



Prince William Sound RCAC Annual Drill Monitoring Report 2019

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2019 Exercise Report Index

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2019 Exercise Summary

Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) staff and contractors observed and wrote 19 exercises and training reports in 2019. In addition to the drills and exercises, staff also participated in Alyeska's Ship Escort Response Vessel System (SERVS) 2019 fishing vessel trainings. All of these reports fall into the categories described below.

Tanker Towing Exercises

Alyeska and the Prince William Sound Shippers continued doing emergency tanker towing and tether exercises in 2019. These exercises not only help training the crews on the tugs and tankers but also continue to test the new equipment from the recent marine services transition.

Open-Water Response Exercises

The four Oil Spill Response Barges (OSRB) also created the opportunity for many open water oil recovery exercises. These exercises allowed the barge and tug crews to train with the fishing vessels from ports in Prince William Sound. The escort tugs are equipped with booms and skimmers to allow them to be able to recover oil when needed. All of these tugs conducted exercises to deploy this equipment and trained on using the U/J oil recovery tactic.

Nearshore Response and Sensitive Area Protection Exercises

Nearshore and sensitive area exercises were conducted in 2019 in Port Valdez and around Prince William Sound. The majority of these exercises are associated with the annual fishing vessel trainings. Sensitive area protection exercises were conducted in conjunction with fishing vessel trainings and Alyeska's emphasis on the Valdez Duck Flats and Solomon Gulch Hatchery deployments. The Valdez Duck Flats sensitive area protection strategy has to go through some changes due to the establishment of the new Valdez harbor and are still being refined.

The Barge Mineral Creek conducted a nearshore support exercise working with fishing vessels and offloading mini-barges after it was reconfigured to be used for that function along with being the designated lightering barge.

SERVS also conducted a series of Geographic Response Strategy (GRS) deployments in Eaglek Bay, Point Pellew, Unakwik Cove, Cabin Bay, and Outside Bay located in northwest and central Prince William Sound in September 2019. Unfortunately, PWSRCAC staff was not able to participate in these deployments. GRS tactics are developed prior to a response to protect highly sensitive areas and include information on both booming and recovery strategies. When SERVS deploys these sensitive area protection strategies, they evaluate the potential effectiveness of these sites and provide input to Alaska Department of Environmental Conservation (ADEC) via the GRS evaluation report. ADEC hosts these GRS sites and deployment information online for the benefit of all, and these strategies are meant to provide sensitive area information for any event or operator, not just Alyeska/SERVS. As such, they are referenced in AK regional plans and the general PWS area plans in addition to Alyeska contingency plans.

Valdez Marine Terminal Drills

The Valdez Marine Terminal (VMT) conducted many exercises in 2019. The annual large incident management team exercise was held on June 25 and included a field response to a simulated oil spill in the tank cell. Alyeska used its west tank farm to allow responders to train and demonstrate the response tactic they may use if the spill occurs in the secondary containment around the oil storage tank.

Alyeska also conducted several sensitive area protection exercises around the Valdez Marine Terminal including a no-notice drill called by ADEC in March. The protection of the Valdez Duck Flats and the Solomon Gulch Hatchery was a big contingency planning issue in 2019 and the deployments at these sites were important to that effort.

Alyeska also hosted an aerial oil spill observation training course and allow staff from PWSRCAC and the regulators to attend the training as well.

Annual Prince William Sound Shipper's Exercise

ATC and BP conduct annual Prince William Sound Shipper's exercise in October and this was probably BP's last major exercise in Alaska. This large two-day exercise was a response to a simulated spill in the Valdez Arm. This exercise was unusual because it was conducted in two separate command posts, located in Valdez and Anchorage. This was a challenging exercise because of split staffs and the communications between the two command posts.

Non-Mechanical Exercises

SERVS conducted two alternative technologies or non-mechanical response exercises that PWSRCAC staff were able to attend. There is an annual aerial dispersant delivery system (ADDS) exercise conducted with the chartered C-130 and the ADDS equipment to practice applying dispersants. The other exercise was conducted in Whittier and focused on the water sampling that would be required if dispersants or in-situ burning are permitted.

SERVS Fishing Vessel Training

PWSRCAC staff attended several in- and out-of-region fishing vessel trainings. There are 400+ contracted fishing vessels participating in SERVS' program. Trainings were held in Kodiak, Homer, Seward, Whittier, Cordova, and Valdez.

Suggestions for Future Exercises

The list of exercises and other suggestions below is not meant to be an exhaustive list of all areas that need further focus and attention, but PWSRCAC would suggest it is a good place to begin. It should be noted that many of the concerns and exercise issues that PWSRCAC have noted through the years have remained consistent across time. Most of these suggestions have not changed as drills and exercises have been restricted to the COVID-19 precautions.

Safety

ADEC called a no-notice exercise in early October 2018, with the goal of testing several of the open water barges' ability to track and find oil, hold formations to recover that oil, and ensuring that responders were using the correct personal protective equipment (PPE) as they worked on decks. This exercise occurred during hours of darkness and also tested the communications from the Command post and Duty office to the field-based Group Supervisor managing assets. PPE arose as a concern during this exercise.

Barge-based Task Force Leaders and other responders found they could not or had difficulty using their VHF radios and respirators at the same time. Communications were difficult enough that some responders removed the respirators to be able to talk on the radio. In-respirator mic or other supplied air mask similar to what firefighters use may be required. There were also issues with some crew members not being shaven, which may not allow the respirators to have a good seal. It is difficult to work in full PPE and there is some wasted material when doing so but periodic exercises should be conducted in full PPE to allow some of these issues to be worked out.

Another issue that has not been resolved is Alyeska's process for ensuring vapors do not overwhelm responders during the decanting or offloading of the mini-barges. Mini-barges can be filled in an environment that does not require the use of respirators. However, as oil builds up in the mini-barges vapors can be concentrated to higher levels. The procedure for decanting and offloading the mini-barges is to open the hatch to look at oil levels but this activity will likely be done by someone without a respirator and a better process for monitoring vapor levels prior to opening the hatches in the mini-barges needs to be established and tested.

Operating in Darkness and Dense Fog

Operating in darkness and foggy situations has been included in this list for the last several years as the reality is much of the winter in Alaska is darkness, and long periods of fog or reduced visibility due to weather is not uncommon for the Prince William Sound area in either summer or winter.

Recognizing that darkness and limited visibility are a reality, PWSARCAC suggests that more training and exercise activity take place in darkness or periods of limited visibility. Include more fishing vessels and their respective crews so proficiency of working in the dark is improved. In addition, the ECO tug fleet has specific capabilities (FLIR cameras and Rutter Radar spill processing) that allow them to better see oil in limited visibility. More exercises using this improved technology should be conducted

with the use of targets on the water for the tugs to practice tracking and positioning the barges correctly.

Specific operations/tactics that PWSRCAC would like to see demonstrated in periods of darkness or reduced visibility include:

- 500-2 mini-barge offloading and general nearshore load-out and support with fishing vessels.
- Duck Flats, Solomon Gulch Hatchery, and other Port Valdez Sensitive Area Protection (SAP) sites. These sites have deployed in darkness before due to real incidents and practice beforehand seems prudent.
- More exercise activity working to integrate tracking buoys, Rutter, and FLIR data with coordinating vessel movements, particularly open water barges.

Tanker-Towing / Tanker Arrest Exercises

SERVS's goal has been to conduct eight tanker arrest exercises per year, though the tanker contingency plan technically requires only four.

One big change is that the tanker towing and arrest exercises are now required to be conducted on a quarterly basis. The Council appreciates this change, as we have voiced concerns through the years that these towing and arrest exercises would typically only happen in the summer months. Our recommendation through the years was to spread these events out so that crews would have the opportunity to work in a variety of weather and stages of darkness. It is good to see that Alyeska, the PWS Shippers and the agencies recognize the value of training across different seasons and weather conditions.

Open-Water Response

The four open water barges, despite minor differences, are now all essentially standardized. This consistency across platforms will allow crews to transfer between barges easier, make training back-up personnel easier, and simplify working with the contracted FVs fleet.

Specific Open Water-related suggestions:

- Conduct barge deployments with vessels and crews from Cordova and Whittier. During the ECO transition, the bulk of barge-related exercise and training activity occurred in Valdez. Cordova vessels have been involved to a lesser degree, and it's unclear if a Whittier vessel has ever helped with a deployment. There are Tier 1 vessels across these three different ports.
- Work to verify that four barge crewmembers is truly enough to support 18 hours of operations prior to relief crews arriving. PWSRCAC has voiced concerns through the years that a crew of four is not sufficient.
- Continue to build back-up crew bench strength so that ECO crews can be assured back-up support in a real event. Alyeska has been training TCC responders to work on the barges and we think that should continue.

- As discussed above, more work in darkness and limited visibility.
- As discussed above, the PPE element and radio communications are still unresolved.

Valdez Marine Terminal

In a broad sense, PWSRCAC would suggest that all tactics in the VMT technical manual be exercised in a 5-year plan cycle and that exercises take place over a variety of seasons and conditions.

Specific VMT-related suggestions include:

- Continue with the multi-day Duck Flats training and conduct a similar intensive training for the Solomon Gulch Hatchery. The current training for the deployment of the Duck Flats by Alyeska is excellent and should continue. Much attention has been given to the Duck Flats deployment over the past several years, and Council staff have observed the general proficiency level of responder increase. The connection of boom ends under tension in particular has been a responder safety concern, and SERVS has done a good job addressing this topic. Continue this work on Duck Flats, but also conduct a similar training for the Solomon Gulch Hatchery.
- Drainage 58 and Scenario 5 improvements. Exercises to address additional recovery capacity options for Drainage 58 and scenario 5. Discharge rates in this scenario far overwhelm the two Crucial skimmers expected to perform recovery. Exercise to focus on complete containment booming at Drainage 58, as the boom needs to be better anchored on its ends to prevent the large gaps observed in the past.

Sensitive Area Protection & Nearshore Response

There is a difference between nearshore response and sensitive area protection components in spill response. The missions of these two elements are not the same, though response equipment, vessels, asset management, and training are very similar and overlap. Nearshore response systems should be designed to intercept and recover oil, as that oil gets close to shore, by working the leading edge of the spill. The mission of the sensitive area protection function is to get out ahead of the spill, and boom sensitive areas prior to oil reaching or threatening those areas. The management and logistical support for both of these operations can be challenging and complex, but it's important to realize that they have different goals despite similar and/or shared resources and management.

Sensitive Area Protection

- The testing for the various GRS sites throughout Prince William Sound has been excellent and these exercises should continue.
- The new Valdez boat harbor is now operational and changes need to be made the Valdez Duck Flats protection scheme. Exercises will need to be conducted to test the new boom configurations.

Nearshore Response

Nearshore response exercises will always be high on the Council's priority list simply because of the sheer volume of fishing vessels associated with this response area. The crews of all of these vessels need to be proficient with the equipment, and equipment does continue to change over time. One example of changing equipment was internalized mini-barge pumps or new 13-disc Crucial skimmer.

- The Tanker Contingency Plan notes that Nearshore will perform recovery operations for twelve hours a day, which means it's inevitable that many of those hours will require operating in reduced visibility during winter months, or foggy days in summer. As nearshore operations generally do not take place during these situations, we do not have very good benchmarks regarding what operations can safely be conducted, or how to adjust tactics accordingly. More exercises are needed to refine these limited visibility Nearshore parameters.
- SERVS has been working to ensure responder safety by taking air reads at open hatch covers while offloading mini-barges. The open covers are necessary to some degree so that responders can watch liquid levels drop and adjust or turn off pumps accordingly. SERVS should consider mounting air monitoring sniffers on a longer pole, or using a hose or tube to get responders farther away from the hatches they are opening. PWSRCAC has concerns that vapor levels could be elevated by concentrating the oil in a mini-barge as mentioned previously. It's good that SERVS is working to quantify vapors in this potentially hydrocarbon-rich atmosphere, and ultimately protect responder health, but the process still needs some refinement.

Dispersant/ISB related

Dispersant, SMART monitoring, and ISB-related exercises tend to be practiced as individual components, and this separation of components may not reflect how these tactics would be employed in a real event. For example, it's possible that both aircraft and tug-based spray dispersant spray system would be in play at the same time, and both these efforts would need SMART monitoring from a vessel on the water as well as spotter aircraft.

- Council suggests during an exercise or training, more of the various components of dispersant application be run simultaneously and managed as they could occur in a real event, versus as separate components.

Unannounced Exercises

Unannounced drills provide the only real measure of a plan holder's ability to respond at a point in time and at a moment's notice. These drills have the ability to test areas of a response that cannot easily be tested otherwise, such as personnel readiness and resupply capabilities. There could even be unannounced aspects to a known event, such as verifying responders have proper PPE once they arrive on scene or discussing what an elevated and unsafe air read would mean for responders and given process, etc.

- No-notice exercise are valuable and should be continued periodically to help ensure readiness. SERVS uses these types of exercises to good effect to monitor their rapid response fleet.

Technical Manual Tactics

Both the Prince William Sound Tanker and VMT contingency plans have technical manuals to define and explain how specific tactics and equipment would be expected to be employed during a spill.

- While some of these tactics are deployed frequently, others have not been exercised very often, if at all. A concerted effort should be made to systematically exercise each of the tactics in the technical manuals within the five years of each planning cycle.

Fishing Vessels

The SERVS Fishing Vessel Program is the backbone of the oil spill response system in Prince William Sound. As such, there is a significant amount of energy and time that goes into the program. However, the reality is that most fishing vessel crews only receive the annual training and do not get called out for additional drills. It's simply difficult to build and maintain proficiency when only practicing with the equipment once a year. There are many aspects to the open-water, nearshore, and sensitive area protection elements, and even as a Tier 1 vessel, opportunities for practice and becoming proficient with these tasks are limited. These activities include working in periods of darkness with open-water barges and in the nearshore environment, managing nearshore task forces for more than a single day exercise, and implementing sensitive area protection strategies ahead of the response area. More opportunities are needed for fishing vessels to become, and remain, response ready.

- While the SERVS fishing vessel program appears to be healthy in regard to the number of participating vessels, PWSRCAC recommends that SERVS continue to verify vessel availability, particularly in winter months when the fleet is far more inactive. This could include turnkey exercises.
- The crewing aspect of availability is largely untested. SERVS reports "vessel" availability, but past no-notice exercise events have shown that the crew component is often a scramble of captains trying to find crew, often cannibalizing other crew in the process. PWSRCAC suggests that SERVS should continue to build additional crew depth via a crew pool and that "extra" responders are allowed to train at annual trainings. This could then be verified through simple turnkey exercises.