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# MassDEP Geographic Response Strategy\* –2020 Onset/Wareham First Responder Exercise

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## After Action Report

October 20, 2020

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.

COVID-19 Compliance - This exercise was conducted during the COVID 19 pandemic and all Commonwealth of Massachusetts Executive Orders and associated social distancing, face covering, and indoor and outdoor gathering requirements were strictly adhered to.

**\*Note: In keeping with national trends across federal and state agencies involved in oil spill response planning, and in the interest of standardizing terminology, MassDEP Geographic Response Plans (GRP) will now be referred to as Geographic Response Strategies (GRS).**

## EXERCISE OVERVIEW

<b>Exercise Name</b>	2020 Onset/Wareham First Responder Exercise
<b>Exercise Date</b>	October 20, 2020
<b>Scope</b>	This exercise was a Full-Scale Exercise, planned for approximately six hours in Onset, MA and upon the waters of Onset Bay. Exercise play was limited to Onset Bay in the vicinity of the Onset Pier and the adjacent shoreline.
<b>Mission Area(s)</b>	Response
<b>Core Capabilities</b>	Environmental Response/Health and Safety, Operational Coordination, Operational Communications.
<b>Objectives</b>	<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 Strategy (GRS) 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, harbor masters, and other state and federal first responders using VHF and UHF communications.</p>
<b>Threat or Hazard</b>	Discharge of oil into a navigable waterway
<b>Scenario</b>	An oil spill has occurred that threatens Onset Bay. The Onset and Wareham Fire Departments will utilize standard Massachusetts GRS booming tactics to protect sensitive resources in Onset Bay and the adjacent shoreline.
<b>Sponsor</b>	Massachusetts Department of Environmental Protection (MassDEP).

**Participating Organizations**

Participating organizations will include:

- Onset Fire Department (OFD)
- Wareham Fire Department (WFD)
- MassDEP
- Moran Environmental Recovery (MER)
- Nuka Research and Planning Group, LLC (Nuka Research)

Note: See Appendix B for participant count

**Point of Contact**

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Onset Fire Department personnel participate in hands-on anchor system set-up training



Shore team positions equipment for on-water deployment



Photos courtesy of Nuka Research & Planning Group



Figure 1. 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 Strategy (GRS) tactics.	Environmental Response/ Health and Safety		S		
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 harbormaster departments using VHF and UHF communications	Operational Communications		S		
<p><b>Ratings Definitions:</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>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).</li> </ul>					

**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"> <li>Access Mass DEP Trailer</li> <li>Identify boom and sorbents</li> <li>Connect boom together</li> <li>Connect towing bridle to boom</li> <li>Connect components of anchor system together</li> </ul>	<ul style="list-style-type: none"> <li><b>Performed Without Challenges (P)</b></li> <li>All equipment was readily available in both trailers.</li> <li>Participation during hands-on training at multiple stations was excellent.</li> </ul>
	Basic Booming Operations	<ul style="list-style-type: none"> <li>Transport and tow boom.</li> <li>Anchoring and Connecting boom</li> <li>Safe vessel and crew operations. (Refer to ICS-208)</li> </ul>	<ul style="list-style-type: none"> <li><b>Performed With Some Challenges (S)</b></li> <li>Booming and anchoring requirements were initially determined during operations brief and based on specifics of vessel to be boomed (25 ft. OFD Safeboat). Boom towing and anchoring were conducted safely though vessel crews did initially encounter difficulty deploying anchor systems around vessel at anchor as one trip line was tangled around anchor after initial deployment. Resolved quickly. Additionally, some boat crews indicated that anchor lines were too short but this was likely due to initial deployment configuration rather than anchor line length as there was plenty of scope for water depth. Anchors were reconfigured and held well.</li> <li>Safety practices for working around the water were followed. Boat operators were able to maneuver successfully during boom deployment.</li> </ul>
	Implement Tactics in GRS	<ul style="list-style-type: none"> <li>Deploy containment boom around a vessel at a mooring.</li> </ul>	<ul style="list-style-type: none"> <li><b>Performed With Some Challenges (S)</b></li> <li>Deployment of containment boom around a vessel at a mooring was safely and effectively performed despite the anchoring challenges noted above. M4 (WFD) initially towed 150 ft of 12 inch boom from dock and transferred to M1 who set first anchor system near moored vessel. M4 encircled moored vessel and set second anchor system, encountering and resolving tangled trip line as noted above. M1 set third anchor system and adjusted configuration to allow for adequate containment area.</li> </ul>
Operational Coordination	Create and Execute an Assignment List (ICS 201)	<ul style="list-style-type: none"> <li>Fill out ICS 201</li> <li>Assignments in ICS 201 are followed and on-scene adjustments.</li> <li>Participants demonstrate command and control of exercise</li> </ul>	<ul style="list-style-type: none"> <li><b>Performed Without Challenges (P)</b></li> <li>The IC outlined an intended operations plan and personnel assignments were made for shoreside and vessel teams.</li> <li>Coordination between shoreside and vessel teams was good.</li> </ul>

Core Capability	Organizational Capability Target	Associated Critical Tasks	Observation Notes
Operational Communications	Effectively Communicate Using VHF equipment	<ul style="list-style-type: none"> <li>• Create Communications Plan</li> <li>• Communicate with other participants using organic VHF equipment</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Performed With Some Challenges (S)</b></li> <li>• The established communications plan was followed and communications, using VHF Channel 23A as well as voice communications when appropriate were, for the most part, clear and timely throughout the exercise. Some exercise controllers and participants noted that there were occasional lapses in effective communication between all vessel strike teams and the IC during the containment boom deployment. It was also noted that M-2 (OFD) could not communicate effectively with the IC and other vessels due to the fact that they had no radio communication onboard. No other hardware or infrastructure issues were encountered.</li> </ul>

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 Strategy (GRS) 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 partial capability level can be attributed to the following strengths:

**Strength 1:** Participation and coordination by the Onset and Wareham Fire Departments and Harbormaster staffs was good and all departments worked well together.

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

**Strength 3:** Boom towing and anchoring were conducted safely. Multiple boat crews were able to deploy a containment boom strategy around a moored vessel in Onset Bay near the town dock.

#### **Areas for Improvement**

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

**Area for Improvement 1:** Deploying and setting anchor systems.

**Reference:** Exercise Plan

**Analysis:** Vessel crews initially encountered difficulty deploying anchor systems around vessel at anchor as one trip line was tangled around anchor after initial deployment. Resolved quickly. Additionally, some boat crews indicated that anchor lines were too short but this was likely due to initial deployment configuration rather than anchor line length as there was plenty of scope for water depth. Anchors were reconfigured and held well.

## **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 partial capability level can be attributed to the following strengths:

**Strength 1:** The established communications plan was followed and communications, using VHF Channel 23A as well as voice communications when appropriate were, for the most part, clear and timely throughout the exercise. No hardware or infrastructure issues were encountered.

### Areas for Improvement

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

**Area for Improvement 1:** Uniform, comprehensive communications capabilities for all participating assets.

**Reference:** ICS 201-Communications Plan

**Analysis:** Some exercise controllers and participants noted that there were occasional lapses in effective communication between all vessel strike teams and the IC during the containment boom deployment. It was also noted that M-2 (OFD) could not communicate effectively with the IC and other vessels due to the fact that they had no radio communication onboard.

Wareham Fire Department tows the boom to set around an anchored vessel in Onset Harbor.



Onset Fire Department personnel re-sets the anchor to optimize the containment strategy around the vessel.



Onset FD personnel prepare to deploy an anchor system.



Containment boom around the anchored vessel successfully deployed.



Photos courtesy of Nuka Research & Planning Group

## APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for the towns of Onset and Wareham following the MassDEP First Responder Exercise conducted on October 20, 2020.

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element <sup>1</sup>	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Core Capability 1: Environmental Response/Health and Safety	Setting up, deploying and adjusting anchor systems	Adjust training program to emphasize the proper set-up, deployment, and adjustment procedures for anchor systems.	Training	Nuka Research	Mike Popovich	11/01/20	12/31/21
Core Capability 2: Operational Coordination	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Core Capability 3: Operational Communications	Effective Communication across all participating vessel/shore strike teams and IC	Emphasize during planning and training phases the importance of all participating assets having a means to communicate via radio	Planning, Organization, Equipment	Nuka Research	Mike Popovich	11/01/20	12/31/21

<sup>1</sup> Capability Elements are: Planning, Organization, Equipment, Training, or Exercise.

## APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations	
Town of Onset, MA	Participant Count
Onset Fire Department	7
Town of Wareham, MA	
Wareham Fire Department	4
<b>TOWN PARTICIPANTS</b>	<b>12</b>
State	
Massachusetts Department of Environmental Protection (MassDEP)	2
Nuka Research and Planning Group, LLC (contractor for MassDEP)	3
Moran Environmental Recovery (contractor for MassDEP)	2
<b>TOTAL</b>	<b>19</b>

## APPENDIX C: EXERCISE EVALUATION FORM



### MassDEP Geographic Response Plan (GRP) Exercise and Testing Program

#### Participant Feedback Form

<b>1</b> Strongly disagree	<b>2</b> Mildly disagree	<b>3</b> Neutral	<b>4</b> Mildly agree	<b>5</b> Strongly agree
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Please use the above rating scale to answer the questions for each of the following topics.

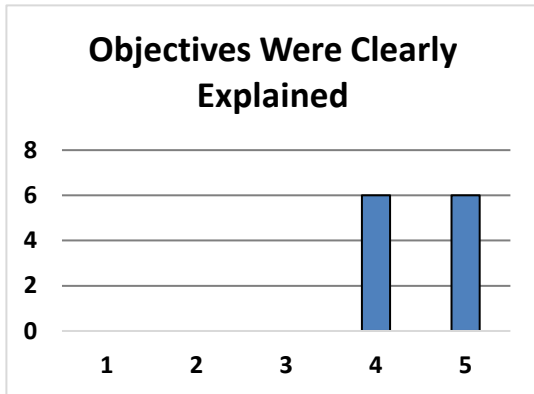
<b>The objectives were clearly explained and the exercise met those objectives.</b>	<b>1 2 3 4 5</b>
<b>Comments:</b>	
<b>The material appropriately challenged me and the pace of instruction was correct.</b>	<b>1 2 3 4 5</b>
<b>Comments:</b>	
<b>The instructor(s) did an excellent job.</b>	<b>1 2 3 4 5</b>
<b>Comments:</b>	
<b>I found the classroom to be a comfortable learning environment.</b>	<b>1 2 3 4 5</b>
<b>Comments:</b>	
<b>I feel more prepared to respond to an oil spill than I did before this exercise.</b>	<b>1 2 3 4 5</b>
<b>Comments:</b>	
<b>The best thing about this training was _____.</b>	
<b>This training could have been improved by _____.</b>	

Please use the back of the sheet if you need more room for comments.

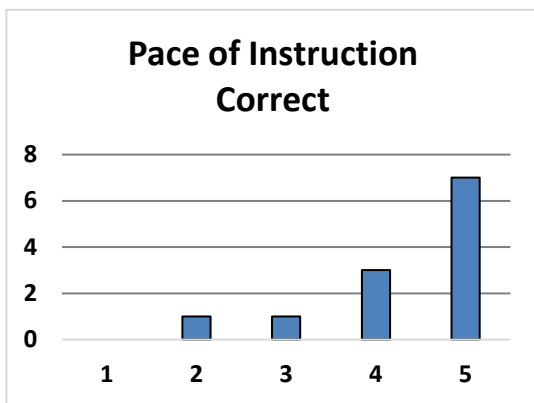
(Rev 2016)



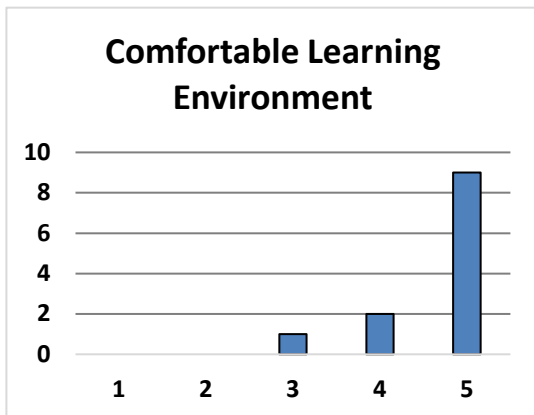
### Student Feedback Summary



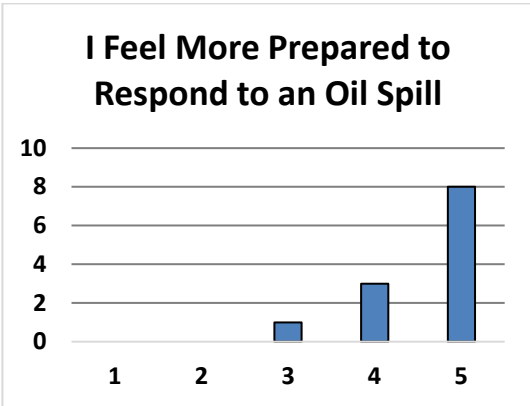
**Comments:** "Clearly explained, execution was mediocre"



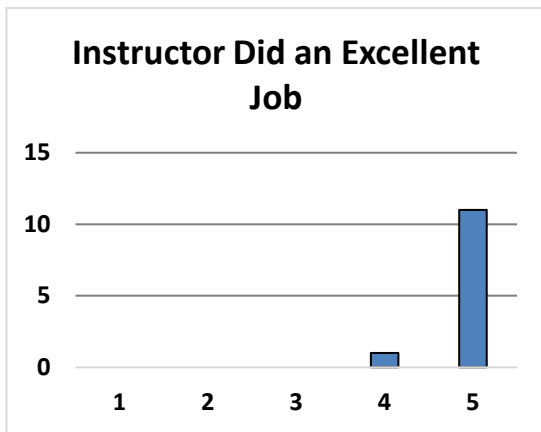
**Comments:** "Wasn't too challenging", "A challenge and the pace was fine"



**Comments:** "Slides were straight forward"



Comments: None



Comments: "Great teaching"

**The best thing about this training was...** "Hands on time", "The boats", "Hands on", "Learning", "Very informative", "Communications", Learning about incident command for waterway emergency", "Good instructions", "Hands on experience"

**This training could be improved by...** "Possibly more instruction/preparation"