



MassDEP Geographic Response Plan – 2018 Saugus River (NS-30) Exercise

After Action Report
September 27, 2018

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	2018 Saugus River (NS-30) Exercise
Exercise Date	September 27, 2018
Scope	This exercise is a Full-Scale Exercise, planned for approximately six hours in Saugus, MA and upon the waters of the Saugus River. Exercise play is limited to the Saugus River and the 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 execution of an Incident Briefing (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 VHF and UHF communications.</p>
Threat or Hazard	Discharge of oil into a navigable waterway
Scenario	An oil spill has occurred that threatens the Saugus River in the vicinity of the Town Dock and boat ramp. The Saugus, Revere and Winthrop Fire Departments and Harbormaster staffs will utilize GRP NS-30 to deploy boom to protect sensitive resources in the Saugus River near the Saugus Town Dock and Boat Ramp.
Sponsor	Massachusetts Department of Environmental Protection (MassDEP).

**Participating
Organizations**

Participating organizations will include:

- Saugus Fire Department (SFD)
- Revere Fire Department (RFD)
- Winthrop Fire Department (WFD)
- Winthrop Harbormaster (WHM)
- MassDEP
- U.S. Coast Guard Sector Boston (USCG)
- Moran Environmental Recovery (MER)
- Nuka Research and Planning Group, LLC (Nuka Research)

Note: See Appendix B for participant count

Point of Contact

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Classroom training is held at the Saugus
Public Safety Building.



Vessels deploy exclusion booms to protect
sensitive resources in the Saugus River.



Photos courtesy of Nuka Research & Planning Group

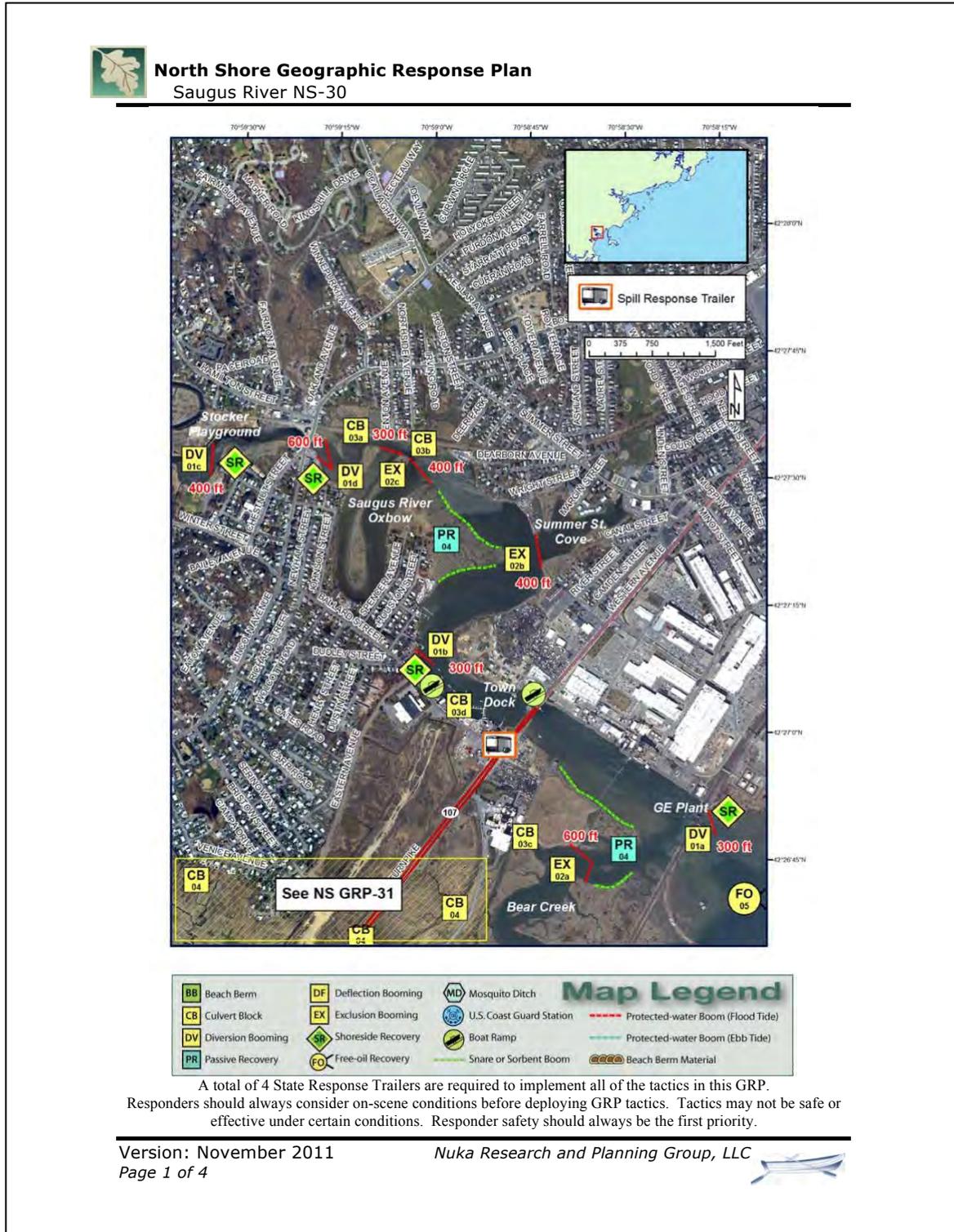


Figure 1. Saugus River GRP (NS-30)

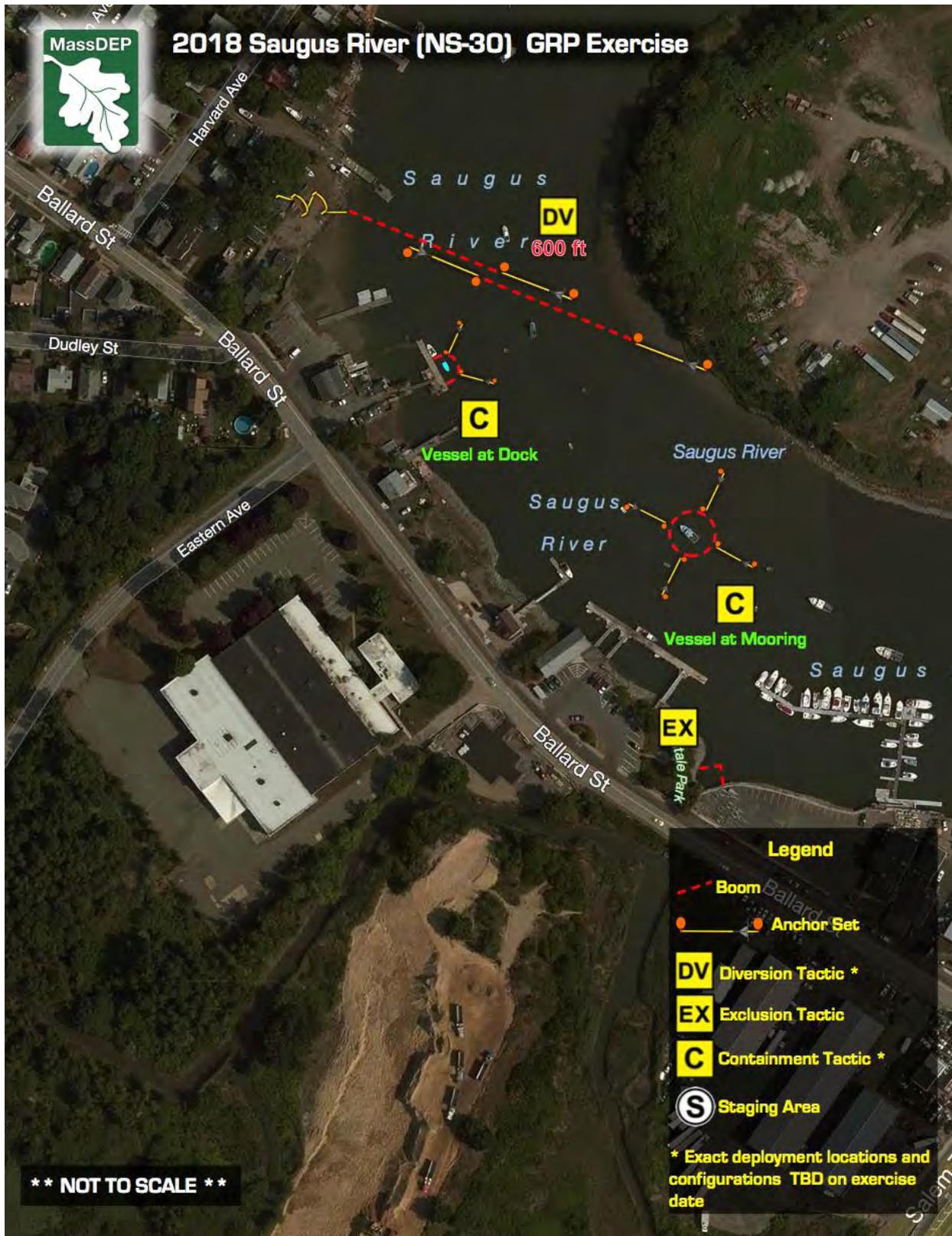


Figure 2. Revised DV-01b Tactic

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 execution of an Incident Briefing (ICS 201) 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, police and harbormaster departments using VHF and UHF 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

Core Capability	Organizational Capability Target	Associated Critical Tasks	Observation Notes
<p>Environmental Response/ Health and Safety</p>	<p>Overview of Response Equipment</p>	<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 operations conducted in a safe manner. • All equipment was readily available in both trailers. • Participation by the Fire, Police and Harbormaster Departments from Saugus, Winthrop, and Revere were excellent and they worked well together. All exercise participants were extremely engaged and actively involved. • Hands on training at multiple stations was very effective. Many participants had never connected the boom together. The anchor station benefitted greatly from the diagram of how to put together an anchor system.
	<p>Basic Booming Operations</p>	<ul style="list-style-type: none"> • Transport and tow boom. • Anchoring and Connecting boom to shore • Safe vessel and crew operations. (Refer to ICS-208) 	<ul style="list-style-type: none"> • Performed Without Challenges (P) • The shore team did an outstanding job of faking the boom out on the shore and deploying it into the water despite the shallow water in the immediate vicinity of the boat ramp. The conditions were difficult, which made towing and pulling boom more difficult. • Initially, when the first boom segment was pulled out into the river the segment had a twist in it, which would impede the effectiveness of the boom. The Revere FD did an excellent job of adjusting the boom on the water including identifying and removing a twist in the boom soon after initial deployment. • The shore team did an excellent job of identifying an adequate fixed anchor point along the shoreline and securing the boom to it. As the boom was set in place, the shore team showed outstanding initiative by taking the slack out of the line and keeping the end of the boom close to shore • Safety Officer did an outstanding job of ensuring lifejackets were worn at all times, personnel kept clear of shore anchor and ensured safe booming operations.

	<p>Implement Tactics in GRP</p>	<p>Exclusion Boom (DV-01b)</p>	<ul style="list-style-type: none"> • Performed With Some Challenges (S) • The DV-01b GRP tactic deployment was not completed and could not be tested due to the strong northerly winds that were impacting the ability of the participating vessels to maneuver and maintain station while deploying and setting boom as well as pushing the boom sections towards the boat ramp. The forces against the boom also caused several anchors to drag which made it impossible to maintain the tactic configuration. Additionally, the downriver shoreward anchor point for the second boom length was not deployed far enough downriver as indicated on the tactical deployment map. Participants did recommend moving this tactic farther down river near the town dock (approx. 800 ft east of the town boat landing) but there is no adequate shoreside recovery area and too many obstructions (i.e. floating piers and docks) at this location to allow for proper deployment of a diversion tactic. Recommendation: Remove the DV-01b tactic from the NS-30 GRP. This recommendation is based on: <ul style="list-style-type: none"> ○ Considering the location of the river bend and the prevailing tidal current speed in this area, and as we learned during the exercise, wind speed and direction are a huge factor in the feasibility of any tactic deployed in this area. Anything other than an east/southeasterly wind makes deployment here problematic. ○ The entire river area between the the Route 107 bridge and the Town boat launch (Tom’s Bait & Tackle) is congested with moored/docked vessels (commercial and recreational) and piers/floating docks making any booming difficult at best. ○ The shoreside recovery (SR) area for DV-01b (regardless of boom configuration) is immediately adjacent to residences and the open land at the SR site may very well be private property. <p>The best strategy to protect the Saugus River and Rumney Marsh area is deployment of diversion tactics east of Route 1A utilizing tactics on the NS-31A (Pines River) GRP. DV-01a on NS-31A was tested in 2013 but additional tactics in the same area should be considered to prevent oil from migrating west past the Route 1A bridge.</p>
<p>Operational Coordination</p>	<p>Create and Execute An Assignment List (ICS 201)</p>	<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"> • Performed without Challenges (P) • IC effectively controlled exercise. Strike teams were well organized and effectively carried out assigned tasks. • Tasking was clear. Assignments were followed and adjustments were rapidly/effectively made by boat crews and shore team. • Large-scale printout of the GRP was extremely useful for the IC to use during the exercise.

<p>Operational Communications</p>	<p>Effectively Communicate Using UHF equipment</p>	<ul style="list-style-type: none"> • Create Communications Plan • Communicate with other participants using organic UHF equipment 	<ul style="list-style-type: none"> • Performed without Challenges (P) • Communications were outstanding. A local Fire Ground Channel was used in addition to voice communications when appropriate.
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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: Participation by the Fire Departments from Saugus, Revere, and Winthrop as well as the Winthrop Harbormaster were excellent and they worked well together. All exercise participants were extremely engaged and actively involved.

Strength 2: Hands on training in multiple stations were very effective. Many participants had never connected the boom together. The anchor station benefitted greatly from the diagram of how to put together an anchor system.

Areas for Improvement

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

Area for Improvement 1: None

Reference: N/A

Analysis: N/A

Objective 2: Demonstrate the ability to assemble a spill response organization utilizing Incident Command System (ICS) principles through development and execution of an Incident Briefing (ICS 201) and implementation of on-site incident management and tactical operations.

The strengths and areas for improvement for each core capability aligned to this objective are described in this section.

Core Capability 2: Operational Coordination

Strengths

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

Strength 1: The Incident Commander effectively controlled the exercise. Strike teams were well organized and effectively carried out assigned tasks.

Areas for Improvement

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

Area for Improvement 1: None

Reference: N/A

Analysis: N/A

Objective 3: Demonstrate the ability to effectively communicate between multiple local, state, and federal agencies including fire departments, police departments, harbormasters, and other state and federal first responders using VHF and UHF 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: Communications were outstanding. The North Fire Ground Channel (UHF) was used and there was an abundance of portable radios in addition to using voice communications when appropriate.

Areas for Improvement

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

Area for Improvement 1: None

Reference: N/A

Analysis: N/A

Participants assembled during the trailer demonstration portion of the training to learn about shoreside anchoring, boom connection, assembling anchor systems, and culvert plugs.



Photo courtesy of Nuka Research & Planning Group

Boom is passed by hand from RFD Marine 1 to the shore team (due to shallow water). The team successfully tied the boom to the shoreside pilings.



Photo courtesy of Nuka Research & Planning Group

Boom is un-twisted to ensure that the array will function properly.



A hotwash is conducted after the exercise to discuss strengths and difficulties encountered during the exercise.



Photos courtesy of Nuka Research & Planning Group

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for the municipalities of Saugus, Revere, and Winthrop following the MassDEP GRP Exercise conducted on September 27, 2018.

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	Revise NS-30 GRP	Remove the DV-01b tactic from the NS-30 GRP.	Planning	Nuka Research	Mike Popovich	10/1/18	12/31/18
Core Capability 2: Operational Coordination	None.	None.	N/A	N/A	N/A	N/A	N/A
Core Capability 3: Operational Communications	None.	None.	N/A	N/A	N/A	N/A	N/A

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

APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations	
Town of Revere, MA	Participant Count
Revere Fire Department	14
Town of Winthrop, MA	
Winthrop Fire Department	7
Winthrop PD/Harbormaster	3
Town of Saugus, MA	
Saugus Fire Department	14
TOWN PARTICIPANTS	38
Federal	
United States Coast Guard (USCG)	4
State	
Massachusetts Department of Environmental Protection (MassDEP)	1
Nuka Research and Planning Group, LLC (contractor for MassDEP)	3
Moran Environmental Recovery (contractor for MassDEP)	2
TOTAL	48

23% of first responders reported having previous GRP exercise experience.

APPENDIX C: EXERCISE EVALUATION FORM



MassDEP Geographic Response Plan (GRP) Exercise and Testing Program

Participant Feedback Form

1 Strongly disagree	2 Mildly disagree	3 Neutral	4 Mildly agree	5 Strongly agree
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Please use the above rating scale to answer the questions for each of the following topics.

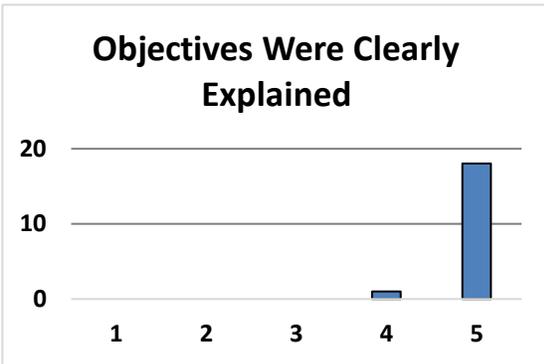
The objectives were clearly explained and the exercise met those objectives.	1 2 3 4 5
Comments:	
The material appropriately challenged me and the pace of instruction was correct.	1 2 3 4 5
Comments:	
The instructor(s) did an excellent job.	1 2 3 4 5
Comments:	
I found the classroom to be a comfortable learning environment.	1 2 3 4 5
Comments:	
I feel more prepared to respond to an oil spill than I did before this exercise.	1 2 3 4 5
Comments:	
The best thing about this training was _____.	
This training could have been improved by _____.	

Please use the back of the sheet if you need more room for comments.

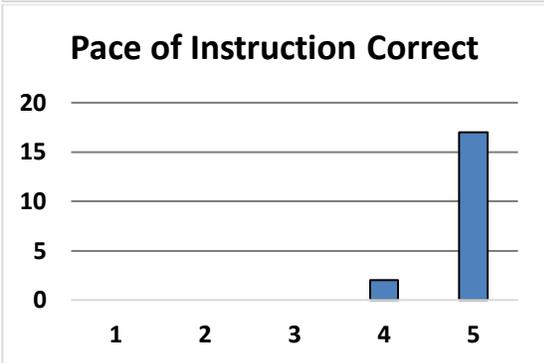
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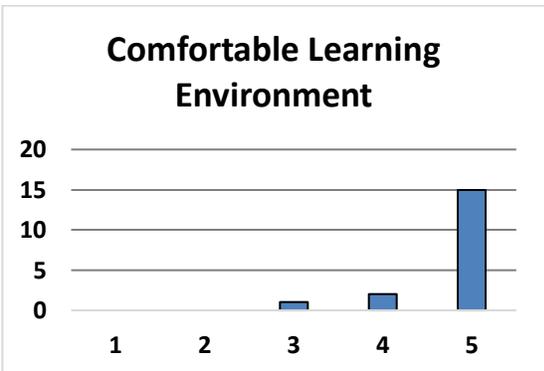
Student Feedback Summary



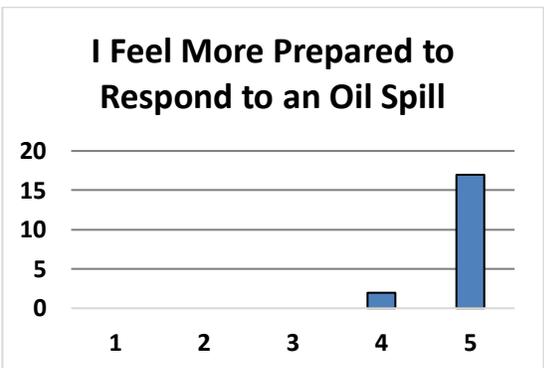
Comments: "The instructors were very thorough"



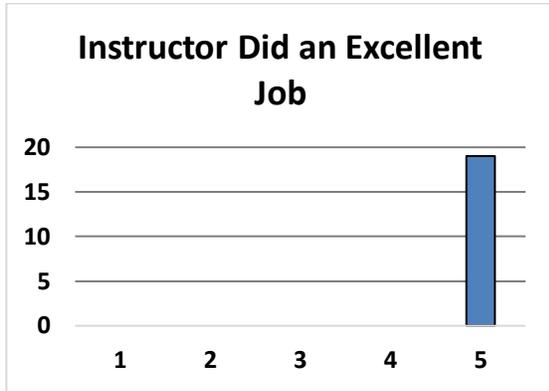
Comments: None



Comments: "Too many people in classroom"



Comments: None



Comments: None

The best thing about this training was... "The hands-on part", "Being out on the water", "Great experience", "HANDS ON!", "The water", "Working with multiple departments", "The experience", "Working on water", "Learning to overcome unexpected challenges", "Getting Experience", "Experience!!", "Playing", "Working with other departments and just getting familiar with equipment",

This training could be improved by.... "Needs to be more often", "I think lecture followed by hands-on is always the best method", "More hands on", "More preparation", "More recurrence, perhaps bi-yearly", "More food",