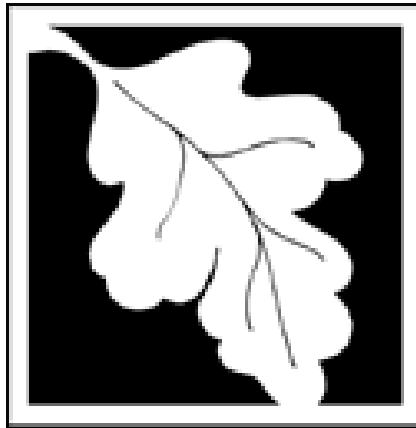


**S. Annisquam River (NS-17) Geographic Response Plan
Deployment Exercise**

October 3, 2012

**AFTER ACTION
REPORT/IMPROVEMENT PLAN**

November 2012



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HANDLING INSTRUCTIONS

1. The title of this document is the Massachusetts Department of Environmental Protection S. Annisquam River Oil Spill Boom Deployment Exercise
2. The information gathered in this AAR/IP is unclassified
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EXECUTIVE SUMMARY

The Massachusetts Department of Environmental Protection S. Annisquam River Geographic Response Plan (GRP) Deployment Exercise occurred on October 3, 2012. The goal was to deploy a closed chevron exclusion booming array, utilizing as many responders as possible from three Northeast region towns (Gloucester, Rockport, and Manchester-by-the-Sea) to exercise the existing North Shore Geographic Response Plan NS-17 developed for the South Annisquam River (See Figure 1) and provide hands-on experience for oil spill first responders.

Figure 1. S. Annisquam River GRP (NS-17)



The Massachusetts Department of Environmental Protection (MassDEP) GRP Program exercise at S. Annisquam River was developed to exercise local area first responder’s Inter-Agency Planning and Coordination, Resource Coordination, and Local Oil Spill Preparedness capabilities. The exercise planning team was composed of several agencies, including the Gloucester Fire Department, the Gloucester Harbormaster Department, the Rockport Fire Department, the Rockport Harbormaster Department, Rockport Emergency Management Department, the Manchester-by-the-Sea Fire Department, the Manchester Harbormaster Department, Massachusetts Department of Environmental Protection, and Nuka Research and Planning Group (See Figure 2).

In preparation for this exercise, Initial, Mid-Term, and Final Planning Conferences were held.

The Initial Planning Conference (IPC) was held on March 15, 2012 at the Rockport Police Department in Rockport, MA. A Mid-Term Planning Conference (MPC) was held on August 17, 2012 via teleconference as was the Final Planning Conference (FPC) on September 20, 2012.

During the course of the IPC the exercise planning team discussed and determined:

- Exercise scope
- Exercise objectives
- Design requirements and conditions including:
 - Timing of the exercise in relation to tidal schedule
 - Potential use of an oil surrogate to simulate spilled oil and determine efficacy of the booming strategy

During the MPC, the exercise planning team further refined the exercise tasks and objectives and determined:

- Exercise scenario and schedule
- Manpower and vessel needs
- Logistical issues including identification of staging and field locations.
- Administrative and documentation requirements and assignments.

During the FPC, a comprehensive review of all exercise objectives was conducted as well as detailed, final discussions to review logistics and resolve all open issues.

Based on the exercise planning team’s deliberations, the following objectives were developed for the S. Annisquam River site:

- Objective 1: Foster Inter-Agency Planning and Coordination by providing the opportunity for local responders to work with Federal (USCG) and State (MADEP) responders to plan for and deploy a GRP protective booming tactic during a simulated incident (Figure 2).
- Objective 2: Promote Resource Coordination among local responders by coordinating use of assets from all three towns and from NERAC cache. (See Table 1 and Figure 3).

- Objective 3: Improve local Oil Spill Preparedness by deploying equipment from the trailer, providing participants hands-on experience mobilizing and demobilizing boom in the field, and providing an opportunity to evaluate the effectiveness of the booming tactic and identify any modifications necessary (See Figure 4).

Gloucester	Rockport	Manchester-by-the-Sea	NERAC	MADEP
Wireless “Hotspot”	Spill Response Trailer (classroom)	Spill Response Trailer	Computer	Spill Response Trailers
HM Vessel (23’)	HM Vessel (24’)	HM Vessel	WebEOC	Exercise facilitators
Engine Truck (rinse boom)	Portable Radios		Tent	Spill response contractor/trainer

Table 1: Assets Supplied for Exercise by Town/Agency

The exercise objectives focused on inter-agency coordination and resource coordination for the purpose of improving initial response capacity to oil spills in the towns of Gloucester, Rockport, and Manchester-by-the-Sea.

Figure 2. Participants Gathered During Training and Initial Operations Briefing



Photo Courtesy of Nuka Research and Planning Group

Figure 3. Manchester Oil Spill Response Trailer



Photo Courtesy of Nuka Research and Planning Group

Figure 4. Staging Area/Boat Ramp



Photo Courtesy of Nuka Research and Planning Group

The purpose of this report is to analyze exercise results, identify strengths to be maintained and built upon, identify potential areas for further improvement, and support development of corrective actions.

Major Strengths

The major strengths identified during this exercise are as follows:

- Local agencies worked together to achieve objectives.
- Local responders demonstrated ability to adapt and modify IAP as necessary to safely meet objectives.
- Assets from all three communities and from NERAC were integrated effectively to support the exercise objectives.
- Clear, concise, and effective communications.

Primary Areas for Improvement

The primary areas for improvement identified during this exercise, including recommendations, are as follows:

- First responders would benefit from additional opportunities to practice boom deployment in a variety of environmental conditions.
- Responders should practice towing boom, especially when maneuvering in channels and congested areas.
- Unified Command should communicate booming tactics and basic operational tasking to first responders prior to boom deployment.
- First responders would benefit from training in how to utilize WebEOC effectively during an incident.
- Neighboring communities would benefit from having a shared Marine VHF operating channel.

Overall, the exercise was successful in providing an opportunity for first responders to deploy boom and strengthen inter-agency participation. Future exercises will be beneficial in strengthening local first responders skill in deploying oil spill containment boom and will provide additional opportunities for inter-town and state (MA DEP, NERAC) coordination.

SECTION 1: EXERCISE OVERVIEW

Exercise Details

Exercise Name

Massachusetts Department of Environmental Protection S. Annisquam River (NS-17) GRP Deployment Exercise

Type of Exercise

Functional Exercise

Exercise Start Date

October 3, 2012

Exercise End Date

October 3, 2012

Duration

5 hours

Location

The exercise in-briefing took place at the Rockport Police Department, with the exercise following at the Heron Way Marina and on the Little River, in the city of Gloucester, MA.

Sponsor

The Massachusetts DEP was the sponsor of the exercise, with input from the participating towns, NERAC, and the U.S. Coast Guard and facilitation by Nuka Research and Planning Group, LLC (contractor to MassDEP).

Program

Massachusetts GRP Exercise Program

Mission

This exercise was designed to provide an opportunity for participants to practice protective booming of a sensitive area in response to a simulated oil spill.

Capabilities

Planning, Communications, Community Preparedness and Participation

Scenario Type

The scenario is a simulated oil spill in the S. Annisquam River.

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Participating Organizations

Participating organizations included:

- Gloucester Harbormaster Department
- Gloucester Fire Department
- Manchester Harbormaster Department
- Manchester Fire Department
- Massachusetts Department of Environmental Protection
- Massachusetts Environmental Police
- Metropolitan Area Planning Council
- Moran Environmental Recovery
- Northeast Homeland Security Regional Advisory Council
- Nuka Research and Planning Group, LLC
- Rockport Fire Department
- Rockport Harbormaster Department
- Rockport Emergency Management Department
- United States Coast Guard Sector Boston
- United States Coast Guard First District

Number of Participants

- Players: 36
- Controllers: 1
- Facilitators: 3
- Observer/Evaluators: 6

SECTION 2: EXERCISE DESIGN SUMMARY

Exercise Purpose and Design

Geographic Response Plans (GRP) are tactical oil spill response plans tailored to protect a specific sensitive area from impacts following a spill. GRPs are developed by collaborative work groups that include local, state, and federal agencies, natural resource organizations, spill response organizations, and the oil industry. GRPs are incorporated into the state/federal Area Contingency Plans for oil spill and hazardous materials response. The Area Contingency Plan implements the National Contingency Plan and aligns with the National Response Framework. Once the GRPs have been published in the Area Plan, the next step in the planning and preparedness process involves exercising the GRPs to (1) field verify the resources and tactics identified in the GRP and (2) provide an opportunity for local responders to practice deploying spill response equipment utilizing an ICS framework.

The MassDEP GRP Exercise Program is currently in the fourth year of field exercises involving local fire, harbor, police, shellfish, and emergency management personnel along with state and federal agencies (Mass Division of Marine Fisheries, U.S. Coast Guard, Mass Environmental Police, National Oceanic and Atmospheric Administration). The exercise design, facilitation, planning, and reporting are funded by MassDEP. Participating towns may receive grant funding to cover overtime and backfill costs. These exercises are designed to examine the strategies and provide experience to the responders.

Exercise Objectives, Capabilities, and Activities

Capabilities-based planning allows for exercise planning teams to develop exercise objectives and observe exercise outcomes through a framework of specific action items that were derived from the Target Capabilities List (TCL). The capabilities listed below form the foundation for the organization of all objectives and observations in this exercise. Additionally, each capability is linked to several corresponding activities and tasks to provide additional detail.

Based upon the identified exercise objectives below, the exercise planning team decided to demonstrate the following capabilities during this exercise:

- **Objective 1:**
 - **Planning:**
 - Successfully demonstrate the ability to plan and coordinate a multi-town/multi-jurisdictional exercise
 - Initial, Mid-Term, and Final Planning Conferences as outlined above under Executive Summary.

- **Objective 2:**
 - **Communications:**
 - Assign Command (Rockport FD Channel) and Operational (Marine VHF Channel 19) frequencies;
 - Supply radios as needed to support interoperable communications; and
 - Communicate effectively during drill between shoreside/on-water responders and ICs.
- **Objective 3:**
 - **Community Preparedness and Participation:**
 - Simulate incident; assign responders;
 - Develop IAP;
 - Use WebEOC to post incident updates;
 - Integrate NERAC computer and tent;
 - Deploy boom; and
 - Demobilize boom.

Scenario Summary

The scenario was a simulated oil spill in the S. Annisquam River that is migrating inland toward the Little River. Local responders from the Gloucester Fire Department, the Manchester Fire Department, the Rockport Fire Department, Gloucester Harbormaster Department, Rockport Emergency Management Department, Manchester Harbormaster Department, and the Rockport Harbormaster Department were directed by the ICs (Gloucester and Rockport Fire Chiefs and Manchester Fire Lt.) to deploy tactic EX-01b from GRP NS-17 (Figure 1). The ICs were able to access WebEOC via a NERAC computer with assistance from the MassDEP. The Exercise Design Team developed an Incident Action Plan (IAP), which was utilized during the exercise. A safety officer from the United States Coast Guard was assigned and after initial safety and operations briefings, the field responders transported, deployed, evaluated, demobilized, and stored the boom and anchors used in the exercise (See Figures 5-8). Peat moss was deployed as an oil surrogate to evaluate the boom effectiveness. Professional spill responders from Moran Environmental provided assistance and direction to the town responders. Personnel from Nuka Research and MassDEP acted as facilitators, providing direction, answering questions, and managing the exercise timetable.

Figure 5. Deploying Initial Boom Segments from MassDEP Trailer



Photo courtesy of Nuka Research and Planning Group

Figure 6. Deploying Shoreside Anchor for North Leg of EX-01b



Photo Courtesy of Nuka Research and Planning Group

Figure 7. Boom Collecting Surrogate (peat moss)



Photo Courtesy of Nuka Research and Planning Group

Figure 8. Multiple Town Agencies Work Together to Deploy Oil Spill Containment Boom



Photo courtesy of Nuka Research and Planning Group

After the boom was loaded back in the trailer, there was a post-exercise ‘hot wash’, during which participants were asked to share any insights learned during the exercise and/or any suggestions

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on modifications needed to successfully deploy the tactic. There was a group of observer/evaluators who observed part or all of the exercise and were asked to fill out evaluation forms online, or participate in the debriefing. The observers included representatives from the Coast Guard, Massachusetts Environmental Police, MassDEP, and members of the Gloucester, Manchester, and Rockport Fire Departments without specific assignments.

SECTION 3: ANALYSIS OF CAPABILITIES

This section of the report reviews the performance of the exercised capabilities, activities, and tasks. In this section, observations are organized by capability and associated activities. The capabilities linked to the exercise objectives of the S. Annisquam River GRP Deployment Exercise are listed below, followed by corresponding activities. Each activity is followed by related observations, which include references, analysis, and recommendations.

Capability 1: Planning

Capability Summary: The Planning capability was implemented during pre-exercise planning conferences and during the functional exercise. The capability required Fire Chiefs and local officials from Gloucester, Manchester, and Rockport to identify objectives, select an exercise location, select a GRP tactic to be tested, and assign manpower, vessels, and other resources to support the exercise. Effective pre-planning led to a successful exercise.

Activity 1.1: Initial and Mid-Planning Conferences to discuss site selection, exercise objectives and other issues outlined above in the Executive Summary.

Observation 1.1: Strength: Representatives from all communities worked well together, offering suggestions and weighing the merit of each before accepting or rejecting them and providing alternatives.

References: Homeland Security Exercise and Evaluation Program, Volume II, February 2007

Analysis: Town-level objectives were well aligned and exercise design proceeded smoothly. All fire or harbor departments committed manpower and vessels to the exercise. There was agreement that the exercise should provide an opportunity for broad participation by as many local responders as possible.

Recommendations: Consider future joint oil spill response exercises, possibly involving other towns or agencies.

Activity 1.2: Mid-Term and Final Planning Conferences to assign manpower and equipment, work through exercise logistics, and additional activities outlined above in the Executive Summary.

Observation 1.2: Strength: All communities coordinated the integration of town equipment, vessels, and manpower with NERAC assets. Task Forces were comprised of first responders from different towns and departments allowing for coordination among towns and agencies, and created a training environment that fostered mentoring between responders with varying levels of experience.

References: Homeland Security Exercise and Evaluation Program, Volume II, February 2007

Analysis: Logistical pre-planning led to a smooth exercise. Each community supplied vessels, equipment and responders, providing an opportunity to work together in a task force setting with mixed crews from all towns. NERAC assets supported the exercise.

Recommendations: Continue to periodically test GRPs and conduct exercises using spill response equipment and multi-jurisdictional approach.

Capability 2: Communications

Capability Summary: On-water spill response operations require a common tactical communications capability so that responders from multiple agencies can work together safely and effectively on the water and shoreline, and so that the Incident Command can maintain situational awareness of tactical operations.

Activity 2.1: Assign Communications Channels:

- Command (Rockport FD Channel)
- Operational (VHF Marine Channel 19)

Observation 2.1:

Strength: The assignment of a separate command and operations frequency was beneficial in that it allowed clear and separate communications between command and operational task forces without undue chatter between command personnel and responders. Assignment of Command frequency allowed IC to communicate directly with Operations Section Chief who then relayed tasking to on-water and shore-side task forces. Responders from Gloucester, Manchester and other agencies were assigned handheld radios by Rockport Fire.

References: Homeland Security Exercise and Evaluation Program, Volume II, February 2007, National Incident Management System

Analysis: All participants maintained good radio discipline minimizing radio “chatter” and confining radio communications to essential information. This practice was evident throughout the exercise, during which Incident Command as well as exercise facilitators monitored radio communications and observed that while the responders communicated key information needed to deploy the boom, they did so quickly, succinctly, and without undue extraneous chatter.

Recommendations: Continue to observe good radio practices and utilize separate channels for IC and Tactical Ops.

Activity 2.2: Future exercises to reinforce good practices.

Observation 2.2:

Strength: The Town of Rockport recognized the need for portable radios for Manchester and Gloucester responders, due to the fact that the Command Frequency (Rockport Fire) was unavailable to them, and provided these to vessels and shoreside responders.

References: Homeland Security Exercise and Evaluation Program, Volume II, February 2007, National Incident Management System

Analysis: The assignment and tracking of radios for interoperable communications provided a workable solution to address the fact that although the three towns do share tactical frequencies among their UHF radios, the channel used by the IC (Rockport Fire Channel) was not shared. There were sufficient handheld radios available to ensure that all crews (vessel and shore) could communicate with the IC, Operations Chief, Safety Officer, and exercise facilitators.

Recommendations: Towns should continue to work together to develop shared communications channels for multi-town/multi-agency on-water incidents.

Activity 2.3: Communicate Effectively During Drill Between On-Water/Shoreside Responders and IC.

Observation 2.3.1:

Strength: Incident Command shared information concisely and clearly between responders on vessels and shoreside.

References: Homeland Security Exercise and Evaluation Program, Volume II, February 2007, National Incident Management System

Analysis: Common operational practices among the three fire departments and the use of a separate channel helped to ensure that radio communications were streamlined and effective. Incident Command and Safety Officer maintained good situational awareness throughout the exercise.

Recommendations: N/A

Observation 2.3.2:

Weakness: Incident Command communications of tactical objectives and strategies to responders was unclear.

References: Homeland Security Exercise and Evaluation Program, Volume II, February 2007, National Incident Management System

Analysis: Tactical objectives for the exercise were unclear. Field responders did not have a clear picture of the specific details of the tactic deployment. This lack of

awareness caused some delay in full deployment and required additional communication between the Unified Command and the responders.

Recommendations: Provide an initial briefing on booming strategy and goals. In the future, Incident Commanders could provide an on-site briefing of the booming strategy and goals for the deployment to ensure all responders are familiar with the procedure and goals.

Capability 3: Community Preparedness and Participation

Capability Summary: MassDEP has developed a community-based oil spill response capacity throughout coastal regions of the state by providing oil spill response equipment trailers to local fire departments, developing GRPs (tactical plans to protect sensitive areas from oil spill impacts), and providing initial training to local first responders. This functional exercise provided a key link by allowing first responders from the communities of Gloucester, Manchester, and Rockport to work together in a task force setting to exercise their ability to deploy boom from a state spill response trailer during a mock oil spill. The community-based spill response program requires that towns be able to work together, since a major oil spill may require significant mutual aid and assistance. This field exercise provided a realistic scenario for the communities to work together to improve their spill response capacity.

Activity 3.1: Simulate Incident; Assign Responders

Observation 3.1:

Strength: Participants from all three towns were assigned by the Incident Commander (IC) to rotating on-water task forces. Task forces were intentionally configured to include participants from different towns and departments to promote inter-jurisdictional cooperation (See Figure 9).

References: Homeland Security Exercise and Evaluation Program, Volume II, February 2007, National Incident Management System, GRP NS-17

Analysis: The process of assigning responders to various task forces provided an opportunity for the departmental leadership to consider the strengths and abilities of their responders for various spill response functions. The GRP provided a tactical plan that was ready for field implementation. To maximize training value, additional responders rotated out on-water deployment teams. Responders were assigned either to the first rotation or second rotation onboard the vessels. Each team was comprised of responders from each participating community to promote interagency coordination. The Gloucester and Rockport Fire Chiefs and Manchester Lt. acted as ICs, forming a Unified Command, while the representative from the USCG acted as Safety Officer.

Recommendations: In this exercise, the three Incident Commanders worked well

together to form a Unified Command. However, decision-making and direction of on-water assets may work more smoothly with a single IC and deputies.

Figure 9. Gloucester/Rockport/Manchester Exercise Assignment List

DIVISION ASSIGNMENT LIST		1. Branch	2. Division/Group				
3. Incident Name <i>S. Annisquam River</i>		4. Operational Period Date: <i>03 Oct 2012</i>		Time:			
5. Operations Personnel							
Operations Chief	<i>Doyle, RF</i>	Division/Group Supervisor		<i>Smith, GF</i>			
Branch Director	<i>Hatch, MF</i>	Air-Attack Supervisor No.		<i>14-16 Coranson</i>			
6. Resources Assigned this Period							
Strike Team/Task Force/Resource Designator	Leader	Number Persons	Trans. Needed	Drop Off PT./Time	Pick Up PT./Time		
<i>VESSELS</i>							
7. Control Operations		<i>25' Parker (RHM)</i>		<i>24' Whaler (RHM)</i>			
<i>13' Whaler (RHM)</i>		<i>Cowford (A) Lucido (A)</i>		<i>Storey, Lesch (A)</i>			
<i>Aldrich (A)</i>		<i>Grant</i>		<i>Sholds</i>			
<i>Cavender</i>		<i>Somers</i>		<i>Doriean</i>			
<i>Kennedy</i>		<i>DeSisto</i>		<i>Sherman</i>			
		<i>Doucette</i>		<i>Contilli</i>			
8. Special Instructions							
9. Division/Group Communication Summary							
Function	System	Grp/Channel	Frequency	Function	System	Grp/Channel	Frequency
Command		<i>RF</i>		Support			
Tac		<i>VHF 19</i>					

Activity 3.2: Use WebEOC, NERAC computer, and tent during exercise

Observation 3.2:

Strength: Computer and wireless hotspot was set up at staging site and local responder used these assets to access WebEOC and internet. The NERAC tent was used as shelter for participants.

References: Homeland Security Exercise and Evaluation Program, Volume II, February 2007, National Incident Management System, NERAC Equipment Cache

Analysis: The simulated oil spill gave the IC an opportunity to use WebEOC as a source of information and to post exercise updates. The availability of laptop computers with wireless internet allowed for the assignment of a dedicated person to monitor weather conditions. NERAC tent was useful for participant overflow and as shelter from the weather. The exercise afforded an opportunity for state, federal and local responders to appreciate the NERAC assets. However, there were no town employees with WebEOC experience or login. The MassDEP WebEOC login was utilized. ICs had an opportunity to view WebEOC and discuss with MassDEP how these resources might be applied during an actual spill.

Recommendations: The Fire Chiefs and Lieutenant would benefit from a tutorial in the basics of WebEOC, so that they may utilize and become familiar with it during training or in case of an actual event. Recommend utilizing NERAC assets to the maximum extent practicable during all future MassDEP GRP exercises and training evolutions. The process for accessing NERAC assets should be reviewed during early exercise planning and a lead NERAC coordinator assigned for each incident from one of the participating towns.

Activity 3.3: Deploy Boom

Observation 3.3.1:

Strength: Vessel-based Task Forces and shore side personnel worked well together to implement the booming tactic under challenging site conditions. Peat moss was deployed as a surrogate to demonstrate boom's capacity to hold floating oil.

References: Homeland Security Exercise and Evaluation Program, Volume II, February 2007, National Incident Management System, GRP NS-17

Analysis: The primary objective of GRPs is to deploy boom ahead of an oil spill to prevent or reduce negative impacts to environmentally sensitive areas. Successful deployment of GRP booming tactics requires that the boom be effectively anchored and positioned so that it would divert, deflect, or exclude oil from the sensitive area. The chevron exclusion boom configuration for Little River was successfully deployed by three vessel crews and two responders launched from vessels to shore, despite the fact that the moorings and transiting vessels made conditions somewhat challenging. Vessel-based responders coordinated their activities towing, anchoring, and positioning boom and worked well together throughout. The ICs and responders decided that one leg of boom could close off the channel as well as the chevron with the added benefit of a shoreside collection point adjacent to the boat ramp. They began to move the boom to that location but time limitations did not allow completion. This exercise provided the chance to adapt the GRP boom array to allow for more convenient collection.

Recommendations: Conduct future GRP deployment exercises to keep boom deployment skills current and to test GRP strategies at other locations. Improve boom deployment and tending skills by deploying existing GRPs that call for and incorporate

boom arrays in different configurations and tending throughout the tide. Deployment of longer boom arrays and those that are relatively more complex (cascade arrays) should not be confused with towing longer sections of boom; a practice that is discouraged. For towing purposes, both due to the relatively small size of vessel used by local first responders, harbor masters and others, and due to relative lack of boom towing experience amongst first responders, it is recommended that boom segment be kept between 200-400 ft. Utilization of surrogate(s) to assess boom effectiveness should be incorporated as much as practicable in future exercises.

Observation 3.3.2:

Strength: While deploying the exclusion boom tactic (EX-01b), the on-water responders observed that one leg of the chevron exclusion boom array could be used to close off the channel and divert oil to a shoreside collection point. Mass DEP will update the GRP to include a revised deflection tactic.

References: Homeland Security Exercise and Evaluation Program, Volume II, February 2007, National Incident Management System, GRP NS-17

Analysis: While the GRPs are developed to protect sensitive areas from oil contamination, they are developed in consideration of available environmental and resource factors and pending actual testing. The Mass DEP 3-year testing program enables Mass DEP and local responders to put these GRP tactics to the test. During the S. Annisquam (NS-17) test, an improved tactic was developed by the responders themselves for use in an actual incident. This participation in the development and testing is essential in ensuring that local responders will be well-equipped and trained to handle these incidents in the future.

Recommendations: Mass DEP will include the revised deflection tactic in the S. Annisquam (NS-17) GRP.

Activity 3.4: Demobilize Boom

Observation 3.4:

Strength: On water responders towed the boom to the boat ramp where participants who had previously been observing took on the role of rinsing and stowing the boom

References: GRP NS-17

Analysis: Demobilization of boom can be time-consuming and tedious. Responders worked well throughout this process, showing strong teamwork. Gloucester Fire provided an engine to support boom rinsing.

Recommendations: The same practice of towing shorter segments of boom should be followed for demobilization as it is for deployment. While demobilization during these types of exercises tends to take place at the end of sometimes very long training days, it is important to ensure that boom towing is done in a deliberate manner with good situational awareness, to avoid potential navigation safety issues. For exercises that approach 5 or more hours, providing lunch for participants may help to alleviate fatigue.

SECTION 4: CONCLUSION

The exercise was successful on many levels. The GRP closed chevron tactic was deployed as intended, but then adapted as the group found that using one leg allowed for a convenient shoreside collection point. The three communities worked together seamlessly. The boom deployment was accomplished quickly and safely despite rain and challenging site conditions. The staging area provided adequate space and the responders were able to effectively use available resources to support the deployment.

The GRP deployment exercise at S. Annisquam River was held in less than optimal weather conditions, yet these conditions did not impede the ability of responders to successfully deploy the boom during the flood tide, as planned. The group demonstrated the capability to assign participants to various roles, including Incident Commander, Operations Section Chief, Safety Officer, vessel-based and shore responders, task forces, and observers. Equipment from the Manchester Oil Spill Response trailer was deployed from vessels provided by all three communities, and participants became more familiar with deploying, setting, and demobilizing boom, anchors, and floats. The Incident Command communicated effectively and clearly with both vessel-based and shore-based responders, while the NERAC computer and wireless access to WebEOC supported weather monitoring and incident updates. Interagency communications were successful, using Rockport Fire's portable VHF radios and available tactical/ops channels.

Lessons learned from this exercise included but were not limited to:

- Responders were able to work well in task force setting that mixed responders from both towns.
- The NERAC assets supported real-time flow of information both in posting updates and receiving weather alerts but could have been better utilized.
- Shorter boom segments are easier to tow for inexperienced personnel and in an area congested with moorings and other vessels.
- There is an existing sturdy shoreside anchor that can be added to the GRP.
- One leg of boom at an angle can completely close off the channel and protect the marsh on the far side, also allowing for good access to shoreside collection point. The GRP should be changed accordingly.
- The Heron Way Marina boat ramp is a good staging area.

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for Massachusetts, Essex County, as a result of the Massachusetts Department of Environmental Protection S. Annisquam River Geographic Response Plan Exercise conducted on October 3, 2012. These recommendations draw on both the After Action Report and the After Action Conference.

Improvement Plan Matrix

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
Capability 2: Communications	1. Towns would benefit from further cooperative exercises using portable UHF radios	2.1 Continue to observe good radio practices and utilize separate channels for IC and Tactical Ops.	2.1.1 Arrange another cooperative exercise at a different site	Communications	Gloucester, Manchester, and Rockport Fire Depts.	Fire Chiefs	October 2012	October 2013

Homeland Security Exercise and Evaluation Program (HSEEP)

**After Action Report/Improvement Plan
(AAR/IP)**

**Massachusetts Department of Environmental Protection
S. Annisquam River (NS-17) GRP Deployment Exercise**

Capability	Observation Title	Recommendation	Corrective Action Description	Capability Element	Primary Responsible Agency	Agency POC	Start Date	Completion Date
Capability 3: Community Preparedness and Participation	1. Communities would benefit from further training in WebEOC and use of NERAC assets (computer, tent)	3.2 Seek out opportunities to participate in other exercises and utilize WebEOC and NERAC assets to continue to gain experience	3.2.1 Participate in another exercise and volunteer to use WebEOC. Seek out NERAC assets early in the planning process and assign a lead NERAC coordinator from each town.	Community Preparedness and Participation	Gloucester, Manchester, and Rockport Fire Depts.	Fire Chiefs	October 2012	October 2013
Capability 3: Community Preparedness and Participation	1. Vessel-based task forces and shore side personnel work well together to implement the booming tactic.	3.3 MassDEP revise and update the GRP to reflect the revised anchor point and single leg DV with shoreside recovery (SR) at the boat ramp.	3.3.2 Update the GRP to reflect revised diversion tactic.	Community Preparedness and Participation	MassDEP	MassDEP representative	October 2012	October 2013

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APPENDIX B: LESSONS LEARNED

While the After Action Report/Improvement Plan includes recommendations which support development of specific post-exercise corrective actions, exercises may also reveal lessons learned which can be shared with the broader homeland security audience. The Department of Homeland Security (DHS) maintains the *Lessons Learned Information Sharing* (LLIS.gov) system as a means of sharing post-exercise lessons learned with the emergency response community. This appendix provides jurisdictions and organizations with an opportunity to nominate lessons learned from exercises for sharing on *LLIS.gov*.

For reference, the following are the categories and definitions used in LLIS.gov:

- **Lesson Learned:** Knowledge and experience, positive or negative, derived from actual incidents, such as the 9/11 attacks and Hurricane Katrina, as well as those derived from observations and historical study of operations, training, and exercises.
- **Best Practices:** Exemplary, peer-validated techniques, procedures, good ideas, or solutions that work and are solidly grounded in actual operations, training, and exercise experience.
- **Good Stories:** Exemplary, but non-peer-validated, initiatives (implemented by various jurisdictions) that have shown success in their specific environments and that may provide useful information to other communities and organizations.
- **Practice Note:** A brief description of innovative practices, procedures, methods, programs, or tactics that an organization uses to adapt to changing conditions or to overcome an obstacle or challenge.

Exercise Lessons Learned

The entire MA DEP GRP development and testing program should be considered a best practice as it provides a model for other states to follow. This program is unlike any other in the country in that it provides a comprehensive method to:

- Develop and test Geographic Response Plans for oil spills
- Train first responders on boom deployment basics as well as specific GRP tactics

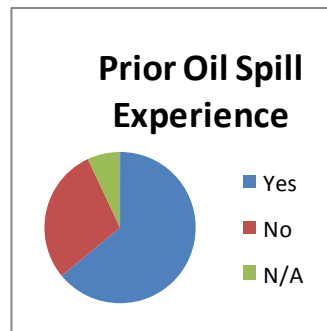
Additionally, MADEP:

- Provides equipment in the form of pre-positioned and fully stocked pollution response trailers that are assigned to select Massachusetts coastal communities
- Provides long-term maintenance and support of the equipment via a maintenance and equipment replacement program

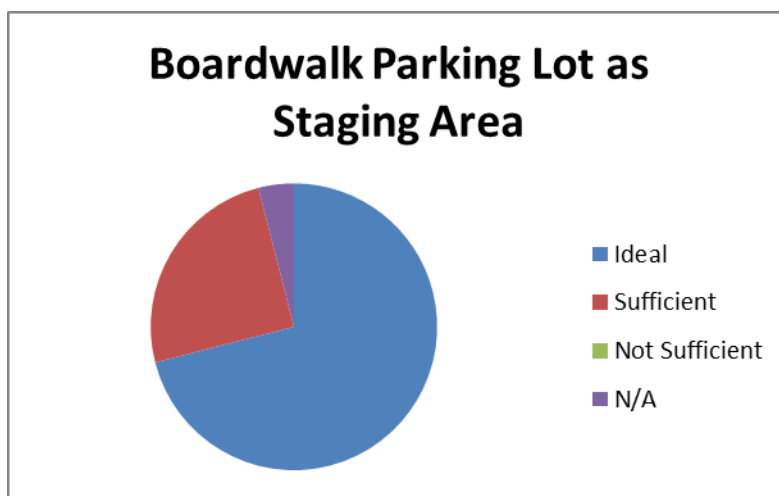
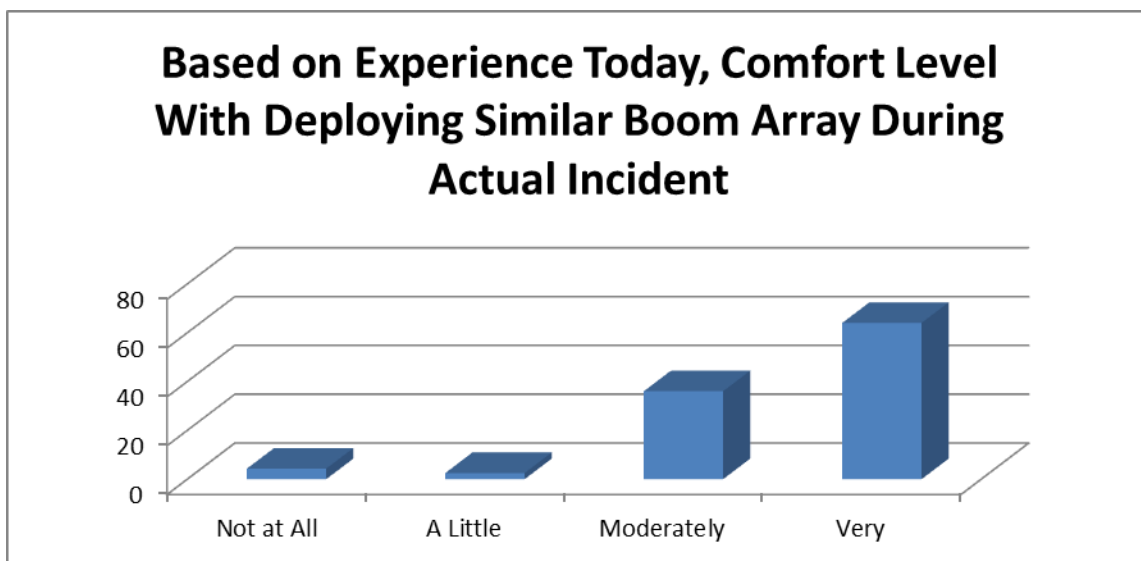
APPENDIX C: EXERCISE EVALUATION FORM

GRP/Oil Spill Response Trailer Training Evaluation Form		
South Annisquam River, Gloucester	Test date: 10/03/12	
Instructions to Evaluators: Complete this form based on your observations of the Oil Spill Response Trailer Training/GRP testing.		
Classroom Training Portion		
Evaluator Name:	Evaluator Organization:	
What did you find helpful about the classroom training portion?		
What, if anything, could be done differently to improve the classroom training?		
Please check a box to respond to the following.	YES	NO
1. I feel the facilitators were well prepared and knowledgeable about oil spill response/GRPs.		
2. I have a better understanding of spill response tactics than I did prior to this training.		
3. I found the handouts to be helpful.		
4. The classroom objectives were clearly explained and the classroom training met the objectives.		
5. The room and facility were adequate.		
Other comments or suggestions about training facilitation, written materials, and/or the facility?		

	Yes	No	N/A
Prior Oil Spill Experience	64%	29%	7%
More Prepared after Exercise	100%	0%	
Better Understanding of Deploying Spill Response Tactics	100%	0%	
Participate in Future GRP Deployments	96%	4%	
Field Objectives Clearly Explained and/or Met	96%	4%	



28 Respondents



APPENDIX D: EXERCISE EVENTS SUMMARY TABLE

Schedule of Events

Time	Event	Location/Details
9:00	Meet for briefing and review	Rockport PD Community Room. Will present scenario, assign personnel, review protective booming and equipment, and develop an Operational Plan and Comms Plan.
10:00	Group trailer review	Rockport PD parking lot. Review of equipment in Rockport trailer.
10:30	Reconvene at Heron Way Marina. Safety briefing and assignment review.	Safety Officer will give a safety briefing and ICs review responder assignments.
10:50	Deploy EX-01b. Leave boom in place to evaluate anchor holding	Load boom to vessels from trailer at boat ramp. Responders will deploy boom as drawn in plan. Other task forces and observers/evaluators will watch from shore.
12:05	Evaluate EX-01b. Deploy surrogate	Responders will deploy peat up-current and up-wind of exclusion boom if tide/wind conditions appropriate.
12:15	Demobilize EX-01b. Prepare to move anchor to straighten leg.	Release anchor and tow boom further up river to change angle of leg, as time and direction of ICs allow.
12:30	Demobilize EX-01b.	Remove boom and anchors, rinse & store boom in trailer.
12:15	Debrief	Reconvene at Heron Way Marina boat ramp for debrief.
1:15	Adjourn	

Tides (Gloucester Harbor) October 3

High 1		Low 1		High 2		Low 2	
1:43	8.9 ft	7:39	.8 ft	13:53	9.4 ft	20:08	0.28 ft

