

Oil Spill Prevention, Administration & Response (OSPAR) Fund

Annual Report

FY2021



Rhode Island Department of Environmental Management Office of Emergency Response

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1: INTRODUCTION

The Oil Spill Prevention Administration and Response (OSPAR) Fund (RIGL Chapter 46-12.7) was created in 1996 following the environmentally devastating North Cape oil spill. The OSPAR Fund is continuously supported through a fee of \$0.05 per barrel of petroleum products received at marine terminals in Rhode Island. The purpose of OSPAR is multi-faceted. It provides funding for the prompt response, containment, and remediation of oil spills; emergency response readiness via trainings and equipment acquisition; emergency loans for affected workers in the case of significant releases; and damage compensation of legitimate claims that cannot otherwise be compensated by responsible parties or the federal government. The funds and the operations conducted in accordance with the statute are managed by the Rhode Island Department of Environmental Management (DEM).

DEM's Office of Emergency Response (OER) is funded, in part, by the OSPAR Fund as Rhode Island's first line of defense in protecting public health, safety, and welfare in an environmental emergency. Like police officers and firefighters, DEM's emergency responders are prepared to handle a great variety of incidents. These incidents may range from a spill of a few gallons to a petroleum tanker rollover, an abandoned drum to bioterror weaponry, and many other possible threats to environmental and public wellbeing. Highly trained first responders are on-call 24 hours a day and 7 days a week. They are tasked with responding to and remediating incidents posing imminent dangers.

Despite an abundance of effective preventative measures, hundreds of incidents possess the potential to threaten the environment daily. Emergency responders are prepared to limit risks from oil and chemical spills, failed tanks or pipes, fires and fumes, overturned trucks, sunken vessels, litter, weapons of mass destruction and abandoned drums amongst many other possibilities. OER responds to several hundred incidents each year. The office is also responsible for the registration and oversight of over 600 facilities with Aboveground Storage Tanks (AST) exceeding a combined capacity of 500 gallons located throughout Rhode Island. Many of these activities are supported by the OSPAR Fund.

Since the enactment of OSPAR, Rhode Island has experienced an increase in environmental impacts from climate change including intensified storms, warming air and waters, increased annual rainfall and rising sea levels. The consequences of these changes further strain our coastal and riverine habitats and infrastructure. During instances where rainfall or storm surges lead to flooding, releases of oil and hazardous materials into the environment increase and necessitate emergency actions and remediation. With our changing climate, there is a growing urgency for strong preparedness and training for responding to weather related issues.

Section 46-12.7-7 of the statute requires the DEM Director to submit an annual report to the legislature on the OSPAR Fund. This report summarizes the status and use of the fund for FY2021.

2: REVENUES & EXPENDITURES

The OSPAR account started FY2021 with a balance forward of \$3,495,655 and ended FY2021 with a balance of \$3,455,833. During FY2021, the \$0.05 per barrel fee resulted in the collection of \$1,849,843 after the 10% cost recovery fees per RIGL 46-12.7-4.1(g). The personnel, operating and project expenditures for FY2021 totaled \$1,889,665. Overall, the OSPAR Fund remained relatively stable during FY2021, ending with a closing balance only \$39,822 less than the balance forward from FY2020. This was due to the decline in revenue,. The expenditures specifically listed in sections (a) through (e) represent the larger costs associated with OSPAR funding for FY2021.

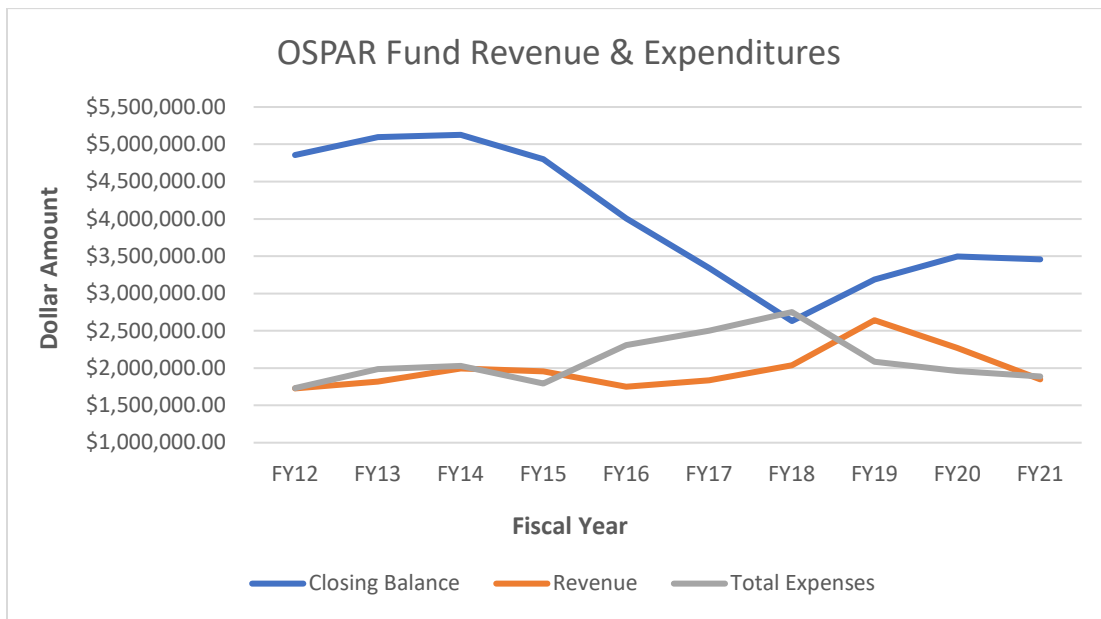


Figure 1. OSPAR Fund revenues & expenditures over the past 10 fiscal years.

3: PERSONNEL COSTS

- Partial salary and benefits for the members of the DEM Emergency Response team. All five personnel serve as first responders and are also responsible for administering the OSPAR Program both in terms of pre-spill readiness and post-spill response.
- An Administrative Officer who supports the Emergency Response Office and the OSPAR program.
- A State Meteorologist to provide weather information before, during, and after spill response activities, as well as trending climatological information for pre-spill preparedness.

- A Tier II Specialist to provide information on petroleum and chemical storage facilities regarding amounts, storage locations, site plans and emergency contact information.
- Partial support of salary and benefits of DEM geographic information system (GIS) Supervisor. This individual is responsible for maintaining a comprehensive internet mapping application for planning, assessment and response to oil spills or other environmental emergencies in Rhode Island marine waters. This individual is also responsible for developing and maintaining a complete data inventory on an internal network capable of supporting responders during an oil spill or other environmental emergency. In the event of a spill, the GIS Supervisor coordinates the collection and dissemination of spatial data, documenting the extent of spill, fish kills, etcetera. In the aftermath of a spill, support is also provided for natural resource damage assessments to aid in the collection of damages from responsible parties.
- Partial salaries and benefits for personnel from the DEM Office of Land Revitalization & Sustainable Materials Management, who oversee the investigation and cleanup of properties contaminated from the release of oil.

a. Personnel Costs	\$1,115,689
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b. Major Operating Expenses	\$99,849
Vehicle Purchases, Maintenance & Readiness	\$31,674
Cell Phones & IT Support	\$15,832
GyroPilot Combo	\$33,339
Supplies: Office, Scientific, Miscellaneous Expenses	\$19,004
<hr/>	
c. Capital Projects	\$0
Narragansett Bay PORTS System	-
Bowditch Navigation Computers	-
<hr/>	
d. Other Projects Supported by OSPAR	\$674,128
Audubon Society – Narragansett Bay Estuarine Program	\$65,147
Save the Bay Assistance at Quonnie Boat Ramp	\$2,442
Coastal and Estuarine Habitat Restoration Trust Fund	\$250,000
Water Quality Monitoring Team	\$294,559
EMA Marine Strike Team	\$61,979
<hr/>	
e. Total Expenditures	\$1,889,665

4: EMERGENCY RESPONSE CLEANUP COST

a. Response Cost Reimbursement Procedures

The OER utilizes OSPAR funding for the prompt response, containment, and remediation of releases. These activities can require responders to hire contractors for responses to incidents without a responsible party (RP) available on-site, incidents on state properties (highways, parks, or land), or incidents posing third party consequences to public health and the environment. When incidents require cleanup, the RP is financially responsible for covering any subsequent costs. Cleanup costs recovered by OER are then funneled back into the OSPAR fund. Therefore, in instances devoid of a viable RP, the OER cannot recover OSPAR funds. However, in many cases, after thorough research, investigation, and review of available information, the OER seeks reimbursement of expenditures from identified RPs. The OER provides two opportunities for the RP to pay for the incident caused by their actions. OER notifies the RP with a first letter and request for reimbursement. If that goes unpaid, a second letter from OER requiring cost reimbursement for expenditures goes out a month later. When the RP fails to pay for the cleanup cost, a package of our expenditures is sent to the Central Collections Unit (CCU) within the Department of Revenue (DOR). When the debt is referred to CCU, collection actions may include, but are not limited to, the following:

1. Interception of Rhode Island tax refunds,
2. A civil suit brought against the RP in state court by the CCU,
3. Attachment of wages or other compensation being paid to the RP,
4. Garnishment, seizure, or levy against bank accounts.

We continue to work with CCU and supply information upon request for the recovery of expenditures from delinquent RPs. All recovered funds go back into the OSPAR account.

b. Cost Recovered

Since we started working with CCU in FY2019, we had 97 Cost Recovery Cases totaling \$152,906.14. Of those cases, 84 have been resolved by OER for a total requested amount of \$128,718.17. As part of settlement agreements with these 84 RPs, OER has accepted \$122,465.07 as payment in full. Some of the RPs agreed to established payment plans with DEM but have since stopped paying. In FY2020 \$93,868.20 was recovered and in FY2021 \$18,651.05 was recovered. To date, 13 cases have been referred to CCU for a total amount of \$26,578.25. However, a portion of these funds were collected by OER prior to CCU beginning collection activities. CCU has resolved 5 of the 13 cases for \$9,945.29 with a remaining outstanding balance of \$16,632.96.

5: EMERGENCY RESPONSE ACTIVITIES

a. Response Activities

The Office of Emergency Response (OER) operates as an all-hazard response program, incorporating the oil spill prevention and response functions carried out by DEM in Rhode Island. OER continued response efforts during the COVID-19 pandemic and actively responded to oil spills, hazardous material incidents and other state emergencies. In FY2021, there were 531 emergency response cases handled by the OER responders. While some annual variation persists, yearly trends largely remain constant for OER response activities. This fiscal year the total response activities were lower due to the COVID-19 pandemic which reduced traffic and disrupted industry – two major sources of emergency response incidents. All incidents are broken down into two primary categories: oil spills and hazardous material responses.

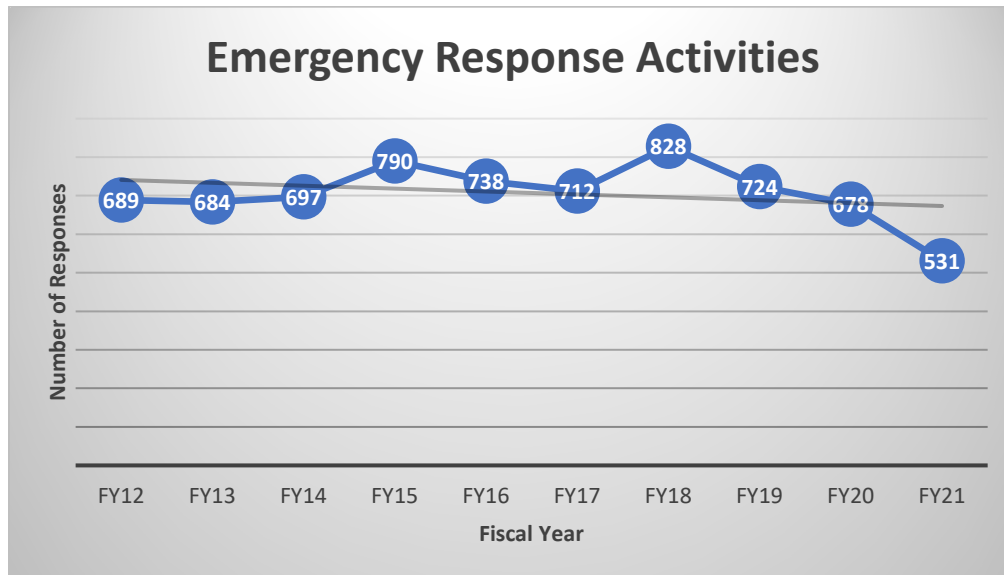


Figure 2. The number of emergency response activities for the previous 10 fiscal years.

b. Oil Spill Response

The OER response team responded to 456 oil spills in FY2021. Oil spills amassed 85.9% of the total number of incidents responded to by OER responders. The amount of oil product and debris remediated during these incidents is estimated to be 11,176 gallons of product and 183 tons of oil spill debris. Also, 550 gallons of oil was brought into compliance via the Oil Pollution Control Regulations (OPCR). There was also approximately 1.6 million gallons of treated oily water and 9,063 tons oily debris disposed of properly for the cleanup work spearheaded by EPA at Lonsdale Bleachery. Remediation work was completed by the OER, responsible parties, or contractors hired by either the OER or

responsible parties. To ensure compliance with State and Federal regulations, all remediation work was overseen by the OER staff.

Circumstances causing oil spills and their consequential environmental impacts vary. The primary categories of oil spills and their relative percentages for FY2021 are charted below:

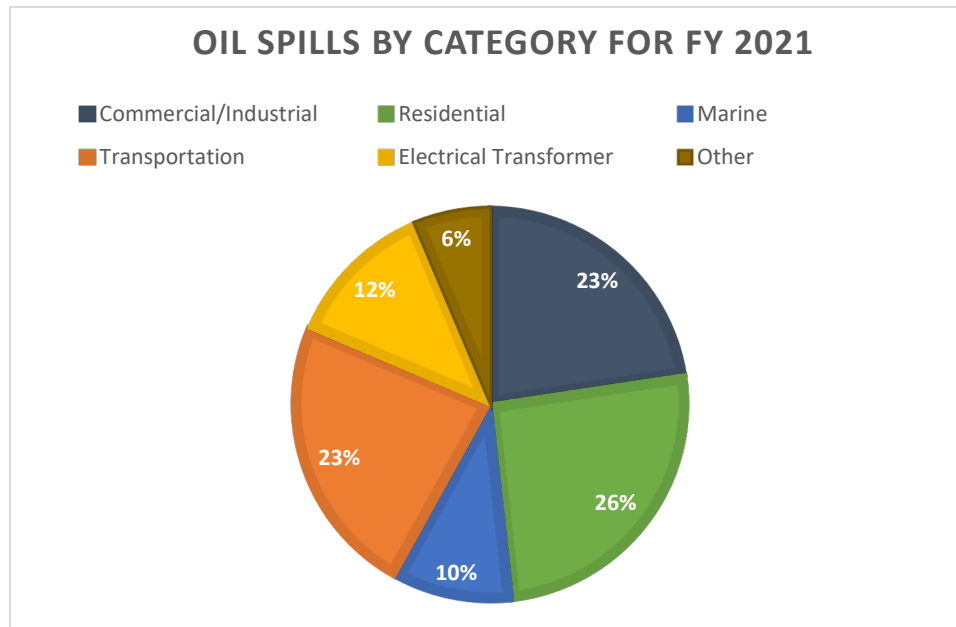


Figure 3. The breakdown of oil spill incidents responded to by the OER in FY2021.

The greatest percentage of oil spills during FY2021 was caused by residential incidents at 26%. However, the amount of residential oil spills was significantly lower in 2021 compared to previous years.. Oil spills in residential areas can be quite concerning as drinking water wells, ground water, and soil can be contaminated, thus compromising water quality for affected individuals. Additionally, septic systems can become fouled and require replacement, odor and health problems can infiltrate homes, and nearby storm water drains, sewers, ditches, and surface water tributaries are at risk for contamination. The OER webpage provides a [pamphlet for residential oil tank information](#) to help homeowners minimize the risk of oil spills. DEM continues to conduct public outreach through press releases, television special reports, and presentations to oil companies via insurance seminars.

For the first time since FY2011, commercial and industrial incidents are not the leading cause of oil spills (Figure 4). The dethroning of commercial and industrial oil spills is likely attributable to the COVID-19 pandemic, which halted operations for countless businesses. The second largest percentage of oil spills was due to transportation-related incidents such as traffic accidents, followed closely by commercial and industrial incidents. Both categories account for 23% of all oil spills. Marine incidents were

responsible for 10% of all oil spills. DEM and the United States Coast Guard (USCG) conduct workshops at the Port of Galilee to reduce oil spills in the Narragansett Bay. In these workshops commercial fishermen are educated on State and Federal requirements for proper containment and disposal of any generated oily waste. Electrical transformer incidents account for 12% of all oil spills. OER personnel meet with electric companies to discuss electrical transformer issues and ensure proper cleanup of mineral oil dielectric fluid (MODF) releases and PCB contaminated transformer oil. Marine and electrical transformer incidents remained consistent throughout the previous decade (Figure 4).

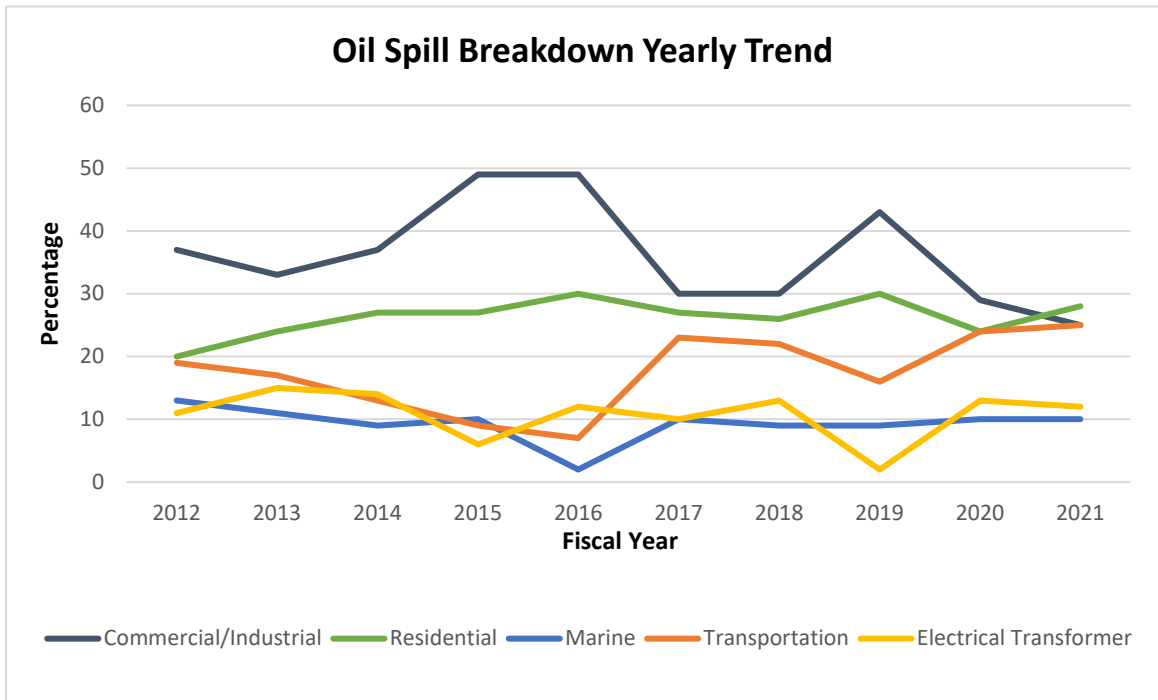


Figure 4. The trend of oil spill categories across the previous 10 fiscal years.

c. Hazardous Material Response

The OER response team responded to 75 hazardous material incidents during FY2021, significantly down from previous years. These incidents amassed 14.1% of all OER response activities. It is estimated that 758 gallons and 1,000 tons of hazardous waste was remediated from the environment. Remediation work was completed by the OER, responsible parties, or contractors hired by either the OER or responsible parties. To ensure compliance with State and Federal regulations, all remediation work was overseen by the OER staff.

6: EMERGENCY RESPONSE INCIDENTS AND EXERCISES

a. Rhode Island Recycled Metals

In 2009, the Cold War era Russian submarine K-77 (see Image 1) was sold to Rhode Island Recycled Metals LLC (RIRM) for scrap. Built in the Juliett-class of Soviet submarines, its hull was made of conventional steel and its battery a lead-acid type. Details surrounding the history of the 298-foot-long submarine remain largely unknown. Juliett-class submarines were used to follow United States aircraft



Image 1. The K-77 submarine.

carrier battle groups in the North Atlantic Ocean and Mediterranean Sea. Papers found on board during an inspection suggest it shadowed Norwegian Kobben-class submarines. K-77 was purchased by the USS Saratoga Museum Foundation and towed to Collier Point in Providence, Rhode Island. It was opened to the public in 2002. The submarine was used as a set for the motion picture K-19: The Widowmaker starring Harrison Ford and Liam Neeson in 2002 and offered public tours and a comprehensive educational program for Girl and Boy Scout programs.



Image 2. Deterioration after the 2007 storm.

The K-77 submarine sank in April 2007 after a bad storm. Recovery efforts by the United States Navy and Army began in June 2008 as a project to train military divers. Divers from Mobile Diving and Salvage Unit Two in Norfolk, Virginia arrived and initiated preparations to raise the submarine. On July 25, 2008 the submarine was brought back to the surface (see Image 2). Efforts to pump out water were completed in August 2008, but the submarine was badly deteriorated and in need of substantial repair. It was

after this discovery K-77 was sold for scrap to RIRM. The company undertook a tedious process to salvage artifacts and remove the interior structures for recycling (see Image 3). RIRM purchased equipment to pull the rest of the hull onshore. In March 2015, the state of Rhode Island filed a complaint in Superior Court to compel the dismantling of the submarine. DEM Office of Emergency Response personnel has been overseeing RIRM's work, and during FY2021 they continued serving as a liaison between RIRM and DEM, providing key updates to state officials and assisting RIRM in their efforts.

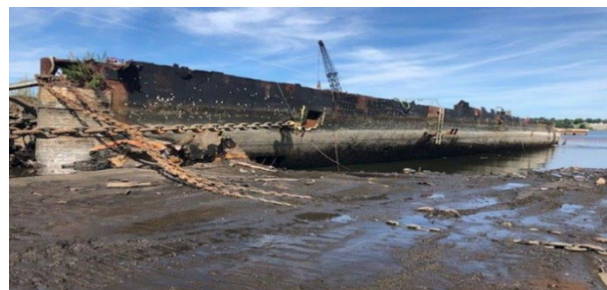


Image 3. K-77 at Rhode Island Recyclable Metals.

b. Barge 108 at Point Judith Lighthouse

On November 25, 2020, due to heavy seas the Tug “Warthog” sunk right off the coast of the Point Judith Lighthouse in Narragansett, RI resulting in a visible oil sheen. The owner had recently purchased the tug and barge and was transiting from New Bedford to his home port – New London, CT. The 47-foot tug had a total diesel capacity of 800 gallons. It was estimated to have sunk with 200-250 gallons of diesel onboard. The Barge 108, a construction barge with no petroleum onboard, was being towed alongside the tug. The crew stated that as they rounded the point at Point Judith, they met heavier weather causing the barge to become active and parted a line. The barge rose on a wave and then slammed into the side of the tug tearing the hull. The crew left the tug and boarded the barge before cutting the tow lines as the tug sank. Coast Guard Station Point Judith removed the crew from the barge with no reported injuries. The barge was beyond the towing capacity of the Coast Guard vessel on scene and was adrift before grounding in front of the lighthouse at Point Judith.

The tug was confirmed to have sunk in position 41 19.43 / 071 28.2 with no initial pollution observed. There was heavy debris observed around the sunken tug. Later that day DEM was notified that heavy diesel odors were present at Rose Nullman park. Coast Guard overflight photos confirmed that there was silver sheen around the sunken tug, but there was not any recoverable product and the sheen was dissipating with wind and tide.

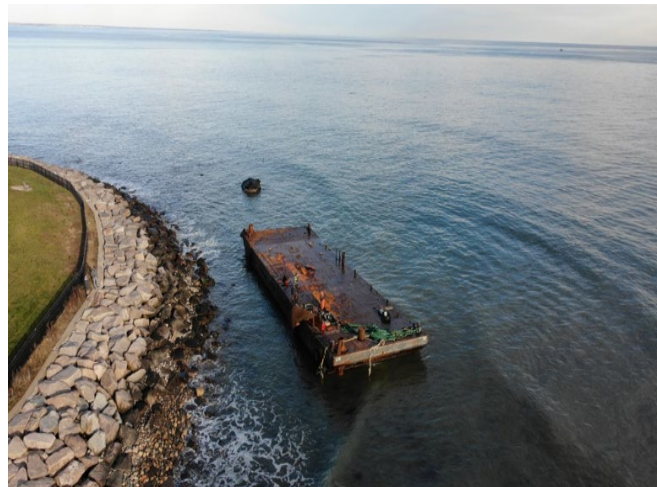


Image 4. Barge 108 grounded.

The Warthog was towing construction Barge 108 which was grounded following the loss of the Warthog (see Image 4). Initial response called for divers to locate and plug the fuel tank vent on the Warthog to prevent a potential release of diesel into the Narragansett Bay. Unfortunately, side scan sonar was conducted for around 9 hours and the Warthog could not be found. In the days following the incident, the United States Coast Guard and

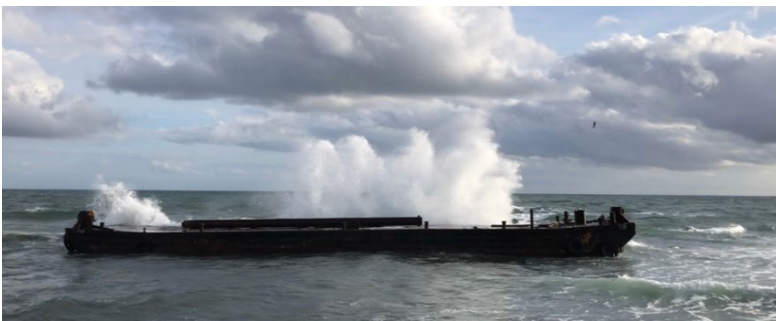


Image 5. Strong waves crashing over Barge 108.

responsible party drafted a Salvage Plan for Barge 108. The Office of Emergency Response reviewed this plan and offered several comments prior to acceptance.

Unfortunately, remediation efforts were continuously stalled by poor weather conditions (see Image 5) and limited communication from the responsible party. On December 10, 2020, Barge 108 was finally towed to the Harbor of Refuge after an arduous effort to dewater and tow the barge. The United States Coast Guard Marine Inspector conducted an inspection of the Barge and coordinated his findings with the Office of Emergency Response. Necessary repairs and maintenance were completed while in the Harbor of Refuge prior to the barge's transport. Despite creating a significant public concern, the barge did not result in any pollution to the surrounding environment. Additionally, despite an initial release of diesel, the Warthog likely did not discharge a significant amount of fuel. On December 24, 2020, it was confirmed that Barge 108 was towed by the tug "Jaguar" from Point Judith to Burr's Marina in New London, CT. However, despite expansive efforts to locate the sunken Warthog, the tug could not be located.

c. Lonsdale Bleachery

The Lonsdale Bleachery was a former textile mill abutting the Blackstone River in Lincoln, RI. Once a thriving textile and bleachery mill complex, the site was closed approximately 50 years ago and subdivided into 29 different parcels of land comprised of several small industrial, commercial, and retail businesses. Unfortunately, in 2004 heavy fuel oil seeped from a former underground fuel storage vault made of concrete. The oil then migrated below grade into the nearby soil and under the granite block retaining wall adjacent to the Blackstone River. This fuel oil pooled on the



Image 6. Hard boom deployment.



Image 7. Oily soil excavation efforts.

groundwater table and discharged up from the sediment at the bottom of the river. The OER responded to this site and installed hard boom to ensure protection of the surrounding environment and Blackstone River.

DEM requested EPA assistance in 2005 and they began the removal fuel oil from the concrete bunkers and excavated contaminated soil down to the groundwater. This previous remediation effort reduced but did not eliminate the oil pollution source.

On March 25, 2020, an Oil Pollution Act of 1990 (OPA 90) Removal Project Plan was written by the EPA. The plan was submitted to the National Pollution Fund Center, which concurred with the proposed response. On August 17, 2020, the EPA and EPA contractors mobilized to the site to conduct oil removal. During FY2021, oil mitigation and collection efforts were still ongoing. Tactical strategies such as using hard boom (see Image 6)



Image 8. Flooded excavation site.

were implemented. Oil-saturated soil was excavated (see Image 7) and transported to a stockpile area. Occasionally large amounts of water flooded the excavation area (see Image 8) requiring continued skimming prior to dewatering, treatment, and discharge of the groundwater. Leaf blowers, pool skimmers and absorbent pads were used to remove oil from infiltrated water; a total of 1,667,300 gallons was treated during this process. At the conclusion of FY2021, approximately 9,063 tons of oily soil was recycled and 26 tons of oily solids such as contaminated PPE was remediated. In FY2022 removal of oil contaminated sediment in the Blackstone River will commence as the final stage of the remediation process. The overall cost of the project is estimated to approach \$8 million.

d. Bradford Soap

The Office of Emergency Response has been working alongside the EPA to mitigate environmental damages at Bradford Soap in West Warwick, RI. At this property, an old underground storage tank (UST) released residual oil that migrated into the adjacent Pawtuxet River. The oil bubbled up from the river's sediment, causing an oil sheen to appear at the surface. To ameliorate this issue, approximately 1,000 square feet of reactive core mat was installed in



Image 9. Boom deployment efforts.

the Pawtuxet River during early 2021. Reactive core mat is used for the underwater containment of petroleum products. Installation of the mat in the Pawtuxet River sediment bordering Bradford Soap prevents oil from bubbling up and contaminating the water. This protects wildlife and vegetation downstream from the release.

The scope of work for this installation process included the mobilization of workers and equipment to the site, the removal of vegetation for crane access, the hoisting and placement of reactive core mat into the river's bottom, the installation and spreading of stone ballast over the reactive core mat, the installation of new boom sections and removal of old boom (see Image 9), and eventually site cleanup and demobilization. Prior

to the construction projects commencement, the activities were approved by the DEM Wetlands program. Following the completion of this process, and inspection from Office of Emergency Response personnel found that the reactive core mat was working well. This site is still active and being monitored by DEM.

e. New England Petroleum Terminal Exercise

On January 26, 2021, the Office of Emergency Response participated in a Government Initiated Unannounced Exercise (GIUE) at New England Petroleum Terminal (NEPT) in Providence, RI. The purpose of this exercise was to test NEPT’s facility response plan (FRP) for an average most probable discharge (AMPD). The hypothetical exercise scenario was a discharge of 50 bbl, or 2,100 gallons, of #6 fuel oil from a ruptured hose during a fuel transfer.


1. Incident Name GIUE: New England Petroleum Term.	2. Prepared by: (name) MST2 Gregory Murray	INCIDENT BRIEFING
SENE: 164001	Date: 30OCT2020	Time: 1145
3. Map/Sketch (include sketch showing the total area of operations, the incident location, overflight results, trajectories, impacted shorelines, or other graphics depicting situational and response status)		
		
4. Current Situation: This morning, while conducting a regulated transfer, a hose failed and discharged approximately 50 barrels of Number 6 Fuel Oil into the waterway.		
Response personnel should maintain a minimum of Level D PPE as well as wear PFDs while conducting cleanup activities.		
Response personnel shall smoke in designated areas only.		

Image 10. ICS 201 Incident Briefing Form drafted for this GIUE.

The GIUE began with a briefing of NEPT personnel. This briefing consisted of the exercise scenario and objectives. Following the briefing, the South Site of the scenario location was contacted and informed of the exercise. They were instructed to isolate the area and continue operations. The containment boom contractor was notified and requests for boom deployment were made. The National Response Center (NRC) was then notified of the drill and provided with all the requested information. After these alerts were made, Office of Emergency Response personnel arrived on scene at the drill location.

A response contractor – Clean Harbors – was notified of the spill and a vacuum truck and oil skimmer were requested. Rhode Island Department of Environmental Management and the company’s Public Information Officer were contacted to alert them of the drill, thus completing the necessary notifications.

The containment boom contractor arrived on scene. The boom was staged near the transfer area – the area in which the hypothetical oil spill occurred – and then placed into the water. Clean Harbors then arrived on scene with a vac truck and oil skimmer. They explained the process for responding to the outlined scenario and displayed their equipment. This demonstration concluded the GIUE.

7: PORTS PROGRAM

The OSPAR Fund continues to support the Narragansett Bay Physical Oceanographic Real-Time System (PORTS) that began operation in June 2000. PORTS, which is operated by the National Oceanic and Atmospheric Administration (NOAA), is comprised of monitoring stations located in Narragansett Bay that monitor the tide, currents, and weather. The data is reported every six minutes to a central receiving computer which processes the information. This real-time information can be accessed at [PORTS: Narragansett Bay PORTS - NOAA Tides & Currents](#). NOAA continuously monitors the in-water sensors and conducts data validation. This 24/7 quality control allows NOAA to guarantee the accuracy of the data. As a result, the state-licensed pilots who guide the largest vessels into port in Narragansett Bay can make decisions on vessel movements with real-time information.

State-licensed pilots can directly access real-time data from PORTS while traversing Narragansett Bay using the new Navicom Dynamics GyroPilot purchased with OSPAR funds. It can also obtain real-time weather information from the National Weather Service. The new GyroPilot system is one of the most accurate systems at much less the cost. The Navicom system is a situational awareness tool for Pilots, who require an independent mGNSS position for more precise operations or maneuvers and to augment the information coming from the Pilot Plug. Pilot Plug devices provides the means to enable pilots and other mariners to connect their own laptop PC or other portable device to a vessel's Automatic Identification System (AIS). With the Gyro Pilot's ability to wirelessly link to the Pilots software and charts, the system is an accessible option to upgrade to higher performance, accuracy, and safety for determining the position of a vessel being piloted through the bay, providing sub-meter accuracy necessary for precise navigation in Rhode Island waters. The goal of the program is to provide the greatest degree of safety possible for commercial ship traffic in Narragansett Bay, and the Ports of Providence, and Quonset.

8: TRAINING ACTIVITIES

- 35-Hour large-scale air monitoring at the Newport Folk Festival
- 35-Hour large scale air monitoring at the Newport Jazz Festival
- 1-Hour Red Wave Device Training
- 1-Hour AP4C Device Training
- 4-Hour Incident Command System Training 100-400
- 1-Hour Tri-State Bird Rescue and Research Presentation
- 1-Hour Rigidity Training HazMat
- 2-Hour Training 7 Bump Testing
- 1-Hour PFAS Webinar
- 2-Hour Radiation Basics
- 1-Hour GIS Training
- 1-Hour RCRA 101 Hazardous Waste ASTs
- 1-Hour Detection & Monitoring During Chemical Response
- 1-Hour Remote Sensing
- 2-Hour RCRA Class
- 1-Hour Leadership Training

3-Hour Calibration and Bump Testing
1.5-Hour PPE Training
1-Hour Cybersecurity Training
1-Hour Distillate Training & Illegal Fuel Transportation
2-Hour Shell Oil Drill
1-Hour Hurricane Conference
7-Hour AFFF Virtual Training
3-Hour Leadership Training
1-Hour Biothreat Training
1-Hour Food Safety Seminar
3-Hour RI Nuclear Science Center
1-Hour Monsanto's Pesticide Webinar
1-Hour MX908 Training
7-Hour Regional Response Team
1-Hour Plugging & Patching Drums
4-Hour Training and Calibration
2-Hour Lithium Battery Webinar
1-Hour EPA Green Cleaners
2-Hours Manager Training
8-Hour Ingestion Pathway Sampling and Decontamination
1-Hour Radiation Safety/Awareness Training
1-Hour Monsanto's Weed Killer Webinar
4-Hour Ingestion Pathway Sampling with CST
2-Hour Detecting Harmful Algal Blooms Webinar
1-Hour CAMEO Training
3-Hour Federal Support for RI Ingestions Pathway Webinar
4-Hour Federal Support for RI Ingestions Pathway Webinar
1-PFAS Training
4-Hours HazMat Training
2-Hours Manager Training
1-Hour Rad Waste Packaging
1-Hour PFAS Webinar Ocean Impacts
7-Hour Operation Safe Return TTX
1-Hour PFAS Webinar
5-Hour AWR136 Cybersecurity
1-Hour Cybersecurity Training
4-Hour SCBA Training
4-Hour American Disability Act Training
3-Hour Novichok Training
1-Hour Intro to Phishing
4-Hour NOAA Flood Exercise
1-Hour NOAA Oil Animal Training
1.5-HOUR CAMEO Data Management Training
24-Hour EPA Hazardous Materials Refresher Training
2-Hours Drone: Changing Your Perspective on Environmental Response
10-Hours Northeast Environmental Enforcement Project (NEEP) Sample Training
4-Hours Sampling Training
2-Hours New England Radiological Conference and Training
2-Hour Environmental Sensitivity Index Webinar.
3-Hour Radiological Fundamentals, Preparedness and Training
2-Hours New England Radiological Conference and Training
2-Hours New England Radiological Conference and Training
1-Hour Harmful Algae Blooms

- 11-Hour Sampling Conducted
- 8-Hour Sampling Training & Sampling Plan
- 1-Hour Hydrogen Safety & Leak Detection Training
- 2-Hour History of Oil Spills
- 1-Hour Using Satellites to Find Oil.
- 1-Hour Submerged & Sunken Oils
- 1-Hour Fate & Behavior of Oil on Water
- 1-Hour Catch & Release Whales
- 1-Hour Case Study on MV Selendang Ayn
- 1-Hour Invasive Pacific Lionfish
- 1-Hour Surface Washing Agents & Herding Agents
- 1-Hour Subsea Pollution to the MC20 Release
- 1-Hour Photo-Documentation Training
- 1-Hour Deep Water Horizon Overview.
- 1-Hour Basic Ecotoxicological & Effects of Oil
- 1-Hour Decision Making in the Face of Weather Hazards
- 1-Hour ERMA (Environmental Response Management Application)
- 1-Hour Sea Turtles Oil Contamination
- 2-Hour COVID-19 Training and NFPA
- 7-Hour IAFC HazMat Response Conference
- 3-Hour Physical and Chemical Properties for Risk Based Response
- 1-Hour Chemistry of Oil
- 1-Hour Measuring the Burn from Above and Below

9: HABITAT RESTORATION PROGRAM

In June 2002, the Rhode Island General Assembly enacted legislation (RIGL 46-23.1) that established a coastal and estuarine habitat restoration program administered by the Rhode Island Coastal Resources Management Council (CRMC). Funding from OSPAR continues to be transferred to CRMC in accordance with RIGL § 46-23.1-3. The financial support is funded through the Rhode Island Coastal and Estuarine Habitat Restoration Trust Fund (CEHRTF). Habitat restoration projects are selected from recommendations by the Technical Advisory Committee and approved by the CRMC. Each year, with approval from the CRMC, the CEHRTF advisory committee allocates up to \$225,000 from the OSPAR Fund to habitat restoration projects throughout Rhode Island.

In general, proposals are evaluated based on the following: the type of habitat; the extent of the project's restoration efforts, whether the project has been identified as a priority through any statewide or regional planning efforts; the potential community benefits, and the capacity of the lead entity to carry out, maintain and monitor the project. In recent years, climate change and sea level rise considerations have been added into the scoring criteria.

Since the inception of the CEHRTF, CRMC awarded \$3.6 million for 136 projects which have leveraged more than \$28 million in matching funds. In its 17 years, the CEHRTF has helped to restore over 300 acres of Rhode Island habitat. The following short project descriptions are taken from the CRMC website. Additional information can be found on the CRMC website at [RI CRMC Habitat Restoration](#).

a. Potter Hill Dam Fish Passage Improvements

The Nature Conservancy in Rhode Island and its project partners were awarded **\$74,500** from the Trust Fund for the design of fish passage improvements in the Pawcatuck River at the Potter Hill Dam in Westerly. The project aims to improve diadromous fish access to more than 3,000 acres of spawning and rearing habitat (83 miles of stream) and will improve passage for the fish runs in the watershed going in both directions. The Potter Hill Dam is currently in disrepair, the fish ladder performs poorly, and with the increase in intensity and frequency of storms, there is a high risk of dam failure that would cause destruction to property and infrastructure in Westerly. This work will complement previous improvements to stream connectivity on the Pawcatuck River, including the recent removal of the White Rock Dam downstream of Potter Hill and Bradford Dam, and work on three dams (Lower and Upper Shannock and Kenyon dams). Potter Hill Dam is the last large barrier to improving fish passage on the main stem of the river. Removing the dam will also reduce downstream flooding from dam failure.



Photo courtesy of TNC.

b. Manton Dam Bank Stabilization

The Trust Fund has awarded **\$58,000** to the Woonasquatucket River Watershed Council and its partners for its next phase of improvements below Manton Dam in Johnston. The group seeks to improve habitat through in-stream and bank stabilization - bank stabilization will include native plantings and revegetation that will provide improved habitat for small mammals, birds, and pollinators in addition to protecting the fishway. Habitat around the fishway will be improved through plantings, and an outdoor classroom at the fishway will be created. The project will stabilize the bank, protect the fish passage, improve bank wildlife habitat, and prevent slumping of the Woonasquatucket River Greenway into the river. The WRWC has completed several fish passage accomplishments to-date, including numerous efforts funded by the Trust Fund.



Photo courtesy of EAEST

c. Shady Lea Mill Barrier Removals

Save The Bay received **\$37,291** in funding for in-river barrier removals in the Mattatuxet River at Shady Lea in North Kingstown. In 2018 with Trust Fund monies, Save The Bay and its project partners removed the spillway at Shady Lea Mill and restored the Mattatuxet River, about 1.5 miles above the fish ladder at the Gilbert Stuart Birthplace on Carrs Pond. The project removed most of the spillway but not the earthen embankment or abutments in order to preserve historic elements of the raceway powerhouse. The design included small stone weir and pool structures below the dam to assure fish passage during low flow. Soon after, an obstruction in the river, approximately 575 feet upstream of the dam was identified. The obstruction appeared at first to be a low stone wall, but a larger stone structure has been revealed, previously underwater and buried in sediment prior to restoration. The structure is a complete barrier to fish passage, and the river currently flows down into the sediment and through the stones in this location. The funds are for design and permitting of removal of the obstruction and modifications to the in-river weirs to achieve anadromous fish passage to the Silver Spring Lake dam.

d. Ninigret and Quonochontaug Pond Salt Marsh Restoration

A total of **\$29,142** was awarded to Save The Bay and its project partners (including CRMC) for salt marsh adaptation and restoration monitoring at Ninigret and Quonochontaug sediment placement projects. The salt marshes at both locations have been impacted by accelerated sea level rise, and prior to restoration showed signs of significant degradation, including areas of standing (impounded) water, die off areas, and an eroding peat layer. The CRMC coordinated two elevation enhancement projects at Ninigret marsh in 2017 and Quonochontaug marsh in 2019, which included placement of sediment via dredging to raise the marsh surface elevations and increase marsh resiliency to sea level rise.



Photo courtesy of J.F. Brennan.

Save The Bay, in partnership with CRMC, has conducted adaptive management at these two marshes including restoring tidal hydrology through grading the placed sediment, excavating creeks and runnels, excavation, planting salt marsh grasses, and managing invasive plants. Ongoing adaptive management of the Ninigret and Quonochontaug sediment placement projects is a key and necessary step in the restoration process to ensure that the functions and values of these marshes are restored.

e. Common Fence Point Restoration

The Trust Fund awarded **\$16,037** to Common Fence Point Improvement Association for restoring coastal habitats and increasing stewardship of Common Fence Point in Portsmouth. The project seeks to restore and improve three coastal habitats in the Common Fence Point neighborhood in need of restoration: a saltwater cove and salt marsh impacted by deposited dredge material, restored in the early 1990s and since impacted by longshore sediment impeding tidal flow; a coastal buffer negatively impacted by human traffic, upland stormwater flow, invasive species and previous partial mowing; and a salt marsh migration corridor that abuts a ball field that is regularly mowed. In addition to restoring habitat (and other) functions and values, these projects will directly engage residents in the restoration activities and development of habitat management plans as well as provide opportunities to be trained/certified in invasive plant management and in leading volunteer groups.

f. Third Beach Dune Restoration



Photo courtesy of the town of Middletown

The Trust Fund awarded **\$5,480** to the Norman Bird Sanctuary for the restoration of dune habitat at Third Beach in Middletown. In 2003, Norman Bird Sanctuary purchased and permanently protected from development a 23-acre parcel between Third Beach Road and the Sakonnet River. This dune restoration is part of previous efforts from the group to improve the ecosystem by removing structures and the planting of native vegetation (the Trust Fund previously awarded monies in 2007 for the creation of a sand berm and planting of native vegetation).

g. Ten Mile River Reservation Dam Assessment Study

The Ten Mile River Watershed Council, in cooperation with the RI Department of Environmental Management (DEM) received **\$5,000** for a dam removal/fish passage assessment study for the Ten Mile River Reservation dam in Rumford. The council is investigating feasibility of removing the dam and restoring the free-flowing river channel. The state-owned dam was considered a significant hazard when last assessed by DEM in 2012. The 10-foot high and 175-foot-long dam obstructs anadromous fish passage to upstream spawning habitat in the Ten Mile River and Seven Mile River. The dam creates a shallow impoundment which suffers from algal blooms during the summer months and is impaired by non-native aquatic plants. In addition to the fully funded projects, the Council also approved partial funding for coastal upland edge restoration in Blackstone Park Conservation District in Providence.

10: WATER QUALITY MONITORING

Effective July 1, 2015, amendments to Rhode Island General Law (RIGL) 46-12.7-13 authorized DEM to direct the use of up to \$250,000 in OSPAR funding annually for environmental monitoring purposes. The Water Quality Management Plan Advisory Committee (WQMPAC) selects the strategic investments.

a. Cooperative Agreement with the United States Geological Survey

As authorized by the WQMPAC, DEM continued its cooperative agreement with the United States Geological Survey (USGS) to maintain long-term monitoring programs that collect data on streamflow, groundwater levels, and water quality in Rhode Island's largest rivers. The 2021 OSPAR contribution was \$250,000, and the other funding came from the USGS match. Funding from the Rhode Island Water Resources Board also contributed to the jointly negotiated program of activities. During FY2021, pursuant to the combined joint funding agreement, the OSPAR Fund supported the following three monitoring programs:

Streamflow Measurements: USGS operated and maintained 21 streamflow gage stations that provided continuous measurements of streamflow elevations. The streamflow data is made available on a real-time basis via the [USGS website](#). The data are used by multiple agencies for several programs including flood forecasting, drought management, water quality restoration, water management, and permitting.

Groundwater Elevation Measurements: USGS collected monthly groundwater elevation readings from nine observation wells located throughout Rhode Island. Five wells are equipped for continuous measurement. The data can have applicability to drought management, permitting, and water management programs.

Large River Water Quality: USGS continued its monthly water quality sampling program for Rhode Island's three largest rivers. Three stations are located near the mouths of the Blackstone, Pawtuxet, and Pawcatuck Rivers since they are representative of the pollutant loadings from these tributaries into coastal waters. With one exception, five stations were sampled monthly on the Blackstone River and its tributaries, the Branch River, the Pawtuxet River, and the Pawcatuck River for a range of water quality parameters including nutrients and pathogens. Samples are additionally analyzed quarterly for metals. Due to rising costs, monthly sampling at the Pawcatuck Station was eliminated from the agreement for the months of November, January, and February. The data undergoes federal quality assurance procedures and is made available through the USGS information system – NWIS. It is important for evaluating long-term trends and tracking pollutant loadings into the upper bay from the rivers and is used in various state water programs.

11: OUTLOOK & PROJECTIONS

FY2021 showed a continued decline in revenue, which was attributed to the COVID-19 pandemic. With Rhode Islanders continuing to work from home and utilizing more delivery services, their demand for gasoline decreased. While expenditures also declined in FY2021 – mostly due to a large decline in vehicle purchase, maintenance, and readiness costs – the drop in revenue still outpaced the reduction in expenditures. Consequently, the OSPAR Fund closing balance fell \$39,822 between FY2020 and FY2021.

The current trends in revenue and expenditures are concerning. FY2021 resulted in the lowest expenditures since FY2014. However, a continued downward trend in expenditures will not be sustainable. As climate change manifests environmental issues such as intensified storms, the need for emergency readiness costs will rise. Additionally, the Office of Emergency Response will be replacing personnel in FY2022 after experiencing a shortage due to retirements at the end of calendar year 2021. Unfortunately, while OSPAR Fund expenditures will likely rise, revenues may not.. When combining the predicted rise in expenditures and fall in revenue, the OSPAR Fund balance will continuously slowly diminish over future fiscal years.

12: CONTACT INFORMATION

For further information regarding this report, activities conducted by the Office of Emergency Response, or the OSPAR Fund, please contact the DEM Emergency Response Administrator, James Ball, at james.ball@dem.ri.gov or (401) 222-4700 ext. 2777129.