



The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

MICHAEL S. DUKAKIS
GOVERNOR

EVELYN F. MURPHY
SECRETARY

Designation of Sandy Neck Barrier
Beach System as an Area of
Critical Environmental Concern and
Supporting Findings

Following an extensive process, including nomination, research, informal meetings with local groups, a public informational meeting, a public hearing, and a formal evaluation of all assembled data, I, the Secretary of Environmental Affairs, hereby designate the Sandy Neck Barrier Beach System an Area of Critical Environmental Concern pursuant to the authority granted to me by G.L. c. 21A, s. 2(7).

I also hereby find Sandy Neck Barrier Beach System is significant to flood control, the prevention of storm damage, the protection of land containing shellfish and fisheries; interests protected by the Wetlands Protection Act, G.L. c. 131, s. 40.

I. Boundary of the Sandy Neck Barrier Beach System ACEC

The ACEC boundary extends eastward along the mean low water line from Scorton Harbor to Beach Point; then follows a closure line extending in a southeasterly direction across Barnstable Harbor to Mill Creek, following the Barnstable town line to Hallet's Mill Pond. The boundary then extends in a westerly direction along the 100 year floodplain line through Barnstable and Sandwich to Scorton Harbor, as delineated on the HUD Flood Insurance Rate map. Three exclusions are made: (1) land in Cobbs Village north of Commerce Road and east of Mill Way; (2) Freezer Road Point and the developed marina; and (3) Scorton Neck, as defined by the land located above the 100 year floodplain line with the exception that the northeastern exclusion boundary is the Sandy Neck Road.

II. Description of the Resources of the Sandy Neck Barrier Beach System

The Sandy Neck area is an extensive and largely unaltered resource system. Among the natural components of the system are many specified as Significant Resource Areas (SRA's) in the Massachusetts CZM Program. These include a seven mile long barrier beach system, dunes and sandy beaches, several thousand acres of salt marsh, productive shellfish beds, a large coastal embayment, an anadromous fish run and floodplain, erosion and accretion areas. The area is a spawning and nursery ground for many marine species, as well as an important habitat for upland species and waterfowl. The beaches, dunes, and salt marshes provide protection against storms for low-lying inland areas. During the

summer months, local residents and visitors flock to Sandy Neck to swim, picnic, walk, fish and use recreational vehicles. The region clearly meets the regulatory criterion of the ACEC Program, that a region proposed for designation must contain at least five of the specified Significant Resource Areas.

III. Procedures Leading to ACEC Designation

The Sandy Neck Barrier Beach System located in the Towns of Barnstable and Sandwich was nominated by a letter from the selectmen of both towns on October 13, 1978. After reviewing this nomination, the Secretary of Environmental Affairs decided on October 20, 1978 to proceed with a full review of the proposed area.

Notice of the receipt of the nomination request and a public hearing notice were published in the Environmental Monitor on October 21, 1978. The public hearing notice also appeared in the Boston Globe as well as in three local newspapers: the Cape Cod Times, the Register, and the Barnstable Patriot. Additional information on the region was collected by the Coastal Zone Management Office staff in consultation with local officials, town boards, and natural resource officers. The results of this research were forwarded for comment and review to the Selectmen, Conservation Commissions, Planning Boards, Park and Recreation Committees, and members of the CZM Citizen Advisory Committee for Cape Cod. Copies also went to interested individuals and were available to the general public upon request. Informational articles about the proposed nomination appeared in several local newspapers, and an informational meeting was held at the Barnstable Town Hall on November 30, 1978. In addition, at the request of the Barnstable Conservation Commission, an explanation of the ACEC Program was given to that group.

The public hearing for the Sandy Neck ACEC proposal was held at the Barnstable High School on Tuesday, December 5, 1978. Approximately eighty residents attended the meeting, and formal comments were made by seventeen persons. All speakers emphasized the extreme importance and fragility of the Sandy Neck barrier beach and marsh system. A number of speakers emphasized the importance of local responsibility for management of the resource system. State support for local management efforts, however, was seen as a positive ramification of the ACEC designation. Several others urged that management efforts should strive to include a wide variety of activities to be conducted in a manner compatible with the various resources. The overwhelming impression was one of great concern for the Sandy Neck system, and an interest in possible state support through the ACEC designation. The hearing record remained open until 3:00 p.m., Friday, December 8, 1978 for those persons who wished to submit written comments. All comments that were received were given consideration.

IV. Discussion of Factors Specified in Section 6.48 of the CZM Program Regulations

Prior to designation of a region as an Area of Critical Environmental Concern, the Secretary must consider the factors specified in Section 6.48 of the CZM Program regulations. Based on research and information from local

residents, I find that the following factors are applicable to the Sandy Neck Barrier Beach System:

Inappropriate use - Future development of this area is a very real threat because strong development pressures on Cape Cod could threaten public welfare in several ways. The individual resource features of the Sandy Neck Barrier Beach System each perform a specific and important function. Inappropriate use or alteration of any one of these features may impair the ability of the particular resource as well as all the other resources present to function well. The long barrier beach, for example, provides protection from storms to inland areas. The natural tendency of a barrier beach is to slowly migrate landward. Efforts to stabilize the beach by constructing groins or jetties would alter the natural movements of the beach and the existing form of the beach, thereby reducing its ability to absorb storm impacts. Another important resource function is nutrient production in the salt marshes and its export to more open waters. This food production and export system supports large numbers of marine species, among them such endangered species as the diamondback terrapin. Inappropriate construction, dredging, filling or release of pollutants will reduce this marsh productivity with consequences effecting the food chain and the population of at least one endangered species.

Quality of the Area - All of the resources of Sandy Neck are of an extremely high quality. Water quality is designated as the highest, SA, and swimming and shellfishing are popular activities. As described in more detail in the data assembled prior to designation, the region supports extensive and varied vegetation, and bird and animal populations. Among the species found on Sandy Neck are several that have been classified as rare, threatened, or endangered; including the least Tern and the diamondback terrapin. The region is generally undeveloped; the natural areas offer varied opportunities for recreation, fishing, shellfishing, and nature study.

Productivity - The extensive marshes of Sandy Neck produce nutrients which support large numbers of marine species important in the food chain. These nutrients are exported from the marshes to Barnstable Harbor and beyond to Cape Cod Bay. The low-lying lands also provide food and habitat for large waterfowl populations. Upland species in large numbers are also found in the region. Because of its size, this area has a particularly high productivity level.

Uniqueness of Area - Perhaps the most important factor leading to the designation of this area as an ACEC is its uniqueness. Inappropriate use of other coastal areas would also lead to a potential threat to the public welfare. But Sandy Neck's quality, its productivity, its size, present recreational and scientific use elements which contribute to its uniqueness - set it apart and make it a most appropriate area for designation as an ACEC. Sandy Neck is the largest barrier beach system in the Commonwealth outside of the Cape Cod National Seashore. This extensive, undeveloped area provides unique opportunities for active and passive recreation to residents and to visitors alike. Sandy Neck is also unique in that it has served as a model for the study of barrier beach and marsh development through studies conducted by Dr. A.C. Redfield of the Woods Hole Oceanographic Institution. Today, Sandy Neck continues to be the

site of important research being conducted by scientists from Woods Hole and elsewhere. A particularly interesting example of on-going research is that being conducted by Mr. Peter Auger, an ecology teacher from the Barnstable High School. Mr. Auger's work is providing extensive new data on the Northern diamondback terrapin, as well as material for ecology courses at the school. Another endangered species susceptible to study in Sandy Neck is the least tern. Students in this area are presented a unique opportunity to participate in primary research.

There are also sites in Sandy Neck which are being studied for their historical and archaeological significance, for example, sites indicative of Wampanoag Indian inhabitation of Sandy Neck.

Economic Benefits - Sandy Neck is a substantial economic asset to the Towns of Barnstable and Sandwich. Visitors to the area buy permits for beach use, vehicular use and shellfishing. As stated in the Sandy Neck report, fees of over \$50,000 were paid for dune and parking fees during the 1978 season. It is important to note that it is the high quality of the area that attracts many visitors. Continued maintenance of this quality is essential if the area is to remain attractive to many users.

Supporting Factors - Strong public consensus on the intrinsic value of the area weighs in favor of the designation. Residents and officials of Barnstable and Sandwich have long recognized both the environmental and economic importance of the region. Land acquisitions by the two Conservation Commissions, shellfish propagation programs, dune management practices, and general management attempts demonstrate the interest and concern of residents in the future of Sandy Neck. One of the purposes of the ACEC nomination by the Selectmen was to ensure that state agency actions in the area are consistent with the character and environmental integrity of the region. The Selectmen also expressed the hope that, upon request, state authorities might be enlisted to assist local agencies in meeting their stated goals for the region.

All of these factors taken together convince me that the Sandy Neck Barrier Beach System is indeed an Area of Critical Environmental Concern to the Commonwealth.

Application of the ACEC designation criteria to the Sandy Neck Barrier Beach System demonstrates that the area is indeed unique, and is valuable in both environmental and economic senses. Local residents have long recognized the importance of the region. Through the designation of the Sandy Neck Barrier Beach System as an Area of Critical Environmental Concern, I intend to enlist the support of state agencies in the continued protection and appropriate use of this important region.


Evelyn F. Murphy

Secretary of Environmental Affairs

12/15/78
Date