



# MassDEP Geographic Response Plan – 2014 Barnstable (CI-03) Exercise

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November 17, 2014

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

<b>Exercise Name</b>	2014 Barnstable (CI-03) GRP Exercise
<b>Exercise Dates</b>	October 23, 2014
<b>Scope</b>	This exercise is a Full Scale Exercise, planned for approximately six hours at Barnstable Harbor in Barnstable, MA and upon the waters of Barnstable Harbor. Exercise play is limited to Barnstable Harbor and adjacent waters.
<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 Plan (GRP) tactics.</p> <p>Objective 2: Demonstrate the ability to assemble a spill response organization utilizing Incident Command System (ICS) principles through development and execution of an Assignment List (ICS 204) 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 both UHF and VHF communications.</p>
<b>Threat or Hazard</b>	Discharge of oil into a navigable waterway
<b>Scenario</b>	A major oil spill in Cape Cod Bay caused by an unknown source will have impact on a significant portion of the shoreline, beaches and tidal areas in and around Barnstable, MA. No responsible party has been identified. A Unified Command has been established and they have contacted the Barnstable and West Barnstable fire departments and recommended that they utilize Geographic Response Plan (GRP) CI-03 to deploy protective booming to protect sensitive resources in and near the Barnstable Harbor including Maraspin Creek and marshes.

**Sponsor**

Massachusetts Department of Environmental Protection. Program funds will be utilized for first responder backfill and overtime costs.

**Participating Organizations**

Participating organizations included:

- Barnstable Fire Department (BFD)
- West Barnstable Fire Department (WBFD)
- Centerville-Osterville-Marstons Mills Fire Department (COMM)
- Barnstable Harbor Master (BHM)
- MassDEP
- U.S. Coast Guard Sector Southeastern New England (USCG)
- 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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## 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 development and execution of an Assignment List (ICS 204) 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 departments, police departments, harbormasters, and other state and federal first responders using both UHF and VHF communications	Operational Communications	P			
<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</li> </ul>					

Objective	Core Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
<p>conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.</p> <ul style="list-style-type: none"> <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
<b>Environmental Response/ Health and Safety</b>	<b>Overview of Response Equipment</b>	<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>	<p>Performed without Challenges (P)</p> <ul style="list-style-type: none"> <li>All skills successfully demonstrated during exercise.</li> <li>Excellent Training from MER despite rainsquall.</li> <li>Classroom training was excellent.</li> <li>Full participation by students in demonstration portion of the instruction.</li> <li>Area for Improvement: Would be useful to have demo ASTM connectors for students.</li> <li>Area for Improvement: Would be useful to use small sections of line for students to tie their own knots for practice.</li> </ul>
	<b>Basic Booming Operations</b>	<ul style="list-style-type: none"> <li>Transport and tow boom.</li> <li><i>Critical Task:</i> Anchoring and Connecting boom to shore</li> <li><i>Critical Task:</i> Safe vessel and crew operations. (Refer to ICS-208)</li> </ul>	<p>Performed Without Challenges (P)</p> <ul style="list-style-type: none"> <li>All boat crews effectively worked together, towing and controlling boom deployment.</li> <li>Safety officer did an excellent job of ensuring safe operations. Kept a line from getting entangled in 17 ft skiff outboard engine.</li> <li>Shore teams were excellent, used rebar and existing structures to anchor boom to shore.</li> </ul>
	<b>Implement Tactics in GRP</b>	<ul style="list-style-type: none"> <li>Deploy Exclusion Boom Tactic</li> </ul>	<p>Exclusion deployment, Performed Without Challenges (P)</p> <ul style="list-style-type: none"> <li>Boom deployed as discussed in briefing except failure of engine by 17 ft harbormaster boat caused the boom to be taken by the current under the bridge. The 25 ft Harbormaster boat skillfully retrieved the boom and anchored it to the floating dock to create the desired chevron.</li> <li>Tactic proved to be successful as modified during ops briefing. Deviated from the GRP by using 150 ft vice 400 ft of 12-inch boom due to presence of floating docks.</li> </ul>

Core Capability	Organizational Capability Target	Associated Critical Tasks	Observation Notes
			<p>Tactic worked well but could have used an additional 50 ft section of boom (not in trailer). IC noted that tactic could easily be deployed without boats if needed. Simulant was unable to penetrate into the sensitive area.</p> <ul style="list-style-type: none"> <li>Harbormaster noted that it may be preferable to use boom from Whale watch pier to the floating docks to keep oil out of the entire harbor (something to look at)</li> </ul> <p>Diversion Deployment</p> <ul style="list-style-type: none"> <li>Only deployed half of Diversion tactic (DV-01) Diversion boom was successful in capturing simulant.</li> <li>Boat crews worked well together to anchor boom among the moorings.</li> <li>Configuration had to be adjusted and anchor moved further offshore but crew did that with skill.</li> <li>Initial shore anchor (rebar) failed.</li> <li>BEST PRACTICE: to correct the failed shore anchor, Jaime Gonslaves provided a best practice use for rebar as a shore anchor. See picture or graphic for more detail. Must include in instruction and in Tactics Manual as preferred option for use of rebar as shore anchor.</li> </ul>
<p><b>Operational Coordination</b></p>	<p><b>Create and Execute An Assignment List (ICS 204)</b></p>	<ul style="list-style-type: none"> <li>Fill out ICS 204</li> <li>Assignments in ICS 204 are followed and on-scene adjustments.</li> <li>Participants demonstrate command and control of exercise</li> </ul>	<ul style="list-style-type: none"> <li>Team make up well defined.</li> <li>Enough personnel to complete assignments.</li> <li>IC did an excellent job of coordinating between shore and boat teams. Especially, when directing boat to relieve strain on failed shore anchor. Directed boat to allow shore team to correct the situation.</li> <li>Good situational awareness of IC. Fully aware of concept that “help comes in waves” and was thinking through next tactic while still working on first.</li> <li>IC very careful to ensure boat didn't get caught on the inside of the exclusion tactic.</li> </ul>
<p><b>Operational Communications</b></p>	<p><b>Effectively Communicate Using UHF and VHF equipment</b></p>	<ul style="list-style-type: none"> <li>Create Communications Plan</li> <li>Communicate with other participants using organic UHF equipment</li> <li>Communicate with</li> </ul>	<p>Performed without Challenges (P)</p> <ul style="list-style-type: none"> <li>Communications interoperability between departments was seamless. VHF equipment was used effectively.</li> <li>Strong comms between shore and water crews.</li> <li>UHF Equipment not utilized.</li> </ul>

Core Capability	Organizational Capability Target	Associated Critical Tasks	Observation Notes
		other participants using organic VHF equipment	

Table 2. EEG Summary

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:** Participants from multiple agencies (Barnstable, West Barnstable and COMM Fire Departments, Barnstable Harbormaster, MassDEP, USCG) worked together to accomplish goal

**Strength 2:** All participants conducted the deployment safely.

#### **Areas for Improvement**

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

**Area for Improvement 1:** Having demonstration ASTM connectors for students would facilitate training by allowing students to have hands on participation in a shorter time.

**Reference:** Massachusetts Geographic Response Plan Tactics Guide

**Analysis:** Demonstration equipment does not exist.

**Area for Improvement 2:** Would be useful to use small sections of line for students to tie their own knots for practice.

**Reference:** Massachusetts Geographic Response Plan Tactics Guide

**Analysis:** Demonstration equipment does not exist.

## **Objective 2: 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 both UHF and VHF communications**

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:** All personnel were clear on assignments during the exercise.

### Areas for Improvement

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

**Area for Improvement 1:** None

**Analysis:** N/A

## Core Capability 3: Operational Communications

### Strengths

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

**Strength 1:** Communications interoperability between departments was seamless. VHF channel 81A was used effectively with all equipment working properly.

**Strength 2:** Strong communication between shore and water crews.

### Areas for Improvement

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

**Area for Improvement 1:** None to report.

**Analysis:** N/A

## APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for MassDEP, the Barnstable Fire District, and the Barnstable Harbormaster following the MassDEP Barnstable(CI-03) GRP Exercise conducted on October 23, 2014.

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	1. Having demonstration ASTM connectors for students would facilitate training by allowing students to have hands on participation in a shorter time.	Either purchase connectors from manufacturer, if possible, or harvest connectors from decommissioned boom for training purposes.	Equipment	MassDEP	Steve Mahoney		
Core Capability 1: Environmental Response/Health and Safety	2. Would be useful to use small sections of line for students to practice tying knots.	Provide small sections of line for students to use for knot tying practice.	Equipment	MassDEP	Steve Mahoney		

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

## APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations	
Federal	Participant Count
United States Coast Guard Sector Southeastern New England (USCG)	1
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
Barnstable Fire District	
Barnstable Fire Department	8
West Barnstable Fire Department	6
COMM Fire Department	8
Town of Barnstable, MA	
Barnstable Harbormaster	6
Barnstable DPW	1
<b>TOTAL</b>	<b>37</b>

## APPENDIX C: EXERCISE EVALUATION FORM

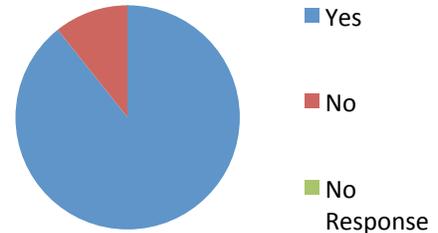
**Massachusetts DEP 2014 Cape & Islands GRP Exercise – PARTICIPANT EVALUATION**

<b>Barnstable, W. Barnstable, COMM – Barnstable Harbor GRP Exercise</b>	<b>Exercise date: 23OCT14</b>	
Instructions to Participants: Complete this form based on your observations of the GRP exercise.		
Participant Name (optional):	Participant Organization:	
What was your role in exercise? (responder, observer, facilitator, etc.)		
What was your level of spill response experience prior to this exercise?		
NONE      TRAINING ONLY      SOME SPILL RESPONSE      A LOT		
Please check a box to respond to the following.	YES	NO
1. I feel more prepared to deploy oil spill response equipment now than I did prior to this exercise.		
2. I have a better understanding of spill response tactics than I did prior to this exercise.		
3. I would participate in future oil spill response equipment or Geographic Response Plan deployments at other sites.		
4. The objectives were clearly explained and the deployment exercise met the objectives.		
5. The exercise was conducted safely.		
Based on your experience today, would you feel comfortable setting a similar boom array during an actual incident?		
NOT AT ALL      A LITTLE      MODERATELY      VERY		
Please evaluate how well the <b>Blish Point Boat Ramp Staging Area</b> worked for deploying and demobilizing boom from the trailer for this deployment: <input type="checkbox"/> <u>Ideal</u> staging area for boom for this tactic. <input type="checkbox"/> <u>Sufficient</u> as a staging area for boom for this tactic. <input type="checkbox"/> <u>Not sufficient</u> as a staging area for boom for this tactic.		
Did the Exercise Plan (map diagram) provide clear direction as to how and where to deploy the boom? If not, please identify problems & suggest improvements.		

**PLEASE USE THE BACK OF THIS PAGE  
FOR ANY ADDITIONAL COMMENTS**

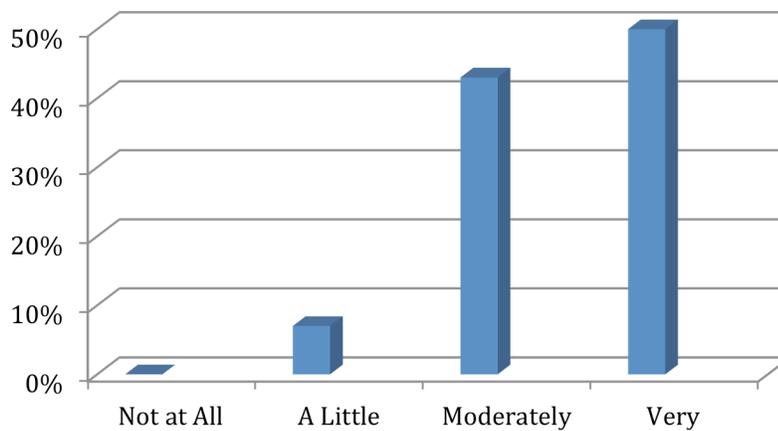
	Yes	No
Prior Oil Spill Experience	89%	11%
More Prepared after Exercise	100%	0%
Better Understanding of Deploying Spill Response Tactics	100%	0%
Participate in Future GRP Deployments	96%	4%
Field Objectives Clearly Explained and/or Met	100%	0%

### Prior Spill Experience



28 Respondents

Based on experience today, comfort level with setting a similar boom array in actual incident



### Blish Point Boat Ramp as Staging Area

