



# MassDEP Geographic Response Plan – 2014 Moon Island First Responder Exercise

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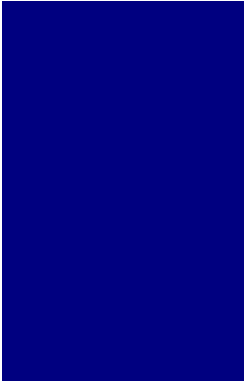
After-Action Report/Improvement Plan

October 30, 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 Moon Island First Responder GRP Exercise
<b>Exercise Dates</b>	September 23th, 2014
<b>Scope</b>	This exercise is a Full Scale Exercise, planned for approximately six hours in Quincy, MA and upon the waters of Boston Harbor. Exercise play is limited to the waters immediately surrounding the Boston Fire Department Moon Island Training Academy (MITA).
<b>Mission Area(s)</b>	Response
<b>Core Capabilities</b>	Environmental Response/Health and Safety, Operational Coordination,
<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>
<b>Threat or Hazard</b>	Discharge of oil into a navigable waterway
<b>Scenario</b>	An oil spill has occurred in outer Boston Harbor and threatens the Boston Harbor Islands including Moon Island. The Boston and Hull Fire Departments, in consultation with the Massachusetts Department of Environmental Protection will deploy protective booming strategies in the vicinity of Moon Island and MITA to protect sensitive resources within and around Moon Island.
<b>Sponsor</b>	Massachusetts Department of Environmental Protection. Urban Areas Security Initiative (UASI) program funds (through the City of Boston's Mayor's Office of Emergency Management) are being utilized for first responder backfill and overtime costs for Boston Fire Department. MassDEP program funds will be utilized for first responder backfill and overtime costs for Hull Fire Department.
<b>Participating Organizations</b>	Participating organizations included: <ul style="list-style-type: none"><li>• Boston Fire Department (BFD)</li></ul>



- City of Boston, Mayor’s Office of Emergency Management
  - Hull Fire Department (HFD)
  - Hull Harbormaster
  - MassDEP
  - Moran Environmental Recovery (MER)
  - Nuka Research and Planning Group, LLC (Nuka Research)
  - U.S. Coast Guard Sector Boston (USCG)
- Note: See Appendix B for participant count



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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	Not Assessed			
<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</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>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.</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
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>Performed without Challenges (P)</li> <li>Excellent Training from MER</li> <li>Full participation by students in demonstration portion of the instruction</li> <li>All skills successfully demonstrated during exercise</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>
	Basic Booming Operations	<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>	<ul style="list-style-type: none"> <li>Performed without Challenges (P)</li> <li>All boat crews effectively towed boom and deployed anchors.</li> <li>Shore team did an excellent job of connecting boom to shore.</li> <li>Best Practice: Innovative use of wood wedges to fix re-bar into jetty.</li> <li>Safety Officer did an excellent job.</li> <li>Good use of safety tape to mark re-bar poles.</li> <li>Area for Improvement: Could use monkey fist/heaving lines to facilitate transfer of boom from shore to boat.</li> <li>Area for Improvement: use plywood for launching anchors on boats instead of tossing them in the water.</li> <li>Best Practice: Use old 6" feeder hoses for chafing gear on jetties/rocks.</li> </ul>
	Implement Tactics in GRP	<ul style="list-style-type: none"> <li>Deploy Exclusion Boom Tactic</li> <li>Deploy Deflection Boom Tactic</li> </ul>	<ul style="list-style-type: none"> <li>EX deployment,</li> <li>Performed without Challenges (P)</li> <li>Boom held surrogate (straw)</li> <li>Some gaps between seawall and boom. Students were aware that</li> </ul>

Core Capability	Organizational Capability Target	Associated Critical Tasks	Observation Notes
		<ul style="list-style-type: none"> <li>Deploy Diversion Boom Tactic</li> </ul>	<p>they could use sausage boom to close gaps &amp; manage tide.</p> <p>DV deployment</p> <ul style="list-style-type: none"> <li>Performed without Challenges (P)</li> <li>75' of anchor line was too much, crew expertly recovered anchor and redeployed it to achieve cascading boom</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>Performed without Challenges (P)</li> <li>Assignments in ICS 204 carried out in outstanding manner</li> <li>IC did an excellent job of controlling exercise.</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 other participants using organic VHF equipment</li> </ul>	<ul style="list-style-type: none"> <li>Not Assessed</li> <li>Communications interoperability between departments was not observed. MITA provided communications equipment to all exercise participants</li> </ul>

**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 (Boston and Hull FD, Hull Harbormaster, Moran Environmental, MassDEP) worked well together to accomplish the training goals.

**Strength 2:** All participants conducted the deployment safely. All associated critical tasks were successfully demonstrated during exercise. Several best practices are noted in the table above.

#### **Areas for Improvement**

The following areas require improvement to maximize efficiency during training:

**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 practice tying knots.

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

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

**Area for Improvement 3:** Would be useful to include heaving lines in the trailer inventory to facilitate passing of boom from the shore to boats.

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

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

## **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.**

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:** Incident Commander did an excellent job of controlling the exercise and providing direction when anchoring of cascade booming during the diversion booming portion of the exercise needed to be readjusted.

**Strength 2:** All boat crews carried out assigned tasks and worked together flawlessly.

#### **Areas for Improvement**

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

**Area for Improvement:** None

### **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 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 3: Operational Communications**

**Not Assessed: Despite not being assessed due to the use of MITA communications equipment by all participants, the following observations were made:**

**Strength 1:** Clear and effective communications between all participants was maintained throughout the exercise

**Strength 2:** All participants maintained good radio discipline throughout the exercise. Extraneous communication was kept to a minimum and clear guidance and asset coordination was provided to accomplish deployment objectives.



## APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for, Chelsea and Everett Fire Departments following the Massachusetts Department of Environmental Protection 2014 Chelsea River First Responder Exercise conducted on June 19, 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		
Core Capability 1: Environmental Response/Health and Safety	3. Would be useful to include heaving lines in the trailer inventory to facilitate passing of boom from the shore to boats.	Add heaving lines for all trailers in MassDEP inventory.	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 Boston (USCG)	2
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
City of Boston, MA	
Boston OEM	1
Boston Fire Department (BFD)	21
City of Hull, MA	
Hull Fire Department (HFD)	9
Hull Harbormaster (HHM)	2
<b>TOTAL</b>	<b>42</b>

## APPENDIX C: EXERCISE EVALUATION FORM

Massachusetts DEP GRP/First Responder Exercise – PARTICIPANT EVALUATION

Boston/Hull – Moon Island First Responder Exercise		Exercise date: 23SEP14	
Instructions to Participants: Complete this form based on your observations of the GRP exercise.			
Evaluator Name:		Evaluator 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>Moon Island Training Academy</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	69%	31%
More Prepared after Exercise	100%	0%
Better Understanding of Deploying Spill Response Tactics	100%	0%
Participate in Future GRP Deployments	100%	0%
Field Objectives Clearly Explained and/or Met	93%	7%



27 Respondents

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

