



MassDEP Geographic Response Plan – 2015 Mattapoisett Inner Harbor (BB- 16) Exercise

June 9, 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

Exercise Name	2015 Buzzards Bay GRP Exercise
Exercise Dates	June 9, 2015
Scope	This exercise is a Full Scale Exercise, planned for approximately six hours in Mattapoisett, MA and upon the waters of Mattapoisett Harbor and the Mattapoisett River. Exercise play is limited to Mattapoisett Harbor, the Mattapoisett River and adjacent waters.
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 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>
Threat or Hazard	Discharge of oil into a navigable waterway
Scenario	An oil spill has occurred that threatens Mattapoisett Harbor and the Mattapoisett River. The Mattapoisett and Marion Fire Departments and Harbormasters staff will utilize GRP BB-16 to deploy protective booming to protect sensitive resources in and near Mattapoisett Harbor and the Mattapoisett River.
Sponsor	Massachusetts Department of Environmental Protection. Program funds will be utilized for first responder backfill and overtime costs.

**Participating
Organizations**

Participating organizations included:

- Mattapoisett Fire Department (MFD)
- Mattapoisett Harbormaster (MHM)
- Marion Fire Department (EFD)
- Marion Harbormaster (EHM)
- 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

Stephen 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	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>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 					

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"> 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

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"> 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 Full participation by students in demonstration portion of the instruction. Classroom & equipment familiarization training was excellent Area for Improvement: Add section during classroom that would address how a gasoline spill is different from other oil spills.
	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 worked together, towing and controlling boom deployment safely. Shore teams were excellent, both used rebar stakes to effectively anchor boom to shore. Member of boat crew initially without PFD identified. Situation corrected on spot.
	Implement Tactics in GRP	<ul style="list-style-type: none"> Deploy Diversions Boom Tactics for Flood and Ebb tides 	<p>Exclusion deployment,</p> <ul style="list-style-type: none"> Performed Without Challenges (P) Boom deployed as discussed in briefing representing a modification of GRP. Revised tactic proved to be successful. Surrogate responded more to the wind than tidal current. Area for improvement: Learned from IC and Mattapoisett Fisheries Officer that tidal flow from Brandt Island Cove could potentially get behind the exclusion array thru the channels cutting across Mattapoisett Neck. Recommend GRP for Brandt Island Cove be reviewed for consistency

Core Capability	Organizational Capability Target	Associated Critical Tasks	Observation Notes
			with revised tactic in this GRP. <ul style="list-style-type: none"> Concerned member of public inquired about whether the exercise was a real emergency. Recommend purchasing signs to inform public of Mass DEP training events. One section of boom in the Mattapoissett DEP trailer had a ballast chain that was too short. This defect needs to be corrected or the boom section replaced.
Operational Coordination	Create and Execute An Assignment List (ICS 201)	<ul style="list-style-type: none"> Fill out ICS 201 Assignments in ICS 201 are followed and on-scene adjustments. Participants demonstrate command and control of exercise 	<ul style="list-style-type: none"> IC performed superbly and did an outstanding job of directing personnel & adjusted tactics exercise based on observed conditions Team make up well defined. There were enough personnel to complete assignments.
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. Initially not enough VHF equipment but situation was immediately corrected. Communications were very effective (CH 81). Strong comms between shore and water crews. UHF Equipment not utilized.

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 (Marion, Mattapoissett, MassDEP) worked together to accomplish the goal.

Strength 2: All participants conducted the deployment safely. There was one potential safety incident and it was rapidly addressed.

Areas for Improvement

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

Area for Improvement 1: The Mattapoisett Inner Harbor GRP (BB-16) requires revision based on the tactics used in the exercise and information obtained from local responders and needs to be reviewed for consistency with the GRP for Brandt Island Cove.

Reference: Massachusetts Geographic Response Plan Tactics Guide

Analysis: N/A

Area for Improvement 2: One shore team initially deployed their rebar stakes below the high tide line but that was corrected on the spot. Both shore anchors were slightly above the high tide line and could have been moved back a bit further.

Shore Team adjusts placement of boom anchoring location



Photo courtesy of Nuka Research & Planning Group

Reference: Massachusetts Geographic Response Plan Tactics Guide

Analysis: Addressed in the debrief. Both teams did an outstanding job of setting up their anchor systems on shore and they held extremely well. No further action required.

Area for Improvement 3: A concerned member of the public approached the exercise to inquire as to whether this was an actual emergency.

Reference: N/A.

Analysis: This happens routinely during just about every GRP exercise conducted. Recommend signs be purchased to inform the public that a MassDEP drill is being conducted.

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.

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 readily followed instructions/directions from the IC.

Incident Commander directs boom deployment assets



Photo courtesy of Nuka Research & Planning Group

Areas for Improvement

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

Area for Improvement 1: None to report. The Incident Commander was fully in control of the exercise at all times. He used the assets under his control to deploy the exclusion tactic and had boats in position to adjust as necessary.

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. Extraneous

communication was kept to a minimum and clear guidance and asset coordination was provided to accomplish deployment objectives.

Areas for Improvement

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

Area for Improvement 1: None to report. It's clear that the exercise participants were experienced with using the oil spill response equipment. It's also clear that they routinely work together and have an excellent working relationship.

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

Analysis: N/A

Shore Team prepares boom for deployment



Photo courtesy of Nuka Research & Planning Group

Towing boom to configure exclusion boom strategy



Photo courtesy of Nuka Research & Planning Group

Vessel delivers boom to shoreside anchor point



Photo courtesy of Nuka Research & Planning Group

Configuring chevron formation



Photo courtesy of Nuka Research & Planning Group

Deploying oil surrogate (peat moss)



Photo courtesy of Nuka Research & Planning Group

Vessels work together to tow boom back to shore



Photo courtesy of Nuka Research & Planning Group

Retrieving and repacking boom



Photo courtesy of Nuka Research & Planning Group

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for Mattapoisett and Marion Fire Departments and Ipswich and Harbormasters following the Massachusetts Department of Environmental Protection 2015 Buzzards Bay/Mattapoisett Inner Harbor GRP Exercise conducted on June 9, 2015.

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element ¹	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Core Capability 1: Environmental Response/Health and Safety	1. Implement Tactics in GRP	Revise Mattapoisett Inner Harbor GRP (BB-16) to incorporate adjustments made to tactics based on observed conditions.	Planning	Nuka Research	Mike Popovich		
Core Capability 1: Environmental Response/Health and Safety	2. Implement Tactics in GRP	Review GRP for Brandt Island Cove for consistency with revised tactic in this GRP.	Planning	Nuka Research	Mike Popovich		
Core Capability 1: Environmental Response/Health and Safety	3. Notification to public that training exercises is being conducted.	Recommend signs be purchased to inform the public that a MassDEP drill is being conducted.	Planning	Nuka Research	Mike Popovich		
Core Capability 1: Environmental Response/Health and Safety	4. Segment of boom in Mattapoisett Trailer with a ballast chain that was too short.	Replace/correct.	Planning	Moran Environmental	John Dupont		
Core Capability 1: Environmental Response/Health	5. Add section during classroom that	Add to classroom training.	Planning	Nuka Research	Mike Popovich		

¹ Capability Elements are: Planning, Organization, Equipment, Training, or Exercise.

and Safety	would address how a gasoline spill is different from other oil spills.						
Core Capability 2: Operational Coordination	N/A						
Core Capability 3: Operational Communications	N/A						

APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations	
Federal	Participant Count
United States Coast Guard (USCG)	4
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 Mattapoisett MA	
Mattapoisett Fire Department	8
Mattapoisett Harbormaster	3
Town of Marion, MA	
Marion Fire Department	6
Marion Harbormaster	3
TOTAL	31

APPENDIX C: EXERCISE EVALUATION FORM

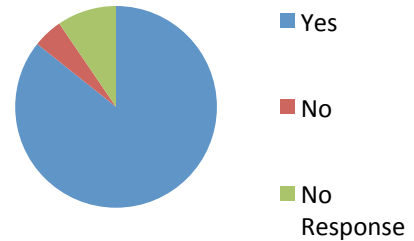
Massachusetts DEP 2015 Buzzards Bay GRP Exercise – PARTICIPANT EVALUATION

Mattapoisett, Marion – Mattapoisett Harbor GRP Exercise		Exercise date: 09JUN15	
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 Mattapoisett Town Wharf/Landing 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**

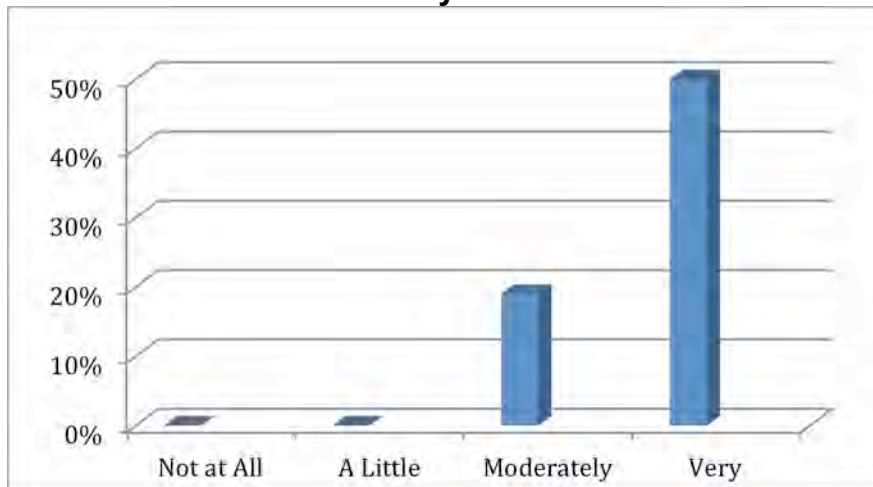
	Yes	No
Prior Oil Spill Experience	95%	5%
More Prepared after Exercise	90%	10%
Better Understanding of Deploying Spill Response Tactics	100%	0%
Participate in Future GRP Deployments	100%	0%
Field Objectives Clearly Explained and/or Met	100%	0%

Prior Spill Experience



21 Respondents

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



Mattapoissett Town Wharf/ Landing as Staging Area

