



MassDEP Geographic Response Plan – 2014 Chelsea River First Responder Exercise

After-Action Report/Improvement Plan

July 19, 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 Chelsea River First Responder Exercise |
| Exercise Dates | June 19, 2014 |
| Scope | This exercise is a Full Scale Exercise, planned for approximately six hours in Chelsea, MA and upon the waters of the Chelsea River. Exercise play is limited to the Chelsea River. |
| Mission Area(s) | Response |
| Core Capabilities | Environmental Response/Health and Safety, 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 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.</p> |
| Threat or Hazard | Discharge of oil into a navigable waterway |
| Scenario | On October 10, 2014 a major storm impacts the New England area and significant storm surge has overwhelmed the dikes and containment walls around Tank 127 at the Sunoco Logistics terminal. Tank 127 contains 8,147,344 gallons of Jet Fuel. Foreign debris carried along by the storm surge has damaged an exposed discharge pipe connected to Tank 127. There is a potential for a worst-case discharge. A Unified Command has been established and they have contacted the Chelsea and Everett Fire Departments and Everett Police Department Marine Unit and recommended that they deploy protective booms to protect sensitive resources within the Chelsea River. |
| Sponsor | Massachusetts Department of Environmental Protection is funding the exercise design, facilitation, and reporting with contracted support from Nuka Research and Planning Group, LLC (Nuka Research). 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. |

Participating Organizations

Participating organizations included:

- Chelsea Fire Department (CFD)
- Chelsea Police Department (CPD)
- Everett Fire Department (EFD)
- Everett Police Department Marine Unit (EPD)
- MassDEP
- MWRA
- U.S. Coast Guard Sector Boston (USCG)
- Moran Environmental Recovery (MER)
- 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.

| 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 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 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. • 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

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 partial capability level can be attributed to the following strengths:

Strength 1: Participants from multiple agencies (Chelsea and Everett FD, Moran Environmental, MassDEP) 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: First responders required assistance from MassDEP and professional responders to effectively deploy basic booming tactics and strategies.

Reference: Plymouth to Salisbury Area Contingency Plan, Massachusetts Geographic Response Plans

Analysis: One of the primary goals of the MassDEP GRP Exercise, Testing, and Training Program is to develop and reinforce (within the coastal Massachusetts first responder community) the knowledge and skills necessary to effectively and safely deploy oil spill containment boom during the early stages of an oil spill response. While some first responders have utilized the oil spill response equipment within the pre-positioned trailers during previous exercises and actual incidents, others have not and are therefore not familiar with the equipment or the basic tactics and strategies associated with the protective booming strategies outlined in the Massachusetts GRPs. This was the case for first responders from Chelsea and Everett. Due to this relative inexperience, this exercise incorporated professional responders and resources (vessels) from a professional oil spill response organization (MER) to assist participating first responders and facilitate deployment of oil spill response equipment. Two MER vessels were utilized along with EPD's Marine Unit (operated by EFD personnel). EFD and CFD personnel were onboard the MER vessels and the EPD vessel and were engaged in deployment activities. EFD, CFD, and CPD personnel, were also engaged in deployment activities shore side under the direction of MassDEP, Nuka Research, and MER personnel. Another major reason for the use of Moran Environmental vessels for this exercise was because neither CFD nor EFD have vessels to facilitate on-water equipment deployment. They must rely on the EPD Marine Unit and/or local harbor masters for vessel support. The EPD Marine Unit vessel was operated by EFD personnel; one of which has extensive experience deploying oil containment boom having previously been employed by Boston Line and Service Co, who provides emergency oil spill response services

within Boston harbor as part of the Boston Harbor Oil Spill Cooperative. His experience was invaluable in this exercise.

As this was the first MassDEP First Responder exercise involving the Chelsea and Everett first responder community, and because this is an ongoing exercise program and more first responder and GRP exercises will be conducted, future exercises should provide first responders from both communities opportunities to conduct these deployments more independently and without such a heavy reliance on professional responder assistance.

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 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

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.

Areas for Improvement

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

Area for Improvement 1: Develop a communications strategy for this exercise series that allows MassDEP, USCG, and other participating entities outside the local response community to establish interoperable communications.

Note: For all intents and purposes the full capability level was achieved for this exercise. This section will outline communications issues that have been identified based on exercise artificialities that can likely be addressed to streamline and standardize UHF and VHF communications during future MassDEP first responder and GRP exercises.

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

Analysis: All members of the Metro Boston Homeland Security Region (MBHSR), of which Everett and Chelsea are a part of, share interoperable UHF communications that allow them to communicate across disciplines and jurisdictions within and outside of the UASI region. This exercise, as in others in this series, presented a unique challenge because assets from other

entities and agencies were used including MER vessels and a Coast Guard Auxiliary vessel that only maintain VHF capabilities. Because of this, it is often necessary to rely on one of the participating fire departments to provide handheld UHF radios that must be distributed to participating vessels and shore side personnel so that all assets involved in the exercise can communicate. This is somewhat of an exercise artificiality and should not reflect on the participating towns existing interoperable communications capabilities. Efforts should be made in future exercises to implement a communications plan that allows for participating assets to establish UHF and VHF communications without the need for distribution of separate handheld radios. In some past exercises, Incident Support Units (ISU) from the Massachusetts Department of Fire Services have been utilized to provide UHF/VHF crosspatch capability so that all participants could communicate.

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for MassDEP, and Chelsea and Everett Fire Departments as a result of 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 ¹ | Primary Responsible Organization | Organization POC | Start Date | Completion Date |
|---|---|--|---------------------------------|----------------------------------|------------------|-----------------|-------------------|
| Core Capability 1: Environmental Response/Health and Safety | 1. Deployment of basic booming tactics and strategies by first responders without assistance from MassDEP and professional responders. | Continued exercises and training to better prepare first responders to deploy basic protective booming tactics and strategies utilizing the pre-positioned equipment supplied by MassDEP. | | MassDEP | Steve Mahoney | January 1, 2015 | December 31, 2015 |
| Core Capability 2: Operational Communications | 1. Develop a communications strategy for this exercise series that allows MassDEP, USCG, and other participating entities outside the local response community to establish interoperable communications. | Implement a communications plan that allows for participating assets to establish UHF and VHF communications without the need for distribution of separate handheld radios. Explore options for obtaining common portable communications hardware. | Equipment | MassDEP | Steve Mahoney | January 1, 2015 | December 31, 2015 |

¹ 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) (including CGAUX) | 4 |
| State | |
| Massachusetts Department of Environmental Protection (MassDEP) | 1 |
| Massachusetts Water Resources Authority | 8 |
| Nuka Research and Planning Group, LLC (contractor for MassDEP) | 2 |
| Moran Environmental Recovery (contractor for MassDEP) | 4 |
| City of Boston, MA | |
| Boston Office of Emergency Management | 1 |
| City of Chelsea, MA | |
| Chelsea Fire Department (CFD) | 7 |
| Chelsea Police Department (CPD) Harbormaster | 1 |
| City of Everett, MA | |
| Everett Fire Department (EFD) | 9 |
| TOTAL | 37 |

APPENDIX C: EXERCISE EVALUATION FORM

Massachusetts DEP Boston Harbor (Chelsea River) First Responder Exercise - EVALUATION

| | | | |
|--|--|-------------------------------|----|
| Boston Harbor (Chelsea) First Responder Exercise | | Exercise date: 19JUN14 | |
| 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 Chelsea St. Bridge 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. | | | |

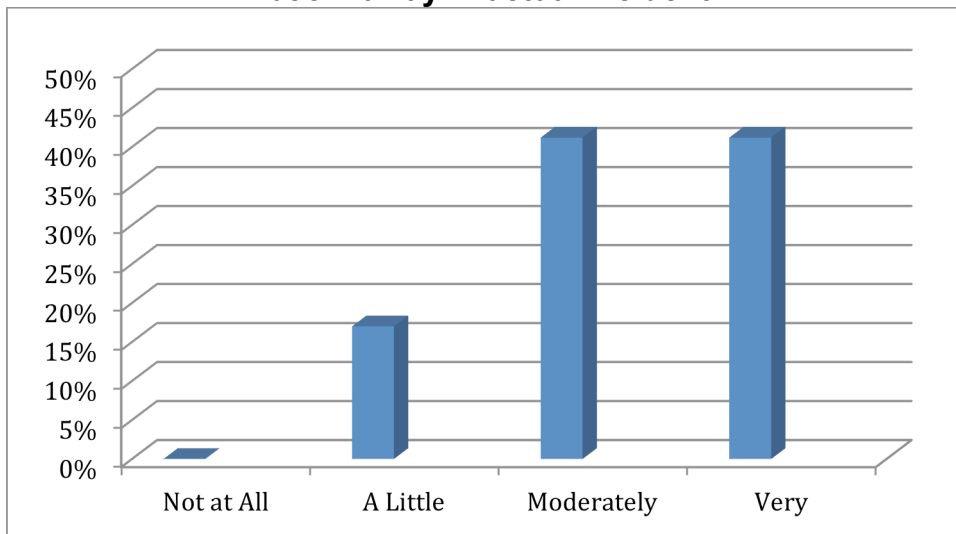
**PLEASE USE THE BACK OF THIS PAGE
FOR ANY ADDITIONAL COMMENTS**

| | Yes | No |
|--|-------|-------|
| Prior Oil Spill Experience | 35.3% | 64.7% |
| 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 | 100% | 0% |



17 Respondents

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



Chelsea St. Bridge as Staging Area

