Waste Site Cleanup Advisory Committee
June 23, 2022

Agenda *(times are approximate)*

9:00 am General updates - Liz Callahan

9:15 Technical Assistance Grants – Nancy Fitzpatrick & Peggy Shaw

9:30 MOSPRA program updates – Julie Hutcheson & Sierra Fletcher

10:15 PFAS-related updates – Paul Locke & Liz Callahan

**** This meeting is being recorded.***

General Program Updates

- Status of work, office moves & hiring
- New roles
- MCP amendments
- WSCAC Refresh
- Technical Assistance Grants

Technical Assistance Grant (TAG) Program Update

Nancy Fitzpatrick and Peggy Shaw
Bureau of Waste Site Cleanup
MassDEP

SAC Meeting, June 23, 2022

Overview of TAG Program

- Public Involvement is a key component of the Waste Site Cleanup Program and Massachusetts Contingency Plan (MCP)
- TAG purpose is to support effective public involvement during assessment and cleanup of disposal sites by:
  - Assisting community and citizens' groups in obtaining expert technical assistance to understand and evaluate disposal site cleanup response actions
  - Enhancing public education about and participation in disposal site assessment and cleanup activities

Available TAG Funding, SFY23

- Total funding anticipated to be $200,000
- Typical grant award to any individual applicant of up to $20,000

Estimated Grant Timeline

Grant Procurement Activity	Date	Time
Pre-TAG Grant Release Informational meeting	Tuesday, June 14, 2022	7 P.M.
Notice of Grant Opportunity (posted on COMMBUYS and MassDEP website)	Friday, July 15, 2022	
TAG Grant Opportunity and Grant Application Release Date (Posting Date) on MassDEP website	Friday, July 15, 2022	
Deadline for submission of written questions via email to MassDEP TAG POC	Tuesday, August 30, 2022	5 P.M.
Official answers for Q&A published on MassDEP webpage	By Tuesday, September 13, 2022	
GRANT APPLICATION DEADLINE	Tuesday, October 18, 2022	5 P.M.
Announcement of Grant Awards (posted on COMMBUYS and MassDEP webpage)	Tuesday, January 31, 2023	
Contract start date	Tuesday April 4, 2023	

TAG Application Process

- All application materials will be available for download on Friday, July 15, 2022 (tentative) at: https://www.mass.gov/service-details/technical-assistance-grants-waste-site-cleanup

- Applications and all supporting documents must be sent electronically by 5pm on Tuesday, October 18, 2022 (tentative) to Nancy.Fitzpatrick@mass.gov

Who can apply?

Eligible applicants include:

- Groups of individuals, such as community groups and neighborhood associations (also, existing "PIP groups")
- A district or other body politic that owns or operates a public water supply
- A city, town or agency
- “[A]ffected by [OHM] from any eligible disposal site”

Who is ineligible?

Groups that:

- Own or operate the disposal site
- Are conducting or funding assessment or cleanup work at the disposal site

Which disposal sites are eligible?

Disposal sites in Massachusetts that are actively involved in the assessment and cleanup process:

- Classified as Tier I and Tier II
- Listed on EPA's Superfund National Priorities List
- Considered to be "Adequately Regulated"

How May TAG Funds be Used?

Eligible activities include:

- Obtaining expert advice
  - Licensed Site Professional (LSP), environmental consultant, attorney, other professional (e.g., interpreter/translator)
- Interpreting technical information and environmental data from the disposal site
- Conducting public education activities

Examples of TAG Projects

- Hiring an LSP/environmental consultant to assist affected community with review of complex data and detailed reports
- Retaining a risk assessor to evaluate a complicated risk assessment and its conclusions relative to health risks
- Creating websites and supporting community forums to educate the affected community and encourage public participation

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
Technical Assistance Grant (TAG) Program
Application SFY2022
COMMBUYS #

I. Applicant Information	
Name of Entity/Group:	
Contact Name:	Title:
Address:	
City/Town:	Zip Code:
Telephone (primary):	Telephone (other):
Email:	
Copy of By-Laws attached? (if available) ☐ Yes ☐ No	
II. Disposal Site Information	
Disposal Site Name (if available):	
Disposal Site Street Address:	
City/Town:	Zip Code:
Release Tracking Number(s) (RTN):	
To your knowledge, has a Technical Assistance Grant been previously awarded for this disposal site? ☐ Yes ☐ No If yes, briefly describe the relationship between the past project and current proposal.	
Is the Applicant currently a Grantee for other grant funding program(s), or have other sources of funding, for the disposal site? ☐ Yes ☐ No	
III. Eligibility	
A. Applicant Description (please check one):	

TAG Application

- Fillable Word Document
- Submitted by email

Grant Award Details

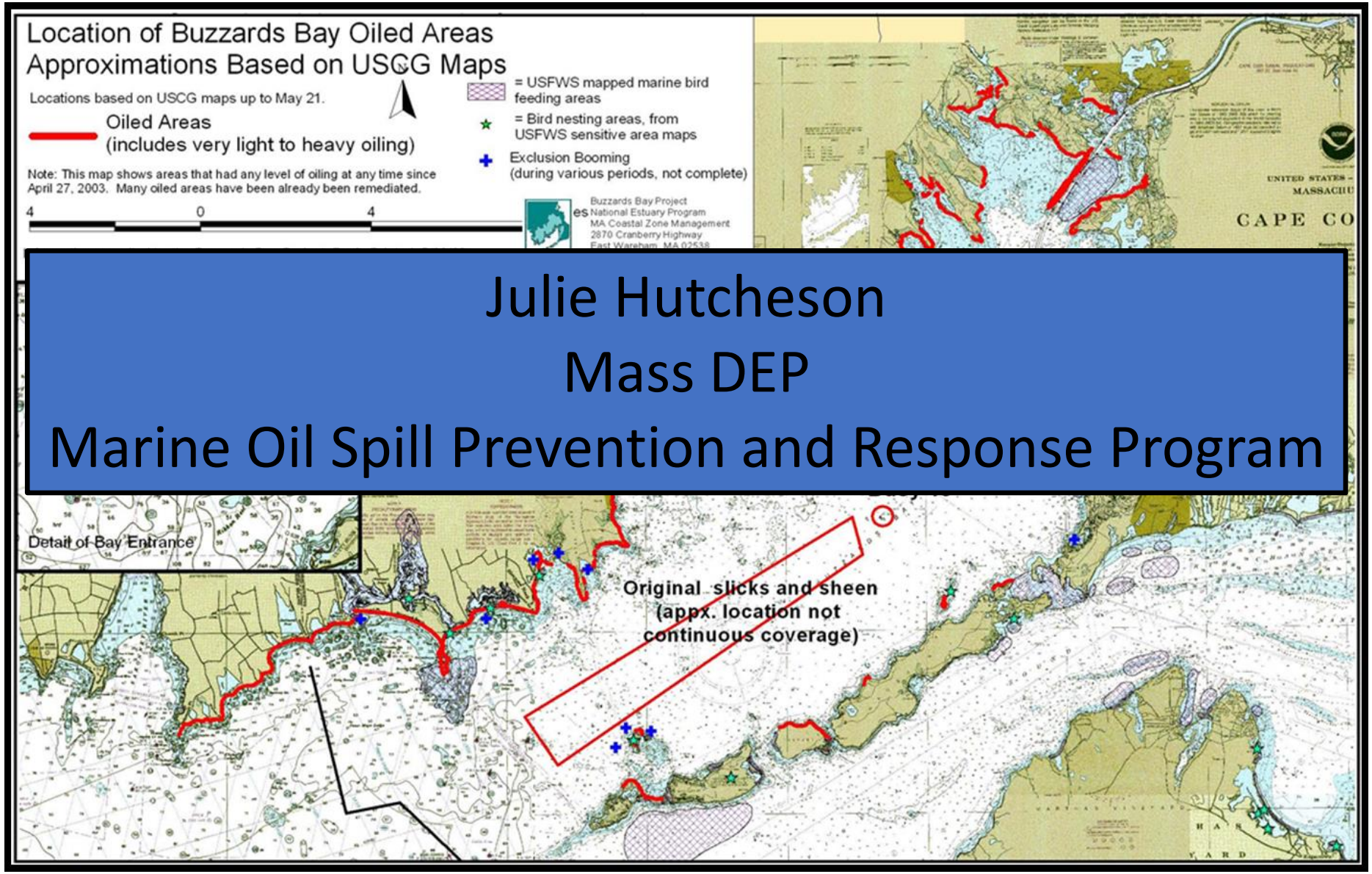
- One award per applicant group
- One award per disposal site
- An award may be used by a group for more than one disposal site
- Duration: contract ends on June 30, 2024
- Reimbursement for expenses incurred <u>after</u> TAG contract has been executed

For further information….

Nancy Fitzpatrick
Nancy.Fitzpatrick@mass.gov
(617) 897-9474

Peggy Shaw
Margaret.Shaw@mass.gov
(617) 874-6467

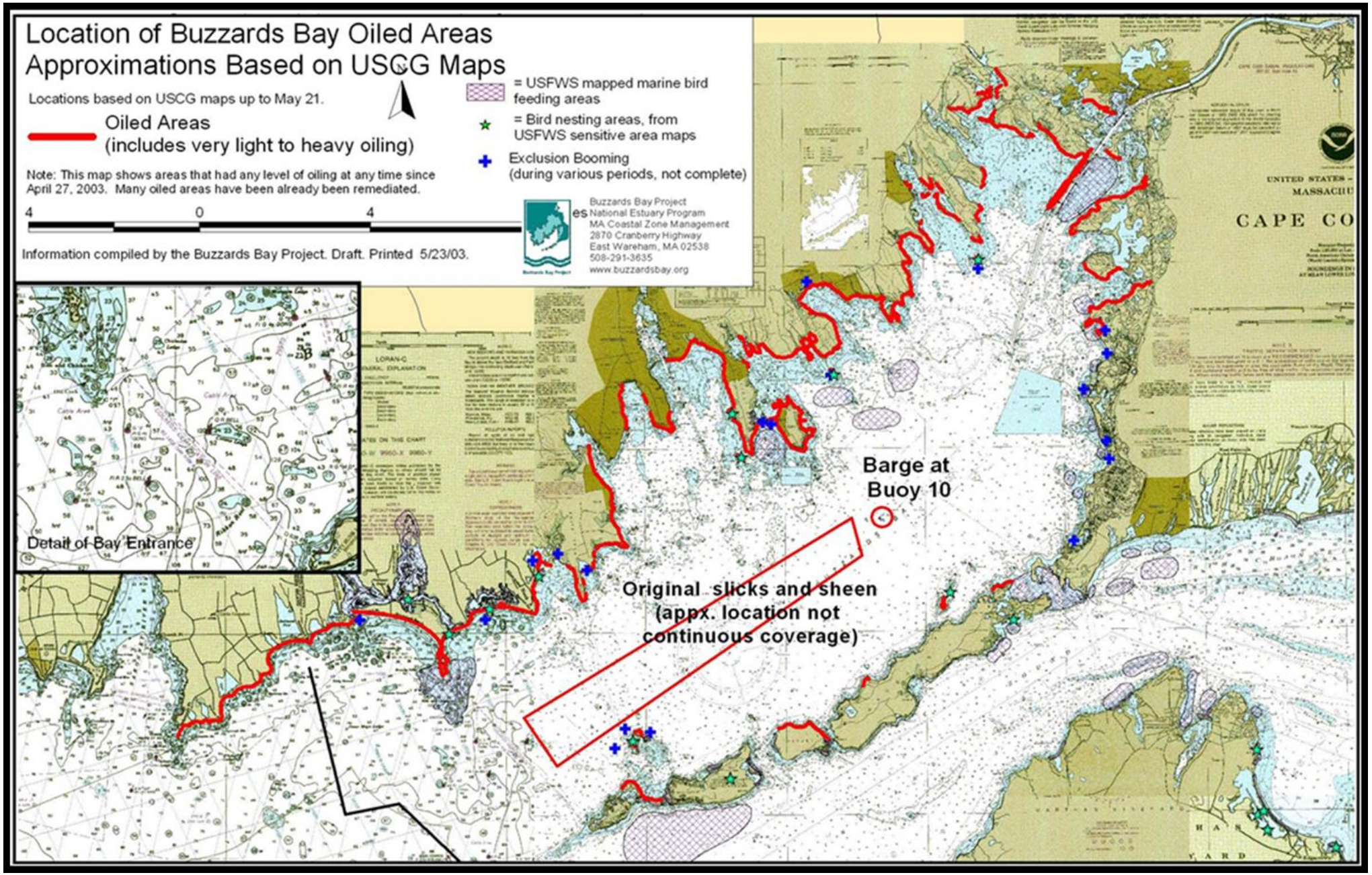
https://www.mass.gov/service-details/technical-assistance-grants-waste-site-cleanup



Julie Hutcheson
Mass DEP
Marine Oil Spill Prevention and Response Program

B-120 April 27, 2003

Where we are now …


Location of Buzzards Bay Oiled Areas
Approximations Based on USCG Maps
Locations based on USCG maps up to May 21.
Oiled Areas
(includes very light to heavy oiling)
Note: This map shows areas that had any level of oiling at any time since April 27, 2003. Many oiled areas have been already been remediated.
4
0
4
Information compiled by the Buzzards Bay Project. Draft. Printed 5/23/03.
= USFWS mapped marine bird feeding areas
= Bird nesting areas, from USFWS sensitive area maps
Exclusion Booming
(during various periods, not complete)
Buzzards Bay Project
National Estuary Program
MA Coastal Zone Management
2870 Cranberry Highway
East Wareham, MA 02538
508-291-3635
www.buzzardsbay.org
Detail of Bay Entrance
Barge at
Buoy 10
Original slicks and sheen
(appx. location not
continuous coverage)
UNITED STATES –
MASSACHU
CAPE CO

MOSPRA

Massachusetts Oil Spill Prevention and Response Act
"The Oil Spill Act" "MOSPRA"

An Act Relative to Oil Spill Prevention and Response in Buzzards Bay and Other Harbors and Bays of the Commonwealth

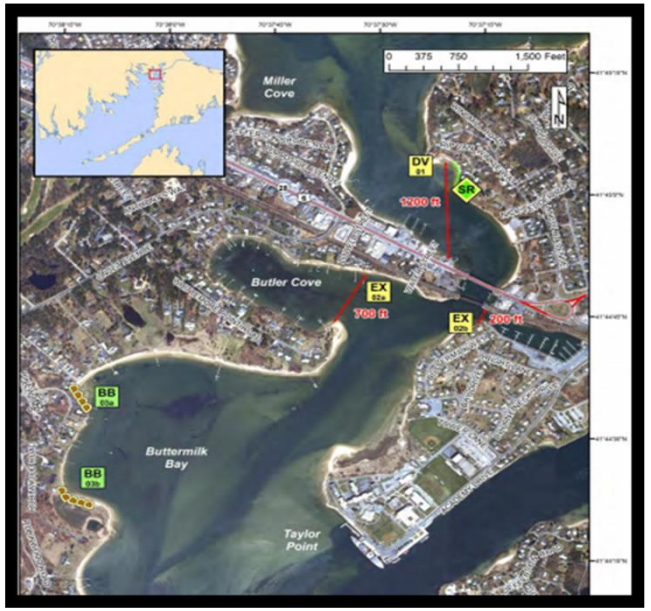
M.G.L 21M, 314 CMR 19.00

MOSPRA

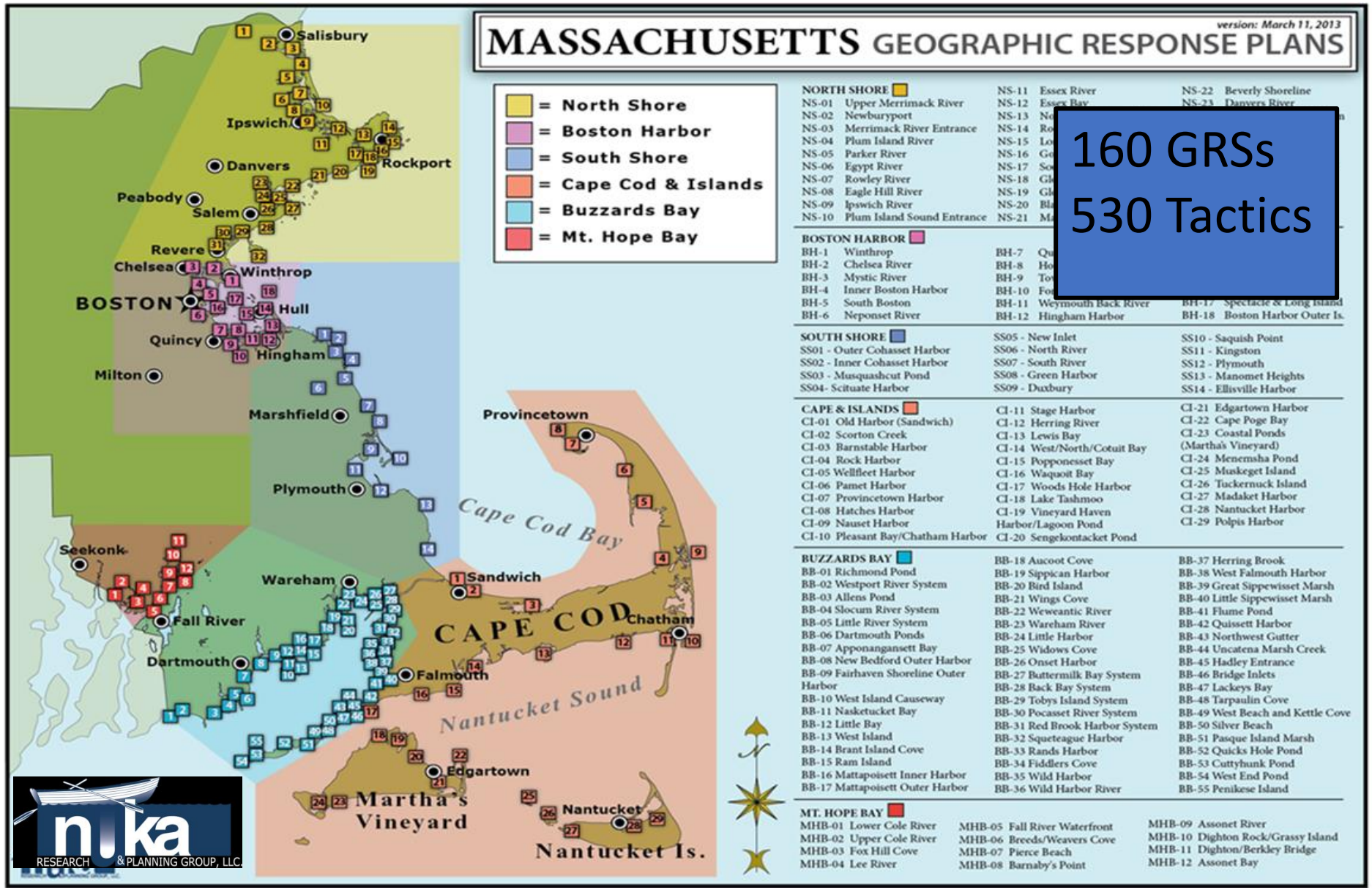
- Marine Oil Spill Prevention and Response Program
- Oil Spill Act Advisory Committee
- MOSPRA Trust Fund - $0.05 fee / bbl unloaded at a Marine Terminal in Massachusetts
- Created Areas of Special Interest
- Enhanced authority under relevant statutes, penalties, added “oil” to Chapter 21E, Section 6

Building Local Capability

1. Development of **Geographic Response Strategies**
2. Distribution of Oil Spill Response **Trailers**
3. Deployment **Training** & GRS Testing **Exercises**

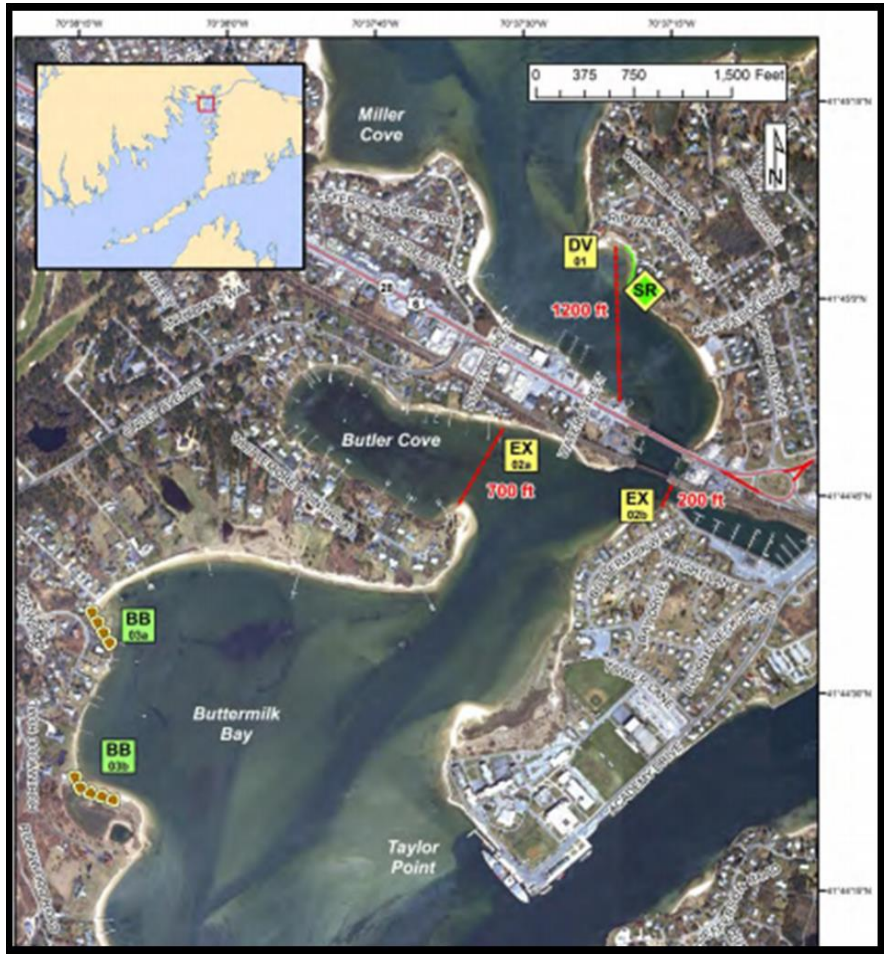


Geographic Response Strategies



160 GRSs
530 Tactics

Geographic Response Strategies



- Map based response strategy to protect sensitive areas from o/s
- Consensus plan developed in a non-emergency setting
- Tactical plan for use by first responders
- Part of CG Sector Boston & Sector SENE ACPs

Popponesset Bay, CI-15

ID	Location & Description	Response Strategy	Implementation
CI-15-01 DF	**Popponesset Bay** Lat. 41°35'01.6"N Lon. 70°26'38.3"W	**Deflection** Deflect oil away from the entrance to Popponessett Bay to free-oil recovery.	Deploy anchors and boom with skiffs. Place 5x300 ft. sections of 16 to 18" boom in a cascaded array to deflect incoming oil to the away from the entrance to Popponessett Bay. Tend throughout the tide.
CI-15-02 DV	**Popponesset Bay** Popponesset Beach a. Lat. 41°35'13.9"N Lon. 70°27'02.3"W Popponesset Creek b. Lat. 41°34'44.0"N Lon. 70°27'24.2"W	**Divert and Collect-Shoreside** Use 16 to 18" boom in the identi-fied pattern and places to divert oil to a shoreside collection locations.	Deploy anchors and boom with skiffs. For (a & b) place 400 ft.of boom at each site at the proper angle to div coming oil to the collection site. At the collection site a hook in the b provide protection against oil impacting the beach. Set up shoreside recovery at both sites and tend throughout the tide.
CI-15-03 PR	**Popponesset Bay** Lat. 41°35'17.2"N Lon. 70°27'06.4"W	**Passive Recovery** Place passive recovery tactics to recover oil that may collect in the marsh on Meadow Point.	Place and anchor 1200 ft. of snare or sorbent boom in front of the entran marshes at Meadow Point. Replace as necessary to maximize the recovery.

CI-15-04 EX	**Popponesset Bay**
	Marina
	a. Lat. 41°35'18.7"N Lon.70°27'46.9"W
	b. Lat. 41°35'07.9"N Lon. 70°27'51.3"W
	c. Lat. 41°35'04.3"N Lon. 70°27'43.9"W
	Ockaway Bay
	d. Lat. 41°35'38.3"N Lon. 70°27'53.6"W
	Ryefield Point
	e. Lat. 41°35'46.6"N Lon. 70°27'41.9"W
	Pinquickset Cove
	f. Lat. 41°35'45.3"N Lon. 70°27'17.5"W
	Mashpee River
	g. Lat. 41°36'19.6"N Lon. 70°28'27.6"W
	Santuit River
	h. Lat. 41°36'13.9"N Lon. 70°27'41.8"W
		Exclusion
		Exclude oil from entering or leaving the identifed streams and intertidal areas with 16 to 18" boom in Popponesset Bay.
			Deploy anchors and boom with skiffs at high tide.
			For (a,b&c) place booms across the identified channels to exclude oil fro ing or entering the marina area.
			For (d&e) place the boom in 2 chevron patterns using the island as an an point for the arrays. an angle to exclude oil.
			For (f) place boom across the entrance to Pinquickset Cove.
			For (g&h) place the boom across the Mashpee and Santuit Rivers. Angle essary to maintain oil exclusion.
			Tend throughout the tide.
			Boom Lengths:
			a. 800 ft.
			b. 600 ft.
			c. 600 ft.
			d. 1200 ft.
			e. 1200 ft.
			f. 300 ft.
			g. 400 ft.
			h. 400 ft.

CI-15-05 FO-S	**Popponesset Bay** Nearshore waters in the general area of: Lat. 41°36'13.7"N Lon. 70°24'04.5"W	**Free-oil Recovery** Maximize free-oil recovery in the offshore & nearshore environment of Popponesset Bay depending on spill location and trajectory.	Deploy free-oil recovery strike teams upwind and up current of the Popp Bay. Use aerial surveillance to locate incoming slicks. Ensure that responders have experience with on-water free-oil recovery.

ID	Response Resources	Staging Area Site Access	Resources Protected	Special Considerations
CI-15-01 DF	**Deployment** ***Equipment*** 1500 ft. 16 to 18" boom 13 anchor systems 2 anchor stakes ***Vessels*** 3 skiffs ***Personnel/Shift*** 10 total (1 vessel operator + 1 responders per vessel, 2 shoreside responder per collection site) **Tending** ***Vessels*** 2 skiffs ***Personnel/Shift*** 5 total (1 vessel operator + 1 responders per vessel, 1 shoreside responders per collection site)	Town landing (off of Great Neck Rd S) or New Seabury Marina (Falmouth Rotary to Great Neck Road S to Red Brook Road to Summersea Ln to Summersea Rd to By the Green Way to Daniels Island Rd). Ockway Bay boat ramp - dirt parking lot to sand boat ramp not usable at low tide. Boat ramps may not be useable at low tide.	Fish-shellfish, finfish Birds-waterfowl concentration, Seabirds, shorebirds Marine mammals- seals Habitat- marsh, sheltered tidal-flats, barrier beach Human Use-Commercial boat harbor, aquaculture, high-use recreational area Land management – NWR Threatened/Endangered species- Piping Plovers (April 1 – Aug 31)	Vessel master should have local knowledge. Use caution in sandy dunes during months when plovers are present. Nesting areas may include beachs, sandspits, foredunes, and washover areas in dunes. Consult with USFWS as early as possible regarding shoreline collection areas and access plans. Entire site surveyed: 11/28/07. Tested: not yet
CI-15-02 DV	**Deployment** ***Equipment*** 800 ft. 16 to 18" boom 4 anchor systems 8 anchor stakes 2 shoreside recovery system ***Vessels/Personnel/Shift*** Same as CI-15-01 **Tending** ***Vessels/Personnel/Shift*** Same as CI-15-01	Same as CI-15-01	Same as CI-15-01	Vessel master should have local knowledge. Tested: not yet
CI-15-03 PR	**Deployment** ***Equipment*** 1200 ft. snare or sorbent boom 24 anchor stakes ***Vessels/Personnel/Shift*** Same as CI-15-01 **Tending** ***Vessels/Personnel/Shift*** Same as CI-15-01	Same as CI-15-01	Same as CI-15-01	Use snare boom for persistent oils and sorbent boom for non-persistent oils.
CI-15-04 EX	**Deployment** ***Equipment*** 5500 ft. 16 to 18" boom 28 small anchor systems 32 anchor stakes ***Vessels/Personnel/Shift*** Same as CI-15-01 **Tending** ***Vessels/Personnel/Shift*** Same as CI-15-01	Same as CI-15-01	Same as CI-15-01	Vessel master should have local knowledge. Tested: not yet
CI-15-05 FO-S	Deploy multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Same as CI-15-01	Same as CI-15-01	Vessel master should have local knowledge. Use extreme caution, shoal waters with rocks & continually shifting sand bars. Currents and winds are locally variable and can create dangerous operating environments.

Page 4 – Aerial Photos

Popponesset Bay, CI-15

Geographic Response Plan for
Cape and Islands, Massachusetts

Clockwise (1) Popponesset Beach looking north. (2) Popponesset Bay and Pinquickset Cove looking northwest. (3) Pinquickset Cove looking west. (4) Popponesset Bay and Creek looking northwest. (5) Popponesset Bay looking northwest. (6) Popponesset Bay entrance looking northwest.

Local Contact Numbers:

Mashpee/Wampanaug
(508) 990-2860

Mashpee-Fire Chief(508) 539-1454

Mashpee-Harbormaster
(508) 539 1450

Mashpee-Shellfish (508) 539 1439

Barnstable Harbormaster
(508) 790-6272

Barnstable-Fire (508) 362-3312

Mashpee NWF- (978) 443-4661

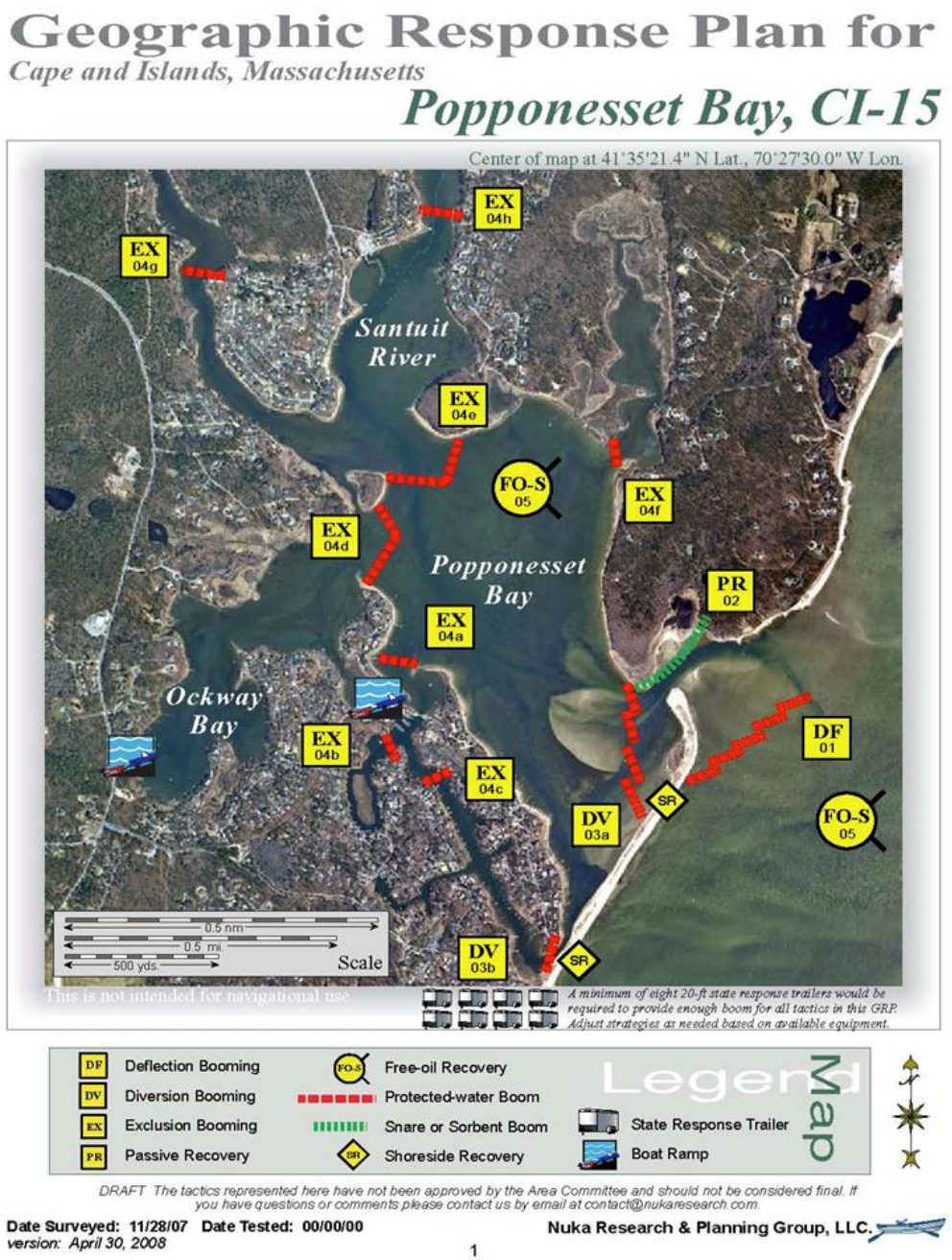
Nantucket Soundkeeper
(508) 775-9767

USFWS (413) 539-3194

April 30, 2008

Nuka Research & Planning Group, LLC.

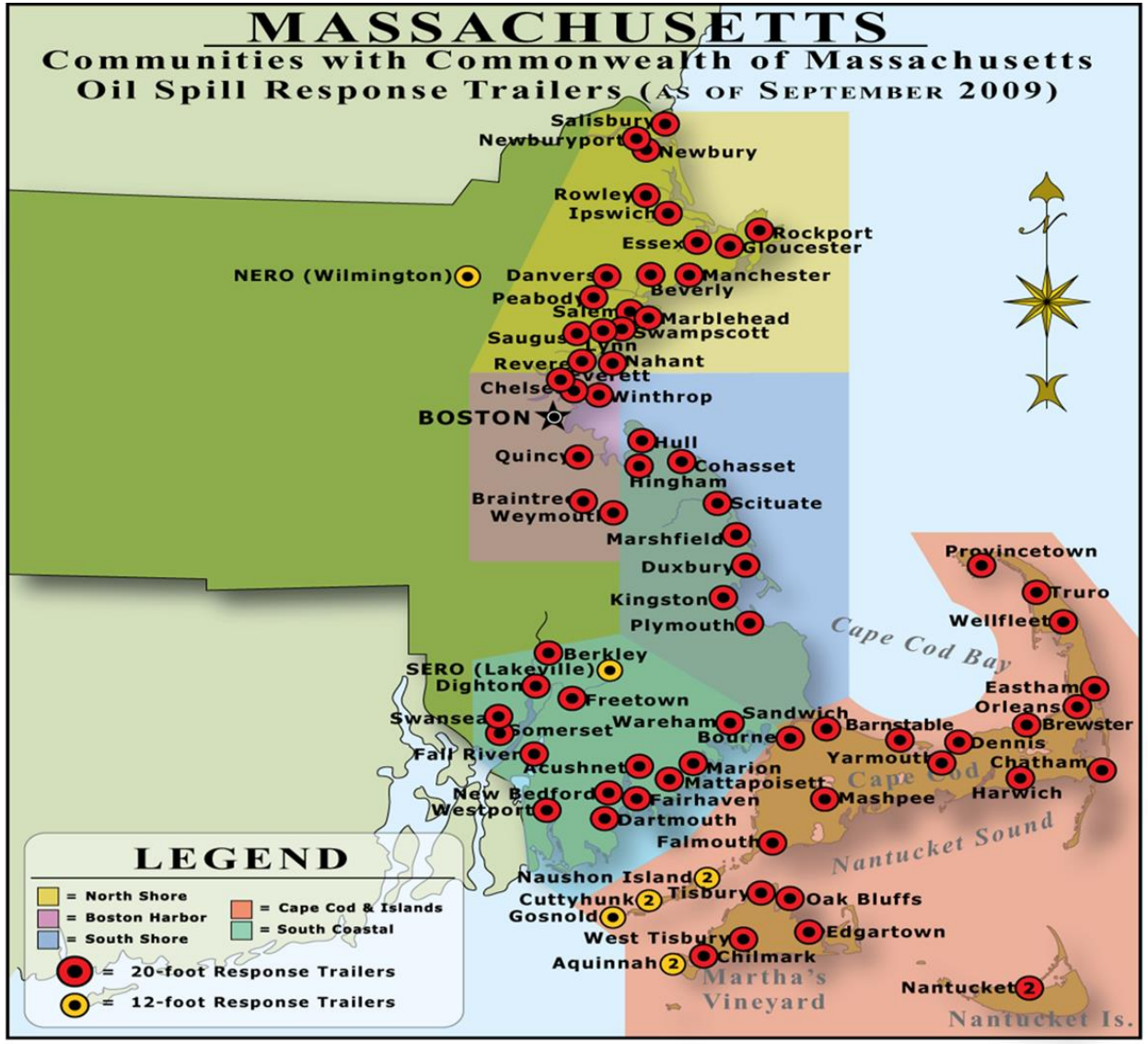
Tactics Map P. 1



Tactics:
Exclusion
Diversion
Deflection

Shoreside Recovery
Free-oil Recovery
Boat Ramps
Trailer Locations

Oil Spill Response Trailers



Oil Spill Response Equipment

- 70 Coastal Communities
- 81 Oil Spill Response Trailers
- 81,000 ft Containment Boom
- 2000 ft of 36” boom staged at MMA and New Bedford
- MassDEP retains ownership
- MassDEP contractor maintains and restocks

Moran Env Recovery

42” Foam Filled Boom

- 11,500 ft of USCG 42 inch FFB
- USCG
- New – post Deep Horizon
- Staged at JBCC
- Anchor Packs 24 – 100 lb

2022 GRS Exercises

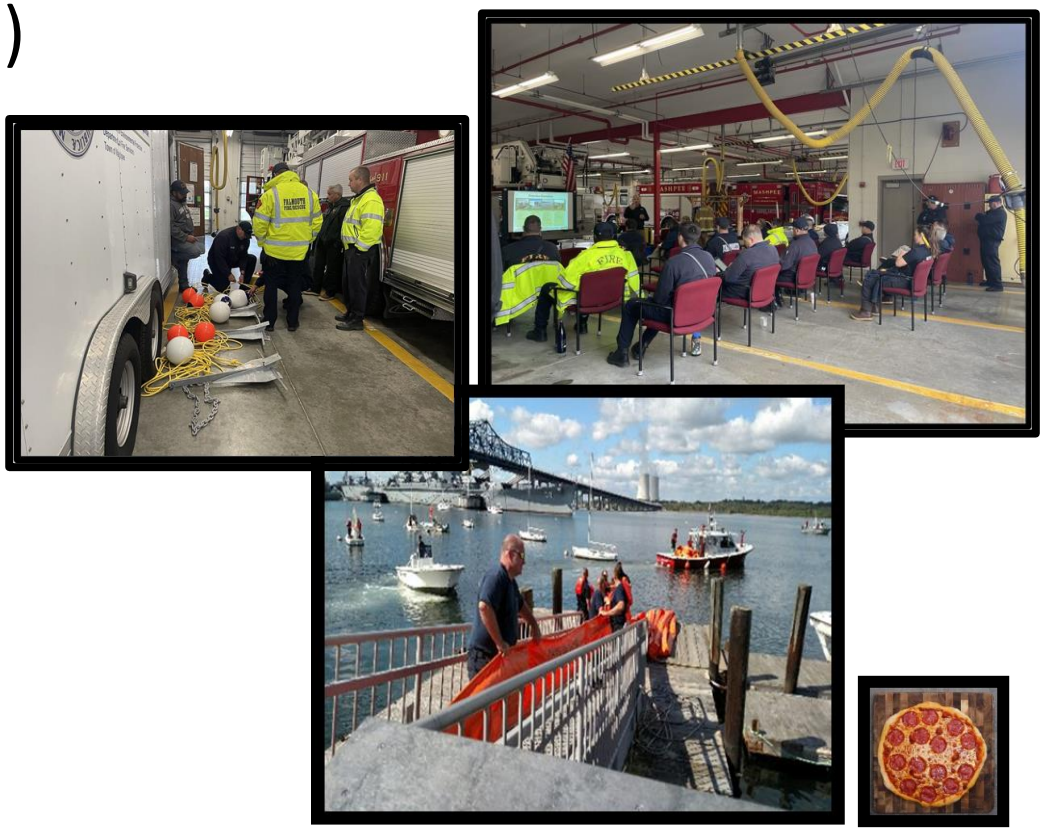
SPRING	DATE	FALL
Chatham/Harwich	4/5	Berkley/Dighton/Freetown
Falmouth/Mashpee	5/4	Chelsea/Everett/Winthrop
Gloucester/Rockport	5/17	Fairhaven/Mattapoisett
Hingham/Hull	5/3	Aquinnah/Chilmark/Edgartown
Kingston/Plymouth	5/5	Oak Bluffs/Tisbury/W. Tisbury
Lynn/Nahant	5/6	Nantucket
New Bedford/Acushnet	4/13	13 exercises 2022

First Responder Training & GRS Testing Exercises

- HSEEP Full Scale Exercises
- Since 2010 – **84 Exercises**
- 6-7 exercises / year – Spring & Fall
- To date **2,194 1st Responders Trained**
- 2-3 Towns per Training
- GRSs are revised after field exercises
- After Action Report prepared & approved by EPT & DEP
- Added to USCG Sector Boston / Sector SENE ACPs

First Responder Training & GRS Testing Exercises

- Initial Planning Meeting (IPM)
- Final Planning Meeting (FPM)
- Training Day
  - Classroom
  - Establish ICS - 201
  - Equipment Familiarization
  - Boom Deployment
  - Demob & Hotwash
  - AAR Approved by EPT & DEP

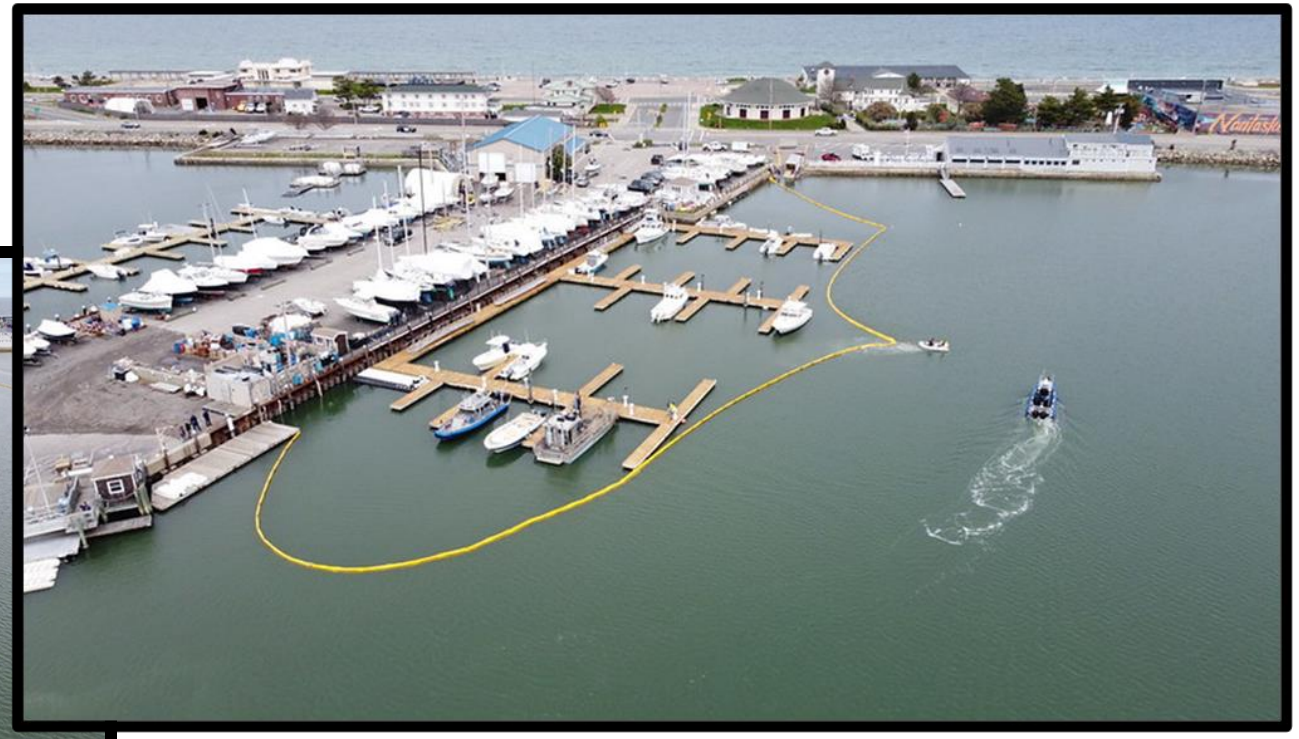


Hingham \ Hull Tactics Map

- Pre-planning boom deployments
- Containment at marina and around a vessel

Hingham \ Hull

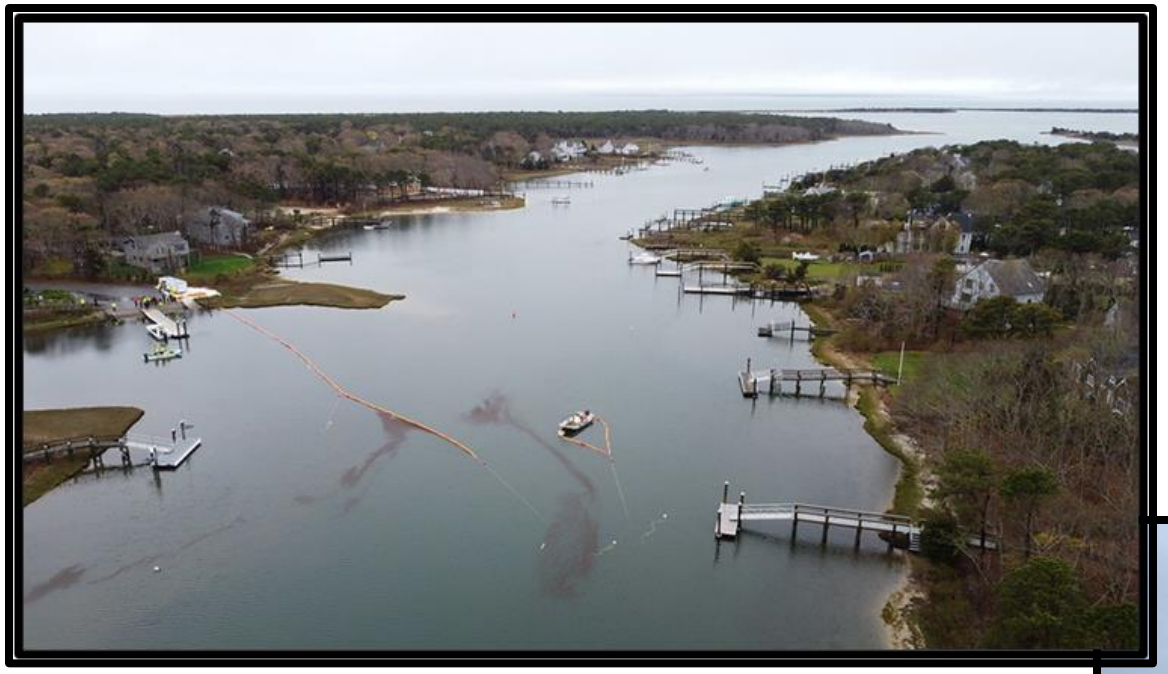
- Weir River, Hull - Steamboat Wharf Marina
- 1st Exercise where 2 containment configurations deployed simultaneously by Incident Commander



Plymouth \ Kingston

- Plymouth Harbor / Leo DeMarsh State Boat Ramp
- Oil Surrogate Deployed – Peat Moss
- 27 Participants

Falmouth\Mashpee

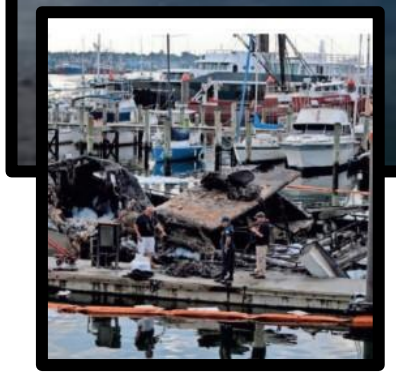


- 1st Responder Training
- Great River Marsh at Waquoit Town Landing
- 33 participants

Westport \ Dartmouth

- Apponagansett Bay
- 29 Participants
- DV – Diversion Tactic

New Bedford- 8/30/21



Miss Dunia – 82 ft yacht
Fairhaven & New Bedford -
Equipment & Hands-on training

Gloucester

COSTANZO HOMER LEADS GLOUCESTER TO WIN OVER PEABODY Page 9

Serving Cape Ann
Gloucester Daily Times
WEDNESDAY, May 18, 2022
WWW.GLOUCESTERTIMES.COM

Rockport engineer taking on Ferrante
Mulcahy qualified for Sept.6 primary ballot

By Ethan Forman
Staff Writer

A Democratic primary race for state representative in the 5th Essex District is shaping up, though candidates still have a couple of weeks to deliver their nomination papers with the minimum 150 certified signatures to the Secretary of State to get on the ballot.

D. Nathaniel Mulcahy

Ann-Margaret Ferrante

Seven-term state Rep. Ann-Margaret Ferrante of Gloucester is facing a challenge from the chair of the Rockport Democratic Town Committee, D. Nathaniel Mulcahy, who says he has filed 538 signature with the Secretary of

PREPARING FOR DISASTER

KIRK E.WILLIAMSON

Tim Ward of Moran Environmental Recovery coils up anchor lines after the presentation on oil spill containment for first responders at Coast Guard Station Gloucester. Please see Page 16 for the story and more photos.

A16 Wednesday, May 18, 2022 GLOUCESTER DAILY TIMES

5-Day forecast

Today	Thursday	Friday	Saturday	Sunday
67° 52°	58° 53°	57° 57°	74° 64°	75° 55°
Mostly sunny	Cooler with a couple of showers	Some sun; breezy in the p.m.	Humid and warmer with some sun	A t-storm around in the p.m.
RealFeel 72°/49° UV 9	RealFeel 56°/48° UV 4	RealFeel 61°/48° UV 9	RealFeel 83°/63° UV 9	RealFeel 73°/49° UV 3

Almanac

Marine Forecast

TV listings now appear in the "Entertainment EXTRA!," published every Friday

High winds hamper drill
Pollution prevention exercise happens shoreside

By Ethan Forman
Staff Writer

A pollution control exercise that was scheduled to put booms meant to control an oil spill into Gloucester's Inner Harbor near Coast Guard Station Gloucester on Harbor Loop stayed high and dry instead.

Gloucester Fire Chief Eric Smith said despite the blue skies Tuesday morning, a combination of windy conditions, tricky tides and lobster boats heading out for the start of lobster season made it difficult to deploy booms in the water.

Still, the training was productive, Smith said. The training involved representatives of the Coast Guard's Station Gloucester and Sector Boston, Gloucester's Harbormaster and Fire department, the Massachusetts Department of Environmental Protection, and the contractor who developed the response plan. Rockport was unable to make it, Smith said.

"It's good to get all the parties in the same room," Smith said.

Gloucester Harbormaster T.J. Ciarametaro said the wind was blowing too hard to get out on the water but "the rest of the drill went really well." He said crews were able to walk through everything on land.

"These drills are very important," said Rockport fire Chief Kirk Keating, noting that the state supplies the town with an oil recovery trailer that can be used in an incident such as a boat leaking fuel, an oil spill or an oil tank letting go along the coast.

Chief Smith said the state has supplied 83 of these trailers to Massachusetts coastal communities.

The trailer and the equipment inside allows firefighters and local officials to contain an oil spill until the state Department of Environmental Protection arrives on scene.

Keating said it's worthwhile to drill so that firefighters can become familiar with the equipment.

Not only are the trailers provided by the commonwealth, they are replenished and maintained by the state, Smith and Keating said.

Training is always good, said Keating, who was unable to make it to Gloucester on Tuesday morning. He said firefighters can always go to the training on their own in the off-time.

Ethan Forman can be reached at 978-675-2774, or eforman@northofboston.com.

KIRK E.WILLIAMSON PHOTOS

Members of the Gloucester Fire Department and Harbormaster's Office, Massachusetts Department of Environmental Protection, and the Coast Guard listen to Mike Popovich, senior project manager for Nuka Research in Plymouth, talk at Coast Guard Station Gloucester on Tuesday about the containment of oil spills both large and small. Because of heavy winds, only class room work and discussion on the waterfront took place.

Members of the Gloucester Fire Department and Harbormaster's Office, Massachusetts Department of Environmental Protection, and the Coast Guard gather at Coast Guard Station Gloucester on Tuesday to learn and drill on the containment of oil spills both large and small.

"Others" are always encouraged to attend

Press
Town Manager

Dept Fire Service
Marine Fisheries
Etc…

Tug Escorts

Tugboat Escorts

- Vessels carrying 6,000 or more barrels of oil must hire a Tugboat Escort to enter or transit "areas of special interest" (M.G.L. c. 21M sec 6(a))
- "Areas of Sensitive Interest" are defined as the waters of Buzzards Bay (including Cape Cod Canal), Mt Hope Bay and Vineyard Sound (M.G.L. c.21M sec 1)

- Transits
- Each barge carries 1-4 million gallons

Aids to Navigation

Cape Cod PORTS

- Buzzards Bay Buoy
- CCC Current Meter - MMA
- Cape Cod Bay Buoy

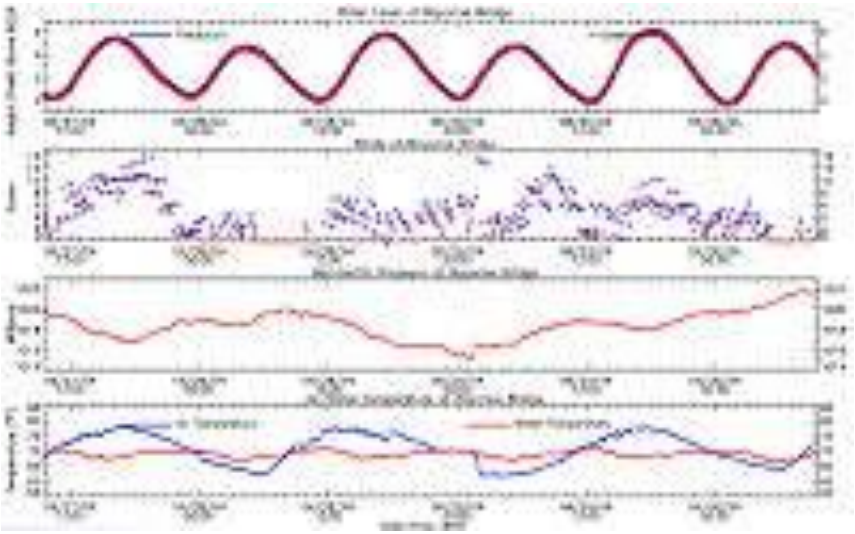
Narragansett PORTS

- Fall River

- PORTS – real time public data
- Partnership NOAA & NERACOOS
- MOSPRA Funding - $905,000 – 5yr agreement / O&M

NOAA PORTS

Data:
Sea State
Wave Height
Sea Level Trends
Extreme Water Level



Best way:
Google – NOAA PORTS
tidesandcurrents.noaa.gov page
Cape Cod tab
Cape Cod Bay & CCC West End at MMA

New Bedford Clean Bilge Project

- Address mystery sheens
- Funded by DEP MOSPRA
- Bilge pump outs 2015 -2019
- COVID - stopped 2020/2021
- Moving Forward

- F/V required to properly dispose of bilge waste
- Over 300 Fishing Vessels in New Bedford Harbor
- Largest grossing port in the US

MOSPRA Grant Program

Projects that enhance the protection of the MA coastline per the Oil Spill Act. Demonstrate clear benefit to the coastline/waterways in preventing & responding to o/s.

<u>Round 1 - 9 Grants - $214,000</u>

NE Wildlife Center – response kits & training
Plymouth – replace waste oil tank
Scituate – drone & FLIR camera
Marion – drone & preparedness plan
Fall River – responder training
MMA – fluorescent dissolved organic sensors
Everett – optical sensor, Mystic River

Evaluating and Adapting Oil Spill Preparedness and Response Capabilities for A Changing Climate

Sierra Fletcher, Operations Manager
Nuka Research and Planning Group

Project Objectives

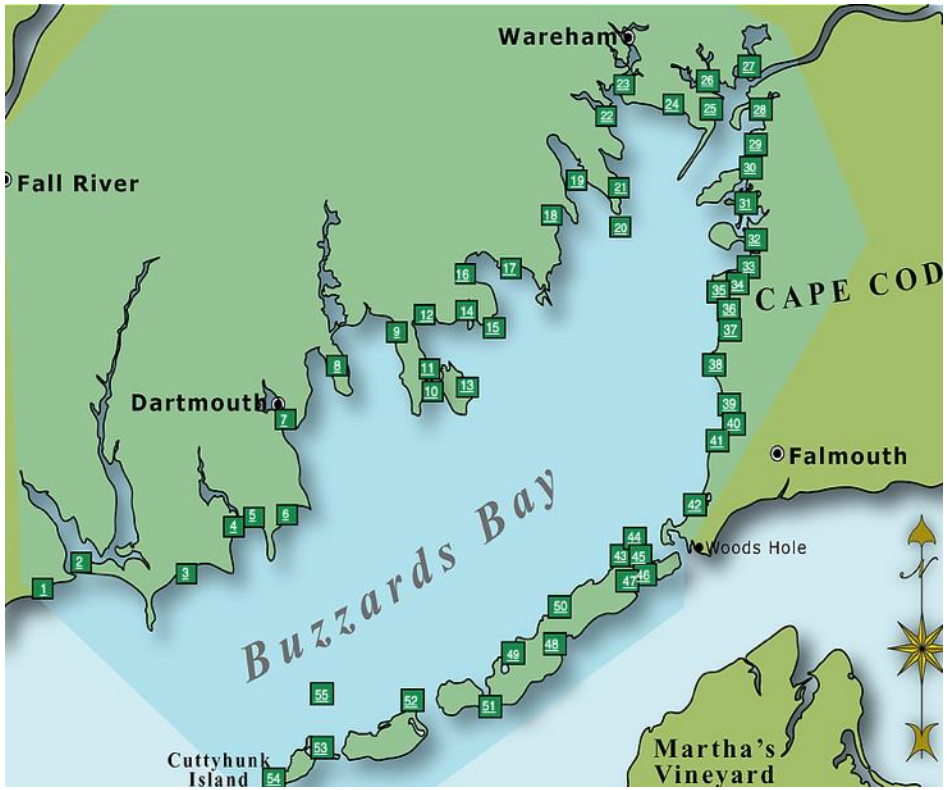
- Update the 2009 Threat Evaluation to compare coastal oil spill threats against the 2009 baseline;
- Examine the impacts of a changing climate and natural hazards to oil spill risks, preparedness, and response;
- Evaluate the impacts of climate mitigation and adaptation policy on marine oil spill risks, preparedness, and response (OSPR);
- Make recommendations for future OSPR priorities, including identification of new and emerging risks, and grant opportunities to facilitate risk reduction through adaptation and decarbonization.

How might climate change and hazards impact oil spill prevention and response?

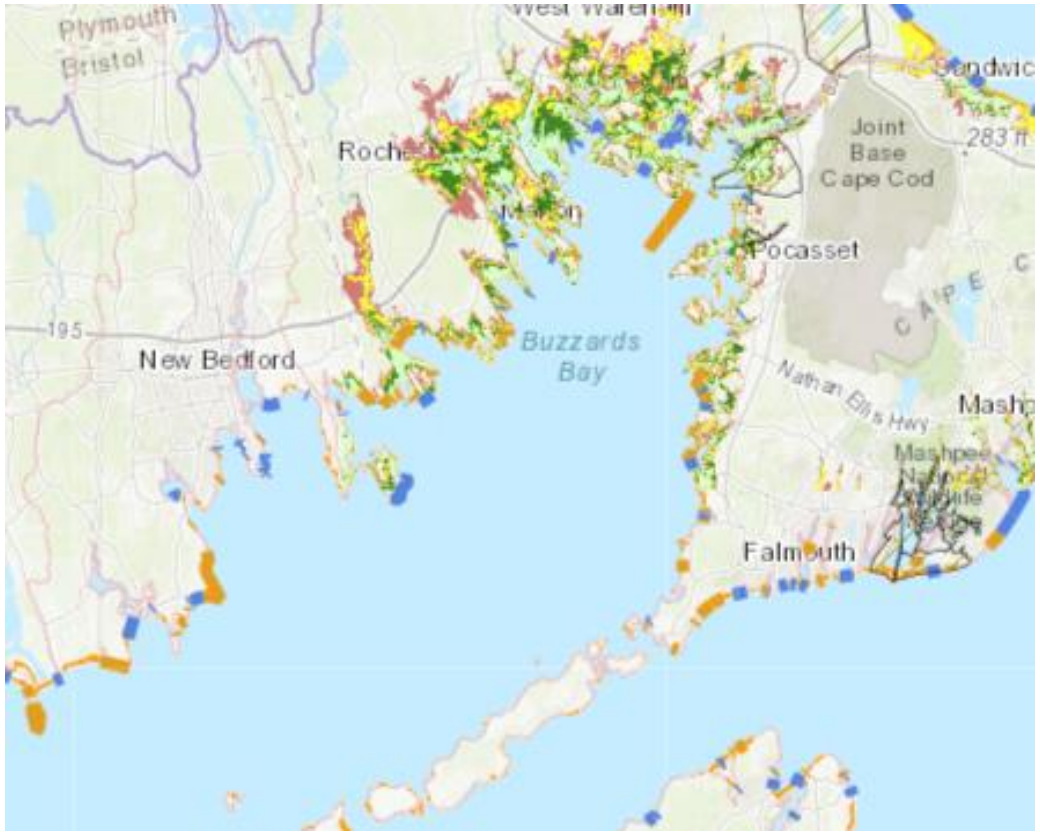
- Increased vulnerability / exposure
- Increased complexity of response Safety concerns for responders
- Changes to receiving environment for spills
- Planning for spills is often done in isolation from other hazards and emergency management organizations

The Murphy Oil spill impacted residential areas of New Orleans, triggered by flooding during Hurricane Katrina. (Photo: EPA, 2006)

How might climate adaptation policy and action impact oil spill prevention & response?



Oil Spill Geographic Response Strategies, Buzzards Bay (Nuka 2009)



Storm surge inundation zones, Buzzards Bay (ResilientMA 2021)

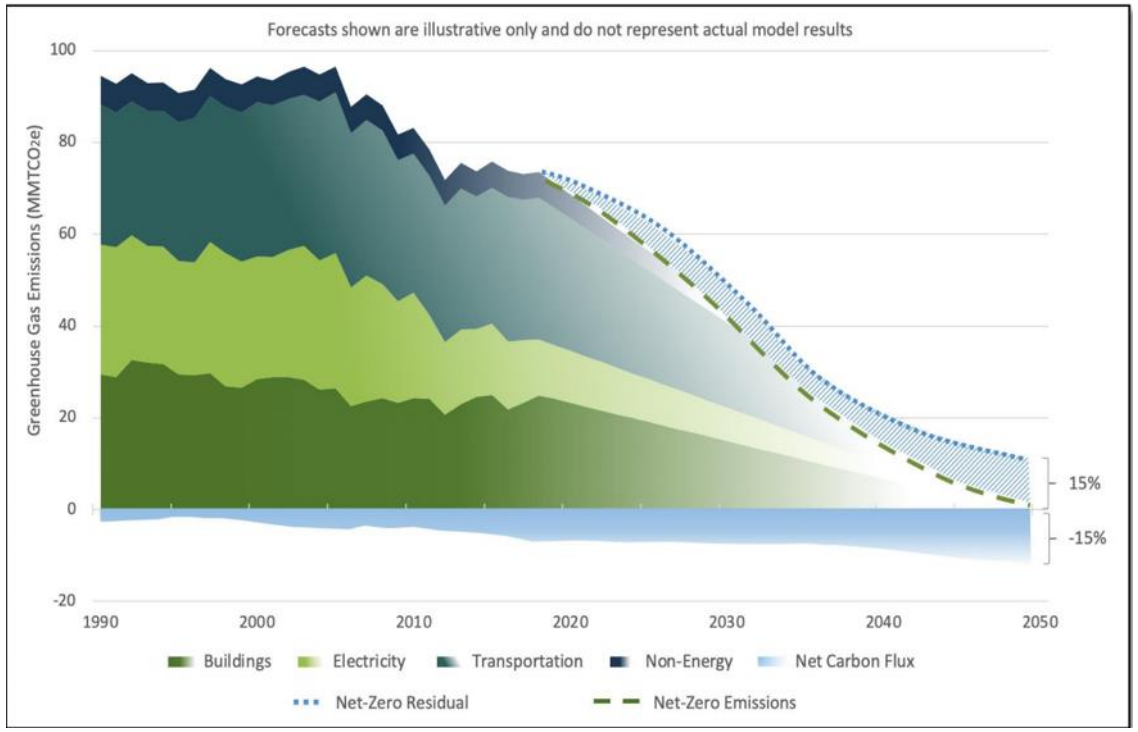
How might decarbonization policy affect oil spill prevention and response?

Massachusetts Net-Zero Policy

- Long term decline in overall oil use through multiple plausible pathways
- Significant shifts in transportation and storage patterns as demand shifts
- Potential for maintenance issues / abandonment as fossil fuel infrastructure is phased out

Shipping Policy / Technologies

- Shift to different fuel types requiring alternative response measures
- Proliferation of new technologies, fuels and cargo types (hydrogen, electric, nuclear, LNG)
- Global shipping targets and technologies will influence local decisions



2009 Threat Assessment Findings

- Assessment of threat levels by type and geographic scale
  - Tank vessel transits highest exposure, followed by land-based storage and non-tank vessels
  - Regional exposure highest in Boston Harbor, followed by Cape & Islands; all other regions similar
  - Harbor-level exposure highest in Boston, Sandwich Boat Basin, New Bedford, Woods Hole

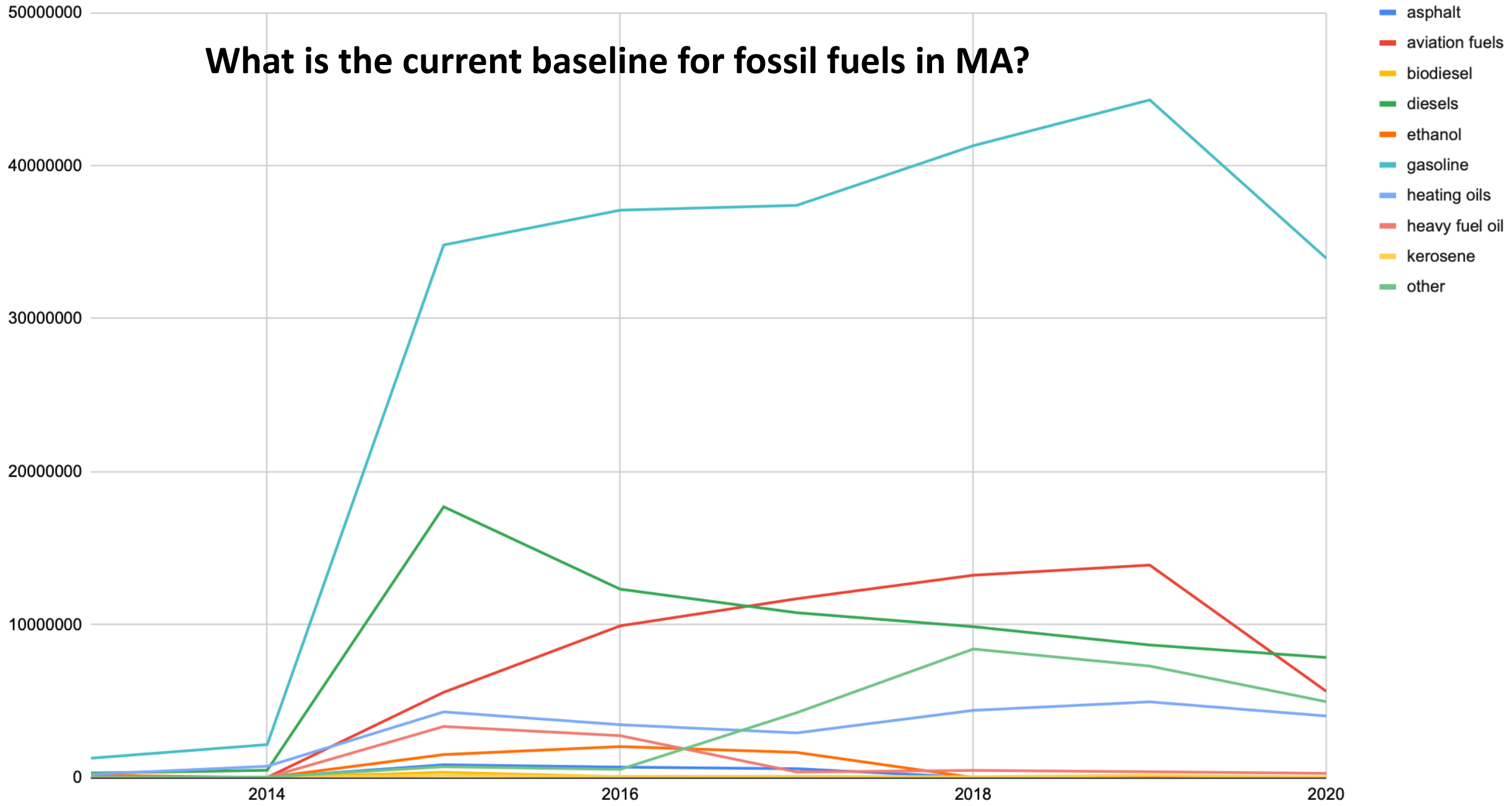
2019 Hazmat Flow Study Objectives

- Summarize and characterize bulk oil and hazardous (OHM) movements
- Identify critical infrastructure and sensitive receptors in buffer zones Scan literature for other OHM flow studies, with a focus on neighboring states
- Identify and summarize trends
- Present material so it is useful to local emergency planners and responders

2022 Integrated Threat and Climate Impact Assessment

- Evaluate changes from 2009-2022 (AIS data from 2017-2020)
- Integrate climate change into assessment
  - Examine the impacts of a changing climate and natural hazards to oil spill risks, preparedness, and response; and
  - Evaluate the impacts of climate mitigation, decarbonization and adaptation policy and trends on marine oil spill risks, preparedness, and response
- Use 2022 Baseline data for Future Scenarios

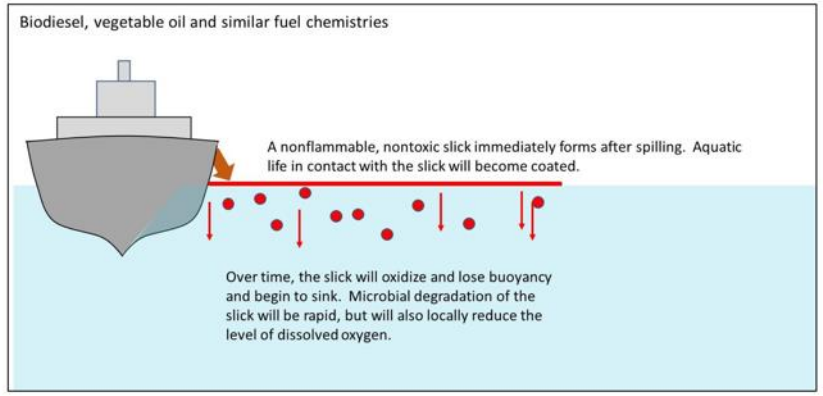
What is the current baseline for fossil fuels in MA?

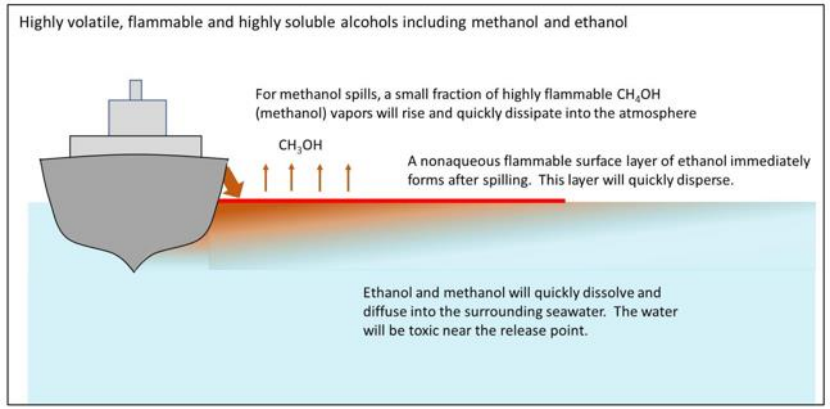


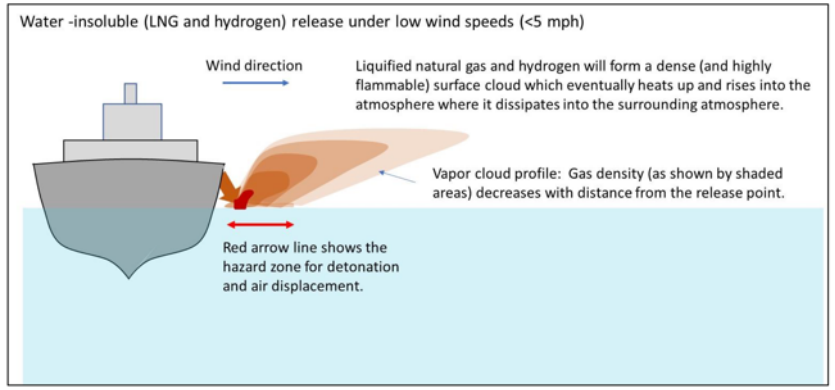
How do Shipping accident risks change as we shift to new fuels?

- Fire, explosion vs. spillage?
- Vapors and smoke

- Emergency towing
- Firefighting and salvage







Should we be changing or adapting our spill response plans & methods?

- Biofuels may create recoverable surface slicks
- Higher volatility fuels create fire, explosive risk but dissipate quickly
- Water-insoluble (hydrogen & LNG) form dense, flammable vapor clouds
- Many alternative fuels have high toxicity but dissipate quickly
- Wind plays an important role

Source: M.D. Kass, C.S. Sluder, and B.C. Kaul (2021). SPILL BEHAVIOR, DETECTION, AND MITIGATION FOR EMERGING NONTRADITIONAL MARINE FUELS. ORNL/TM-2020. Dept. of Energy. 43 pgs.

Next Steps

Qualitative

- Plausible Futures Workshop(s)
  - Climate hazards and spill risk for different sources
  - Decarbonization pathways, technologies, and emerging opportunities/risks
  - Future strategies for climate and oil spill risk reduction

Quantitative

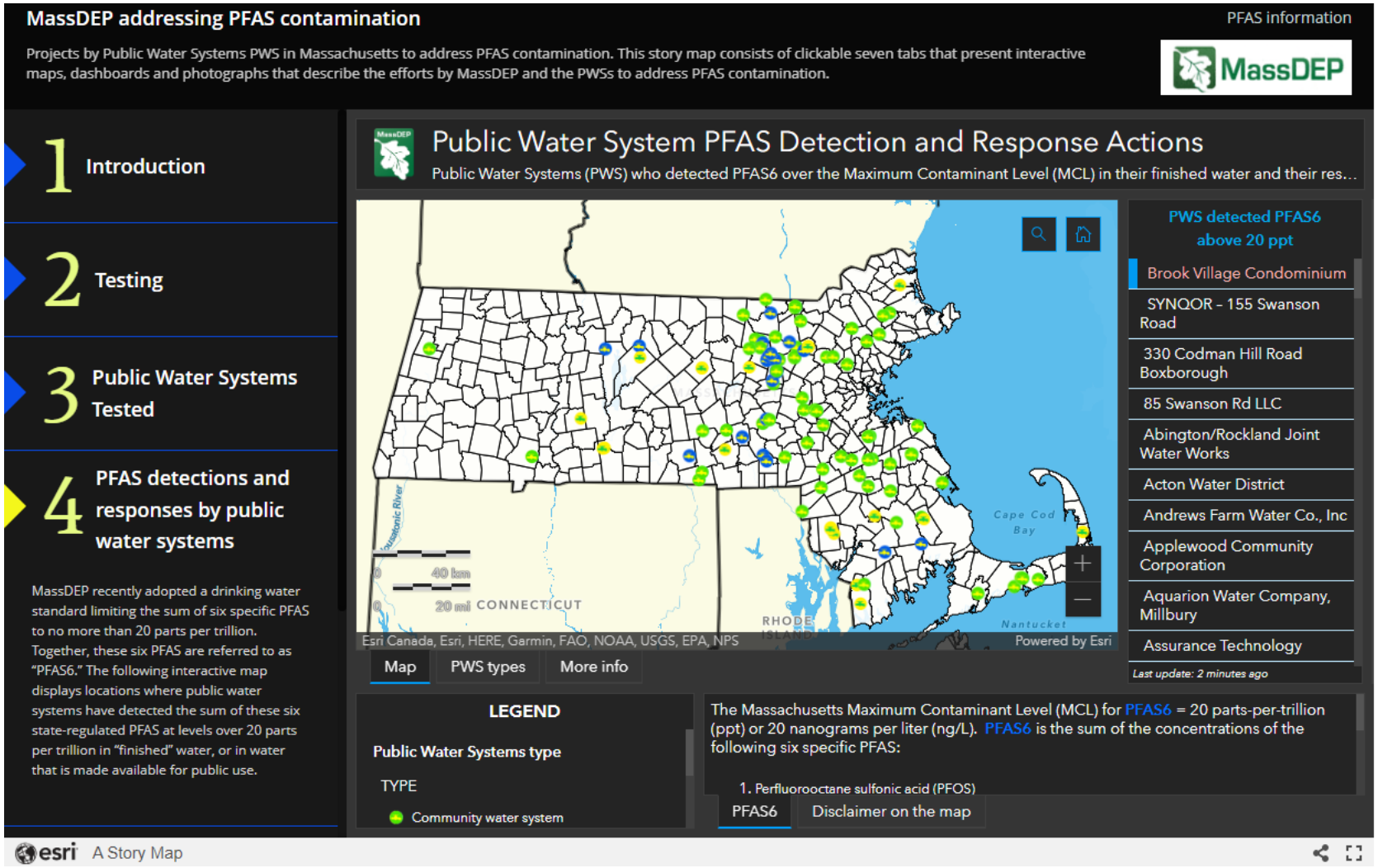
- Threat assessment – region, exposure, volume, location and source
- GIS analysis of current and plausible oil transportation patterns and climate projections
- Future threat scenarios – analysis of plausible transportation patterns based on decarbonization pathways

PFAS Public and Private Well Sampling

- Free sampling programs contract/funding ends June 30.

Public Water Supply Testing

https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas#pfas-detected-in-drinking-water-supplies-in-massachusetts-



- 1,228 PWS (Community and Non-Community) have tested for PFAS (1,468 PWS are required to test); 1,171 took advantage of free testing
- 95% population have water that currently meets 20 ppt PFAS6 MCL
- 128 PWS are currently or were previously providing water > 20 ppt PFAS6 MCL
- Details of PWS response -- Tab 4 of storymap
- PWS PFAS testing results are available at EEA data portal. Search under the chemical name: "PFAS6"

Private Well Sampling Program

- Program involves 85 communities with > 60% residents use private wells
- 4,716 homeowners have applied for the free sampling from the 85 towns
- 1,959 homeowners are now sampling/ready to sample
- We have results from 1,667 private wells; 95% found to be less than 20 ppt MCL

  1,214 = ND 73%
  271 < or = 10 ppt 16%
  99 > 10 ppt but less than 20 ppt 5.9%
  75 > 20 ppt but less than 90 ppt 4.5%
  10 private wells tested *through this program* have tested with results above the 90 ppt imminent hazard. .6 %

- About 200,000 private wells in MA serving 600,000 residents

MassDEP

United States Environmental Protection Agency

Search EPA.gov

Environmental Topics | Laws & Regulations | Report a Violation | About EPA

News Releases: Headquarters | Water (OW)

CONTACT US

EPA Announces New Drinking Water Health Advisories for PFAS Chemicals, $1 Billion in Bipartisan Infrastructure Law Funding to Strengthen Health Protections

Agency establishes new health advisories for GenX and PFBS and lowers health advisories for PFOA and PFOS

June 15, 2022

Contact Information
EPA Press Office (press@epa.gov)

WASHINGTON (June 15, 2022) Today, the U.S. Environmental Protection Agency (EPA) released four drinking water health advisories for per- and polyfluoroalkyl substances (PFAS) in the latest action under President Biden's action plan to deliver clean water and Administrator Regan's PFAS Strategic Roadmap. EPA also announced that it is inviting states and territories to apply for $1 billion – the first of $5 billion in Bipartisan Infrastructure Law grant funding – to address PFAS and other emerging contaminants in drinking water, specifically in small or disadvantaged communities. These actions build on EPA's progress to safeguard communities from PFAS pollution and scientifically inform upcoming efforts, including EPA's forthcoming proposed National Primary Drinking Water Regulation for PFOA and PFOS, which EPA will release in the fall of 2022.

"People on the front-lines of PFAS contamination have suffered for far too long. That's why EPA is taking aggressive action as part of a whole-of-government approach to prevent these chemicals from entering the environment and to help protect concerned families from this pervasive challenge," said **EPA Administrator Michael S. Regan**. "Thanks to President Biden's Bipartisan Infrastructure Law, we are also investing $1 billion to reduce PFAS and other emerging contaminants in drinking water."

https://www.epa.gov/newsreleases/epa-announces-new-drinking-water-health-advisories-pfas-chemicals-1-billion-bipartisan