

Wellfleet Harbor Area of Critical Environmental Concern (ACEC)

Designation Date:	May 18, 1989
Total approximate acreage:	12,480 acres
Watershed/subwatershed:	Cape Cod/Wellfleet Bay
Municipalities (% of ACEC):	Eastham (5%), Truro (3%), and Wellfleet (92%)

What makes this area so special?

Designation Overview

The Wellfleet Harbor ACEC was nominated by the Conservation Commissions, Boards of Selectmen, and Planning Boards from the Towns of Eastham, Truro, and Wellfleet and was designated as an ACEC in 1989 because of the area's extraordinary natural resources. The boundary for this ACEC extends from Ryder Beach in South Truro southward to Sunken Meadow Beach in Eastham and generally follows the 10-foot contour line on the landward side and the Cape Cod National Seashore boundary on the seaward side.

Portions of the area have been designated by the Department of Conservation and Recreation as containing visual landscapes and cultural resources that place it in the top 5% of all landscapes in the Commonwealth (1982 Massachusetts Scenic Landscape Inventory). Important habitats within the ACEC boundary include largely unaltered barrier beaches, islands, marsh systems, salt and fresh water ponds, rivers, bays, and tidal flats. These areas provide flood control, storm damage prevention, improved water quality, wildlife habitat, and recreation opportunities to surrounding communities.

Wildlife Habitats

The diverse and relatively unaltered habitats of this ACEC provide feeding, spawning, and nursery grounds for numerous shellfish, finfish, amphibians, reptiles, birds, and mammals. In 2002, the state's Natural Heritage and Endangered Species Program (NHESP) identified approximately 7,990 acres or 65% of the ACEC as core habitat through their BioMap project, which highlights areas in Massachusetts with high biodiversity and most in need of protection. That same year, NHESP listed 20 species that were either endangered, threatened, or of special concern and depend on this area for their survival (*see species list at the end of this fact sheet*). This diverse region is a spawning, nursery, and foraging habitat for marine, brackish, and fresh water animals. In 2001, the NHESP located 13 potential vernal pools in this ACEC, while the Herring River is identified as the largest migratory fish run on the outer cape. Habitat for oysters, bay scallops, quahogs, blue mussels, and razor, soft shell, and surf clams can be found within the ACEC boundary according to draft maps made in 2003 by the Division of Marine Fisheries and based on historical information and interviews with local shellfish officers.

Land Use

Almost 30% of the land in the Wellfleet Harbor ACEC is covered by either forested or wetland habitats, with a majority of the area consisting of Wellfleet Bay's open waters. Although less than 5% of the land within the boundary is residential, much of the land immediately adjacent to the boundary and Rte. 6 has been converted to residential development. Many recreational and

scenic sites are found in the area, with a significant portion belonging to the Cape Cod National Seashore and the Massachusetts Audubon Society. These two areas contribute to over 25% or 3,400 acres of protected open space in the ACEC.

Economic Benefits

The economies of the three towns are tied to the region since local fishing and tourism industries depend on the natural resources in this ACEC. The clean waters and productive marsh habitat support the area's rich shellfish populations, which are an important part of the recreational and commercial fishing industry. In 2002, tidal flats in the ACEC supported 180 acres of aquaculture lease sites used by 58 license holders. Wellfleet is the state's most successful aquaculture site with a combined harvest in 2002 worth close to \$3 million from aquaculture and shellfishing. In addition to being an active aquaculture site, many residents also make a living by harvesting wild shellfish.

Local economies also benefit from the many public recreational and scenic sites. The Cape Cod National Seashore encompasses over 20% of the ACEC. Another major public use area is the Massachusetts Audubon Society Wellfleet Bay Wildlife Sanctuary in South Wellfleet. This 1,100-acre refuge has numerous trails, habitats, and a visitors' center open to the public. Residents and tourists are also drawn to the clean beaches and waters in the ACEC for recreational activities such as boating, swimming, walking, and bird watching.

Archaeology

The Wellfleet Harbor ACEC contains at least 75 archaeological sites, more than any other ACEC on Cape Cod. The presence of Native Americans appears to have begun between 8,000 to 6,000 years ago, and continued with increasing frequency from 1,200 to 450 years ago. Although historic shell middens (refuse mounds) and a number of burials are reported around Wellfleet Harbor, the discovery of a mass grave in the 1980s makes this area unique in regional archaeology.

What are some stewardship activities?

One goal of the ACEC program is to promote stewardship of this area's resources through the participation, cooperation, and expertise of many interest groups. The Wellfleet Audubon Wildlife Sanctuary offers a variety of natural history programs for all ages and is involved with local research projects, conservation efforts, and planning activities. The Cape Cod National Seashore is also involved in research projects, especially in the Herring River where the hydrology, vegetation, water quality, and marine resources have been studied in the surrounding salt marsh. The town is currently preparing a harbor management plan, which addresses issues of public access, navigation, and use of waterfront areas. The town has also developed shellfish management strategies and was the focus for a 2001 federal/state study of how remote sensing can be used to support shellfish management and aquaculture activities.

By becoming active stewards, community members can help monitor the condition, target problems, and find ways to improve and protect the natural resources in their ACEC. If you have any questions or ideas for stewardship in the Wellfleet Harbor ACEC, please contact the Massachusetts Office of Coastal Zone Management's ACEC Stewardship Coordinator, Katie Lund, at (508) 289-2889 or the Department of Conservation and Recreation's ACEC Coastal Coordinator, Liz Sorenson, at (617) 626-1394.

Local ACEC Stewards

Towns of Eastham, Truro, and Wellfleet
Cape Cod National Seashore

What coastal resources are included (partially or entirely) in the ACEC?

Harbors, Sounds, Bays: Wellfleet Harbor, Loagy Bay, Drummer Cove, The Cove, Duck Harbor, Cape Cod Bay (*Wellfleet*)

Rivers: Herring River (*Wellfleet*)

Lakes, Ponds: Herring, Higgins, and Gull Ponds (*Wellfleet*)

Brooks, Creeks: Hatches Creek (*Eastham*); Bound and Fresh Brooks, Blackfish, Duck, and Pole Dike Creeks, and Silver Spring (*Wellfleet*)

Great Ponds (ponds > 10 acres): Herring, Higgins, and Gull Ponds (*Wellfleet*)

Outstanding Resource Waters (ORWs): Wellfleet Harbor, Duck Harbor, Cape Cod Bay, Herring River, Herring Pond, Higgins Pond, Gull Pond, Hatches Creek, Bound Brook, Fresh Brook, Blackfish Creek. (*ORWs are waters, such as public water supplies and vernal pools that are protected by the most stringent standards because they constitute an outstanding resource as determined by their socio-economic, recreational, ecological, and/or aesthetic values*).

Barrier Beaches included in ACEC (Massachusetts Barrier Beach Inventory, CZM, 1982): Sunken Meadow Spit (Eh-1) (*Eastham*); Bound Brook Beach (Tr-5) (*Truro*); Audubon Sanctuary (Wf-22), Blackfish Creek South Spit (Wf-14), Catboat Rd. Spit (Wf-21), Chipman Cove Spit (Wf-10), Cliff Ave. Bay Barrier (Wf-18), Duck Harbor Beach (Wf-1), Field Point (Wf-12), Great Island South Harbor Spit (Wf- 7), Great Island/Great Beach Hill Bay Barrier (Wf-3), Great Beach Hill South Harbor Spit (Wf- 5), Great Island East Spit (Wf-8), Great Beach Hill North Harbor Spit (Wf-6), The Gut (Wf-2), Hillside Ave. Spit (Wf-13), Indian Neck Tidal Inlet Barriers (Wf-11), Jeremy Point Barrier Spit (Wf-4), Lieutenant Island South Spit (Wf-19), Lieutenant Island South Marsh Barrier (Wf-20), Lieutenant Island/Loagy Bay Spit (Wf-17), Mayo Beach (Wf-9), Old Wharf Point South Spit (Wf-16), Old Wharf Point North Spit (Wf-15) (*Wellfleet*). (Massachusetts Barrier Beach Inventory, CZM, 1982).

NATURAL RESOURCE ACREAGE ESTIMATES

Note: acreages are estimated using Massachusetts Geographic Information System data (2001).

HABITAT TYPE	ACREAGE in ACEC	% of ACEC	LAND USE	ACREAGE in ACEC	% of ACEC
barrier beach	400	3	recreation	60	<1
eelgrass	440	3	agriculture	<1	<1
salt marsh	1,230	10	residential	565	4
tidal flat	1,395	11	commercial	10	<1
freshwater wetland	930	7	industrial	7	<1

cranberry bog	--	--	OPEN SPACE		
forest	1,620	13	federal	2,790	22
open water	8,170	65	state	65	<1
100 yr floodplain	4,180	33	municipal	145	1
			private/nonprofit	515	5
			chapter 61	--	--
			protected	3,430	27

NHESP listed species (Endangered (E), Threatened (T), or Special Concern (SC):

roseate tern (E - bird), oysterleaf (E - plant), gerhard's underwing moth (T - moth), piping plover (T - bird), diamondback terrapin (T - reptile), prickly pear (T - plant), water willow stem borer (T - moth), fibrous bladderwort (T - plant), eastern spadefoot (T - amphibian), eastern box turtle (SC - reptile), spotted turtle (SC - reptile), broom crowberry (SC- plant), commons panic-grass (SC - plant), New England bluet (SC- plant), four toed salamander (SC - amphibian), pale green pinion moth (SC - moth), salt reedgrass (SC - plant), least tern (SC - bird), common tern (SC - bird), and the arctic tern (SC - bird).