

DMF Updates & Emerging Issues

Shellfish Advisory Panel – November 18, 2021

NSSP Mooring Area Requirement

- The [National Shellfish Sanitation Program \(NSSP\)](#) regulates all harvest, handling and processing of bivalve molluscan shellfish in the US. The NSSP is a product of the [Interstate Shellfish Sanitation Conference \(ISSC\)](#), a state-federal-industry partnership which meets every two year to promulgate new regulations.
- At the ISSC biennial conference in October 2019 new requirements for mooring area assessment were adopted. The Massachusetts Division of Marine Fisheries is in the process of identifying, mapping and reclassifying mooring areas which meet the new definition in the NSSP. This presentation will review those requirements and present several mooring area examples along with DMF's sanitary classification of those areas.



Mooring Area Assessment

- Passed the Interstate Shellfish Sanitation Conference (ISSC) - October 2019
- New requirement published in “2019 NSSP” revision → October 2020
 - Mooring Areas must be delineated with more than 20 boats
 - Mooring areas must be classified as Conditionally Approved or below
 - Pollution Assessment now required of these mooring areas
 - Boats are a potential and direct source of pollution
 - If mooring area deemed a pollution source, justification needed for OPEN status
 - If pollution source, a dilution analysis required to determine if impact to adjacent waters
 - If calculation indicates adjacent waters negatively impacted – must be CLOSED
 - Areas may be reopened once boats are pulled for winter and assessment determines area is not a pollution source



Pollution Assessment Determination

- DMF conducts a Pollution Assessment (PA) for all defined mooring areas
- PA results in Mooring Area **Determination**:
 - Classify area to Prohibited / **CLOSED**
 - Classify area to Conditionally Approved with **CLOSED** status during boat season
 - Classify area to Conditionally Approved with **OPEN** status during boat season



Mooring Area Inventory

Areas **CLOSED** during boating season

Town(s)	Mooring Area Name	Growing Area	Area Designation	Classification	Opening Date	Closing Date	Redef/Reclass Notice Date
CLOSED		66					
Barnstable	Cotuit Oyster Company	SC21, Cotuit Bay	SC21.4	Cond. App.	Nov-1	May-15	5/26/2021
Barnstable	Cotuit Town Landing	SC21, Cotuit Bay	SC21.6	Cond. App.	Nov-1	May-15	5/26/2021
Barnstable	Bridge Street	SC22, West Bay	SC22.2	Cond. App.	Nov-1	May-15	5/14/2021
Barnstable	Hyannis Outer Harbor Mooring Area	SC27 Hyannis Outer Harbor	SC27.5	Cond. App.	Nov-1	May-1	4/30/2021
Barnstable	Mills River/Prince Cove Mooring Area	SC23, North Bay	SC23.1	Cond. App.	Feb-15	May-1	4/30/2021
Barnstable	North Bay Mooring Area	SC23, North Bay	SC23.2	Cond. App.	Nov-1	May-1	4/30/2021
Barnstable/Yarmouth	Hyannis Yacht Club Mooring Area	SC27 Hyannis Outer Harbor	SC28.8	Cond. App.	Nov-1	Jun-1	5/28/2021
Barnstable/Yarmouth	Hyannis Yacht Club Mooring Area	SC28 Lewis Bay	SC28.8	Cond. App.	Jun-1	Oct-31	5/28/2021
Bourne	Mashnee Road	BB46, Phinney's Harbor	BB46.3	Cond. App.	Sep-1	Jul-31	7/30/2021
Bourne	Red Brook Harbor	BB49, Red Brook and Pocasset Harbors	BB49.1	Cond. App.	Nov-15	Apr-15	4/30/2021
Bourne	Mill Pond	BB49, Red Brook and Pocasset Harbors	BB49.6	Cond. App.	Oct-1	Jun-1	5/28/2021
Bourne	Hospital Cove	BB49, Red Brook and Pocasset Harbors	BB49.7	Cond. App.	Oct-1	Jun-1	5/28/2021
Bourne/Falmouth	Squeteague Harbor	BB50	BB50.3	Cond. App.	Oct-1	Jul-1	6/30/2021
Dartmouth	Apponagansett Bay	BB12, Apponagansett Bay	BB12.3	Cond. App.	Nov-1	May-1	4/30/2021
Edgartown	Edgartown Inner Harbor Mooring Area	V19	V19.1	Cond. App.	Nov-1	May-1	4/30/2021
Essex	Conomo Point Mooring Area East	N7, Essex Bay	N7.10	Cond. App.	Nov-1	Apr-16	4/15/2021
Essex	Conomo Point Mooring Area West	N7, Essex Bay	N7.11	Cond. App.	Nov-1	Apr-16	4/15/2021
Fairhaven	West Island North Mooring Area	BB18, West Island	BB18.4	Cond. App.	Nov-1	May-1	4/30/2021



Mooring Area Inventory

Areas **CLOSED** during boating season

Town(s)	Mooring Area Name	Growing Area	Area Designation	Classification	Opening Date	Closing Date	Redef/Reclass Notice Date
CLOSED							
Falmouth	Quisset Harbor	BB58, Quisset Harbor	BB58.2	Cond. App.	Nov-1	May-1	4/30/2021
Falmouth	Great Harbor	SC2, Great Harbor	SC2.2	Cond. App.	Nov-14	May-28	5/27/2021
Falmouth	Edgewater Drive East Mooring Area	SC14, Eel River East	SC14.6	Cond. App.	Nov-14	May-1	4/30/2021
Falmouth	Waquoit Bay	SC15 Waquoit Bay	SC15.3	Cond. App.	Nov-14	May-1	4/30/2021
Falmouth	Green Pond Mooring Area	SC12	SC12.4	Cond. App.	Nov-1	May-1	4/30/2021
Gloucester	Lobster Cove South Mooring Area	N9	N9.26	Cond. App.	Oct-16	May-31	9/3/2021
Gloucester	Wheeler's Point Mooring Area	N9	N9.27	Cond. App.	Oct-16	May-31	9/3/2021
Gloucester	Wheeler's Cove Mooring Area	N9	N9.28	Cond. App.	Oct-16	May-31	9/3/2021
Harwich	Round Cove Mooring Area	SC59	SC59	Cond. App.	Nov-1	May-1	4/30/2021
Ipswich	North Ridge Mooring Area	N4, Plum Island Sound	N4.8	Prohibited	N/A	N/A	2/5/2021
Ipswich	Ipswich Bay Yacht Club Mooring Area	N4, Plum Island Sound	N4.9	Prohibited	N/A	N/A	2/5/2021
Ipswich	Clark Beach Mooring Area	N4, Plum Island Sound	N4.10	Prohibited	N/A	N/A	2/5/2021
Ipswich	Pavilion Beach Mooring Area	N4, Plum Island Sound	N4.11	Prohibited	N/A	N/A	2/5/2021
Ipswich	Grape Island Mooring Area	N4, Plum Island Sound	N4.12	Prohibited	N/A	N/A	2/5/2021
Ipswich	Eel Run Mooring Area	N4, Plum Island Sound	N4.13	Prohibited	N/A	N/A	2/5/2021
Ipswich	Sandy Point Mooring Area	N4, Plum Island Sound	N4.14	Prohibited	N/A	N/A	2/5/2021
Marion	Sippican Inner Harbor	BB32, Sippican Harbor	BB32.13	Cond. App.	Nov-1	May-1	4/30/2021
Marion	Wings Cove	BB34, Wings Cove	BB34.1	Cond. App.	Nov-1	May-1	4/30/2021
Marion/Wareham	Lower River Mooring Area	BB35, Weweantic	BB35.0	Cond. App.	Oct-1	Jun-1	5/28/2021
Mashpee	Ockway Bay Mooring Area	SC19, Ockway Bay	SC19.2	Cond. App.	Oct-15	May-1	4/30/2021
Mashpee	Great River Mooring Area	SC16, Great River	SC16.4	Cond. App.	Oct-15	May-1	4/30/2021
Mattapoisett	Mattapoisett Inner Harbor	BB25, Mattapoisett Harbor	BB25.2	Cond. App.	Nov-1	May-1	4/30/2021
Nantucket	Nantucket Harbor West	NT2, Nantucket Harbor West	NT2.6	Cond. App.	Nov-1	May-1	4/30/2021
Newbury/Newburyport	Basin Mooring Area	N2, Merrimack River	N2.6	Cond. Res.	Nov-1	Jun-1	6/1/2021



Mooring Area Inventory

Areas **CLOSED** during boating season

Town(s)	Mooring Area Name	Growing Area	Area Designation	Classification	Opening Date	Closing Date	Redef/Reclass Notice Date
CLOSED							
Oak Bluffs	Medieros Cove	V11, Lagoon Pond	V11.5	Cond. App.	Nov-1	May-15	7/7/2021
Oak Bluffs	Mouth of Oak Bluffs Harbor Mooring Area	V13, Oak Bluffs Harbor	V13	Cond. App.	Nov-1	May-1	4/30/2021
Oak Bluffs	Oak Bluffs Harbor Mooring Area	V14	V14.1	Cond. App.	Nov-1	May-1	4/30/2021
Orleans	Arey's Pond Mooring Area	SC63 Arey's Pond	SC63.4	Cond. App.	Nov-1	May-1	4/30/2021
Orleans	Nauset Marine	SC63 Meetinghouse Pond	SC63.5	Cond. App.	Nov-1	May-1	4/30/2021
Provincetown	Inner Harbor Mooring Area	CCB4, Provincetown Harbor	CCB4.1	Prohibited	N/A	N/A	4/30/2021
Provincetown	Wood End Mooring Field	CCB4, Provincetown Harbor	CCB4.2	Prohibited	N/A	N/A	4/30/2021
Swansea	Swansea Marina and Mooring Area	MHB4, Cole River	MHB4.3	Cond. App.	Nov-1	May-1	5/14/2021
Swansea	Sea View Ave	MHB4, Cole River	MHB4.01	Cond. App.	Nov-1	May-1	4/30/2021
Tisbury	Town Anchor	V8, Lake Tashmoo	V8.3	Cond. App.	Nov-1	Jun-15	6/14/2021
Tisbury	East Tashmoo	V8, Lake Tashmoo	V8.2	Cond. App.	Nov-1	May-15	5/14/2021
Tisbury	Breakwater North	V10, Vineyard Haven Harbor	V10.2	Cond. App.	Nov-1	Jun-15	6/14/2021
Tisbury	Reniers Mooring Area	V11, Lagoon Pond	V11.10	Cond. App.	Oct-15	Jul-20	7/19/2021
Tisbury	Vineyard Haven Inner Harbor Mooring Area	V10, Vineyard Haven Harbor	V10.1	Cond. App.	Nov-1	May-1	4/30/2021
Truro	Pamet Harbor Mooring Area	CCB7, Pamet Harbor	CCB7.1	Cond. App.	Nov-1	May-1	4/30/2021
Wareham	Town Pier	BB40, Onset Bay	BB40.3	Cond. App.	Nov-1	May-1	4/30/2021
Wareham	Eastern Side of Onset Bay Mooring Area	BB40, Onset Bay	BB40.6	Cond. App.	Nov-1	May-1	4/30/2021
Wareham	Sunset Cove	BB41, Sunset Cove	BB41.0	Cond. App.	Nov-1	May-1	4/30/2021
Wareham	Tempest Knob	BB36, Wareham River	BB36.14	Cond. App.	Jan-1	May-1	4/30/2021
Wareham	East River, Broad Cove	BB42 East River	BB42.2	Cond. App.	Nov-1	May-1	4/30/2021
Wareham	East River, Muddy Cove	BB42 East River	BB42.3	Cond. App.	Dec-1	May-1	4/30/2021
Wellfleet	Chipman's Cove	CCB13, Wellfleet	CCB13.6	Cond. App.	Oct-15	May-22	5/21/2021
Westport	Westport Harbor	BB3, West Branch	BB3.1	Cond. App.	Dec-1	May-1	4/30/2021
Yarmouth	Englewood Mooring Area	SC28 Englewood	SC28.4	Cond. App.	Jun-1	Oct-31	5/28/2021



Mooring Area Inventory

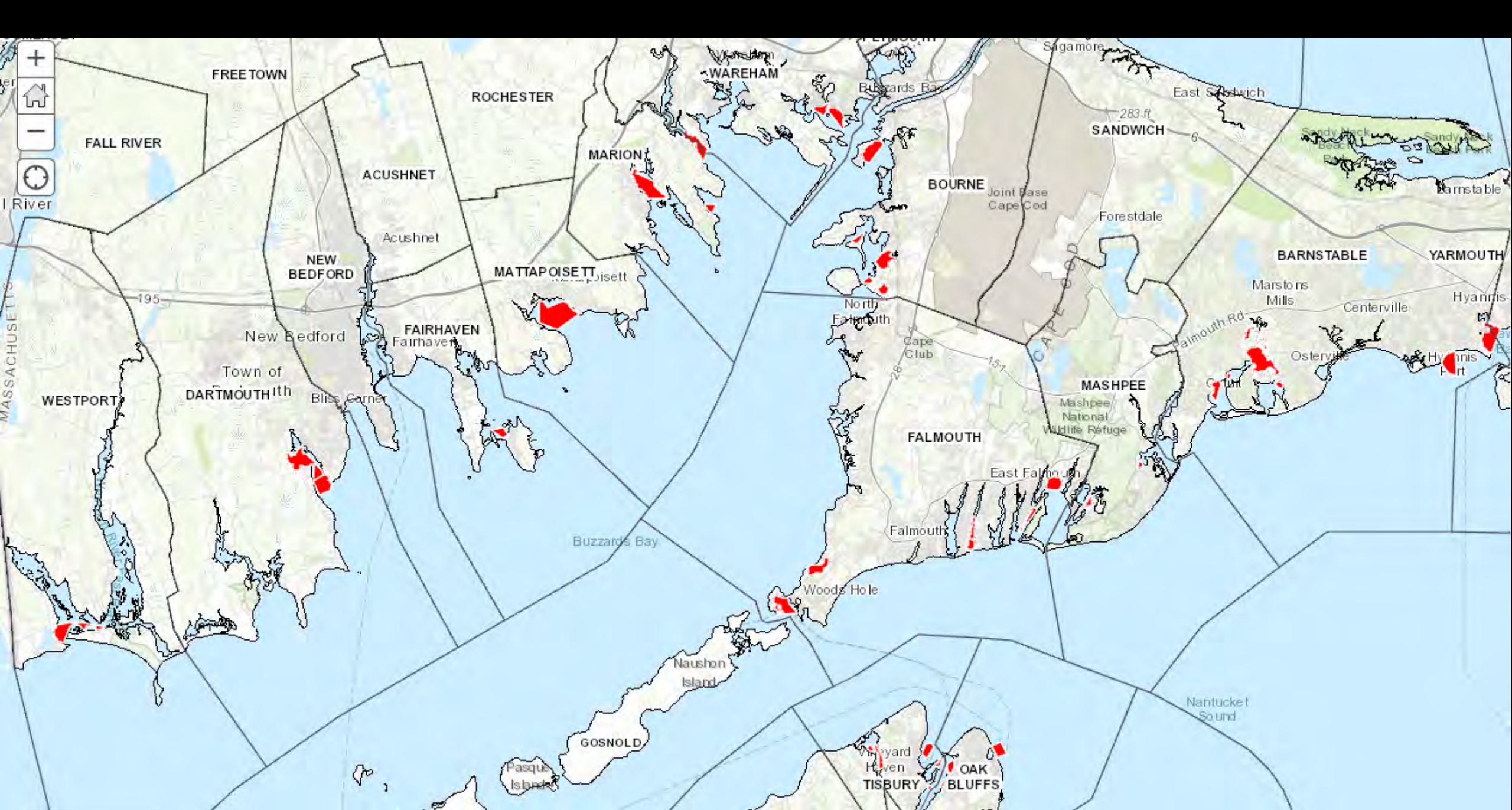
Areas **OPEN** during boating season

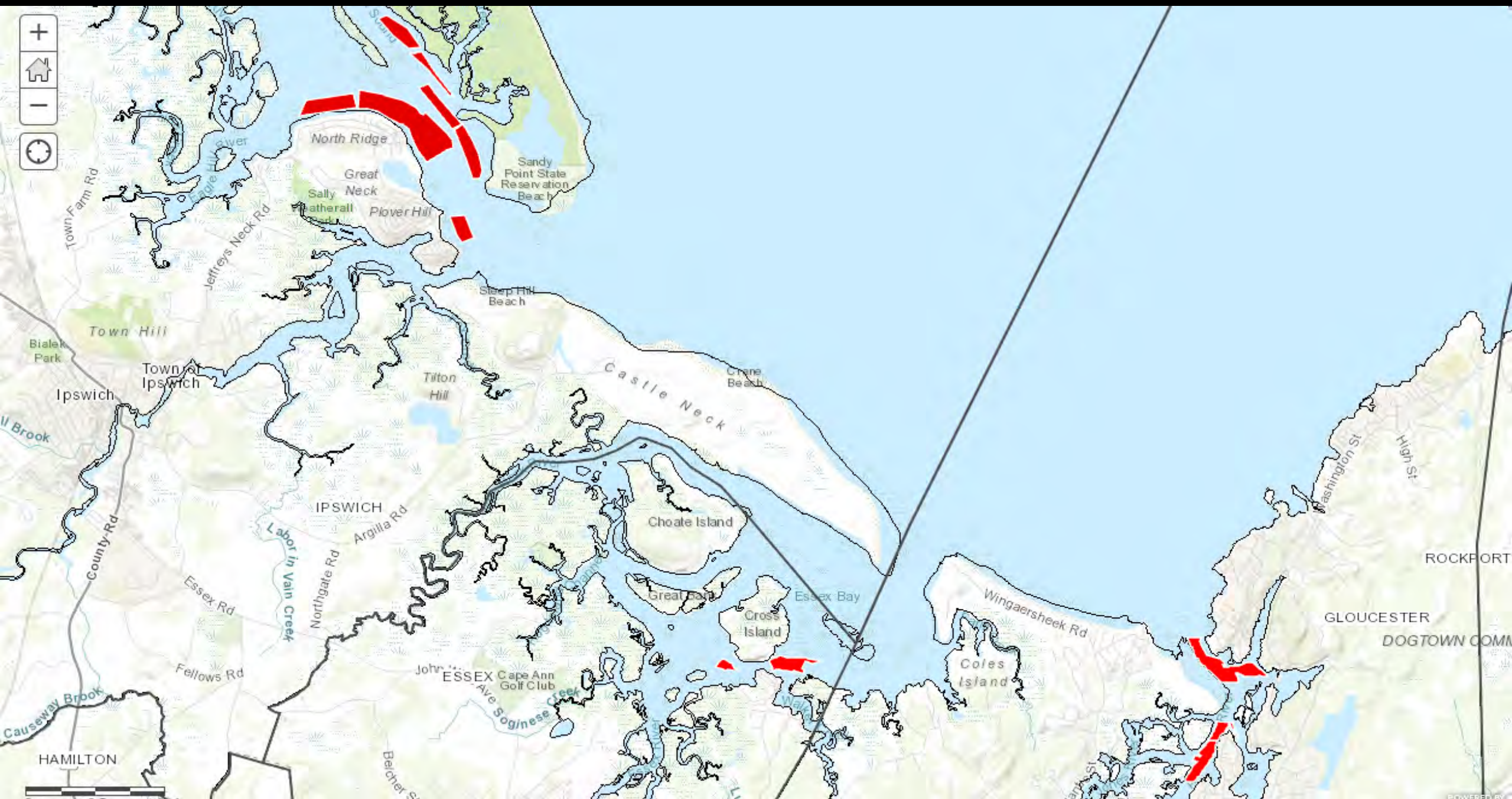
Town(s)	Mooring Area Name	Growing Area	Area Designation	Classification	Opening Date	Closing Date	Redef/Reclass Notice Date
OPEN		8					
Dartmouth	Deep Water Mooring Area	BB12 Apponagansett Bay	BB12.5	Cond. App.	N/A	N/A	4/30/2021
Duxbury	Standish Shores Marine	CCB45	CCB45.4	Cond. App.	N/A	N/A	2/4/2021
Duxbury	Town Pier Offshore Mooring Area	CCB45	CCB45.6	Cond. App.	N/A	N/A	2/4/2021
Duxbury	Town Pier Inshore Mooring Area	CCB45	CCB45.5	Cond. App.	N/A	N/A	2/4/2021
Oak Bluffs/Tisbury	Northeast Corner Mooring Area	V11 Lagoon Pond	V11.4	Cond. App.	N/A	N/A	7/7/2021
Tisbury	Lagoon Landing Mooring Area	V11 Lagoon Pond	V11.6	Cond. App.	N/A	N/A	5/14/2021
Wareham	Sunset Cove Mooring Area	BB41 Sunset Cove	BB41.0	Cond. App.	N/A	N/A	4/30/2021
Westport	Julius Way	BB4, East Branch	BB4.27	Cond. App.	N/A	N/A	3/12/2021

Mooring Areas

Approximately 4,400 acres / Range from 4 - 510 acres / Average 77 acres







- <http://www.issc.org/nssp-guide>

- **@.06 Mooring Areas** (*page 59*)

Reclassification for NSSP Compliance Wastewater Treatment Plant Buffer Zones

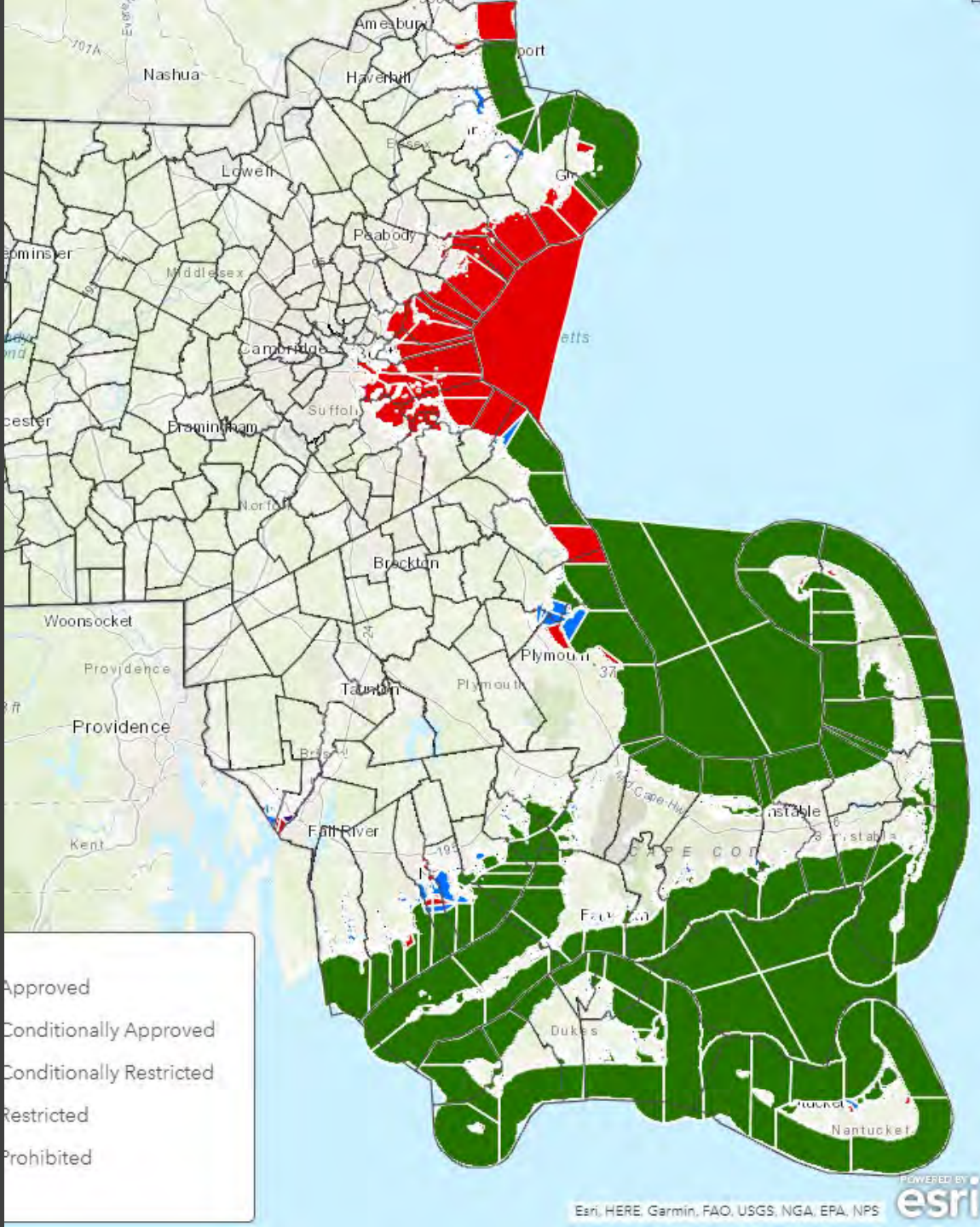
Classification adjacent to Wastewater Treatment Plants

- National Shellfish Sanitation Program (NSSP) Guidance States
 - Without modeled data or dye studies, states are required to set:
 - Mandatory Closed Safety Zone/Prohibited at 1000 / 1 dilution line
 - Conditional area within 100,000 / 1 dilution line
- Impacts
 - CSZ may preclude harvesting
 - Reclassification to Conditionally Approved may impact harvesting
 - Conditional classification requires additional documentation and monthly monitoring by DMF

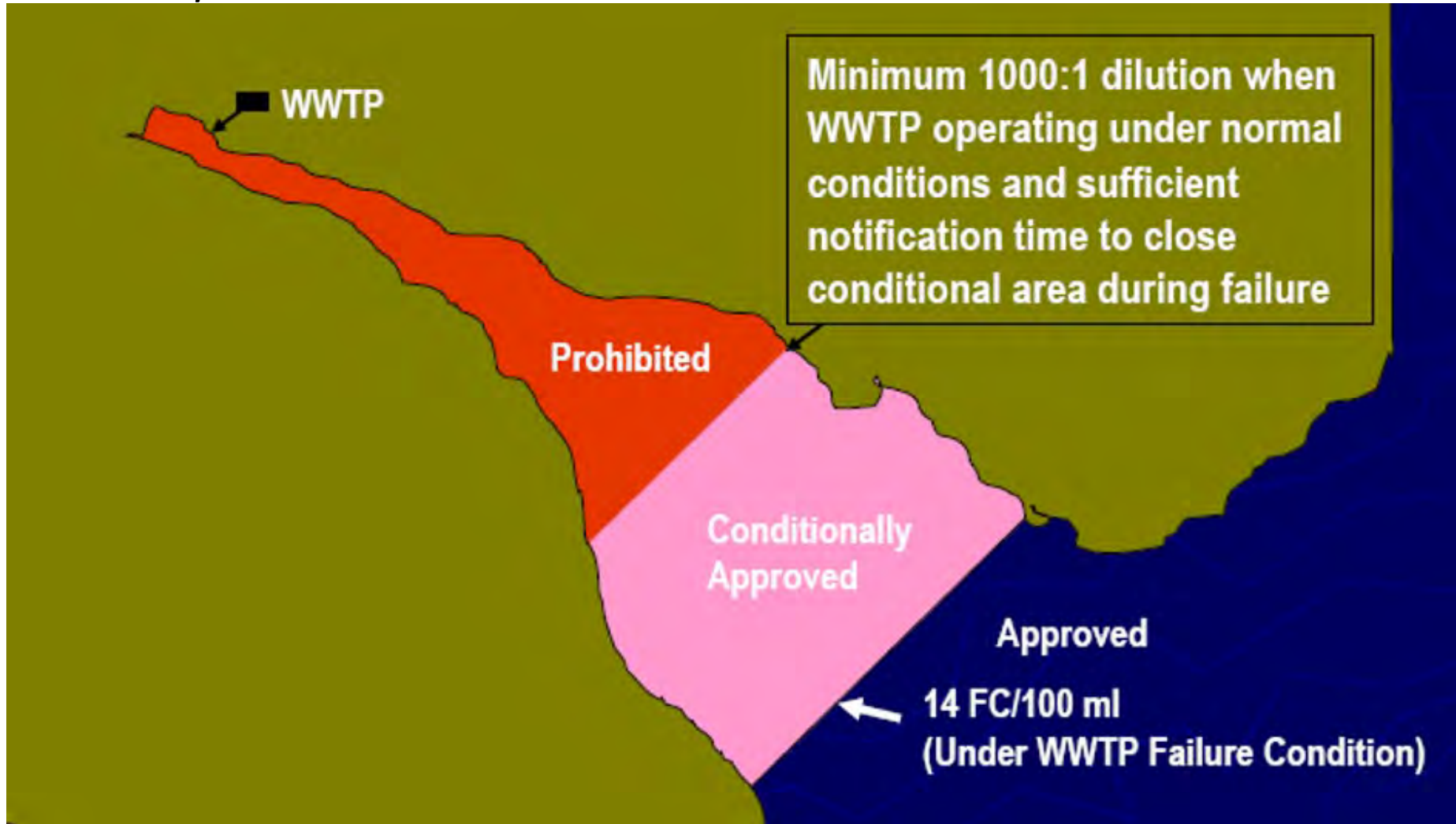


Shellfish Sanitary Classifications

- **Approved** Open to shellfish harvesting for direct human consumption subject to local rules and regulations. Closed only during major coast-wide events.
- **Conditionally Approved** Closed some of the time due to rainfall, wwtp performance, season, or mooring area or other predictable event. When open, it is treated as an Approved area.
- **Restricted** Contains a limited degree of contamination at all times. When open, shellfish can be relayed to a less contaminated area or harvested for depuration.
- **Conditionally Restricted** Contains a limited degree of contamination at all times, subject to intermittent pollution events and may be closed some of the time due to rainfall wwtp performance, or other predictable event.
- **Prohibited** Closed to the harvest of shellfish under all conditions, except the gathering of seed for municipal propagation programs under a DMF permit.



For Example



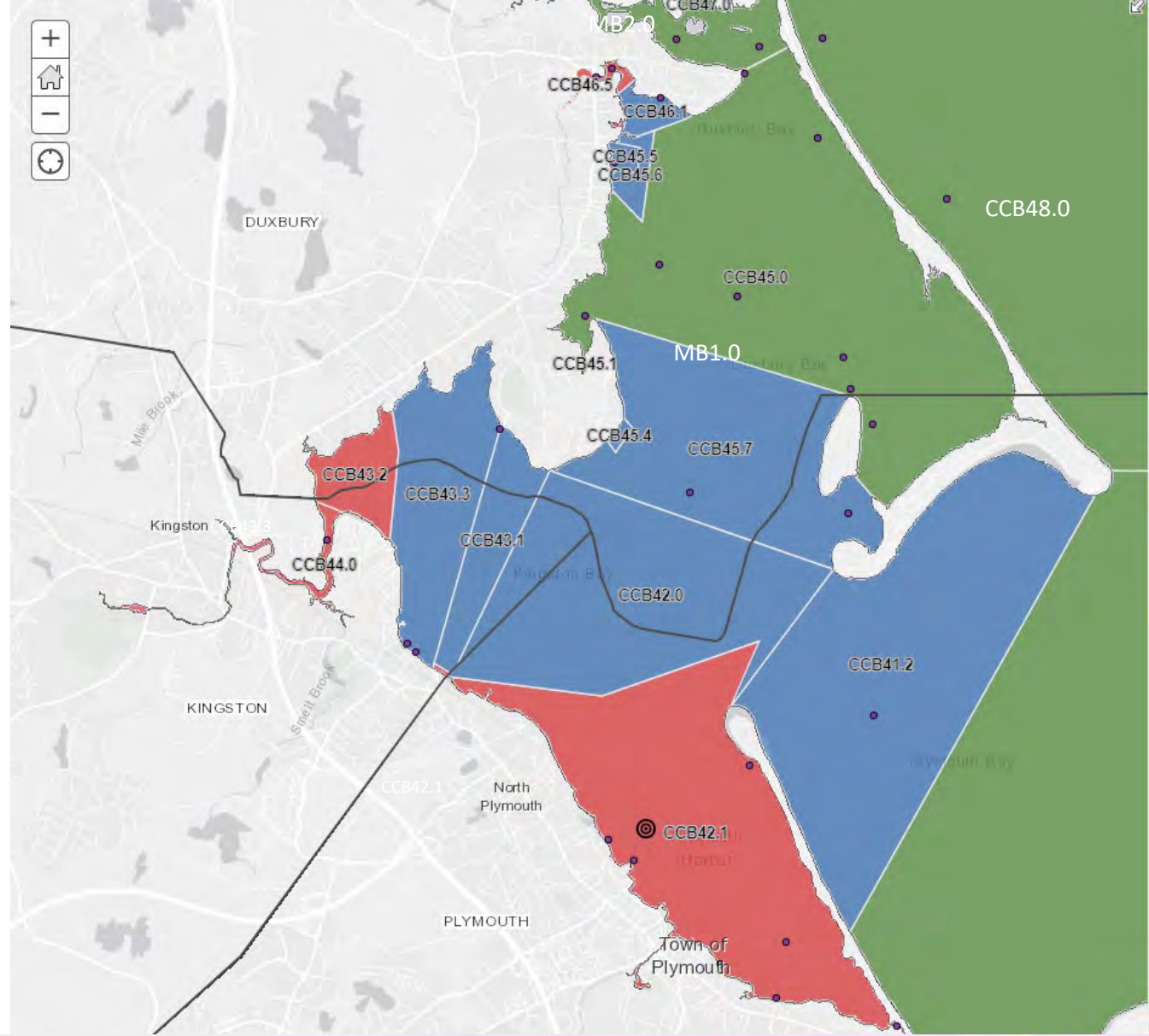
Why follow NSSP?

- Public Health
- Massachusetts member of the Interstate Shellfish Sanitation Conference (ISSC)
- Both DMF and DPH have adopted the National Shellfish Sanitation Conference Model Ordinance by reference in regulation
- Avoid non-compliance
 - Massachusetts could be prevented from exporting product inter-state



[illegible]

Current Classification 3 Bay System

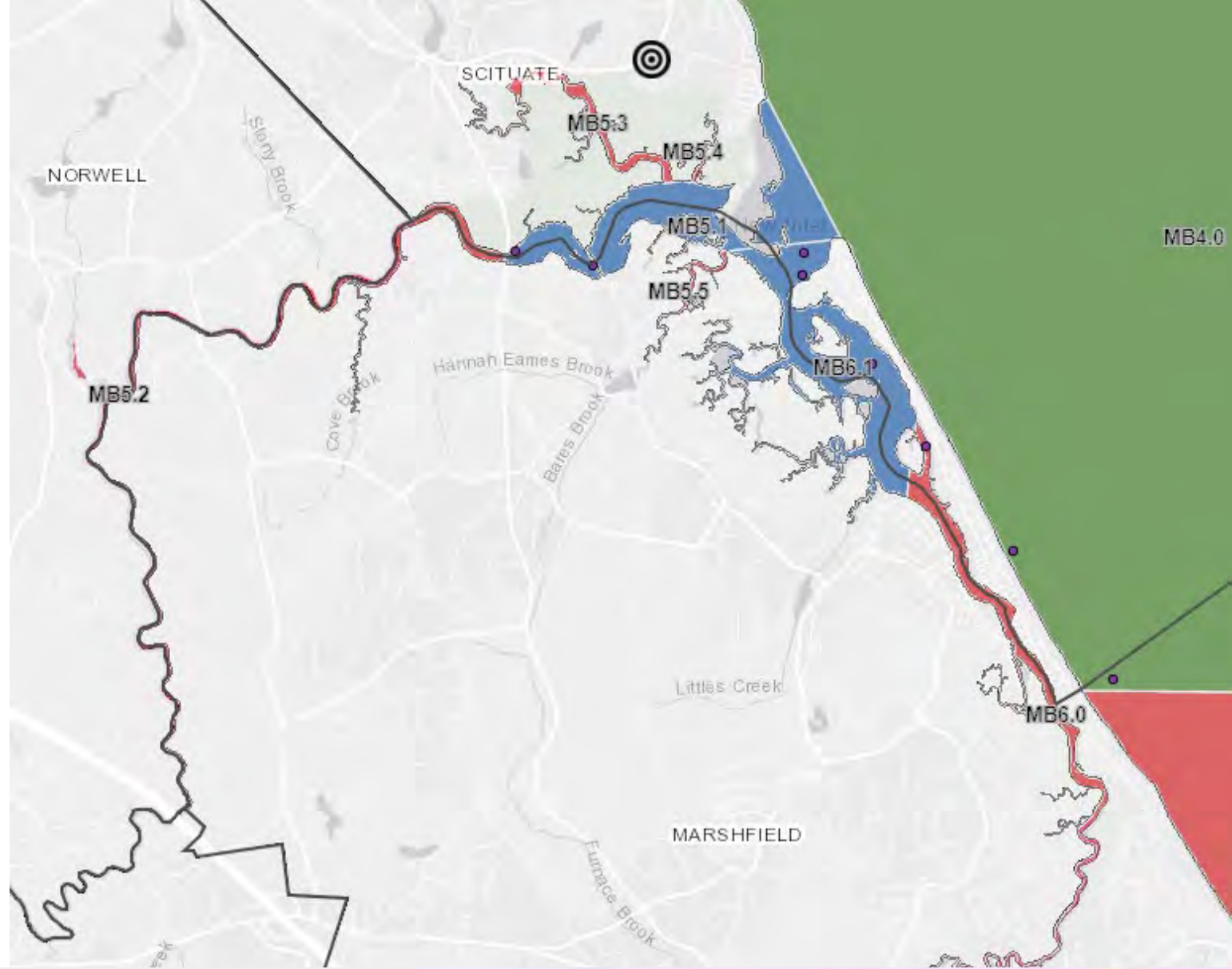


Current Classification North-South River

Conditionally Approved

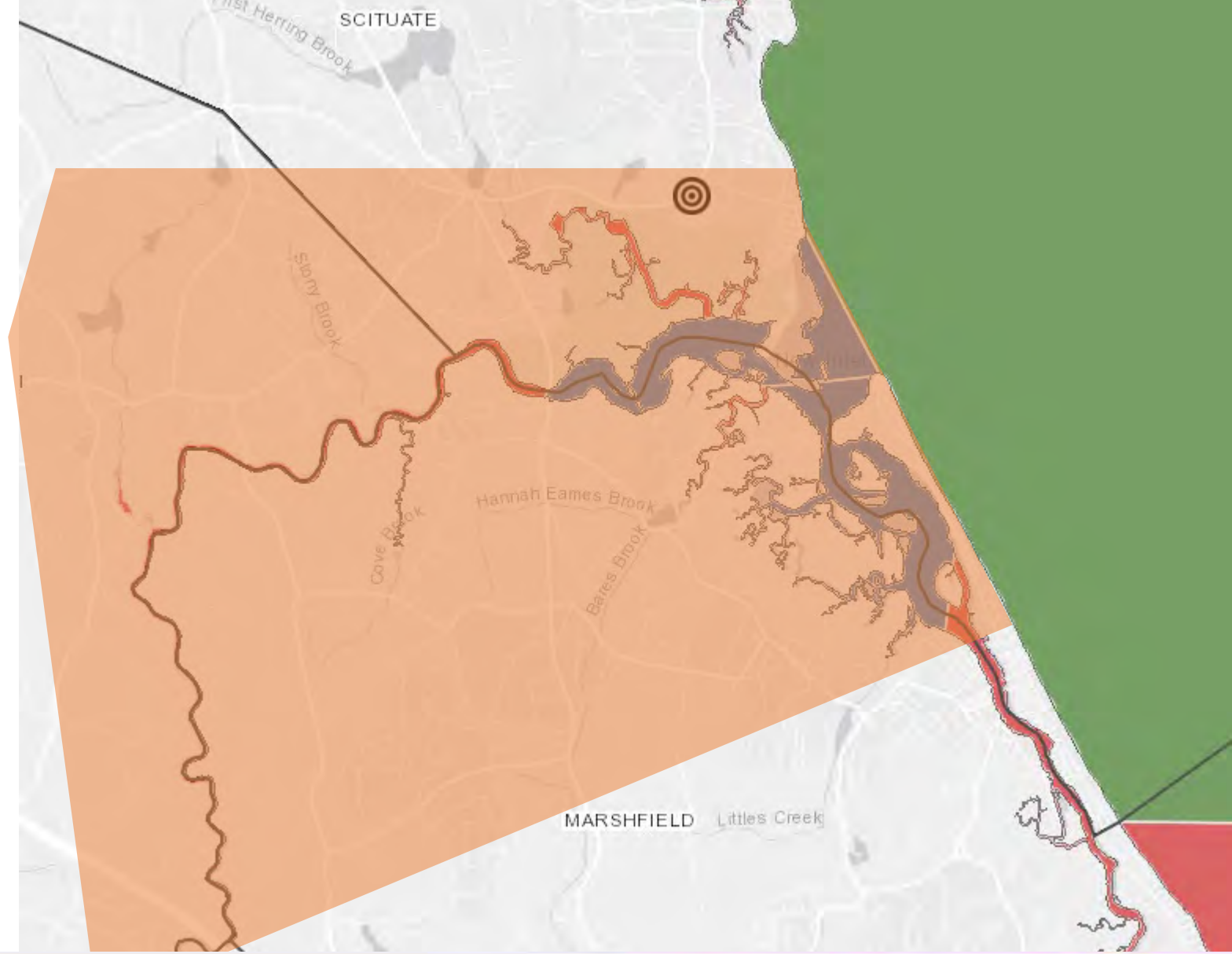
MB5.1, North River East
MB6.1, South River North
Current Status - Closed

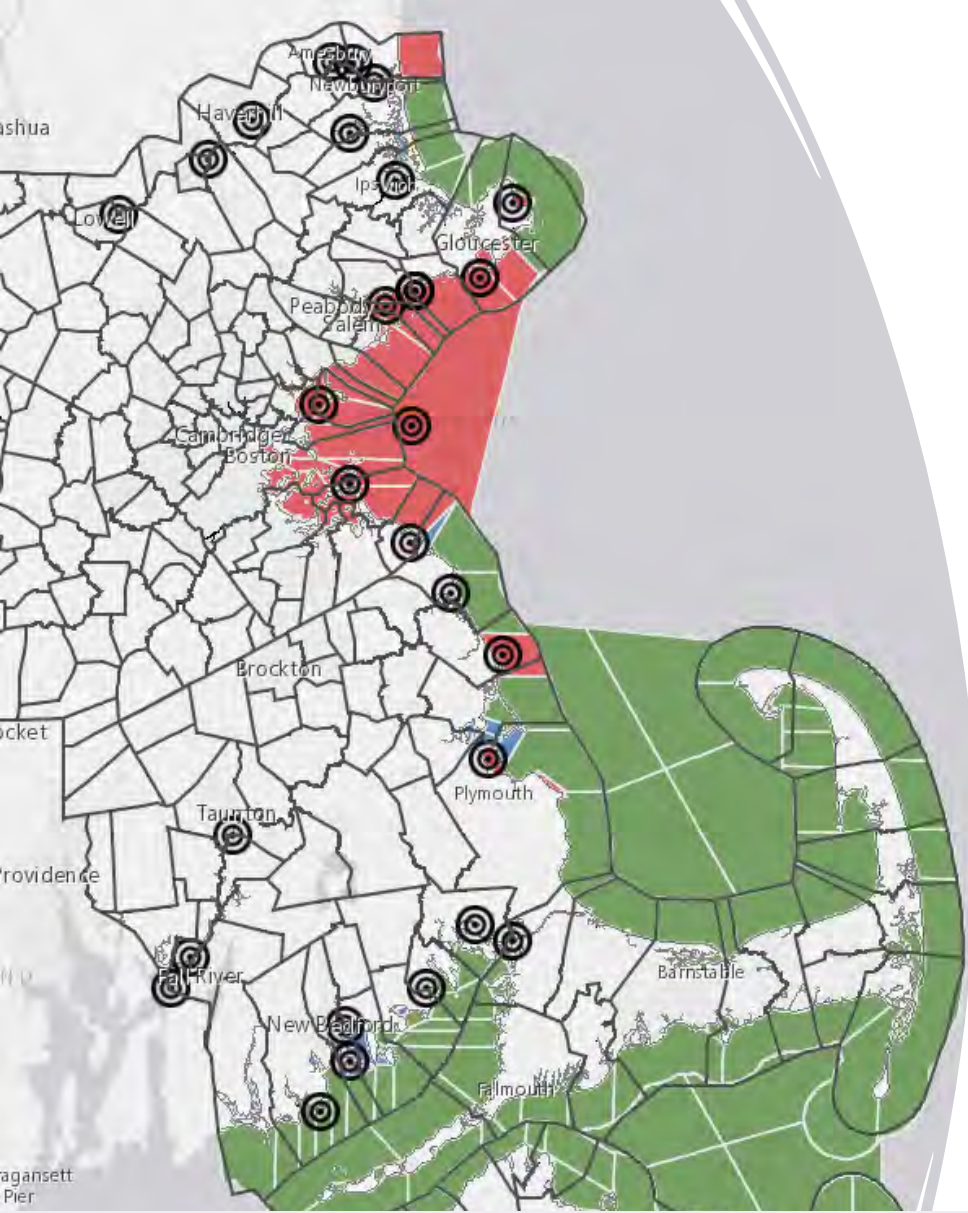
Closed
June 1 to October 31
Open
November 1 to May 31



Recommended Closed Safety Zone

< 1000/1 Dilution





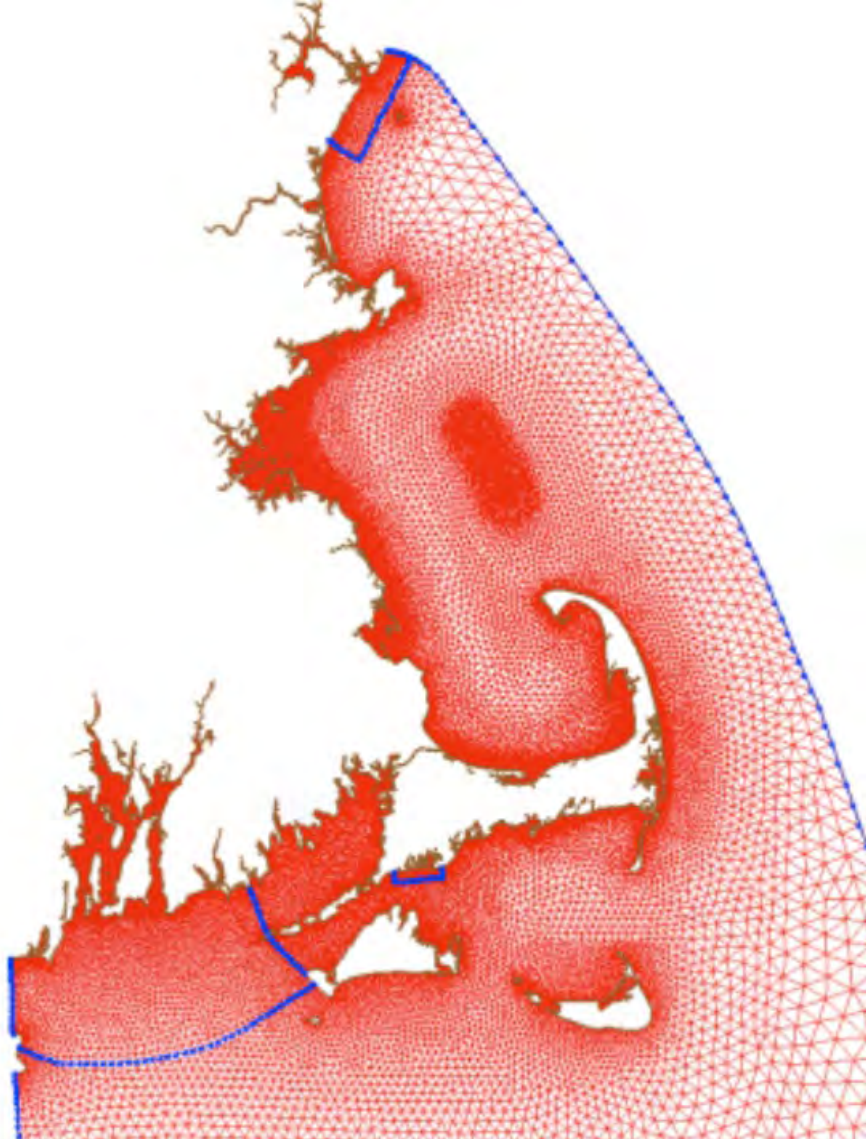
What can/is be(ing) done?

- Currently collecting water samples from both plants
 - Analyzing influent, pre-disinfection and effluent for fecal coliform
 - Analyzing samples for Male Specific Coliphage (MSC) – viral indicator
- Conduct WWTP Evaluations
 - Meet with Plant Operators, Town officials, and DEP
- DMF will use a GIS tool for volumetric calculations to set 1000/1 and 100K/1 dilution lines utilizing more accurate/current bathymetric data
- DMF has submitted a request for an FDA dye study for Scituate WWTP



What can/is be(ing) done? *(con't)*

- DMF has contract with SMAST @Umass Dartmouth
 - Dr. Chen's (FVCOM (finite-volume coastal ocean model) to model WWTP discharge from plants impacting Massachusetts Shellfish Growing Areas
 - 1) DMF provides input parameters for model runs for both Prohibited Closed Safety Zones and Conditional Classifications
 - WWTP outfall locations
 - Flow rates
 - Concentrations
 - 2) SMAST developing high resolution domain



<http://fvcom.smast.umassd.edu/2014/01/06/subdomain-fvcom-gomgb-for-mass-bay-and-nantucket-soundshoalscurrent-version/>



<http://www.issc.org/nssp-guide>

Section IV Guidance Documents – Chapter II. Growing Areas

Starting on Page 287

.19 Classification of Shellfish Growing Waters Adjacent to Waste Water Treatment Plants

2022 Growing Area PEER Areas

- BB10 Smith Neck South Coastal - Dartmouth
- BB11 Dartmouth East Coastal - Dartmouth
- BB12 Apponagansett Bay - Dartmouth
- BB13 Clark Cove - Dartmouth/New Bedford
- BB21 Nasketucket Bay - Fairhaven/Mattapoissett
- BB22 Little Bay - Fairhaven
- BB25 Mattapoissett Harbor - Mattapoissett
- BB31 Aucoot Cove - Marion/Mattapoissett
- BB32 Sippican Harbor - Marion
- BB36 Wareham River - Wareham
- SC48 Stage Harbor - Chatham
- SC49 Oyster Pond River - Chatham
- SC50 Oyster Pond - Chatham
- SC51 Mitchell River and Mill Ponds - Chatham

Questions