First Responder Training and Geographic Response Strategy (GRS) Testing Exercise Series –

Plymouth, Kingston

After-Action Report

April 29, 2025

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	2025 Plymouth/Kingston Geographic Response Strategy Exercise
Exercise Date	April 29, 2025
Scope	The full-scale exercise was planned for approximately six hours at the Plymouth Harbormaster Office in Plymouth, MA. Exercise play was limited to Town Wharf in Plymouth and the surrounding areas.
Mission Area(s)	Prevention, Protection, Response
Capabilities	Environmental Response/Health and Safety, Operational Coordination, Operational Communications
Objectives	Demonstrate the ability of local first responders to: **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. **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. **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.
Threat or Hazard	Discharge of oil into a navigable waterway
Scenario	An oil spill has occurred that threatens Town Wharf and the surrounding area. The Plymouth and Kingston Fire Departments and Plymouth Harbormaster will utilize various common Geographic Response Strategy (GRS) tactics to protect sensitive resources in these areas.
Sponsor	Massachusetts Department of Environmental Protection (MassDEP)
Participating Organizations	Participating organizations included: • Plymouth Fire Department/Emergency Management • Plymouth Harbormaster • United States Coast Guard Sector Boston • MassDEP • Moran Environmental Recovery (MER) • Nuka Research
Point of Contact	Julie Hutcheson, Marine Oil Spill Prevention & Response Program Coordinator Massachusetts Department of Environmental Protection 100 Cambridge St., Suite 900 Boston, MA 02114 (617) 366-7424 julie.hutcheson@mass.gov

Figure 1: The Plymouth FD Incident Commander facilitates an Operations briefing

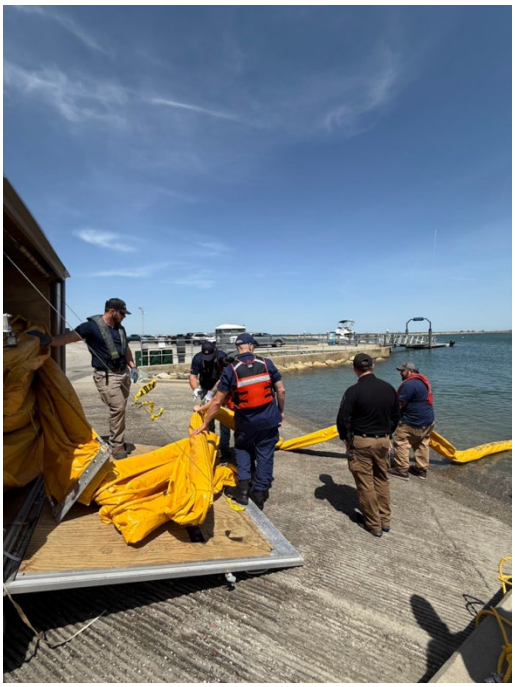

Figure 2: Participants connect sections of boom to prepare for on-water deployment

Figure 3: Participants learn about sorbent materials, culvert plugs, and heaving lines

Figure 4: Participants practice assembling marine anchor systems

Photos courtesy of Nuka Research and Plymouth Harbormaster Department

EXECUTIVE SUMMARY

Exercise Planning

In preparation for the Plymouth/Kingston exercise, both an Initial Planning Meeting (IPM) and a Final Planning Meeting (FPM) were conducted with members of the Exercise Planning Team (EPT). The EPT consisted of senior personnel from each of the participating organizations listed in the Exercise Overview section.

Initial Planning Meeting

A hybrid Initial Planning Meeting (IPM) was held via Zoom and in-person at the Plymouth Harbormaster's Office (185 Water St, Plymouth, MA, 02360) on Thursday, March 20th, from 1:00 PM to 2:00 PM.

Purpose

The purpose of the IPM was to discuss and identify logistical requirements for the exercise, including the date, classroom and deployment locations, personnel and vessel needs, and any additional operational considerations.

Participants

Table 2: IPM Participants

Name	Title/Rank	Department/Organization
Brian Cusack	Battalion Chief	Plymouth Fire Department
Jerome Hart	Deputy Chief	
Christian Horvath	Emergency Manager	
Chad Hunter	Harbormaster	Plymouth Harbormaster
Britany McKibben	CWO	USCG Sector Boston
Mario Villani		USCG Sector SENE

Outcomes

A summary of key IPM outcomes is provided below. Additional details are available in the exercise ICS-201.

- **Exercise Date:** Tuesday, April 29th
- **Classroom Location:** Plymouth Harbormaster's Office (185 Water St, Plymouth)
- **Deployment Location(s):** Plymouth Harbormaster's Dock (185 Water St, Plymouth)
- **Additional Resources:** Plymouth Harbormaster Drone
- **Deployment Notes:** Herring running in area near Town Brook this time of year

Final Planning Meeting

A Final Planning Meeting (FPM) was held via Zoom on Tuesday, April 22nd, from 10:00 AM – 11:00 AM.

Purpose

The purpose of the FPM was to review the draft ICS-201 to validate exercise logistics confirmed during the IPM and to discuss any outstanding operational details needed to support the on-water deployment.

Participants

Table 3: FPM Participants

Name	Title/Rank	Department/Organization
David Malaguti	Deputy Chief	Plymouth Fire Department
Christian Horvath	Emergency Manager	
Chad Hunter	Harbormaster	Plymouth Harbormaster
Britany McKibben	CWO	USCG Sector Boston

Outcomes

A summary of key FPM outcomes is provided below, including a description of deployment plans.

- Deploy 150-200ft of boom in an exclusion/diversion array at the mouth of Town Brook
- Deploy 300ft of containment boom around a moored vessel near Town Wharf

Exercise Conduct

Exercise controllers and senior participant personnel monitor weather forecasts and may also conduct pre-deployment site surveys to identify any physical or environmental limitations that could impact execution of the deployment plan. Any necessary adjustments to the plan and the conditions observed on the day of the exercise are summarized below.

Table 4: Summary of Observed Conditions

Factor	Observed Conditions
Wind speed and direction	24 mph, SSW
Tidal conditions	Flood tide
Water depth (approx.)	Not provided
Wave action & Current speed (approx.)	Strong currents, strong winds from south/southwest
Vessel traffic	Minimal, boats launching to work oyster farms
Harbor mooring field density	Minimal
Other observations	Congested boat ramp due to oyster harvesting; Herring running near Town Brook

The following deployment activities were completed:

- Complete the deployment of 300ft of containment boom around a moored vessel near Town Wharf.

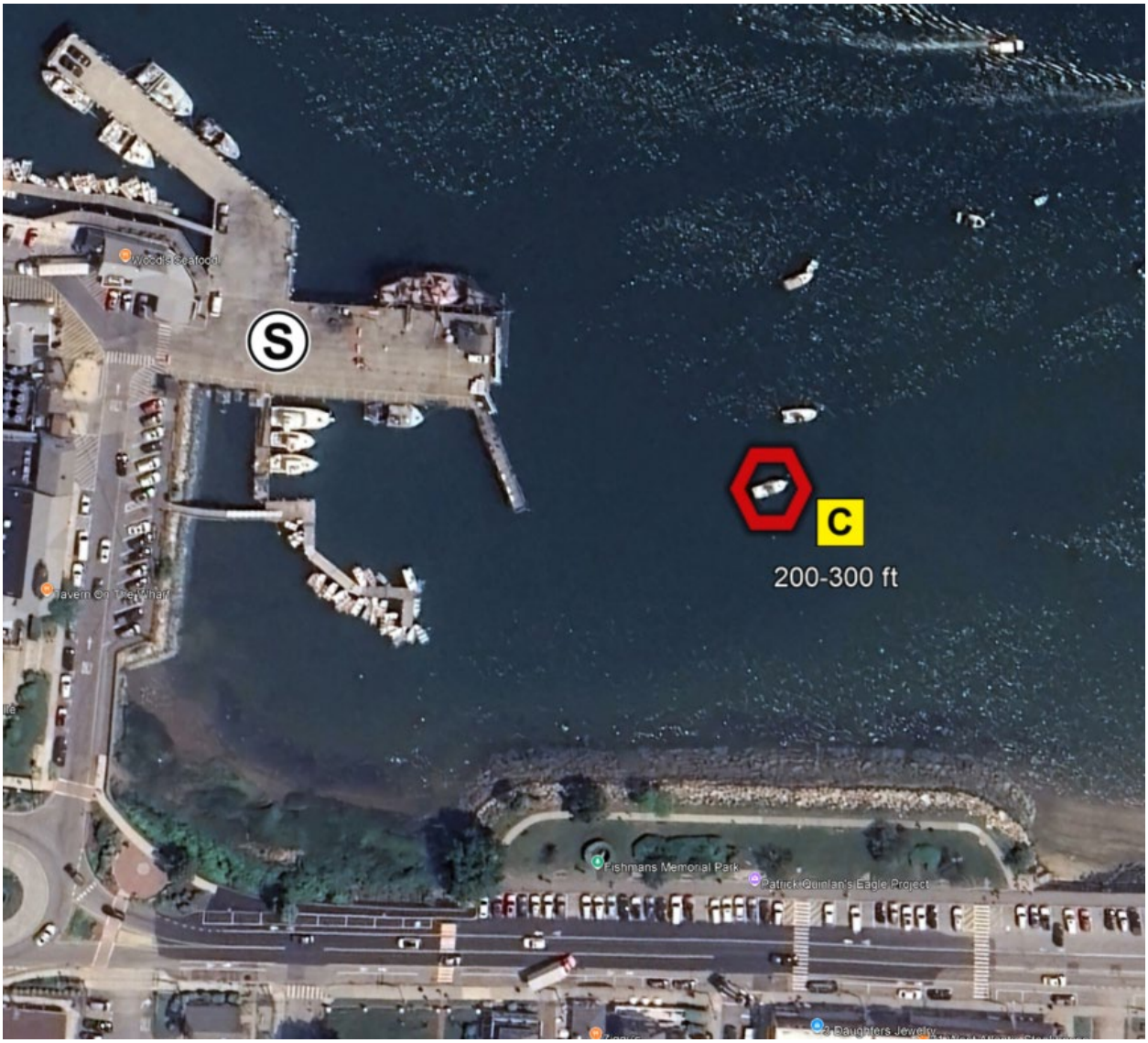

Figure 5: Phase One Exercise Tactics Map

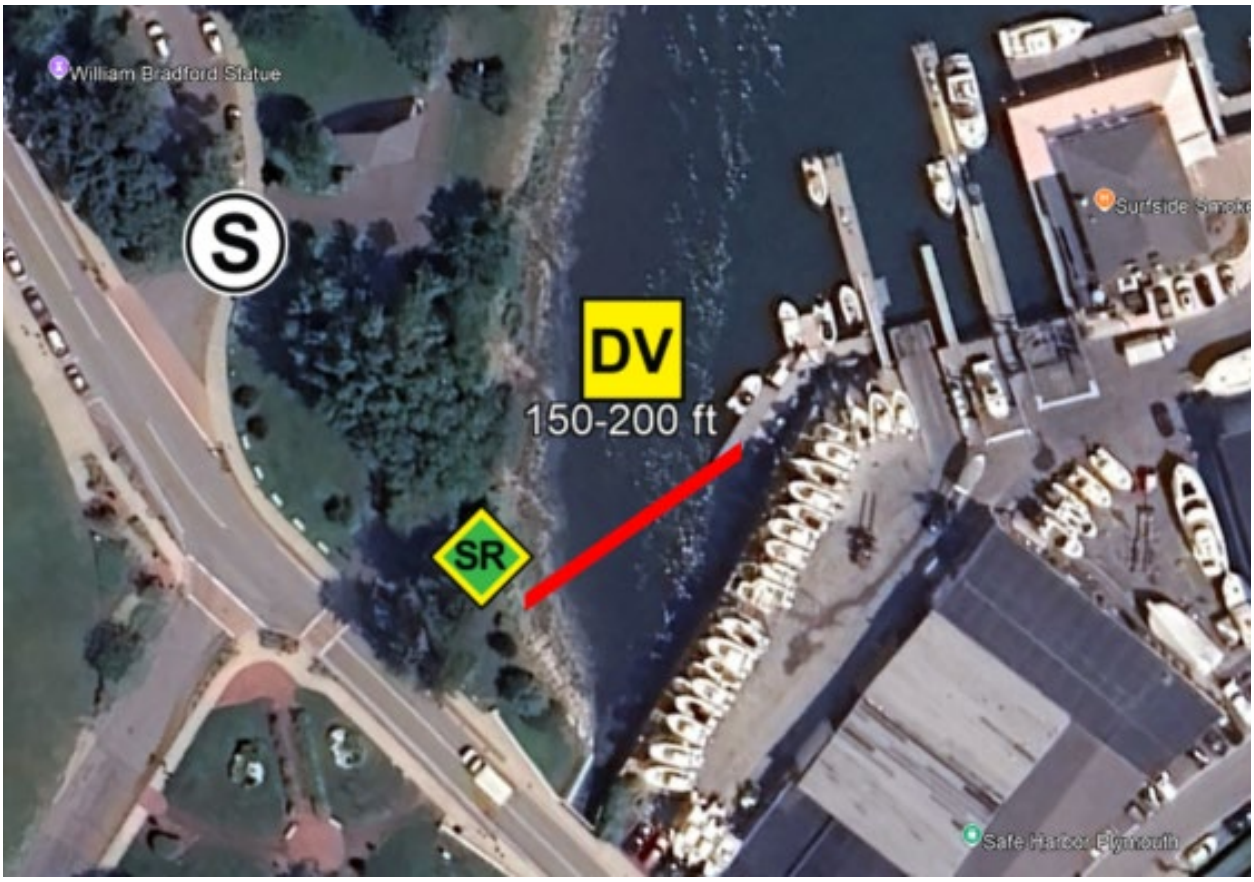

Figure 6: Phase Two Exercise Tactics Map

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: Shoreside crews worked together to properly stage the response trailer in proximity to the boat ramp, unload each section of boom, load marine anchor systems onto each work vessel, and conduct shore-to-vessel transfer.

Strength: Vessel crews worked together to tow 300ft of boom towards the vessel docked in Town Wharf, then coordinated with shoreside crews to position the boom with multiple marine anchors and a shoreside anchor on a nearby floating dock.

Figure 7: A drone operated by the Plymouth Harbormaster captures vessels towing boom

Strength: Command staff, vessel crews, and drone support personnel worked together to coordinate an initial deployment plan and adjustments as needed.

Observation: Vessel crews loaded portions of the 300-foot segment of boom onto the deck of one of the towing vessels, then transported to the deployment location.

Analysis: The decision to partially load sections of boom onto the boat deck facilitated easier transport by reducing the resistance typically encountered when boom is in tow. This approach also enhanced vessel maneuverability and control within a tight operating area by stabilizing the load and contributing to a smoother, more efficient transit to the deployment location.

Observation: Due to timing constraints, responders were unable to deploy at the Town River site as initially planned.

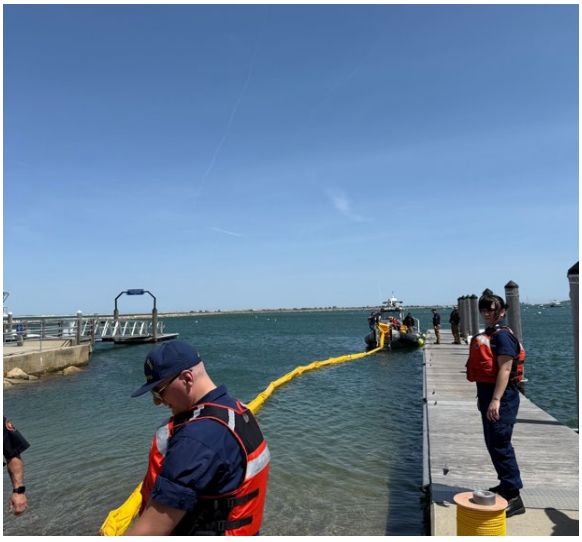

Figure 8: Shoreside responders unload boom sections to begin towing to the deployment site

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 Plymouth FD Incident Commander (IC) quickly identified a Safety Officer (SO). Together, the IC and SO coordinated shore and vessel crew assignments, then effectively communicated deployment plans, roles and responsibilities, and operational safety considerations through an Operations and Safety briefing.

Strength: Command staff, vessel crews, shoreside crews, and trailer support personnel were able to safely and effectively coordinate all deployment activities.

Strength: Command staff and drone support personnel utilized live drone footage to monitor and direct deployment activities, then coordinate adjustments as needed.

Observation: The amount of boom (300ft) prepared for the containment array exceeded what was appropriate for the operating area, slowing the on-water evolution as crews determined the configuration of anchor systems necessary to complete the deployment.

Figure 9: Vessel crews deploy 300 feet of boom around a fishing vessel in the harbor

Analysis: Crews encountered challenges managing the excess boom in the limited operational space. Once the tactic was configured, bellies began to form in the containment array. Crews then worked together to reposition anchor points and make the necessary adjustments to improve the configuration, but this required additional time and effort. Future deployments would benefit from pre-surveying operational areas to ensure the appropriate length of boom is prepared prior to engaging in on-water operations.

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

Strength: Command Staff identified a common radio frequency as the primary communications channel for the exercise and directed participants to join the channel during the Operations and Safety briefings.

Strength: All crews demonstrated excellent communication skills, allowing for adjustments to be made safely and effectively.

Observation: Some vessel crews did not have access to radios, impacting communication with shoreside personnel.

Analysis: Shore to on-water coordination was challenging without radio communication between vessel crews and the shoreside team. Messages had to be passed verbally, causing brief operational delays. Providing all crews with radios and a common communications channel prior to on-water deployment would improve coordination in future responses.

Figure 10: Command Staff work with Exercise Controllers to prepare for deployment briefings

PARTICIPANTS & RESOURCES

Table 5: List of Participants

Participating Organizations	
Town of Plymouth, MA	**Participant Count**
Plymouth Fire Department	6
Plymouth Harbormaster	4
Town of Kingston, MA	
Kingston Fire Department	1
TOTAL TOWN/CITY PARTICIPANTS	**11**
State	
Massachusetts Department of Environmental Protection (MassDEP)	4
Nuka Research and Planning Group, LLC (contractor for MassDEP)	2
Moran Environmental Recovery (contractor for MassDEP)	3
Federal	
United States Coast Guard Sector Boston	5
TOTAL	**25**

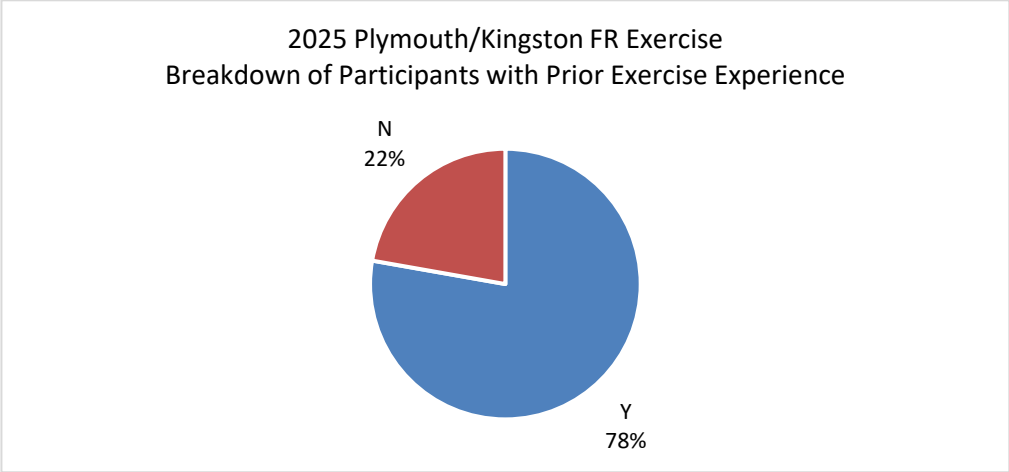

Figure 11: Previous Exercise Participation

Table 6: List of Resources

List of Resources			
Agency	**Resource**	**Kind**	**Exercise Function**
Plymouth HM	27' Safeboat	Vessel	Boom Deployment
Plymouth HM	15' Whaler	Vessel	Safety
Plymouth FD	Oil spill response trailer	Trailer	Boom Deployment and Trailer Training
Kingston FD	Oil spill response trailer	Trailer	Support
Plymouth HM	Equipment	Drone	Support