



MassDEP Geographic Response Plan – 2014 Inner Cohasset Harbor (SS-02) Exercise

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

Exercise Name	2014 Inner Cohasset Harbor (SS-02) GRP Exercise
Exercise Dates	September 8, 2014
Scope	This exercise is a Full Scale Exercise, planned for approximately six hours in Cohasset, MA and upon the waters of Inner Cohasset Harbor. Exercise play is limited to Inner Cohasset Harbor and 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 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>
Threat or Hazard	Discharge of oil into a navigable waterway
Scenario	An oil spill has occurred in Cohasset Harbor and is migrating toward the Cohasset Cove and Inner Cohasset Harbor. The Cohasset and Hingham Fire Departments will utilize GRP SS-02 to deploy protective booms to protect sensitive resources in and near Inner Cohasset Harbor.
Sponsor	Massachusetts Department of Environmental Protection. Program funds will be utilized for first responder backfill and overtime costs.
Participating Organizations	Participating organizations included: <ul style="list-style-type: none">Cohasset Fire Department (CFD)

- Cohasset Harbormaster (CHM)
 - Hingham Fire Department (HFD)
 - Hingham Police Department - Harbormaster (HPD)
 - 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

Steve Mahoney, Environmental Analyst
Massachusetts Department of Environmental Protection
Oil Spill Prevention and Response Program
1 Winter St.
Boston, MA 02108
(617) 292-5516
Stephen.Mahoney@state.ma.us

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		S		
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, harbor masters, and other state and federal first responders using both UHF and VHF communications	Operational Communications	P			
<p>Ratings Definitions:</p> <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 					

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"> 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

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 skills successfully demonstrated during exercise Excellent Training from MER Full participation by students in demonstration portion of the instruction. Classroom training was excellent Area for Improvement: Would be useful to have demo ASTM connectors for students. Area for Improvement: Would be useful to use small sections of line for students to tie their own knots for practice.
	Basic Booming Operations	<ul style="list-style-type: none"> Transport and tow boom. <i>Critical Task:</i> Anchoring and Connecting boom to shore <i>Critical Task:</i> Safe vessel and crew operations. (Refer to ICS-208) 	<ul style="list-style-type: none"> Performed without Challenges (P) All boat crews effectively towed and controlled boom deployment safely. Shore team did an excellent job of connecting boom to shore. Area for Improvement: Could use monkey fist/heaving lines to facilitate transfer of boom from boat to shore.
	Implement Tactics in GRP	<ul style="list-style-type: none"> Deploy Exclusion Boom Tactic Deploy Deflection Boom Tactic Deploy Diversion Boom Tactic 	<p>EX West (The Gulf) deployment,</p> <ul style="list-style-type: none"> Performed with some Challenges (S) EX Tactic¹ proved to be successful. After initial deployment of 400 ft of boom recognized need for additional boom. 100 ft of boom was added and after final adjustment determination was made that 450 ft is ideal length at deployment location. Boom deployed as discussed in

¹ Note: Both EX configurations as deployed were alternative strategies from those included in the current Inner Cohasset Harbor GRP. During the MPM, Exercise Planning Team members determined that the DV02b strategy as depicted in the SS-02 GRP would not be feasible due to the high current during flood tide at the mouth of The Gulf. In the case of the DV02a strategy, it was decided that deployment in the configuration depicted would be problematic in the presence of the floating docks located near the Cohasset Sailing Club. As a result, both the EX East and West strategies were developed and deployed instead of the DV02a & b strategies.

			<p>briefing, high current/wind speed presented challenges that teams overcame.</p> <ul style="list-style-type: none"> EX East (Bailey Creek) deployment Performed with some Challenges (S) Modified EX Tactic proved to be successful although current speed, mooring fields, and small boat with inadequate horsepower created challenges. Challenges overcome by requesting assistance from larger vessel with adequate horsepower. After initial deployment of 450 ft of boom recognized need for additional boom. 50 ft of boom was added and determination was made that 500 ft is ideal length at deployment location. Shore team had difficulty in pulling boom from water and above high tide mark due to boom length and current. Area for Improvement: In congested harbors with mooring fields and strong currents, tow/retrieve boom in shorter sections to facilitate easier and safer boom deployment and retrieval.
Operational Coordination	Create and Execute An Assignment List (ICS 204)	<ul style="list-style-type: none"> Fill out ICS 204 Assignments in ICS 204 are followed and on-scene adjustments. Participants demonstrate command and control of exercise 	<ul style="list-style-type: none"> Excellent idea to print/tape ICS-204 to trailer. Recommendation: Print out larger GRP map for IC and tape it to trailer next to ICS-204
Operational Communications	Effectively Communicate Using UHF and VHF equipment	<ul style="list-style-type: none"> Create Communications Plan Communicate with other participants using organic UHF equipment Communicate with other participants using organic VHF equipment 	<ul style="list-style-type: none"> Performed without Challenges (P) Communications interoperability between departments was seamless. VHF channel 17 was used effectively with all equipment working properly. Strong comms between shore and water crews. Tasking from IC was clear to teams. UHF Equipment not utilized Area for Improvement: While call signs/communications were effective during exercise, need to establish/clarify inter-town call signs for floating assets to avoid confusion during future incidents and exercises.

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 (Cohasset Fire Department and Harbormaster and Hingham Fire Department and 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.

Area for Improvement 3: Would be helpful to use monkey fist/heaving lines to facilitate transfer of boom from boat to shore.

Reference: Massachusetts Geographic Response Plan Tactics Guide

Analysis: Demonstration equipment does not exist.

Area for Improvement 4: In congested harbors with mooring fields and strong currents, tow/retrieve boom in shorter sections to facilitate easier and safer boom deployment and retrieval.

Reference: Massachusetts Geographic Response Plan Exercise Plan

Analysis: Deploying boom in congested harbors with numerous mooring buoys and when contending with tidal flow and wind can be challenging. Regardless of the size of the towing vessel, wind and current can cause towed boom to become entangled in mooring buoys and around anchored and moored vessels. To reduce the likelihood of this occurring, every effort should be made to reduce the amount of boom being towed through congested harbors and mooring fields. This will require personnel to connect boom sections from a vessel and may require adjustments in deployment strategies and lengthen the time it takes to deploy boom. This method however will reduce the risk of injury to response personnel and potential damage to anchored/moored vessels.

Objective 2: 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 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 17 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: Establish and clarify call signs for Cohasset and Hingham floating resources/units.

Analysis: While call signs/communications were effective during exercise, need to establish/clarify inter-town call signs for floating assets to avoid confusion during future incidents and exercises.

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for MassDEP and the Towns of Cohasset and Hingham following the MassDEP Inner Cohasset Harbor (SS-02) GRP Exercise conducted on September 8, 2014.

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element ²	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.	Include heaving lines as standard equipment for all trailers in MassDEP inventory.	Equipment	MassDEP	Steve Mahoney		
Core Capability 1: Environmental Response/Health and Safety	4. Would be helpful to have serrated knives as standard equipment in each trailer to facilitate line cutting.	Include serrated knives as standard equipment for all trailers in MassDEP inventory.	Equipment	MassDEP	Steve Mahoney		
Core Capability 3: Operational Communications	1. Establish and clarify call signs for Cohasset and Hingham floating resources/units.	Establish unique call signs for Cohasset and Hingham FD and PD resources	Planning	Hingham Harbormaster	Ken Corson		

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)	2
Moran Environmental Recovery (contractor for MassDEP)	2
Town of Cohasset, MA	
Cohasset Fire Department	7
Cohasset Harbormaster	3
Town of Hingham, MA	
Hingham Fire Department	5
Hingham Police Department - Harbormaster	2
TOTAL	25

APPENDIX C: EXERCISE EVALUATION FORM

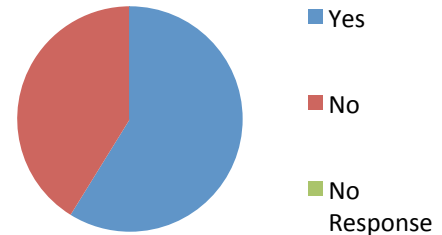
Massachusetts DEP 2014 South Shore GRP Exercise – PARTICIPANT EVALUATION

Cohasset/Hingham – Inner Cohasset Harbor GRP Exercise		Exercise date: 08SEP14	
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 Cohasset Town Dock Staging Area 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**

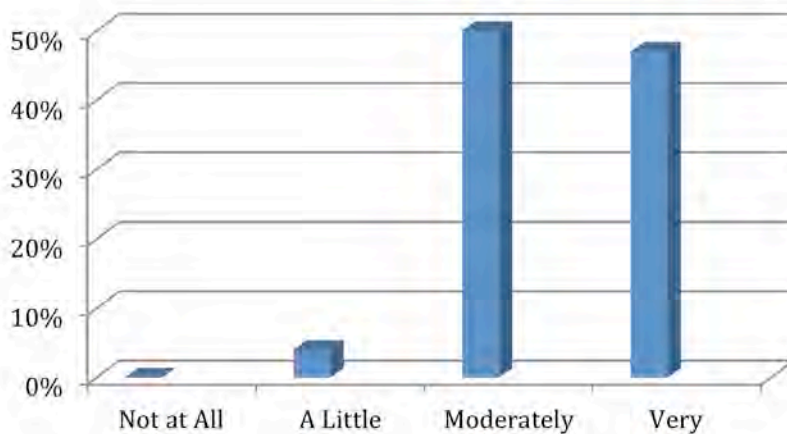
	Yes	No
Prior Oil Spill Experience	59%	41%
More Prepared after Exercise	100%	0%
Better Understanding of Deploying Spill Response Tactics	100%	0%
Participate in Future GRP Deployments	94%	6%
Field Objectives Clearly Explained and/or Met	100%	0%

Prior Spill Experience



17 Respondents

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



Cohasset Town Dock as Staging Area

