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REPORT TO CONGRESS: COASTAL BARRIER RESOURCES SYSTEM

**Proposed Recommendations for Additions to or Deletions
from the Coastal Barrier Resources System**



**VOLUME 3
MASSACHUSETTS**

U.S. Department of the Interior

February 1987



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**Proposed Recommendations for Additions to or Deletions from
the Coastal Barrier Resources System**

MASSACHUSETTS

Mapped, edited, and published by the Coastal Barriers Study Group

**United States Department of the Interior
William P. Horn, Assistant Secretary for Fish and Wildlife and Parks**

February 1987

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INTRODUCTION

The Coastal Barrier Resources Act (CBRA) of 1982 (Public Law 97-348) established the Coastal Barrier Resources System (CBRS), a system of undeveloped coastal barriers along the Atlantic and Gulf of Mexico coasts. This atlas of coastal barriers in Massachusetts has been prepared in accordance with Section 10 of CBRA (16 U.S.C. 3509), which states:

Sec. 10. Reports to Congress.

(a) In General.--Before the close of the 3-year period beginning on the date of the enactment of this Act, the Secretary shall prepare and submit to the Committees a report regarding the System.

(b) Consultation in Preparing Report.--The Secretary shall prepare the report required under subsection (a) in consultation with the Governors of the States in which System units are located and with the coastal zone management agencies of the States in which System units are located and after providing opportunity for, and considering, public comment.

(c) Report Content.--The report required under subsection (a) shall contain--

(1) recommendations for the conservation of fish, wildlife, and other natural resources of the System based on an evaluation and comparison of all management alternatives, and combinations thereof, such as State and local actions (including management plans approved under the Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.)), Federal actions (including acquisition for administration as part of the National Wildlife Refuge System), and initiatives by private organizations and individuals;

(2) recommendations for additions to, or deletions from, the Coastal Barrier Resources System, and for modifications to the boundaries of System units;

(3) a summary of the comments received from the Governors of the States, State coastal zone management agencies, other government officials, and the public regarding the System; and

(4) an analysis of the effects, if any, that general revenue sharing grants made under section 102 of the State and Local Fiscal Assistance Amendments of 1972 (31 U.S.C. 1221) have had on undeveloped coastal barriers.

This atlas of Massachusetts includes delineations of the CBRS units designated by Congress in 1982 and delineations of proposed recommendations for additions and modifications to the CBRS that will be provided to Congress by the Department of the Interior following public review and comment.

Under the direction of the Assistant Secretary for Fish and Wildlife and Parks, this report has been prepared by the Coastal Barriers Study Group, a task force of professionals representing the National Park Service, U.S. Fish and Wildlife Service, U.S. Geological Survey, and other Departmental offices.

BACKGROUND

The Commonwealth of Massachusetts occupies only 8,257 square miles, but with over 1,200 miles of coastline, its beach length ranks second in New England. Its population of over 6 million represents an amalgamation of many ethnic groups that have immigrated to the State since 1620. Most of the State's population is concentrated in the coastal strip between Cape Anne and Cape Cod with Boston and its suburbs containing the greatest number of people.

The State's economy is based on manufacturing, fishing, and farming. By the 1850's nearly 90 percent of the State's forests had been cleared for agricultural use. The Connecticut Valley was, and remains, one of the best agricultural areas in New England. Recently, "high-tech" industries have joined the traditional manufacturing ones. Education is also a major industry in the State; Massachusetts has more colleges and universities per capita than any other region of the country. Recreation and tourism are growing industries in the State, especially in the Berkshires and along the coast.

Massachusetts contains mountains in the west (the Berkshires with Mt. Greylock at 3,491 feet, the highest point), a major river valley (the Connecticut), uplands in the central region, and a coastal plain in the east and southeast made up of glacial

deposits of sand and gravel. Offshore from the mainland are two large islands, Nantucket and Martha's Vineyard, which share their glacial origins with Cape Cod. They are composed mostly of sand and gravel, and the wave action of the Atlantic has produced magnificent beaches and protected bays and harbors. The vegetation of Cape Cod and the islands is similar: salt marshes, coastal dune strands, scrub thickets, oak-pine forests on the uplands, and beech-red maple forests on old dunes and north-facing glacial slopes. In the past, southeastern Massachusetts was covered by extensive heathlands. Today, only remnants of this coastal heath remain on Cape Cod and Martha's Vineyard, though Nantucket is still covered in heathlands.

The coastal region is extensive and has many salt marshes, bays, sounds, rocky shores, beaches, dunes, and marine bluffs. Some of the largest salt marshes in the State are found behind Plum Island and Crane's Beach in the northeastern part of the State. Both barrier beaches and their associated wetlands resulted from erosion of the glacial ridges common in that region. Rocky shores are found between Cape Anne and Minot, and some areas look much like Maine and Nova Scotia. Most of the southeast coast, however, contains sandy or gravelly beaches, either on barriers or at the foot of eroding glacial uplands. Along the State's 1,200 miles of coastline, there are at least 157 major barrier beaches affected by winter storms or hurricanes (S.M. Humphries and J.R. Benoit, unpublished manuscript 1980).

The great fishing fleets that sailed to the Grand Banks are largely gone, but fishing is still an important part of the resource base. Shellfishing is important for both commercial and private interests. The natural resource base that brings the greatest source of income to the State today is unquestionably the coastal system.

COASTAL RESOURCE MANAGEMENT

Commonwealth Coastal Resource Management

The Commonwealth passed its first wetlands protection legislation in 1963, but laws and regulations dealing with coastal issues go well back into the State's history, even to the founding of the Massachusetts Bay Colony in the 1600's. Many laws dealt with the use of coastal resources, protection of sand dunes, creation of "public lands" and parks, and management of coastal resources. In the early days of Provincetown, a young man was required by law to plant a certain amount of beachgrass before getting married. The Commonwealth set aside a large portion of Cape Cod north of Provincetown as common lands in the 1700's. When dunes started moving because of excessive grazing and wood cutting, laws prohibiting such activities were passed. These lands became part of a State park and are now in the Cape Cod National Seashore. In the early 1900's, legislation was passed to provide funds for hiring a dune superintendent and developing a program to stabilize migrating dunes that were then threatening to bury Provincetown.

With passage of the Federal Coastal Zone Management Act and approval of the State program in 1978, a unified plan for coastal management was put into effect. The Massachusetts program was the first to be approved on the Atlantic coast. In 1978, the Wetlands Protection Act was enacted; it specifically included barrier beaches and dunes within its jurisdiction. Many other acts designed to protect and regulate activities on the coast followed. This movement culminated on August 8, 1980, when the Governor issued Executive Order No. 181 on Barrier Beaches. This was the first order of its kind in the country and created a State policy discouraging further government funding of new or old development on barrier beaches in the State. In 1981, the Governor also issued Executive Order 190, Relocation of Off-Road Vehicle Use on Public Lands Containing Coastal Wetland Resources, to exclude off-road vehicle use from sensitive environmental areas, specifically dunes, salt marshes, and tidal flats.

The Commonwealth of Massachusetts has an active and effective Coastal Zone Management (CZM) Program including 28 State laws and programs. These are coordinated by the CZM Office, located in the Executive Office of Environmental Affairs, and established by Section 13 of the 1983 Acts and Resolves, which amends Chapter 21a of the Massachusetts General Laws. The purpose of the legislation "shall be to secure for the inhabitants of the Commonwealth the objectives and benefits of the federal Coastal Zone Management Act, 16 U.S.C. 1451."

The following State laws apply to management and protection of coastal barriers.

Areas of Environmental Concern (MGLA Ch. 21a). The Secretary of Environmental Affairs developed a process for designating Areas for Preservation Restoration (APR's), or in the nomenclature of Massachusetts, Critical Areas of Environmental Concern. As a result of this designation, the Executive Office of Environmental Affairs (EOEA) agencies attach a high degree of scrutiny to their activities in these areas. They do not proceed with activities that could impair characteristics cited in area designations, and they administer programs consistently within CZM policies regarding acquisition, protection, and use of such areas.

The Coastal Wetlands Restriction Program (MGLA Ch. 130). This Act authorizes the Commissioner of the Department of Environmental Management (DEM), with approval of the Board of Environmental Management, to impose land use restrictions on wetlands "for the purpose of promoting the public safety, health and welfare and protecting public and private property, wildlife and marine fisheries." The Act does not pertain to all wetlands within a particular community but only to those that are important for the above listed purposes. Wetlands are evaluated on a site-specific basis by local officials. Wetland areas not subject to restriction are not by implication considered unimportant. When an area is identified, all affected landowners are notified, a public hearing is held, and finally, the restriction order is recorded at the Registry of Deeds. A marginal reference on the deed of

the landowner is made by Registry officials. Generally, large-scale activities involving dredging and filling operations are prohibited. No permits may be issued by other agencies for such activities within a restricted area. Allowable activities such as docks, piers, floats, wharves, boat houses, cultivation of shellfish, harvesting of salt hay, recreation, and limited access to unrestricted land are subject to approval by other permit-issuing agencies. Presently, 36 coastal communities have been restricted.

Historic District Act (MGLA Ch. 40c). This Act enables cities and towns to establish historic districts for the preservation and protection of historic sites. Within such districts, demolition, new construction, and alteration to exterior architectural features cannot be performed without a certificate of appropriateness or non-applicability.

Inland Wetlands Restriction Program (MGLA Ch. 131). This Act is administered by the Department of Environmental Quality Engineering (DEQE) and is similar to the Coastal Wetlands Restriction Program except that it applies to inland freshwater areas.

Massachusetts Environmental Policy Act (MGLA Ch. 30). Known as MEPA, this Act is enforced by the MEPA Unit within the Office of Environmental Affairs. The MEPA program examines environmental impacts of State actions including permitting, approvals, and funding. Generally, an individual seeking a State permit, approval, or funding may be subject to the MEPA process. However, many State permits, approvals, and funds are exempt from MEPA, either by their nature or because they fall below certain quantitative thresholds. These exemptions and thresholds appear in the MEPA regulations. Projects subject to review must circulate, and project initiators must file an Environmental Notification Form (ENF). A 20-day comment period ensues from publication of the ENF in the MEPA Monitor, a bi-weekly publication. Within 30 days after publication, a decision is reached on whether an environmental impact report (EIR) is required. If the EIR is not required, State agencies are free to issue permits, approve funds, etc. If an EIR is required, a "scope" will be issued, identifying issues that the EIR must address. Draft and final EIR's each go through 37-day review and comment periods. Projects that exceed thresholds (CMR 301: 10.32 (5)) automatically require an EIR if they require any State permits whatsoever.

Mineral Resources Regulatory Act (MGLA Ch. 21). This Act empowers the Division of Mineral Resources in DEQE to license, following a public hearing, the exploration for sand, gravel, and other minerals in Massachusetts coastal waters and the seabed and to grant leasing rights for extraction of such mineral resources as are discovered.

Ocean Sanctuaries (MGLA Ch. 132a). This program was created to protect all State waters except those from Lynn to Marshfield and those in Mt. Hope Bay. In general, activities such as the removal of sand, gravel, or minerals, and the dumping of any new waste discharge are prohibited. However, a broad class of activities are exempt from these prohibitions. While the terms of the five

designated Ocean Sanctuaries differ, laying of cables approved by the Department of Public Utilities, projects authorized under the Waterways Program, or other improvements authorized by other State or Federal agencies are permitted. No permit is required to conduct an activity in an Ocean Sanctuary besides that which would be issued under the Waterways Program. The Department of Environmental Management is responsible for insuring compliance.

Scenic Rivers Act (MGLA Ch. 21). This Act is enforced by the Department of Environmental Management (DEM). It designates certain rivers or streams as scenic resources and restricts or prohibits certain uses on the river and contiguous banks. A restriction order is recorded at the Registry of Deeds and a marginal reference is made on the landowner's deed. The order specifies permitted and prohibited uses. A group of local landowners sitting as an overseeing body reviews proposed uses, acts to enforce the order, and acts as an advisory group to owners along the river corridor.

Waterways Program (MGLA Ch. 91). This program is administered by the Department of Environmental Quality Engineering, Division of Land and Water Use. A license is required for any structure built seaward of the high tide line in tidal areas and any structure involving government expenditures in or over great ponds and certain rivers and streams. The applicant must also obtain water quality certification from the Division of Water Pollution Control and a permit from the U.S. Army Corps of Engineers.

Wetlands Protection Act (MGLA Ch. 131). This Act is administered by the DEQE, which provides rules and regulations that local Conservation Commissions follow in implementing the Act. A permit, called an Order of Conditions, is required for work in or within 100 feet of a wetland or floodplain, whichever distance is greater. However, current policy only provides for measuring 100 feet landward of the vegetated wetland, not the floodplain. Wetlands are defined by the presence of certain plant species. The law prohibits those activities that would have a significant adverse impact on public and private water supply, ground-water supply, flood control, storm damage prevention, prevention of pollution, and protection of finfish and shellfish. Appeals are handled by DEQE.

Executive Order 181 (Barrier Beaches). This order recognizes the dynamic and important role that barrier beaches play in protecting the shore from storm damage and flooding, their sensitivity to damage by human interference, and their high degree of hazard from coastal storms. The order gives the highest priority to disaster assistance funds used for relocating willing sellers from storm-damaged barrier beach areas. It specifies that State and Federal funds will not be used to encourage development on barrier beaches; that management plans for State-owned barriers will be prepared consistent with the State's wetland policy; that no development will be permitted in velocity zones or primary dunes; that structures on barriers will be used only for maintaining navigation at inlets and only if mechanisms are employed

to supply downdrift beaches with sediment; and that dredged materials of suitable size will be used for beach nourishment.

Executive Order 190 (Relocation of Off-road Vehicle Use On Public Lands Containing Coastal Wetland Resources). This order recognizes the degrading impacts that off-road vehicles (ORV's) can have on coastal wetlands that include beaches, barrier beaches, dunes, salt marshes, and tidal flats. The order directs all State agencies to balance the competing uses of the Commonwealth's public lands and minimize the degradation of its public coastal wetland resources. It specifically excludes ORV use in sensitive environmental areas, i.e., dunes, salt marshes, and tidal flats, which provide significant public interests. Its stated purpose is to assure that soil erosion and damage to vegetation are minimal; to assure that harassment of wildlife and significant disruption of wildlife habitats are minimized; and to assure that ORV's will not be excluded from public lands but will be directed to environmentally acceptable areas.

Of the laws and executive orders previously listed, the Wetlands Protection Act and the Executive Orders have played major roles in protecting and managing coastal barriers. The Wetlands Act includes coastal barriers as well as marshes, both tidal and fresh. It is enforced by local Conservation Commissions with final authority vested in the Department of Environmental Quality Engineering. The Executive Order on Barrier Beaches, which prohibits the use of State funds to encourage or support development on coastal barriers, is enforced by the Coastal Zone Management Office. Executive Order 190 is enforced by the Executive Office of Environmental Affairs along with the Department of Environmental Management and Fisheries, Wildlife and Recreational Vehicles.

Local Actions

The Martha's Vineyard Commission is charged by statute (MGLA, Ch. 831, 1977) to preserve and protect the unique cultural, historical, ecological, scientific, and other values of Martha's Vineyard and to provide for the enhancement of sound local economies. The commission has designated responsibility for the entire coastal district below the 10-foot elevation contour, or within 500 feet of mean high water of a coastal water body exceeding 10 acres or of the ocean, and all land within 100 feet of streams and wetlands that drain into coastal great ponds. Certain activities are allowed in this coastal zone, mostly recreation, conservation, agriculture, and fishing, but home construction is not permitted unless it is an addition to an existing family dwelling, and then only by special authorization. The commission has worked closely with the Office of Coastal Zone Management regarding CBRA and has helped town boards understand CBRA.

The Town of Chatham has created a "Seashore Conservancy District" that includes areas within authorized boundaries of Cape Cod National Seashore and in which development is prohibited.

The Town of Orleans has added its only CBRS unit to its Conservancy District so that the

unit is protected by regulations that prohibit development (i.e., landfills or excavations, drainage except for mosquito control, buildings or structures). The town also has a "Seashore Conservancy District," which includes areas within the authorized boundaries of Cape Cod National Seashore.

Pursuant to enactment of CBRA, the Town of Swansea dropped plans to proceed with a "beach stabilization project" that had been authorized by various agencies. The town is concerned about "continuing erosion" that is affecting a community center and parking lot.

The Town of Westport denied three applications for building permits on coastal barriers after the enactment of CBRA. Also subsequent to passage of CBRA, two areas were purchased by a "Conservation Land Trust." The third site (location not disclosed) has received building permits from several agencies and potential Federal insurance.

Private Sector Initiatives

The Massachusetts Audubon Society has long been a supporter of barrier island initiatives, particularly CBRA.

The New England Sierra Club Chapter publishes a newsletter called "CUSP"--Citizen Update on Shoreline Policy.

The Trustees of Reservations serves as a private conservation landowner and manages and protects many sites in Massachusetts considered ecologically sensitive, unique, or of high recreational value. The group owns several coastal barriers that fall into the undeveloped, otherwise protected category.

EXISTING CBRS UNITS

A brief description of each existing Coastal Barrier Resource System unit in Massachusetts follows. Each unit is identified by its number, name, and the county in which it is located.

C00-Clark Pond (Essex). This bay barrier on the east side of Great Neck connects two hills (North Ridge and Plover Hill) that protect Clark Pond. It is located in Plum Island Sound just to the west of Plum Island State Park at the southern end of Plum Island in the Town of Ipswich.

C01-Wingaersheek (Essex). This small spit south of Annisquam Lighthouse extends to Wheeler Point in Gloucester. It provides habitat for migratory birds and protects a salt marsh ecosystem. There are off-road vehicle trails on the barrier, and recreational use is heavy in the summer. Access to the area is by paved road or small private boats. There is a town-owned public beach on the spit with parking facilities.

C01A-Good Harbor Beach (Essex). This two-part unit is on the western end of a bay barrier and protects a salt marsh along its north side. The unit is in East Gloucester.

C01B-Brace Cove (Essex). This bay barrier on the west side of Brace Cove protects Niles Pond to the west. The barrier is a sand

CBRS UNITS IN MASSACHUSETTS ESTABLISHED BY CONGRESS, 1982

Unit Name	Unit ID Code	County	Shoreline Length (miles)	Area (acres)
Clark Pond	C00	Essex	0.4	34.9
Wingaersheek	C01	Essex	0.7	210.6
Good Harbor Beach	C01A	Essex	0.4	82.5
Brace Cove	C01B	Essex	0.3	54.5
West Head Beach	C01C	Suffolk	0.3	28.6
North Scituate	C02	Plymouth	0.4	20.7
Rivermoor	C03	Plymouth	0.6	220.4
Rexhame	C03A	Plymouth	0.4	55.8
Plymouth Bay	C04	Plymouth	1.9	382.2
Center Hill				
Complex	C06	Plymouth	1.3	145.6
Scorton	C08	Barnstable	0.8	50.7
Sandy Neck	C09	Barnstable	2.4	2,607.2
Freemans Pond	C10	Barnstable	0.9	397.7
Namskaket Spits	C11	Barnstable	0.7	281.7
Boat Meadow	C11A	Barnstable	0.4	93.6
Chatham Roads	C12	Barnstable	1.2	129.2
Lewis Bay	C13	Barnstable	1.7	673.1
Squaw Island	C14	Barnstable	0.9	77.3
Centerville	C15	Barnstable	1.0	59.4
Dead Neck	C16	Barnstable	1.8	198.4
Popponeset Spit	C17	Barnstable	0.9	82.1
Waquoit Bay	C18	Barnstable	3.2	1,138.2
Falmouth Ponds	C18A	Barnstable	0.8	25.8
Black Beach	C19	Barnstable	0.6	217.9
Buzzards Bay				
Complex	C19A	Plymouth	2.8	480.2
Coatue	C20	Nantucket	2.3	552.2
Sesachacha Pond	C21	Nantucket	0.5	52.7
Cisco Beach	C22	Nantucket	0.5	26.5
Esther Island				
Complex	C23	Nantucket	5.7	1,520.7
Tuckernuck Island	C24	Nantucket	3.0	384.5
Muskeget Island	C25	Nantucket	1.5	2,954.9
Eel Pond Beach	C26	Dukes	1.1	102.2
Cape Poge	C27	Dukes	3.6	504.0
South Beach	C28	Dukes	6.7	610.8
Squibnocket				
Complex	C29	Dukes	4.7	668.8
James Pond	C29A	Dukes	0.5	86.6
Mink Meadows	C29B	Dukes	0.8	41.9
Elizabeth Islands	C31	Dukes	5.0	605.6
W. Sconticut Neck	C31A	Bristol	2.6	279.2
Harbor View	C31B	Bristol	0.3	69.3
Mishaum Point	C32	Bristol	0.4	122.0
Little Beach	C33	Bristol	1.9	282.1
Horseneck Beach	C34	Bristol	1.7	360.7
Cedar Cove	C34A	Bristol	0.3	16.6
Little Compton				
Ponds	D01	Bristol	0.8	224.0
Totals:			70.7	17,213.6

beach connecting Eastern Point to the uplands of East Gloucester and represents the eastern side of a tombolo system.

C01C-West Head Beach (Essex). This unit is a tombolo beach system on the southern end of Long Island in Boston Harbor that protects an aquatic habitat between the beaches.

C02-North Scituate (Plymouth). This unit is a bay barrier at the south end of Musquashcut Pond between the developed northern section of North Scituate Beach and Mann Hill Beach in the Town of Scituate.

C03-Rivermoor (Plymouth). This spit is on the north side of New Inlet and is attached to a developed upland in Scituate. It protects a salt marsh system on the north side of North River, designated a "Scenic River" by the Massachusetts Scenic Rivers Program. The Massachusetts Audubon Society manages a tern nesting colony on the spit. The beach has limited access and is used mainly by local residents.

C03A-Rexhame (Plymouth). This unit is a portion of the Humarok Beach barrier spit which protects South River in the Town of

Marshfield. It contains a dune ridge up to 10 feet high.

C04-Plymouth Bay (Plymouth). This unit includes portions of several barriers at the entrance to Plymouth Harbor. The two largest pieces are on Saguish Neck, near Plymouth Lighthouse, and Plymouth Beach.

C06-Center Hill Complex (Plymouth). This unit comprises three distinct coastal barrier systems in the Town of Plymouth. The most northerly is a bay barrier sheltering Ship Pond. The beach is low and composed of cobble stones. An off-road vehicle trail runs along the shore. South of this barrier is the Center Hill Pond bay barrier, also a low cobble beach. Access to the barrier is by footpath only. Ellisville Harbor is the most southerly barrier in this unit. It is made up of two spits that run along the front of Salt Pond and are separated by a small tidal channel. The southern spit is attached to a headland called Harlows Landing. Salt Pond is mostly a salt marsh. There is a boat access site on the south side of Ellisville Harbor Beach.

C08-Scorton (Barnstable). This barrier spit shelters a well-developed tidal creek and salt marsh system as well as a coastal forest in the Town of Sandwich. Access is by paved, light-duty road or by footpath.

C09-Sandy Neck (Barnstable). This unit has two sections: one is a triangular section just west of Sandy Neck Beach that includes part of Scorton Neck Beach, and the other encompasses the eastern tip of Sandy Neck Spit. The entire spit is quite large for this region, and it protects an extensive salt marsh system called the Great Marshes. Rare plants, birds, sea turtles, and unique dune fields that reach elevations of 80 feet are found in this barrier ecosystem. The eastern tip of Sandy Neck is accessible by an off-road vehicle trail down the length of the spit, through the dunes. Easy boat access is available at the eastern tip. The area is heavily used for recreation. Its western section is accessible by foot from the parking area in Sandy Neck State Park and from residences on the nearby uplands. The unit is in the Town of Sandwich.

C10-Freemans Pond (Barnstable). This unit, in the Town of Brewster, has three segments. The eastern part is a barrier spit protecting Freemans Pond and its salt marsh system. The central section includes Wings Island, a glacial deposit, and its beach. Also included are the marshes and tidal creeks associated with Stony Brook. The western segment is a barrier spit on the east side of Quivett Neck that protects Quivett Creek and its marshes. The beaches are used by local residents for recreation. Wings Island is part of the Cape Cod Museum of Natural History and has foot trails that are used by visitors studying local biota and coastal processes. The barriers are accessible only by foot. The Freemans Pond segment is accessible from two parking areas: one on the east side, and the other on the west side.

C11-Namskaket Spits (Barnstable). This unit consists of double spits flanking both sides

of Namskaket Creek where it empties into Cape Cod Bay. The spits are attached to uplands on either side of the creek and protect a salt marsh system and estuary. Natural processes on this coastal barrier have not been altered by human activities. The spits are accessible by foot from developments on either side of Namskaket Creek. The area, used primarily for recreation by local residents, is in the Town of Brewster.

C11A-Boat Meadow (Barnstable). This unit is primarily salt marsh on the eastern side of Cape Cod Bay with a narrow sand barrier island on the marsh edge. It is on the western shore of Eastham where Cape Cod changes orientation from east-west to north-south and where the Herring River and Boat Meadow River meet the Cape Cod Bay in Eastham.

C12-Chatham Roads (Barnstable). This unit consists of two segments in the Town of Chatham. The eastern segment includes the western part of Harding Beach which protects the entrance to Bucks Creek and also fronts Cockle Cove, a part of Nantucket Sound. It is a narrow spit with dunes and beach grass vegetation that has been growing eastward across the mouth of Bucks Creek toward the settlement of Harding Beach. Salt marshes and tidal creeks make up the wetlands behind the barrier. The western segment is known as Forest Beach. It includes Mill Creek and its associated marshes, but does not include Taylor Pond from which it flows. Access to both beaches is limited to foot traffic, and the areas are used for recreation by local residents. A few small groins exist on Forest Beach, and the end of this segment has a short jetty protecting the entrance to Mill Creek. Cockle Cove Beach is on the downdrift side of this jetty and thus shows the typical offset configuration. A radio tower (WCC) stands in the marsh behind Forest Beach. Uplands near both segments are heavily developed.

C13-Lewis Bay (Barnstable). This relatively large unit is part of a tombolo system. The main portion is a beach (Great Island Beach) connecting Great Island to the mainland along the south shore of Cape Cod on Nantucket Sound in Yarmouth. Also included are Pine Island, Cedar Point and Smith Point (a small tombolo) on the north side of Great Island, and Fox Point and the marshes between it and Great Island. Twenty groins on the south shore of Great Island and six on the northwest shore of Smiths Point have caused some redistribution of sediment on the beach.

C14-Squaw Island (Barnstable). This unit is in the Town of Hyannis and fronts on Nantucket Sound. It contains two parts: a tombolo connecting Sunset Hill with Squaw Island, and a western spit on the western side of Squaw Island that protects the entrance to and salt marshes of Halls Creek. Six groins are present on the spit east of Hyannis Point and are causing some redistribution of sand. A jetty on the west side of the inlet near the western boundary of the unit has caused accumulation of sand behind the jetty and possibly some landward recession of the eastern spit found there. A paved road runs along the eastern barrier to the developed portions of Squaw Island.

C15-Centerville (Barnstable). This unit, near the Village of Centerville, is also known as Long Beach. It runs along the southeastern mouth of the Centerville River where it empties into Nantucket Sound. The unit is accessible from Craigville Beach by a road to the eastern end. There is limited use along the eastern section by local residents and people coming from Craigville Beach. The unit is on the downdrift side of the jetty on nearby Dowsed Beach.

C16-Dead Neck (Barnstable). Also known as Oyster Harbor Beach, this unit is separated from Osterville Grand Island by a tidal channel known as Seapuit River on the north shore of Nantucket Sound. The eastern end flanks the entrance to West Bay, while the western end shows a recurving tendency into the entrance of Cotuit Bay. Littoral drift is predominately from east to west. The unit contains a small sand bar called Sampsons Island, which has a short jetty on its eastern end. There appears to be no appreciable effect of the jetty on the island. The unit is opposite the Village of Cotuit in the Town of Barnstable.

C17-Popponesset Spit (Barnstable). This unit is mostly in the Town of Mashpee at the end of Popponesset Spit but also includes Thatch Island, which recurves toward Meadow Point on the mainland and flanks the entrance to Popponesset Bay, and a small island behind the spit called Little Thatch Island. The Thatch Islands are usually submerged except at very low tides. The beach is used by residents of an adjacent community known as Popponesset Beach. The barrier is downdrift from a series of groins in front of Popponesset Beach, which has caused noticeable retreat of the shoreline.

C18-Waquoit Bay (Barnstable). This unit contains South Cape Beach in Mashpee, an east-west running barrier spit which protects Waquoit Bay and Sage Lot Pond on the north side of Nantucket Sound. Across the entrance to Waquoit Bay is Washburn Island, which is also included. This island is shaped like an inverted "T," with its long axis oriented north-south. It consists of low dunes and two spits. The eastern spit is longer and protects the entrance to Waquoit Bay, while western spit is shorter and protects Eel Pond. Washburn Island supports a well-developed coastal forest of oak and pitch pine. Access to Washburn Island is by boat only. There is moderate recreational use of South Cape Beach. The inlet to Waquoit Bay is stabilized by jetties that have caused an eroded shoreline at South Cape Beach and seaward accretion of the beach on Washburn Island.

C18A-Falmouth Ponds (Barnstable). This unit contains two bay barriers in the Town of Falmouth and protects long, narrow coastal ponds behind Vineyard Sound. The western section has an inlet artificially stabilized with jetties on both sides. The eastern section has an improved road running along its entire length and several groins along its beach. The eastern section protects Bournes Pond; the western section protects Green Pond.

C19-Black Beach (Barnstable). This unit is a double spit system protecting Great Sippewissett Marsh in Falmouth on the eastern shore of Buzzards Bay. The barriers consist of low dune fields, strand vegetation, and sand beaches. The salt marsh behind the barrier is a typical *Spartina* community. This marsh is well-known for the many ecological studies that have been done on nutrient cycling, marsh productivity, and the intertidal marine organisms living in it.

C19A-Buzzards Bay Complex (Plymouth). This unit has seven subunits on the north shore of Buzzards Bay. The Aucoot Cove subsection consists of a salt marsh with a narrow sandy beach at the head of Aucoot Cove and a small sandy island called Haskell Island. The second subunit is along Hiller Cove and is mainly salt marsh. The third subunit is a capelike system containing Angelica Point and Strawberry Point, made up of salt marshes, sand flats, a coastal forest, and a narrow sandy spit enclosing Pine Island Pond on the north side of the cape. The fourth subunit is a salt marsh with a narrow beach fronting on Mattapoisett Harbor along the east side of Mattapoisett Neck. Other sections are located along the northeastern shore of Buzzards Bay near Wareham. The Sedge Cove and Nobska Point subunits contain marshland and thin sandy beaches. The easternmost subsection is Bourne Point, a sandy spit that protects Little Harbor in Wareham.

C20-Coatue (Nantucket). This unit comprises three sections that are part of a large tombolo-spit system at the northern tip of Nantucket Island. The eastern section joins Wauwinet and Coskata and protects the eastern side of Nantucket Harbor (at the head of the harbor) and has been breached in the past by storm surges. The western section is part of a long spit that runs southwestward from Coskata and fronts Nantucket Sound. This spit protects the northern side of Nantucket Harbor and is notable for its series of six almost equally spaced points that create a striking scalloped shoreline along the backside. The third section occupies most of Great Point at the very northern tip of Nantucket Island. The Great Point Lighthouse, lost in recent storms, was just north of this section. Vegetation is of typical dune strand and shrub thickets. Off-road vehicle trails run through the unit and are the primary means of access to the area. Boats are used to reach the section on Coatue Spit.

C21-Sesachacha Pond (Nantucket). This unit is a sandy bay barrier protecting Sesachacha Pond on the eastern shore of Nantucket Island and fronting the Atlantic Ocean. It is contiguous with the Town of Quidnet to the north. The barrier connects two upland areas on either side of Sesachacha Pond and is occasionally breached by storms.

C22-Cisco Beach (Nantucket). This single dune ridge bay barrier is near the small Village of Cisco. Cisco Beach connects uplands that flank Hummock Pond and Clark Cove. At the western end of the beach, a low area breaks open periodically, allowing an exchange of water between Hummock Pond and

the Atlantic Ocean. The beach is reached by foot from either side and is used for recreation by the local residents.

C23-Esther Island Complex (Nantucket). The three subunits of the Esther Island Complex are Eel Point, Esther Island and Madaket Harbor, and the western tip of Madaket. The unit is at the western tip of Nantucket Island. The portion on Madaket is a sandy point (cape) along the south side of Madaket Harbor, just west of a small settlement. Eel Point is a barrier spit on the north side of Madaket Harbor containing a series of dunes and associated strand vegetation with elevations above 10 feet. Behind the barrier are typical salt marshes. Esther Island is a sandy barrier island of low dunes and sparse vegetation containing a small pond on its eastern end.

C24-Tuckernuck Island (Nantucket). This unit has three subunits on Tuckernuck Island. The first subunit is a bay barrier protecting North Pond and a recurving spit that is attached to the western end of the island; the second, on the northeastern side, is a narrow barrier spit protecting East Pond; and the third, on the southeast side, is a barrier spit that extends from Tuckernuck Island toward Esther Island. Several sandy shoals between Tuckernuck and Esther Island are also included in this unit. The subunits on the south side of Tuckernuck face the Atlantic Ocean while the one on the northeast faces Nantucket Sound.

C25-Muskeget Island (Nantucket). Muskeget Island is one of the most significant coastal barriers in Massachusetts. The island has been kept pristine largely because of its inaccessibility. Access is by small boat or airplane, but the low elevation of the island and the extremely shallow water and shoals surrounding the island make either method difficult. It is richly endowed with fish and wildlife populations, including an endemic rodent, the Muskeget vole. It is the southernmost breeding area for the gray seal, and two endangered birds--the peregrine falcon and southern bald eagle--are occasional visitors. The island is mostly used for hunting, nature study, and scientific research. The dune fields on Muskeget are up to 10 feet high and are covered with dune grass and coastal shrub communities. Several spits recurve around the southern side of the island, creating a small sheltered cove and salt marshes. Small freshwater marshes are found in the dune field. Muskeget is located between Tuckernuck Island and Martha's Vineyard.

C26-Eel Pond Beach (Dukes). This unit is on Martha's Vineyard and contains two barrier spits just east of Edgartown that front on the entrance to Edgartown Harbor. The north spit is narrow and recurves around to the northwest, thus protecting a small cove called Eel Pond. The southern spit is linear and widens at its southern end, where it juts into the Edgartown Harbor entrance just east of the Martha's Vineyard-Chappaquiddick Ferry route. The Edgartown Lighthouse is at the end of this spit.

C27-Cape Poge (Dukes). This unit consists of four subunits on the Cape Poge Peninsula, a

northward-trending barrier spit on the east side of Chappaquiddick Island. The barrier protects Pocha Pond and Cape Poge Bay. The two eastern subunits comprise a linear sand beach with a single low dune ridge and back barrier flats supporting grass and shrub vegetation. The northern subunit is an upland area of dunes and glacial deposits reaching elevations of 20 feet and more. The highest portions are on the eastern side and contain glacially derived rock that is rapidly eroding. The uplands here support a dense shrub community and small stands of pine. The western subunit consists of a long, gradually curving, very narrow beach of sand and gravel with a few low dunes. This section curves southward from Cape Poge and encloses the northwestern side of Cape Poge Bay.

C28-South Beach (Dukes). This unit comprises bay barriers protecting the coastal ponds along the south side of Martha's Vineyard. From east to west, the ponds that these barriers protect are Edgartown Great, Jobs Neck, Oyster, Watcha, Homer, Tisbury Great, Black Point, and Chilmark. The barriers are relatively low and contain a series of dunes in various stages of development. They are frequently breached and overwashed by coastal storms that push saltwater into the ponds. Local residents have occasionally opened the barriers to allow more saltwater exchange with the ponds. The ponds contain freshwater to brackish water, depending on storm activity and precipitation.

C29-Squibnocket Complex (Dukes). This unit contains five subunits that are a series of bay barriers around Gay Head on the western end of Martha's Vineyard. The easternmost section is called Stonewall Beach and it protects Stonewall Pond; another section protects Squibnocket Pond on the southeastern side of Gay Head. An unimproved road runs along this beach to Squibnocket Ridge. Long Beach and Squibnocket Beach combine to form a relatively wide bay barrier with dunes over 10 feet high. The barrier contains a dune ridge and dune fields of typical strand vegetation and shrub thickets with salt marshes behind. These beaches enclose the southwestern side of Squibnocket Pond and protect a small pond called Lily Pond on the north end. A fourth section runs between Zacks Cliffs and the Gay Head Cliffs. It consists of a low beach and dune system with wetlands behind. The fifth and major section consists of a large spit with large dunes along the north side of Menemsha Pond. There is a dredged opening at the eastern end of this spit. An unimproved road called West Payson Road runs to the end of the spit. The barrier contains dune fields and interdune ponds and marshes with salt marshes near the inlet.

C29A-James Pond (Dukes). This unit is a small bay barrier with a temporary inlet that protects Jakes Pond. It faces Lamberts Cove in West Tisbury on Martha's Vineyard. The barrier has a dune ridge reaching heights of more than 10 feet. A small salt marsh is included near the inlet at the western end of the unit.

C29B-Mink Meadows (Dukes). This unit is a low bay barrier bisected by a dredged and jettied inlet protecting Mink Meadows Pond and

several smaller ponds. The unit is at the north end of the Town of Vineyard Haven on Martha's Vineyard.

C31-Elizabeth Islands (Dukes). This unit contains several barriers on three islands of the Elizabeth Islands chain, which stretches southwestward from the Woods Hole region of Cape Cod, separating Buzzards Bay from Vineyard Sound. Robinson's Hole Beach is on the eastern end of Pasque Island and is a small tombolo system protecting a salt marsh. Quicks Hole Pond Beach is a bay barrier at the eastern end of Nashawena Island. Three other barrier systems are on Cuttyhunk Island: two subunits are part of the Copicut Neck tombolo on the northeastern corner of the island; another tombolo beach system extends eastward from the Village of Cuttyhunk to Canapitsit Channel. At the western end of the island, a pair of spits enclose a small bay and marsh called Western Pond.

C31A-West Sconticut Neck (Bristol). This unit's four subunits are on the mainland around Sconticut Neck and West Island near Fairhaven. One section is a cape called North Point on the north end of West Island and contains a sandy beach and salt marsh. The point juts into Nasketucket Bay and protects North Cove Harbor. A second subunit consists of a barrier spit attached to Round Island and a small island called Fish Island in Round Cove. Salt marshes lie behind the spit. On the west side of Sconticut Neck are two other subunits. One contains a small spit protecting a narrow bay and a bay barrier along the shore south of Silver Shell Beach. The other consists of a narrow bay barrier protecting a small pond just to the north of the Silver Shell Beach community.

C31B-Harbor View (Bristol). This unit is mainly a salt marsh with a thin bay barrier beach on Buzzards Bay between Fairhaven (Harbor View section) and Pope Beach.

C32-Mishaum Point (Bristol). This unit is a narrow barrier spit extending westward from Salters Point toward Mishaum Point on Buzzards Bay in the Town of Dartmouth. It protects an unnamed bay with a small inlet at the western end of the spit. A sand road runs partway down the spit.

C33-Little Beach (Bristol). This bay barrier protects Allens Pond in Dartmouth. The pond drains into Buzzards Bay through a circuitous channel at the eastern end of the barrier. The beach is just east of Horseneck State Reservation.

C34-Horseneck Beach (Bristol). This unit has two parts, each flanking the Horseneck Beach State Reservation, which faces the Atlantic Ocean near the Rhode Island-Massachusetts State line in the Town of Westport. The eastern part, a bay barrier known as East Beach, is the connecting link between the Reservation and the mainland. The western part, a barrier spit called Horseneck Point, extends into the Westport River protecting Westport Harbor.

C34A-Cedar Cove (Bristol). This small double spit system encloses Cedar Cove just south of the Town of South Swansea in Mount Hope Bay, an arm of Narragansett Bay, across the

Taunton River from Fall River. Salt marshes fringe the inside of the sandy spits.

D01-Little Compton Ponds (Bristol). The Massachusetts segments of this unit are two small bay barriers protecting Cockeast and Richmond Ponds.

PROPOSED ADDITIONS AND MODIFICATIONS

This section identifies proposed recommendations for additions to and deletions from the Coastal Barrier Resources System. The Secretary of the Interior, as directed by Section 10 of the Coastal Barrier Resources Act, will make his final recommendations to the Congress after a 90-day public comment period. These proposed recommendations have been developed in response to public, State and Federal agency, and Congressional comments on the Coastal Barrier Draft Inventory developed by the Study Group. The inventory maps were available for public comment between March 4, 1985, and September 30, 1985. The process and criteria used in the inventory were described on March 4, 1985, in the Federal Register (Vol. 50, No. 42).

The Commonwealth of Massachusetts reviewed these documents and supports the addition of all units in the inventory with minor alterations because of development or lack of conformance with definitional criteria. Massachusetts also supports the addition of more aquatic habitat to certain existing CBRS units, as listed in the following table. The Commonwealth requested the deletion of a segment of the Eel Pond Beach unit (C26) containing a causeway and lighthouse.

The Department received 20 other comments concerning Massachusetts. The majority of these were in favor of the CBRS expansion.

The Department of the Interior proposes to recommend that all undeveloped, unprotected coastal barriers and associated aquatic habitat, including additional wetlands recommended by the Commonwealth, be added to the Coastal Barrier Resources System. Because the Waquoit Bay unit (C18) of CBRS is protected by Massachusetts, the Department proposes it be deleted from the System. The requested modification of Eel Pond Beach would not conform with the purposes of CBRA and is not a proposed recommendation.

The Town of Wellfleet requested that the inner harbor area of MA-17, Wellfleet Harbor, be deleted from the inventory. The Town of Provincetown and several residents requested that parts of unit MA-19, Provincetown, also be deleted from the inventory. Because both these units are included in the Cape Cod National Seashore, the Department is no longer considering either of these areas for addition to CBRS.

The Town of Edgartown requested several deletions from existing CBRS units C26, C27, and C28; and proposed units MA-27 and MA-28. The Town's request concerning C26 is the same as the State's and is not accepted. The State endorsed an expansion of units C27 and C28 and the addition of MA-27. The density

of development on C27 does not exceed the allowable threshold. The Department concurs with the State's position and recommends the expansion and addition of these units. Unit MA-28 is locally protected, therefore, it is no longer recommended for addition.

A table presenting the Department's current position on each unit identified in the inventory follows this discussion.

Public comment on the proposed recommendations is solicited.

Comments should be directed to:

The Coastal Barriers Study Group
Department of the Interior
National Park Service
P.O. Box 37127
Washington, DC 20013-7127.

SUMMARY OF PROPOSED RECOMMENDATIONS FOR COASTAL BARRIERS IN MASSACHUSETTS

Unit ID Code ^a	Unit Name ^b	County	Congress. Dist. ^c	Shoreline Length (miles) ^d	Area (acres) ^e	Proposed Recommendation ^f
MA-01	Salisbury Beach	Essex	6	—	—	State protected; no further consideration
MA-02	Plum Island	Essex	6	—	—	Federally protected (FWS); no further consideration
C00	Clark Pond	Essex	6	1.30	894	Add additional wetlands to CBRS unit
MA-03	Castle Neck	Essex	6	2.98	3,099	Add to CBRS; no change from inventory
C01	Wingaersheek	Essex	6	0.70	759	Add new area to existing CBRS unit; no change from inventory
C01A	Good Harbor Beach	Essex	6	0.96	151	Add new area to existing CBRS unit; no change from inventory
C01B	Brace Cove	Essex	6	0.30	55	No change to existing CBRS unit
MA-04	West Beach	Essex	6	0.58	82	With addition of Chubb Creek segment, add to CBRS
MA-05	Devereux Beach	Essex	6	—	—	Barrier a seawall; no further consideration
MA-06	Phillips Beach	Essex	6	0.31	27	Add to CBRS; no change from inventory
MA-07	Nahant Beach	Essex	6	—	—	State protected; no further consideration
MA-08	Snake Island	Essex	6	—	—	Locally protected; no further consideration
MA-09	Wollaston Beach	Suffolk	11	—	—	State protected; no further consideration

(continued)

SUMMARY OF PROPOSED RECOMMENDATIONS FOR COASTAL BARRIERS IN MASSACHUSETTS

Unit ID Code ^a	Unit Name ^b	County	Congress. Dist. ^c	Shoreline Length (miles) ^d	Area (acres) ^e	Proposed Recommendation ^f
MA-10	Merrymount	Suffolk	11	—	—	Locally protected; no further consideration
C01C	West Head Beach	Suffolk	11	0.45	53	Realign boundary at State request; add to existing CBRS unit
MA-11	Peddocks Island	Plymouth	11	0.83	589	Add to CBRS; no change from inventory
MA-12	The Glades	Plymouth	10	0.80	398	Add additional wetlands at State request; add to CBRS
C02	North Scituate	Plymouth	10	0.40	75	Add new area to existing CBRS unit with additional wetlands requested by State
C03	Rivermoor	Plymouth	10	0.60	1,042	Add new area to existing CBRS unit with additional wetlands requested by State
C03A	Rexhame	Plymouth	10	1.90	126	Add new area to existing CBRS unit; no change from inventory
MA-13	Duxbury Beach	Plymouth	10	3.85	7,284	Add to CBRS; no change from inventory
C04	Plymouth Bay	Plymouth	10	3.70	2,241	Add new area to existing CBRS unit; no change from inventory
C06	Center Hill Complex	Plymouth	10	1.30	146	No change to existing CBRS unit
MA-14	Sandwich Harbor	Barnstable	10	—	—	Locally protected; no further consideration
C08	Scorton	Barnstable	10	0.80	159	Add new area to existing CBRS unit; no change from inventory
C09	Sandy Neck	Barnstable	10	2.40	6,119	Add additional wetlands to existing CBRS unit; delete locally protected area

(continued)

SUMMARY OF PROPOSED RECOMMENDATIONS FOR COASTAL BARRIERS IN MASSACHUSETTS (CONTINUED)

Unit ID Code ^a	Unit Name ^b	County	Congress. Dist. ^c	Shoreline Length (miles) ^d	Area (acres) ^e	Proposed Recommendation ^f
MA-15	Grays Beach	Barnstable	10	—	—	State protected; no further consideration
MA-16	Nobscusset	Barnstable	10	0.52	41	Add to CBRS; no change from inventory
C10	Freemans Pond	Barnstable	10	1.40	436	Add new area to existing CBRS unit; no change from inventory
C11	Namskaket Spits	Barnstable	10	0.70	282	No change to existing CBRS unit
C11A	Boat Meadow	Barnstable	10	0.40	342	Add wetlands to existing CBRS unit; delete locally protected area
MA-17	Wellfleet Harbor	Barnstable	10	—	—	Federally protected (NPS); no further consideration
MA-18	Pamet Harbor	Barnstable	10	0.98	289	Add area west of Hwy. 6 to CBRS. Area east of hwy., Federally protected (NPS); no further consideration
MA-19	Provincetown	Barnstable	10	—	—	Federally protected (NPS); no further consideration
MA-20	Nauset Beach	Barnstable	10	—	—	Federally protected (NPS); no further consideration
MA-21	Monomoy	Barnstable	10	—	—	Federally protected (FWS); no further consideration
C12	Chatham Roads	Barnstable	10	1.20	237	Add new area to existing CBRS unit; no change from inventory
MA-22	Red River Beach	Barnstable	10	—	—	Locally protected; no further consideration
C13	Lewis Bay	Barnstable	10	1.70	1,592	Add wetlands to existing CBRS unit; delete locally protected area

(continued)

SUMMARY OF PROPOSED RECOMMENDATIONS FOR COASTAL BARRIERS IN MASSACHUSETTS (CONTINUED)

Unit ID Code ^a	Unit Name ^b	County	Congress. Dist. ^c	Shoreline Length (miles) ^d	Area (acres) ^e	Proposed Recommendation ^f
C14	Squaw Island	Barnstable	10	0.90	151	Add new area to existing CBRS unit; no change from inventory
C15	Centerville	Barnstable	10	1.00	168	Add wetlands to existing CBRS unit; delete locally protected area
MA-23	Davis Beach	Barnstable	10	—	—	Locally protected; no further consideration
C16	Dead Neck	Barnstable	10	2.31	866	Add wetlands to existing CBRS unit; delete locally protected area
C17	Popponesset Spit	Barnstable	10	0.90	310	Add new area to existing CBRS unit; no change from inventory
C18	Waquoit Bay	Barnstable	10	—	—	State protected; recommend deletion from CBRS
C18A	Falmouth Ponds	Barnstable	10	0.80	302	Add new area to existing CBRS unit; no change from inventory
C19	Black Beach	Barnstable	10	0.60	218	No change to existing CBRS unit
MA-24	Naushon Island Complex	Dukes	10	2.46	181	Add to CBRS; no change from inventory
MA-30	Herring Brook	Barnstable	10	0.20	36	Add to CBRS; no change from inventory
C31	Elizabeth Islands	Dukes	10	6.20	843	Add new area to existing CBRS unit; no change from inventory
MA-25	Penikese Island	Dukes	10	—	—	State protected; no further consideration
C20	Coatue	Nantucket	10	8.21	8,778	Add new area to CBRS unit; no change from inventory
C21	Sesachacha Pond	Nantucket	10	0.50	272	Add new area to existing CBRS unit; no change from inventory

(continued)

SUMMARY OF PROPOSED RECOMMENDATIONS FOR COASTAL BARRIERS IN MASSACHUSETTS (CONTINUED)

Unit ID Code ^a	Unit Name ^b	County	Congress. Dist. ^c	Shoreline Length (miles) ^d	Area (acres) ^e	Proposed Recommendation ^f
C22	Cisco Beach	Nantucket	10	0.50	182	Add new area to existing CBRS unit; no change from inventory
C23	Esther Island Complex	Nantucket	10	5.70	1,772	Add new area to existing CBRS unit; no change from inventory
C24	Tuckernuck Island	Nantucket	10	3.12	564	Add new area to existing CBRS unit; no change from inventory
C25	Muskeget Island	Nantucket	10	1.50	2,955	No change to existing CBRS unit
C26	Eel Pond Beach	Dukes	10	1.20	167	Add new area to existing CBRS unit; no change from inventory. State and town requested deletion does not qualify
C27	Cape Poge	Dukes	10	6.80	2,388	Add new area to existing CBRS unit; no change from inventory. Town-requested deletion does not qualify.
MA-26	Harthaven	Dukes	10	0.73	76	Add to CBRS; no change from inventory
MA-27	Edgartown Beach	Dukes	10	1.20	347	Add southern segment to CBRS; town request to delete does not qualify. Northern segment State protected; no further consideration
MA-28	Norton Point	Dukes	10	—	—	Locally protected; no further consideration
C28	South Beach	Dukes	10	9.40	2,413	Add new area to existing CBRS unit; no change from inventory
C29	Squibnocket Complex	Dukes	10	5.60	1,750	Add new area to existing CBRS unit, except one structure (identified on 1982 aerial photography) and locally protected area

(continued)

SUMMARY OF PROPOSED RECOMMENDATIONS FOR COASTAL BARRIERS IN MASSACHUSETTS (CONCLUDED)

Unit ID Code ^a	Unit Name ^b	County	Congress. Dist. ^c	Shoreline Length (miles) ^d	Area (acres) ^e	Proposed Recommendation ^f
C29A	James Pond	Dukes	10	0.50	90	Add new area to existing CBRS unit; no change from inventory
C29B	Mink Meadows	Dukes	10	0.80	42	No change to existing CBRS unit
MA-29	No Mans Land	Dukes	10	—	—	Federally protected (FWS); no further consideration
MA-31	Squeteague Harbor	Barnstable	10	0.50	95	Add to CBRS; no change from inventory
MA-32	Bassetts Island	Barnstable	10	0.57	156	Add to CBRS; no change from inventory
MA-33	Phinneys Harbor	Barnstable	10	1.39	241	Add to CBRS; no change from inventory
MA-34	Long Beach Point	Plymouth	10	0.82	38	Add to CBRS; no change from inventory
MA-35	Planting Island	Plymouth	10	0.80	161	Add to CBRS; no change from inventory
C19A	Buzzards Bay Complex	Plymouth	10	4.30	767	Add new area to existing CBRS unit; no change from inventory
C31A	West Sconticut Neck	Bristol	10	4.60	439	Add area to existing CBRS unit; no change from inventory
C31B	Harbor View	Bristol	10	0.30	69	No change to existing CBRS unit
MA-36	Round Hill	Bristol	10	0.31	67	Add to CBRS; no change from inventory
C32	Mishaum Point	Bristol	10	0.40	122	No change to existing CBRS unit
C33	Little Beach	Bristol	10	1.90	523	Add area to existing CBRS unit; no change from inventory
C34	Horseneck Beach	Bristol	4	1.70	2,508	Add wetlands to existing CBRS unit; delete State protected area

(continued)

SUMMARY OF PROPOSED RECOMMENDATIONS FOR COASTAL BARRIERS IN MASSACHUSETTS

Unit ID Code ^a	Unit Name ^b	County	Congress. Dist. ^c	Shoreline Length (miles) ^d	Area (acres) ^e	Proposed Recommendation ^f
C34A	Cedar Cove	Bristol	4	0.30	17	No change to existing CBRS unit
D01	Little Compton Ponds	Bristol	4	0.85	224	No change to existing CBRS unit (see also Volume 4)
				<hr/>	<hr/>	
Totals - CBRS as Recommended				110.93	56,816	
Existing CBRS				<u>70.7</u>	<u>17,214</u>	
Net Change in CBRS				+40.23	+39,602	

^aUNIT ID CODE - State initials (MA) plus a number identify a proposed new unit. An existing unit is identified by the legal code letter (C or D) and number established by Congress in 1982.

^bUNIT NAME - For proposed new units, this is a provisional name based on a prominent local feature. For existing CBRS units, this is the legal name.

^cCONGRESSIONAL DISTRICT - U.S. Congressional District in which unit is located.

^dSHORELINE LENGTH - For existing units with additions or deletions, this length is for the entire unit, as modified.

^eAREA - For existing units with additions or deletions, this area is for the entire unit, as modified.

^fPROPOSED RECOMMENDATION - A brief explanation of the differences between the 1985 inventory and the recommendations proposed in this revised inventory. For more detailed explanations, please contact the Study Group. Abbreviations: FWS = Fish and Wildlife Service, NPS = National Park Service, CBRS = Coastal Barrier Resources System. Barriers no longer under consideration are not mapped in this atlas.

INDEX TO EXISTING AND PROPOSED CBRs UNITS IN MASSACHUSETTS

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C96

C97

C98

C99

C100

USER NOTE: To locate the map(s) of each existing and proposed CBRs unit in this volume, consult the table on the following page.

EXISTING AND PROPOSED CBRS UNITS AND THEIR LOCATION IN THIS VOLUME

Unit ID Code	Unit Name	USGS Topographic Map	Page
C00	Clark Pond	Ipswich	21
C01	Wingaersheek	Gloucester	22
C01A	Good Harbor Beach	Rockport	23
C01B	Brace Cove	Gloucester	22
C01C	West Head Beach	Hull	26
C02	North Scituate	Cohasset	27
C03	Rivermoor	Scituate	28
C03A	Rexhame	Scituate	28
MA-03	Castle Neck	Ipswich	21
		Gloucester	22
C04	Plymouth Bay	Duxbury	29
		Plymouth	30
MA-04	West Beach	Marblehead North	24
C06	Center Hill Complex	Sagamore	31
MA-06	Phillips Beach	Lynn	25
C08	Scorton	Sandwich	32
C09	Sandy Neck	Sandwich	32
		Hyannis	33
		Dennis	34
C10	Freemans Pond	Dennis	34
		Harwich	35
C11	Namskaket Spits	Orleans	36
C11A	Boat Meadow	Orleans	36
MA-11	Peddocks Island	Hull	26
C12	Chatham Roads	Harwich	35
MA-12	The Glades	Cohasset	27
C13	Lewis Bay	Hyannis	33
		Dennis	34
MA-13	Duxbury Beach	Duxbury	29
		Plymouth	30
C14	Squaw Island	Hyannis	33
C15	Centerville	Hyannis	33
C16	Dead Neck	Cotuit	38
MA-16	Nobscusset	Dennis	34
C17	Popponeset Spit	Cotuit	38
C18	Waquoit Bay	Falmouth	39
C18A	Falmouth Ponds	Falmouth	39
MA-18	Pamet Harbor	Wellfleet	37
C19	Black Beach	Woods Hole	40
C19A	Buzzards Bay Complex	Onset	51
		Marion	52
		Sconticut Neck	53
C20	Coatue	Great Point	43
		Siasconset	44
		Nantucket	45
C21	Sesachacha Pond	Siasconset	44
C22	Cisco Beach	Nantucket	45
C23	Esther Island Complex	Nantucket	45
		Tuckernuck Island	46
C24	Tuckernuck Island	Tuckernuck Island	46
MA-24	Naushon Island Complex	Woods Hole	40
		Naushon Island	41
C25	Muskeget Island	Tuckernuck Island	46
C26	Eel Pond Beach	Edgartown	47
MA-26	Harthaven	Edgartown	47
C27	Cape Poge	Edgartown	47
MA-27	Edgartown Beach	Edgartown	47
C28	South Beach	Edgartown	47
		Tisbury Great Pond	48
C29	Squibnocket Complex	Squibnocket	49
C29A	James Pond	Vineyard Haven	50
C29B	Mink Meadows	Vineyard Haven	50
MA-30	Herring Brook	Woods Hole	40
C31	Elizabeth Islands	Naushon Island	41
		Cuttyhunk	42
C31A	West Sconticut Neck	Sconticut Neck	53
C31B	Harbor View	New Bedford North	54
MA-31	Squeteague Harbor	Onset	51
C32	Mishaum Point	New Bedford South	55

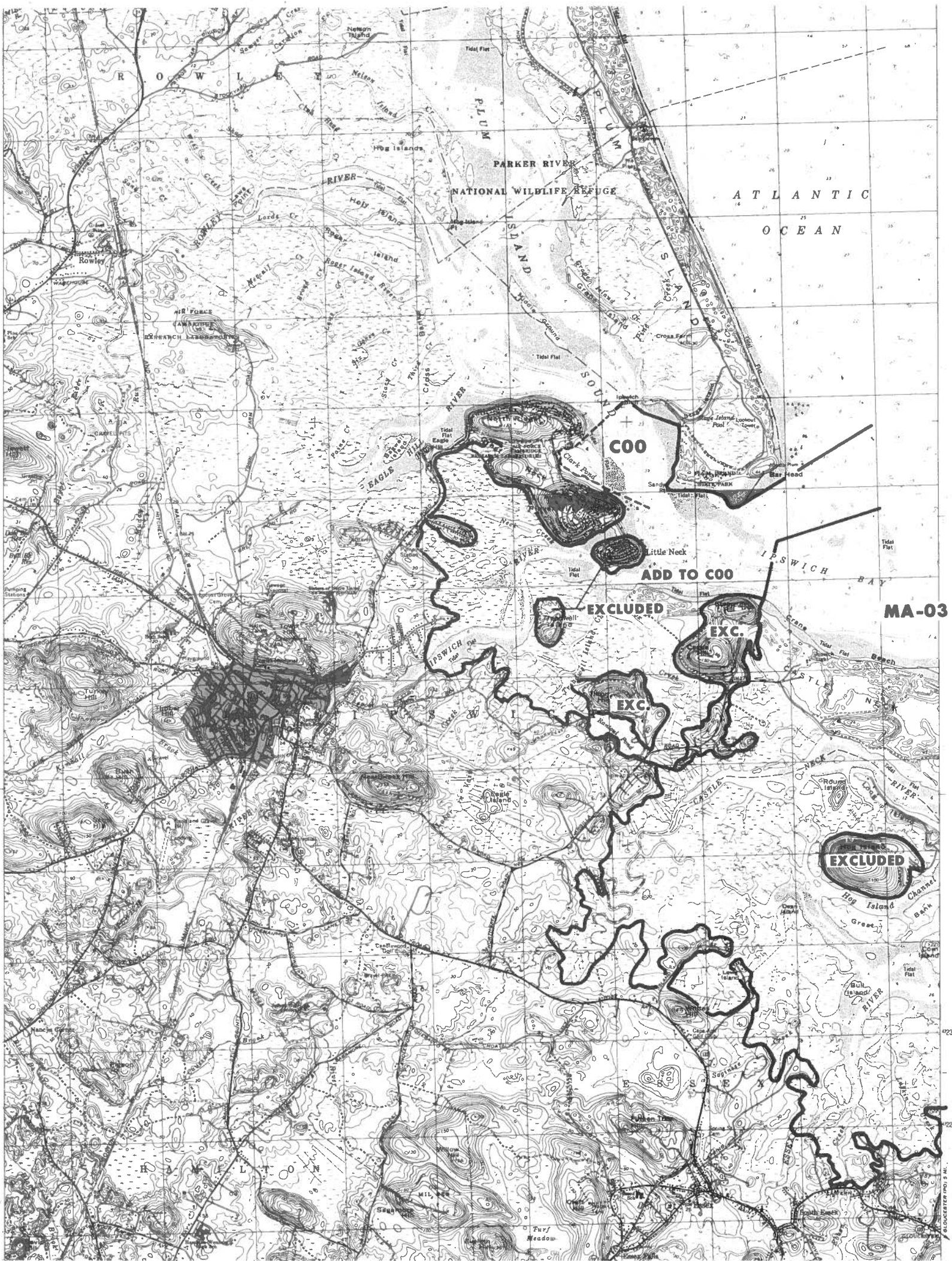
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EXISTING AND PROPOSED CBRS UNITS AND THEIR LOCATION IN THIS VOLUME (CONCLUDED)

Unit ID Code	Unit Name	USGS Topographic Map	Page
MA-32	Bassetts Island	Onset	51
C33	Little Beach	New Bedford South	55
		Westport	56
MA-33	Phinneys Harbor	Onset	51
C34	Horseneck Beach	Westport	56
C34A	Cedar Cove	Fall River	57
MA-34	Long Beach Point	Onset	51
MA-35	Planting Island	Onset	51
MA-36	Round Hill	New Bedford South	55
D01	Little Compton Ponds	Westport	56

MAP KEY

-----	Existing CBRs units
-----	Proposed additions to or deletions from CBRs
ADD	Area recommended for addition to a CBRs unit
DELETE	Area recommended for deletion from the CBRs
EXCLUDED	Area excluded from an existing or proposed CBRs unit because it is developed or it is otherwise protected

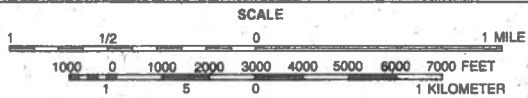


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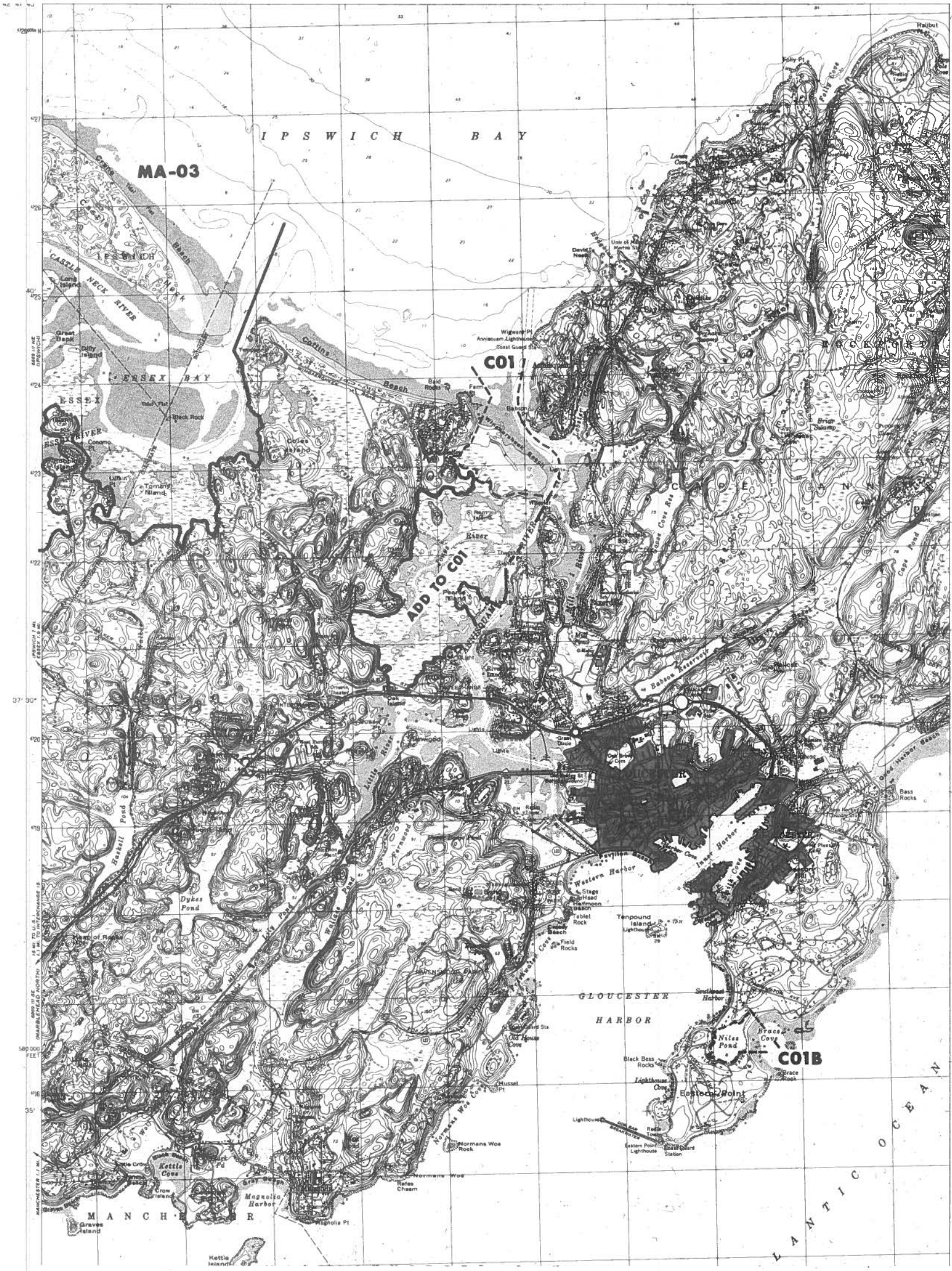
QUADRANGLE
IPSWICH
MASSACHUSETTS



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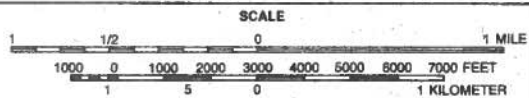


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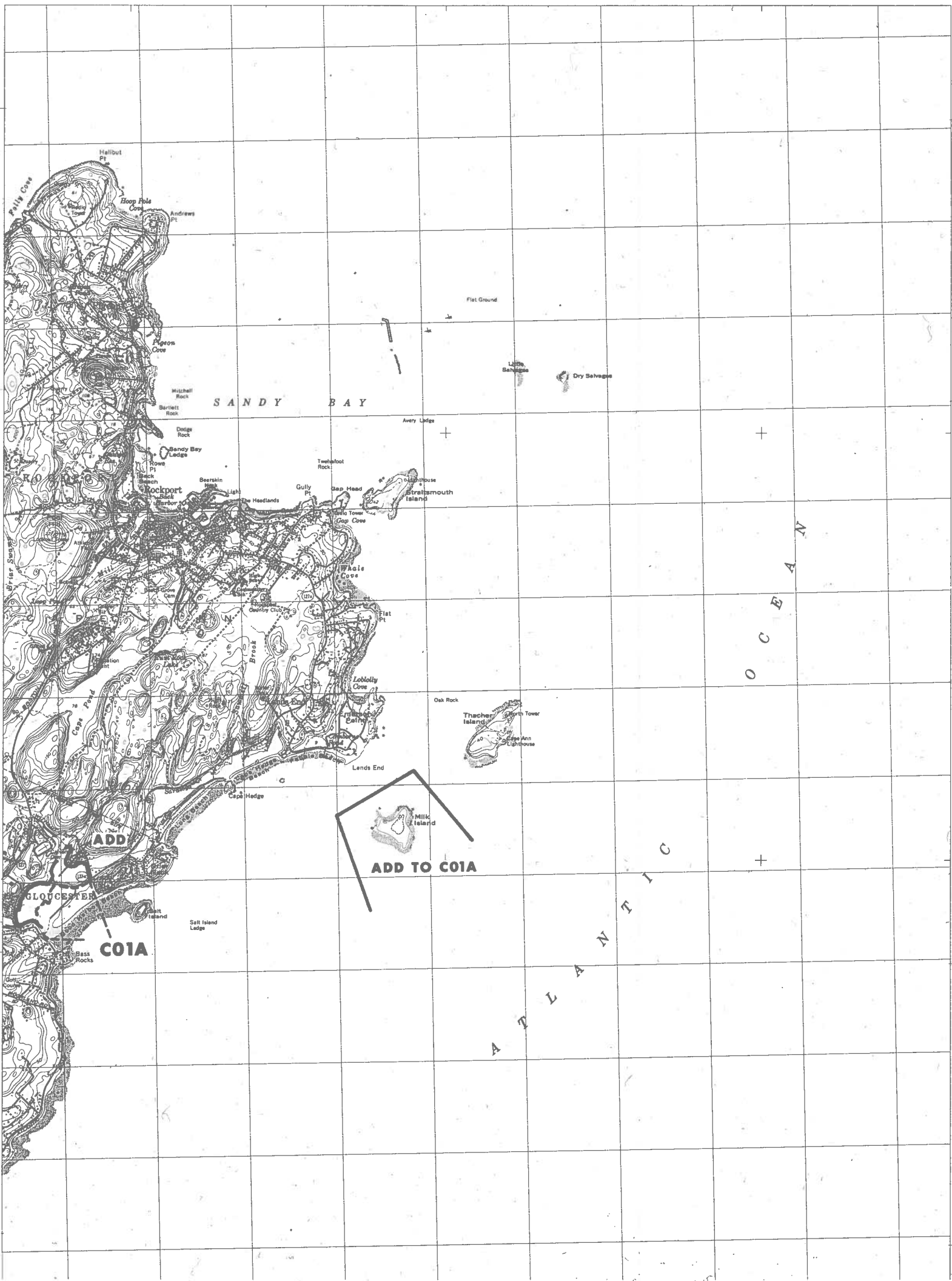
QUADRANGLE
GLOUCESTER
MASSACHUSETTS



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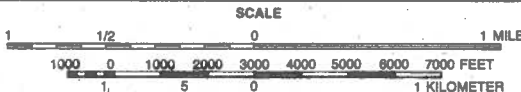
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QUADRANGLE
ROCKPORT
MASSACHUSETTS



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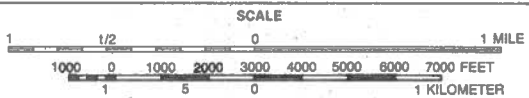
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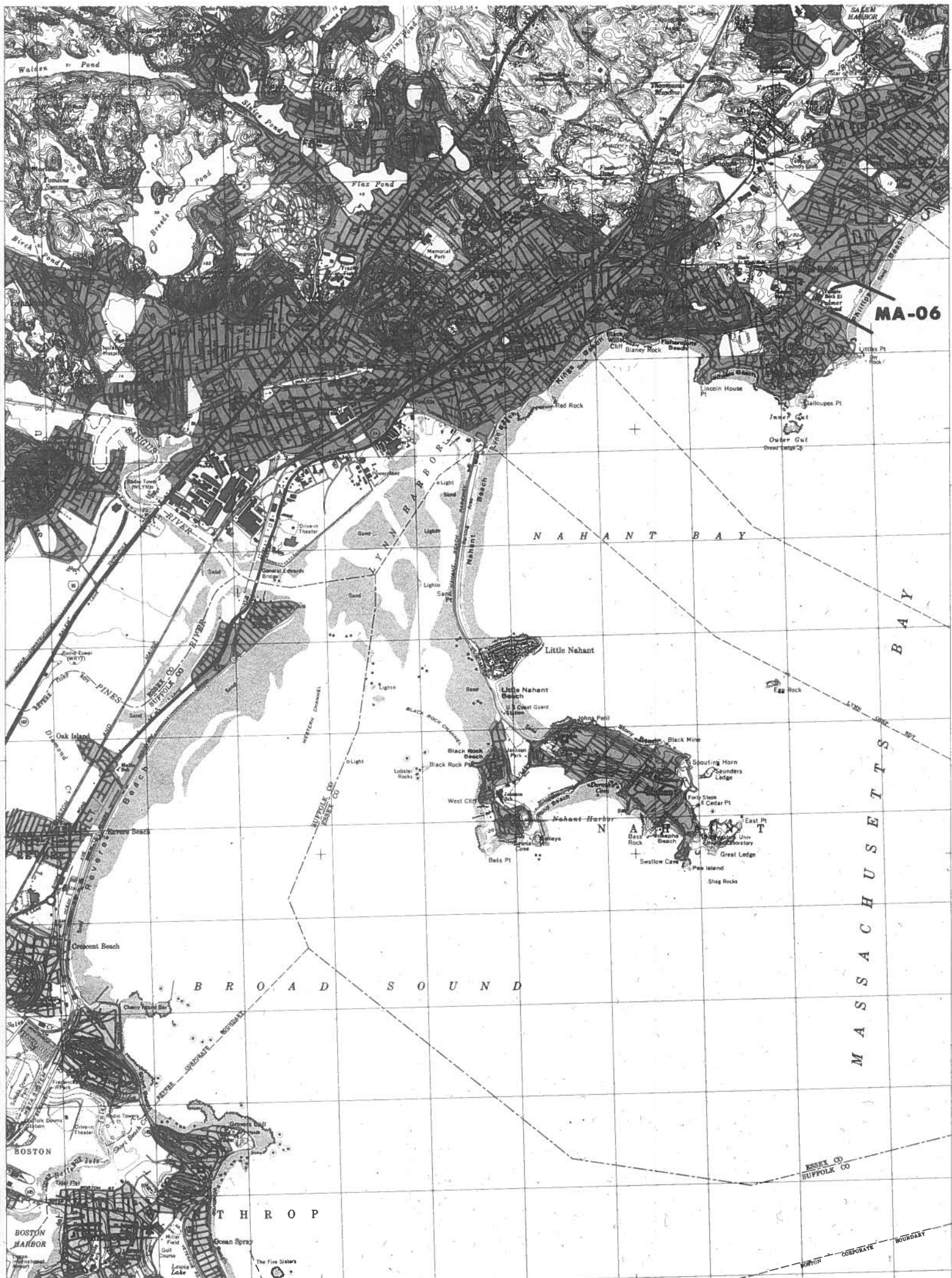
QUADRANGLE
MARBLEHEAD NORTH
MASSACHUSETTS



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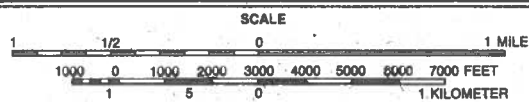
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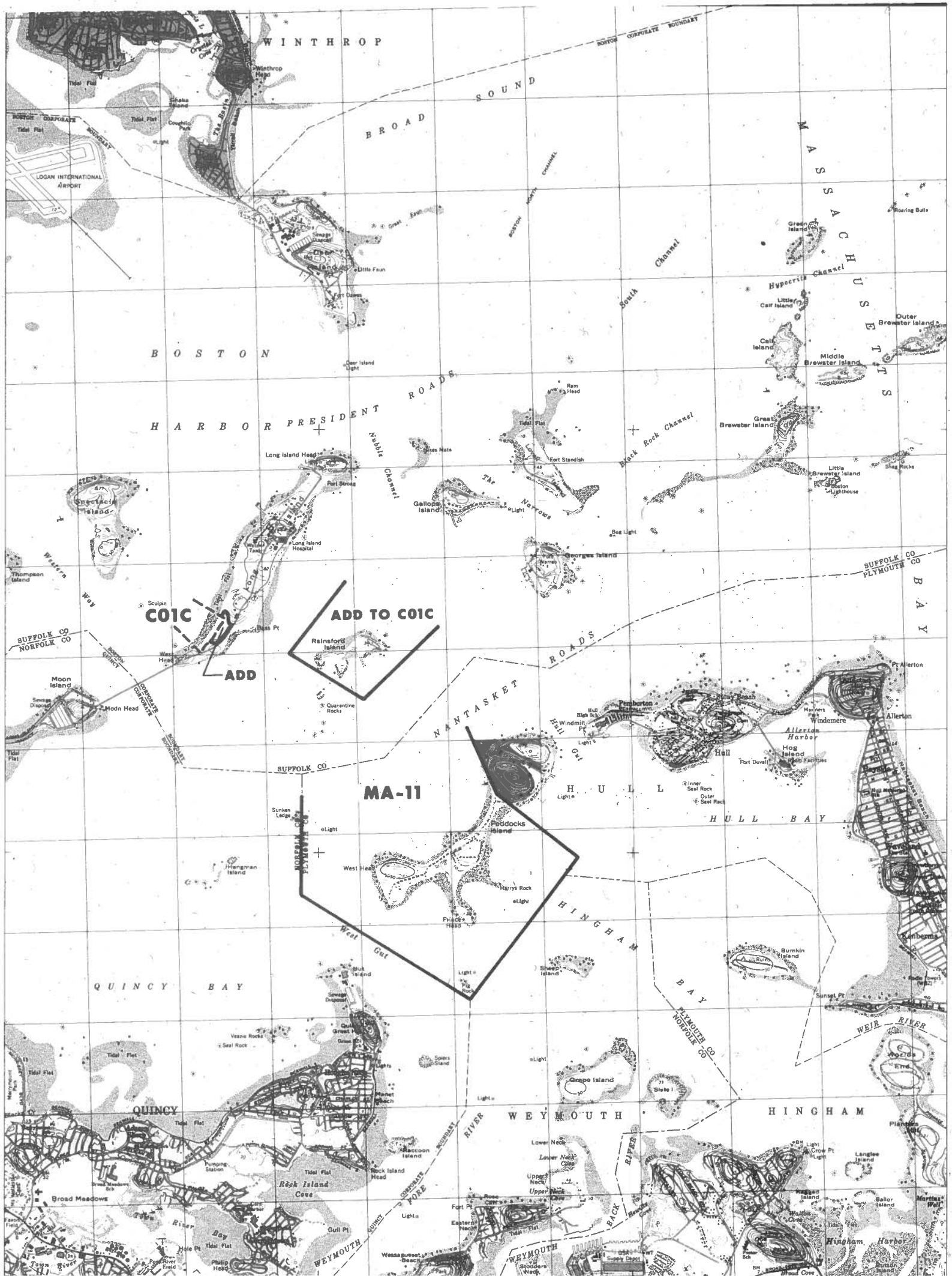
QUADRANGLE
LYNN
MASSACHUSETTS



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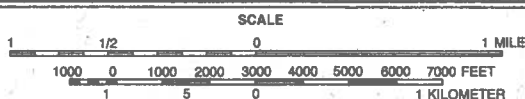
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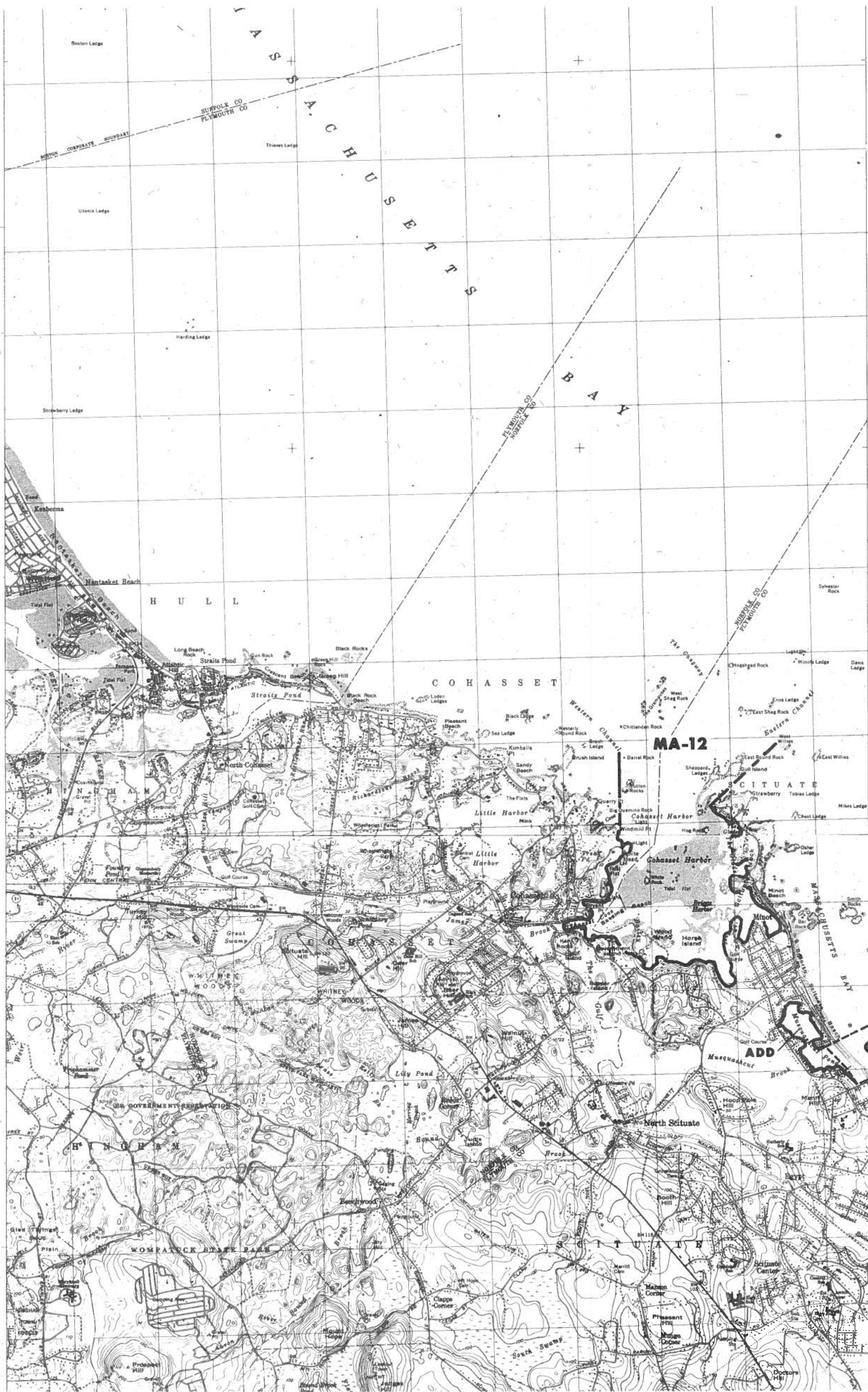
QUADRANGLE
HULL
MASSACHUSETTS



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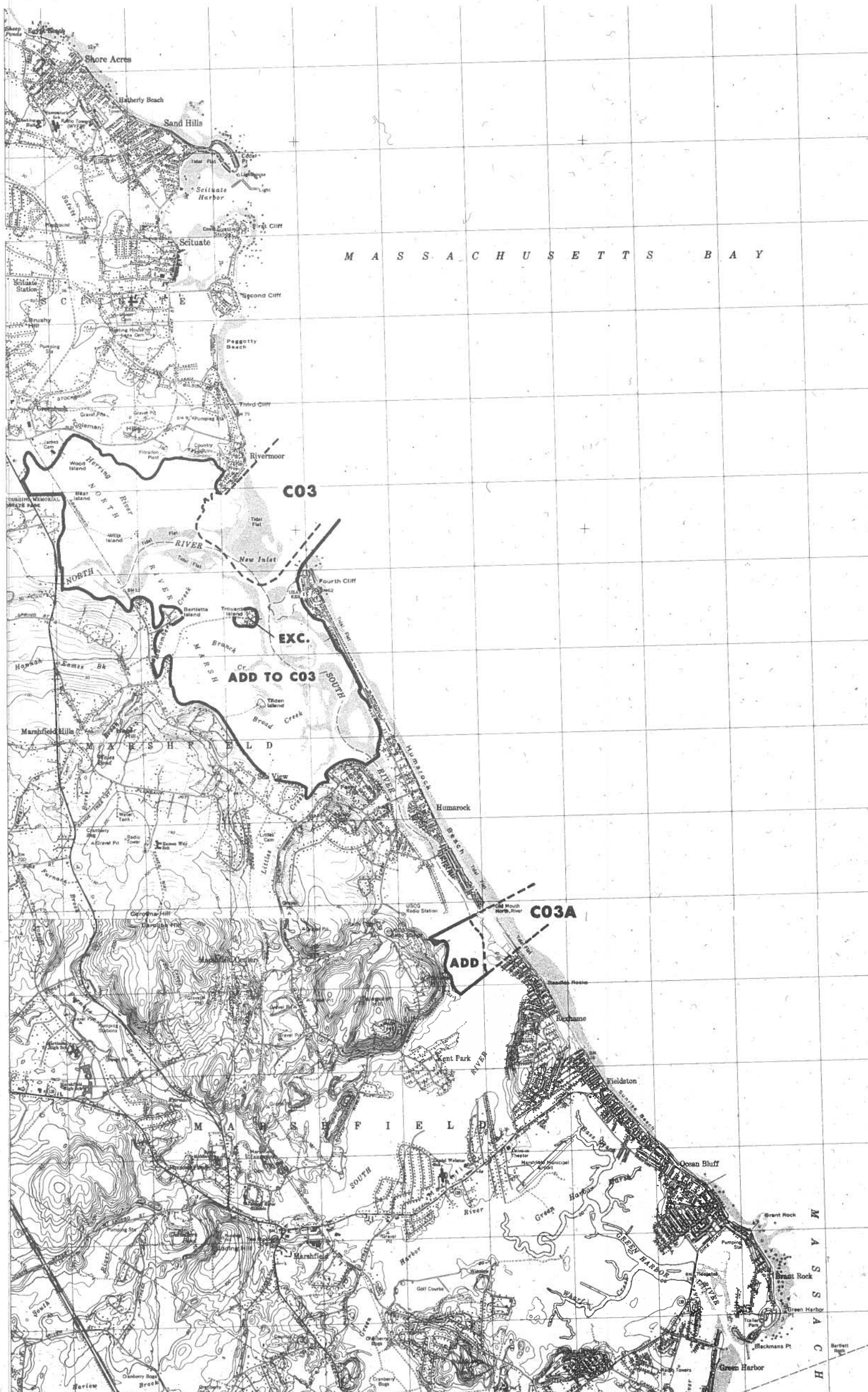
QUADRANGLE
COHASSET
MASSACHUSETTS

SCALE
1 1/2 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 5 0 1 KILOMETER

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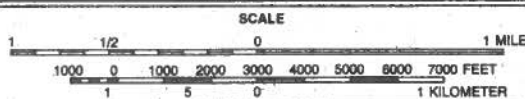
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QUADRANGLE
SCITUATE
MASSACHUSETTS



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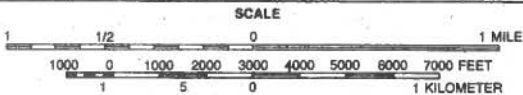
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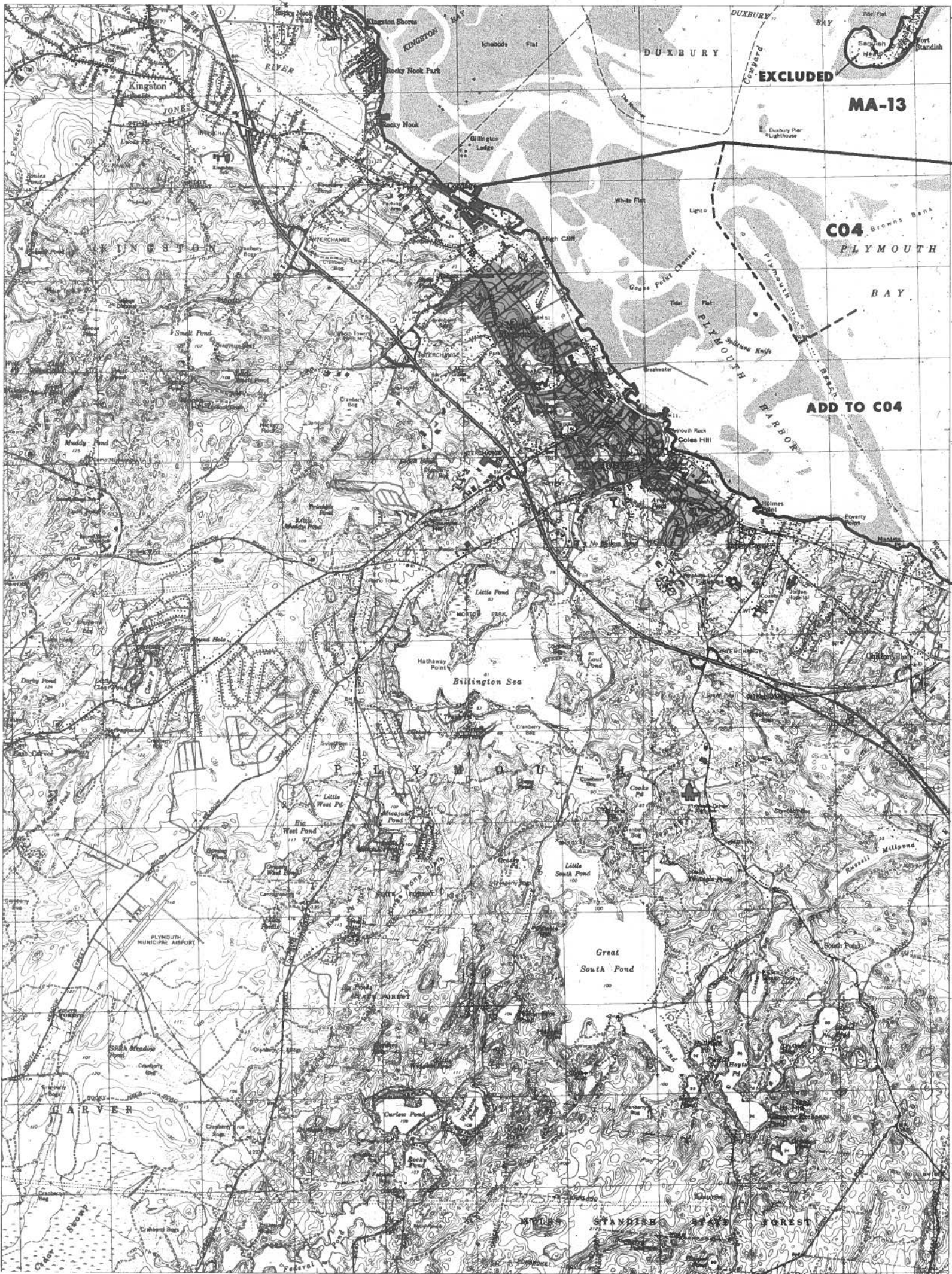
QUADRANGLE
DUXBURY
MASSACHUSETTS



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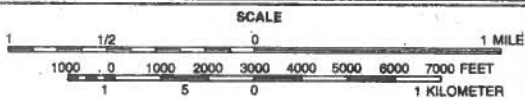
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QUADRANGLE
PLYMOUTH
MASSACHUSETTS



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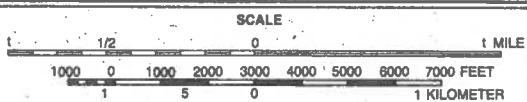
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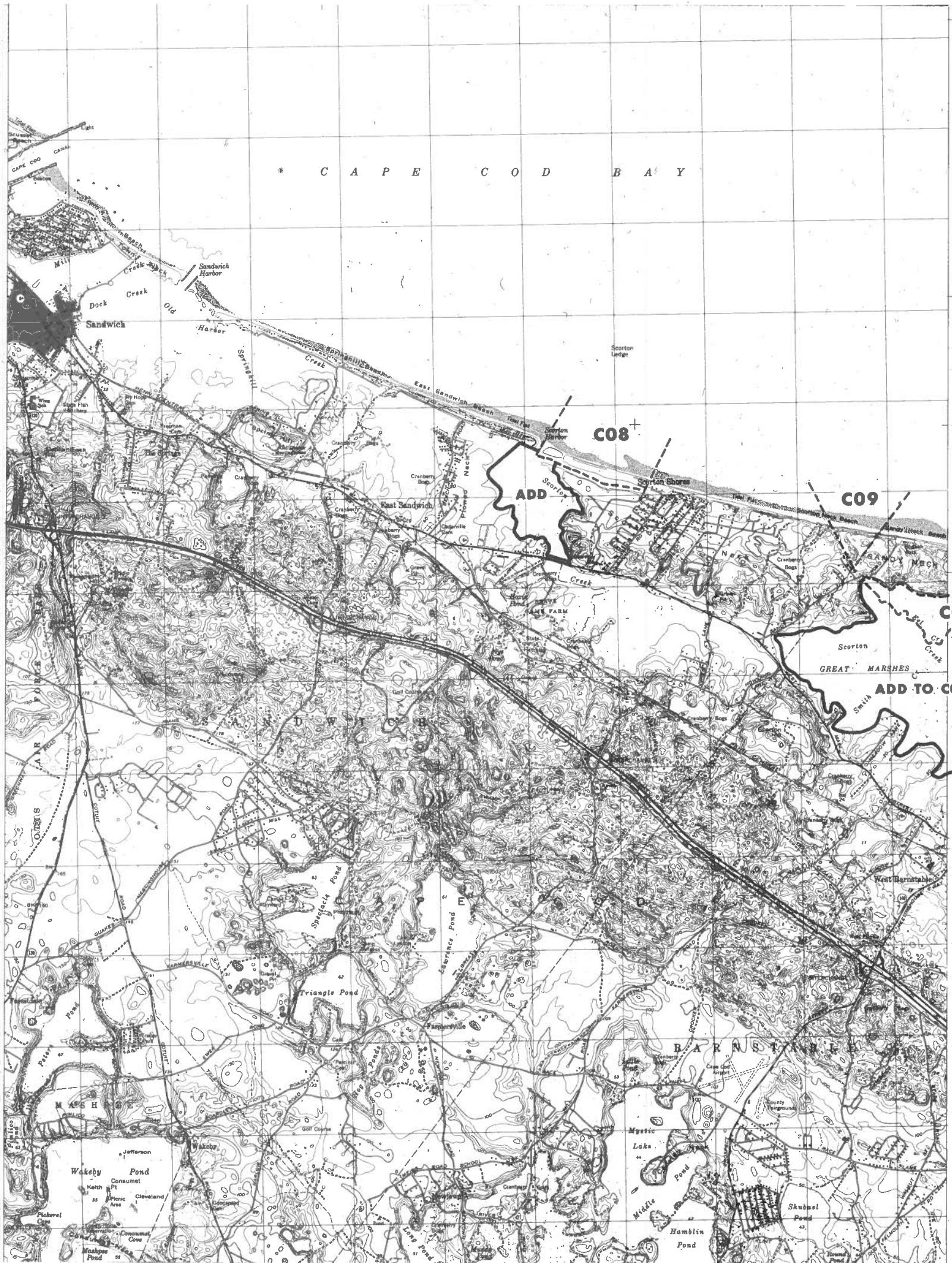
QUADRANGLE
SAGAMORE
MASSACHUSETTS



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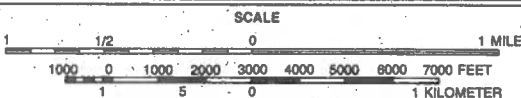


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QUADRANGLE
SANDWICH
MASSACHUSETTS



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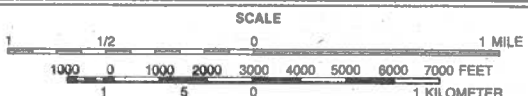


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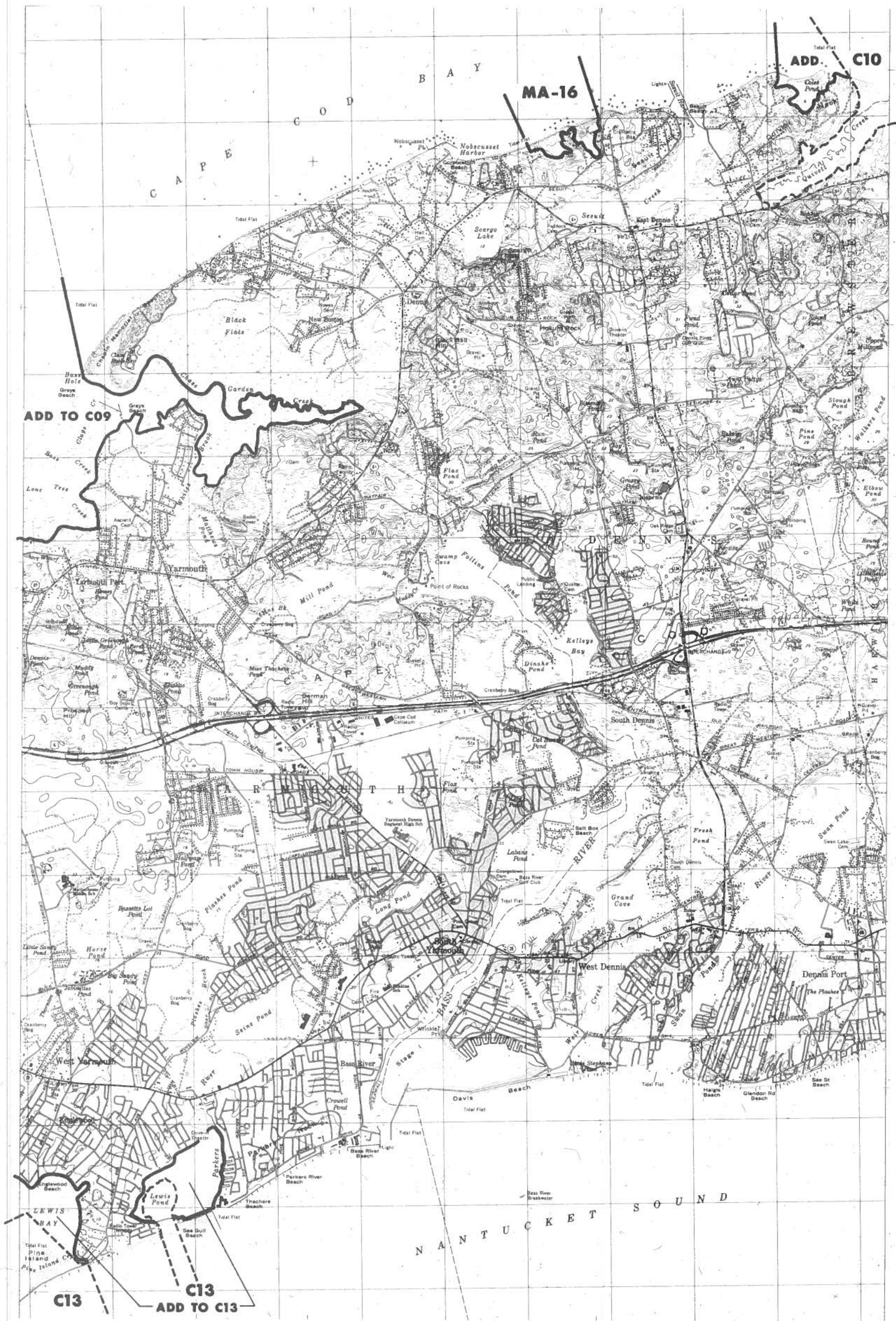
QUADRANGLE
HYANNIS
MASSACHUSETTS

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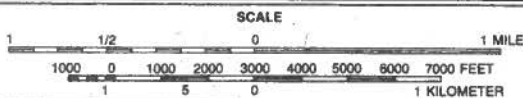
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QUADRANGLE
DENNIS
MASSACHUSETTS



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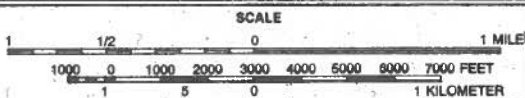
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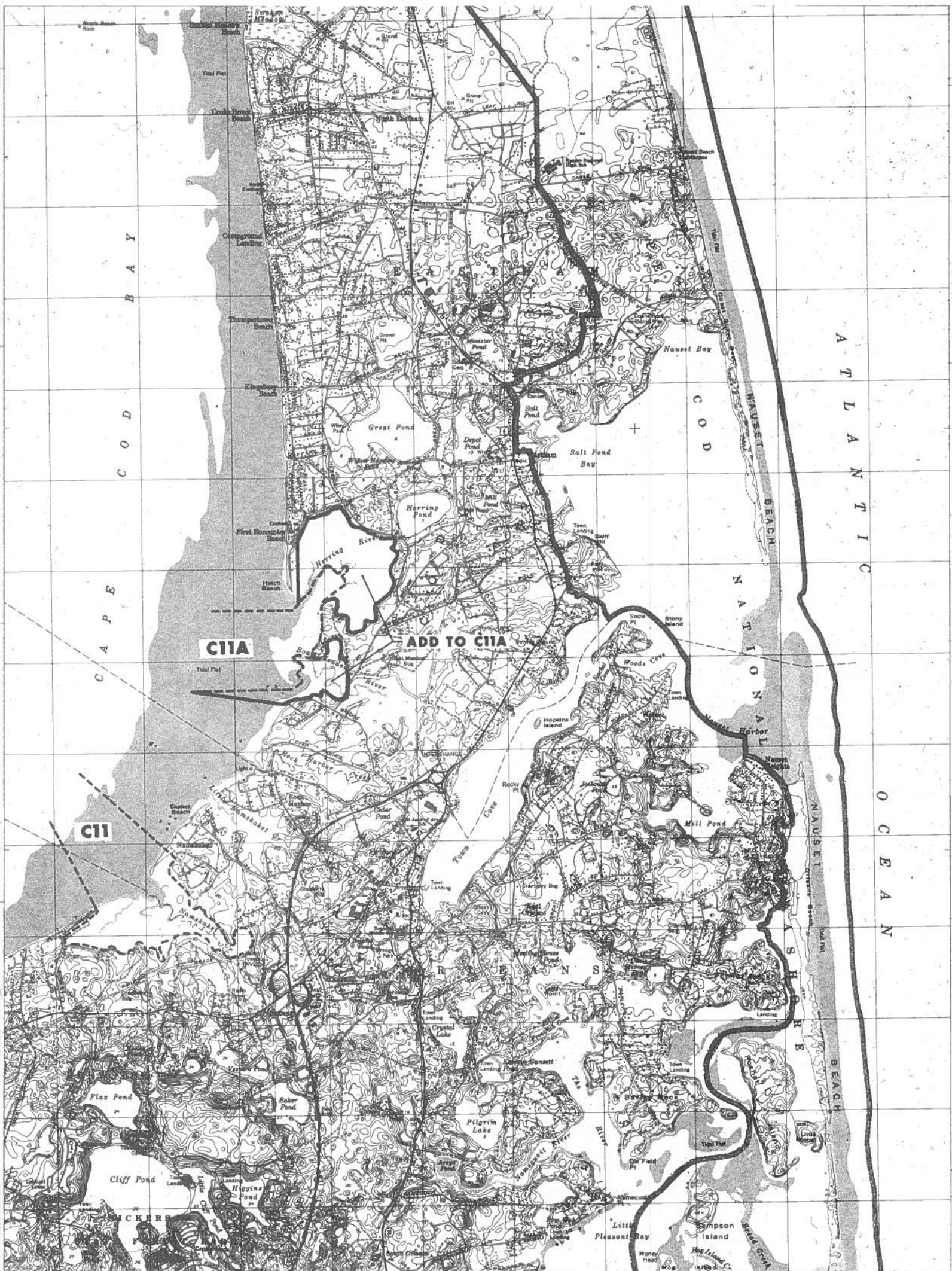
QUADRANGLE
HARWICH
MASSACHUSETTS



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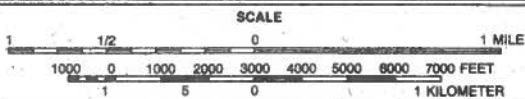
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QUADRANGLE
ORLEANS
MASSACHUSETTS



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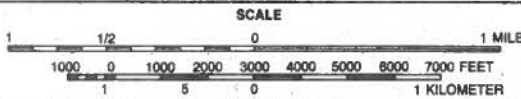


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Report to Congress on the Coastal Barrier Resources System

QUADRANGLE
WELLFLEET
MASSACHUSETTS



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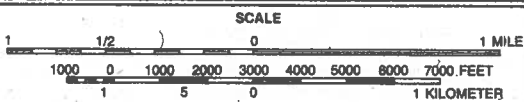
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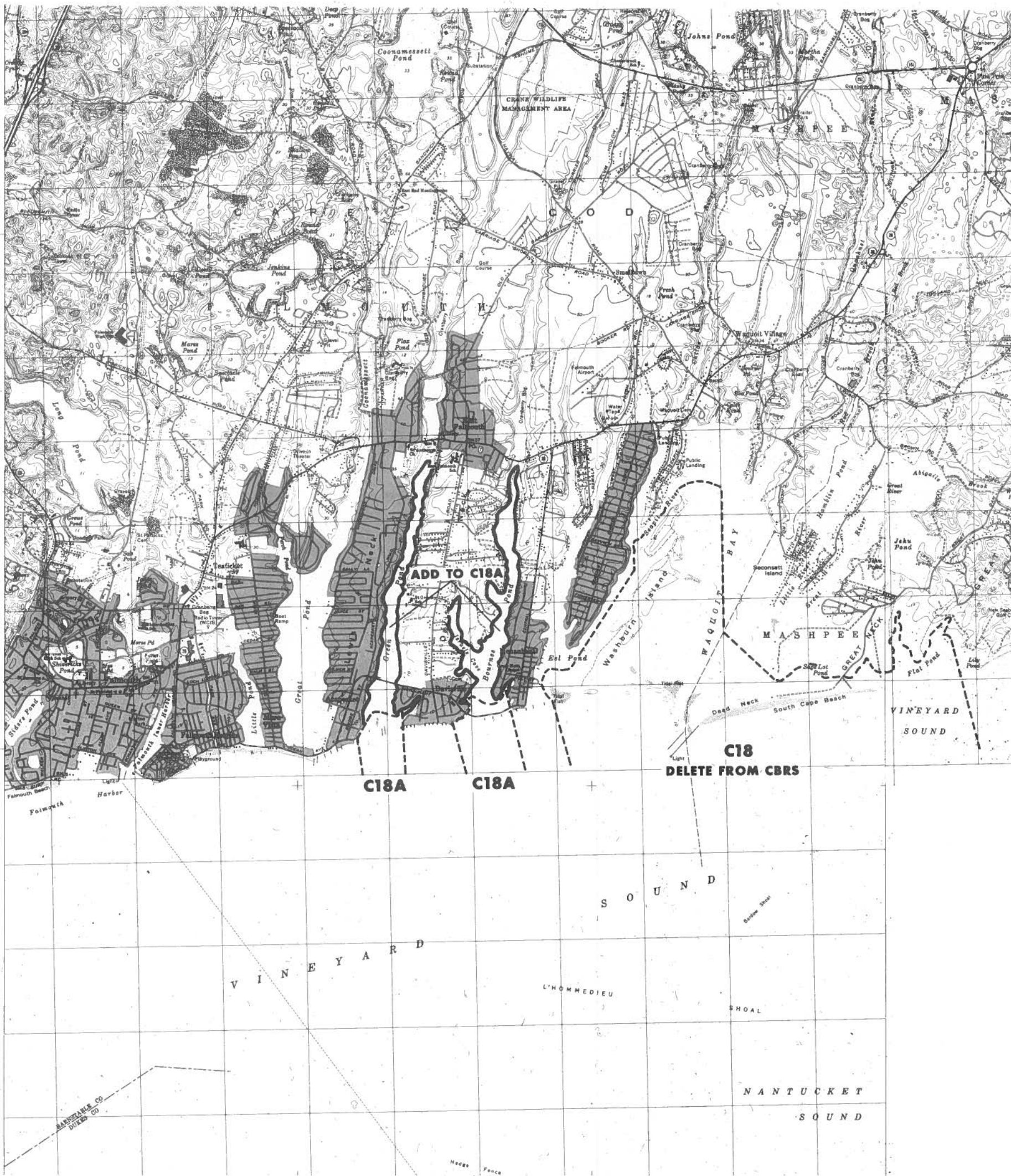
QUADRANGLE
COTUIT
MASSACHUSETTS



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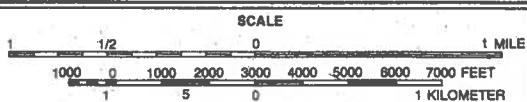
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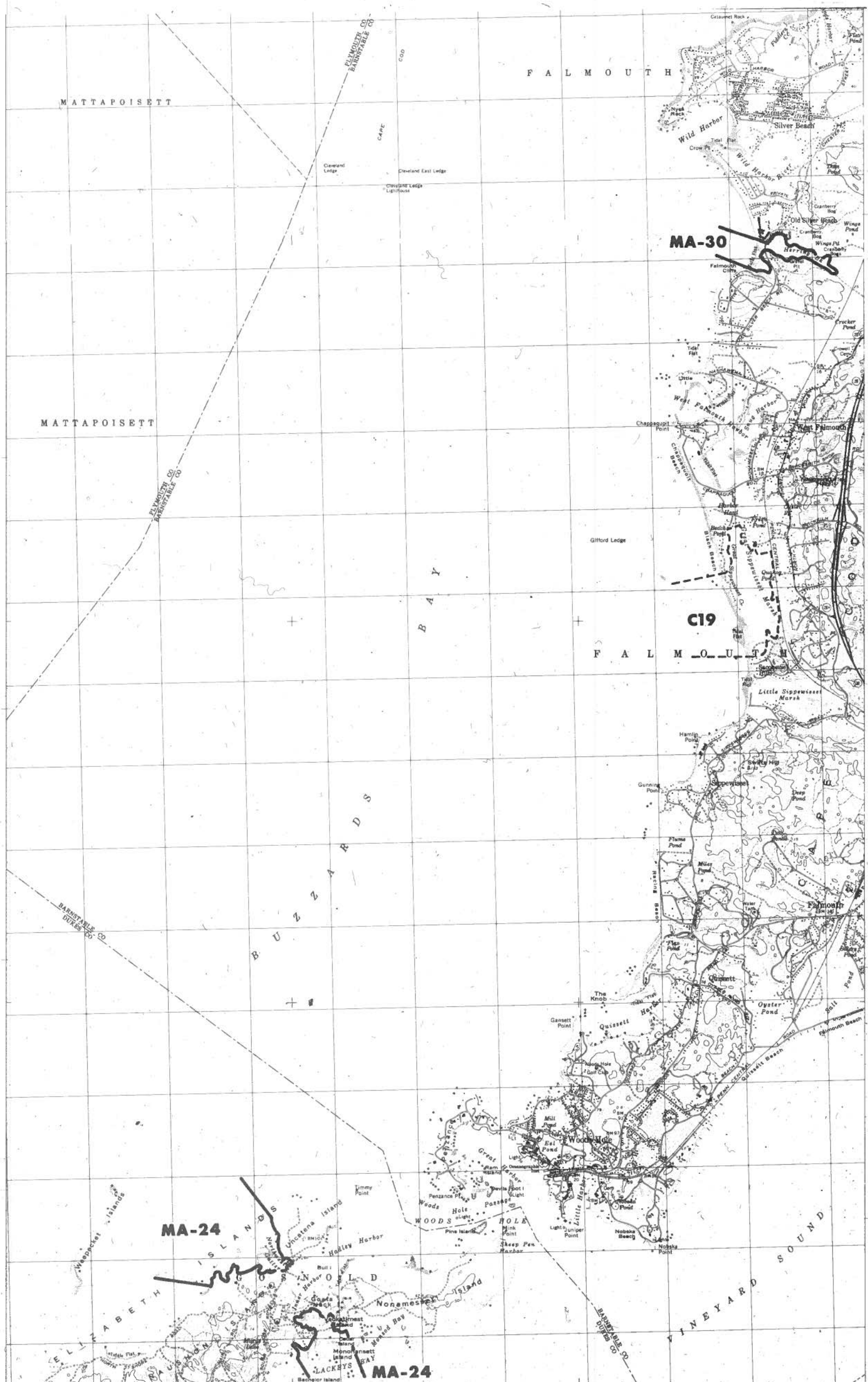
QUADRANGLE
FALMOUTH
MASSACHUSETTS



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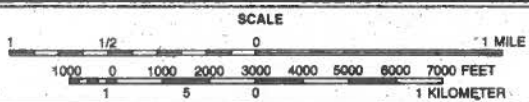


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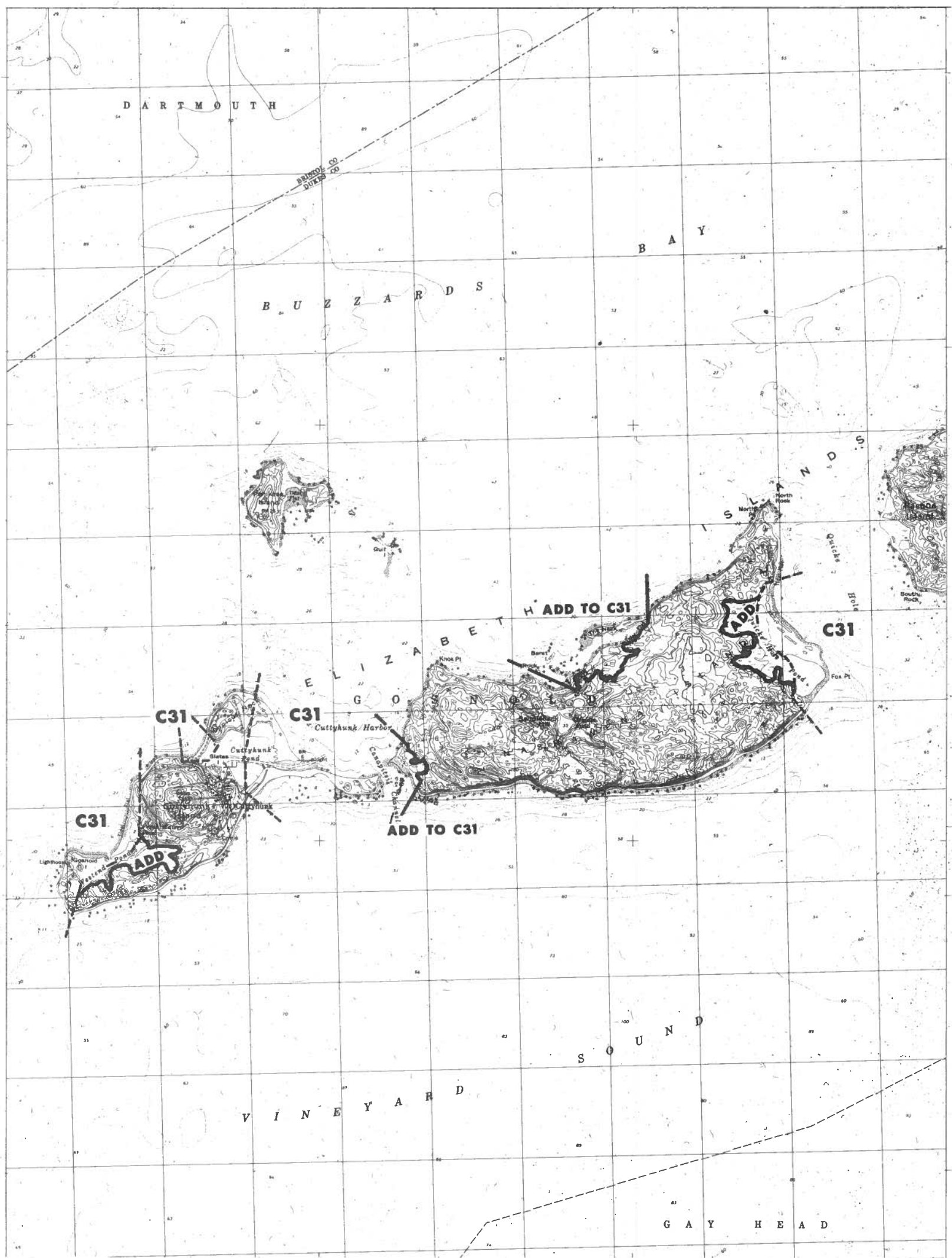
QUADRANGLE
WOODS HOLE
MASSACHUSETTS



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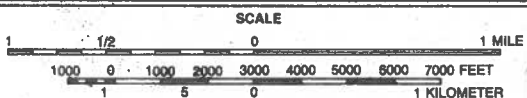


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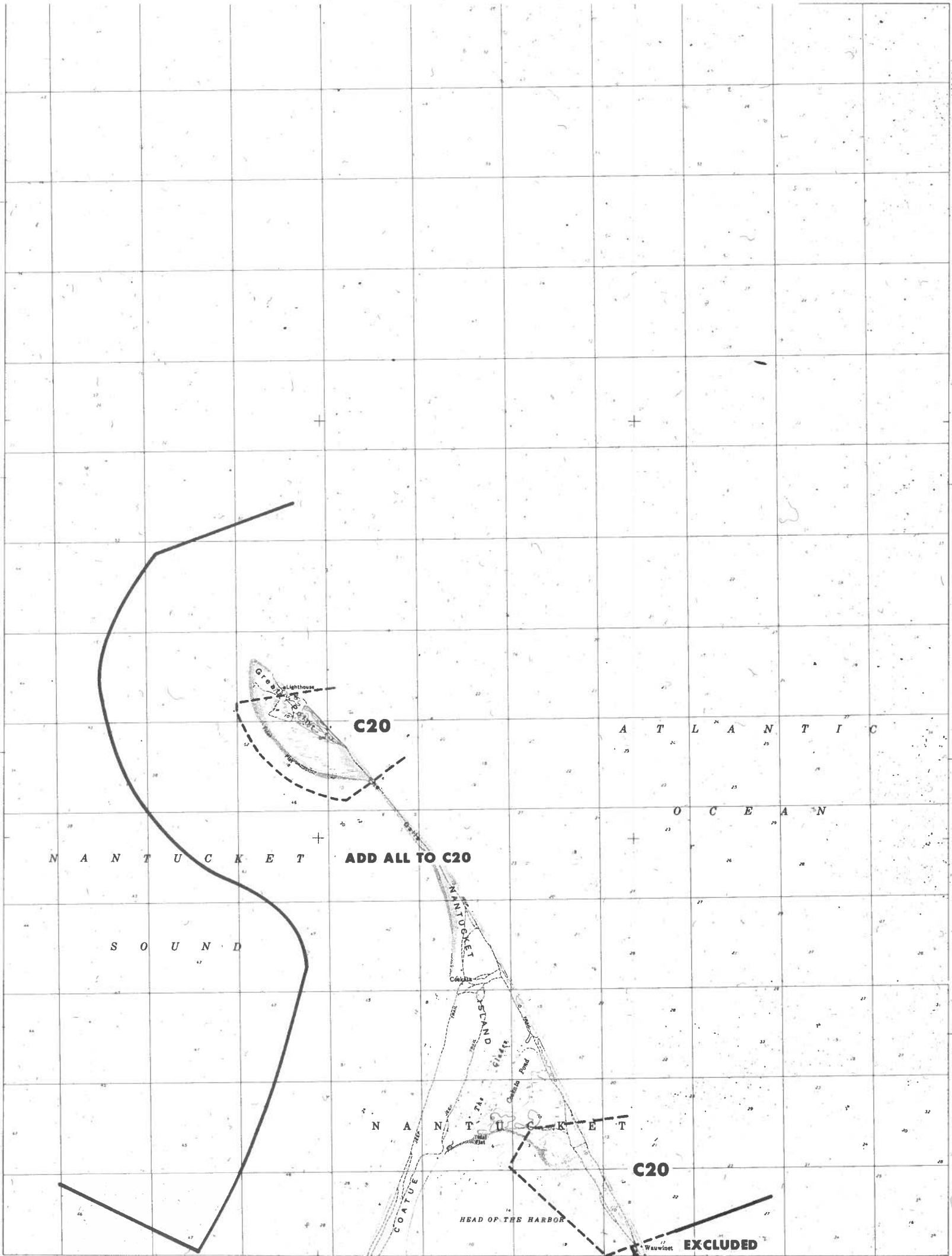
QUADRANGLE
CUTTYHUNK
MASSACHUSETTS



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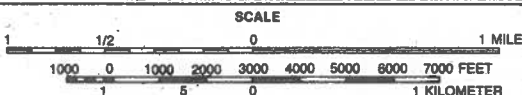
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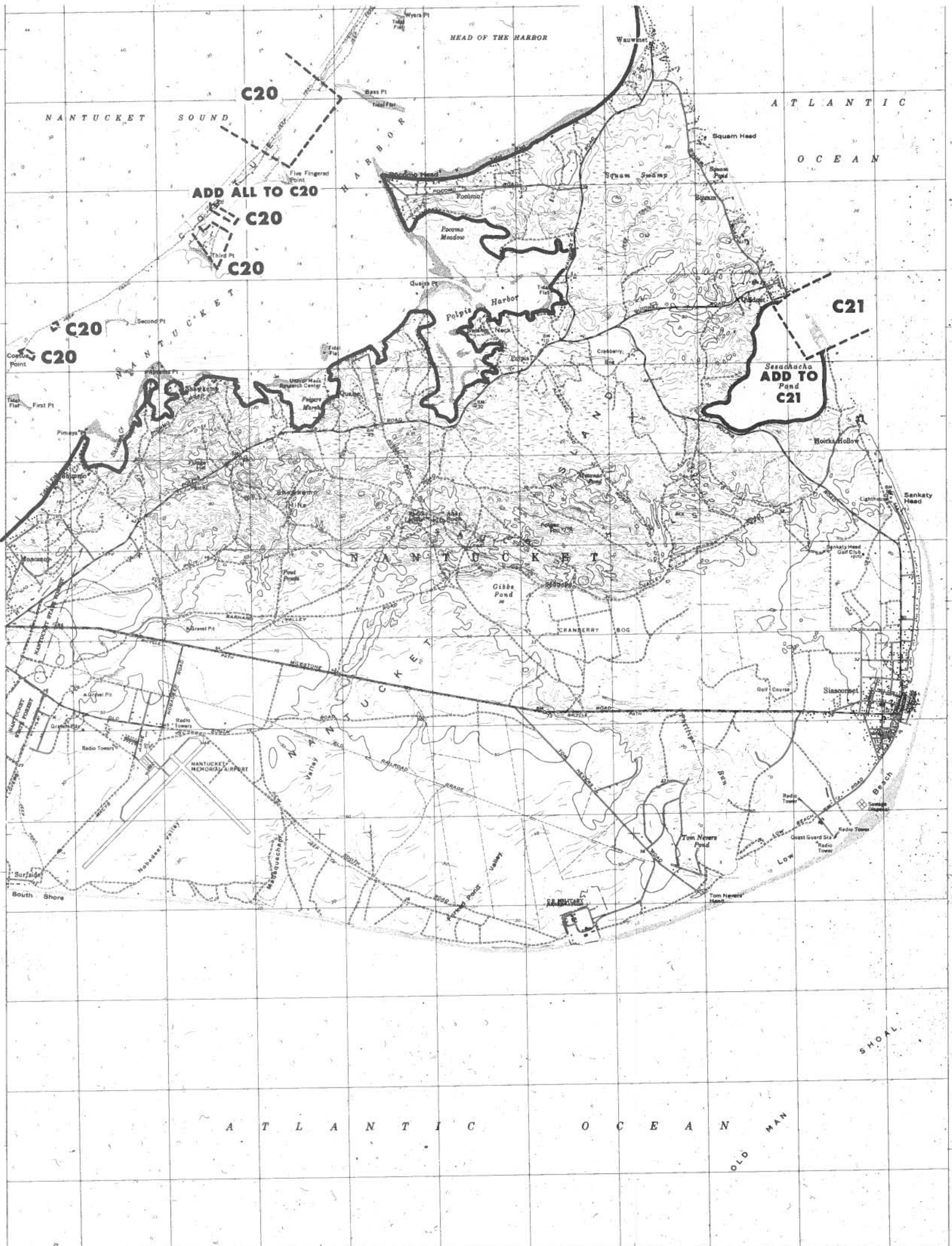
QUADRANGLE
GREAT POINT
MASSACHUSETTS



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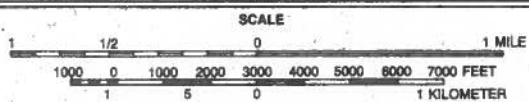
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QUADRANGLE
SIASCONSET
MASSACHUSETTS



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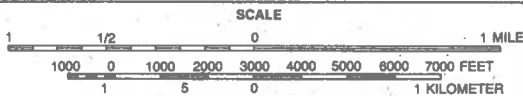


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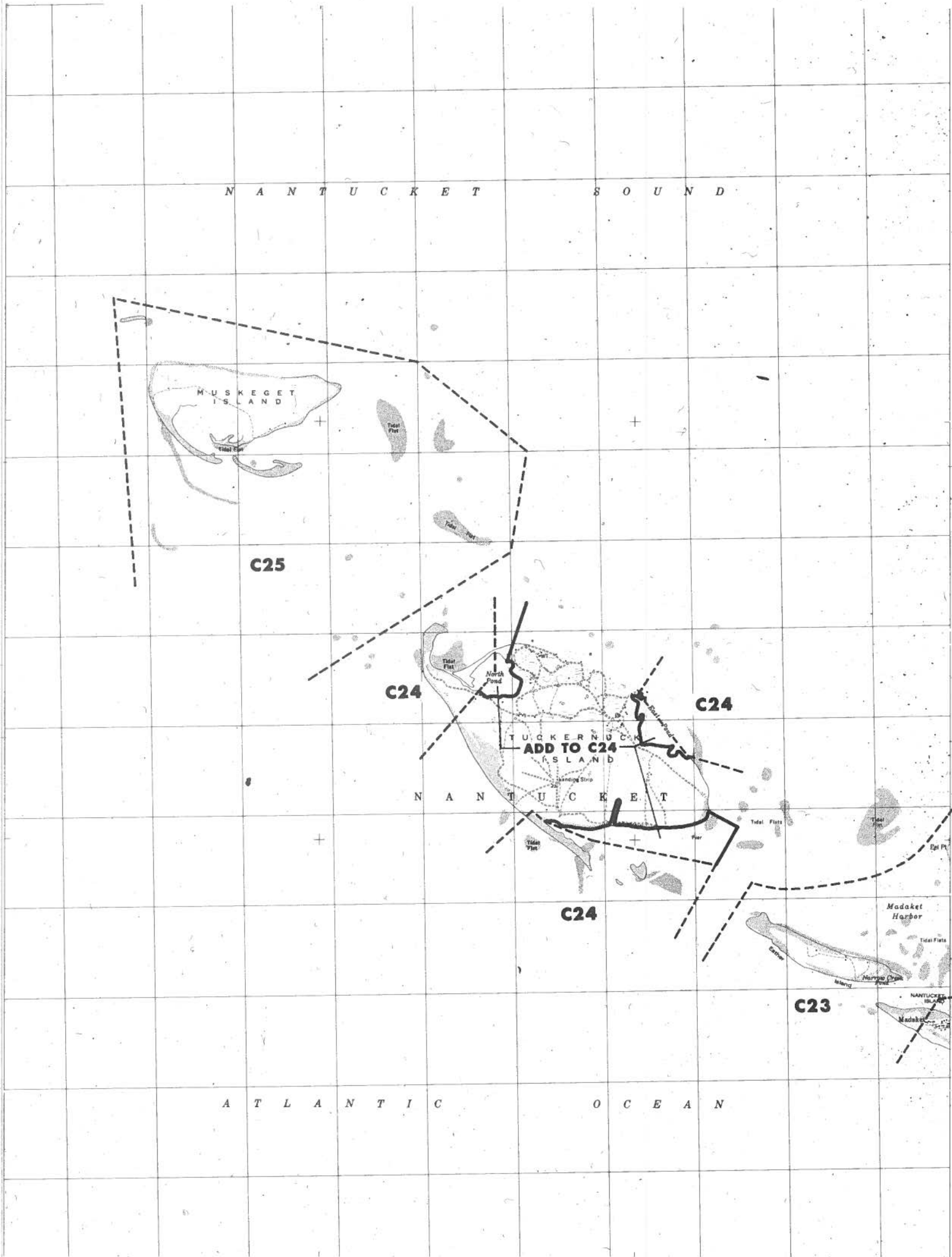
QUADRANGLE
NANTUCKET
MASSACHUSETTS



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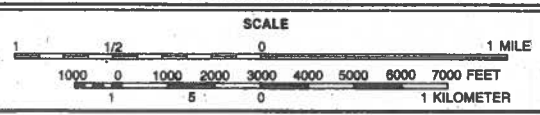


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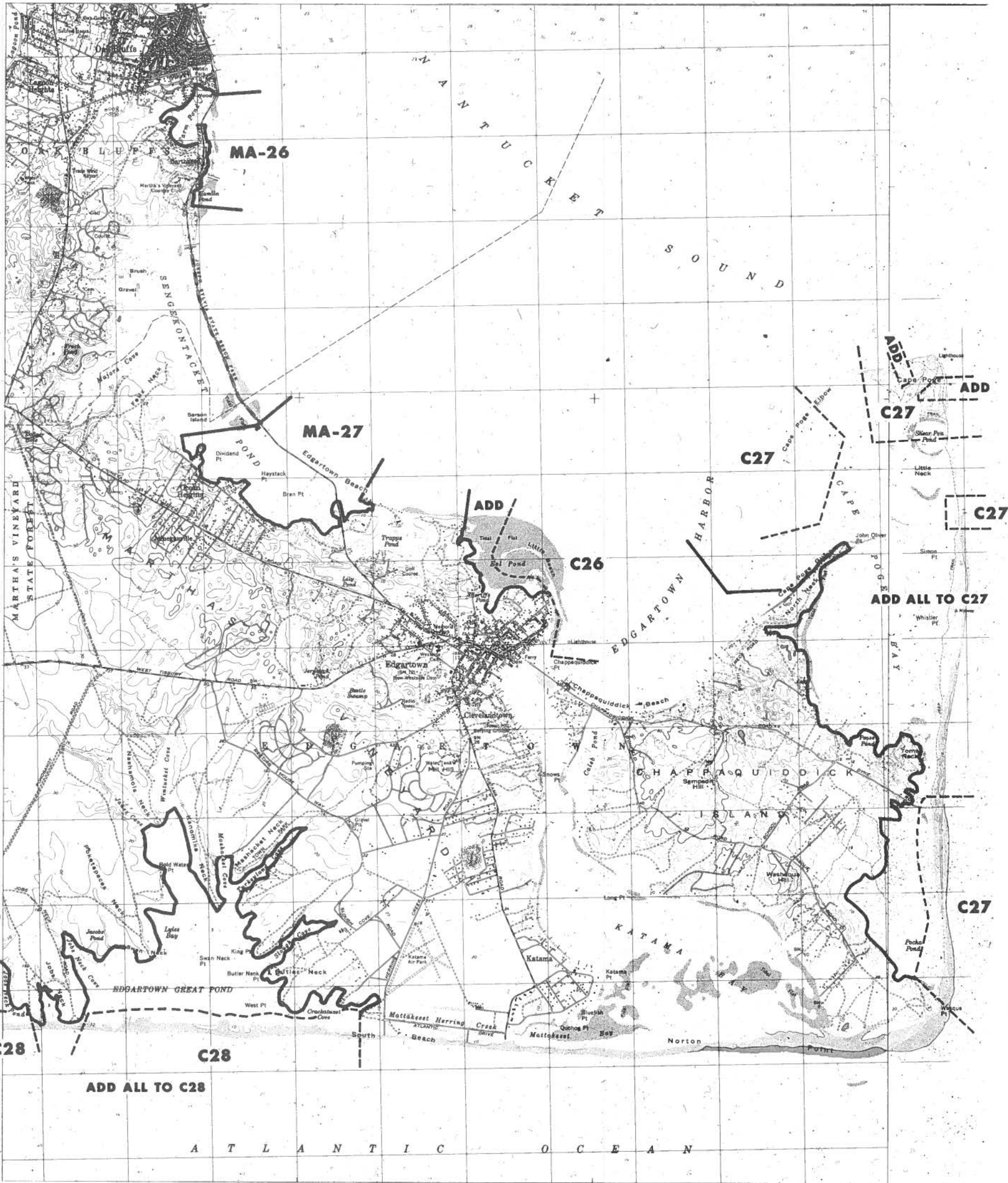
QUADRANGLE
TUCKERNUCK ISLAND
MASSACHUSETTS



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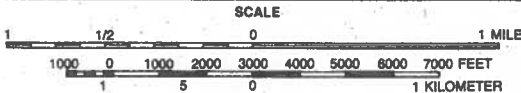
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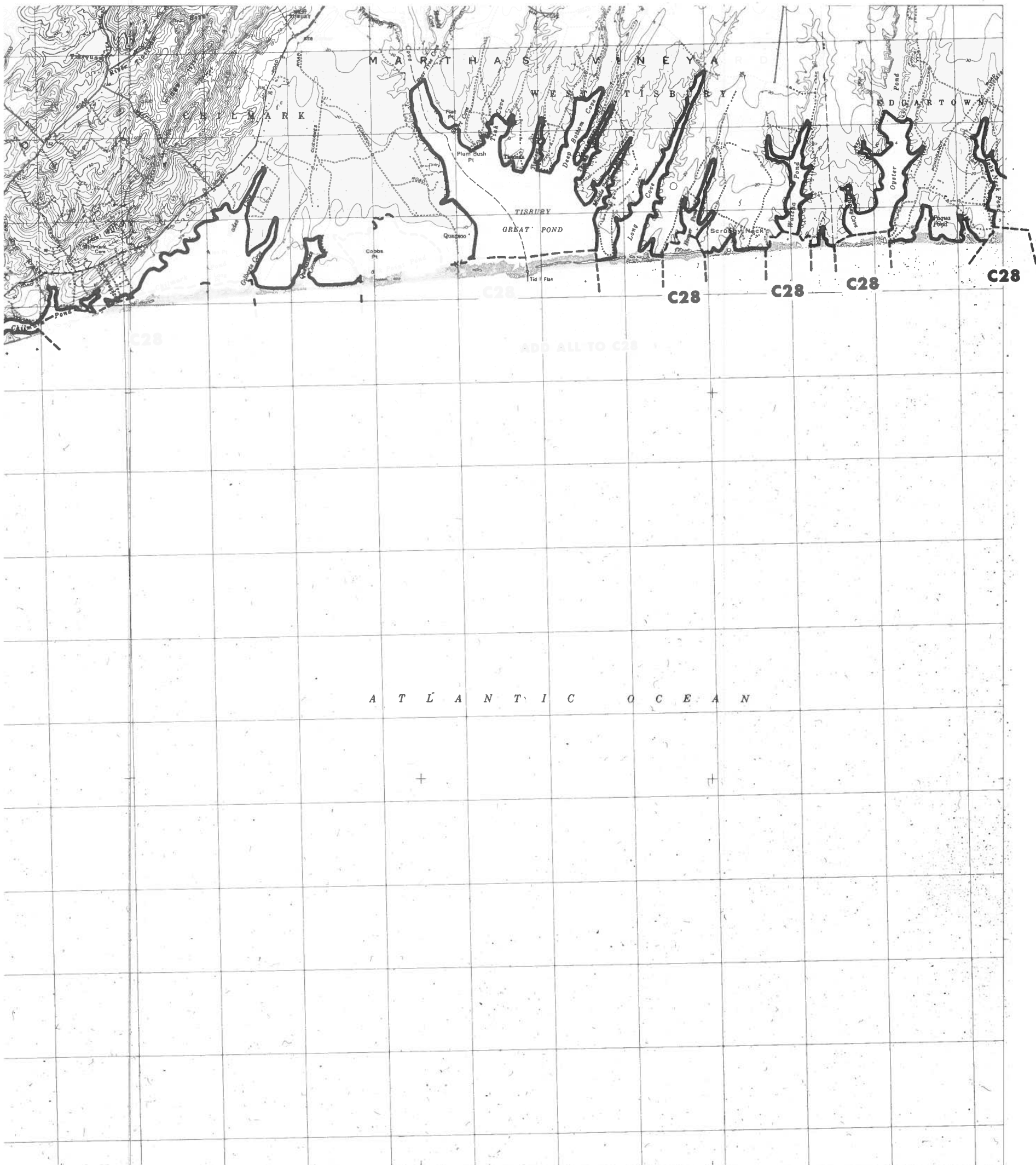
QUADRANGLE
EDGARTOWN
MASSACHUSETTS



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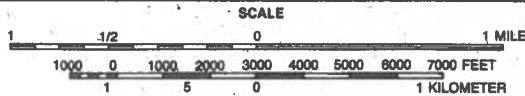


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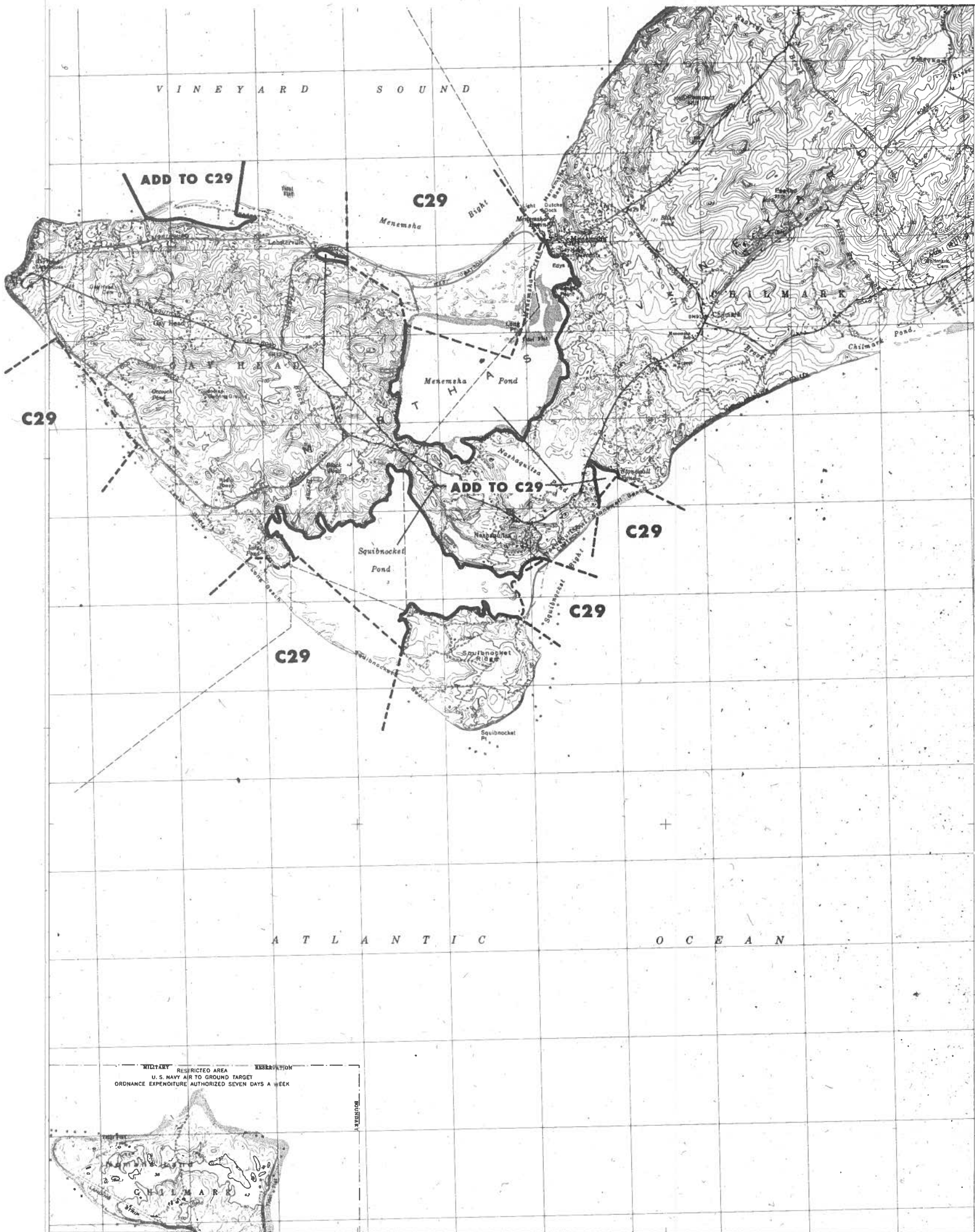
QUADRANGLE
TISBURY GREAT POND
MASSACHUSETTS



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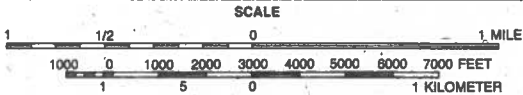


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QUADRANGLE
SQUIBNOCKET
MASSACHUSETTS

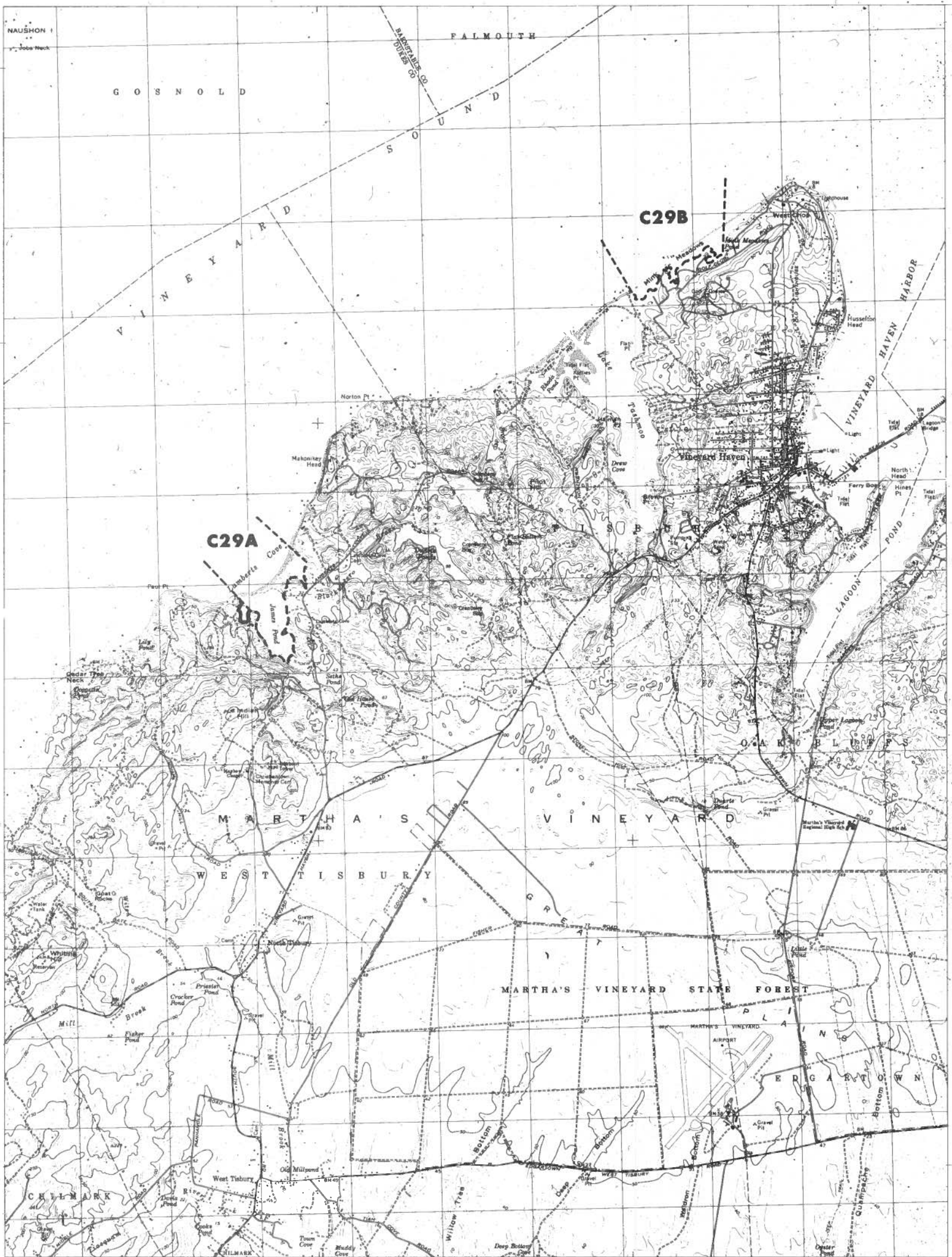


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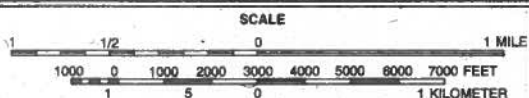


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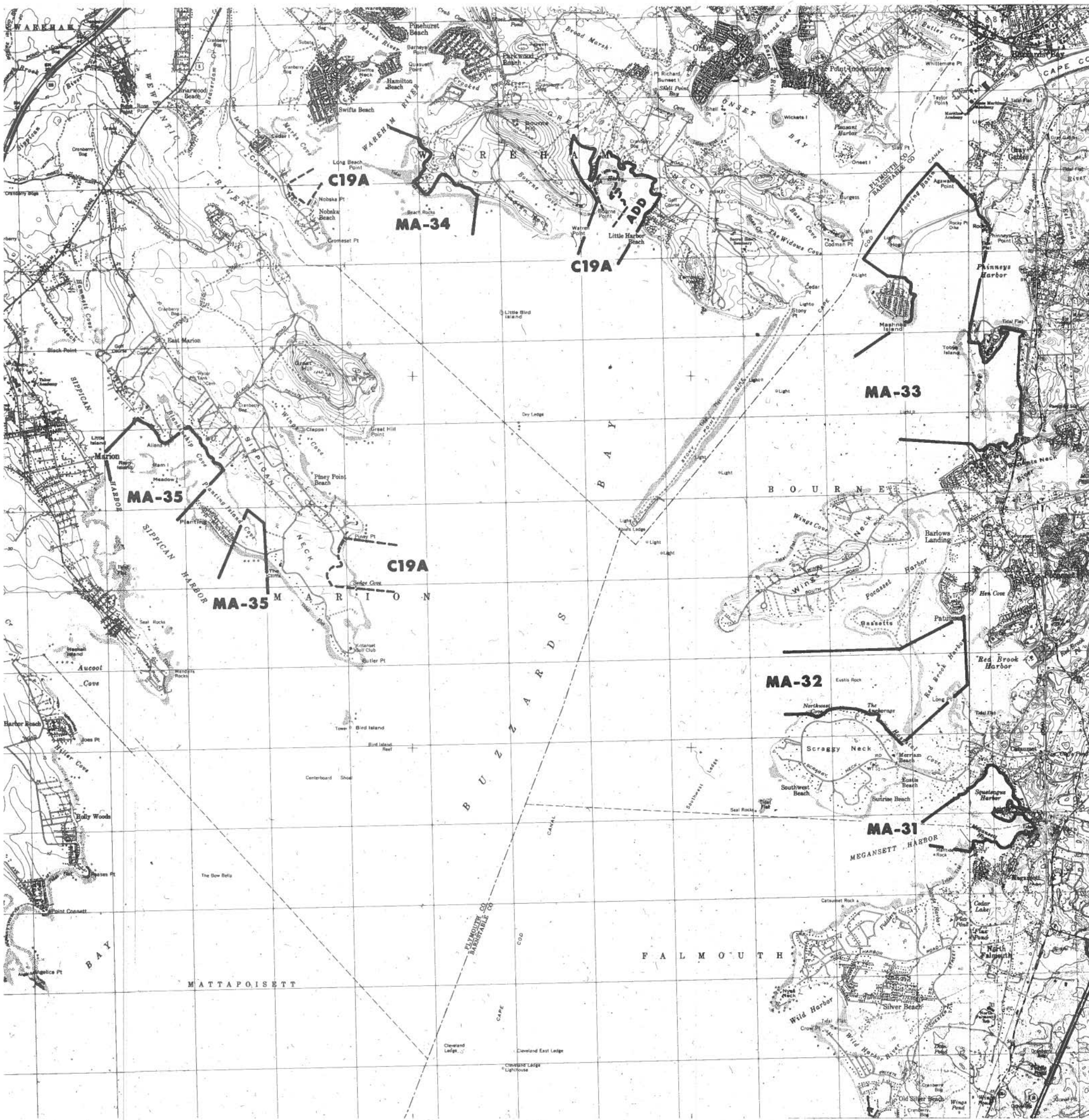
QUADRANGLE
VINEYARD HAVEN
MASSACHUSETTS



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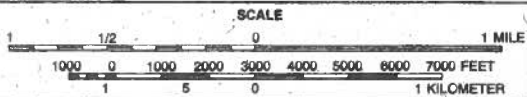
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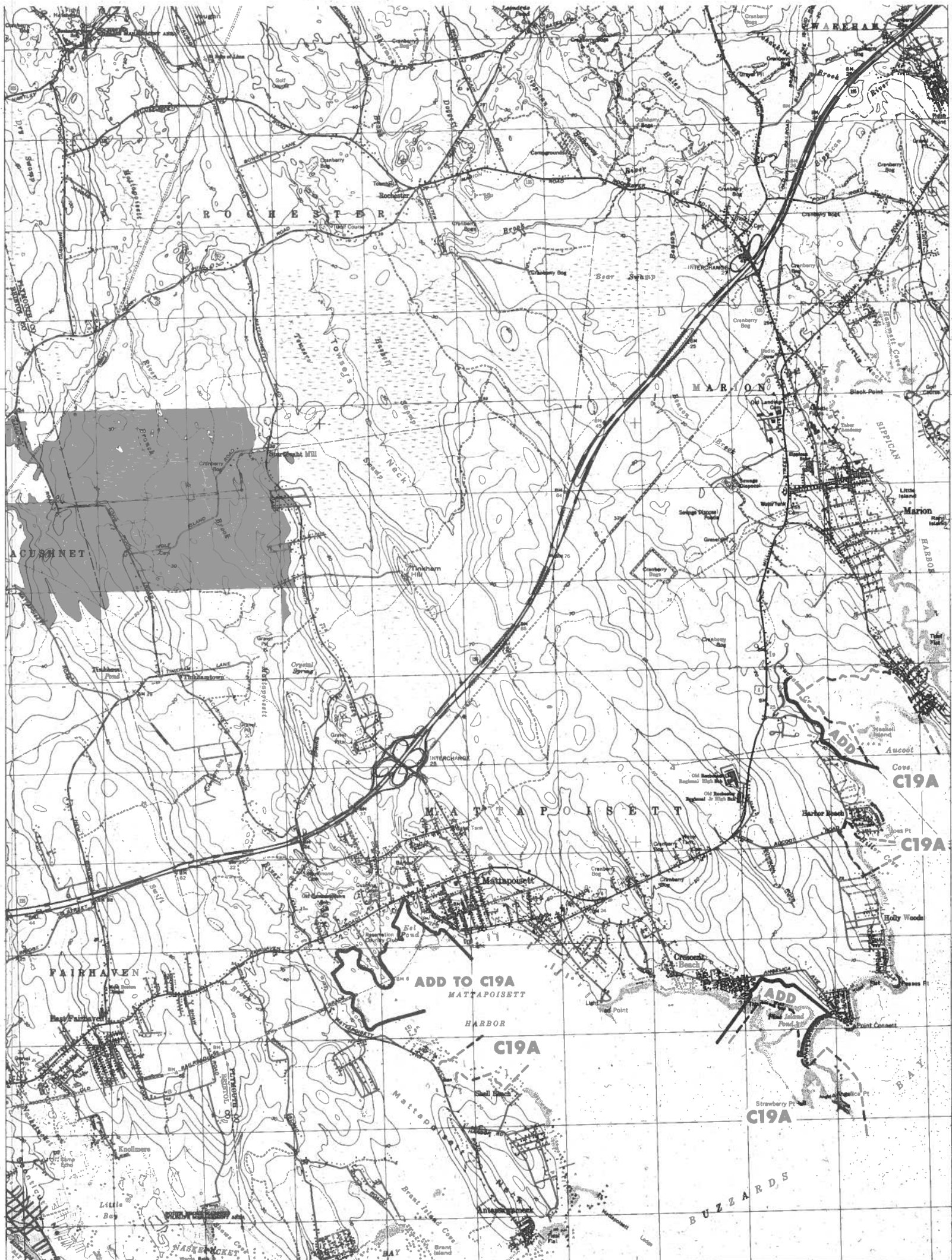
QUADRANGLE
ONSET
MASSACHUSETTS



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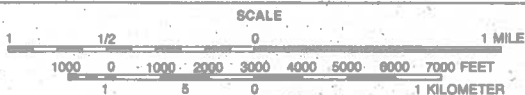
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QUADRANGLE
MARION
MASSACHUSETTS



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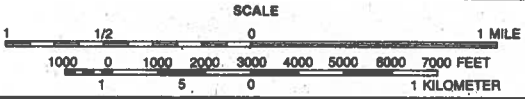


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QUADRANGLE
SCITICUT NECK
MASSACHUSETTS



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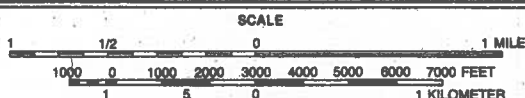
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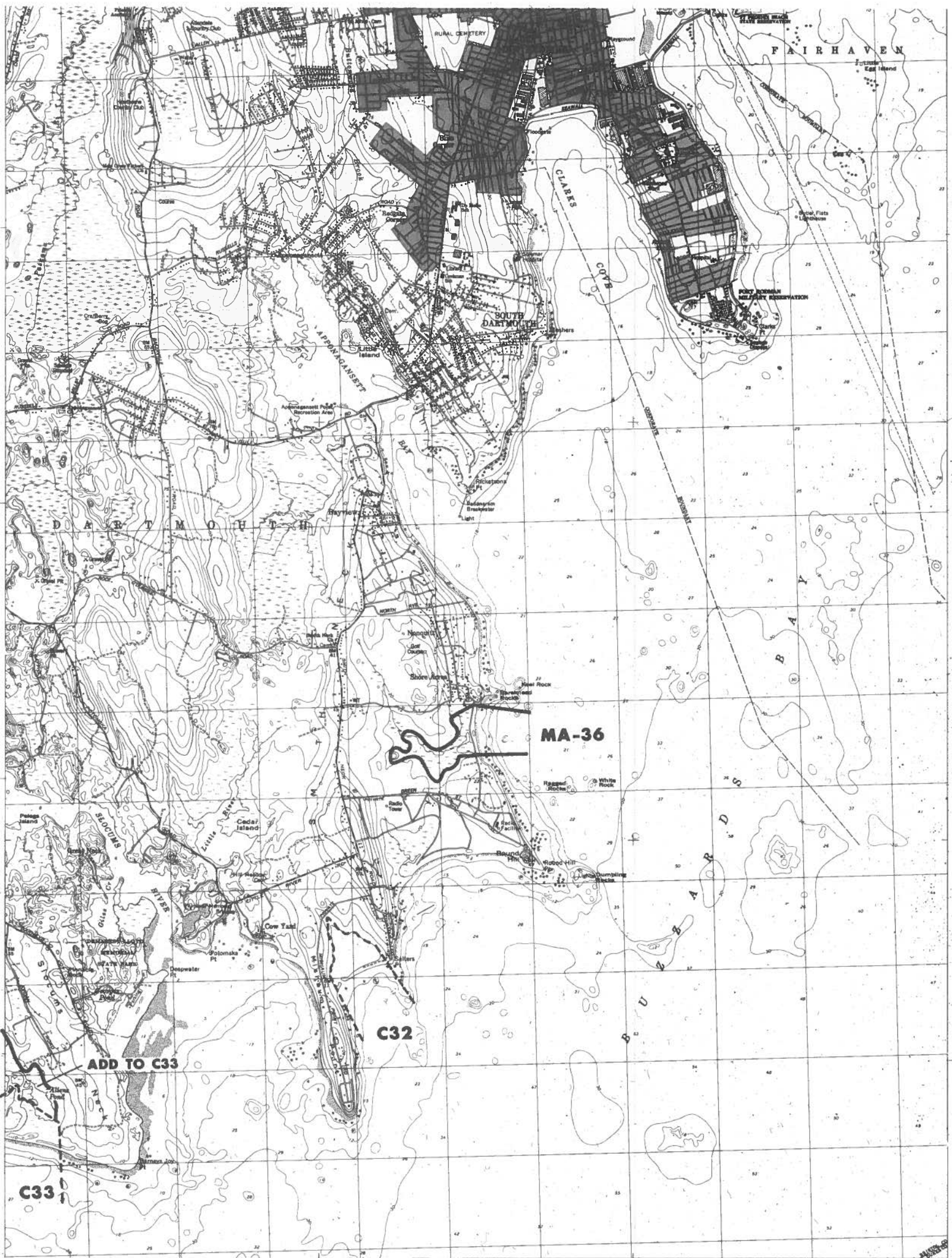
QUADRANGLE
NEW BEDFORD NORTH
MASSACHUSETTS



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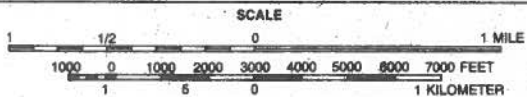
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QUADRANGLE
NEW BEDFORD SOUTH
MASSACHUSETTS



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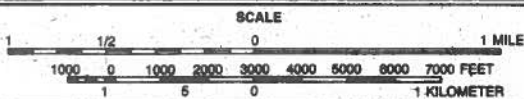


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QUADRANGLE
WESTPORT
MASSACHUSETTS



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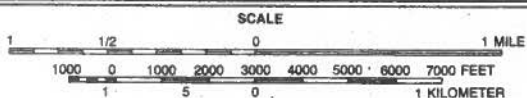
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QUADRANGLE
FALL RIVER
MASSACHUSETTS



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