



First Responder Training and Geographic Response Strategy (GRS) Testing Exercise Series – Barnstable, Hyannis, Yarmouth

After-Action Report

September 19, 2024

The After-Action Report (AAR) aligns exercise objectives with preparedness doctrine and related frameworks and guidance. Exercise information required for preparedness reporting and trend analysis is included; users are encouraged to add additional sections as needed to support their own organizational needs.

EXERCISE OVERVIEW

Table 1: Exercise Overview

Exercise Name	2024 Barnstable/Hyannis/Yarmouth FR Exercise
Exercise Date	September 19, 2024
Scope	This was a full-scale exercise planned for approximately six hours at Englewood Beach in Yarmouth, MA. Exercise play was limited to Lewis Bay and the adjacent shoreline.
Mission Area(s)	Prevention, Protection, Response
Capabilities	Environmental Response/Health and Safety, Operational Coordination, Operational Communications
Objectives	<p>Demonstrate the ability of local first responders to:</p> <p>Objective 1: Conduct initial response activities within the first 4-6 hours of an oil spill incident by deploying MassDEP oil spill response equipment and implementing common Geographic Response Strategy (GRS) tactics in alignment with the MassDEP GRS Tactics Guide.</p> <p>Objective 2: Establish and maintain command and control in the first 4-6 hours of an oil spill incident response by identifying relative health and safety hazards, developing an initial response organization, and communicating response objectives, strategies, and tactics through the completion of an Incident Briefing form (ICS 201) and the facilitation of an Operations and Safety Briefing.</p> <p>Objective 3: Communicate information and actions between multiple local, state, and federal agencies within the first 4-6 hours of an oil spill incident by identifying a common UHF or VHF radio channel that can be utilized by all participants.</p>
Threat or Hazard	Discharge of oil into a navigable waterway
Scenario	An oil spill has occurred that threatens Lewis Bay. The Barnstable, Hyannis, and Yarmouth Fire Departments and Harbormaster/Department of Natural Resources staff will utilize various common Geographic Response Strategy (GRS) tactics to protect sensitive resources in Lewis Bay and the surrounding area.
Sponsor	Massachusetts Department of Environmental Protection (MassDEP)
Participating Organizations	<p>Participating organizations included:</p> <ul style="list-style-type: none"> • Barnstable Fire Department • Barnstable Harbormaster • Hyannis Fire Department • Yarmouth Fire Department • Yarmouth Department of Natural Resources • MassDEP • United States Coast Guard Sector SENE • Moran Environmental Recovery (MER) • Nuka Research

Exercise Name	2024 Barnstable/Hyannis/Yarmouth FR Exercise
Point of Contact	Julie Hutcheson, Marine Oil Spill Prevention & Response Program Coordinator Massachusetts Department of Environmental Protection Oil Spill Prevention and Response Program 100 Cambridge St., Suite 900 Boston, MA 02114 (617) 366-7424 julie.hutcheson@mass.gov



Figure 1: Participants learn how to configure a marine anchor



Figure 2: Participants learn about sorbents and culvert plugs



Figure 3: Participants practice connecting sections of boom



Figure 4: Participants learn about shoreside anchor systems and heaving lines

Photos courtesy of Nuka Research & Planning Group

EXECUTIVE SUMMARY

Exercise Planning

In preparation for the Barnstable/Hyannis/Yarmouth exercise, both an Initial and Final Planning Meeting (IPM/FPM) were held with members of the Exercise Planning Team (EPT). The EPT was comprised of senior personnel from each of the participating organizations listed in the Exercise Overview section.

The following deployment plans were developed:

- Test DV01b and EX02c tactics from GRS #CI13B

Exercise Conduct

Exercise controllers and senior participant personnel monitor weather forecasts and may also conduct pre-deployment site surveys to identify limitations and obstructions that could impact the deployment plan as described above. Deployment plan modifications (if necessary) and observed exercise-day conditions are detailed below.

The following deployment activities were completed:

- Deploy 300ft of containment boom around a moored vessel located southwest of Englewood Beach boat ramp, then deploy 300ft of a DV array from shoreside collection point on section of beach west of boat ramp.

Table 2: Summary of Observed Conditions

Factor	Observed Conditions
Wind speed and direction	15-20 mph, NE
Tidal conditions	Flooding tide
Water depth (approx.)	5-10ft
Wave action & Current speed (approx.)	Small breaking waves
Vessel traffic	None
Harbor mooring field density	Minimal
Other observations	None



Figure 5: Exercise Tactics Map

EXERCISE REPORT

Objective 1: Conduct initial response activities within the first 4-6 hours of an oil spill incident by deploying MassDEP oil spill response equipment and implementing common GRS tactics in alignment with the MassDEP GRS Tactics Guide.

Strength: Vessel and shoreside crews worked well together to properly stage the response trailer on the boat ramp, unload 300ft of boom, load marine anchor systems onto vessels from the ramp and a nearby dock, and then tow boom to the deployment area.

Strength: Vessel crews effectively deployed 300ft of boom in a containment tactic around a vessel at a mooring, then deployed three marine anchors to complete the array. Peat moss was deployed to test and validate the effectiveness of the tactic.

Strength: Shore crews effectively configured a shoreside anchor while vessel crews demobilized the containment array and towed 300ft of boom toward the shoreside anchor location. Both crews worked together to conduct shore-to-vessel transfer utilizing a heaving line. Shore crews then connected the boom to the shoreside anchor, and vessel crews towed from the shoreline and dropped a marine anchor to configure a diversion array.



Figure 6: Vessel crews make final adjustments to the containment array

Objective 2: Establish and maintain command and control in the first 4-6 hours of an oil spill incident response by identifying relative health and safety hazards, developing an initial response organization, and communicating response objectives, strategies, and tactics through the completion of an Incident Briefing form (ICS-201) and the facilitation of an Operations and Safety Briefing.

Strength: The Incident Commander quickly developed and communicated deployment plans and modifications to all participants, assigned vessel and shoreside crew roles and responsibilities, and identified a common radio channel during an Operations briefing.

Strength: Vessel and shore crews worked well together to coordinate, complete, and test the containment boom array, then demobilize and complete the shoreside anchor configuration and diversion tactics deployment.

Observation 1: Minor miscommunications in relaying deployment modifications led to some confusion regarding resource needs.

Analysis: After coordinating several changes to the deployment plan prior to the Operations briefing (to ensure the proper utilization of all available resources), Command Staff communicated these changes to vessel and shore crews. While the Operations and Safety briefings were both



Figure 7: Shoreside crews toss a heaving line to an awaiting vessel

informative and descriptive, there was a slight misunderstanding over the number of anchors needed to complete the containment array. A decision was ultimately made to deploy three marine anchors instead of four (as originally planned) to utilize a nearby mooring ball as the fourth anchor. When this operation proved difficult, vessel crews recognized that a fourth marine anchor was likely necessary.

Objective 3: Communicate between multiple local, state, and federal agencies, including fire, police and harbormaster departments using VHF and UHF communications.

Strength: Command Staff pre-identified a common radio frequency as the primary communications channel for the exercise, directed participants to join the channel, and effectively communicated updates and modifications throughout deployment.

Strength: Vessel crews and shore team maintained excellent communications despite encountering operability issues with some of the radios.



Figure 8: Incident Commander conducts an Operations briefing

PARTICIPANTS & RESOURCES

Table 3: List of Participants

Participating Organizations	
Town of Barnstable, MA	Participant Count
Barnstable Fire Department	5
Hyannis Fire Department	10
Barnstable Harbormaster	3
Town of Yarmouth, MA	
Yarmouth Fire Department	8
Yarmouth Department of Natural Resources	7
TOTAL TOWN/CITY PARTICIPANTS	33
State	
Massachusetts Department of Environmental Protection (MassDEP)	2
Nuka Research and Planning Group, LLC (contractor for MassDEP)	2
Moran Environmental Recovery (contractor for MassDEP)	2
Federal	
United States Coast Guard Sector SENE	3
TOTAL	42

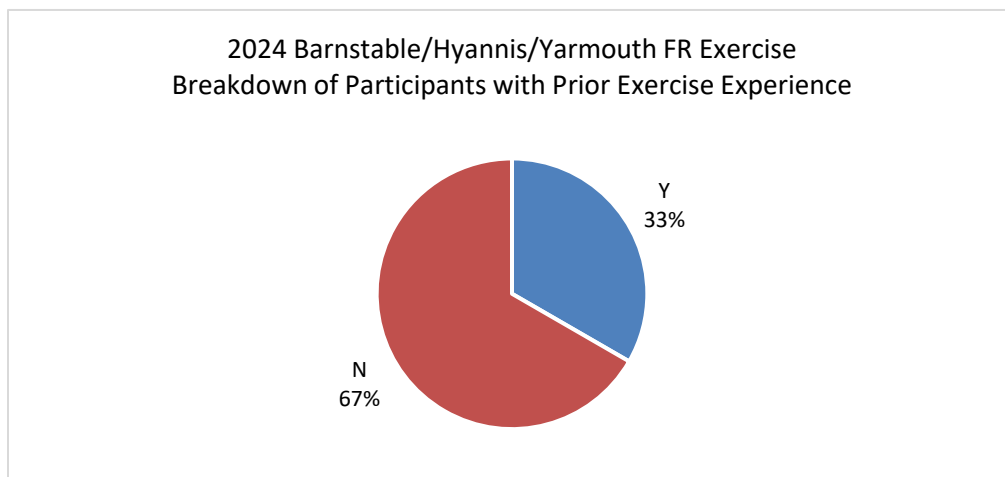


Figure 9: Previous Exercise Participants

Table 4: List of Resources

List of Resources			
Agency	Resource	Kind	Exercise Function
Hyannis FD	34' Jetboat	Vessel	Safety/Observation
Hyannis FD	13' Whaler	Vessel	Boom Deployment
Barnstable FD	17' Whaler	Vessel	Acting Source of Spill
Barnstable HM	Safeboat	Vessel	Safety
Yarmouth DNR	23' Safeboat	Vessel	Boom Deployment
Yarmouth	Oil spill response trailer	Trailer	Boom Deployment
Barnstable	Oil spill response trailer	Trailer	Trailer Training