Commonwealth of Massachusetts

Division of Marine Fisheries

251 Causeway Street, Suite 400
Boston, Massachusetts 02114
(617)626-1520
fax (617)626-1509

David E. Pierce, Ph.D.
Director

Charles D. Baker
Governor
Karyn E. Polito
Lieutenant Governor
Matthew A. Beaton
Secretary
Ronald Amidon
Commissioner
Mary-Lee King
Deputy Commissioner

6/6/2018

PUBLIC COMMENT PERIOD AND HEARING NOTICE:

Public Comment and Hearing Regarding Proposed Special Permit for Commercial Kelp Longline Culture in Coastal Waters off Harding's Beach in Chatham, MA

Public Comment period June 6, 2018 - July 6, 2018

Public Hearing June 27th, 2018 6pm at the Chatham Community Center 702 Main Street Chatham, MA 02633

The Division of Marine Fisheries (DMF) has scheduled a public hearing and comment period to accept comments on a special permit application to commercially culture Sugar Kelp (Saccharin latissimi) in the waters of Nantucket Sound off Harding's Beach in Chatham, MA. The proposed project consists of the seasonal deployment from October to May 15 of anchor held 150-200 ft. horizontal longlines at three locations covering approximately 49 acres. Initial work will consist of a maximum of fifteen (15) lines placed across the three sites. Complete build out in subsequent years will be subject to additional review and not exceed a total of 350 lines across all three sites. Submerged horizontal lines would be deployed a minimum of 7 feet below the surface with intermittent buoys for line suspension and navigational aids to mark the project boundaries. Horizontal lines are proposed to be placed at the sites not before October and removed by May 15 annually.

DMF will review comments to evaluate stakeholder concerns about the proposed project and to determine if modifications to location, gear marking, and gear design, or other features of the project, may be warranted. Written public comments will be accepted until 5:00 PM on July 6th and a public hearing will be held on June 27th at 6PM at the **Chatham Community Center 702 Main Street Chatham, MA 02633.** Please address all comments to Director David Pierce. Comments can be sent by e-mail to marine.fish@state.ma.us or by mail to 251 Causeway Street, Suite 400, Boston, MA 02114.

A full copy of the permit application can be found on DMF's website or can be obtained by contacting Jared Silva by phone (617-626-1534) or through e-mail (jared.silva@state.ma.us).

DMF Commercial Aquaculture Application

Chatham Kelp, LLC. 720 Main Street, Chatham, Massachusetts

May 15, 2018

Carl Douglas, Jamie Bassett, and Richard Curtis of Chatham Kelp, LLC- have submitted an application for a Class 4 Type 2 DMF aquaculture permit from The Massachusetts Division of Marine Fisheries pursuant to G.L. 130.

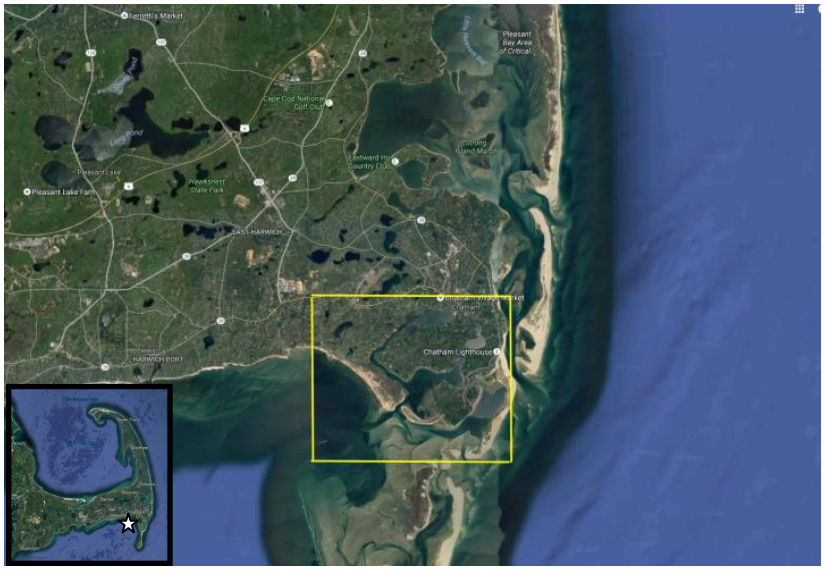
DMF project review will be conducted consistent with the requirements under 322 CMR 15 for Class 4 Type 2 aquaculture permits. Applications for Class 3 and 4 open-water aquaculture permits are subject to a state-wide public comment period, and are reviewed by the Division and cooperating agencies to determine if adverse impacts are likely to occur at the proposed site as a result of the operation of the permit. Topics for evaluation include, but are not limited to the following: (a) Water quality and hydrology; (b) Exposure/suitability of proposed structures; (c) Shellfish habitat and growing area classification; (d) Benthic habitat conditions; (e) Submerged aquatic vegetation; (f) Endangered species / marine mammals; (g) Competing uses of the area; (h) Wild fisheries; (i) Navigation; (j) Access to site. DMF is coordinating with cooperating agencies and the general public. Complete project review will be concluded prior to the Director's final determination on the issuance of a permit.

Purpose:

To introduce and commercially culture endemic Sugar Kelp (Saccharin latissima) at 3 sites located in the waters of Nantucket Sound off Harding's Beach in Chatham, MA.

Location:

The proposed sites are located in the waters of Nantucket Sound off Harding's Beach in Chatham, MA. Work will be conducted on three sites. Site 1 is approximately 12.5 acres in size, site 2 is approximately 27 acres in size, and site 3 is approximately 9.5 acres in size.

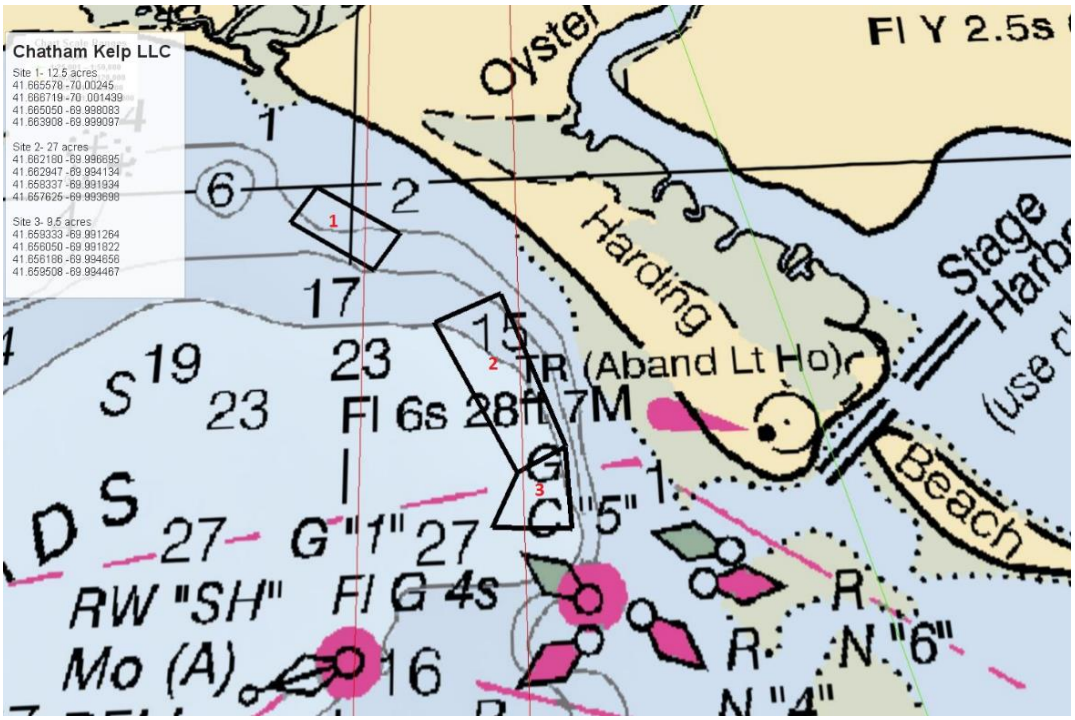


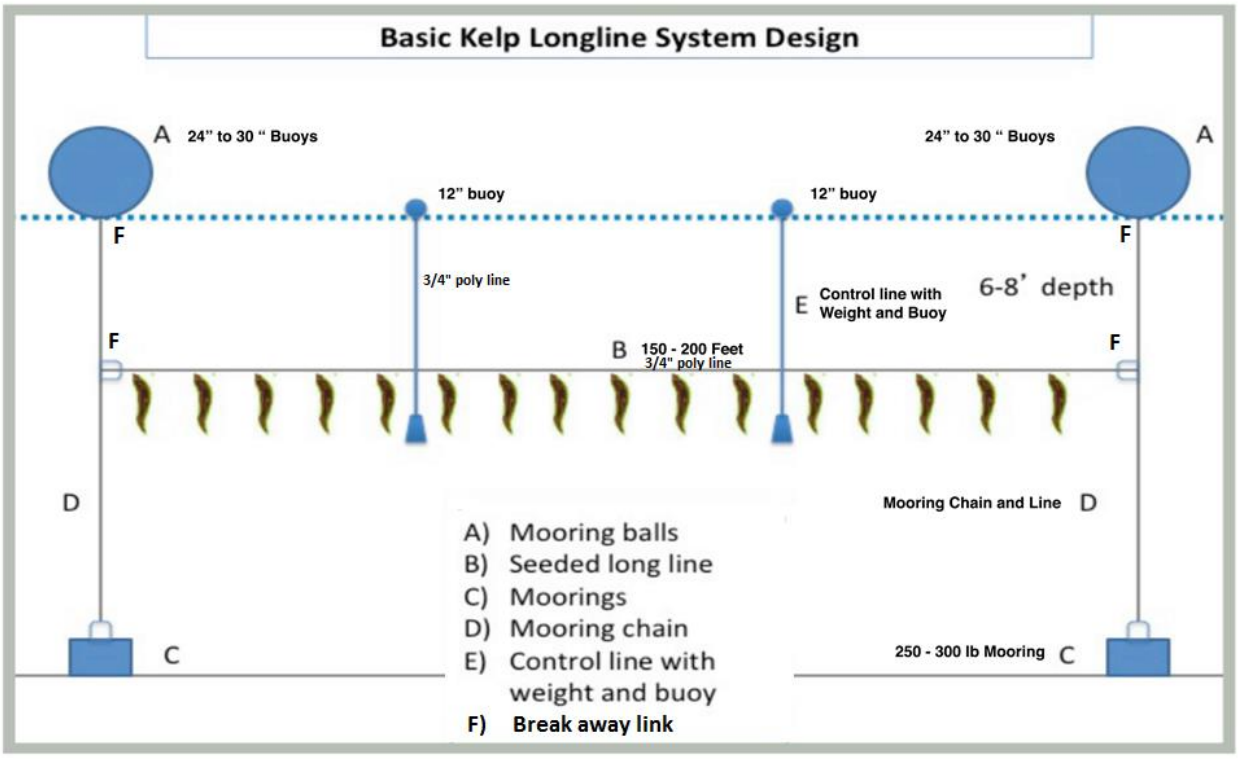
Site Boundaries:

Site 1: NORTH LATITUDE	 WEST LONGITUDE
41.665578	-70.00245
41.666719	-70 .001439
41.665050	-69.998083
41.663908	-69.999097
Site 2: NORTH LATITUDE	 WEST LONGITUDE
41.662180	-69.996695
41.662947	-69.994134
41.658337	-69.991934
41.657625	-69.993698
Site 3: NORTH LATITUDE	 WEST LONGITUDE
41.659333	-69.991264
41.656050	-69.991822
41.656186	-69.994656
41.659508	-69.994467

Proposed Activity:

The work involves the annual deployment from October to April of anchor held 150-200 ft. horizontal longlines at 3 sites. Initial work will consist of a maximum of fifteen (15) lines placed across the three sites. Complete build-out in subsequent years will consist of no more than 350 lines across all three sites. Individual kelp lines will consist of two moored vertical lines with a 150- 200 ft. horizontal line suspended between the moorings. Horizontal lines would be deployed a minimum of 7 feet below the surface with intermittent buoys for line suspension and navigational aids to mark the project boundaries. Seeded kelp lines will be attached to the horizontal line. Horizontal lines are proposed to be placed at the sites in October and removed by May 15.





Grow Depth from Mooring Ball to Block = 15' to 30' at Mean Low

Kelp grow-out line set-up

I. Benthic Habitat Conditions:

Location 1 – Harding's Beach = Generally Sand

The sites are proximate to mapped eelgrass based on 1995 DEP Seagrass layers but do not overlap the mapped areas. More recent Seagrass layers provided by DEP, show no no mapped Seagrass resources proximate to the sites. Sites one and two were surveyed by the Center for Coastal Studies in 2013 and no eel grass was observed.

II. Detailed Operational Plan

1. Species

a. Saccharina latissima aka "Sugar Kelp"

Sources: Pending DMF approval

i. Greenwave.org
Bren Smith
Indian Point Road
Branford, CT 06405

ii. Ocean Approved
Tollef Olson & Paul Dobbins
188 Presumscott Street
Portland, Maine 04103

iii. Scott Lindell
Biology Department,
MS # 34, 104 Redfield Bldg.
Woods Hole Oceanographic Institution
Woods Hole, MA 02543

iv. Connecticut Sea Grant
University of Connecticut
Avery Point
Marine Science Building
1080 Shennecossett Road
Groton, Connecticut 06340

II. Detailed Operational Plan (cont.)

2. Density

a. Location 1 – Harding's Beach

During our first year, we would like to try 5 to 10 lines in this location. If harvest yields a commercially viable product, we would like to have the ability to expand to 350 lines.

Lines would be approximately 150 feet in length each and would be spaced no less than 15 - 20 feet apart. That is to say, there would be at least approximately 15 - 20 feet of space between each line so that 1) the lines would be less likely to tangle and 2) so that our tending and harvesting vessel could operate freely in an adequate amount of space between each line.

The deployment of additional longlines beyond the initial 15 will be will be subject to approval by DMF and contingent on the successful deployment of gear during the first season and adherence to permit conditions. The initial expansion request will not exceed 100 longlines. Subsequent requests will be subject to approval by DMF and contingent on adherence to permit conditions in the previous seasons. The total number of lines deployed at full build out will not exceed 350 longlines.

II. Detailed Operational Plan (cont.)

3. Gear Deployment

Gear will be deployed in mid to late October, depending upon weather. Specifically, we would like to deploy gear after the prevailing winds turn northerly to take advantage of the natural lee that both locations provide. Mooring hardware will be deployed and removed by local mooring contractors. Seeded Kelp lines will be deployed the month of November, dependent upon the availability of Kelp seed by Chatham Kelp LLC.

4. Removal Dates

The kelp will grow between November and April. Harvest will occur between late April and early May. Kelp lines will be removed at the time of harvest. Kelp line mooring ends will be removed in early May.

5. Access

Access to the sites will be free but weather dependent. As a standard operating procedure, we plan on monitoring each site bi-weekly, accessing the site from Stage Harbor in Chatham, MA. That said, on any given day that we may have fair weather with northerly winds either calm or light and variable, we will take advantage of the fair weather and access the sites to monitor, inspect, both gear and product and if necessary, repair any damaged gear. We will perform this operation with a 20 foot x 80 inches wide Carolina Skiff, powered by a 115 HP Yamaha outboard with a maximum speed of approximately 30mph / 26 knots.

6. Harvest Vessel Size and Speed

During the first year of this program with the relatively few Kelp lines, we will use the 20 foot x 80 inches wide Carolina Skiff, powered by a 115 HP Yamaha outboard with a maximum speed of approximately 30mph / 26 knots. If project is successful and we progress to a second year with larger kelp line foot print, we will consider other vessel options for harvest

7. Harvest Method

Kelp product will be harvested by hand by raising the kelp lines above water surface and cutting kelp product, by hand, from the kelp lines and depositing each line's product into individual fish totes or like receptacles. Depending upon weather conditions, once the Kelp product has been harvested and is on vessel, we may also remove spent Kelp seed lines at the same time. Otherwise, we will return at a following date, weather dependent to remove seed lines.

8. Disposition (Pending DMF Approval)

Once each Kelp line has been harvested and deposited into individual totes, we will analyze each line's yield weight and composition. Product will be dispersed as follows:

a. Majority of product will be sold to Kelp seed suppliers
b. A portion will be sold to a local craft beer company (Devil's Purse Brewing)
c. A portion will be kept in order to experiment with drying techniques
d. A portion will be offered to select local restaurants for recipe experiments
e. A portion will be shipped to a processing facility (yet to be determined) to analyze alginate and compound yields.
f. A portion will be used as compost
g. A portion will be offered to the Town of Chatham for analysis
h. A portion will be offered to the Division of Marine Fisheries for analysis

III. Consideration of Alternatives to minimize any anticipated habitat degradation and conflicts with other marine resources

a. To prevent issues related to interactions between marine protected species and deployed gear the following measures will be taken:
    a. Buoys used as corner markers will be attached to anchored vertical lines with a 600 lb. breakaway link or rope of appropriate breaking strength. Surface buoys used for buoyancy will be attached with a maximum 1100 lb. breakaway link or rope of appropriate breaking strength.
    b. Subsurface horizontal lines will be attached to vertical lines with a maximum 1100 lb. breakaway link or rope of appropriate breaking strength.
    c. All ropes > 20ft in length will be marked with a white, yellow and black marker (each color will be 6" in length for a total mark of 12") consistent with the methods of marking aquaculture gear prescribed in the Atlantic Large Whale Take Reduction Plan. Lines must be marked in the middle.

b. To prevent impacts to submerged aquatic vegetation the following measures will be taken:
    a. Vertical lines will be attached to anchors using flexible rodes to prevent sediment scouring.
    b. Anchors or any gear will not be placed within 75' of eelgrass.

c. To prevent issues related to interactions between commercial and recreation fishing activities the following measures will be taken:

   i. If the Chatham Shellfish Department or Division of Marine Fisheries identifies that commercially significant numbers of Bay Scallops or Quahogs have settled on the sites or portions thereof, we will make accommodations to allow access for harvest.

d. To prevent issues with navigation the following measures will be taken

   i. Horizontal lines will not be deployed prior to October 15 and will be removed prior to May 15.
   ii. Horizontal lines will be suspended a minimum of 7' below the surface.
   iii. The four corners of each site shall be delineated with buoyed lines. Each buoy shall be marked in figures at least four inches in height in a conspicuous place with the permit number.

IV. Disposal Plan for culls and gear (Compost, land-fill)

We do not anticipate have in excess culls. The disposition of all material has been described in channels A – H under the Disposition heading under the detailed operational plan. In the off chance that there is excess material / product, it will be composted at "0" Middle Road in East Harwich, MA.

In the event that we have irreparable gear, this gear will be disposed of at the Chatham Transfer Station in the recycling bin for fishing gear.

Appendix:

Figure 4.1 Surficial sediments and protected benthic habitats in the Massachusetts ocean management planning area

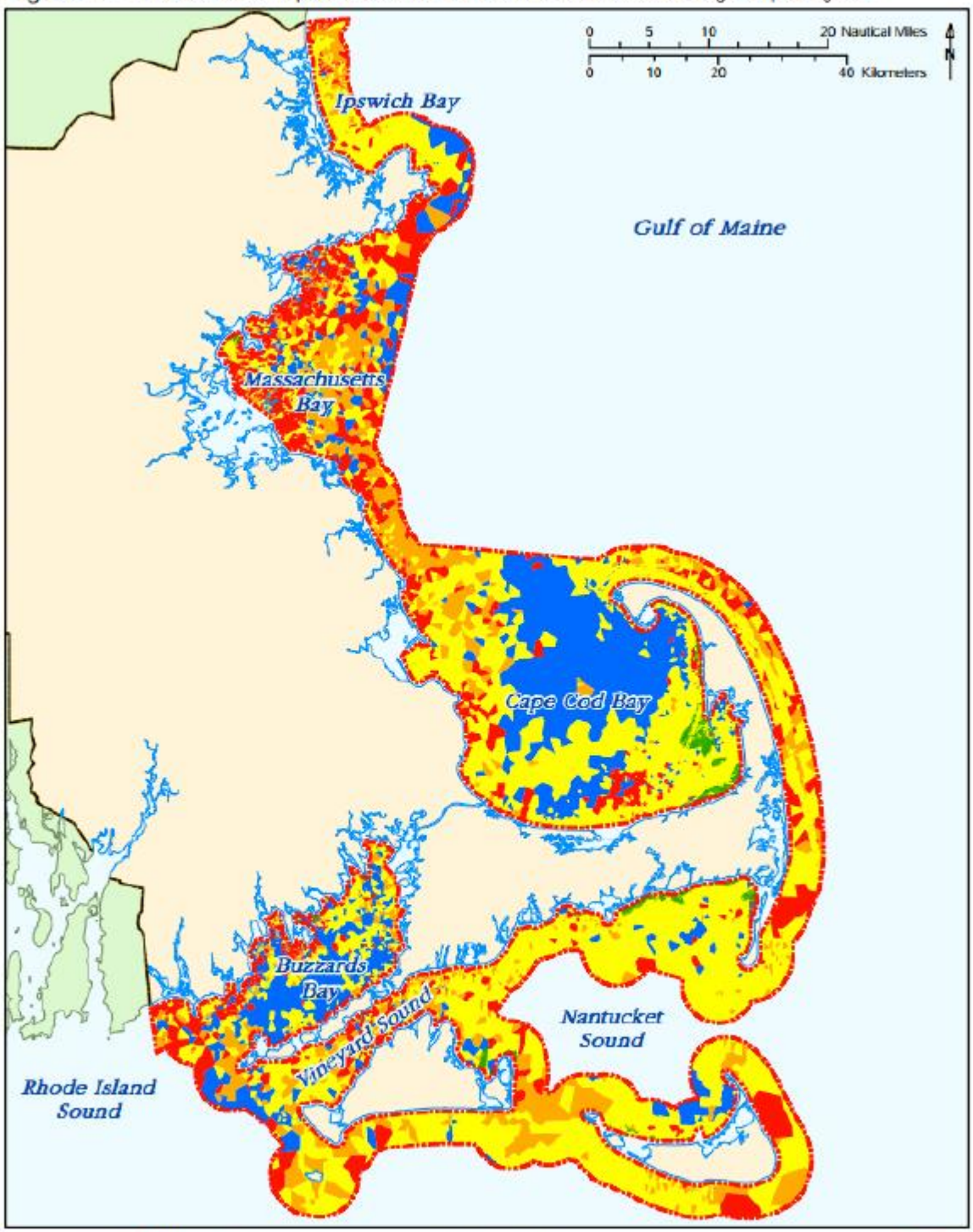
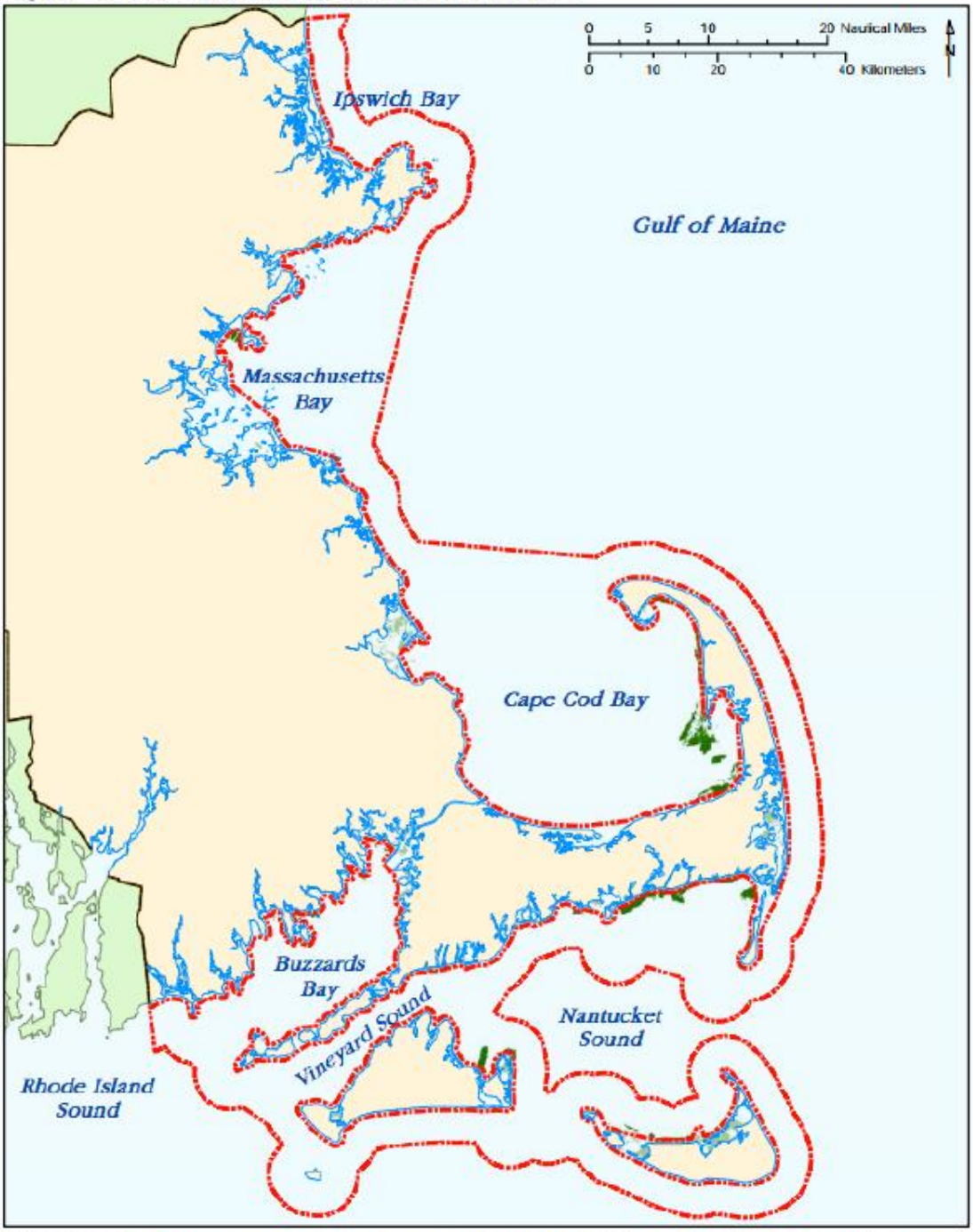


Figure 4.2 Eelgrass in the Massachusetts ocean management planning area



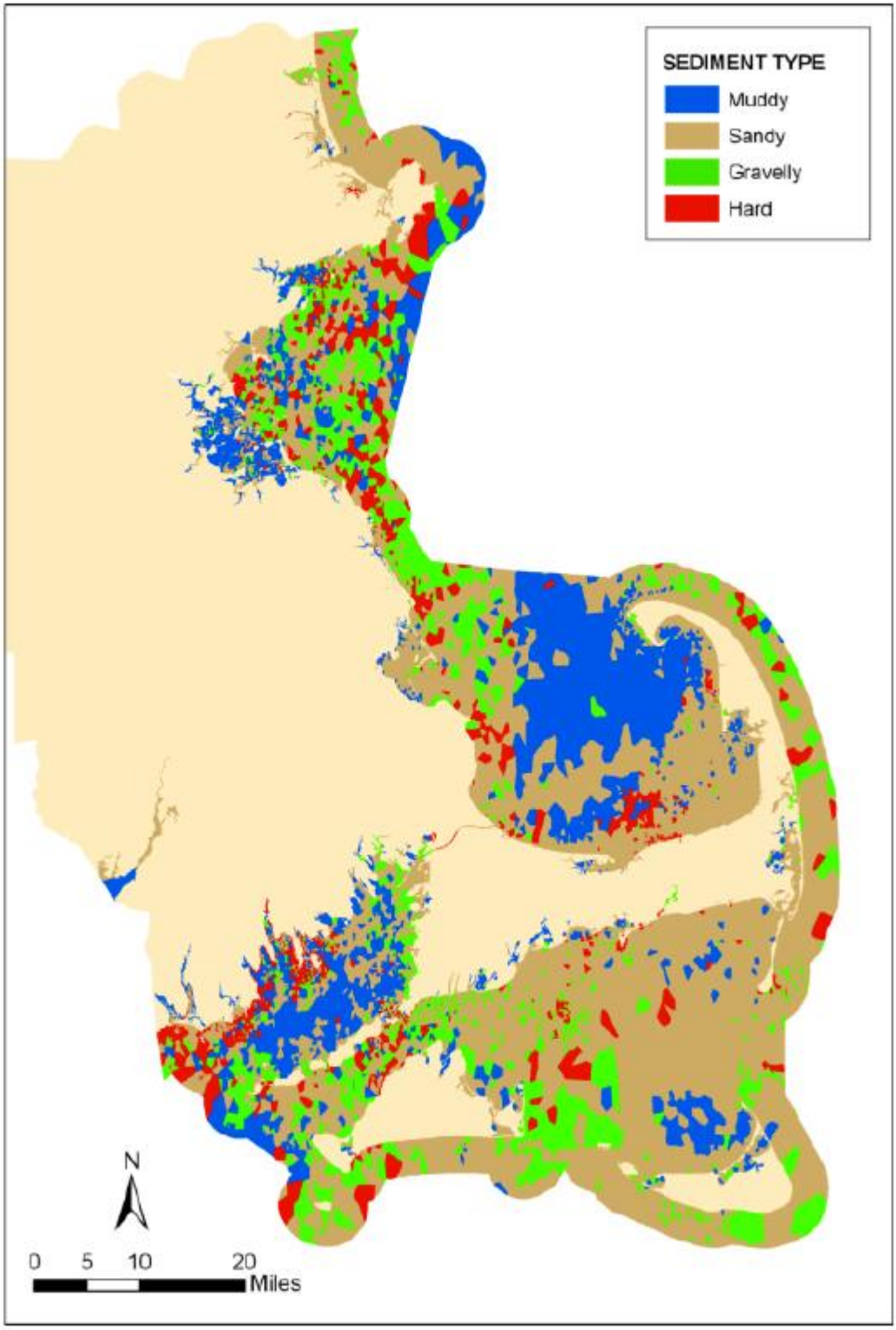


Figure 4B. Sediment distribution map with Thiessen polygon interpolation. Blue=muddy sediment, brown=sandy sediment, green=gravelly sediment, and red=hard sediment.

Figure 4.4 Areas important to fisheries resources in the Massachusetts ocean management planning area

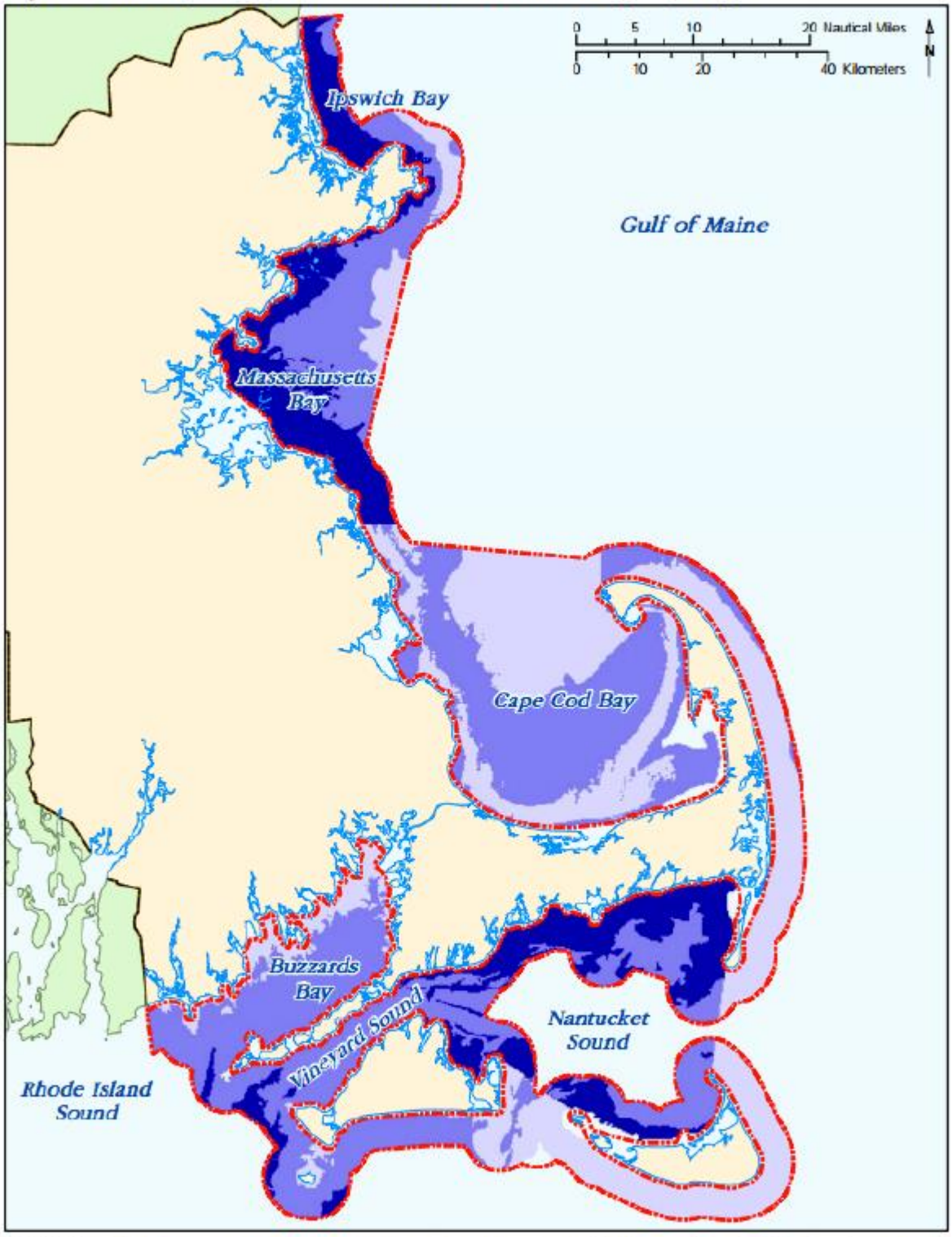


Figure 6.1 Commercial fisheries activity in the Massachusetts ocean management planning area

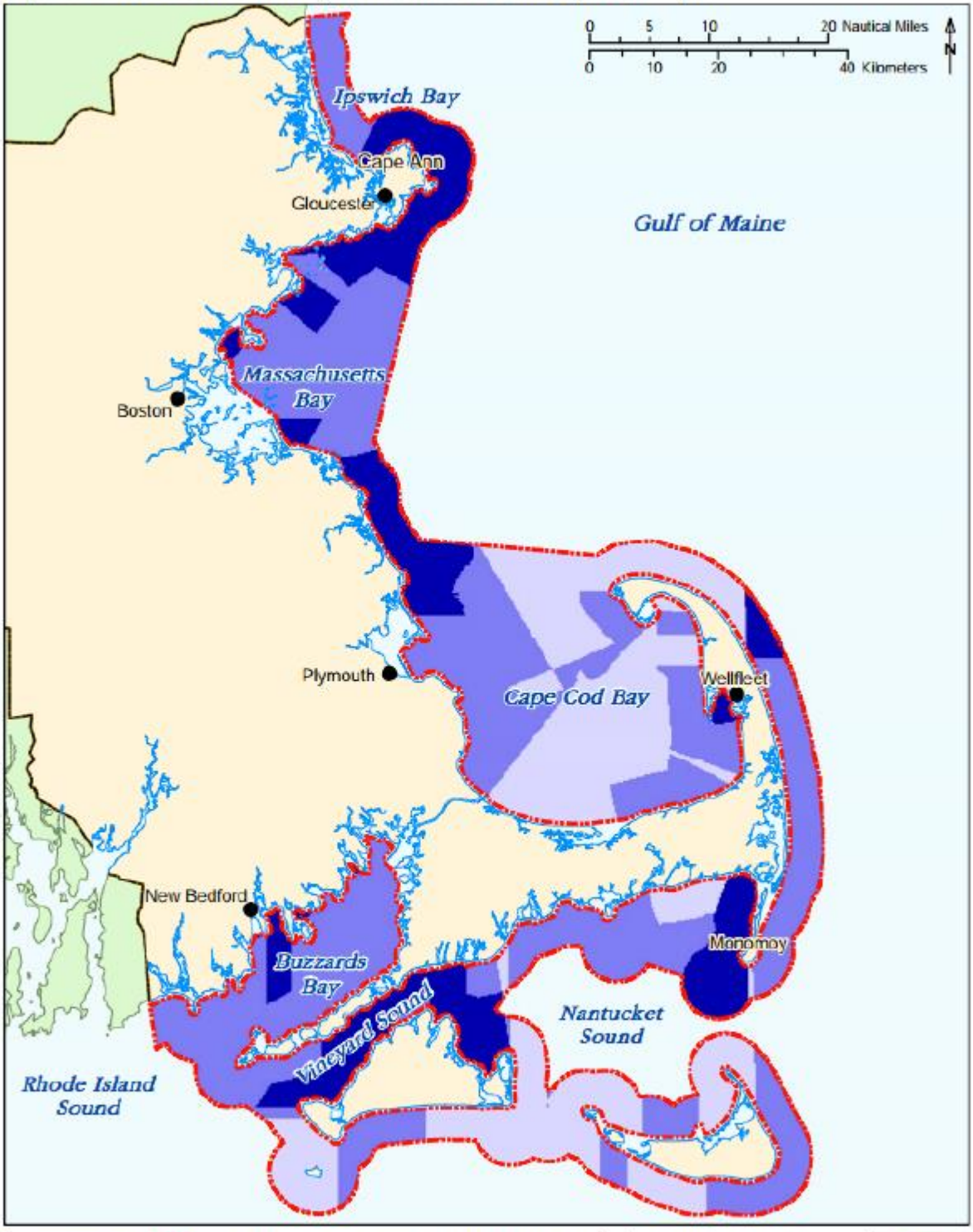


Figure 6.2 **Recreational fishing areas classified as "high importance" in the Massachusetts ocean management planning area**

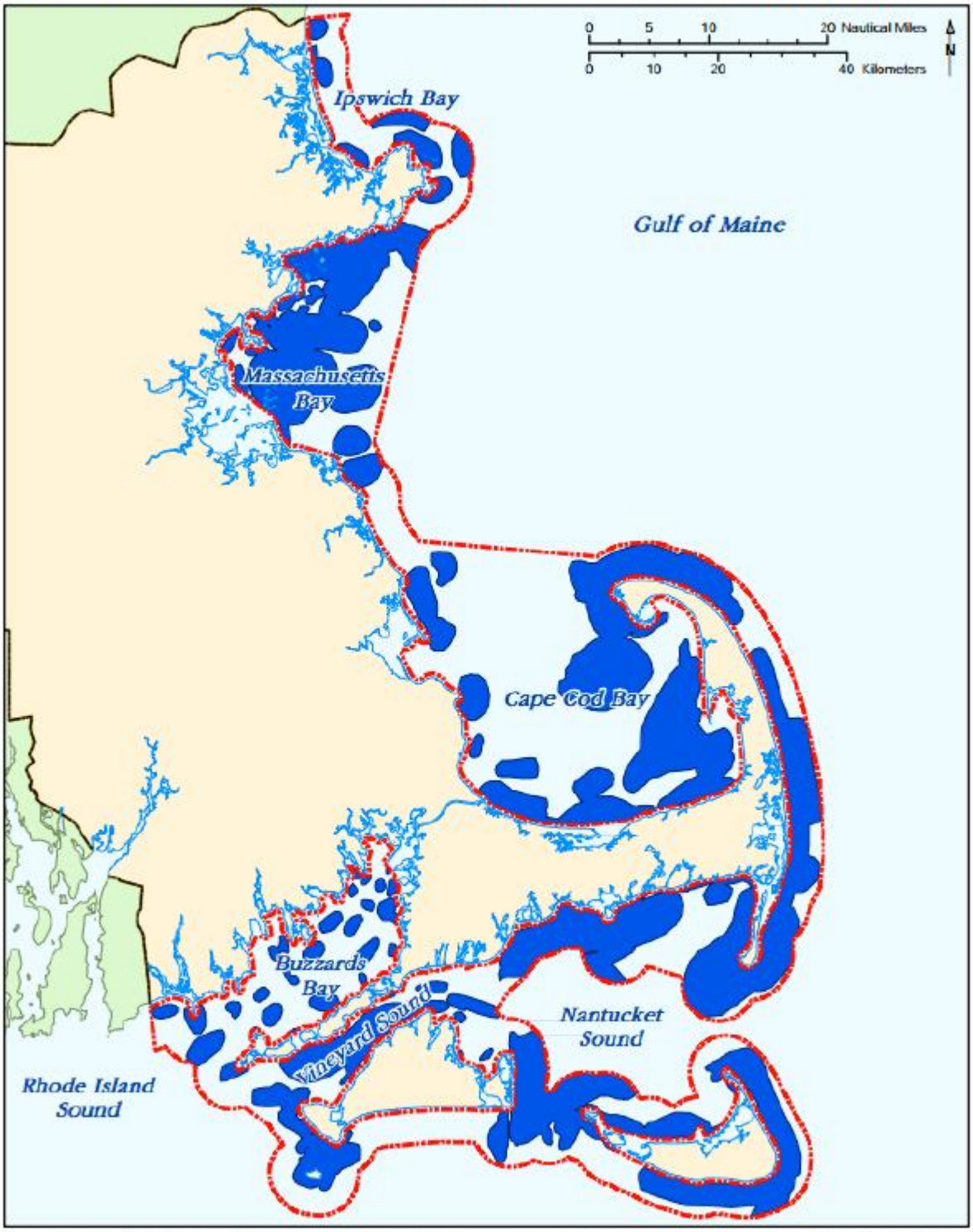


Figure 6.3 Recreational boating and fishing areas identified by a Massachusetts Marine Trades Association (MMTA) survey

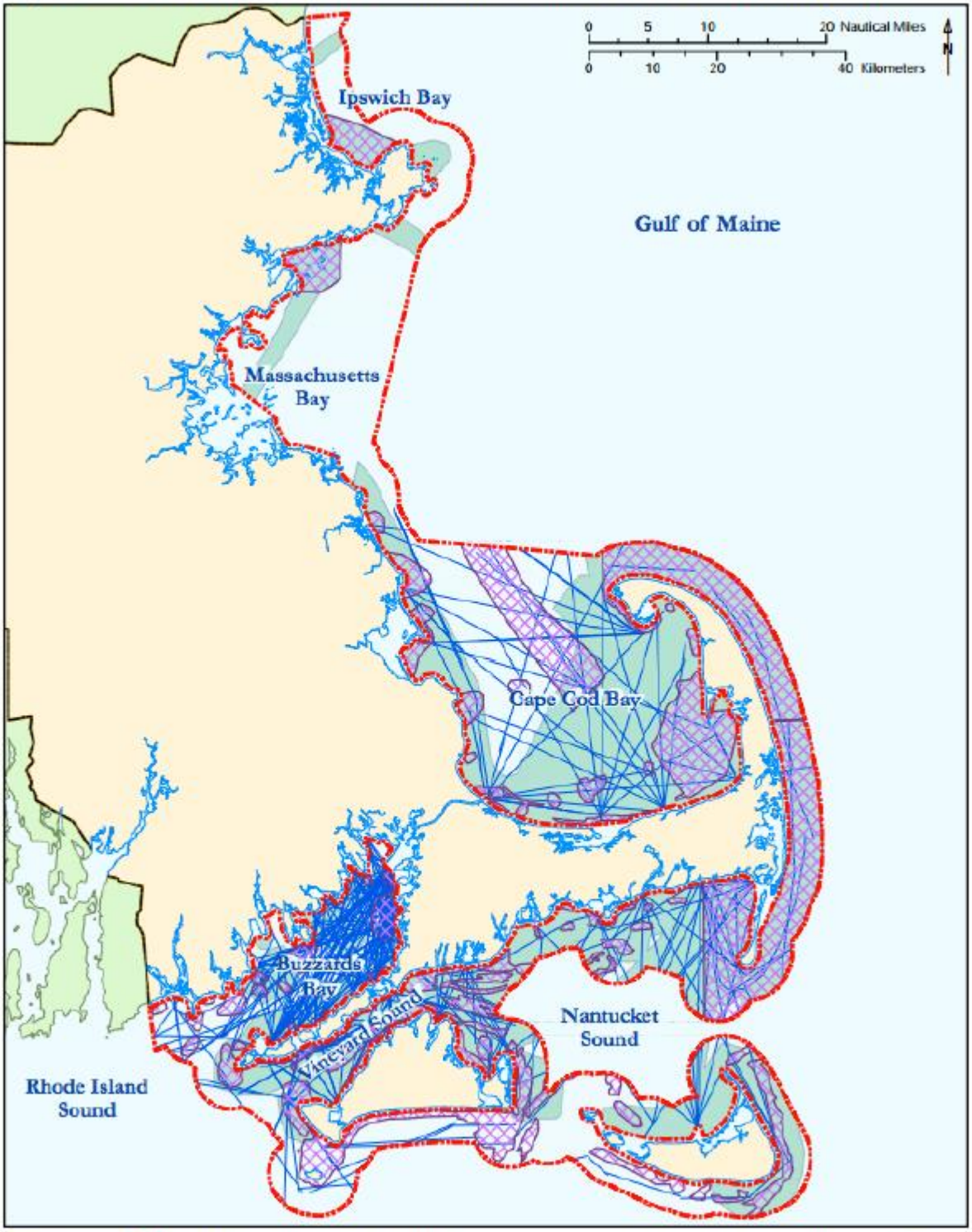


Figure 6.4 Popular dive sites in and adjacent to the Massachusetts ocean management planning area

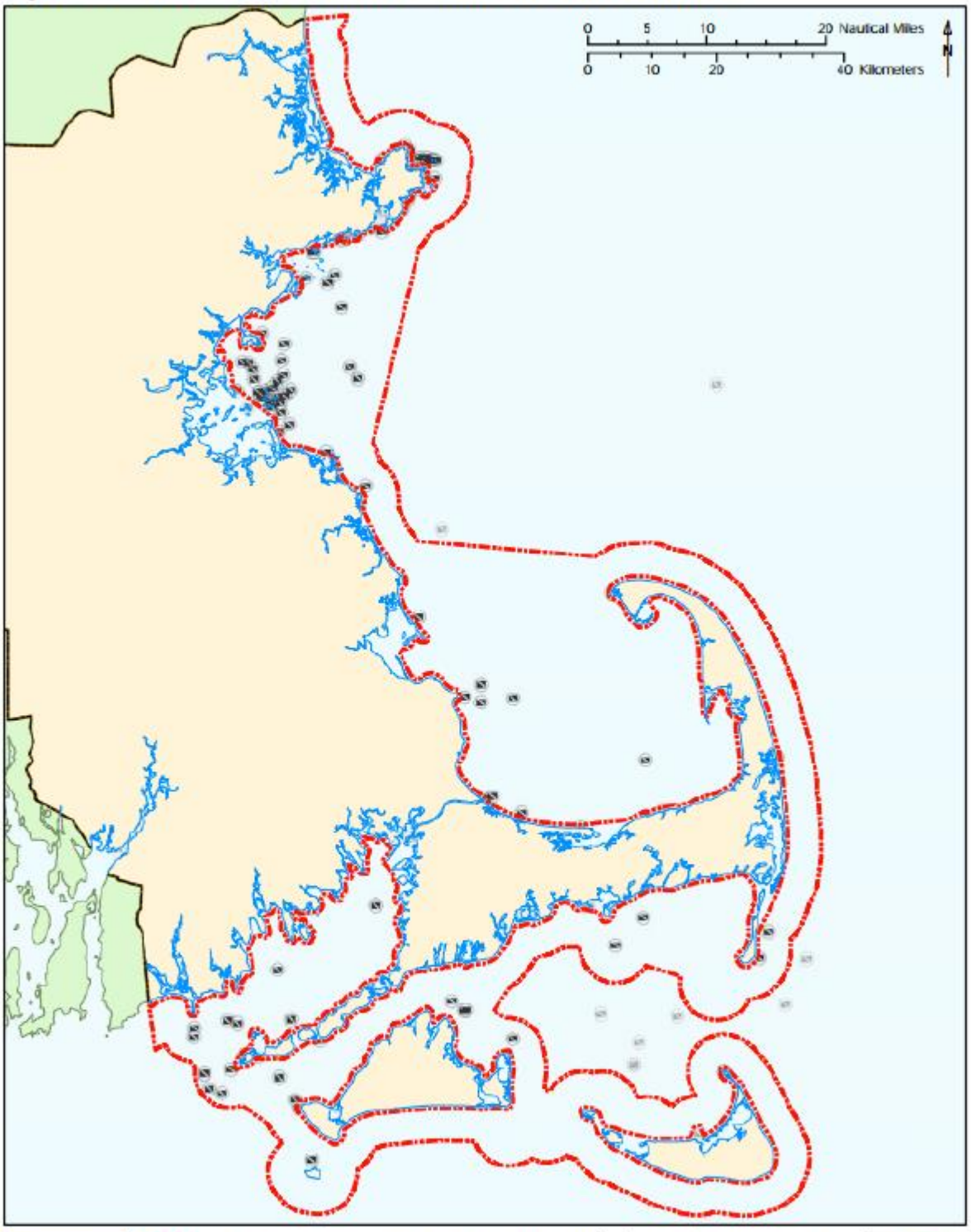


Figure 6.5 Infrastructure, navigation lanes, and transportation routes

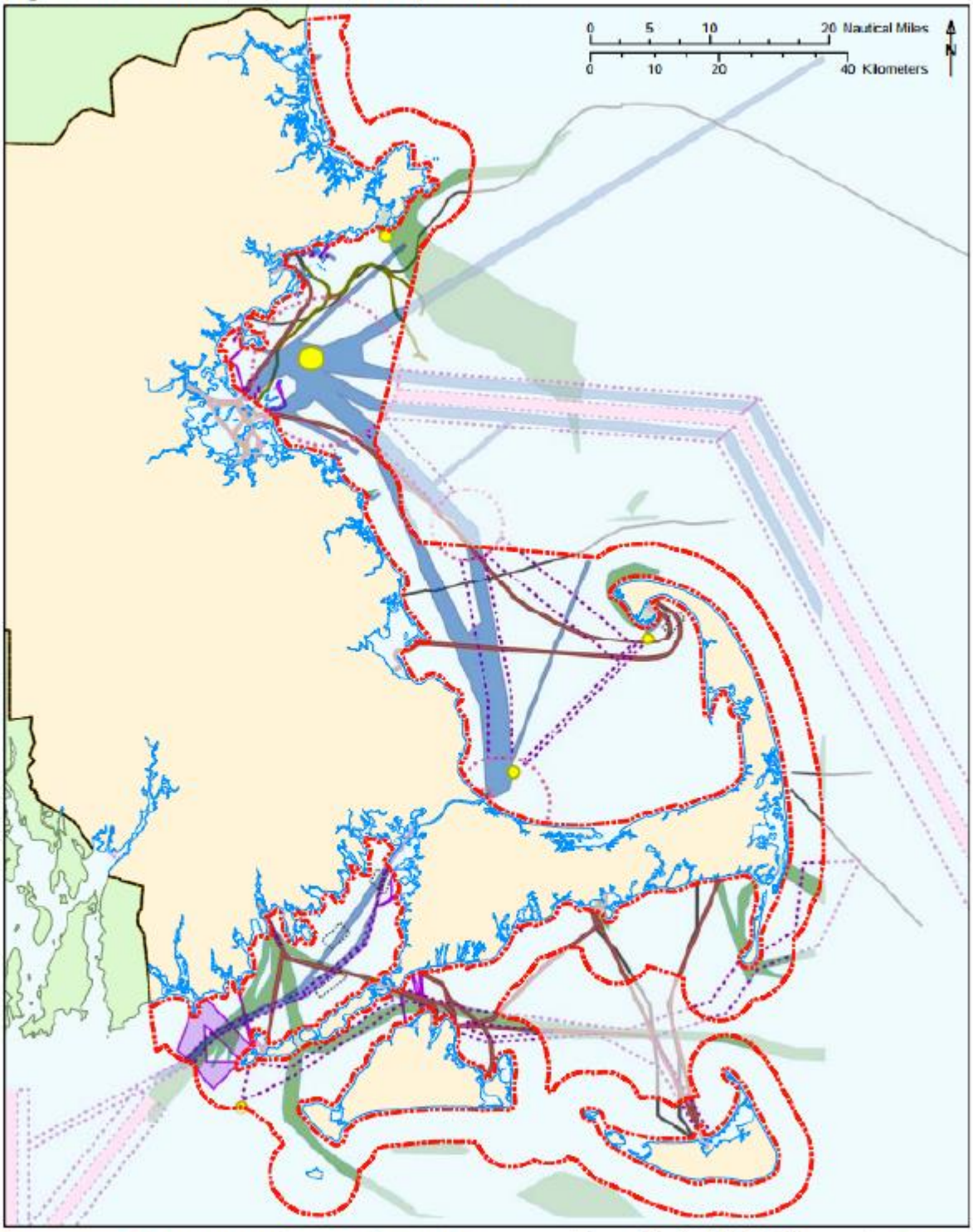
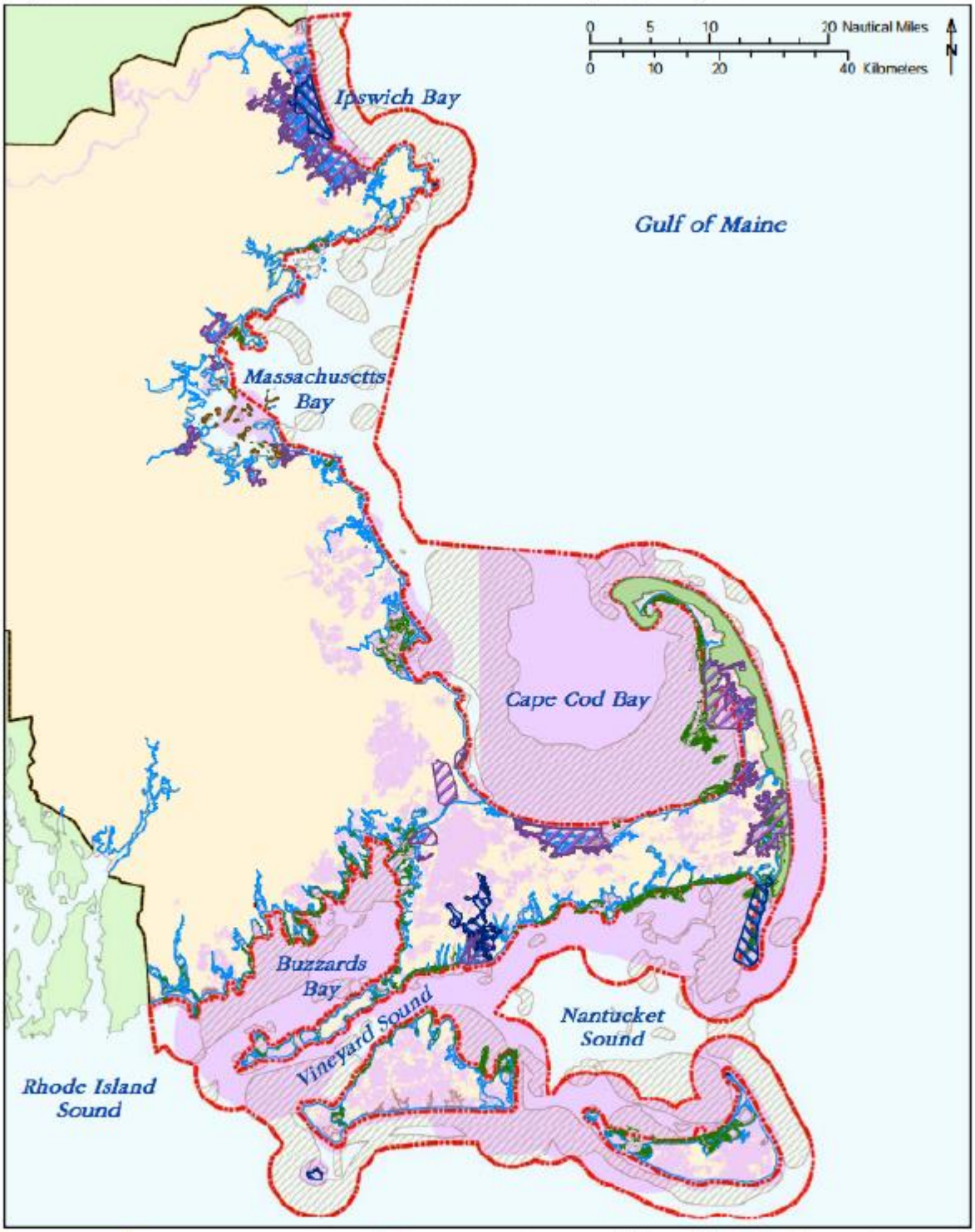


Figure 6.7 Protected areas in and adjacent to the Massachusetts ocean management planning area



Weak Link Figure 1

Chatham Kelp LLC

Weak Link Figure 2

Center for Coastal Studies Provincetown

Hiebert Marine Laboratory
5 Holway Avenue
Provincetown, MA 02657
tel (508) 487-3623 fax (508) 487-4695

Cursory Site Characterization of Proposed Kelp Farm off of Harding's Beach, Chatham

The Center for Coastal Studies was asked by the Town of Chatham to provide comments on the 3 sites for a proposed kelp farm based off of Harding's Beach in Chatham. This analysis is based solely on previous acoustic marine surveys conducted by the Center for the Town and general knowledge of the area. These surveys were conducted, in part, to document the presence or absence of eelgrass as well as pre-dredge conditions off of Harding's Beach (Figure 1). Vessel-based acoustic surveys were conducted on August 19, 20, 30, and September 14, 16 and an underwater video survey was conducted on October 16th 2013. This review is based on those data and knowledge of the area with regards to sediment transport, benthic (bottom) habitat and general oceanographic conditions of this area of Nantucket Sound.

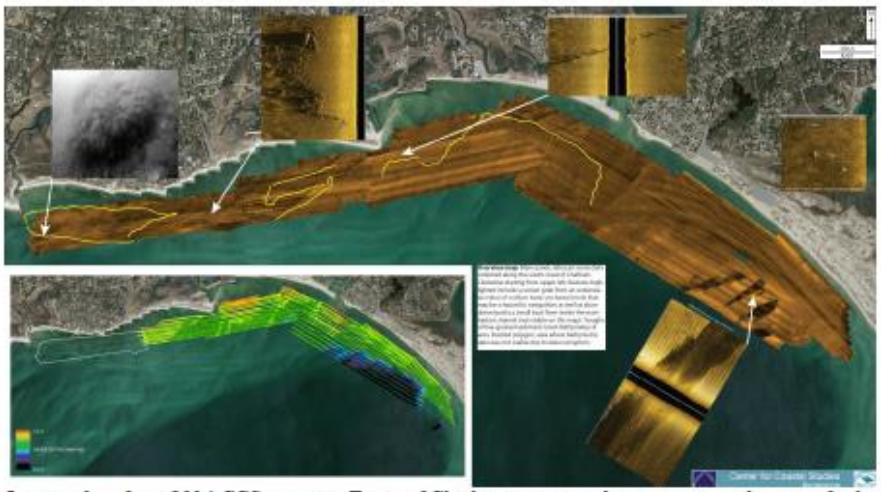


Figure 1. Image taken from 2014 CCS report to Town of Chatham to assess the presence or absence of submerged aquatic vegetation.

Based on the previous surveys no eelgrass was present on the seafloor within the mapped area. It should be noted that Area 3 and the southern edge of Area 2 were not covered by the acoustic surveys (Figure 2) so nothing can be definitively said with regards to those at the time of the surveys. However, it is not likely that eelgrass was present in that location during the time of the

survey. Present oceanographic conditions, waves, tides and currents have changed little in the interim.

Figure 2. Areas 1 and 2 are approximate locations of disposal sites used by the US Army Corps of Engineers when dredging the entrance channel to Stage Harbor. Both of these sites are potential Kelp Farm Locations. Area 3 is approximate boundary of the proposed kelp farm site that is not dredge disposal site. All location information was provided by the Town. The overall area of active sediment transport as noted by the bedforms visible in the aerial photograph (taken in 2016) immediately to the east of the Area 3 and seen in the sidescan sonar imagery. The darker areas seen in the sidescan sonar imagery in Box 2 is finer-grained material, i.e. fine-grained sand, silt, etc.

The sites are all in the zone of the nearshore where sediment transport processes are active. The bottom is overlain, or covered, by unconsolidated sand, unless otherwise noted, and is an area of persistent deposition due to the net direction of sediment transport from west to east. This material is occasionally dredged to keep the entrance to Stage Harbor navigable.

Town of Chatham

Office of the Selectmen
Town Manager
549 Main Street
Chatham, MA 02633

Jill R. Goldsmith
TOWN MANAGER
jgoldsmith@chatham-ma.gov

Tel: (508) 945-5105
Fax: (508) 945-3550
www.chatham-ma.gov

MEMORANDUM

TO: All Interested State/Federal Agencies

FROM: Jill R. Goldsmith, Town Manager

DATE: May 26, 2017

SUBJECT: Proposed Kelp Farming Pilot Project

On May 2, the Chatham Board of Selectmen (Board) discussed the merits of a pilot project for commercial farming and harvesting of Sugar Kelp (*Saccharina latissimi)* within Chatham waters as proposed by Mr. Jamie Bassett. The Board unanimously endorsed the proposal and offered strong encouragement for a successful effort. The Board also recommends that state and federal agencies support Mr. Bassett's efforts to obtain the necessary permits and/or approvals that would enable him to commence operations as soon as possible.

Kelp farming is a new aquacultural endeavor for the region and has not been undertaken in Chatham. The prospect of a new sustainable enterprise for kelp farming has the potential to provide both environmental and economic benefits to Chatham and the surrounding region. There is a growing demand for kelp for a variety of products including food, fertilizers, pharmaceuticals, cosmetics, and biofuel. The market for kelp is expanding and if farming is proven successful in Chatham it has the potential to become a profitable commercial enterprise providing increased employment opportunities. The potential for job creation is particularly attractive to our maritime workforce since kelp farming is conducted during the fall through early spring seasons when traditional fishing opportunities are diminished.

With input from Town staff, Mr. Bassett identified two general locations for installation of the bottom-anchored kelp growing gear. These sites have been reviewed by the Town and are considered acceptable for the activity and season proposed. The Town recognizes that kelp farming is relatively new at the state level and that further coordination and licensing will be necessary to ensure the activity is conducted in a safe and sustainable manner. The Town is fully committed to working cooperatively with state and federal agencies to establish appropriate protocols and/or conditions of operation to improve the chance for successful implementation.

In summary, the Board is pleased that Mr. Bassett has put forth a proposal of this nature and fully supports his efforts to develop a commercial kelp farming operation in Chatham waters.

Waterways Advisory Committee

549 Main Street
Chatham, MA 02633

To: Board of Selectmen

From: Peter Taylor, Chairman

Date: 2/16/2017

Subject: Kelp Aquaculture Permit

On Monday February 13th, 2017, Mr. Jaime Bassett, a local resident and commercial shellfisherman, presented to our committee his plans for growing kelp in Chatham waters. Under Chapter 265 of our local by-law and MGL CH. 91 the Harbormaster has issued a permit for this activity. The Waterways Advisory Committee enthusiastically endorses this endeavor by Mr. Bassett. With the ever challenging resource and regulatory issues surrounding the fishing industry, it has become essential for our commercial fishermen to diversify in order to remain viable. The Waterways Committee has recommended an annual permit be issued by the Harbormaster for a period of 5 years in order for Mr. Bassett to explore the economic and market viability of this project. We further recommend due to the uncertainty of this pilot program and that no specific fee for such a permit exists today, that a fee of $10 a year be assessed. Thank you for your consideration in this matter and we anticipate your board will want to support this project along with the members of our committee.

Cc: Jaime Bassett
Stuart Smith, Harbormaster

Town of Chatham

Shellfish Advisory Committee

April 13, 2017

To: Chatham Board of Selectmen
From: Chatham Shellfish Advisory Committee
Re: Kelp Permit

Dear Board members:

On March 30th, the Shellfish Advisory Committee (SAC) heard a proposal from Mr. James Bassett to grow kelp in Nantucket Sound. The locations would be over existing designated dredge dumping areas. There is little evidence of shellfish or eelgrass in these areas that could be impacted by the kelp growing process. The season is from November to April, so there would be little impact on boat traffic. The kelp would be supplied by Woods Hole Oceanographic Institute, which has sanctioned the grow-out in Nantucket Sound.

After discussion, the SAC determined that there would be no significant impact to shellfish or shellfish habitat, and voted unanimously to support the proposal.

Respectfully submitted,

David Likos,
Shellfish Advisory Committee

To: Chatham Bard of Selectmen
From: South Harbor Plan Committee
Subj: Kelp Permit
Date: April 27, 2017

Dear Members of the Board of Selectmen,

Jamie Bassett made a presentation to the South Coastal Harbor Plan Committee on April 21, 2017.

He proposes to grow sugar kelp (saccharina latissima) at one ore more locations in Chatham waters: Nantucket Sound, Outermost Harbor and/or Pleasant Bay.

The equipment he proposes to use would be set at least six feet under the surface, except for the buoys at each end of each line, and the growing season would be from November to April. The interference with navigation would be minimal.

He would base his operations in a location or locations which would not interfere with potential growth of eelgrass or with other fishing or shellfishing operations.

There appears to be demand for sugar kelp and it has the potential of generating local employment during the off-season.

He recognizes the state and federal permits he will require.

The South Coastal Harbor Plan Committee supports Jamie Basset's initiative and urges the Board of Selectmen to do likewise.

Michael Westgate, Chair