nantucket wetlands chapter applies to land or to work that may affect an area subject to protection under this chapter may submit to the Conservation Commission by certified mail or hand delivery a written request which may be identical in form to a request for determination filed pursuant to MGL c. 131, § 40, Form 1 of 310 CMR 10.99. The Commission shall within 21 days of receipt make a written determination to such request which may be identical in form to

2. Editor's Note: See Ch. 139, Zoning.

- D. Any person who desires a determination as to whether this Nantucket wetlands chapter applies to land or to work that may affect an area subject to protection under this chapter may submit to the Conservation Commission by certified mail or hand delivery a written request which may be identical in form to a request for determination filed pursuant to MGL c. 131, § 40, Form 1 of 310 CMR 10.99. The Commission shall within 21 days of receipt make a written determination to such request which may be identical in form to

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Form 2 of 310 CMR 10.99. Notice of the time and place of the public meeting at which the determination is to be made shall be given by the Commission at the expense of the applicant, not less than five days prior to the public meeting, by publication in a newspaper of general circulation in Nantucket. At least five days prior to the public meeting, by certified mail, return receipt requested, the applicant shall send a copy of the notice of the public meeting, supplied by the Commission, to all abutters, as certified by the Assessor from the Town's most recent Assessor's list. Postmarked mailing receipts and the certified abutter's list shall be presented to the Commission at the opening of the public meeting. The Commission may determine that the work described in a request is in an area subject to this chapter but will not alter the wetland and, because the work is of a limited extent, does not require a permit, notwithstanding the other provisions of this chapter. [Added 5-17-1988 ATM by Art. 95, approved 9-28-1988; amended 6-27-1989 STM by Art. II, approved 10-17-1989]

- E. Members of the Commission, its employees and agents may enter upon privately owned land to perform their duties under this section and may, in furtherance thereof, take samples and photographs and make examinations, inspections and surveys. [Added 4-10-1989 ATM by Art. 126, approved 7-4-1989]
- F. Permit and waiver rehearing limit. No permit or waiver which has been unfavorably and finally acted upon by the Commission shall again be eligible for consideration on a new application within three years after the date of final unfavorable action unless the Commission finds, by a favorable vote of a majority of the members then present and voting, specific and material changes in the circumstances upon which the previous unfavorable action was based and describes such changes in the records of its proceedings. [Added 4-12-1999 ATM by Art. 61, approved 8-10-1999]

§ 136-4. Hearing; determination; enforcement orders; appeals; plan changes or modifications.

- A. The Commission shall hold a public hearing on the application within 21 days of its receipt. Notice of the time and place of the hearing shall be given by the Commission at the expense of the applicant, not less than five days prior to the hearing, by publication in a newspaper of general circulation in Nantucket and by mailing a notice to the applicant, the Board of Health, the Board of Selectmen, the Planning Board, all abutters, the property owner if different from the applicant and to such other persons as the Commission may by regulation determine. At least five days prior to the public hearing, by certified mail, return receipt requested, the applicant shall send a copy of the notice of the public hearing, supplied by the Commission, to all abutters, as certified by the Assessor from the Town's most recent Assessor's list. Postmarked mailing receipts and the certified abutter's list shall be presented to the Commission at the opening of the public hearing. Return receipt cards shall be presented to the Commission before the hearing can be closed. The Commission, its agents, officers and employees, may enter upon privately owned land for the purpose of performing their duties under this chapter. [Amended 5-17-1988 ATM by Art. 95, approved 9-28-1988; 6-27-1989 STM by Art. II, approved 10-17-1989]

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- B. Permit and conditions. If, after the public hearing, the Commission determines that the area which is the subject of the application is significant to the interests of this chapter, the Commission shall, within 21 days of such hearing, issue or deny a permit for the work requested. If it issues a permit after making such determination, the Commission shall impose such conditions as it determines are necessary or desirable for protection of those interests, and all work shall be done in accordance with those conditions. If the Commission determines that the area which is the subject of the application is not significant to the interests protected by this chapter or that the proposed activity does not require the imposition of conditions, it shall issue a permit without conditions within 21 days of the public hearing. Permits shall expire three years from the date of issuance unless renewed prior to expiration. Permits may be extended for three one-year periods. The Commission may determine by regulation standards for the granting or denial of an extension. [Amended 5-17-1988 ATM by Art. 95, approved 9-28-1988; 4-9-2001 ATM by Art. 44, approved 8-4-2001]
- C. Relationship to MGL c. 131, § 40. Since the Wetlands Protection Act, MGL c. 131, § 40, establishes minimum standards, the Commission shall not impose additional or more stringent conditions in an order pursuant to MGL c. 131, § 40, than it imposes pursuant to this chapter; nor shall it require a notice of intention filed under MGL c. 131, § 40, to provide additional materials or data to those required under this chapter.
- D. The Commission may continue or adjourn a public hearing for a permit in the following situations: [Added 5-17-1988 ATM by Art. 95, approved 9-28-1988]
- (1) With the consent of the applicant, to an agreed-upon date which shall be announced at the hearing; or
 - (2) Without the consent of the applicant, to a date certain for the reasons stated at the hearing, including receipt of additional information from the applicant or others.
- E. The Commission may deny or revoke a permit at any time, even after commencement or completion of work, if the applicant fails to comply with the requirements of this chapter, fails to comply with the regulations promulgated pursuant to this chapter, fails to comply with the conditions of a permit issued pursuant to this chapter or if the applicant fails to submit necessary information or plans requested by the Commission. The inaccuracy or incompleteness of plans or other information required to be submitted to the Commission shall be grounds for denial or revocation of an application. This provision shall apply even if such inaccuracy or incompleteness is not apparent until after a permit has been issued and shall apply whether or not such inaccuracy or incompleteness is the result of intentional or willful conduct. [Added 5-17-1988 ATM by Art. 95, approved 9-28-1988; amended 4-10-1989 ATM by Art. 126, approved 7-4-1989]
- F. When the Commission determines that any work is performed in violation of this chapter, the regulations promulgated pursuant to this chapter or the conditions specified in a permit issued pursuant to this chapter, the Commission may issue an enforcement order. The Commission may promulgate regulations to effectuate the purposes of this section. [Added 5-17-1988 ATM by Art. 95, approved 9-28-1988]]
- G. Any party aggrieved by a permit issued pursuant to this chapter may file a complaint seeking relief in the Superior Court of the County of Nantucket not more than 20 days
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after the issuance of the permit by the Commission. [Added 5-17-1988 ATM by Art. 95, approved 9-28-1988]

- H. Prior to the commencement of any work permitted or required by a permit issued pursuant to this chapter, the permit shall be recorded by the applicant in the Nantucket Registry of Deeds or with the Nantucket Registry of the Land Court, within the chain of title of the affected property. Certification of recording shall be sent to the Commission. [Added 5-17-1988 ATM by Art. 95, approved 9-28-1988]
- I. Persons applying for or holding a valid permit who wish to make plan changes shall request in writing permission to do so. The Commission may determine that the plan changes are not significant and no further action is required or that the plan changes are significant and a new application for a permit or notice of intent must be filed in writing. Within 21 days of the issuance of an occupancy permit by the Building Inspector for any work or activity covered by a permit issued by the Commission, the applicant shall apply for a certificate of compliance from the Commission certifying that the work or activity has been completed as authorized and in compliance with the permit. As a condition to issuance of such certificate, the Commission, its members, employees or agents may enter on privately owned land and take samples and photographs and make examinations, inspections and surveys. If the Commission determines that the work or activity has in fact been completed as authorized and in compliance with the permit, it shall issue a certificate of compliance to the applicant. Failure of the applicant to comply with this provision shall constitute a violation within the meaning of § 136-10A and shall be punishable as provided therein. [Added 5-17-1988 ATM by Art. 95, approved 9-28-1988; amended 4-10-1989 ATM by Art. 126, approved 7-4-1989]
- J. For any project which the Commission determines will have a detrimental effect on a wetland scenic view, the Commission may require that the project be modified in a manner that mitigates the effect on the wetland scenic view. Such requirements may include but are not limited to: [Added 5-17-1988 ATM by Art. 95, approved 9-28-1988]
 - (1) Building size or height restrictions.
 - (2) Imposition of distance restrictions between existing structures and proposed new structures.
 - (3) Landscaping and revegetation requirements.

§ 136-5. Emergency projects.

This chapter shall not apply to any emergency project as defined in MGL c. 131, § 40.

§ 136-6. Preacquisition violation. [Amended 5-17-1988 ATM by Art. 95, approved 9-28-1988]

Any person who purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of this chapter or in violation of any permit issued pursuant to this chapter shall forthwith comply with any such order or restore such land to its

condition prior to any such violation; provided, however, that no action, civil or criminal, shall be brought against such person unless commenced within three years following the date of acquisition of the real estate by such person or five years after the violation, whichever is earlier.

§ 136-7. Promulgation of rules and regulations.

After due notice and public hearing, the Commission may promulgate rules and regulations to effectuate the purposes of this chapter. Failure by the Commission to promulgate such rules and regulations or a legal declaration of their invalidity by a court of law shall not act to suspend or invalidate the effect of this chapter.

§ 136-8. Burden of proof.

The applicant shall have the burden of proving by a preponderance of the credible evidence that the work proposed in the application shall not harm the interests protected by this chapter. Failure to provide adequate evidence to the Commission supporting a determination that the proposed work will not harm the interests protected by this chapter shall be sufficient cause for the Commission to deny a permit or grant a permit with conditions or, in the Commission's discretion, to continue the hearing to another date to enable the applicant or others to present additional evidence.

§ 136-9. Security.

The Commission may require, as a permit condition, that the performance and observance of other conditions be secured by one or both of the following methods:

- A. By a bond or deposit of money or negotiable securities in an amount determined by the Commission to be sufficient and payable to the Town of Nantucket. The bond shall be released by the Commission only after the Commission issues a certificate of compliance. [Amended 5-17-1988 ATM by Art. 95, approved 9-28-1988]
- B. By a conservation restriction, easement or other covenant running with the land, executed and properly recorded (or registered, in the case of registered land).

§ 136-10. Violations and penalties; enforcement. [Amended 4-10-1989 ATM by Art. 126, approved 7-4-1989]

- A. Any person who violates any provision of this chapter or of any condition of a permit issued pursuant to it shall be punished by a fine of not more than \$300. Each day or portion thereof during which a violation continues shall constitute a separate offense; if more than one, each condition violated shall constitute a separate offense. The fine set forth herein is in addition to any fine levied under the Wetlands Protection Act, MGL c. 131, § 40. This chapter may be enforced pursuant to MGL c. 40, § 21D, by a Town police officer or other officer having police powers.

- B. Upon request of the Commission, the Board of Selectmen and Town Counsel shall take such civil legal actions, including the bringing of actions for injunctive and monetary relief, as may be necessary to enforce this chapter and permits issued pursuant to it. Upon request of the Commission, the Chief of Police shall take such legal actions under the criminal law as may be necessary to enforce this chapter and permits issued pursuant to it.

APPENDIX “F”

Town of Nantucket's Code Ch. 64, Camping

Chapter 64

CAMPING

§ 64-1. Restrictions.

§ 64-2. Violations and penalties.

[HISTORY: Adopted by the Annual Town Meeting of the Town of Nantucket 4-3-1979 by Art. 82, approved 8-18-1979. Amendments noted where applicable.]

GENERAL REFERENCES

Loitering — See Ch. 94.

Peace and good order — See Ch. 105.

§ 64-1. Restrictions.

No person shall, between the hours of 8:00 p.m. and 8:00 a.m., set up on any property, public or private, without permission of the owner thereof, a camp or tent or sleep in the open or in a vehicle within the territorial limits of the Town of Nantucket.

§ 64-2. Violations and penalties.

Any person violating this chapter shall be punished by a fine of not more than \$200 for each offense.

APPENDIX "G"

**Town of Nantucket's Code
Ch. 66, Protection of
Coastal Areas and
Open Spaces**

Chapter 66

COASTAL AREAS AND OPEN SPACES, PROTECTION OF

§ 66-1. Purpose.

§ 66-4. Violations and penalties.

§ 66-2. Definitions.

§ 66-5. Enforcement.

§ 66-3. Prohibited activities.

§ 66-6. Severability.

[HISTORY: Adopted by the Annual Town Meeting of the Town of Nantucket 4-30-2003 by Art. 68, approved 6-30-2003. Amendments noted where applicable.]

GENERAL REFERENCES

Regulation of motor vehicles on beaches — See Ch. 56.
Bicycles and mopeds — See Ch. 57.
Camping — See Ch. 64.

Nantucket and Madaket Harbor Watersheds — See Ch. 99.

§ 66-1. Purpose.

The purpose of this chapter is to protect the beaches, coastal areas and other open unimproved spaces of Nantucket by regulating activities within or upon these areas by persons whose activities are deemed to have a significant effect on the environment, including but not limited to wildlife and recreation; on scenic views; on excessive noise; on the natural, scenic, historic and aesthetic qualities of the beach environment or other open spaces on Nantucket; on the public safety and welfare; and on the preservation of peace and good order. Such protection is extended to private as well as to public open space areas as a correlate to owners giving express or implied consent to the use of their private property for any lawful purpose thereon.

§ 66-2. Definitions.

In this chapter, the following terms, unless a contrary meaning is required by the context or as specifically prescribed, shall have the following meanings:

COASTAL AREA — Refers to all unimproved land situated between Nantucket Sound and the Atlantic Ocean, on one side, and the primary coastal bank, the line of upland vegetation, on the other side, except that such term shall include all dunes, whether or not between such perimeters.

NIGHT TIME — The hours from 8:00 p.m. to 5:00 a.m.

OPEN UNIMPROVED SPACE — An area of land not within a coastal area that is undeveloped. Open space contiguous to a dwelling house that would be considered a yard is not included

POLICE OFFICER — Any police officer of the Town, State Police Officer, Environmental Police Officer, Sheriff or Deputy Sheriff of Nantucket County.

§ 66-3. Prohibited activities.

No group of persons of 10 or more shall congregate or assemble in the night-time within or upon any coastal area or open unimproved space without the express written permission of the property owner while engaged in any of the following activities:

- A. Possession of any alcoholic beverages whether on their person or within or under their control.
- B. Starting, assembling, maintaining or being in proximity to: any open fire, fire pit, charcoal fire, or any other configuration of materials so placed as to provide for a fire whether or not the fire has actually been started or not.
- C. Operation of any mechanical device designed to generate electricity.
- D. Operation of any sound producing or sound amplification equipment.

§ 66-4. Violations and penalties.

It shall be deemed a breach of the peace and it shall be the duty of any police officer to order any person or persons so acting as to violate the provisions of this chapter to cease any prohibited activities which are specified herein and if the person or persons so ordered do not forthwith obey, to remove such person or persons or to arrest and/or cause such person or persons to be brought before the Trial Court of the Commonwealth District Court, Nantucket Division, upon a complaint made for a violation of the provisions of § 66-3. Violators may be fined \$100.

§ 66-5. Enforcement.

This chapter may be enforced by any police officer. An enforcement officer may use the noncriminal disposition specified in Chapter 1, Article II, of this Code. This section shall not limit the enforcement of any other applicable statutes or regulations.

§ 66-6. Severability.

The provisions of this chapter are severable and, if any of these sections are held unconstitutional or otherwise invalid by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining sections.

APPENDIX "H"

Massachusetts General Law (M.G.L.) Chapter 48, Section 13; Fires

GENERAL LAWS OF MASSACHUSETTS

PART PARTIzMV-RP. ADMINISTRATION OF THE GOVERNMENT

TITLE VII. CITIES, TOWNS AND DISTRICTS

CHAPTER 48. FIRES, FIRE DEPARTMENTS AND FIRE DISTRICTS

FOREST WARDENS

Chapter 48: Section 13 Setting open air fires; conditions and restrictions; penalty for violation

Section 13. No person shall set, maintain or increase a fire in the open air at any time except by permission, covering a period not exceeding two days from the date thereof, granted by the forest warden or chief of the fire department in cities and towns, or, in cities having such an official, the fire commissioner; provided, that if such permission is not in writing, a written record of the granting thereof, setting forth the date upon which permission was granted, the dates covered by such permission, the name and address of the person to whom, and the manner in which, such permission was granted, and any other necessary information relative thereto, shall be made and kept by the forest warden, chief or fire commissioner, as the case may be, and shall be open to public inspection; and provided further, that persons eighteen years of age or older may, without a permit, set, maintain or increase a reasonable fire for the purpose of cooking, upon sandy or gravelly land free from living or dead vegetation or upon sandy or rocky beaches bordering on tidewater, if the fire is enclosed within rocks, metal or other nonflammable material. The forest warden, chief or fire commissioner, as the case may be, may make it a condition for granting a permit that any burning shall be done only after four o'clock (eastern standard time) in the afternoon, and in the case of a permit for a demolition burning may make it a condition for granting such permit that sufficient fire department personnel, to be assigned by proper authority at the expense of the person seeking such permit, shall be present at such burning to control the fire until it is entirely extinguished. Any permit granted under this section may be revoked at any time. The forester may make rules and regulations relating to the granting and revocation of such permits binding throughout the commonwealth. Such rules and regulations shall take effect subject to section thirty-seven of chapter thirty, when approved by the governor and council. The forest wardens in towns and officials performing the duties of forest wardens in cities shall cause public notice to be given of the provisions of this section and shall enforce the same. Whoever violates any provision of this section shall be punished by a fine of not more than \$500 plus the cost of suppression or by imprisonment for not more than one month or both. In this section, a demolition burning shall mean a fire set for the purpose of burning debris resulting from the demolition of buildings.

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APPENDIX "I"

Coastal Zone Management's (CZM) Guidelines to Barrier Beach Management in Massachusetts Ch. 2 and 3

CHAPTER 2

Massachusetts Wetlands Protection Act/Barrier Beach Resources (as defined in the Massachusetts Wetlands Protection Act and Regulations)

The primary state legal requirements with which the barrier beach manager developing a management plan must comply are found in the Massachusetts Wetlands Protection Act and Regulations (Mass. General Laws Chapter 131, §40; 310 Code of Mass. Regulations 10.00). Under this Act and its Regulations, the various component parts of the barrier beach system have been defined and their functions detailed. This Chapter presents those legal definitions, the specified functions of each resource area, and summarizes the performance standards for each resource area.

Each resource area associated with barrier beach systems is discussed, with pertinent information in the following categories:

- Definitions (including exact wording from the Regulations and additional information to clarify meaning);
- Function (including "presumptions of significance," critical characteristics, physical processes, and biological processes); and
- Summary of Wetlands Protection Regulatory Performance Standards.

The barrier beach-related resource areas as listed in the Massachusetts Wetlands Protection Act and Regulations are:

- Barrier Beaches
- Coastal Beaches and Tidal Flats
- Coastal Dunes
- Salt Marshes
- Land Containing Shellfish
- Land Under Salt Ponds
- Land Under the Ocean

This Chapter also contains a separate section on rare species wildlife habitat. Note that the Wetlands Protection Act and Regulations require safeguards for rare species habitat that are in addition to the regulatory performance standards for general wildlife habitat. This section is entitled:

- Protection of Rare Species Habitat

[Fresh water wetland resources, such as bogs, can also be present on barrier beaches. For those performance standards, see the Mass. Wetlands Protection Act and Regulations at 310 Code of Mass. Regulations 10.55-60.]

General Information

Barrier beach systems are subject to a plethora of federal, state, and municipal statutes, bylaws/ordinances and regulations. The primary federal and state authorities are summarized in Chapter 1, while a more complete listing of federal and state laws appears in Appendix E.

Of the state requirements, the Massachusetts Wetlands Protection Act and Regulations are extremely important for beach stewards to understand because many activities on barrier beaches must comply with the performance standards found in the Regulations.

The Task Force offers the following regulatory summaries as a service to barrier beach stewards, but recommends a careful reading of the Act and Regulations prior to undertaking management activities. In addition, the Task Force recommends that beach managers consult with their municipal conservation commission or the Mass. Department of Environmental Protection to determine whether proposed management activities fall within the Wetlands Protection Act's jurisdiction. The Department of Environmental Protection has developed *"Recommended Conditions for Barrier Beaches,"* found in Appendix I, to assist barrier beach managers in meeting the regulatory performance standards.

The "Definition" sections found in this Chapter are quoted from the Wetlands Regulations, but the "Functions" and "Performance Standards" sections are not; the "Functions" sections contains additional information not found in the Wetlands Regulations, while the "Performance Standards" sections are summaries of the regulatory requirements for each resource area. Consult the appropriate section of 310 Code of Mass. Regulations 10.00 for the exact regulatory language.

Barrier beach managers should also note that municipalities are free to adopt wetlands bylaws/ordinances and regulations which provide greater levels of protection than contained in the state Wetlands Protection Act and Regulations. (See Lovequist v. Conservation Commission of Dennis, 379 Mass. 7 (1979).) The Task Force recommends that beach managers consult with their municipal conservation commissions to learn more about local requirements.

Barrier Beaches

(310 Code of Mass. Regulations 10.29)

Definition

Barrier Beach means a narrow low-lying strip of land generally consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast. It is separated from the mainland by a narrow body of fresh, brackish or saline water or a marsh system. A barrier beach may be joined to the mainland at one or both ends. [310 Code of Mass. Regulations 10.29(2)]

This definition is more fully discussed in Chapter 1 of these Guidelines.

Functions

The Wetland Regulations presume that barrier beaches, including all of their coastal dunes, are significant to storm damage prevention, flood control, the protection of marine fisheries, wildlife habitat, and where there are shellfish, to land containing shellfish. "Significant" is defined in the Regulations to mean "plays a role" in protecting any of the interests.

Critical Characteristics, Physical and Biological Processes

The characteristics of a barrier beach which are critical to the protection of the interests listed above are those critical characteristics listed for coastal beaches, tidal flats, and coastal dunes, as well as the barrier beach's ability to respond to wave action, including storm overwash sediment transport.

The physical and biological processes of barrier beaches are discussed in detail in Chapter 1 of these Guidelines. In addition, the physical and biological processes of coastal beaches, tidal flats, and coastal dunes are discussed in more detail in the Sections of this Chapter pertaining to each Resource Area.

Summary of Wetlands Protection Regulatory Performance Standards

When a barrier beach is significant to storm damage prevention, flood control, marine fisheries or the protection of wildlife habitat, the following performance standards apply:

- Each of the performance standards listed for coastal beaches and for all coastal dunes which make up a barrier beach (see Sections entitled "Coastal Beaches and Tidal Flats" and "Coastal Dunes" in this Chapter).
- No project may be permitted which will have any adverse effect on the habitat of state-listed rare vertebrate or invertebrate species (See Section entitled, "Protection of Rare Species Habitat" for more information on this standard).

Coastal Beaches and Tidal Flats

(310 Code of Mass. Regulations 10.27)

Definitions

Coastal Beach means unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bankline or the seaward edge of existing man-made structures, when these structures replace one of the above lines, whichever is closest to the ocean. [310 Code of Mass. Regulations 10.27(2)(a)]

Tidal Flat means any nearly level part of a coastal beach which usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach or which may be separated from the beach by land under the ocean. [310 Code of Mass. Regulations 10.27(2)(b)]

The size of the unconsolidated sediments which make up coastal beaches may range from very fine particles to small rocks several inches in diameter, as on a shingle or cobble beach. Tidal flats are commonly found both along exposed shorelines and in protected estuarine areas. They may be completely surrounded by water at mean low water and may or may not be connected to the rest of the beach.

Functions

The Wetland Regulations presume that coastal beaches, including tidal flats, are significant to the interests of storm damage prevention, flood control, and the protection of wildlife habitat. In addition, the Regulations presume that tidal flats are significant to the protection of marine fisheries and, where there are shellfish, to land containing shellfish. "Significant" is defined in the Regulations to mean "plays a role" in protecting any of the interests.

Critical Characteristics

The characteristics of coastal beaches which are critical to storm damage prevention or flood control are the ability of the coastal beach to respond to wave action, and the volume (quantity of sediments) and form of the beach. The characteristics of coastal beaches which are critical to the protection of marine fisheries or wildlife habitat are the distribution of sediment grain size, water circulation, water quality, and relief and elevation.

Physical Processes

Coastal beaches serve as a sediment source for dunes and subtidal areas and for downdrift coastal areas. Sediments move from subtidal areas to beaches to dunes and back again, in a constant shifting of sediment caused by wind and waves. Coastal

beaches prevent storm damage and contribute to flood control by dissipating wave energy, reducing the height of storm waves, and providing sediment to other coastal features which, in turn, enhance those same features.

Biological Processes

Tidal flats provide many critical links in the marine food web. They are sites where organic and inorganic materials may be entrapped and recycled into the water column for reuse by algae and other primary producers. Tidal flats are valuable habitats for many invertebrates, including a variety of polychaete worms and bivalve and gastropod mollusks. These organisms utilize plankton and microalgal-produced nutrients and detritus and contribute extraordinary numbers of larvae to the food web. These larvae in turn provide a valuable food source for the young stages of commercially-important fish and crustaceans, as well as for migratory and wintering shorebirds. Adult invertebrates that live in tidal flats provide food for a variety of species, including the commercially valuable winter flounder and crustaceans.

Coastal beaches are extremely important in recycling nutrients derived from storm drift and tidal action. Vegetative debris along the drift (or wrack) line is vital for resident and migratory shorebirds, which feed on invertebrates that eat this vegetation. The intertidal zone below the wrack line on coastal beaches supports many invertebrates such as mollusks and crustacea which are also eaten by shorebirds. A number of birds nest on the coastal berm between the toe of a dune and the high tide line. Isolated coastal beaches on small islands provide relatively predator-free areas for coastal birds to rest, feed, and nest in, and some such islands are important haul-out areas for harbor seals. Detailed information on staging areas for migratory shorebirds is found in Appendix D.

Summary of Wetlands Protection Regulatory Performance Standards

When a coastal beach is significant to storm damage prevention, flood control or the protection of wildlife habitat, the following performance standards apply:

- Any project on a coastal beach (with a few specified exceptions as stated in the Wetlands Protection Act Regulations) must not have an adverse effect by increasing erosion, decreasing the volume or changing the form of any coastal beach or an adjacent or downdrift coastal beach.
- Any groin, jetty, solid pier, or other solid fill structure which will interfere with littoral drift, in addition to complying with the foregoing standard, must be constructed as follows:
 - It must be the minimum length and height demonstrated to be necessary to maintain beach form and volume. In evaluating necessity, coastal engineering, physical oceanographic and/or coastal geologic information must be considered;
 - Immediately after construction, any groin must be filled to entrapment capacity in height and length with sediment of grain size compatible with that of the adjacent beach;
 - Jetties trapping littoral drift material must contain a by-pass system to transfer sediments to the downdrift side of the inlet or must be periodically dredged to provide beach nourishment to ensure that downdrift or adjacent beaches are not starved of sediments.

Migratory Shorebirds

A number of locations in the Bay State are vital to the migration of arctic shorebirds. These sites typically are places with unusually high biological productivity with rich invertebrate food resources favored by shorebirds to rapidly accumulate fat necessary for their 2,000-mile nonstop flights over the Atlantic Ocean to landfalls in northeastern South America. Only one species, Black-bellied Plover, gathers in Massachusetts in substantial numbers during northward migration. On the other hand, most shorebirds are migrating southward during the peak of the summer outdoor recreational season (July through mid-September). During lower tides, shorebirds are widely distributed over large expanses of tidal flats, and generally have alternate locations they can use when disturbed. In contrast, habitat requirements for resting areas seem quite specific, and at most staging areas there are few high tide resting sites available, so when disturbance occurs the species frequently have no or few alternative sites to use. Finally, the amount of coastal space available to shorebirds is substantially less at high tide times than at low tide times.

Shorebirds Defined

The Massachusetts coast plays a critical role in the international migration systems of a variety of shorebirds that are ephemeral visitors to New England, visiting during their migratory journeys between arctic nesting grounds of Canada and Alaska, and wintering grounds, which for some kinds, are as distant as the southernmost coasts of South America.

Technically speaking, shorebirds are the sandpipers, plovers and their allies. They do not include other coastal birds such as terns or gulls. In spite of their name, many shorebirds are not coastal birds; some are upland animals, some use fresh water wetlands, and one--- the Woodcock -- is essentially a woodland bird. But most species of shorebirds are essentially coastal marine animals for much of their life.

Management and Conservation

Shorebirds making stopovers on Massachusetts coastal beaches and tidal flats include some of the earliest southbound migrants seen in New England. Earliest birds appear during the first week of July. Peak numbers occur during the last third of July and the first third of August, also the peak beach recreation season in coastal New England. One species, the Dunlin, migrates substantially later with peak numbers occurring during October and November.

Just as an aircraft must store an enormous volume of fuel before a long flight, so too must migratory birds. Instead of petroleum, bird reserves are layers of fat accumulated prior to departure. A typical shorebird leaves Massachusetts after visiting 10-14 days and weighing 60% more than when it arrived.

It is this basic, ingrained need to gain fat which underlies most of the conservation issues faced in trying to protect shorebird migration systems.

In order to get the fat, shorebirds must consume enormous amounts of food. Indeed, because of their high body temperatures, and their high activity levels, even meeting daily metabolic requirements requires huge amounts of food.

There are few areas where shorebirds can meet their fattening requirements for migration. Important areas in Massachusetts include the Ipswich, Merrimac, North & South and Parker River Estuaries, and tidal embayments such the Pleasant and Nauset Bay regions, Plymouth/Kingston/Duxbury Bays, and Monomoy National Wildlife Refuge. The Westport River estuary also is important to the Dunlin. [For a complete listing of important migrating shorebird staging areas, see Appendix D.]

- Beach nourishment with clean sediment of a grain size compatible with that on the existing beach may be permitted.

When a tidal flat is significant to marine fisheries or the protection of wildlife habitat, the following performance standards apply:

- In addition to complying with the requirements for coastal beaches, a project on a tidal flat must, if water-dependent, be designed and constructed using the best available measures to minimize adverse effects, and if the project is non-water-dependent, it must have no adverse effect, on marine fisheries or wildlife habitat caused by:
 - alterations in water circulation;
 - alterations in the distribution of sediment grain size; and
 - changes in water quality, including, but not limited to, other than natural fluctuations in the levels of dissolved oxygen, temperature or turbidity, or the addition of pollutants.
- No project may be permitted on a coastal beach or tidal flat which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species (See Section entitled, "Protection of Rare Species Habitat" for more information on this standard).

While visiting Massachusetts, shorebirds need two types of habitat resources: good feeding areas and relatively undisturbed resting areas. Coastal intertidal flats are used for feeding during lower tidal periods (day or night) whereas resting areas, typically coastal barrier beaches, or sometimes high salt marsh, are used during higher tidal periods, generally for the three hours either side of high tide times. Best feeding areas generally are in sheltered tidal waters of estuaries and bays where small sediment grain size is associated with high abundance and availability of invertebrate animal prey (small worms, crustaceans, and noncommercially-important bivalves.)

Habitat requirements of shorebirds at resting areas seem quite specific; virtually all are close to the feeding flats, are open habitats affording shorebirds good view of approaching predators, and are relatively undisturbed locations. At most coastal migration staging areas there are few high tide resting sites available, so when disturbance occurs shorebirds frequently have few, if any, alternative sites to use. Finally, the amount of coastal space available to shorebirds is substantially less at high tide than at low tide. Recent studies in Plymouth have shown that chronic disturbance of resting sites is associated with a steady decline in shorebird numbers.

Because most shorebirds are migrating southward during the peak outdoor recreational season (July through mid-September), and competing with humans for some of the most popular coastal resources, shorebird management efforts are most needed at this season. In general, management efforts are particularly needed to reduce chronic disturbance of resting areas during high tide periods; during lower tides shorebirds are widely distributed over large expanses of tidal flats, and generally have alternate locations they can use when disturbed.

Shorebirds as a Recreational Resource

Birdwatching is a popular outdoor recreational activity in coastal Massachusetts, so managing for abundant and diverse birdlife is warranted. Shorebirds are an important summer attraction to birdwatchers, including many that visit the coast from distant states to see migrating shorebirds. Minimizing disturbance of shorebird habitat from birdwatchers and other beach users will help ensure that the Massachusetts coast remains an important recreational resource to naturalists.

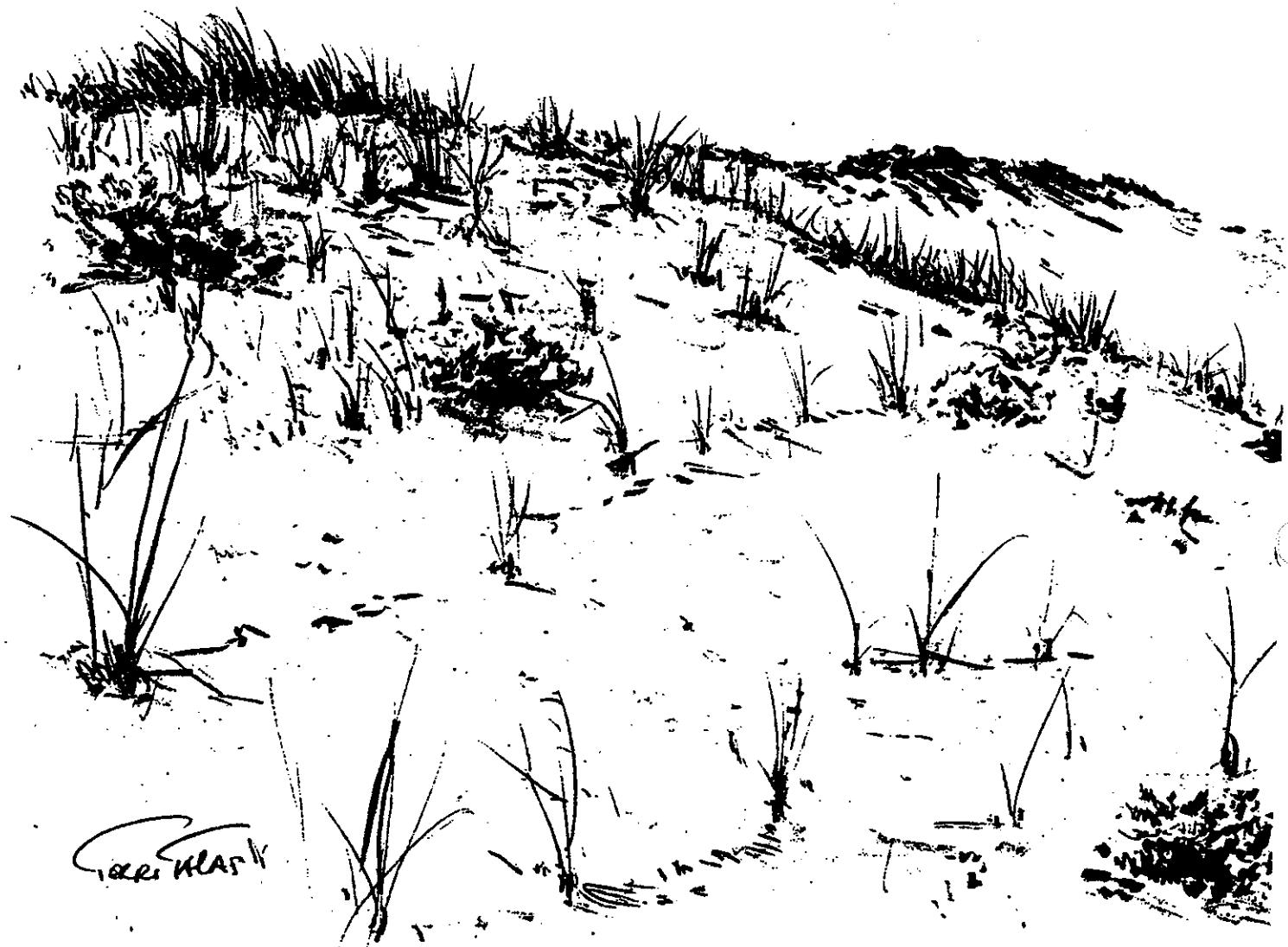


Figure 8. Coastal dunes with beach grass (courtesy of Mass. Department of Environmental Management).

Coastal Dunes

(310 Code of Mass. Regulations 10.28)

Definition

Coastal Dune means any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control. [310 Code of Mass. Regulations 10.28(2)]

Functions

The Wetland Regulations presume that coastal dunes are significant to storm damage prevention, flood control, and the protection of wildlife habitat. This is particularly true of the coastal dunes closest to the coastal beach. On barrier beaches, the Wetlands Regulations presume that all coastal dunes (no matter how far from the coastal beach) are per se significant to storm damage prevention and flood control. "Significant" is defined in the Regulations to mean "plays a role" in protecting any of the interests.

Critical Characteristics

The characteristics of coastal dunes which are critical to storm damage prevention, flood control, and the protection of wildlife habitat are:

- 1) Erosional Capability: the ability of coastal dunes to erode in response to coastal beach conditions. The erosion of coastal dunes by waves, usually during storms, supplies sand to the adjacent coastal beach.
- 2) Coastal Dune Form and Volume: the volume and form (height and width) of coastal dunes provide a buffer which resists wave approach during storms and retards stormline retreat. Coastal dune form and volume are the result of a combination of factors, the most important of which are wind and vegetation. Natural water flow, in the form of storm overwash, is also an important process in controlling coastal dune form and volume, because through this mechanism, sand is carried landward to initiate dune formation.
- 3) Vegetative Cover: vegetation contributes to the growth and stability of coastal dunes by providing conditions favorable to sand deposition. Wrack material, such as beachgrass stems, is carried to the strand line by wind and wave activity where it accumulates and often is buried by sand blowing from the coastal beach. Seeds of many plants become mixed with these materials and may subsequently germinate.
- 4) Ability of the Dune to Move Landward or Laterally: on shorelines, coastal dunes bordering the coastal beach move landward and laterally in response to the prevailing predominant winds with the rest of the shoreline. This allows

coastal dunes to maintain their form and volume. If the dune was not allowed to continually build landward, the dune would gradually be eroded from the seaward side and would become smaller and smaller, and would therefore be more likely to be completely washed away in a storm with its protective values lost altogether.

- 5) Ability of the Dune to Continue Serving as Bird Nesting Habitat: several species of birds, including terns and piping plovers, nest in dunes and depend upon the type (or lack) of vegetative cover, topography, and hydrologic regime of the dune system.

Physical Processes

The set of dunes closest to the coastal beach are the ones that are nearly always significant to storm damage prevention and flood control, and are therefore subject to the performance standards summarized below. The dunes behind the one or two rows of dunes closest to the beach may contribute to storm damage prevention and flood control, but are less likely to do so than the front dunes. However, on barrier beaches, all coastal dunes are always significant to these interests.

Artificially constructed dunes are included in the definition because they also play a role in protecting inland properties from storm waves and flooding.

All coastal dunes on a barrier beach are important because their volume constitutes the major portion of the total volume of the barrier beach above high water and each line of dunes is intricately related. The volume and form provide a buffer from storm waves and elevated sea levels for landward properties and landward coastal wetlands.

Coastal flora are also important to the functioning of coastal dune systems.

Biological Processes

A variety of birds, seabirds, shorebirds and song birds nest at the base or sides of dunes and in the interdunal area. The particular species that utilize these habitats vary depending upon vegetative community cover, topography, and hydrologic regime. Wet meadows or vernal pool habitats occur in a few dune systems, serving as important feeding areas for a wide variety of bird species. Dune systems also support a variety of mammals, amphibians, reptiles, and invertebrates.

Summary of Wetlands Protection Regulatory Performance Standards

When a coastal dune is significant to storm damage prevention, flood control or the protection of wildlife habitat, the following performance standards apply:

- Any alteration of, or structure on, a coastal dune or within 100 feet of a coastal dune must not have an adverse effect on the coastal dune by:
 - affecting the ability of waves to remove sand from the dune;
 - disturbing the vegetative cover so as to destabilize the dune;
 - causing any modification of the dune form that would increase the potential for storm or flood damage;
 - interfering with the landward or lateral movement of the dune;
 - causing removal of sand from the dune artificially; or

- interfering with mapped or otherwise identified bird nesting habitat.
- When a building already exists upon a coastal dune, a project accessory to the existing building may be permitted, provided that such work, using the best commercially available measures, minimizes the adverse effect on the coastal dune caused by the impacts listed above.
- The following projects may be permitted, provided that they have no adverse effect on the coastal dune caused by the impacts listed above:
 - pedestrian walkways, designed to minimize the disturbance to the vegetative cover and traditional bird nesting habitat;
 - fencing and other devices designed to increase dune development, and direct vehicular and pedestrian traffic; and
 - plantings compatible with the natural vegetative cover.
- No project may be permitted which will have any adverse effect on the habitat of state-listed rare vertebrate or invertebrate species (See Section entitled, "Protection of Rare Species Habitat" for more information on this standard).

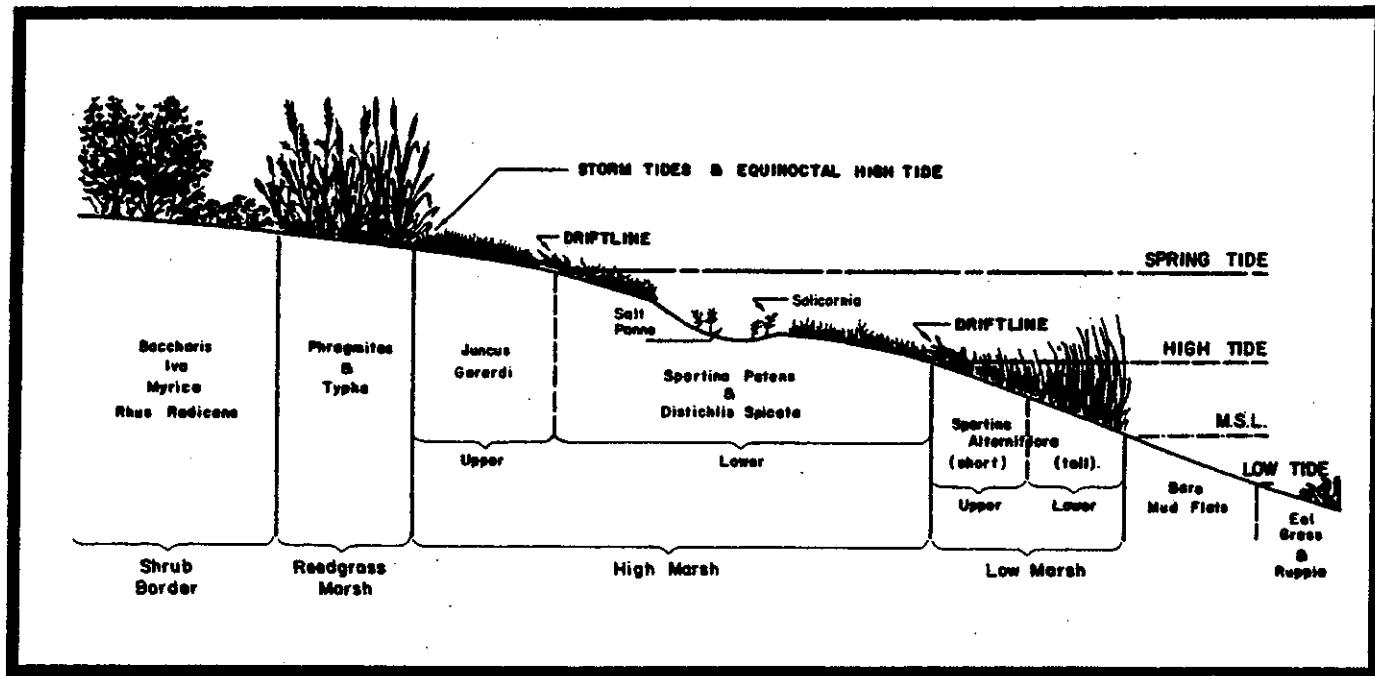


Figure 9. Salt marsh zonation for New England.

Salt Marshes

(310 Code of Mass. Regulations 10.32)

Definition

Salt Marsh means a coastal wetland that extends landward up to the highest high tide line, that is, the highest spring tide of the year, and is characterized by plants that are well adapted to or prefer living in, saline soils. Dominant plants within salt marshes are salt meadow cord grass (*Spartina patens*) and/or salt marsh cord grass (*Spartina alterniflora*). A salt marsh may contain tidal creeks, ditches and pools. [310 Code of Mass. Regulations 10.32(2)(a)]

Salt marshes are usually located adjacent to tidal waters. Salt marshes are flat, open areas characterized by grasses that are bordered by upland or inland wetland vegetation.

Functions

The Wetland Regulations presume that salt marshes are significant to the protection of marine fisheries, wildlife habitat, and where there are shellfish, to the protection of land containing shellfish, to the prevention of pollution, to storm damage prevention, and to ground water supply. "Significant" is defined in the Regulations to mean "plays a role" in protecting any of the interests.

Critical Characteristics

The characteristics of salt marshes which are critical to the protection of the interests listed above are: 1) the growth, composition and distribution of salt marsh vegetation; 2) the flow and level of tidal and fresh water; and 3) the presence and depth of peat.

Physical Processes

Salt marsh cordgrass and underlying peat are resistant to erosion and dissipate wave energy, thereby providing a buffer that reduces wave damage. The peat and fine sediment material that underlie a salt marsh function as a barrier between the fresh groundwater that is found landward of the salt marsh and the ocean. This relatively impervious layer of peat acts essentially as a dam and thus serves to help maintain the level of fresh groundwater, or the water table, in the adjacent upland areas. The destruction or removal of this peat layer could create a drainage conduit for groundwater which would lower the nearby water table.

Salt marsh plants and the sediments bound to their network of vegetative roots and rhizomes act to reduce pollution of the coastal zone by absorbing and binding contaminants such as chlorinated hydrocarbons and heavy metals delivered by surface runoff from upland areas. Salt marsh can also retain nutrients such as

nitrogen and phosphorus that otherwise may contribute to algal blooms in coastal waters.

Biological Processes

Salt marshes also play an important role in the protection of marine fisheries and land containing shellfish, and provide important wildlife habitat. Salt marshes are extremely productive natural systems that export large volumes of organic material (detritus) to the ocean and estuaries where the detritus supports extensive marine food chains. The basis of the coastal marine food web is the phytoplankton organisms which depend, in part, on these nutrients for their productivity. Changes in the growth or species composition of phytoplankton will directly affect the remainder of the food web. The young stages of many organisms entering the fisheries pass through a planktonic stage during which the availability of phytoplanktonic food organisms is a controlling factor in their survival. The total net production of salt marsh grasses may be as much as three times higher than the total net production of a Missouri tall grass prairie.

Salt marshes provide spawning and nursery areas for finfish as well as important food, shelter, breeding areas, and migratory and overwintering areas for many wildlife species. Many bird species feed on finfish, shellfish, and other food species produced in salt marshes or through the salt marsh's contribution to the marine food chain.

Summary of Wetlands Protection Regulatory Performance Standards

When a salt marsh is significant to the protection of marine fisheries, the prevention of pollution, storm damage prevention or ground water supply, the following the following performance standards apply:

- A proposed project in a salt marsh, on land within 100 feet of a salt marsh or in a body of water adjacent to a salt marsh must not destroy any portion of the salt marsh and must not have an adverse effect on the productivity of the salt marsh. Alterations in growth, distribution and composition of salt marsh vegetation must be considered in evaluating adverse effects on productivity. The harvesting of salt marsh hay is not prohibited.
- A small project within a salt marsh, such as an elevated walkway or other structure which has no adverse effects other than blocking sunlight from the underlying vegetation for a portion of each day, may be permitted if the project complies with all other applicable requirements of these regulations.
- A project which will restore or rehabilitate a salt marsh, or create a salt marsh, may be permitted.
- No project may be permitted which will have any adverse effect on the habitat of state-listed rare vertebrate or invertebrate species. (See Section entitled, "Protection of Rare Species Habitat" for more information on this standard.)

Land Containing Shellfish (310 Code of Mass. Regulations 10.34)

Definitions

Land containing shellfish means land under the ocean, tidal flats, rocky intertidal shores, salt marshes and land under salt ponds when any such land contains shellfish. [310 Code of Mass. Regulations 10.34(2)(a)]

Shellfish means the following species: Bay scallop (*Argopecten irradians*); Blue mussel (*Mytilus edulis*); Ocean quahog (*Arctica islandica*); Oyster (*Crassostrea virginica*); Quahog (*Mercenaria mercenaria*); Razor clam (*Ensis directus*); Sea clam (*Spisula solidissima*); Sea scallop (*Placopecten magellanicus*); Soft shell clam (*Mya arenaria*). [310 Code of Mass. Regulations 34(2)(b)]

Land containing shellfish differs from the other Resource Areas in that it is both an interest to be protected under the Wetlands Act and a Resource Area.

Functions

The Wetland Regulations presume that "land containing shellfish" is significant to the protection of shellfish resources as well as the protection of marine fisheries when it has been identified and mapped by the conservation commission or the Massachusetts Department of Environmental Protection, either based upon maps and designations of the Massachusetts Division of Marine Fisheries or upon maps and written documentation of the shellfish constable. "Significant" is defined in the Regulations to mean "plays a role" in protecting any of the interests.

Critical Characteristics

The characteristics of land containing shellfish which are critical to the protection of the interests listed above are: shellfish; water quality; water circulation; and the natural relief, elevation or distribution of sediment grain size of the land.

Physical Processes

The quality of water over land containing shellfish is affected by alterations in salinity, dissolved oxygen, nutrients, turbidity, temperature and the addition of pollutants. These physical and chemical characteristics influence shellfish in a number of ways, including growth, reproduction and mortality. For example, various shellfish species have particular salinity requirements. A salinity range of approximately 5-8 parts per thousand is the critical salinity boundary between fresh water and marine faunas. Below this level of salinity, even the most hardy of marine organisms cannot survive because a number of vital physiological processes are impaired.

Water circulation patterns help maintain the temperature, dissolved oxygen, and salinity levels of waters over land containing shellfish, thereby helping to maintain



Figure 10. Shellfish harvesting (courtesy of Mass. Department of Environmental Management).

conditions needed for productive shellfish beds. Water currents also supply nutrients and disperse pollutants.

Bivalves that burrow into sediments have specific depth and grain size requirements. Thus, the natural relief, elevation, and distribution of sediment grain size of land containing shellfish is important. The size of sediment grains has three general effects on shellfish populations. First, the young of various species prefer specific particle sizes in which to burrow. The success of adult shellfish, therefore, depends on the availability of the specific particle size needed by the young. Second, the young larval stages respond to the microstructure of the sediment surface and will not settle successfully if particle size or texture is not suitable. Further, the success of larvae which have settled and are undergoing metamorphosis may be affected by the compaction of the surface layer of sediments. This compaction depends, in part, on particle size and shape. Third, the oxygen tension in the water within the sediments is partially a reflection of water circulation. This, in turn, is a function of the particle size and compaction. Oxygen tension within water layers affects the mortality rate of newly settled larvae.

Biological Processes

Shellfish are an important commercial, recreational and ecological resource in Massachusetts. As a food source, shellfish are important to people because they are high in protein and are produced in a relatively short period of time.

The ecological value of shellfish resources is less obvious, but no less significant. As biological consumers, shellfish are a vital link between the abundant phytoplankton and other important segments of the coastal ecosystem. As producers, shellfish may be viewed in two ways. First, adult shellfish represent a valuable resource to humans and to members of the marine ecosystem which feed directly or indirectly on them. Second, the planktonic stages of shellfish which are produced in extraordinary quantities during the spring and summer months in coastal waters represent a significant source of food for the young life stages of marine fish and crustaceans important to commercial and recreational fisheries. Therefore, the maintenance of naturally productive shellfish beds plays a direct role in maintaining fish stocks by supplying food to the young of commercially important fishes. Various birds feed on immature and mature shellfish as well as on the other invertebrate food species that are abundant in many shallow shellfish bed areas.

Summary of Wetlands Protection Regulatory Performance Standards

When a Resource Area, including land under the ocean, tidal flats, rocky intertidal shores, salt marshes, or land under salt ponds is significant to the protection of land containing shellfish and the protection of marine fisheries, the following performance standards apply:

- Any project on land containing shellfish must not adversely affect such land or marine fisheries by a change in the productivity of the land caused by:
 - alterations of water circulation;
 - alterations in relief elevation;
 - the compacting of sediment by vehicular traffic;

- alterations in the distribution of sediment grain size;
 - alterations in natural drainage from adjacent land; or
 - changes in water quality, including, but not limited to, other than natural fluctuations in the levels of salinity, dissolved oxygen, nutrients, temperature, or turbidity, or the addition of pollutants.
- A project which temporarily has an adverse effect on shellfish productivity but which does not permanently destroy the habitat may be permitted if the land containing shellfish can and will be returned substantially to its former productivity in less than one year from the commencement of work.
 - For land containing shellfish that is significant because it has been designated by the Mass. Division of Marine Fisheries or the municipal shellfish constable (except in Areas of Critical Environmental Concern), a project may be permitted, if the shellfish are moved to a suitable location after consultation with the shellfish constable and the Massachusetts Division of Marine Fisheries. The project may not be commenced until after the moving and replanting of shellfish has been commenced.
 - Projects approved by the Massachusetts Division of Marine Fisheries that are specifically intended to increase the productivity of land containing shellfish may be permitted. Aquaculture projects approved by the appropriate local and state authority may also be permitted.
 - No project may be permitted which will have any adverse effect on the habitat of state-listed rare vertebrate or invertebrate species (See Section entitled, "Protection of Rare Species Habitat" for more information on this standard).

Land Under Salt Ponds

(310 Code of Mass. Regulations 10.33)

Definition

Salt Pond means a shallow enclosed or semi-enclosed body of saline water that may be partially or totally restricted by barrier beach formation. Salt ponds may receive freshwater from small streams emptying into their upper reaches and/or springs in the salt pond itself. [310 Code of Mass. Regulations 10.33(2)]

Functions

The Wetland Regulations presume that land under salt ponds is significant to the protection of marine fisheries and wildlife habitat and, where there are shellfish, to the protection of land containing shellfish. "Significant" is defined in the Regulations to mean "plays a role" in protecting any of the interests.

Critical Characteristics

The characteristics of land under salt ponds which are critical to the protection of the interests listed above are: water circulation, distribution of sediment grain size, freshwater inflow, productivity of plants, and water quality.

Physical and Biological Processes

Salt ponds are areas of high marine productivity that may function as nursery grounds for offshore fish, as well as supporting resident populations of commercially important fish, mollusks and crustaceans. The abundance of these marine organisms is dependent upon the primary production of phytoplankton, algae and other plant communities that include eel grass and *Spartina alterniflora*. Salt ponds also provide spawning areas for shellfish and are nursery areas for crabs and fish. In addition to the many birds which feed on fish found in salt ponds, waterfowl also eat invertebrates such as mollusks and crustaceans from salt ponds, and some bird species eat rupia and eel grass which may be rooted in land under salt ponds.

The critical productivity of salt ponds also depends upon the freshwater inflow and water circulation that enhance the availability of the essential nutrients required for plant growth.

Summary of Wetlands Protection Regulatory Performance Standards

When land under a salt pond is significant to the protection of marine fisheries or wildlife habitat, the following performance standards apply:

- Any project on land under a salt pond, on lands within 100 feet of the mean high water line of a salt pond, or on land under a body of water adjacent to a salt pond must not have an adverse effect on marine fisheries

or wildlife habitat of the salt pond caused by:

- alterations of water circulation;
- alterations in the distribution of sediment grain size and the relief or elevation of the bottom topography;
- modifications in the flow of fresh and/or salt water;
- alterations in the productivity of plants, or
- alterations in water quality, including, but not limited to, other than normal fluctuations in the level of dissolved oxygen, nutrients, temperature or turbidity, or the addition of pollutants.
- Projects specifically required and intended to maintain the depth and the opening of a salt pond to the ocean in order to maintain or enhance the marine fisheries or for the specific purpose of fisheries management may be permitted.
- No project may be permitted which will have any adverse effect on the habitat of state-listed rare vertebrate or invertebrate species (See Section entitled, "Protection of Rare Species Habitat" for more information on this standard).

Land Under the Ocean (310 Code of Mass. Regulations 10.25)

Definition

Land Under the Ocean means land extending from the mean low water line seaward to the boundary of the municipality's jurisdiction and includes land under estuaries. [310 Code of Mass. Regulations 10.25(2)(a)]

Nearshore Areas of land under the ocean means that land extending from the mean low water line to the seaward limit of a municipality's jurisdiction, but in no case beyond the point where the land is 80 feet below the level of the ocean at mean low water. However, the nearshore area shall extend seaward only to that point where the land is 30 feet below the level of the ocean at mean low water for municipalities bordering Buzzard's Bay and Vineyard Sound...40 feet below the level of the ocean at mean low water for Provincetown's land in Cape Cod Bay, and 50 feet below the level of the ocean at mean low water for Truro's and Wellfleet's land in Cape Cod Bay. [310 Code of Mass. Regulations 10.25(2)(b)]

Land under the ocean includes land under bays, estuaries and under portions of rivers which are tidally influenced, such as the Taunton River in the Berkley and Dighton area, as well as land under the open ocean out to the municipality's boundary.

Functions

The Wetland Regulations presume that nearshore areas of land under the ocean are significant to the protection of marine fisheries and, where there are shellfish, to the protection of land containing shellfish, to storm damage prevention, flood control, and the protection of wildlife habitat. The Wetland Regulations presume that land under the ocean beyond the nearshore areas is significant to the protection of marine fisheries and where there are shellfish, to the protection of land containing shellfish. "Significant" is defined in the Regulations to mean "plays a role" in protecting any of the interests.

Critical Characteristics

The characteristic of nearshore land under the ocean which is critical to the protection of storm damage prevention or flood control is the bottom topography of the land. The characteristics of land under the ocean which are critical to the protection of marine fisheries and wildlife habitat are: water circulation, distribution of sediment grain size, water quality, finfish habitat, and important food for wildlife.

Physical Processes

Nearshore areas of land under the ocean (generally areas up to 80 feet of

depth below mean low water, or to a lesser depth in certain specified areas near the Cape and Islands) play an important role in storm damage prevention and flood control.

As waves travel from deep to nearshore areas, the natural bottom topography changes their direction and height because of refraction, bottom friction and percolation. The effect of these changes is to reduce the energy of the waves, thereby reducing storm damage and flooding.

The amount of wave energy which reaches the shoreline also depends, in part, upon how much energy is lost as the wave shoals, prior to breaking. The shallower the water and more gradual the slope, the greater the loss of energy. Energy is also lost due to the pumping action of shoaling waves, that is, the forcing of water (percolation) into the sea bed. Submerged bars also help dissipate storm wave energy.

Nearshore areas of land under the ocean also serve as a sediment source for coastal beaches and coastal dunes.

Biological Processes

Land under the ocean (including nearshore areas), which includes estuaries and tidal rivers, plays an important role in maintaining shellfish and marine fisheries. Such land provides habitat for productive plant communities, such as eelgrass beds, that produce large amounts of particulate matter and dissolved nutrients which support marine organisms such as phytoplankton and detritovore populations. These organisms, in turn, are prey for bottom dwelling, or benthic, organisms. Many species of commercially valuable fish consume both plankton and benthic organisms at some point in their life cycle.

Such land also provides spawning and nursery sites for fish, crustaceans, and shellfish, and prime feeding and shelter habitat for adult organisms which comprise the commercial and recreational fisheries.

Nearshore areas of land under the ocean provide important habitat for birds. Waterfowl feed heavily on vegetation (such as eel grass, widgeon grass, and macrophytic algae) and invertebrates (such as polychaetes and mollusks) found in estuaries and other shallow submerged land under ocean. Coastal waterbirds such as terns, gulls, and herons feed on fish in these areas.

Summary of Wetlands Protection Regulatory Performance Standards

When land under the ocean is significant to the protection of marine fisheries, protection of wildlife habitat, storm damage prevention or flood control, the following performance standards apply:

- Improvement dredging for navigational purposes must be designed and carried out using best available measures to minimize adverse effects caused by changes in:
 - bottom topography which will result in increased flooding or erosion caused by an increase in the height or velocity of waves impacting the shore;
 - sediment transport processes which will increase flood or erosion hazards by affecting the natural replenishment of beaches;
 - water circulation which will result in an adverse change in flushing

rate, temperature, or turbidity levels; or

- marine productivity which will result from the suspension or transport of pollutants, the smothering of bottom organisms, the accumulation of pollutants by organisms, or the destruction of marine fisheries habitat or wildlife habitat.

• Maintenance dredging for navigational purposes must be designed and carried out using the best available measures to minimize adverse impacts caused by changes in marine productivity which will result from the suspension or transport of pollutants, increases in turbidity, the smothering of bottom organisms, the accumulation of pollutants by organisms, or the destruction of marine fisheries habitat or wildlife habitat.

• Projects other than improvement or maintenance dredging must not cause adverse effects by altering the bottom topography so as to increase storm damage or erosion of coastal beaches, coastal banks, coastal dunes, or salt marshes.

• Projects other than improvement dredging must, if water-dependent, be designed and constructed using best available measures to minimize adverse effects, and if non-water-dependent, must have no adverse effects, on marine fisheries habitat or wildlife habitat caused by:

- alterations in water circulation;
- destruction of eelgrass (*Zostera marina*) or widgeon grass (*Ruppia maritima*) beds;
- alterations in the distribution of sediment grain size;
- changes in water quality, including, but not limited to, other than natural fluctuations in the level of dissolved oxygen, temperature or turbidity, or the addition of pollutants; or
- alterations of shallow submerged lands with high densities of polychaetes, mollusks, or macrophytic algae.

• No project may be permitted which will have any adverse effect on the habitat of state-listed rare vertebrate or invertebrate species (See Section entitled, "Protection of Rare Species Habitat" for more information on this standard).

Protection of Rare Species Habitat (310 Code of Mass. Regulations 10.37)

Definitions

Estimated Habitat Maps (see opposite page) of state-listed vertebrate and invertebrate occurrences are provided by the Massachusetts Division of Fisheries and Wildlife's Natural Heritage & Endangered Species Program as a service to municipal conservation commissions who are charged with protecting rare species habitat under the Wetlands Protection Act. These maps define the estimated geographical extent of habitats of all listed rare wetland wildlife species for which occurrences have been reported and documented to the satisfaction of the Program.

The Mass. Department of Environmental Protection defers to the scientific opinions of the Mass. Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program in determining the location and extent of actual habitat of state-listed rare species. The Department also relies on the Natural Heritage Program to determine whether a proposed activity will have an adverse effect, whether short- or long-term, on the habitat of the local rare species population. The Heritage Program's opinion is presumed to be correct and may be overcome only upon a clear showing to the contrary.

See the next chapter of this document for a complete list of rare species likely to be associated with barrier beach ecosystems.

Function

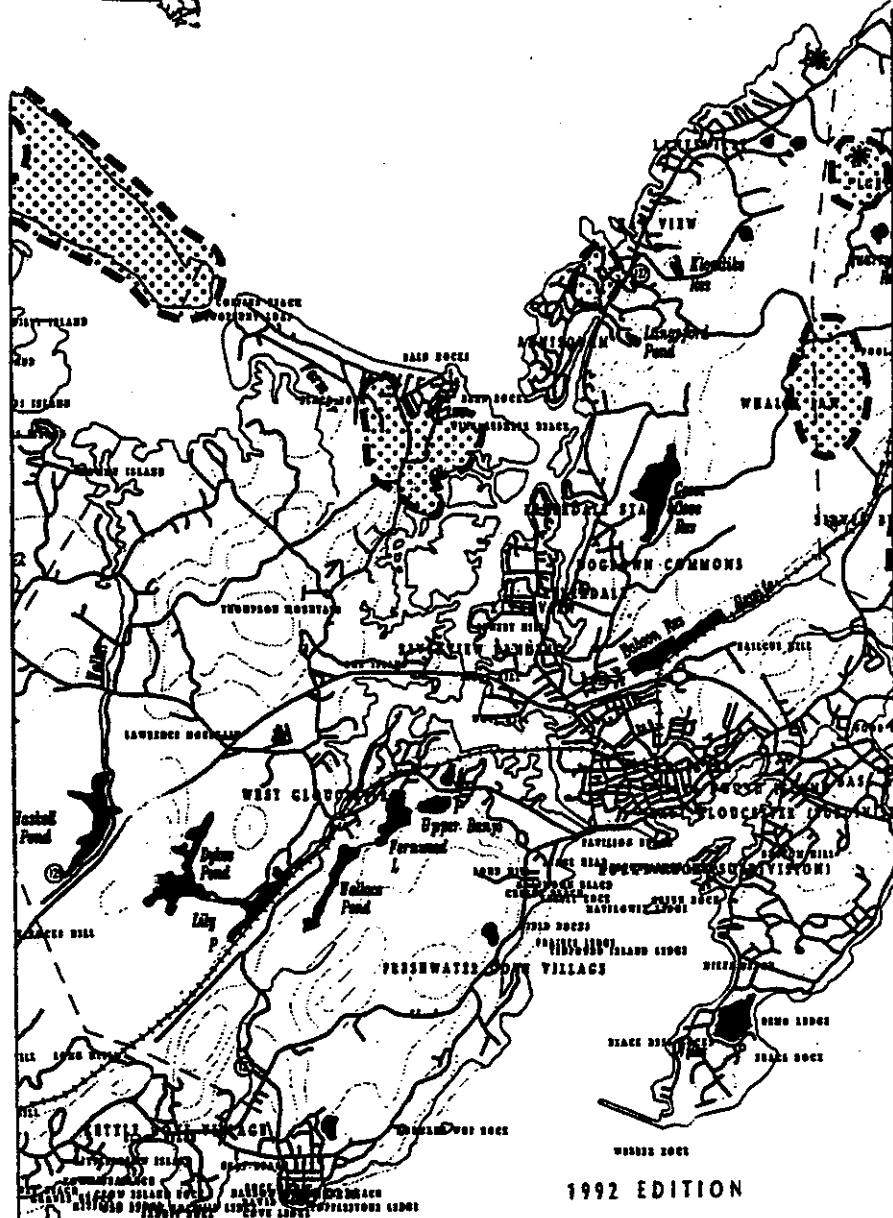
Rare species wildlife habitat provides all the requisite essentials for breeding, nesting, foraging and resting for the species listed at 310 Code of Mass. Regulations 10.60. Certain rare, state-listed species have specialized requirements that are met by the ecosystem on barrier beaches. Selected species, which barrier beach managers are particularly likely to encounter, are discussed further on in this document.

Summary of Wetlands Protection Regulatory Performance Standards

When a project is proposed to alter a Resource Area which is part of the actual habitat of a state-listed species, the following performance standard applies:

- No project may be permitted which will have any short or long-term adverse effect on the habitat of the local population of that species.

GLoucester Quad



1992 EDITION



MAY OF ESTIMATED HABITATS
OF STATE-LISTED RARE WETLANDS WILDLIFE
Use only in reference to the Wetlands
Protection Act Regulations (310 CMR 18)
Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries & Wildlife

Scale 1:60,000 (1 inch = 5,000 feet)
See County Index Maps to locate adjacent quadrangles

Figure 11. Mass. Natural Heritage and Endangered Species Program map of estimated habitats of state-listed rare wetlands wildlife for Gloucester.

The Massachusetts Division of Fisheries and Wildlife acts as the scientific authority in making this determination. A determination made by the Division is presumed to be correct, although it can be rebutted by a clear demonstration of contrary information before a municipal conservation commission.

Appendix H, the Division's "Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts," and Appendix I, the Department of Environmental Protection's "Recommended Conditions for Barrier Beaches," should be consulted for additional information and recommended conditions.

CHAPTER 3

Other Federal and State Statutes Applicable to Barrier Beaches

Several other federal and state laws are important for beach managers to understand in carrying out their responsibilities on barrier beaches. This Chapter discusses some of the most important of these federal and state statutes and their applicability to Massachusetts barrier beaches.

Where appropriate, this Chapter includes for each piece of legislation the following information:

- General Explanation; and
- Summary of Regulatory Requirements.

The laws discussed in this Chapter are:

- Federal Endangered Species Act of 1973 (16 U.S. Code 1531);
- Mass. Endangered Species Act (Mass. General Laws Chapter 131A);
and
- Mass. Historical Commission.

Additional statutes and regulations which may be of interest to barrier beach stewards are found in Chapter 1 -- "A Beach Manager's Guide to the Regulations," and Appendices E -- "Federal, State, Regional, and Municipal Laws" and K -- "Access for the Physically Challenged."

Federal Endangered Species Act of 1973 (16 United States Code 1531)

This law, and the regulations promulgated thereunder, authorize the U.S. Department of the Interior's Fish and Wildlife Service to list, based on the best available biological data, plants and animals determined to be "Endangered" or "Threatened." "Critical Habitat" designations are based on biological and other information.

If the following federally listed Endangered and Threatened species occur on Massachusetts barrier beaches, their presence may have significant management implications for beach managers.

SPECIES	STATUS
bald eagle	Endangered
peregrine falcon	Endangered
piping plover	Threatened
roseate tern	Endangered
Northeastern beach tiger beetle	Threatened

The U.S. Fish and Wildlife Service also has a list of rare flora and fauna found on barrier beaches in Massachusetts.

Direct or indirect habitat-altering activities may adversely affect listed species. Of particular importance in Massachusetts are the following species:

- 1) **Bald eagle:** Eagles may appear along barrier beaches at any season of the year. Barrier beaches are important to eagles primarily for foraging purposes. Eagles primarily seek carrion--dead fish, birds and mammals--scavenged on sand/mudflats and along the tide line.
- 2) **Peregrine falcon:** Migrant peregrine falcons may appear along barrier beaches at any time of the year, but are most frequently noted in September-October and more occasionally through the winter months to the end of May. The entire barrier beach functions as a feeding ground for the peregrine falcon. Prey consists primarily of birds.
- 3) **Piping plover:** Massachusetts barrier beaches provide some of the most important nesting habitat for this species on the Atlantic Seaboard. [See more complete discussion in Chapter 2 and the next section.]
- 4) **Roseate tern:** Small numbers of roseate terns occur within larger common tern colonies on barrier beaches in Massachusetts. These seabirds use isolated dune areas for nesting and rearing their young. Large sandflat areas adjacent to the dunes function as "nursery grounds" for recently fledged young, and, in some cases, as "staging areas" for birds prior to fall migration. [See more complete discussions in Chapter 2 and the next section.]

5) **Northeastern beach tiger beetle:** This tiger beetle formerly inhabited wide, sandy beaches throughout much of the northeastern United States. Today only a single population occurs north of Maryland, on a privately-owned beach on Martha's Vineyard. Adults feed on insects, amphipods, and carrion, and larvae inhabit burrows in upper portions of the intertidal zone. Larvae appear to be destroyed by off-road vehicles, heavy pedestrian traffic, and severe storms. Habitat may be further degraded by coastal development and beach stabilization structures.

Summary of Regulatory Requirements

Federal regulations prohibit "taking," including harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting listed wildlife species; as well as attempting to engage in such conduct; or causing such acts to be committed. In addition, federal agencies must consult with the U.S. Fish and Wildlife Service prior to undertaking, authorizing, or funding any activity that may affect listed species.

In 1979, the U.S. Fish and Wildlife Service and the Massachusetts Division of Fisheries and Wildlife executed a Cooperative Agreement, as provided under Section 6 of the U.S. Endangered Species Act, under which the two agencies share some responsibilities for management of federally-listed species. These species also occur on the "Massachusetts List of Endangered, Threatened, and Special Concern Species." For non-federal entities, compliance with the Massachusetts Endangered Species Act and the Massachusetts Wetlands Protection Act, as defined in these **Guidelines**, will generally assure compliance with the prohibitions on "take" contained in federal law. However, federal agencies are further obligated to conduct a "Section 7 consultation" under the U.S. Endangered Species Act for proposed activities that may affect listed species.

**Massachusetts Endangered Species Act
(Mass. General Laws
Chapter 131A; 321 Code of Mass. Regulations 10.00)**

This law and the regulations promulgated thereunder establish procedures for the listing of Endangered, Threatened and Special Concern species native to Massachusetts, and the designation of "Significant Habitat" for Endangered and Threatened species, and establish rules and prohibitions regarding activities which could result in a "taking" of such species or alter "significant habitat."

Rare species of plants and animals that are likely to occur on Massachusetts barrier beaches and are officially listed as Endangered, Threatened or Special Concern by the Massachusetts Division of Fisheries and Wildlife (321 Code of Mass. Regulations 10.60) are listed below. For a complete listing, refer to the Regulations.

ANIMAL SPECIES	STATUS
Diamondback Terrapin	Threatened
Short-eared Owl	Endangered
Piping Plover	Threatened
Northern Harrier	Endangered
Peregrine Falcon	Endangered
Bald Eagle	Endangered
Least Tern	Special Concern
Roseate Tern	Endangered
Common Tern	Special Concern
Arctic Tern	Special Concern
Gray Seal	Special Concern
Northeastern Beach Tiger Beetle	Endangered

PLANT SPECIES	STATUS
Seabeach Amaranth (<i>Amaranthus pumilus</i>)	Historical
Purple Needlegrass (<i>Aristida purpurascens</i>)	Threatened
Seabeach Needlegrass (<i>Aristida tuberculosa</i>)	Special Concern
Pygmyweed (<i>Crassula aquatica</i>)	Threatened
Common's Panic-grass (<i>Dichanthelium commonsianum</i>)	Special Concern
Mattamuskeet Panic-grass (<i>Dichanthelium mattamuskeetense</i>)	Endangered
Saltpond Grass (<i>Diplache maritima</i>)	Threatened
Sea Lyme-grass (<i>Elymus mollis</i>)	Endangered
Saltpond Pennywort (<i>Hydrocotyle verticillata</i>)	Special Concern
Oysterleaf (<i>Mertensia maritima</i>)	Endangered
Pinnate Water Milfoil (<i>Myriophyllum pinnatum</i>)	Special Concern

Adder's Tongue Fern (<i>Ophioglossum vulgatum</i>)	Threatened
Prickly Pear (<i>Opuntia humifusum</i>)	Threatened
Stigose Knotweed (<i>Polygonum setaceum</i> var. <i>interjectum</i>)	Special Concern
Lion's Foot (<i>Prenanthes serpentaria</i>)	Endangered
Seabeach Dock (<i>Rumex pallidus</i>)	Threatened
Knotted Pearlwort (<i>Sagina nodosa</i> var. <i>nodosa</i>)	Threatened
Bristly Foxtail (<i>Setaria geniculata</i>)	Special Concern
Salt Reedgrass (<i>Spartina cynosuroides</i>)	Special Concern
American Sea-blite (<i>Suaeda americana</i>)	Special Concern

Summary of Regulatory Requirements

Regulations pursuant to the Massachusetts Endangered Species Act prohibit the "take" of any species of animal or plant listed as Endangered, Threatened or Species of Special Concern in Massachusetts. In reference to animals, "take" means to harass, harm, pursue, hunt, shoot, hound, kill, trap, capture, collect, process, disrupt the nesting, breeding, feeding or migratory activity or attempt to engage in any such conduct, or to assist in such conduct. In reference to plants, "take" means to collect, pick, kill, transplant, cut or process or attempt to engage or to assist in any such conduct. The regulations further state that: "All state agencies shall utilize their authorities in furtherance of the purposes of the Massachusetts Endangered Species Act and these regulations; review, evaluate and determine the impact on Endangered, Threatened and Special Concern species or their habitats of all works, projects or activities conducted by them; and use all practicable means and measures to avoid or minimize damage to such species or their habitats." This includes any work, project or activity either directly undertaken by a state agency or indirectly by other parties with funds provided by a state agency.

The Massachusetts Division of Fisheries and Wildlife has prepared "Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts," found in Appendix H, to assist barrier beach managers in meeting these regulatory requirements.

Piping Plover

Piping plovers are small, sand-colored shorebirds that nest on sandy beaches along the Atlantic Coast from South Carolina to Newfoundland. The U.S. Atlantic Coast population is listed as "Threatened" by the U.S. Department of the Interior's Fish & Wildlife Service under provisions of the U.S. Endangered Species Act of 1973 and was estimated at 790 pairs in 1992 (a 6% increase over the previous year). In Massachusetts, the piping plover is also listed as "Threatened" by the Massachusetts Division of Fisheries and Wildlife under provisions of the Massachusetts Endangered Species Act. An estimated 290 pairs nested in Massachusetts in 1993, from Plum Island south to the Rhode Island border and east to Cape Cod, Martha's Vineyard and Nantucket.

Piping plovers nest on coastal beaches above the high-tide line, sand flats at the end of sand spits, gently sloping foredunes and in blow-out or washover areas between or behind primary dunes. They also nest on areas where sandy dredged material has been deposited. Nests are simple "scrapes" in the sand or mixtures of sand, gravel and shells. Nests are placed on open sand or in patches of sparse to moderately dense beach grass and other dune vegetation. Piping plovers are dependent upon natural processes of beach erosion and accretion through wind and wave action to maintain areas of suitable nesting habitat.

Piping plovers return to nesting beaches in Massachusetts from mid-March through late April or early May. Males establish and defend territories and court females. Nesting may occur from mid-April through late July. Clutch size is usually 4 eggs; average incubation period is 27-28 days. Piping plovers fledge only a single brood per season, although renesting will occur in response to nest loss. Chicks are precocial and able to move about within hours after hatching. Chicks remain together with one or both parents until they fledge at 25-35 days of age. Both adults and chicks feed on a variety of invertebrates found in intertidal sand and mud flats, wrack, and on upper beaches and dunes. Preferred feeding habitats of both adults and chicks are intertidal areas of wrack (seaweed, vegetation, shells and other organic debris deposited on the beach by tidal action). Unfledged chicks may be present from late May until mid-August.

Least Tern

Least terns are whitish-colored black-capped birds sporting a white forehead and a black-tipped yellow bill. These small (10") seabirds nest along the Atlantic Seaboard from southern Maine to Florida. In Massachusetts, the least tern is listed as a "Species of Special Concern" by the Massachusetts Division of Fisheries and Wildlife under provisions of the Massachusetts Endangered Species Act. An estimated 2,642 pairs nested at 51 sites in Massachusetts in 1992.

Least terns occupy nesting grounds similar in most respects to those of the piping plover and the two species commonly nest in close proximity to each other. Least terns arrive in Massachusetts in early May, engage in elaborate courtship rituals, mate and quickly establish colonies. Actual nesting occurs from about the third week of May through mid-July. Nesting groups range in size from just a few pairs to 500 or more pairs. Nesting groups mount mutual defense tactics, notably mobbing and defecating upon intruders with great accuracy. Least terns nest in their own colonies and do not join in mixed colonies with other species of terns.

Nests are formed as shallow "scrapes" in the sand, usually in sandy areas devoid of vegetation, but sometimes in areas of sparse beach grass, beach pea and other dune vegetation. Least terns, like the piping plovers, have nested along the eastern barrier beaches for thousands

of years, capitalizing opportunistically on natural processes of beach erosion and accretion.

Clutches consist of 1-3 eggs. The average incubation period is 21-23 days. Incubating adults, clutches of eggs and the young are extremely cryptic. These terns are single brooded, but will renest multiple times in response to nest loss. Chicks are precocial and may run considerable distances along the beaches in the prefledging period. Fledging occurs at about 20-22 days. Adults deliver fish caught in the surrounding waters to the chicks. Soon after fledging, least terns stage and depart southward; most are gone before the end of August.

Common, Roseate and Arctic Terns

These 3 similar-appearing species of whitish-colored black-capped seabirds commingle in large nesting colonies and are hence treated as a group. The common tern is indeed the most "common" of the group. In 1992, some 8,600 pairs were estimated at 35 sites in Massachusetts; only 9 of these sites exceeded 100 pairs. Unlike the common tern, the Arctic tern is regarded as a "peripheral" species in Massachusetts. At the southern limits of its natural range in Massachusetts, the Arctic tern has been declining since the 1950s and reached an all-time low of only 8 pairs in 1992. Both of these species are listed by the Massachusetts Division of Fisheries and Wildlife as a "Species of Special Concern" under provisions of the Massachusetts Endangered Species Act.

The Northeastern population of the roseate tern is listed as "Endangered" by both the U.S. Department of the Interior's Fish and Wildlife Service under the U.S. Endangered Species Act of 1973 and the Massachusetts Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program under provisions of the Massachusetts Endangered Species Act. In 1992, nearly 85 percent of the entire Northeastern population was concentrated in two colonies--Bird Island, Buzzards Bay, Massachusetts and Great Gull Island, off the eastern end of Long Island, New York. Out of an estimated 1,412 pairs in Massachusetts in 1992, 1,375 pairs (97 percent) were at Bird Island. Away from Bird Island, small numbers of roseates may be found and should be expected with large nesting groups of common terns.

All three of these "larger" tern species differ dramatically from the least tern in habitat preference. Unlike the least tern, they prefer to establish colonies on offshore islands including barrier islands and the remote tips of barrier beaches. Unfortunately for these terns, most of the optimal offshore nesting sites have been gradually usurped by gulls since the 1950's. As a result, terns have been forced to settle at a limited number of secondary inshore sites that leave them more exposed to disturbance by a variety of factors including human activity and a host of land-based predators.

The life histories of these 3 species of terns is generally similar though differing in particulars. Exemplifying the three, common terns select dune areas with moderate to dense stands of beach grass and other dune vegetation. Birds arrive from the south in early May. Colony sites are generally selected before the end of May. Ritualized courtship and pair formation occurs on the beach and sandflats about the colony site. Nesting groups range from just a few to 4,000 or more pairs. Nests are "scrapes" in the sand, usually lined with beach grass and seaweed. Clutches of 2-3 eggs are produced. Both parents share incubation duties for a term of about 23 days. The young are precocial and seek the shade of vegetation and are brooded by the adults. Diet of these terns is almost exclusively fish. Adults rise from the colony to aggressively mob and defecate on intruders.

As the young approach fledging at about 28 days, the bare sandy berm areas proximate to the colony assume importance to the birds as rearing or nursery areas for the young. At some sites, thousands of young terns may be present in these areas from late July through mid-August. After mid-August, most terns have fledged and all three species gather in "staging areas" prior to departure for winter quarters by the end of August.

Massachusetts Historical Commission

As early as possible in the planning stages of a project licensed or permitted by the Massachusetts Department of Environmental Protection, in whole or in part, the Department should notify the Massachusetts Historical Commission in order for the Commission to determine whether the project will have an effect on a historic or archaeological property which is listed in the State Register of Historic Places. The Department does not have to notify the Commission of a project if it clearly does not have an area of potential impact due to the nature of the project. However, if a project is likely to impact a geographical area and cause a change in the historical, architectural, archaeological, or cultural qualities of a property, the Department should notify the Massachusetts Historical Commission. Notification to the Commission is through the project applicant's submission of a Project Notification Form, or, in the case of a project which also requires a Massachusetts Environmental Policy Act review, an Environmental Notification Form. [A Massachusetts Historical Commission Project Notification Form is found in Appendix A of 950 Code of Mass. Regulations 71.00.]

Within thirty days of receipt of a Project Notification Form, the Historical Commission will determine whether the project will have any adverse effect on a State Register property and will provide written comment. If the Commission determines that a project will have an adverse effect, the Commission and Department of Environmental Protection should immediately consult to discuss ways to eliminate, minimize or mitigate the adverse effect. The purpose of the consultation process is to avoid damage to historic or archaeological properties through the adoption of prudent and feasible means. Under Chapter 9 §27C of the Mass. General Laws, the discovery of any archaeological resources on lands owned or controlled by the Commonwealth or any of its subdivisions, should be reported to the State Archaeologist at the Massachusetts Historical Commission.

For further information, contact the Massachusetts Historical Commission, 80 Boylston Street, Boston, MA 02116, (617) 727-8470.

CHAPTER 4

Public Use/Recreational Activities

Barrier beaches have long been used by the public for a variety of purposes, including many recreational activities. While many uses have little impact on the resources of the barrier beach, other activities have been shown to have significant impacts.

This Chapter describes, for the barrier beach resource areas addressed in Chapter 2:

- Activity Descriptions;
- Resource Impacts; and
- Recommended Management Measures.

The activities covered in this Chapter include:

- Pedestrian Uses, including Hunting, Fin and Shellfishing, Kite-flying, Pets, and Hiking;
- Camping, including Fires;
- Watercraft, including Boats and Jet-Skis;
- Plant Harvesting;
- Non-Motorized Transport, including Horseback Riding and Bicycles;
- Fireworks; and
- Off-Road Vehicle Use.

Pedestrian Uses, including Hunting, Fin and Shellfishing, Kite-flying, Pets and Hiking

Pedestrians engage in a variety of activities on barrier beaches, including: wildlife observation (birdwatching), beach strolling, fishing access, hunting, and jogging. Kite flying at the beach is a popular sport that is viewed as a passive activity. Shellfishing in the intertidal and subtidal areas abutting the barrier is common for both recreational and commercial purposes. Hunting and fishing can occur throughout the barrier beach ecosystem.

Resource Impacts

Pedestrian access is important to encourage and maintain at barrier beaches. However, if left unmanaged, large, concentrated and frequent volumes of pedestrians can have significant impacts on barrier beach resources, including:

- dune vegetation (destruction of vegetation can lead to blow-outs and general lowering of dune profiles and impact wildlife habitat);
- wetlands (marshes, swamps, semi-flooded areas) which contain peaty soils (destruction of vegetation can produce depressed trails, with subsequent widening as pedestrians seek drier ground);
- upper wrack line (destruction of sand-binding plants which would otherwise start growing there);
- wildlife (the human disturbance factor and low tolerance of some species).

Wildlife can be adversely impacted by visitor-generated garbage left at the beach, since it may be ingested or may attract predators to nesting areas.

Discarded kite string and monofilament line can cause wildlife entanglement problems.

Nesting and feeding shorebirds may perceive kites as potential predators, thereby temporarily abandoning nests, leaving young vulnerable to temperature changes and predation. Shorebirds, terns and waterfowl may suffer serious injury or death from entanglement in kite strings, either during flight or from lengths of string discarded on the beach.

Unleashed or uncontrolled pets can harass, capture or kill wildlife, particularly nesting birds, eggs, and hatchlings. Additionally, unleashed or uncontrolled pets may cause disturbance to other beach users during seasonal high use periods. Animal waste can have an adverse impact on coastal beaches, water quality, and tidal flats. Vegetation, dune form and function can also be adversely affected.

Recommended Management Measures

- The Mass. Division of Fisheries and Wildlife's "Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns and Their Habitats in Massachusetts," found in Appendix H, and the Mass. Department of Environmental Protection's "Recommended Conditions for Barrier Beaches," found in Appendix I, should be consulted.

General Pedestrian Use/Hiking

- Pedestrian impacts should be managed in order to minimize adverse impacts to barrier beach natural resources associated with this activity.
- In most instances, large, concentrated and frequent volumes of pedestrian activity should be prohibited from coastal dunes and wetlands. However, where large, frequent and concentrated volumes of pedestrians will be channeled through dunes, the following precautions should be taken:
 - in establishing cross-over paths through dunes, there should be the minimum number of paths necessary to provide safe access and egress from the back of the barrier beach to the beach front;
 - pedestrian traffic should be managed through the use of ramps and elevated boardwalks, fences, thick vegetation, and signs;
 - trails should be constructed such that they cause no harm or disturbance to state-listed rare species;
 - non-ramped pedestrian trails through dunes to the beach front should be periodically inspected in order to determine whether or not the location of the trail or the volume of traffic are contributing to excessive wear and erosion. If so, the trail may have to be relocated or a ramp or boardwalk built and the old trail restored;
 - trails should not be constructed so that they create blowouts;
 - pedestrian trails should not cross over unstable dunes; and
 - pedestrian routes should not be constructed so that they create wind and wave tunnels; they should follow an "S" pattern. [See Chapter 5 for information on construction of pedestrian pathways and boardwalks.]
- On beaches where there is pedestrian traffic which could harm or disturb incubating plovers or terns, their eggs, or chicks, refuge areas with at least a 50 yard-radius around nests should be delineated with warning signs and symbolic fencing above the high tide line [see figure on page 72]. Only persons engaged in rare species monitoring, management, or research activities should enter the refuge areas, although individuals may pass by outside. Refuge areas should remain fenced as long as viable eggs or unfledged chicks are present.
- Refuge areas around nests should be expanded if a 50-yard radius is deemed inadequate to protect incubating adults or unfledged chicks from harm or disturbance. This may include situations where plovers or terns are especially intolerant of human presence, or where a 50-yard radius refuge provides

**Barrier Beach Pedestrian Closure to Protect
Piping Plover Chicks Between Hatching and Fledgling Periods**

(approximately 35 days)

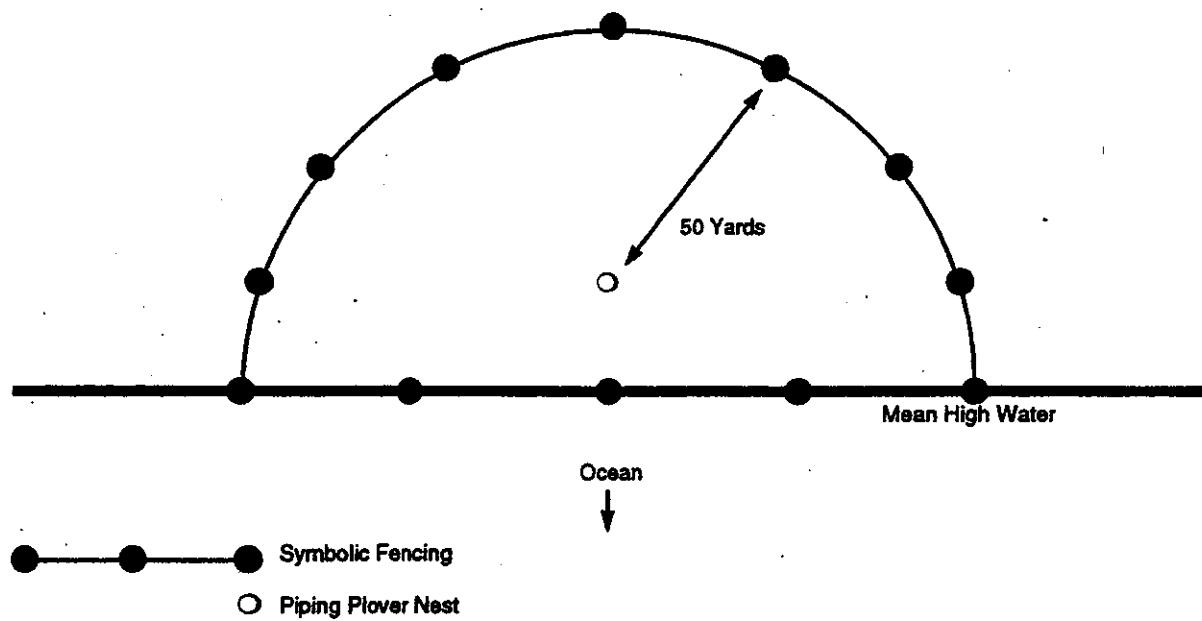


Figure 12. Barrier beach pedestrian closure to protect piping plover chicks between hatching and fledgling periods (approximately 35 days).

insufficient escape cover or alternative foraging opportunities for plover chicks. If nests are discovered outside fenced areas, fencing should be extended to create a sufficient buffer to prevent harm or disturbance to incubating adults, eggs, or unfledged chicks. On some beaches where plovers and terns have traditionally nested or where suitable habitat occurs, it may be necessary to symbolically fence portions of habitat during March or April, prior to plover nesting, or during May, prior to tern nesting, if, in the opinion of the Massachusetts Division of Fisheries and Wildlife, or its agent, failure to do so could discourage plovers or terns from nesting as a result of disturbance from human use.

- Rearing or nursery areas used by unfledged or recently-fledged tern chicks, as identified by the Massachusetts Division of Fisheries and Wildlife, or its agent, should be delineated by beach managers with posts, warning signs, or symbolic fencing not later than June 21. Only persons engaged in rare species monitoring, management, or research should enter posted or fenced tern nursery areas while unfledged tern chicks or tern chicks being fed by adult terns are present, although individuals may pass by outside these areas. Such nursery areas may be re-opened when all tern chicks have fledged and are not being fed by adult terns.
- Viewing platforms should be constructed where people congregate at stairways and scenic overviews.
- Concessions that sell refreshments should be encouraged to use biodegradable materials and seek alternatives to enhance waste reduction.
- Users should be encouraged to follow a carry in-carry out policy on garbage, trash, and refuse.

Hunting

- Hunting conducted in accordance with existing Mass. Division of Fisheries and Wildlife regulations is a legitimate and acceptable recreational activity on barrier beaches.

Pets

- Pets should be leashed or under control of their owners at all times from April 1 to August 31 on beaches where piping plovers or terns are present or have traditionally nested. Pets should be prohibited on these beaches from April 1 through August 31 if, based on observations and experience, pet owners fail to keep pets leashed and under control and staff resources prohibit enforcement of leash laws. Hunting dogs, as is traditional, should be kept under the control of hunters at all times. This guideline is especially important in remote areas which are difficult to manage and yet attractive to wildlife.

Kite-Flying

- From April 1 to August 31, kite flying should be prohibited within 200 yards of both nesting territorial adults and unfledged juvenile piping plovers and terns.

Finfishing

- Sport finfishing on barrier beaches is an activity that, for public safety reasons, should be separated from recreational swimming areas during active beach use hours.

Shellfishing

- Shellfishing is regulated at the municipal level by Mass. General Laws Chapter 130 and by Fishing & Shellfishing Regulations at 322 Code of Mass. Regulations 1.00 - 12.00. Aquaculture is also regulated under the Mass. Wetlands Protection Act and Regulations at 310 Code of Mass. Regulations 10.04 (a)(b).

All Activities

- Informative and educational signs are encouraged.

Camping, including Fires

Uses include people staying overnight in tents, self-contained camping vehicles or in the open. This activity may also include accessory uses such as camp fires and chase vehicles.

Resource Impacts

Tenting and associated heavy pedestrian use may impact vegetation or landform. Generally, when limited and well managed, there are few impacts on coastal beaches or heavily vegetated areas. Other activities, such as accessory fires and waste disposal, including human waste, may cause significant impacts if not properly managed. Camping and fires can: destroy vegetated cover as well as alter dune form and function; can impact rare species, rare species habitat, and migratory shorebirds through disturbance of nesting, resting, and feeding activities; and can impact erosion control structures and signage through the use of these structures as combustion material. Fires can create a public safety threat and debris problem through improper disposal. The procedure of extinguishing a fire through burial is dangerous as coals may continue to burn underground for an extended period of time, producing no visible smoke, but posing a safety threat to barefoot beachgoers.

Recommended Management Measures

- Camping areas should be delineated by beach managers and cited in their plans. The areas should be located at least 100 yards from identified nesting sites and off-road vehicle corridors.
- Camping should be prohibited in rare species habitat and significant migratory shorebird areas, and limited in coastal dunes.
- Designation of camping areas should include assessment of flammability of adjacent flora, access availability by vehicle or foot, waste disposal facilities, wildlife considerations, and scenic views.
- Educational programs for campers should take place.
- A "carry in-carry out" policy for trash should be implemented.
- A policy requiring fires in containers will alleviate the problem of buried fires as the camp fire user can carry the fire to the water to extinguish it or fill the container with water on location.
- Informative and educational signs are encouraged.
- See section on "Off-road Vehicle Use" (page 85)

Watercraft, including Jet Skis

In some instances, vessel access to barrier beaches has been encouraged by beach managers where vehicular access has been restricted. In order to properly manage vessel access to barrier beaches and islands, beach managers are encouraged to work closely with municipal harbormasters, the Massachusetts Harbormasters Association, the boating public, yacht clubs, the U.S. Coast Guard Auxiliary and the U.S. Power Squadron.

Recreational watercraft, including boats, jet skis, sailboards and other vessels are popular at many beaches. Some of these activities have occurred at beaches since colonial times and, in certain instances, are provided for in the Colonial Ordinances of 1641 and 1647. However, watercraft use adjacent to public bathing beaches is also regulated by other state and federal laws, such as 323 Code of Mass. Regulations 2.00-2.14 (others are cited at Appendix E). Small craft, typically under twenty-five feet in length, are most commonly observed launching and landing around beach and marsh areas. Such vessels anchor just offshore and move passengers to the beach in small dinghies. In addition, individual watercraft such as jet skis and sailboards have become more popular.

Impacts from watercraft can take two forms: on-water and/or onshore. Although on-water activities may impact barrier beaches directly or indirectly, the impacts of onshore activities of humans accessing beaches via watercraft have a more direct affect on a beach.

Resource Impacts

Most vessel owners in Massachusetts operate their boats in a conscientious and environmentally sensitive manner. In some instances, however, adverse impacts to the barrier environment can occur when vessel and beach regulations are not in place or are violated, more often at remote barrier beach locations not easily managed by beach managers.

Impacts are not likely to occur from minimal or occasional use of watercraft. It is the chronic impacts that should be evaluated due to popular use in specific areas.

Barrier beach resources impacted by watercraft include: beaches, salt marsh, land containing shellfish, and land under the ocean. Coastal dunes may be impacted by pedestrians associated with vessel use. Vessel access at barrier beaches may conflict with recreational swimming. It may also conflict with rare species and wildlife habitat protection, especially at remote ends of barrier spits. Changes in bottom topography, alteration of substrate vegetation, and increased sedimentation due to prop wash and hull impacts may also occur. Increased access by small craft on barrier spits can create a large human disturbance factor to areas otherwise inaccessible to most people but commonly used as nesting, feeding, resting and migration habitat for rare species and other wildlife.

On-water

Barrier beaches in Massachusetts that are popular for watercraft activities share many common traits. Often the preferred areas for landing and recreating are on the sheltered backside of beaches. These areas are typically associated with a salt marsh system or a bay, important resource areas known for their fragility. Many times the preferred watercraft use areas are also remote, enhancing their wildlife value. Resource impacts that may occur from on-water watercraft activities include changes in underwater topography from increased water column mixing and sedimentation; disturbance and contamination of economically-important shellfish beds and waters; increased beach and marsh bank erosion from watercraft wake; water contamination from gas, oil and waste tank discharges; and disturbances to nesting, feeding, resting and migration habitat for rare species and other wildlife from watercraft noise.

Onshore

Onshore activities of humans accessing beaches from watercraft take on similar characteristics to other forms of human use on beaches. Individuals from watercraft do not necessarily act differently than other persons accessing a beach by other means. However, onshore activities related to watercraft regularly occur in remote areas where management is difficult. Therefore, activities prohibited in well-patrolled areas of beaches may occur more often in remote areas accessed by watercraft due to lack of enforcement. Specific potential onshore impacts from humans accessing beaches via watercraft include damage to dunes and fragile beach vegetation, disturbance to wildlife (primarily resting, nesting and feeding shorebirds and terns) from humans and pets, and contamination from trash and human waste.

Recommended Management Measures

General

- Watercraft use should be balanced with other uses, potentially warranting special area use designations both on-water and shoreside.
- Where symbolic fencing is inadequate in protecting rare species, such as terns and plovers, or wildlife habitat, such as significant migratory shorebird staging areas, and where there is no active rare species management plan in place, beach managers should consider negotiated alternative management measures, including, but not limited to, temporary restrictions on the launching and beaching of small craft on those portions of the barrier beach that provide nesting, feeding, resting, or migration habitat for rare species and other wildlife. Discussions should include representatives from the beach owner and manager, the municipal conservation commission, The Massachusetts Division of Fisheries and Wildlife, and the user groups.
- In order to protect dunes, beaches, and salt marsh resources, the number of watercraft and associated visitors should be assessed and managed where and when necessary.

- Signs should be erected at these areas to inform users of the management issues.

On-water

- Management of on-water activities of watercraft involves regulatory statutes that exceed the scope of this document. However, there are certain measures a beach manager can employ, such as working with appropriate authorities to designate areas for swimming or boat landing only, in an effort to ensure public safety. Speed limits can be posted around high-use watercraft areas for public safety. Buoys and signs should delineate such special use areas. Unfortunately, certain other on-water impacts may be impossible for a beach manager to enforce. In such cases, cooperation with local harbormasters, Massachusetts Environmental Police Officers and the U.S. Coast Guard may assist in solving a problem. [See Mass. General Laws Chapter 90B, §§1-5.]
- Potential conflicts can exist between exercise of the public trust rights to "fish, fowl and navigate," recreational swimming, and the protection of rare species and wildlife habitat. Beach managers are therefore urged to designate, wherever safe and practicable, launching and landing areas for watercraft.

Onshore

- Impacts from onshore activities associated with watercraft can be effectively managed using a variety of techniques that allow for continued use of the resource while balancing the needs for conservation with recreation. However, to achieve this balance, beach managers must commit resources to specific areas where pedestrians from watercraft regularly come onshore. Some of the recommended management measures include: fencing and signage to protect fragile dune areas; fencing and signage to protect wildlife areas; general signage to inform users about the area and regulations governing its use; regular staffing to directly educate users about the fragile barrier beach environment and encouraging respect for the resources; enforcing regulations; and encouraging conscientious on-water operation of watercraft. These techniques have proven effective and should be adopted for all high-use watercraft areas.

Pedestrian Impacts

- Pedestrian impacts associated with vessel landings and launching can have an impact on barrier beach natural resources, especially in remote areas of barrier beaches not easily managed. Refer to the "Pedestrian Use" section in this Chapter regarding the impacts and recommended management measures.

Plant Harvesting

Plant Harvesting includes removal of living and dead plant material from the barrier marshes and beaches. Sea lavender is commonly removed from high salt marsh areas, and American Beach Grass seed stocks are commonly removed from dune areas. Large scale removal of coastal vegetation can have an adverse impact on dunes and beach stabilization, seed sources and food sources for animals.

Resource Impacts

Removal of sea lavender has effected the Massachusetts population of sea lavender by depleting the seed source within the salt marsh community.

Removal of American Beach Grass seed stocks can limit the spread of the grass and lead to dune destabilization and erosion.

Recommended Management Measures

- Unauthorized harvesting of barrier beach plants, such as sea lavender, American Beach Grass and *Spartina*, should be prohibited.
- Informative and educational signs are encouraged.

Non-motorized Transport, including Horseback Riding and Bicycles

Non-motorized transport uses include: recreational horseback riding, horseback patrol, and mountain biking.

Resource Impacts

Within the barrier beach system, there are areas where this type of activity is more appropriate or less damaging than others. However, where this activity destroys vegetation, it also is likely to adversely impact dune shape and function. The introduction of feces from horses to land or water from direct contact or runoff can contribute to human health problems and water quality degradation.

Recommended Management Measures

- Bicycles and horses should be encouraged to remain on established paths. The use of coastal dunes for official horse patrol or recreational purposes is discouraged. Dunes should only be traversed when accessing or exiting a coastal beach, and then, access should be over a designated trail. Horses should also be directed away from tidal flats as feces can have an adverse impact on shellfish.
- On beaches where horses are used and could harm or disturb incubating plovers or terns, or their eggs, or chicks, refuge areas of at least a 50-yard radius around nests and above the high tide line should be delineated with warning signs and symbolic fencing.
- Refuge areas around nests should be expanded if a 50-yard radius is deemed inadequate to protect incubating adults or unfledged chicks from harm or disturbance. This may include situations where plovers or terns are especially intolerant of human presence, or where a 50-yard radius refuge provides insufficient escape cover or alternative foraging opportunities for plover chicks. If nests are discovered outside fenced areas, fencing should be extended to create a sufficient buffer to prevent harm or disturbance to incubating adults, eggs, or unfledged chicks. On some beaches where plovers and terns have traditionally nested or where suitable habitat occurs, it may be necessary to symbolically fence portions of habitat during March or April, prior to plover nesting, or during May, prior to tern nesting, if, in the opinion of the Massachusetts Division of Fisheries and Wildlife, or its agent, failure to do so could discourage plovers or terns from nesting as a result of disturbance from human use.

- Rearing or nursery areas used by unfledged or recently-fledged tern chicks, as identified by the Massachusetts Division of Fisheries and Wildlife, or its agent, should be delineated with posts, warning signs, or symbolic fencing not later than June 21. Only persons engaged in rare species monitoring, management, or research should enter posted or fenced tern nursery areas while unfledged tern chicks or tern chicks being fed by adult terns are present, although individuals may pass by outside these areas. Such nursery areas may be re-opened when all tern chicks have fledged and are not being fed by adult terns.
- Beach managers should establish appropriate areas for the use of all non-motorized transport to avoid rare species habitat and other sensitive coastal resources according to season.
- Non-motorized transport often allows the public easy access to distant areas. Beach managers should develop measures to manage and educate this user group as enforcement of rules and regulations is often difficult in remote areas.
- Informative and educational signs are encouraged.

Fireworks

This activity includes the setting-off of large scale, municipally sanctioned Fourth of July-type fireworks attracting thousands of people.

Resource Impacts

The landing of fireworks and associated debris can result in quick-moving fires, especially during dry summer months. The result is destruction of vegetation that holds dunes in place. Fireworks may cause disturbance to nesting, feeding, and resting rare species and cause disturbances to wildlife habitat.

Recommended Management Measures

- The launching and large-scale viewing of fireworks should be prohibited on coastal dunes, in salt marshes, and near wildlife habitat, especially that of nesting rare species (April 1 to August 31).
- Launching and viewing areas for municipally sanctioned Fourth of July-type fireworks events should be established in conjunction with the beach manager and municipal fire warden so as to avoid adverse impacts to rare species, wildlife habitat and barrier beach and wetland natural resources. Particular attention should be paid to the management of large and concentrated volumes of pedestrian traffic associated with this activity in order to avoid adverse impacts to sensitive and critical natural resources. [See "Pedestrian Use" section earlier in this Chapter.]
- Codes regulating the launching or lighting of fireworks should be strictly enforced on barrier beaches.

Off-Road Vehicle Use

The off-road vehicle user group includes: beach-goers; fisherman; recreational overnight users with self contained campers which may have trailered "chase" vehicles and boats; private property owners; and special users such as those engaged in research and monitoring, minimal maintenance, law enforcement, emergencies and public safety.

Resource Impacts

Most off-road vehicle owners in Massachusetts operate their vehicles in a conscientious and environmentally sensitive manner. In some instances, however, adverse impacts to the barrier environment may occur when vehicle and beach regulations are not in place or are violated, more often at remote barrier beach locations not easily managed by beach managers.

Coastal beaches may be impacted through the churning of tires; tidal flats may be impacted through compaction of the substrate; vegetation may be destroyed; and dunes may be destabilized.

According to "The Impact of Off-Road Vehicles on Coastal Ecosystems in Cape Cod National Seashore: An Overview" (Leatherman and Godfrey, 1978), it is said that: "The sheering and compressional effects of off-road vehicle passage extend to a depth of approximately 20 centimeters; the shear stresses of the turning wheels disintegrate the drift and break plant rhizomes. The integrity of drift lines is destroyed by off-road vehicle traffic, as the material is scattered about the beach. Vehicle impact also decreases the rate of decay of organic material. Bacterial counts associated with the drift were normally very high but were markedly reduced when vehicles pulverized the organic deposits."

"Vehicle traffic also crushes and kills seedlings of annuals and the young plants of perennials, such as *Ammophila*, which are associated with the drift. It was found that the effect of 100 passes of an off-road vehicle does not differ significantly from that of 10 passes; only a few passes are required to break up the deposit and kill all the vegetation. Thus, the major effect of vehicles on the high beach was on drift lines and developing dunes, with traffic severely limiting new dune formation."

Vehicle travel through the coastal dune can destroy the vegetated mat and can contribute to erosion of dune form and function. Travel over salt marshes can destroy the vegetated mat and cause erosion. Shellfish resources may be impacted due to compaction of soil and crushing existing organisms, depending on the depth of shellfish and other organisms, substrate type, weight and use of vehicle.

Off-road vehicle use may degrade piping plover habitat by crushing wrack (seaweed, shells and other organic material deposited on the beach by tidal action) into the sand and making it unavailable to the plovers as cover or foraging substrate. Wrack is a preferred feeding habitat for piping plovers, especially chicks.

Vehicles can degrade piping plover habitat by creating ruts that may trap or impede movements of chicks, and by causing disturbance that may prevent plovers

from using habitat that is otherwise suitable (Goldin and others, 1990; Strauss, 1990; Melvin and others, 1993). For a complete list of citations, see Appendix H, the Massachusetts Division of Fisheries and Wildlife's "Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns and Their Habitats in Massachusetts."

The use of off-road vehicles may also impact other migratory shorebirds feeding and resting on beaches, tidal flats, coastal dunes and salt marshes. Vehicles and other associated activities may disturb and interrupt feeding and resting activity by driving through or adjacent to the associated habitats. Impacts are potentially greatest during the southward part of shorebird migration (July 1st - September 15th) when public use of beaches is highest.

The use of off-road vehicles may affect the survival and productivity of state and/or federally listed endangered species, such as piping plovers and terns. Vehicles can crush concealed eggs and chicks, even adult birds. Typical behaviors of piping plover chicks make them much more vulnerable than least tern chicks to off-road vehicles. Chicks frequently move back and forth between the foredune and preferred feeding habitats in the wrack line and intertidal zone. These movements place piping plover chicks in the paths of vehicles moving along the berm or through the intertidal zone. Because piping plover chicks typically leave the nest within a day of hatching and typically run out onto the open beach, the wire fencing placed around nests or nesting areas to deter predators is ineffective in protecting chicks from vehicles. Plover chicks and least tern chicks may stand in or walk and run along tire ruts, and young chicks sometimes have difficulty crossing deep ruts or climbing out of them. Chicks sometimes stand motionless or crouch, rather than flee, as vehicles pass by.

Piping plovers may be vulnerable to disturbance during periods of courtship and territory establishment in March and April. Similarly, least terns may be vulnerable in May and June. Common, roseate and Arctic terns are highly disturbed by any vehicle or pedestrian intrusion into their colonies. Prolonged or repeated disturbances at colonies can lead to egg and chick loss from exposure and predation or site abandonment.

1) OFF-ROAD VEHICLE DRIVING CORRIDORS

Recommended Management Measures

- The Mass. Division of Fisheries and Wildlife's "Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns and Their Habitats in Massachusetts," found in Appendix H, and the Mass. Department of Environmental Protection's "Recommended Conditions for Barrier Beaches," found in Appendix I, should be consulted.

Beach Corridors

- Where off-road vehicle use takes place or is proposed to take place on a barrier beach, off-road vehicle beach driving corridors should be designated by beach managers. Corridors should be located such that they avoid wildlife habitat, particularly that of rare species; wrack lines; salt marsh; vegetated areas on coastal beaches; tidal flats; overwash areas; and coastal dunes. A coastal beach off-road vehicle driving corridor should be located at a minimum of 10 feet seaward of the spring high tide line to the most seaward berm crest (see figure on page 88). Back dune or back barrier vehicle routes should be eliminated wherever and whenever possible and restored.
- When designating beach driving corridors, beach managers should also consider separating vehicle use areas from other beach recreational activities, such as bathing, hiking and walking.
- Between July 1 and September 15, areas that are identified as significant feeding, resting and staging areas for migratory shorebirds should be closed to off-road vehicles by posting and fencing the areas or by altering off-road vehicle travel corridors. Shorebirds are most susceptible to disturbances at high tide when they roost on upper portions of the beach. This is a recommendation only, designed to protect from disturbance migratory shorebirds that are feeding and roosting while on their way to South America.
- In instances where off-road vehicle access has been closed in order to comply with environmental laws, beach managers are encouraged to work with local officials, the public, and, where appropriate, state and federal officials to resolve any conflicts through planning and discussions. Reasonable alternative access routes should always be investigated.
- When the use of a vehicle corridor creates an unstable dune area such as a blowout, or results in a reduction in foredune height, volume or function, then the trail should be relocated with the old crossover closed and the area restored. Activities that produced such damage should be reviewed for compliance with environmental law. [Such contingency plans should be part of the overall beach management scheme.]

Beach Terminology Diagram

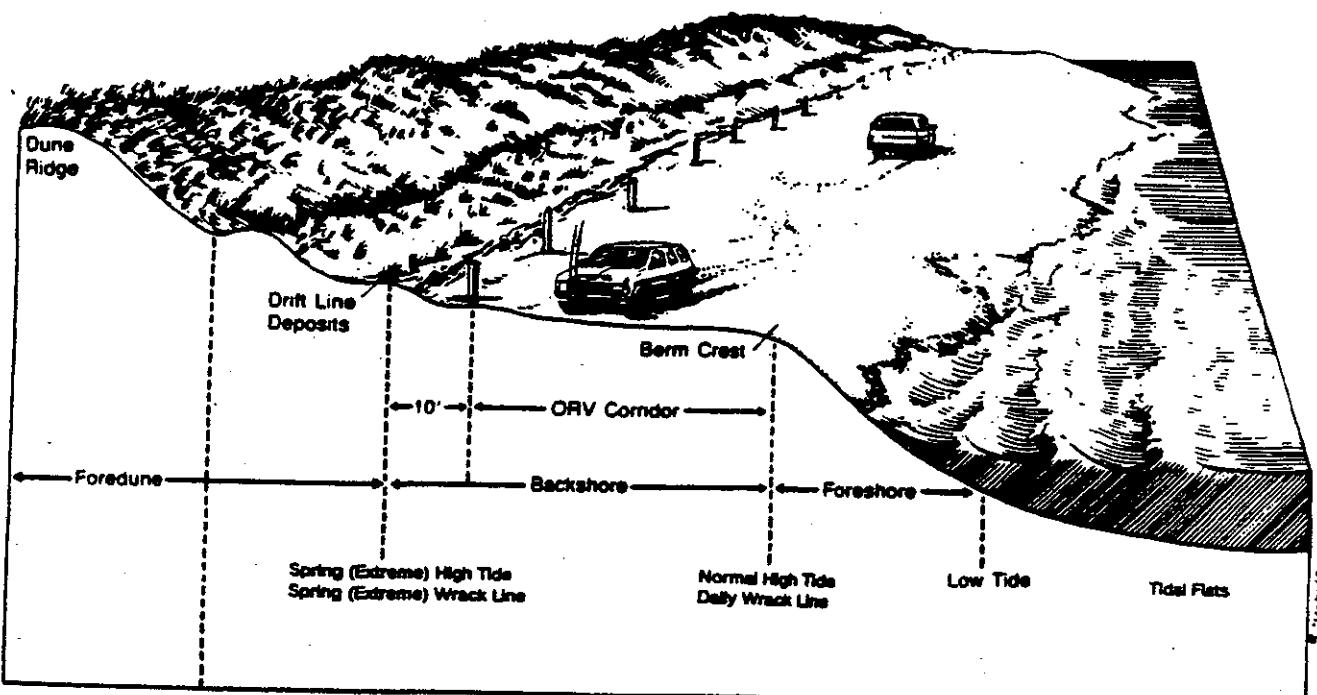


Figure 13. Beach terminology diagram (adapted from: U.S. Department of the Interior/National Park Service/Cape Cod National Seashore).

- Travel through off-road vehicle corridors should be on well established vehicle trails, delineated with posts, signs, and/or fencing.
- Adequate protection measures should be applied to beach trails during high or exceptionally high tides so that drivers will not damage the seaward edge of dunes. Some trails may be closed during certain time periods depending on the width of the beach and height of the tide.
- Travel may be further restricted due to other changing beach conditions and rare species nesting activity.
- Severely rutted trails should be repaired in order to keep off-road vehicles from using unauthorized areas and to confine vehicles to designated routes.
- All designated off-road vehicle corridor routes should be indicated on maps and diagrams provided with off-road vehicle permits.
- Parking should be permitted only within oversand vehicle corridors. However, in order to avoid traffic obstruction, parking should not be permitted on previously made trails within the corridor.
- Parking in blowout areas should be prohibited and controlled by posting and cable fencing. The use of snow fence in such areas is not encouraged as it may adversely impact nesting shorebirds.
- In some instances, beach managers may be able to provide for overnight camping by self-contained vehicles along the coastal beach corridor. A self-contained vehicle is a motor home or truck with an attached camper shell, with permanently mounted holding tanks with a 3 day capacity for containing black and gray water.
- Overnight camping and sleeping should be permitted only in self-contained recreational vehicles along the off-road vehicle corridor. For safety reasons, tents should not be permitted within the corridor. Vehicles and campers should possess a valid permit visibly displayed.

Dune Crossovers

- Where off-road vehicle corridor crossover routes are located on coastal dunes, they should be the minimum number of routes necessary in order to provide safe access and egress over the dune to the vehicle corridor located on the beach front.
- Ramps should be constructed as the prime vehicle corridor route through coastal dunes. Vehicle ramps can be constructed by placing 2x4 inch boards on edge, with short spacers between each 2x4, and held together by cables which pass through the studs and spacers. The spaces between the studs allow sand to filter through when the ramp is lifted and reset. If the site becomes

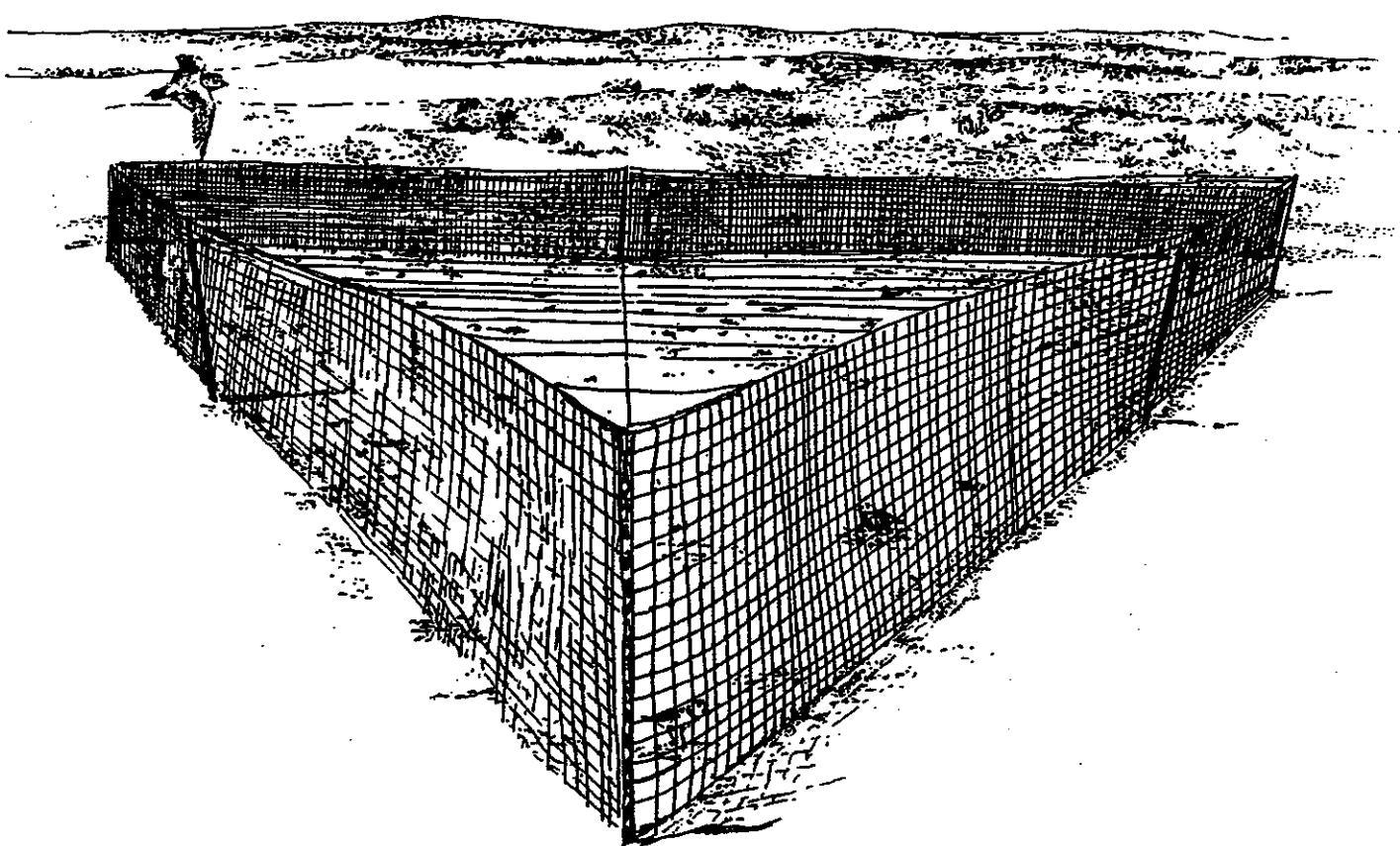


Figure 14: Fencing plan to protect piping plover nests and unfledged chicks from pedestrian, non-motorized transport, and off-road vehicles (courtesy of Mass. Department of Environmental Management).

stable, beach grass plants will grow in the spaces between the studs (Carlson and Godfrey, 1984). Also see the Guidelines' Chapter 5.

- Non-ramped crossover trails from the backside of the beach through dunes to the beach front corridor should be periodically inspected in order to determine whether or not the location of the trail or volume of traffic is contributing to excessive dune erosion. If so, the trail may have to be relocated or a ramp built and the old trail restored.
- Non-ramped trails should be constructed such that:
 - a. Dune routes do not include sharp turns and steep grades;
 - b. Trails do not cross unstable dunes;
 - c. Trails avoid sensitive areas such as nesting bird areas, blowouts, and sites of rare species of plants and animals;
 - d. Wind and wave tunnels are not created. Routes through dunes should be curved in an "S" fashion.
- Dune crossover traffic should be confined to designated routes by use of cable fences.
- See Appendix D, "Off-road Vehicles, Recommended Equipment and Suggested Trail and Driving Guidelines."

Information/Education

- Use of vehicles allows access to remote areas and as a result the impact may involve human waste. The use of public or privately maintained toilet facilities may be necessary.
- Driving hours should be established, advertised, and well known by all beach users.
- Speed limits should be 15 miles per hour, unless otherwise posted.
- Speed limits in self-contained vehicle areas should be 5 miles per hour.
- Speed limits near posted bird nesting colonies, nursery areas or roosting areas should be 5 miles per hour for all vehicles.
- Informative and educational signs should be used to:
 - a. Mark designated off-road vehicle trails and access points across foredunes; and
 - b. Mark restricted areas, when appropriate, such as rare bird species nesting areas.
- Along with the issuance of an off-road vehicle permit, educational information

specific to the beach should be provided to drivers. Some beach managers also require drivers to view a brief audio-visual presentation. [See Chapter 6 -- "Public Education and Outreach."]

2) BARRIER BEACH VEHICLE QUOTA

Recommended Management Measures

- As a general rule, it is recommended that a certain number of square feet of frontal coastal beach be allowed for each off-road vehicle entering the beach. This will determine the amount of vehicles allowed on a barrier beach at any one time.

In determining the appropriate number of vehicles for a specific area, the beach manager should first estimate the square footage of available coastal beach, ten feet from the Spring High Tide to Mean High Tide. Bathing areas, salt marshes, coastal dunes, tidal flats, rare species habitat, wrack, and staging areas for migratory shorebirds should not be included in the land areas used to calculate the number of square feet allowable.

$$\text{Available Area/Number of Vehicles} = \text{Area per Vehicle (in square feet)}$$

This recommendation must be interpreted by beach managers on a case-by-case basis depending largely upon the characteristics of the barrier beach under consideration for off-road vehicle operations.

3) RARE SPECIES MANAGEMENT

Recommended Management Measures

The following jurisdictional matters should be evaluated by beach managers and regulators:

- 1) Wildlife habitat and rare species habitat is protected under the Massachusetts Wetlands Protection Act and enforced by the municipal conservation commission and the Massachusetts Department of Environmental Protection;
- 2) Rare species are protected under the federal Endangered Species Act and the Massachusetts Endangered Species Act, which are enforced by the U.S. Fish and Wildlife Service and the Massachusetts Division of Fisheries and Wildlife, respectively; and
- 3) Wildlife habitat, including that for rare species can and in some instances may be protected under municipal wetlands protection by-laws/ordinances and enforced by the municipal conservation commission.

- Refer to Appendix H, Massachusetts Division of Fisheries and Wildlife's "Guidelines for Managing Use of Beaches to Protect Piping Plovers, Terns and Their Habitats in Massachusetts."

Under the Massachusetts Wetlands Protection Act regulations, if a proposed project is found to alter a resource area which is part of the actual habitat of a state-listed rare wildlife species, such project shall not be permitted to have any short or long term adverse effects on the habitat of the local population of that species. The Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife acts as the scientific authority to determine what is actual habitat and to provide an opinion about whether proposed activities subject to the Mass. Wetlands Protection Act will have adverse effects on rare wildlife habitat. An opinion issued by the Natural Heritage and Endangered Species Program is presumed to be correct, although this presumption is rebuttable and may be overcome upon a clear showing to the contrary.

The Massachusetts Endangered Species Act and its regulations are administered by the Massachusetts Division of Fisheries and Wildlife. The Act prohibits the "taking" of any species of animal or plant listed as "Endangered," "Threatened," or "Species of Special Concern" in Massachusetts. For animals, "taking" is defined as: "to harass, harm, pursue, hunt, shoot, hound, kill, trap, capture, collect, possess, disrupt the nesting, breeding, feeding, or migratory activity or attempt to engage in any such conduct, or to assist such conduct." Regulations implementing the Act state further that: "All state agencies shall utilize their authorities in furtherance of the purposes of Massachusetts Endangered Species Act and these regulations; review, evaluate and determine the impact on Endangered, Threatened and Special Concern species or their habitats of all works, projects, or activities conducted by them; and use all practicable means and measures to avoid or minimize damage to such species or their habitats." This includes "any work, project, or activity either directly undertaken by a state agency, or if undertaken by a person, which seeks the provision of financial assistance by an agency or requires the issuance of permits by an agency."

- Where there is no management undertaken to effectively implement the Massachusetts Division of Fisheries and Wildlife's "Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns and Their Habitats in Massachusetts" (Appendix H), estimated rare species habitat should be closed entirely to all off-road vehicle activity from mid-April through late July. It should be noted, that development and implementation of a management plan, which includes comprehensive monitoring, may result in temporary closures of less duration than closures made without any management. The Massachusetts Division of Fisheries and Wildlife should be consulted regarding the development of such plans and the employment of rare species monitors.
- Off-road vehicular access for shellfishing should be a component of beach management plans and cross-reference municipal shellfish management plans. Such plans should be established by and with local officials, the Massachusetts

Types of Barrier Beach Off-Road Vehicle Closures to Protect Piping Plover Chicks Between Hatching and Fledgling Periods

(approximately 35 days)

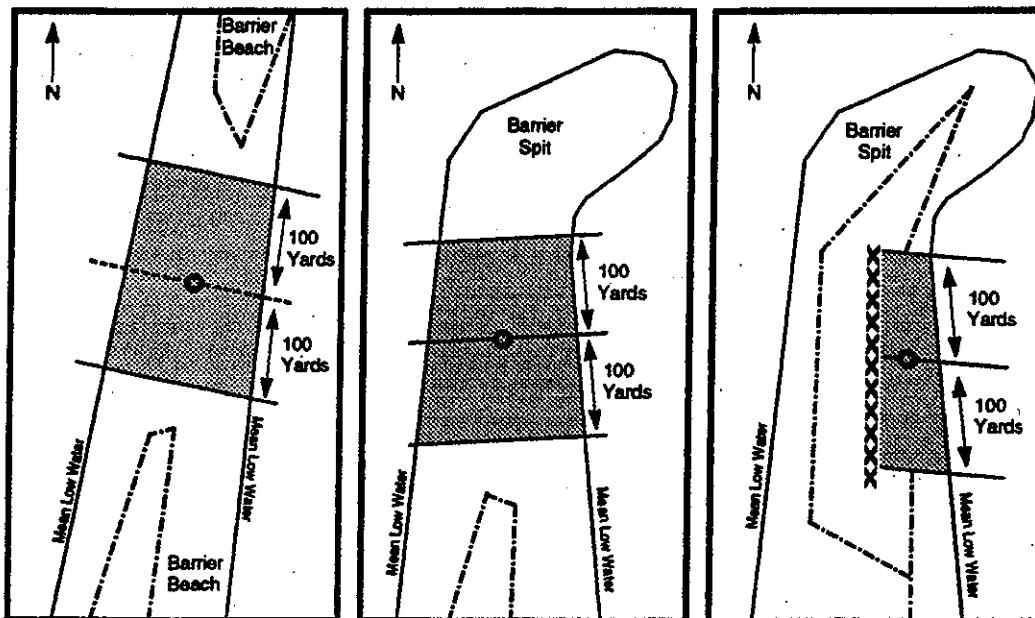


Figure 1

Closure of a section of beach to through traffic. Access/egress to open beach areas is possible in either direction. Not excluding pedestrian access.

Figure 2

Nest situated such that closure of beach 100 yards north and south of the nest is necessary. Traffic originates from one direction only or by ferry. Not excluding pedestrian access.

Figure 3

Closure of beach 100 yards north and south of the nest. Continued vehicle/foot passage allowed in area of barrier beach inaccessible to plover chicks due to natural features such as high dunes. Not excluding pedestrian access.

Key:

— Off-road vehicle corridor

● Rare species nest with hatched but unfledged birds

■ Area temporarily closed to off-road vehicles

☒ Impenetrable natural feature

Figure 15: Types of barrier beach off-road vehicle closures to protect piping plover chicks between hatching and fledging (approximately 35 days). (This is a graphic illustration of Appendix H: Massachusetts Division of Fisheries and Wildlife's "Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns and Their Habitats in Massachusetts.")

Division of Marine Fisheries and in compliance with the above recommended regulatory and management measures of the Massachusetts Wetlands Protection Act, Mass. Endangered Species Acts, and U.S. Endangered Species Act.

4) ESSENTIAL VEHICLES ---

Recommended Management Measures

- When all or part of a barrier beach is temporarily closed to off-road vehicle use due to the presence of rare species, such as unfledged plover or tern chicks, the beach manager should establish a policy that considers closing the beach entirely to all off-road vehicles or closing it to recreational vehicles with the exception of one or more "essential uses," where absolutely necessary. The use of essential vehicles at a barrier beach will depend upon the site, its conditions, and the amount and type of essential use proposed.

A certain amount of essential off-road vehicle use may be appropriate and necessary for effective management of the barrier. The use of such vehicles may be considered essential for the minimal amount of activity necessary to provide for:

- Public safety;
- Law enforcement;
- Minimal maintenance of public property;
- Access to private dwellings not otherwise accessible;
- Rare species monitoring and management; and
- Research (wildlife, plants, geology).

- Escorts are recommended for essential vehicles to insure compliance with all pertinent regulations and guidelines.
- Refer to Appendix H, Massachusetts Division of Fisheries and Wildlife's "Guidelines for Managing Use of Beaches to Protect Piping Plovers, Terns and Their Habitats in Massachusetts," especially "IV. Management Guidelines" for Essential Vehicles."
- After a period of time where essential vehicles are used, a thorough re-evaluation should be made regarding any impacts from such use on wildlife habitat and rare species. Management plans should be adjusted accordingly.
- Also see the previous section on Management Measures for "Off-road Vehicle Driving Corridors."

APPENDIX "J"

Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts

**Massachusetts Natural Heritage
Program (April 21, 1993)**

Appendix A

Guidelines for Managing Recreational Use of Beaches to Protect Piping Plovers, Terns, and Their Habitats in Massachusetts

Massachusetts Division of Fisheries and Wildlife
Natural Heritage and Endangered Species Program
Field Headquarters, Rt. 135
Westborough, MA 01581

21 April 1993

I. Introduction

The Massachusetts Division of Fisheries and Wildlife (the Division) has developed the following guidelines to assist beach managers and property owners with protecting piping plovers, least terns, common terns, roseate terns, arctic terns, and their habitats. Implementing these guidelines will help beach managers and property owners avoid potential violations of the Massachusetts Endangered Species Act (MGL c. 131A) and its implementing regulations (321 CMR 10.00) involving recreational use of beaches used by piping plovers and terns for breeding and nesting habitat.

The Division intends to apply these guidelines in its review of Notices of Intent, pursuant to the Massachusetts Wetlands Protection Act regulations (310 CMR 10.37), for vehicular use of beaches where piping plovers and terns occur.

The Department of Environmental Protection has developed a set of recommended conditions for barrier beach management to be used by municipal conservation commissions in drafting Orders of Conditions. In addition, the Massachusetts Barrier Beach Task Force, coordinated by the Office of Coastal Zone Management, has developed a comprehensive set of guidelines covering the full range of barrier beach management issues. The following guidelines should be read and applied in conjunction with these other documents.

Users of these piping plover and tern guidelines are advised that they do not supersede any law, regulation, or official policy of this or any other agency. Rather, these guidelines are intended to complement other regulatory review processes regarding recreational activities on beaches by providing a standard set of scientifically based management recommendations.

10-4

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This document contains five sections: 1) an introduction, 2) summaries of life histories of these species and threats to their continued existence in the state, 3) a summary of pertinent laws and regulations, 4) guidelines for managing and protecting plovers, terns, and their habitats, and 5) literature cited.

In these guidelines, the Division has sought to provide the necessary protection to piping plovers and terns without unnecessarily restricting appropriate access along all of the state's beaches. The Division has a long history of promoting the rights of citizens to enjoy a variety of outdoor pursuits, provided that they do not jeopardize the state's wildlife resources. The Division has worked to facilitate fishing and hunting access statewide and has supported the common law right of access to the shorelines of the coast and "Great Ponds" for the purposes of fishing and fowling. Although these guidelines make it clear that it will be necessary at times to restrict vehicular access temporarily on beaches where and when piping plovers and terns are present, the Division will only support such restrictions when it is necessary to protect the habitat, nests, and unfledged chicks of plovers and terns. The Division will continue to seek and consider management measures that offer maximum flexibility in balancing recreational use with protection of rare species and their habitats. Even when vehicular access is restricted, the Division will normally support continued access to beaches for fishermen and other recreational users by foot and by boat.

II. Species Status, Life History, and Threats

Piping Plover

Piping plovers are small, sand-colored shorebirds that nest on sandy, coastal beaches from South Carolina to Newfoundland. The U.S. Atlantic coast population is listed as "Threatened" by the U.S. Fish and Wildlife Service under provisions of the U.S. Endangered Species Act of 1973 (U.S. Fish and Wildlife Service 1988), and was estimated at 790 pairs in 1992 (U.S. Fish and Wildlife Service 1992). In Massachusetts, the piping plover is also listed as "Threatened" by the Massachusetts Division of Fisheries and Wildlife under provisions of the Massachusetts Endangered Species Act. In 1992, 213 pairs of piping plovers nested on Massachusetts beaches (Melvin 1992).

Piping plovers nest on coastal beaches above the high-tide line, sand flats at the end of sand spits, gently sloping foredunes, and in blow-outs or washover areas between or behind coastal dunes. They may also nest where sandy dredged material has been deposited. Nests are simple scrapes in the sand or mixtures of sand, gravel, and shells. Nests are placed on open sand or in

patches of sparse to moderately dense beach grass and other dune vegetation. Piping plovers depend on natural processes of beach erosion and accretion through wind and wave action to maintain suitable nesting habitat.

Piping plovers return to nesting beaches in Massachusetts from mid-March to early May. Males establish and defend territories and court females. Nesting may occur from mid-April through late July. Clutch size is usually four eggs, and eggs are usually incubated for 27-28 days before hatching. Piping plovers fledge only a single brood per season, but may renest several times if previous nests are lost. Chicks are precocial and able to move about within hours after hatching. They may move hundreds of yards from the nest site during their first week of life. Chicks remain together with one or both parents until they fledge (are able to fly) at 25 to 35 days of age. Depending on date of hatching, unfledged chicks may be present from late May until mid-August, although most fledge by the end of July. Adults and chicks feed on amphipods, marine worms, flies, and other invertebrates. The most important feeding habitats for both adults and chicks are intertidal areas and wrack (seaweed, vegetation, shells, and other organic debris deposited on the beach by tides and storms) (Gibbs 1986, Goldin et al. 1990, Hoopes et al. 1992).

Sandy beaches that provide nesting habitat for piping plovers are also attractive recreational habitats for people and their pets. Human recreational activities can be a source of both disturbance and direct mortality to piping plovers (Blodget 1990, Melvin et al. 1991). People on beaches may inadvertently crush eggs, cause nests to be abandoned, and disturb or displace unfledged chicks. Unleashed dogs may chase adults, kill chicks, and eat eggs. Kites and fireworks are highly disturbing to piping plovers (Hoopes et al. 1992; Howard et al. 1993).

Unrestricted use of motorized vehicles on beaches is a serious threat to piping plovers and their habitats. Vehicles can crush both eggs and chicks (Burger 1986, Patterson 1988, Strauss 1990, Melvin et al. 1991). In Massachusetts, biologists documented 7 incidents in which 9 chicks were killed by vehicles between 1989 and 1992 (Melvin et al. 1993). Many biologists that monitor and manage piping plovers believe that many more chicks are killed by vehicles than are found and reported. On sections of Massachusetts beaches used by vehicles during nesting and brood-rearing periods, breeding plovers are generally either absent or less abundant than expected given available nesting and feeding habitat. In contrast, plover abundance and productivity has increased on beaches where vehicle restrictions during chick-rearing periods have been combined with protection of nests from predators.

Typical behaviors of piping plover chicks increase their vulnerability to vehicles (Melvin et al. 1993). Chicks frequently move between the upper berm or foredune and feeding habitats in the

wrack line and intertidal zone. These movements place chicks in the paths of vehicles driving along the berm or through the intertidal zone. Chicks stand in, walk, and run along tire ruts, and sometimes have difficulty crossing deep ruts or climbing out of them. Chicks sometimes stand motionless or crouch as vehicles pass by, or do not move quickly enough to get out of the way. Wire fencing placed around nests to deter predators is ineffective in protecting chicks from vehicles because chicks typically leave the nest within a day after hatching and move extensively along the beach to feed.

Vehicles also degrade piping plover habitat by crushing wrack into the sand and making it unavailable as cover or a foraging substrate, by creating ruts that may trap or impede movements of chicks, and by causing disturbance that may prevent plovers from using habitat that is otherwise suitable (Goldin et al. 1990, Strauss 1990, Melvin et al. 1993).

Least Tern

Least terns are small, white and black seabirds that nest along Atlantic coast beaches from southern Maine to Florida. The least tern is listed as a "Species of Special Concern" by the Division of Fisheries and Wildlife under provisions of the Massachusetts Endangered Species Act. An estimated 2,642 pairs nested at 51 sites in Massachusetts in 1992 (Blodget 1992).

Least terns nest in habitats that are similar to those of the piping plover, and the two species often nest near each other. Least terns arrive in Massachusetts in early May, engage in elaborate courtship rituals, mate, and quickly establish nesting colonies. Actual nesting occurs from about the third week of May to mid-July. Nesting colonies range in size from several pairs to over 500 pairs. Nests are shallow "scrapes" in the sand, usually in sandy areas devoid of vegetation, but sometimes in areas of sparse beach grass, beach pea, and other dune vegetation. Least terns, like piping plovers, have nested along the Atlantic coast for thousands of years and depend on natural processes of beach and dune erosion and accretion to maintain their habitats.

Clutches consist of 1-3 eggs and incubation averages 21 to 23 days. Least terns are single-brooded, but will renest multiple times if previous nests are lost. Chicks are precocial and may move considerable distances along the beach before fledging, which occurs after 20-22 days. Adults deliver fish caught in the surrounding waters to chicks. Soon after chicks are able to fly, least terns gather in pre-migratory flocks and depart southward; most are gone before the end of August.

Least terns are vulnerable to disturbance from humans, pets, and vehicles during periods of courtship and egg-laying in May and

June. Similar to piping plovers, incubating least tern adults, eggs, and chicks are extremely cryptic. Prolonged or repeated disturbance at colonies can lead to egg and chick loss from exposure, predation, or abandonment. Least tern chicks are also vulnerable to mortality caused by off-road vehicles, and may stand or crouch in or walk and run along vehicle ruts.

Common, Roseate, and Arctic Terns

These three similar species of white and black seabirds nest together in mixed-species colonies. All are slightly larger than the least tern. The common tern is indeed the most "common" of the group. In 1992, 8,600 pairs were estimated at 35 sites in Massachusetts, although only 9 of those colonies exceeded 100 pairs (Blodget 1992). The arctic tern, at the southern edge of its natural range in Massachusetts, has been declining since the 1950's and reached an all-time low of only 8 pairs in 1992. Both of these species are listed by the Massachusetts Division of Fisheries and Wildlife as "Species of Special Concern" under provisions of the Massachusetts Endangered Species Act.

The Northeastern population of the roseate tern is listed as "Endangered" by both the U.S. Fish and Wildlife Service under the U.S. Endangered Species Act of 1973 (U.S. Fish and Wildlife Service 1989), and the Massachusetts Division of Fisheries and Wildlife under provisions of the Massachusetts Endangered Species Act. Of an estimated 1,412 pairs in Massachusetts in 1992, 1,375 pairs (97%) nested on Bird Island in Buzzards Bay (Blodget 1992). The rest were scattered among large colonies of common terns.

These three species of larger terns prefer to nest on offshore islands and remote tips of barrier beaches. Unfortunately, gulls have usurped most optimal nesting sites since the 1950's, forcing terns to nest at a limited number of secondary inshore sites where they are more exposed to human disturbance and a host of land-based predators.

The life histories of these three species of terns are generally similar. Exemplifying the three, common terns select dune areas with moderate to dense stands of beach grass and other dune vegetation. Birds arrive from the south in early May and select colony sites before the end of May. Ritualized courtship and pair formation occur on the beach and sandflats adjacent to the colony site. Nesting colonies range from a few to over 4,000 pairs. Nests are usually scrapes in the sand lined with beach grass and seaweed. Clutches of 2-3 eggs are laid and both parents share incubation duties for about 23 days. Young are precocial but are fed and brooded by adults. Diets of these terns are almost exclusively fish. As the young approach fledging at about 28 days, they congregate in rearing or "nursery" areas on broad expanses of beach and sand flats, where they loaf and are fed by adults. At

some sites, thousands of young terns may be present in these nursery areas from late July through mid-August. After mid-August, most terns have fledged and all three species gather at staging areas prior to departing for winter quarters by the end of August.

Prolonged or repeated disturbance at nesting colonies or nursery areas of common, arctic, or roseate terns can lead to egg and chick loss from exposure, predation, or abandonment. Eggs and young chicks tend to be less subject to mortality from vehicles because they occur more often in dune areas, but older chicks are sometimes run over when they move onto the outer beach prior to fledging. Older chicks have also been found dead, tangled in kite string.

III. Massachusetts Law

This section is provided to give a brief overview of provisions of the Massachusetts Wetlands Protection Act and Endangered Species Act that are pertinent to the management of piping plovers, terns, and their habitats. The reader is strongly advised to read the official texts of the current laws and regulations cited below.

Massachusetts Wetlands Protection Act (MGL c. 131 s. 40)

The Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife (the Program) acts as the scientific authority to determine what is actual habitat and to provide an opinion about whether proposed activities subject to the Wetlands Protection Act will have adverse effects on rare wetlands wildlife habitat. Opinions issued by the Program are presumed to be correct, although this presumption is rebuttable and may be overcome upon a clear showing to the contrary.

Massachusetts Endangered Species Act (MGL c. 131A)

The Massachusetts Endangered Species Act (MESA) and regulations (321 CMR 10.00) are administered by the Massachusetts Division of Fisheries and Wildlife. The Act prohibits the "taking" of any species of animal or plant listed as "Endangered", "Threatened", or "Species of Special Concern" in Massachusetts. For animals, "taking" is defined as: "to harass, harm, pursue, hunt, shoot, hound, kill, trap, capture, collect, process, disrupt the nesting, breeding, feeding, or migratory activity or attempt to engage in any such conduct, or to assist such conduct". Regulations implementing the Act state further that: "All state agencies shall utilize their authorities in furtherance of the purposes of MESA and these regulations; review, evaluate and

determine the impact on Endangered, Threatened and Special Concern species or their habitats of all works, projects, or activities conducted by them; and use all practicable means and measures to avoid or minimize damage to such species or their habitats." This includes "any work, project, or activity either directly undertaken by a state agency, or if undertaken by a person, which seeks the provision of financial assistance by an agency or requires the issuance of permits by an agency".

IV. Management Guidelines

VEHICLE MANAGEMENT

Protection of Nests and Nesting Habitat

On beaches where vehicles will be driven, all areas of suitable piping plover nesting habitat, as determined by the Division, should be identified and delineated with posts and warning signs or symbolic fencing on or before April 1 each year. Suitable nesting habitat for all species of terns should be identified and so delineated on or before May 15 each year.

All vehicular access into or through delineated nesting habitat should be prohibited. However, prior to hatching, vehicles may pass by such areas along designated vehicle corridors established along the outside edge of plover and tern nesting habitat. Vehicles may also park outside delineated nesting habitat, if beach width and configuration and tidal conditions allow. Vehicle corridors or parking areas should be moved, constricted, or temporarily closed if territorial, courting, or nesting plovers or terns are disturbed by passing or parked vehicles, or if disturbance is anticipated because of unusual tides or expected increases in vehicle use during weekends, holidays, or special events.

Protection of Chicks and Chick Habitat

Sections of beaches where unfledged piping plover or tern chicks are present should be temporarily closed to all vehicles not deemed essential. (See the provisions for essential vehicles below.)

When unfledged plover chicks are present, vehicles should be prohibited from all dune, beach, and intertidal habitat within 100 yards of either side of a line drawn through the nest site and perpendicular to the long axis of the beach. The resulting 200 yard-wide area of protected habitat for plover chicks should extend from the ocean-side low water line to the bay-side low water line.

or to the farthest extent of dune habitat if no bay-side intertidal habitat exists. However, vehicles may be allowed to pass through portions of the protected area that are considered inaccessible to plover chicks because of steep topography, dense vegetation, or other naturally-occurring obstacles. If unfledged plover chicks move outside the original 200 yard-wide area of protected habitat, then the boundaries of the protected area should be adjusted to provide at least a 100 yard buffer between chicks and vehicles.

When unfledged least tern chicks are present, vehicles should be prohibited from all dune, beach, and intertidal habitat within 100 yards of either side of lines drawn through the outermost nests in the colony and perpendicular to the long axis of the beach. The resulting area of protected habitat for least tern chicks should extend from the ocean-side low water line to the bay-side low water line, or to the farthest extent of dune habitat if no bay-side intertidal zone exists. If unfledged chicks move outside the original protected area, then the boundaries of the protected area should be adjusted to provide at least a 100 yard-wide buffer between unfledged chicks and vehicles. However, vehicles may pass through any portions of the protected area considered inaccessible to least tern chicks because of distance, steep topography, dense vegetation, or other naturally-occurring obstacles. Because least tern chicks disperse from nests shorter distances and at older ages than piping plover chicks, under some circumstances it may be possible to allow passage of vehicles through portions of protected least tern chick habitat if, in the opinion of the Division, this can occur without substantially increasing threats to least tern chicks or their habitats.

Timing of Vehicle Restrictions in Chick Habitat

Restrictions on use of vehicles in areas where unfledged plover or tern chicks are present should begin on or before the date that hatching begins and continue until chicks have fledged. For purposes of vehicle management, plover chicks are considered fledged at 35 days of age or when observed in flight, whichever occurs first. Tern chicks are considered fledged when they are capable of flight.

When piping plover nests are found before the last egg is laid, restrictions on vehicles should begin on the 26th day after the last egg is laid. This assumes an average incubation period of 27 days, and provides a 1 day margin of error.

When plover nests are found after the last egg has been laid, making it impossible to predict hatch date, restrictions on vehicles should begin on a date determined by 1 of 3 scenarios:

- 1) If a plover nest found with a complete clutch is monitored twice per day, at dawn and dusk (before 0600 hrs and after

1900 hrs), vehicle use may continue until hatching begins. Nests should be monitored at dawn and dusk to minimize the time that hatching may go undetected if it occurs after dark. Whenever possible, nests should be monitored from a distance with spotting scope or binoculars to minimize disturbance to incubating plovers.

2) If a plover nest is found with a complete clutch before May 22 (the earliest recorded hatch date for piping plovers in Massachusetts), and is not monitored twice per day, at dawn and dusk, then restrictions on vehicles should begin May 22.

3) If a plover nest is found with a complete clutch on or after May 22, and is not monitored twice per day, at dawn and dusk, then restrictions on vehicles should begin immediately.

If hatching occurs earlier than expected, or chicks are discovered from an unreported nest, restrictions on vehicles should begin immediately.

If, in the opinion of the Division, ruts are present that are deep enough to restrict movements of plover chicks, or vehicle impacts on wrack are so severe that wrack must be allowed to accumulate naturally prior to hatching, then restrictions on vehicles should begin at least 5 days prior to the anticipated hatching date of plover nests. If a plover nest is found with a complete clutch, precluding estimation of hatching date, and availability of wrack has been substantially reduced by vehicle passage, or deep ruts have been created that could reasonably be expected to impede chick movements, then restrictions on vehicles should begin immediately.

Restrictions on use of vehicles in least tern chick habitat should begin as soon as hatching begins (as early as June 12). Restrictions may begin later if, in the opinion of the Division, tern chicks are not endangered by vehicles because of distance or intervening steep terrain, dense vegetation, or other naturally-occurring barriers.

Areas of dune, beach, or intertidal habitat used as nursery areas by unfledged or recently fledged tern chicks, as identified by the Division, should be delineated with posts, warning signs or symbolic fencing not later than June 21. All access by vehicles into posted tern nursery areas should be prohibited while unfledged or recently-fledged tern chicks are present in these areas, until it is determined that use of nursery areas by young terns has ended (i.e. young terns are no longer being fed by adult terns).

Essential Vehicles

Essential vehicles, as defined by municipal conservation commissions pursuant to the Guidelines for Barrier Beach Management in Massachusetts developed by the Massachusetts Barrier Beach Task Force, should only travel on sections of beaches where unfledged plover or tern chicks are present if such travel is absolutely necessary and no other reasonable travel routes are available. Essential vehicles should travel through chick habitat areas only during daylight hours, except in emergencies, and should be guided by a qualified monitor who has first determined the location of all unfledged plover and tern chicks. All steps should be taken to minimize number of trips by essential vehicles through chick habitat areas. Use of open, 3 or 4-wheel motorized all-terrain vehicles (ATVs) or non-motorized all-terrain bicycles is recommended whenever possible for monitoring and law enforcement because of the improved visibility afforded operators. Homeowners should consider other means of access, e.g. by foot, water, or shuttle services, during periods when chicks are present. A log should be maintained by the beach manager of the date, time, vehicle number and operator, and purpose of each trip through areas where unfledged chicks are present. Personnel monitoring plovers and terns should maintain and regularly update a log of the numbers and locations of unfledged plover and tern chicks on each beach. Drivers of essential vehicles should review the log each day to determine the most recent number and location of unfledged chicks.

Travel by essential vehicles should avoid the wrack line and should be infrequent enough to avoid creating deep ruts that could impede chick movements. If essential vehicles are substantially reducing availability of wrack or are creating ruts that could impede chick movements, use of essential vehicles should be further reduced and, if necessary, restricted to only emergency vehicles.

MANAGEMENT OF OTHER RECREATIONAL USES

The activities discussed in this section are not subject to the jurisdiction of the Wetlands Protection Act because they are not considered to be alterations of wetland resource areas. The following guidelines should only be applied in reference to the Massachusetts Endangered Species Act.

On beaches where pedestrians, joggers, sun-bathers, picnickers, fishermen, boaters, horseback riders, or other recreational users will be present in numbers that could harm or disturb incubating plovers or terns, their eggs, or chicks, refuge areas of at least 50 yard-radius around nests and above the high tide line should be delineated with warning signs and symbolic fencing. Only persons engaged in rare species monitoring,

management, or research activities should enter refuge areas. Refuge areas should remain fenced as long as viable eggs or unfledged chicks are present.

Refuge areas around nests should be expanded if a 50 yard-radius is deemed inadequate to protect incubating adults or unfledged chicks from harm or disturbance. This may include situations where plovers or terns are especially intolerant of human presence, or where a 50 yard-radius refuge provides insufficient escape cover or alternative foraging opportunities for plover chicks. If nests are discovered outside fenced areas, fencing should be extended to create a sufficient buffer to prevent harm or disturbance to incubating adults, eggs, or unfledged chicks. On some beaches where plovers and terns have traditionally nested or where suitable habitat occurs, it may be necessary to symbolically fence portions of habitat during March or April, prior to plover nesting, or during May, prior to tern nesting, if, in the opinion of the Division, failure to do so could discourage plovers or terns from nesting as a result of disturbance from human use.

Rearing or nursery areas used by unfledged or recently fledged tern chicks, as identified by the Division, should be delineated with posts, warning signs, or symbolic fencing not later than June 21. Only persons engaged in rare species monitoring, management, or research should enter posted or fenced tern nursery areas while unfledged tern chicks or tern chicks being fed by adult terns are present, although individuals may pass by outside these areas. Such nursery areas may be re-opened when all tern chicks have fledged and are not being fed by adult terns.

Pets should be leashed and under control of their owners at all times from April 1 to August 31 on beaches where piping plovers or terns are present or have traditionally nested. Pets should be prohibited on these beaches from April 1 through August 31 if, based on observations and experience, pet owners fail to keep pets leashed and under control.

Kite flying should be prohibited within 200 yards of nesting or territorial adult or unfledged juvenile piping plovers or terns, from April 1 to August 31.

Fireworks should be prohibited on beaches where plovers or terns nest from April 1 to August 31.

V. Literature Cited

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APPENDIX "K"

Examples of Signs Posted on Nantucket's Beaches

**WILDLIFE
PROTECTION
AREA**

**DO NOT
ENTER**



12577-20005

YARD SIGN, MANHATTAN, NY 100-2005 612-000-0010



12277-00002

1000 BROADWAY, NEW YORK, NY 10036 (212) 582-4470

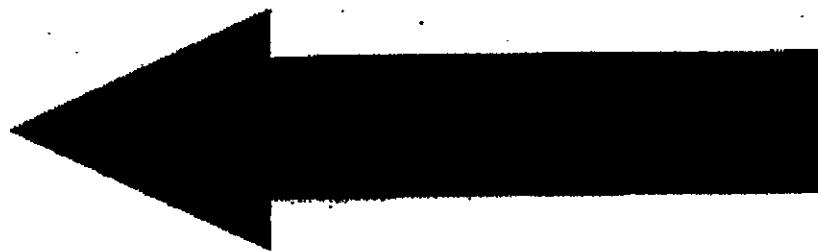


NO PEDESTRIANS

A128

VORBEREITUNG: MAURUS NY 13104-0153 (212) 562-0114

**PLEASE WALK
ALONG
WATERS EDGE**



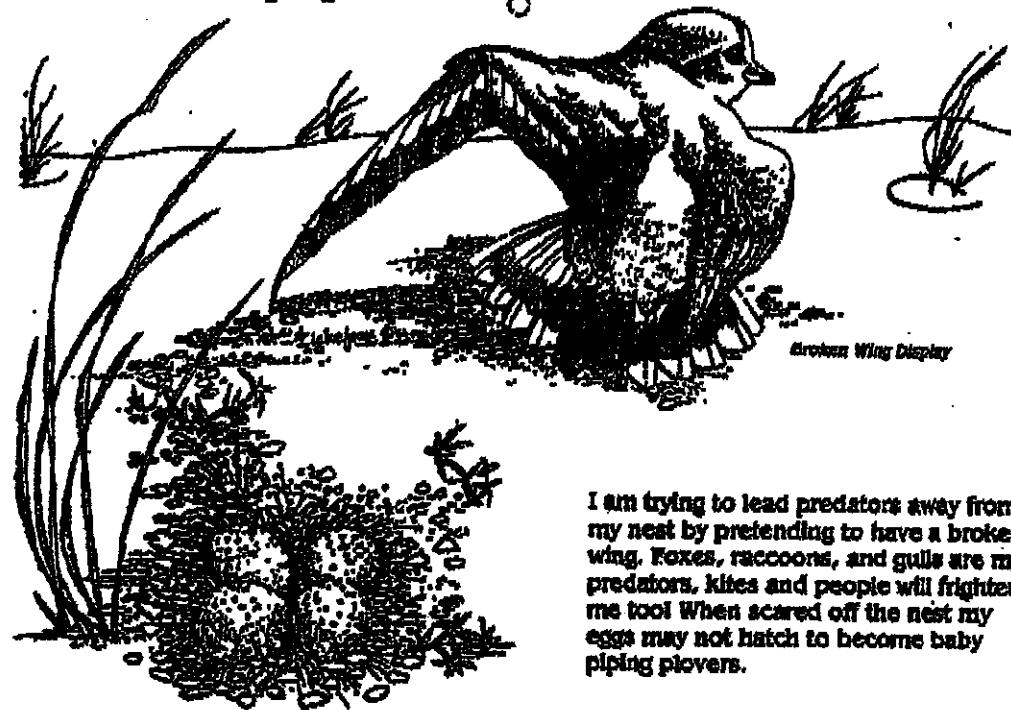
**PLEASE WALK
ALONG
WATERS EDGE**



**DUNE
RESTORATION
KEEP OFF
GRASS**

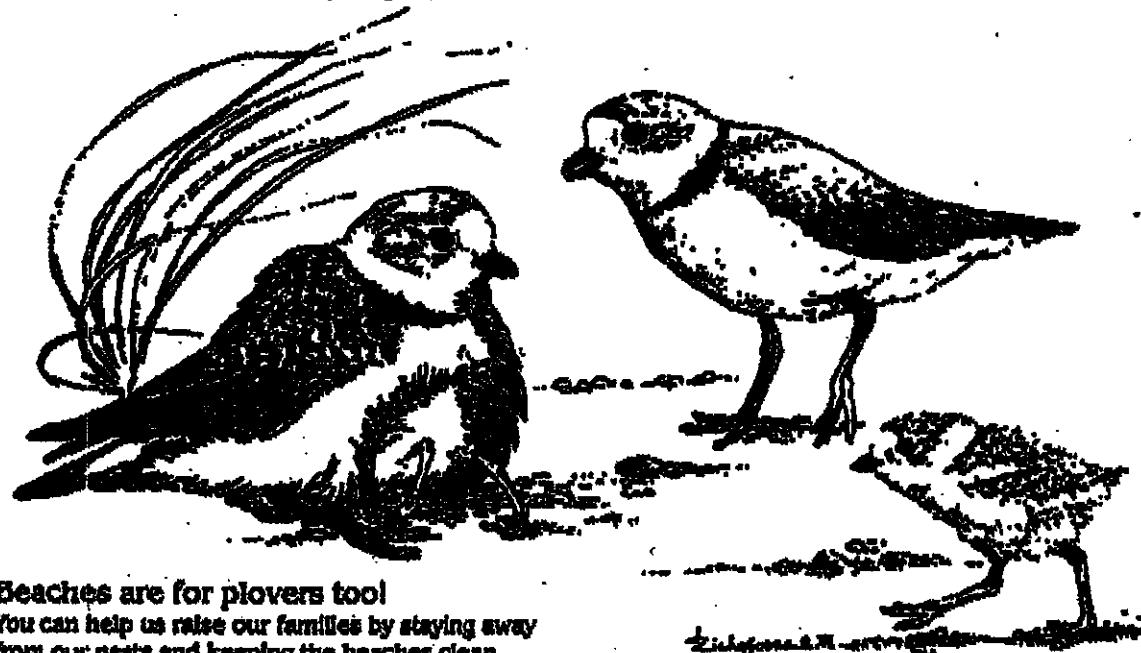


The Threatened Piping Plover



broken wing display

I am trying to lead predators away from my nest by pretending to have a broken wing. Foxes, raccoons, and gulls are my predators. Kites and people will frighten me too! When scared off the nest my eggs may not hatch to become baby piping plovers.



Beaches are for plovers too!
You can help us raise our families by staying away from our nests and keeping the beaches clean.

Town of Nantucket
Marine & Coastal Resource Department

ENTRY PROHIBITED

This area is a natural breeding ground for Terns and Plovers



**THESE RARE BIRDS,
THEIR NESTS AND EGGS
ARE PROTECTED**

UNDER MASSACHUSETTS AND FEDERAL LAWS

**Persons May Be Arrested and Fined for Killing,
Harassing or In Any Way Disturbing Birds Nesting
In This Area (MGL c. 131 § 5,74 and Title 50 CFR).**



**Division of
Fisheries & Wildlife**

MASSACHUSETTS DIVISION OF FISHERIES & WILDLIFE

Town of Nantucket
Marine & Coastal Resource Department
34 Washington Street
Nantucket, MA 02554
508-228-7261

1527-4000

100 BROAD ST., SUITE 100, NANTUCKET, MA 02554-1000 www.nantucketma.org

APPENDIX "L"

Town of Nantucket's Beach Map and Brochures

Nantucket Beach Map 2004

Key

Beach Driving Permitted only as shown on this map

Beach driving permitted 6 a.m.-10 p.m., if beach conditions allow

Beach driving permitted 6 a.m.-10 p.m., unless otherwise posted

Beach driving prohibited 9 a.m.-5 p.m., and 10 p.m.-6 a.m., 6/1-9/15 unless otherwise posted

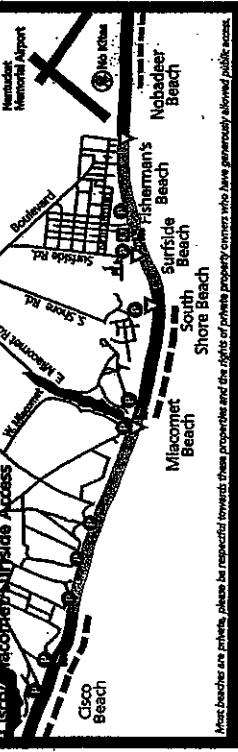
Beach driving prohibited at any time year-round

Beach driving prohibited 6/1-9/15 most of the south and east shore is body-surf only and requires vehicle access for 40% of day. Vehicles display only, depending on beach conditions.

Active surf fishermen are permitted to drive on all green and yellow beaches from 10 p.m.-4 a.m.

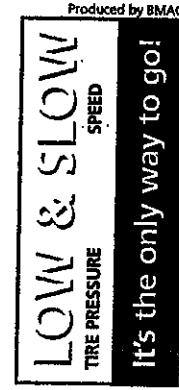
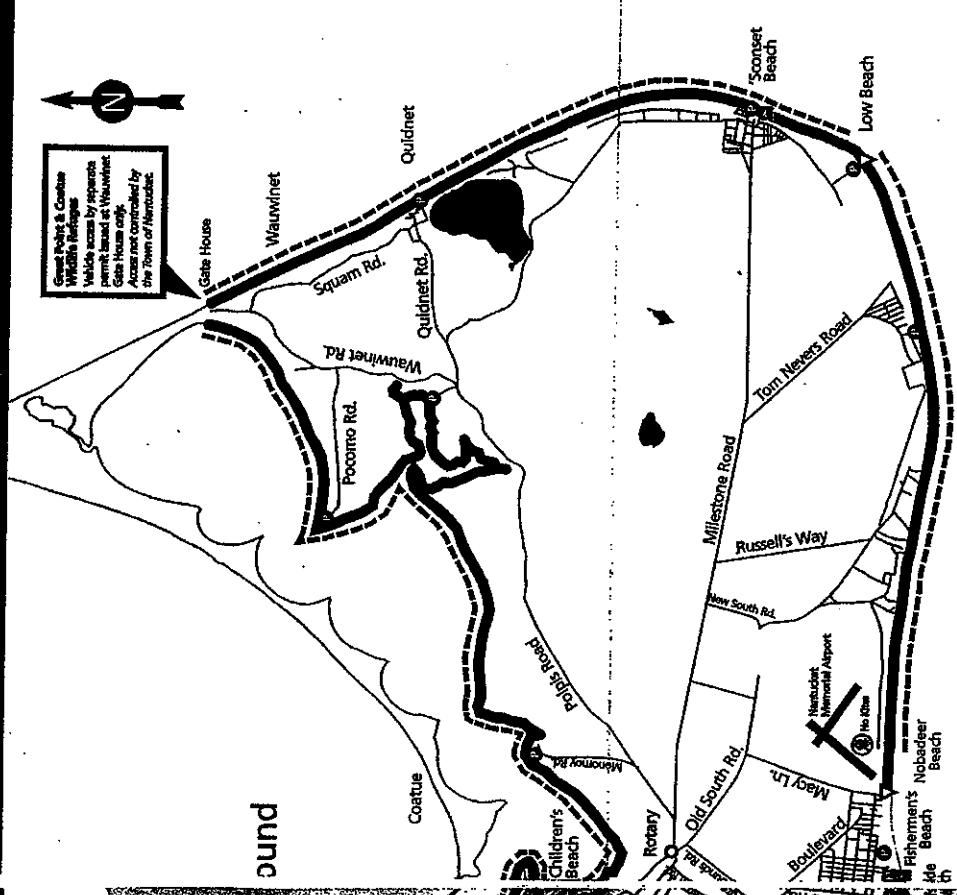
Unless otherwise posted

No surf fishermen permitted



These beaches are private; please be respectful towards their property owners who have generously allowed public access.

Most beaches are private; please be respectful towards these properties and the rights of private property owners who have generously allowed public access.



Produced by BMAC

PLEASE RESPECT OUR FRAGILE ENVIRONMENT.

Nantucket Beach Map 2004

Rules & Regulations

Rules and Regulations

Please carefully read these regulations governing the use of a motor vehicle on Nantucket beaches. All drivers of motor vehicles issued a beach permit are responsible for understanding and abiding by these rules. Failure to comply with any of these regulations may result in immediate revocation of the permit sticker and imposition of a \$250.00 fine.

● Vehicles may access designated beach driving areas ONLY and must have a valid town issued beach permit sticker on the vehicle.

The permit is only valid for the vehicle bearing the license plate number indicated on the permit sticker and is not transferable to another person or vehicle. This brochure must be in the vehicle when on the beach.

● All vehicles must be four-wheel drive, properly registered, and operated by a licensed driver.

● Across the beach at designated points of entry ONLY. Over the past few years many unauthorized vehicle pathways have been created over the dunes. These paths are increasing in number each year, damaging Nantucket's Barrier Dune System. The map on the reverse side shows the authorized access points clearly and they are marked at the beach with deer signage. Vehicles must enter the beach only at these marked access points. Your compliance in using only these designated access points is of crucial importance in assuring that damaged dunes rebuild as well as in protecting the privilege of continued vehicle access to the beach.

● DO NOT DRIVE ON DUNES, BEACH GRASS, TIDAL FLATS, MARSHES, OR IN DESIGNATED BIRD NESTING AREAS. Destruction of the dunes leads to erosion of the entire beach. Beach dunes offer the first line of defense against wave action. If dunes are destroyed or breached, then what lies behind them becomes vulnerable to the elements.

● Pedestrians have the right-of-way. Please be courteous to people sitting or walking on the beach.

● Do not exceed 20 MPH at any time and 5 MPH within 100 yards of a pedestrian. Vehicles with the water at their right always have the right-of-way.

● Each vehicle shall be equipped with a shovel, jack and jack board, spare tire, and a tire pressure gauge. Other recommended equipment: tow rope, port-a-potty, fire extinguisher, and cell phone. Before going onto the beach, all drivers must air down vehicle tires to 12 to 15 psi. Driving is easier and chances of getting stuck in the sand are reduced. Stay in established tracks. Invasive tread

Environmental Statement

Nantucket
2004
B-4-1-F-ERI
E.U. 54, contract #3, 2004
0000 SAY

Nantucket's beaches are a treasure for residents and visitors alike to enjoy. Beach vehicle drivers must help ensure that Nantucket's fragile ecosystem remains healthy and strong by following the rules and regulations in this brochure. Your cooperation in protecting this resource is required for continued vehicle access.

● Fines or any beach are prohibited without a permit. Permits and fines and regulations pertaining to fines on the beach can be obtained at the Nantucket Fire Department. There shall be no bonfires or lewd fires of any type anywhere on the island. Permits are for charcoal grills or gas grills only.

● Gatherings of 15 or more unrelated persons, any commercial activity on any beach or night-time activity requires a permit that can be obtained from the Board of Selectmen's Office.

● Dogs are not permitted on beaches where lifeguards are present. Dogs must be leashed on all beaches at all times. Owners are responsible for cleaning up after their pets.

● Permits expire on December 31st regardless of date issued.

● Beach access may be limited due to shore line erosion, tidal height, private property, overgrowth, etc. seasonal conditions. Kites are prohibited near nesting areas and in the immediate vicinity of the airport.

● CARRY OUT WHAT YOU CARRY IN-DON'T LEAVE TRASH ON THE BEACH. Please take trash bags with you to the beach.

● Only public beaches at Sankaty, Jetties, Donkey, and Chilmark Beach have sanitary facilities. Please take this into account when planning your outing. We recommend the use of a port-a-potty. The use of the beach or the dunes as a toilet will not be tolerated.

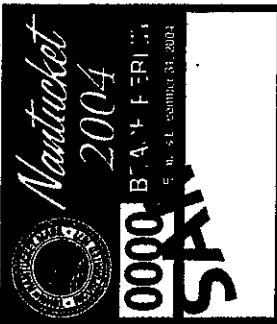
● Do not drive or park on life-guarded beaches between the hours of 9 A.M. - 5 P.M.

● Beaches are closed to vehicles except for active fishing between 10 p.m. and 6 a.m.

● MOST beaches on Nantucket are privately owned. Although most owners have been very generous in allowing the public to use their beaches, your cooperation and respect for private property rights is crucial in keeping all of Nantucket's beaches open to the public.

PLEASE RESPECT OUR FRAGILE ENVIRONMENT.

Town of Nantucket
16 Broad Street
Nantucket, MA 02554
Ph. (508) 228-7255



Fee Schedule

Vehicles Registered On-Island	\$50.00 (between Jan. 1-June 1)
After June 1, ALL permits are \$100 regardless of residence/registration	
Vehicles Registered Off-Island	\$100.00

Important Phone Numbers

Nantucket Police Department (non-emergency)	(508) 228-2212
Nantucket Fire Department (non-emergency)	(508) 228-3244
Nantucket Marine Department	(508) 228-7251
Beach Manager	(508) 228-3545
Nantucket Parks & Recreation	(508) 228-7243
Beach Information Line	(508) 228-7250
Ocean Guard	(508) 228-3548
Environmental Police	(508) 228-3262
Marine Mammal Stranding Team (via Radio)	(508) 228-3262

Where to Drive on the Beach



Don't

Do

Don't

Don't

Don't

APPENDIX "M"

References

References

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Guidelines for Managing Recreational Activities in Piping Plover Breeding Habitat on the U.S. Atlantic Coast to Avoid Take Under Section 9 of the Endangered Species Act, by the Northeast Region, U.S. Fish & Wildlife Service.

Guidelines for Managing Recreational Uses to Beaches to Protect Piping Plovers, Terns and their Habitat in Massachusetts. 21 April 1993, by Massachusetts Division of Fisheries & Wildlife, Natural Heritage and Endangered Species Program.

Massachusetts General Law (M.G.L), Ch. 48, Section 13 Setting open air fires; conditions and restrictions; penalty for violation.