



---

# MassDEP Geographic Response Plan – 2019 Scituate Harbor (SS-04) Exercise

---

After Action Report

June 4, 2019

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

<b>Exercise Name</b>	2019 Scituate Harbor (SS-04) Exercise
<b>Exercise Date</b>	June 4, 2019
<b>Scope</b>	This exercise was a Full-Scale Exercise, planned for approximately six hours in Scituate, MA and upon the waters of Scituate Harbor. Exercise play was limited to the Jericho Boat Ramp, Scituate Town Dock, Scituate Harbor and the adjacent shoreline.
<b>Mission Area(s)</b>	Response
<b>Core Capabilities</b>	Environmental Response/Health and Safety, Operational Coordination, Operational Communications.
<b>Objectives</b>	<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>
<b>Threat or Hazard</b>	Discharge of oil into a navigable waterway
<b>Scenario</b>	An oil spill has occurred that threatens Scituate Harbor. The Cohasset and Scituate Fire Departments and Harbormaster staffs will utilize GRP SS-04 to deploy boom to protect sensitive resources in Scituate Harbor.
<b>Sponsor</b>	Massachusetts Department of Environmental Protection (MassDEP).

**Participating  
Organizations**

Participating organizations will include:

- Cohasset Fire Department (CFD)
- Cohasset Harbormaster (CHM)
- Scituate Fire Department (SFD)
- Scituate Harbormaster (SHM)
- MassDEP
- Moran Environmental Recovery (MER)
- Nuka Research and Planning Group, LLC (Nuka Research)

**Point of Contact**

Note: See Appendix B for participant count

Julie Hutcheson, Oil Spill Program Coordinator  
Massachusetts Department of Environmental Protection  
Oil Spill Prevention and Response Program  
1 Winter St.  
Boston, MA 02108  
(617) 556-1191  
julie.hutcheson@state.ma.us

Moran Environmental Recovery and MassDEP personnel provide an overview of trailer equipment to First Responders prior to the field exercise



Scituate Fire Department personnel tow boom through Scituate Harbor enroute to deployment site



Photos courtesy of Nuka Research & Planning Group



Figure 1. Scituate Harbor GRP (SS-04)

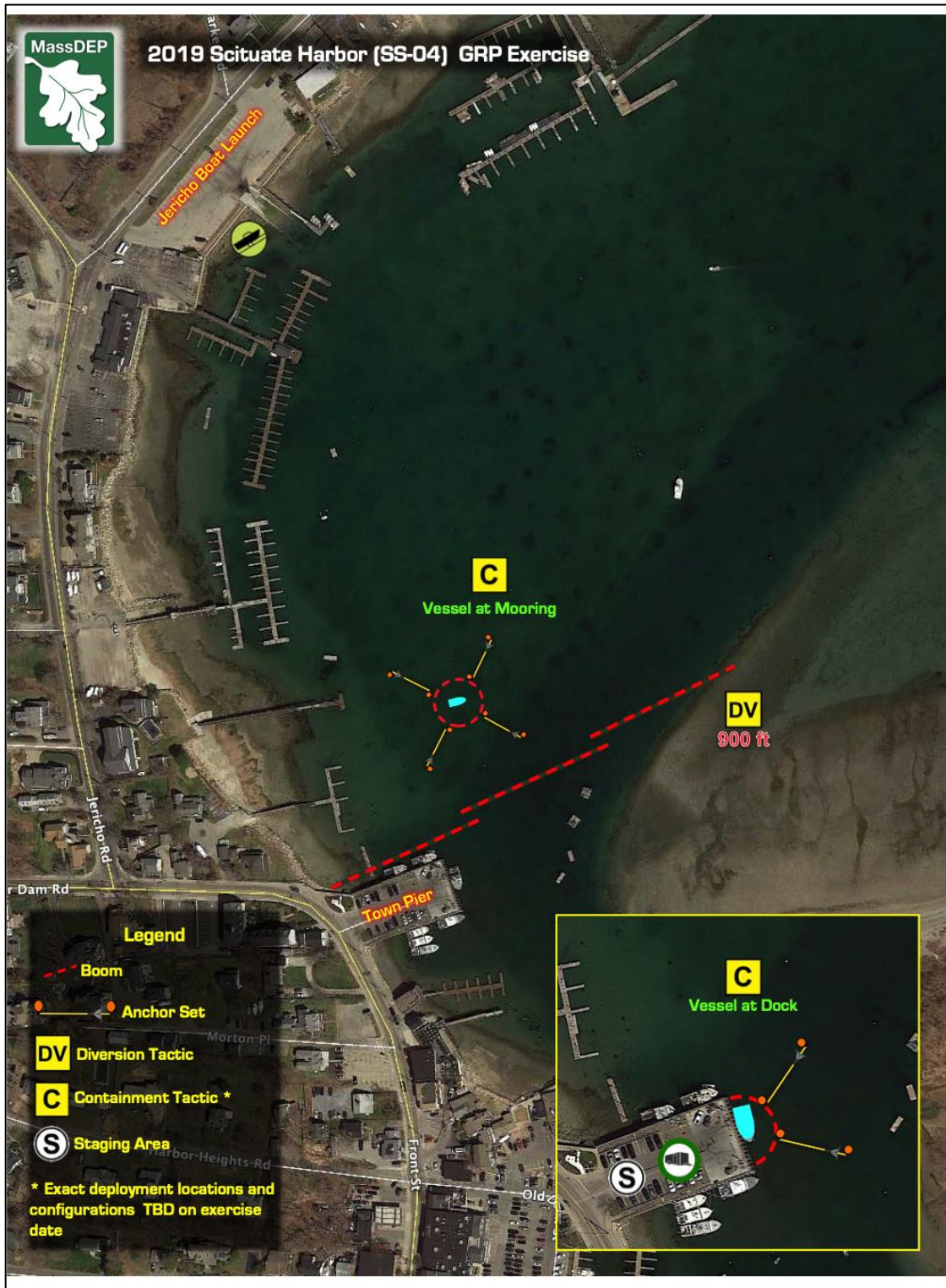


Figure 2. Exercise Tactics Map (showing alternate DV-01a strategy for testing)

## 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		S		
Demonstrate the ability to effectively communicate between multiple local, state, and federal agencies including fire, police and harbor master departments using VHF and UHF communications	Operational Communications	P			
<p><b>Ratings Definitions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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).</li> </ul>					

**Table 1. Summary of Core Capability Performance**

Core Capability	Organizational Capability Target	Associated Critical Tasks	Observation Notes
<b>Environmental Response/ Health and Safety</b>	<b>Overview of Response Equipment</b>	<ul style="list-style-type: none"> <li>• Access Mass DEP Trailer</li> <li>• Identify boom and sorbents</li> <li>• Connect boom together</li> <li>• Connect towing bridle to boom</li> <li>• Connect components of anchor system together</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Performed Without Challenges (P)</b></li> <li>• All equipment was readily available in both trailers.</li> <li>• Participation during hands-on training at multiple stations was excellent.</li> </ul>
	<b>Basic Booming Operations</b>	<ul style="list-style-type: none"> <li>• Transport and tow boom.</li> <li>• Anchoring and Connecting boom to shore</li> <li>• Safe vessel and crew operations. (Refer to ICS-208)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Performed With Some Challenges (S)</b></li> <li>• Anchoring requirements were quickly determined once on-scene and anchor systems were configured and set-up quickly and efficiently. Boom towing and anchoring were conducted safely. Boat crews quickly altered their towing configurations based on the need for more control and pulling power.</li> <li>• Adequate MassDEP safety practices were not adhered to while offloading and to a lesser degree while repacking the boom into the trailer at the boat ramp.</li> </ul>
	<b>Implement Tactics in GRP</b>	Diversion Boom (DV-01a)	<ul style="list-style-type: none"> <li>• <b>Performed Without Challenges (P)</b></li> <li>• During pre-planning for this exercise, it was recognized that the existing DV-01a strategy (Figure 1) would likely not be effective due to current speed and the position of the boom in relation to the main channel and direction of flow. The strategy was modified for testing (Figure 2) but this strategy was further modified based on first responder local knowledge and conditions on the day of the exercise. Three, two-hundred ft boom sections were deployed in a cascade array from the northeast corner of the Town Pier. Because the wind shifted from the northeast to south/southeast, surrogate was deployed east of the Town Pier, drifted to the north/northwest, and was contained within the first boom segment nearest the Town Pier. No entrainment or other boom failures were observed. <b>Recommendation:</b> While testing of this modified DV-01a flood tide strategy was not completed (due to changing weather conditions), the SS-04 GRP will be modified to reflect the DV-01a strategy as depicted in Figure 2.</li> </ul>

<p><b>Operational Coordination</b></p>	<p><b>Create and Execute an Assignment List (ICS 201)</b></p>	<ul style="list-style-type: none"> <li>• Fill out ICS 201</li> <li>• Assignments in ICS 201 are followed and on-scene adjustments.</li> <li>• Participants demonstrate command and control of exercise</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Performed With Some Challenges (S)</b></li> <li>• While the IC clearly outlined an intended deployment plan to Exercise Controllers prior to commencement of field operations, personnel were released to prep vessels and equipment without conducting an operations and safety brief. Exercise Controllers called all personnel back to the staging/deployment site at the Jericho Rd. boat ramp to conduct the brief and the IC explained the deployment plan. Personnel assignments proved inadequate as there were not enough personnel assigned to the trailer strike team to conduct boom and equipment preparation and deployment. Most personnel were assigned to the six vessels being used for the exercise.</li> <li>• Because the staging deployment site (Jericho Rd. boat ramp) and the deployment site (Scituate Town Pier) were separated (approx. ¼ mile), and because an ops/safety brief was not conducted, there was confusion on where personnel should go following the trailer training portion of the exercise. Some personnel went to the Town Pier while others to the Jericho Rd. Boat Ramp.</li> <li>• Because of the separation between sites, the IC and other senior staff split their time between the two sites. Considering the presence of a DFS Incident Support Unit at the Town Pier, command and control should have been established at the ISU at the commencement of the exercise with the IC remaining at the ISU and communicating with appropriately assigned strike team leaders at Jericho Rd. boat ramp and the Town Pier. Despite these challenges, overall operational coordination between exercise players was, for the most part, effective.</li> </ul>
<p><b>Operational Communications</b></p>	<p><b>Effectively Communicate Using VHF equipment</b></p>	<ul style="list-style-type: none"> <li>• Create Communications Plan</li> <li>• Communicate with other participants using organic VHF equipment</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Performed without Challenges (P)</b></li> <li>• The established communications plan was followed and communications, using VHF Channel 17 and voice communications when appropriate, were clear, concise, and timely throughout the exercise. No hardware or infrastructure issues encountered.</li> </ul>

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 and coordination by the Cohasset and Scituate Fire Departments and Harbormaster staffs were excellent and they worked well together.

**Strength 2:** Participation during hands-on training at multiple stations was excellent.

**Strength 3:** Anchoring requirements were quickly determined once on-scene and anchor systems were configured and set-up quickly and efficiently.

**Strength 4:** Boom towing and anchoring were conducted safely. Boat crews quickly altered their towing configurations based on the need for more control and pulling power.

#### **Areas for Improvement**

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

**Area for Improvement 1:** Minor safety violations occurred during boom deployment and repacking that involved the wearing of proper personal protective equipment (footwear and PFD's) should have been corrected when observed. These safety issues were brought to the attention of response personnel by MassDEP staff.

**Reference:** Incident-specific Safety Message/Plan (ICS 208), Massachusetts Geographic Response Plan Tactics Guide (April 2012)

**Analysis:** Exercise Controllers should thoroughly review the incident-specific Safety Message/Plan (ICS 208), and generally emphasize incident/exercise safety during the operation and safety brief.

## **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:** Overall operational coordination between exercise players was, for the most part, effective

#### **Areas for Improvement**

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

**Area for Improvement 1:** While the IC clearly outlined an intended deployment plan to Exercise Controllers prior to commencement of field operations this operations plan was not conveyed to response personnel before they were released to prep vessels and equipment. Exercise Controllers called personnel back to the staging/deployment site at the Jericho Rd. boat ramp to conduct the operations brief and to explain the deployment plan. However not all personnel attended the Operations brief. Personnel assignments were also inadequate as there were not enough personnel assigned to the trailer strike team to conduct boom and equipment preparation and deployment. Most personnel were assigned to the six vessels being used for the exercise.

Because the staging deployment site (Jericho Rd. boat ramp) and the deployment site (Scituate Town Pier) were separated (approx. ¼ mile), and because an ops/safety brief was not conducted, there was confusion on where personnel should go following the trailer training portion of the exercise. Some personnel went to the Town Pier while others to the Jericho Rd. Boat Ramp.

Because of the separation between sites, the IC and other senior staff split their time between the two sites. Considering the presence of a DFS Incident Support Unit at the Town Pier, command and control should have been established at the ISU at the commencement of the exercise with the IC remaining at the ISU and communicating with appropriately assigned strike team leaders at Jericho Rd. boat ramp and the Town Pier. Despite these challenges, overall operational coordination between exercise players was, for the most part, effective.

**Reference:** 2018 MassDEP Geographic Response Plan Exercise and Testing Program Incident Commander and Safety Officer Handbook

**Analysis:** Shortfalls in meeting this capability could have been avoided had a proper and thorough Operations and Safety Brief been conducted prior to the group dispersing following the classroom and trailer training session. For all future exercises, MassDEP and its contractors will

ensure that a detailed operations and safety brief is conducted at the conclusion of the hands-on trailer training. This brief will include a thorough review of the ICS 201 and the tactical deployment plan as well as completing assignments for all participants using a modified ICS 201 page 3.

### **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 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:** The established communications plan was followed and communications, using VHF Channel 17 and voice communications when appropriate, were clear, concise, and timely throughout the exercise. No hardware or infrastructure issues encountered.

#### **Areas for Improvement**

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

**Area for Improvement 1:** N/A

**Reference:** N/A

**Analysis:** N/A

Scituate Harbormaster personnel position and anchor a section of diversion boom in Scituate Harbor



Photo courtesy of Nuka Research & Planning Group

Massachusetts Department of Fire Services Incident Support Unit (right) and Rehab Unit (left) are on-scene to support exercise



Photo courtesy of Nuka Research & Planning Group

First Responders adjust diversion boom array



Peat moss (deployed as an oil surrogate) is contained by boom.



Photos courtesy of Nuka Research & Planning Group

## APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for the municipalities of Cohasset and Scituate following the MassDEP GRP Exercise conducted on June 4, 2019.

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element <sup>1</sup>	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Core Capability 1: Environmental Response/Health and Safety	Revise SS-04 GRP	Modify the DV-01 tactic from a 400 ft single leg array to a 600 ft single leg configuration with an additional 100 ft length along the pier at McCabe Park (for a total of 700 ft).	Planning	Nuka Research	Mike Popovich	06/01/19	12/31/19
Core Capability 2: Operational Coordination	Conduct of Operations and Safety Brief and assignment of personnel	For all future exercises, MassDEP and its contractors will ensure that a detailed operations and safety brief is conducted at the conclusion of the hands-on trailer training. This brief will include a thorough review of the ICS 201, exercise safety and the tactical deployment plan as well as conducting personnel assignments for all participants using a modified ICS 201 page 3	Planning, Organization	Nuka Research	Mike Popovich	06/01/19	12/31/19
Core Capability 3: Operational Communications	None	None	N/A	N/A	N/A	N/A	N/A

<sup>1</sup> Capability Elements are: Planning, Organization, Equipment, Training, or Exercise.

## APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations	
Town of Cohasset, MA	Participant Count
Cohasset Fire Department	5
Cohasset Harbormaster	1
Town of Scituate, MA	
Scituate Fire Department	8
Scituate Harbormaster	9
<b>TOWN PARTICIPANTS</b>	<b>23</b>
Federal	
United States Coast Guard (USCG)	0
State	
Massachusetts Department of Fire Services	5
Massachusetts Department of Environmental Protection (MassDEP)	2
Nuka Research and Planning Group, LLC (contractor for MassDEP)	3
Moran Environmental Recovery (contractor for MassDEP)	2
<b>TOTAL</b>	<b>35</b>

## 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
------------------------	----------------------	--------------	-------------------	---------------------

Please use the above rating scale to answer the questions for each of the following topics.

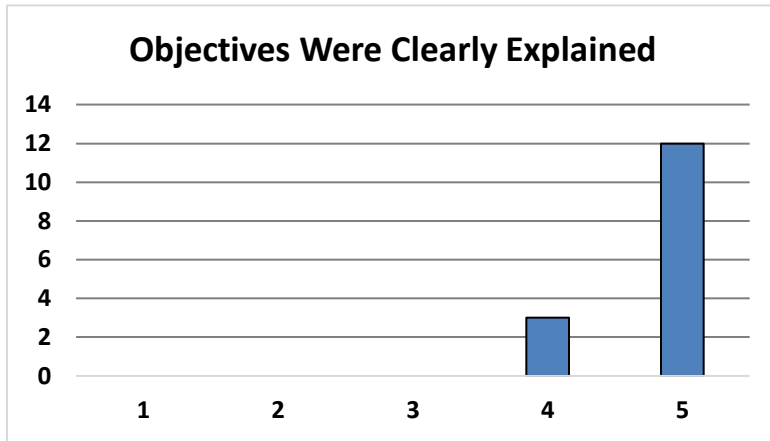
The objectives were clearly explained and the exercise met those objectives.	1   2   3   4   5
Comments:	
The material appropriately challenged me and the pace of instruction was correct.	1   2   3   4   5
Comments:	
The instructor(s) did an excellent job.	1   2   3   4   5
Comments:	
I found the classroom 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.

(Rev 2016)

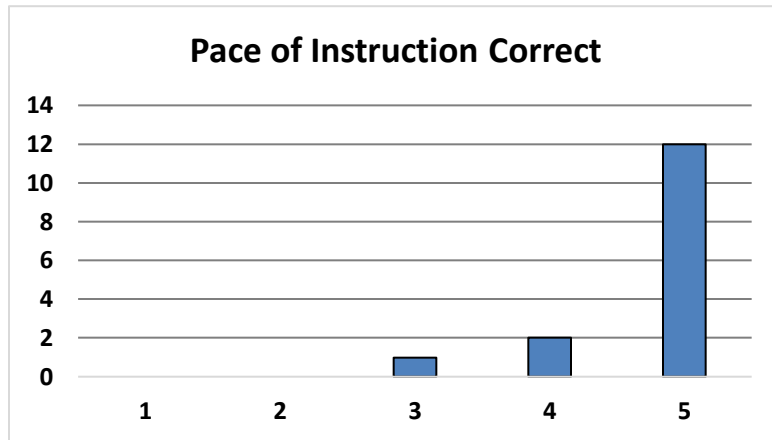


### Student Feedback Summary



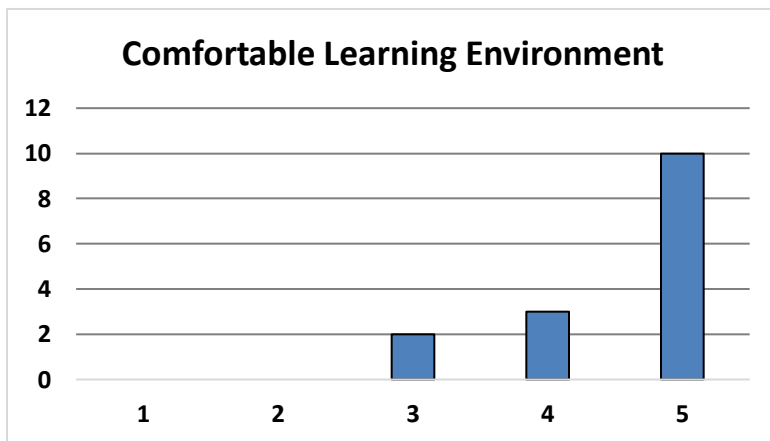
**Comments:**

"Some members had done the practical exercises and some had not, causing those members who had not some confusion in the boats", "adjusted to wind conditions"



**Comments:**

"Great pace"

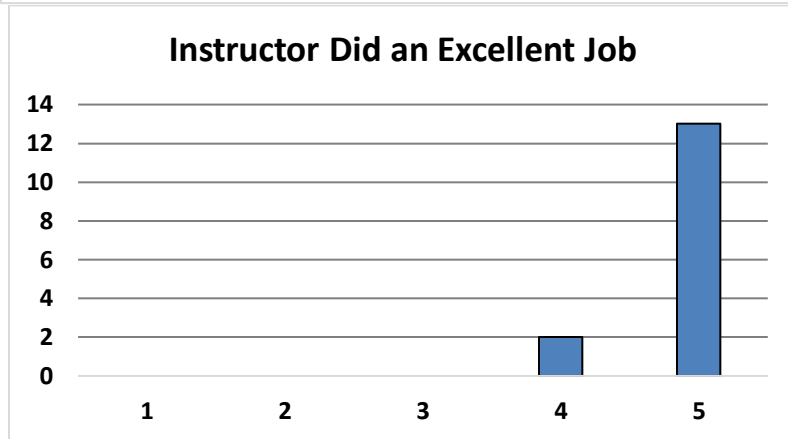
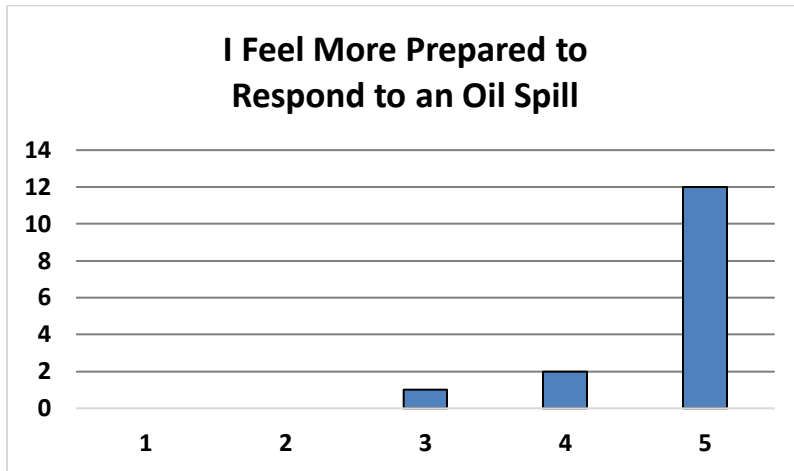


**Comments:** None

**Comments:**

"Well organized and coordinated exercise"





**Comments:**

"No DEP or Nuka people were on the boats"

**The best thing about this training was...**

"Live training", "The practical exercise", "Hands on work", "Skills training", "practical training", "operating with unified command and with other departments", "Hands on", "On-water training", "Practical Portion", "Practical Experience"

**This training could be improved by...**

"More direction needs to be provided during the practical exercise, and having instructors on the boats for 1st timers", "more practice", "clear instructions for recovering the boom from boat to land", "Instructors on boat if one is inexperienced"