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# MassDEP Geographic Response Plan – 2015 Kingston (SS-11) Exercise

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September 16th, 2015

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>	2015 South Shore GRP Exercise
<b>Exercise Dates</b>	September 16th, 2015
<b>Scope</b>	This exercise is a Full Scale Exercise, planned for approximately six hours in Kingston, MA and upon the waters of the Jones River. Exercise play is limited to the Jones River, Kingston Bay and 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 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 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 both UHF and VHF communications.</p>
<b>Threat or Hazard</b>	Discharge of oil into a navigable waterway
<b>Scenario</b>	An oil spill has occurred that threatens Kingston Bay and the Jones River. The Kingston and Plymouth Fire Departments and Harbormasters staff will utilize GRP SS-11 to deploy protective booming to protect sensitive resources in and near Kingston Bay and the Jones River.
<b>Sponsor</b>	Massachusetts Department of Environmental Protection. Program funds will be utilized for first responder backfill and overtime costs.

**Participating  
Organizations**

Participating organizations included:

- Kingston Fire Department (KFD)
- Plymouth Fire Department (PFD)
- Plymouth Harbormaster (PHM)
- MassDEP
- U.S. Coast Guard Sector Boston (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</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
<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>	<ul style="list-style-type: none"> <li>• Performed without Challenges (P)</li> <li>• All skills successfully demonstrated during the exercise</li> <li>• Excellent Training from MER. Full participation by students in demonstration portion of the instruction.</li> <li>• Classroom training was excellent.</li> <li>• Trailer accessed without issue. Boom removed from trailer &amp; all participants had an opportunity to connect boom segments.</li> <li>• Bridle successfully connected to boom &amp; anchor systems assembled.</li> <li>• <b>Area for Improvement:</b> Kingston FD trailer did not have a slide hammer. Recommend replacing the sledgehammer with a slide hammer for safety reasons.</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>	<ul style="list-style-type: none"> <li>• Performed Without Challenges (P)</li> <li>• KFD boat effectively towed boom from bow and deployed it across the Jones River. Vessel and crew operations performed safely.</li> <li>• Tow of boom to eastern shore done via bow tow. Seamlessly shifted boom to shore.</li> <li>• Shore teams were excellent. Once they had enough line, they were able to quickly secure the boom to shore with the rebar.</li> <li>• All necessary PPE properly worn. Shore teams anchored boom to both shorelines.</li> </ul>

Core Capability	Organizational Capability Target	Associated Critical Tasks	Observation Notes
	<b>Implement Tactics in GRP</b>	<ul style="list-style-type: none"> <li>Deploy Diversions Boom Tactics for Flood and Ebb tides</li> </ul>	Diversion deployment: <ul style="list-style-type: none"> <li>Performed Without Challenges (P)</li> <li>Modified exclusion tactic successfully deployed.</li> <li>600' of boom deployed in DV 01 diversion configuration representing a modification of GRP.</li> <li>Deployment of 50-100' of additional boom would give full coverage to the river and a better angle for the boom to prevent entrainment from strong current in middle of channel.</li> </ul>
<b>Operational Coordination</b>	<b>Create and Execute An Assignment List (ICS 201)</b>	<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>ICS 201 completed.</li> <li>Assignments followed correctly with on-scene adjustments made as necessary.</li> <li>IC performed superbly and did an outstanding job of directing personnel &amp; adjusted tactics exercise based on observed conditions</li> <li>Team make up well defined.</li> <li>Enough personnel were present to complete assignments</li> </ul>
<b>Operational Communications</b>	<b>Effectively Communicate Using UHF and VHF equipment</b>	<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>Performed without Challenges (P)</li> <li>Communications interoperability between departments was seamless. UHF equipment provided by KFD was used effectively (Kingston Fire 2).</li> <li>Strong comms between shore and water crews.</li> <li>VHF Equipment not utilized.</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 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 and contractors (Kingston, Plymouth, Moran Environmental, MassDEP) worked well together to complete assigned tasks

**Strength 2:** All participants conducted the deployment safely. There were no potential safety incidents.

#### **Areas for Improvement**

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

**Area for Improvement 1:** The Kingston GRP (SS-11) requires revision based on the tactics successfully used in the exercise. Tactic EX-01a should be changed to DV-01 with an associated shore side recovery tactic. In addition, the two other exclusion tactics should be renumbered.

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

**Analysis:** As written, EX-01a did not take advantage of the potential for shore side recovery on the west bank of the Jones River and also might not be able to handle the strong currents observed at this point of the river. The diversion tactic used during the exercise can effectively handle the currents in the Jones River and also be used as a flood and ebb tactic. The ebb tactic would require shifting the shore side recovery to the opposite bank of the Jones River.

Kingston Fire Boat tows boom into position



Photo courtesy of Nuka Research & Planning Group

Shore Team secures boom using rebar anchor stakes



Photo courtesy of Nuka Research & Planning Group

Diversion Boom successfully deployed



Photo courtesy of Nuka Research & Planning Group

Plymouth Harbormaster assists with deployment



Photo courtesy of Nuka Research & Planning Group

**Area for Improvement 2:** The Kingston trailer was not equipped with a slide hammer. Instead it was equipped with a sledgehammer.

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

**Analysis:** Slide hammers are much more effective in driving rebar stakes into the ground. They are also significantly safer to use than the sledgehammers currently being phased out. Recommend that the sledgehammer in the Kingston FD trailer be replaced.

## **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:** The Incident Commander did an outstanding job. All personnel were clear on assignments during the exercise and appropriate direction was provided.

#### **Areas for Improvement**

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

**Area for Improvement 1:** None

**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 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**

#### **Strengths**

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

**Strength 1:** Clear and effective communications between all participants was maintained throughout the exercise. All participants maintained good radio discipline. There was good circuit discipline and asset coordination was carried out to accomplish deployment objectives. It's clear that the exercise participants were experienced with using the oil spill response equipment and they routinely work together with an excellent working relationship. Kingston FD provided the UHF radios (Kingston Fire 3) and it was noted that during the exercise that the marine units might not receive UHF radios in an actual emergency as quickly as they did during the drill and VHF frequencies would need to be used for them. Participants also noted during the

hot wash that Plymouth County possesses a communications van that could provide supplemental equipment for use in an actual emergency.

### Areas for Improvement

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

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

**Reference:** Homeland Security Exercise and Evaluation Program Guidance, April 2013, National Incident Management System

**Analysis:** N/A

□ Incident Commander confers with peers during deployment



Photo courtesy of Nuka Research & Planning Group

## APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for Kingston and Plymouth Fire Departments and the Plymouth Harbormaster following the Massachusetts Department of Environmental Protection 2015 Kingston GRP Exercise conducted on September 16th, 2015.

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. Implement Tactics in GRP	Revise Kingston GRP (SS-11) to replace EX-01a with DV-01 and an associated shoreside recovery tactic. Other Exclusion tactics need to be renumbered.	Planning	Nuka Research	Mike Popovich	10/15/15	
Core Capability 1: Environmental Response/Health and Safety	2. Overview of Response Equipment	Recommend replacing the sledgehammer in the Kingston FD trailer with a slide hammer for safety reasons.	Planning	MER	John Dupont, Jr	10/15/15	
Core Capability 2: Operational Coordination	N/A						
Core Capability 3: Operational Communications	N/A						

<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	3
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
Town of Kingston, MA	
Kingston Fire Department	7
Town of Plymouth, MA	
Plymouth Fire Department	7
Plymouth Harbormaster	4
TOTAL	28

## APPENDIX C: EXERCISE EVALUATION FORM

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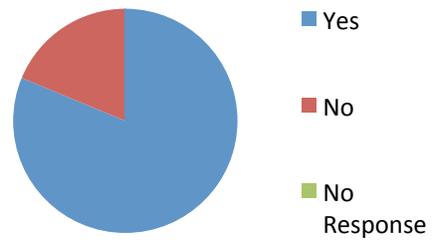
**Massachusetts DEP 2015 South Shore GRP Exercise – PARTICIPANT EVALUATION**

Kingston/Plymouth – Kingston (Jones River) GRP Exercise		Exercise date: 16SEP15	
Participant Name (optional):		Participant Organization:	
What was your role in exercise? (participant, evaluator, observer, 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>Kingston Pier</b> worked for deploying and demobilizing boom from the trailer for this deployment: ___ <u>Ideal</u> staging area for boom for this tactic. ___ <u>Sufficient</u> as a staging area for boom for this tactic. ___ <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**

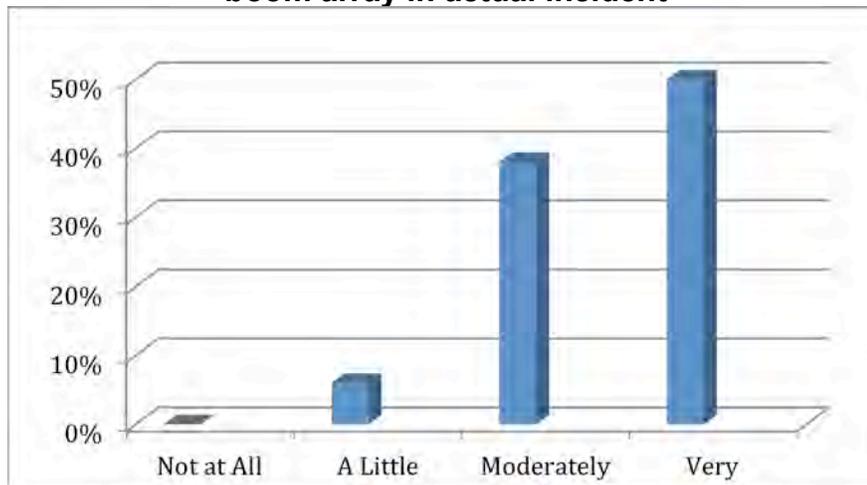
	Yes	No
Prior Oil Spill Experience	81%	19%
More Prepared after Exercise	100%	0%
Better Understanding of Deploying Spill Response Tactics	94%	6%
Participate in Future GRP Deployments	100%	0%
Field Objectives Clearly Explained and/or Met	100%	0%

### Prior Spill Experience



16 Respondents

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



### Kingston Pier as Staging Area

