



MassDEP Geographic Response Plan – 2019 Hyannis/Yarmouth First Responder Exercise

After Action Report
September 17, 2019

The After-Action Report/Improvement Plan (AAR/IP) aligns exercise objectives with preparedness doctrine to include the National Preparedness Goal 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

Exercise Name	2019 Hyannis/Yarmouth First Responder Exercise
Exercise Date	September 17, 2019
Scope	This exercise was a Full-Scale Exercise, planned for approximately six hours in Hyannis, MA and upon the waters of Lewis Bay. Exercise play was limited to Lewis Bay in the vicinity of the Hyannis Steamship Authority Terminal and the adjacent shoreline.
Mission Area(s)	Response
Core Capabilities	Environmental Response/Health and Safety, Operational Coordination, Operational Communications.
Objectives	<p>Objective 1: Demonstrate the ability to deploy oil spill equipment from one or more MassDEP pre-positioned oil spill response trailers utilizing common Geographic Response Plan (GRP) tactics.</p> <p>Objective 2: Demonstrate the ability to assemble a spill response organization utilizing Incident Command System (ICS) principles through execution of an Incident Briefing (ICS 201) and implementation of on-site incident management and tactical operations.</p> <p>Objective 3: Demonstrate the ability to effectively communicate between multiple local, state, and federal agencies including fire departments, police departments, harbormasters, and other state and federal first responders using VHF and UHF communications.</p>
Threat or Hazard	Discharge of oil into a navigable waterway
Scenario	An oil spill has occurred that threatens Lewis Bay. The Hyannis and Yarmouth Fire Departments and Barnstable and Yarmouth Harbormaster staffs will utilize common oil spill response tactics and deploy boom to protect sensitive resources in Lewis Bay and the surrounding area.
Sponsor	Massachusetts Department of Environmental Protection (MassDEP).

Participating Organizations

Participating organizations will include:

- Hyannis Fire Department (HFD)
- Barnstable Harbormaster (BHM)
- Barnstable Department of Natural Resources (BDNR)
- Yarmouth Fire Department (YFD)
- Yarmouth Harbormaster (YHM)
- Yarmouth Department of Natural Resources (YDNR)
- Mass Department of Fire Services HAZMAT Division (MassDFS Hazmat)
- MassDepartment of Environmental Protection (MassDEP)
- Moran Environmental Recovery (MER)
- Nuka Research and Planning Group, LLC (Nuka Research)

Note: See Appendix B for participant count

Point of Contact

Julie Hutcheson, Oil Spill Program Coordinator
Massachusetts Department of Environmental Protection
Oil Spill Prevention and Response Program
1 Winter St.
Boston, MA 02108
(617) 556-1191
julie.hutcheson@state.ma.us

Moran Environmental Recovery and MassDEP personnel provide an overview of trailer equipment to First Responders prior to the field exercise



Yarmouth Fire Department personnel tow boom through Hyannis Harbor enroute to deployment site



Photos courtesy of Nuka Research & Planning Group



Figure 1. Lewis Bay GRP (CI-13)



Figure 2. Exercise Tactics Map

ANALYSIS OF CORE CAPABILITIES

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team. Table 2 includes compiled data from the Exercise Evaluation Guide (EEG) including the organizational capability targets, associated critical tasks, and observations as observed during the exercise and determined by the evaluation team.

Objective	Core Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
Demonstrate the ability to deploy oil spill equipment from one or more MassDEP pre-positioned oil spill response trailers utilizing common Geographic Response Plan (GRP) tactics.	Environmental Response/ Health and Safety	P			
Demonstrate the ability to assemble a spill response organization utilizing Incident Command System (ICS) principles through execution of an Incident Briefing (ICS 201) and implementation of on-site incident management and tactical operations.	Operational Coordination	P			
Demonstrate the ability to effectively communicate between multiple local, state, and federal agencies including fire, police and harbor master departments using VHF and UHF communications	Operational Communications	P			
Ratings Definitions: <ul style="list-style-type: none"> Performed without Challenges (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. Performed with Some Challenges (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified. Performed with Major Challenges (M): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws. Unable to be Performed (U): The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s). 					

Table 1. Summary of Core Capability Performance

Core Capability	Organizational Capability Target	Associated Critical Tasks	Observation Notes
Environmental Response/ Health and Safety	Overview of Response Equipment	<ul style="list-style-type: none"> Access Mass DEP Trailer Identify boom and sorbents Connect boom together Connect towing bridle to boom Connect components of anchor system together 	<ul style="list-style-type: none"> Performed Without Challenges (P) All equipment was readily available in both trailers. Participation during hands-on training at multiple stations was excellent. PFD's were missing from the Yarmouth spill trailer.
	Basic Booming Operations	<ul style="list-style-type: none"> Transport and tow boom. Anchoring and Connecting boom to shore Safe vessel and crew operations. (Refer to ICS-208) 	<ul style="list-style-type: none"> Performed Without Challenges (P) Anchoring requirements were quickly determined once on-scene and anchor systems were configured and set-up quickly and efficiently. Boom towing and anchoring were conducted safely. Safety practices for working around the water were followed despite the missing PFDs. Boat operators were able to maneuver successfully during boom deployment to avoid active vessel traffic. Deployment of boom around a vessel at a mooring was safely and effectively performed by several boat crews. While boom was ultimately deployed successfully using this vessel, the HFD 30' Metalcraft jet drive vessel (M808) is not ideal for deployment of small sections of harbor boom, especially in a congested harbor area.
	Implement Tactics in GRP	<ul style="list-style-type: none"> Deploy containment around a vessel at the dock. Deploy containment around a vessel at a mooring. 	<ul style="list-style-type: none"> Performed Without Challenges (P) During pre-planning for this exercise, it was recognized that the existing GRP strategy CI-13 A (Figure 1) would be difficult to implement and test due to heavy traffic in the area. The strategy was modified for testing (Figure 2) to include 400 ft of exclusion boom but this strategy was not tested due to vessel traffic on the day of the exercise. One hundred feet of 12" boom was deployed in a containment configuration around a vessel at the dock. Two hundred feet of 18" boom was deployed around a vessel at a mooring. To maximize training benefit, both evolutions were conducted twice utilizing different boat crews.
Operational Coordination	Create and Execute an Assignment List (ICS 201)	<ul style="list-style-type: none"> Fill out ICS 201 Assignments in ICS 201 are followed and on-scene adjustments. Participants demonstrate command 	<ul style="list-style-type: none"> Performed Without Challenges (P) The IC clearly outlined an intended operations plan and personnel assignments were made for shoreside and vessel teams. Coordination between shoreside and vessel teams was good. Assignment of vessel crews to complete the 2nd deployment evolution was conducted smoothly and effectively.

		and control of exercise	
Operational Communications	Effectively Communicate Using VHF equipment	<ul style="list-style-type: none">• Create Communications Plan• Communicate with other participants using organic VHF equipment	<ul style="list-style-type: none">• Performed without Challenges (P)• The established communications plan was followed and communications, using VHF Channel 83A and voice communications when appropriate, were clear, concise, and timely throughout the exercise. Barnstable County Sheriff's office drone was successfully used to obtain video footage of the field exercise. No hardware or infrastructure issues were encountered.

Table 2. Summary of Organizational Capability Targets and Associated Critical Tasks

The following sections provide an overview of the performance related to each exercise objective and associated core capability, highlighting strengths and areas for improvement.

Objective 1: Demonstrate the ability to deploy oil spill equipment from one or more MassDEP pre-positioned oil spill response trailers utilizing common Geographic Response Plan (GRP) tactics

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Core Capability 1: Environmental Response/Health and Safety

Strengths

The full capability level can be attributed to the following strengths:

Strength 1: Participation and coordination by the Hyannis and Yarmouth Fire Departments and Harbormaster staffs was excellent and all departments worked well together.

Strength 2: Participation during hands-on training at multiple stations was excellent.

Strength 3: Deployment and anchoring of boom around a vessel at a mooring was successfully accomplished by different boat crews despite being in a congested harbor area with vessel traffic.

Strength 4: Boom towing and anchoring were conducted safely. Boat crews were able to deploy boom around a vessel at the dock and at a mooring using several different boat crews and vessels.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: PFDs in the Yarmouth trailer were not available (missing) for use during the field exercise.

Reference: Incident-specific Safety Message/Plan (ICS 208)

Analysis: This missing safety equipment should be identified during the planning meetings prior to the exercise. MassDEP has made provisions with a contractor to maintain and resupply item from the spill trailers.

Objective 2: Demonstrate the ability to assemble a spill response organization utilizing Incident Command System (ICS) principles through development and execution of an Incident Briefing (ICS 201) and implementation of on-site incident management and tactical operations.

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Core Capability 2: Operational Coordination

Strengths

The full capability level can be attributed to the following strengths:

Strength 1: Overall operational coordination between exercise players was effective and well communicated.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: N/A

Reference: N/A

Analysis: N/A

Objective 3: Demonstrate the ability to effectively communicate between multiple local, state, and federal agencies including fire departments, police departments, harbor masters, and other state and federal first responders using VHF communications

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Core Capability 3: Operational Communications

Strengths

The full capability level can be attributed to the following strengths:

Strength 1: The established communications plan was followed and communications, using VHF Channel 83A and voice communications when appropriate, were clear, concise, and timely throughout the exercise. No hardware or infrastructure issues encountered.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: N/A

Reference: N/A

Analysis: N/A

Hyannis/Yarmouth GRP FX participants attend classroom instruction



Photo courtesy of Nuka Research & Planning Group

Shore teams deploy boom into Hyannis Inner Harbor.

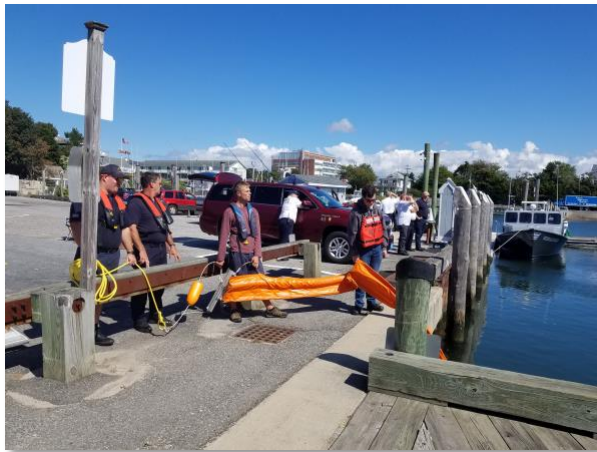
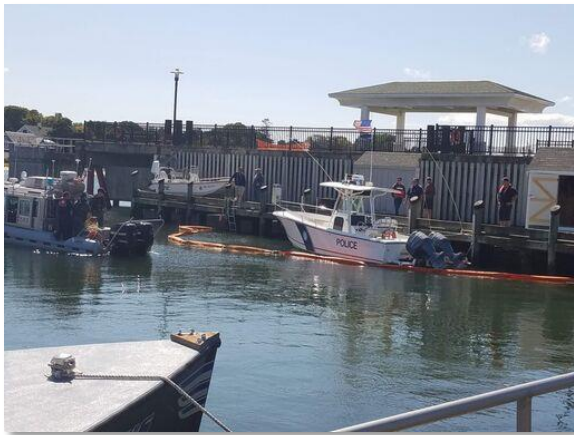


Photo courtesy of Nuka Research & Planning Group

First responders deploy boom around vessel at a dock



First responders deploy boom around a vessel at a mooring



Photos courtesy of Nuka Research & Planning Group

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for the municipalities of Barnstable/Hyannis and Yarmouth following the MassDEP GRP Exercise conducted on September 17, 2019.

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element ¹	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Core Capability 1: Environmental Response/Health and Safety	Restock PFD in Yarmouth trailer	Yarmouth Fire Department should identify location of missing trailer PFD's or request MassDEP to restock missing items.	Equipment	YFD/MER	YFD training officer/MER	09/25/19	10/31/19

¹ Capability Elements are: Planning, Organization, Equipment, Training, or Exercise.

APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations	
Town of Hyannis, MA	Participant Count
Hyannis Fire Department	7
Barnstable Harbormaster	4
Barnstable DNR	2
Barnstable County Sheriff's Office	2
Town of Yarmouth, MA	
Yarmouth Fire Department	6
Yarmouth DNR/Harbormaster	3
TOWN PARTICIPANTS	24
Other	
Hy-Line Cruises	6
State	
Massachusetts Department of Fire Services HAZMAT	1
Massachusetts Department of Environmental Protection (MassDEP)	3
Nuka Research and Planning Group, LLC (contractor for MassDEP)	2
Moran Environmental Recovery (contractor for MassDEP)	3
TOTAL	39