

Oil Spill Prevention, Administration and Response (OSPAR) Fund

Annual Report FY 2018



Volvo Ocean Race Newport 5/2018

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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1. INTRODUCTION

The Oil Spill Prevention Administration and Response (OSPAR) Fund, RIGL Chapter 46-12.7, was created in 1996 (modifying a prior statute adopted in 1990) in the aftermath of the environmentally-devastating North Cape oil spill. The fund was created, and is continually supported, by the assessment of a \$0.05 per barrel fee on petroleum products received at marine terminals in Rhode Island. The purpose of OSPAR is multi-faceted. It provides funds to promptly respond, contain and remediate oil spills. OSPAR funds are also utilized to maintain a state of emergency response readiness through responder training and equipment acquisition. The fund further provides, in the event of a significant release, funding for emergency loans to workers affected by a spill, as well as 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).

In the over twenty years since enactment of OSPAR legislation, Rhode Island has increasingly experienced impacts related to climate change, including more intense storms, increased annual rain fall, sea level rise, and warming air and waters. These impacts further stress our coastal and riverine habitats and infrastructure. In instances where rainfall or storm surge lead to flooding, there is an increase in releases of oil and hazardous materials into the environment that call for emergency actions and remediation.

Rhode Island experienced a natural disaster in March 2010 that may be a precursor of the situations we will face more frequently and need to be prepared for in the future. The floods that occurred in 2010 on the Pawtuxet and Pawcatuck Rivers were a great example of the challenges ahead from our changing climate. On March 31st of 2010, Governor Donald Carcieri declared a State of Emergency based on the significant statewide damages from the flooding. The state Emergency Operation Center (EOC) was inundated with calls concerning leaking tanks, abandoned drums, gas cylinders, as well as releases of oil and chemicals. In the overall Rhode Island response, the DEM Office of Emergency Response was responsible for Emergency Support Function #10 (ESF#10), which provides support to the state and local governments for response to discharges and releases of oil or hazardous material following a disaster. Our responsibilities leading ESF #10 are in addition to many other services provided by DEM at the EOC over the two-week response period. Over that time frame, DEM responded to approximately 170 releases of oil or hazardous material and conducted 70 follow-up inspections..

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 FY 2018.

2. REVENUES & EXPENDITURES – FY2018

The OSPAR account started FY 2018 with a balance forward of \$3,343,238.00 and ended the fiscal year with a balance of \$2,630,879.00. During FY 2018, the \$0.05 per barrel fee resulted in the collection of \$2,038,658.00 after the ten percent cost recovery

fees per RIGL 46-12.7-4.1(g). Personnel, operating and project expenditures for FY2018 totaled \$2,751,017.00. The OSPAR Fund balance has been on a downward trend since FY2014 and over the last few years the revenues have been less than the expenditures.

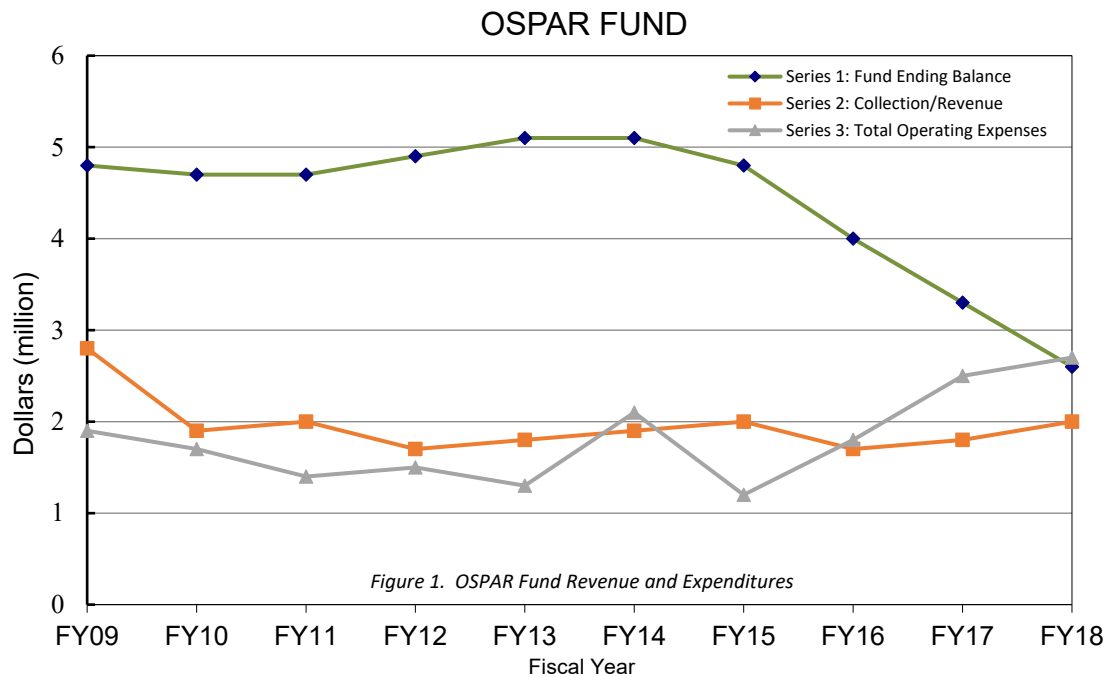


Figure 1 provides an overview of the approximate OSPAR Fund revenues and expenditure activities since FY2009.

2.1 EXPENDITURES

2.1.1 Personnel Costs

- Partial salary and benefits of DEM Emergency Response Administrator.
- Partial support for four other 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 provide 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 RI 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 extent of spill, fish kills, etc. 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 DEM Office of Waste Management.

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Personnel Cost	\$ 1,360,291
2.1.2 Major Operating Expenses	
Vehicle Purchases, Maintenance & Readiness	\$ 281,012
Building Maintenance	\$10,485
Cell phones, IT Support	\$ (16,416)
Supplies: Office, Scientific, Miscellaneous Expenses	\$118,842
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Major Operating Expenses	\$ 393,923
2.1.3 Capital Projects	
Narragansett Bay PORTS SYSTEM	\$ 0.0
Factory Brook Fish Passage Improvements	\$122,092
Narragansett Bay PORTS (Pilot Navigation System)	\$210,884
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Capital Projects	\$ 332,976
2.1.4 Other Projects supported by the OSPAR Fund	
Audubon Society – Narragansett Bay Estuarine Program	\$ 92,295
Coastal and Estuarine Habitat Restoration Trust Fund	\$215,106
Water Quality Monitoring Team	\$169,814
Port of Providence Marine Strike Team (EMA)	\$186,612
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Other Projects supported by the OSPAR Fund	\$ 663,827
2.1.5 Total OSPAR Expenditures	\$2,751,017

These total expenditures, listed above, represent the larger cost associated with the funding for FY2018

3. RESPONSE ACTIVITIES – FY2018

In FY2018 the Office of Emergency Response (OER), which operates as an all hazard response program and incorporates the oil spill prevention and response functions of DEM, continued to be extremely active responding to oil spills, hazardous material incidents and other state emergencies. There were 828 emergency response investigations undertaken by the Office during FY2018. While there is some annual variation in the number of emergency responses, the trend of the data has been consistent over the last several years. The incidents comprised two primary categories, hazardous material responses and oil spills.

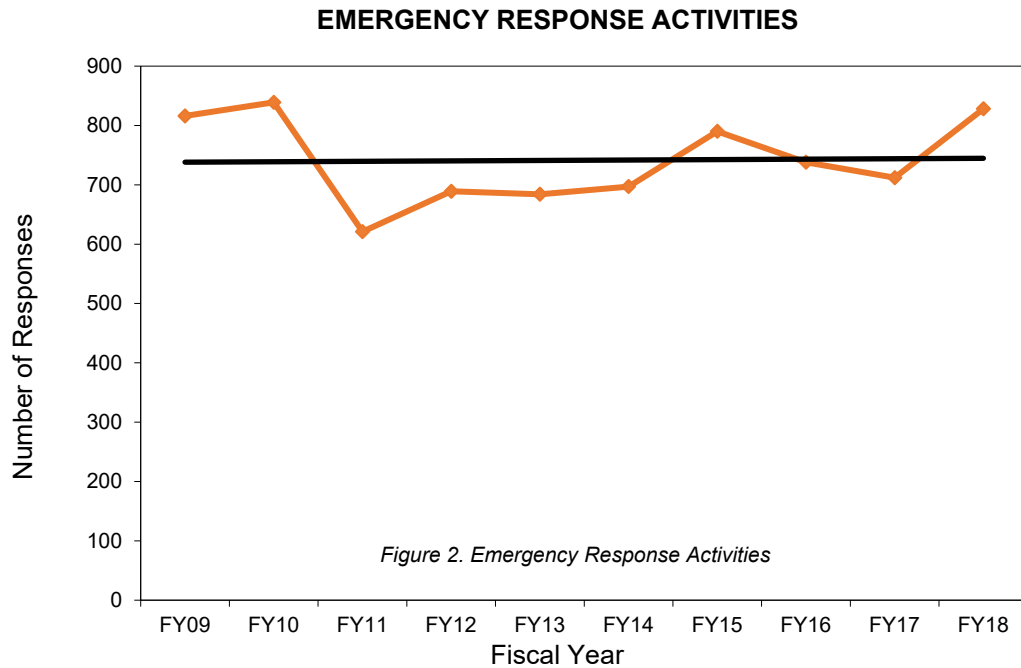


Figure 2 tracks the number of emergency response activities for a ten-year period.

3.1 OIL SPILL RESPONSE ACTIVITIES – FY2018

The DEM emergency response team responded to 759 (92%) oil spills during FY2018. The amount of oil products and oil spill debris remediated or removed from the environment during these response activities was estimated to be 76,532.5 gallons of oil and 912.6 tons of oil spill debris. The remediation work was completed by the OER, the OER contractors, the responsible party or their contractor. To ensure compliance with state and federal regulations, the work was conducted under the OER purview.

The circumstances causing these releases and the environmental impacts generated were varied. The categories of oil spills and the relative percentages of each spill type are illustrated in figure 3.

FY 2018

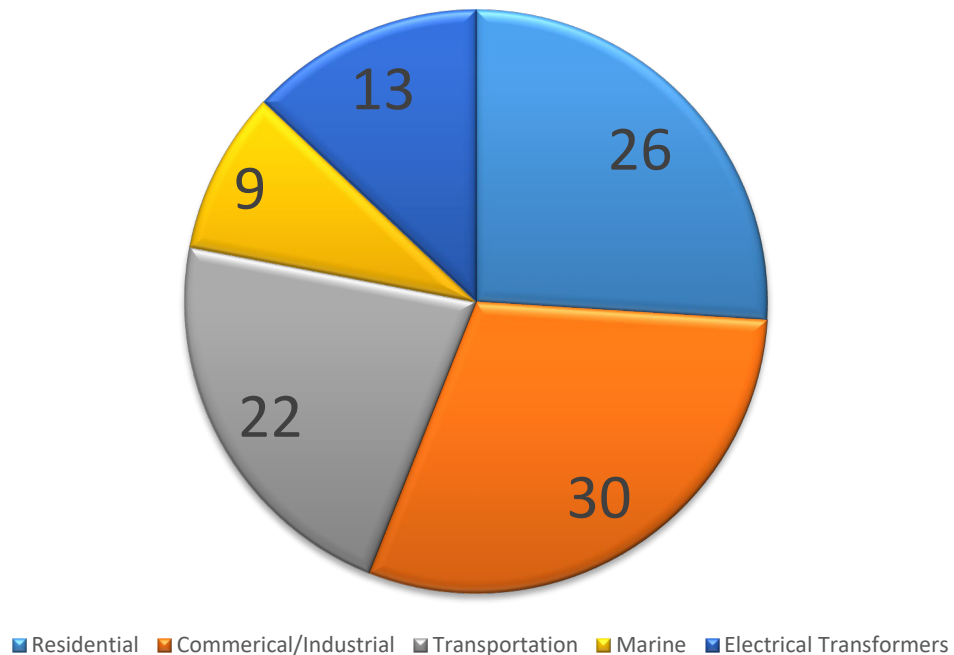


Figure 3. FY2018 Oil Spills by Category

The greatest percentage of spills, 30 percent, was related to commercial and industrial incidents. Residential oil spills comprised the next largest category accounting for 26 percent of department responses. Fuel oil spills in residential areas can contaminate drinking water wells, ground water, and soil; foul septic systems, requiring their replacement; cause odor and health problems in the home; and contaminate storm water drains, sewers, drainage ditches and surface water tributaries that lead to the Atlantic Ocean. The department has posted information on the Emergency Response web page regarding how to minimize the risk of a spill or release from a residential oil tank at <http://www.dem.ri.gov/news/2010/pr/0215101.htm>. DEM continues to conduct public outreach through press releases, television special reports and presentations to oil companies via insurance seminars. DEM also cooperated with the Oil Heat Institute to provide pertinent information to the oil service industry. Transportation related spills accounted for 22 percent of the spill events in FY2018. Spills from electrical transformers comprised 13 percent of the spill events. Personnel from the OER continue to meet with some of the electric companies to discuss electrical transformer issues and to assure the proper cleanup of mineral oil dielectric fluid (MODF) and PCB contaminated transformer oil. Oil spills in Narragansett Bay and other marine areas comprised 9 percent of response activities. DEM and USCG have been conducting workshops in the Port of Galilee to educate commercial fishermen regarding the State and Federal requirements for the proper containment and disposal of oily waste they generate. These workshops will hopefully be fruitful in reducing the number of oil spill responses in the Port of Galilee. The category and relative percentages by category of spills have remained relatively constant over the last few years with some fluctuation in the different spill types.

Figure 4 compares the categories and spill percentages for the last three fiscal years.

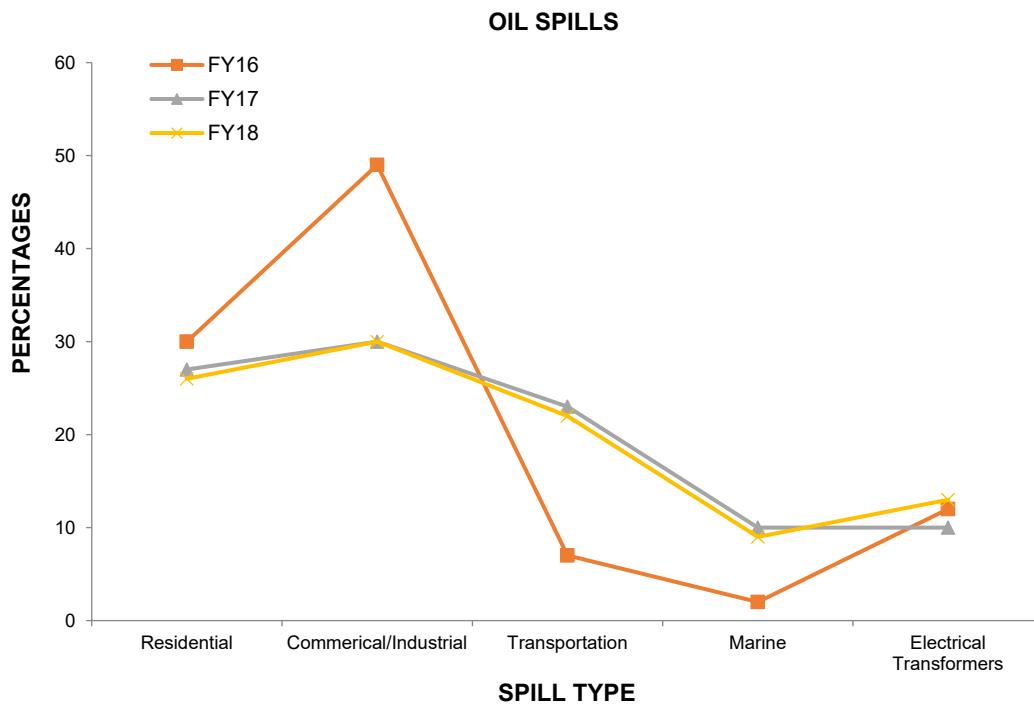


Figure 4. Comparisons of Oil Spills FY2016, FY2017 and FY2018

3.2 HAZARDOUS WASTE RESPONSE ACTIVITIES – FY2018

During FY2018 8% of the response actions involved hazardous waste, totaling 67 responses. The amount of hazardous materials/waste remediated or removed from the environment during these response activities was estimated to be 5,391 gallons of hazardous materials/waste and 44.8 tons of hazardous materials/waste. The remediation work was completed by the OER, the OER contractors, the responsible party or their contractor. To ensure compliance with state and federal regulations, the work was conducted under the OER purview.

4. OER INCIDENTS/EXERCISES – FY2018

4.1 Volvo Ocean Race May 8-20, Newport Folk Festival July 27-29 and Newport Jazz Fest August 3-5, 2017

From May 8th to 20th DEM Office of Emergency Response provided air monitoring for the Volvo Ocean Race venue at Fort Adams State Park in Newport, RI. The hours of operations went from 7:00 am to 4:00 pm during the week and from 7:00 am until 7:00 pm on the weekends. The air monitoring was requested by the venue organizers and the RI Emergency Management Agency to ensure public safety. The equipment entailed the use of 10 AreaRae field instruments with gamma detectors. The meters identify levels for explosive limits, hydrogen sulfide, cyanides, oxygen, volatile organic compounds and radiation. The field instruments send the air monitoring results

wirelessly back to a host computer system in the DEM communication truck parked adjacent to the Eisenhower House. Every morning the operation started with an Incident Action Plan meeting to discuss the updated information and plan for the day. The meeting included weather reports for the day, threat assessments, disaster medical responses, police activities, venue operations and hazardous material operations. DEM also provided a boom trailer filled with curtain boom to provide containment for possible oil spills generated by the hundreds of vessels in the vicinity of Fort Adams to view the race. These same operations took place in July and August for the Newport Folk Festival (NFF) and Newport Jazz Festival (NJF). DEM provided the same air monitoring, radiation detection and the boom trailer to ensure public safety and protect the environment the NFF and NJF. During the three events there were no issues; everything went on without any problems.

4.2 Watch Hill Spill Prep Area Exercise May 30-31, 2018



From May 30 through May 31 of 2018, a multi-agency exercise was conducted to evaluate participating groups' capabilities and preparedness for emergency response procedures regarding substantial marine oil spills. Similar to a dress rehearsal for a Broadway show that no one would want to see, a simulated oil discharge brought 110 responders from 17 agencies together. The first day of the exercise was conducted at the Westerly Education Center. The Watch Hill Spill PREP Area Exercise focused on establishing sectional and individual roles within the Incident Command System (ICS), a management system detailing the

breakdown of responsibilities during an incident. The ICS is critical for increasing efficiency in emergency situations. It provides the opportunity for a smooth integration of personnel from varying agencies and organizations when joining forces to combat an incident. Within the ICS, sectors prioritized during the exercise were the Unified Command (authoritative structure), Incident Command Post (on-scene facility comprised of incident command staff) and Joint Information Center (facility used for coordination of public information activities).

Agencies and organizations included in the Watch Hill exercise are listed below:

Federal – United States Coast Guard, Environmental Protection Agency, Department of Commerce, Department of Interior (U.S. Fish and Wildlife), National Oceanic Atmospheric Administration

State – Department of Environmental Management, Marine Fisheries, Fish & Wildlife, Law Enforcement, Legal, Water Resources, Public Affairs and Emergency Management Agency

Local – Town of South Kingstown, RI; Town of Westerly, RI; Dunn’s Corners Fire District, Misquamicut Fire District, Watch Hill Fire District, Weekapaug Fire District, Westerly Fire District

Industry – National Response Corporation, Interstate Navigation Block Island Ferry

Non-Governmental Organization – Save the Bay, Coastal Institute Scientific Support for Environmental Emergency Response (SSEER)



The scenario created for this exercise is described as follows:

An oil spill occurred following the collision of the barge Amos Heller and the tug Al Wilson, which lost power due to a fire. All 5 crew members evacuated and were recovered. The two vessels are currently connected and afloat with oil actively spilling. The tug held 8,600 gallons of diesel oil, and the barge held 4,200,000 gallons, combining for a maximum potential spill of 4,208,600 gallons!

The second day of the exercise commenced in Winnapaug Pond and Weekapaug Breachway to test the oil spill cleanup strategies for the area. The Geographic Response Plan (GRP) was developed by a DEM contractor and are listed on the DEM website under GRP for the Southern Coastal Areas, Tidal Inlet Protection Strategies for Oil-Spill Response <http://www.dem.ri.gov/programs/benviron/emerre/grp/Rlinlets.pdf>. These strategies were tested on the second day of the drill to ensure that they would be successful in an actual emergency. In Winnapaug Pond, there are an abundance of natural resources at risk during significant environmental threats. Numerous waterfowl, crustaceans, fish and other sea life occupy the waters designated for the exercise. Recreational and commercial harvesting of clams, quahogs and scallops takes place in the pond, and private residences are scattered along its shores. These entities supported by the pond are of utmost importance when optimizing protection strategies. In the exercise, the primary objective was to contain incoming oil in a channel before it could reach the pond. Oil can be contained using curtain boom (floating barriers utilized in oil spills that prevent oil from spreading beyond a targeted area of water). The responders were able to install the boom in accordance with a portion of the GRP to complete a successful operation.



4.3 Fishing Vessel Tiger Jo Sinking 5/27/2017

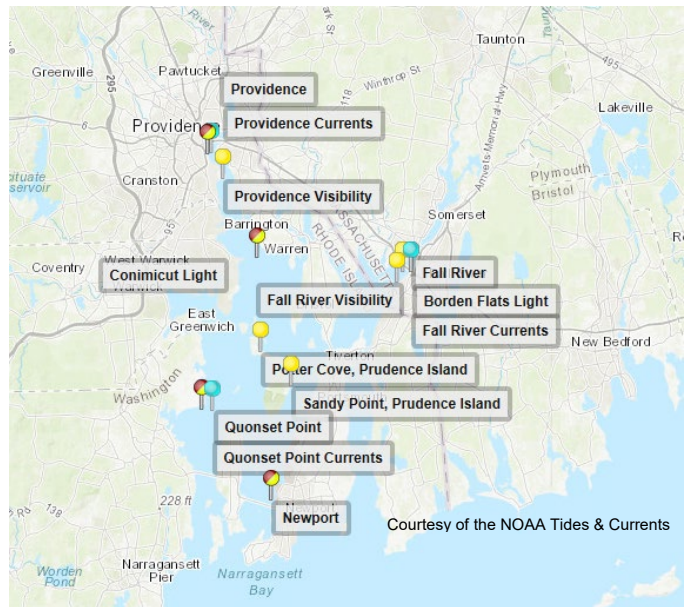
On the 27th of December, the DEM was notified that the F/V Tiger Jo was sinking and pulling a cabin cruiser that was tied up to it. The F/V Tiger Jo was illegally tied up to the University of Rhode Island (URI) Marine Research dock in Allen's Harbor. The F/V is a 50-foot gill netter out of Point Judith. The owner was incarcerated at the ACI at the time of the sinking. The vessel was totally submerged and actively leaking at the time of the DEM responder's arrival. DEM then immediately hired an oil spill cleanup contractor to cleanup oil spread throughout the harbor. The responders also brought in the



DEM oil spill boom trailer purchased with OSPAR Funding to contain and remediate the diesel fuel that was leaking from the sunken vessel. The boom from the trailer was installed by the hired cleanup contractor to contain the spilled diesel. The cabin cruiser was released from the sunken vessel before it was pulled under water and tied off to the bulkhead. This allowed the contractor to conduct cleanup operations in that area. A vacuum truck brought in by the contractor was used to remove the oil contained within the curtain boom and around the vessel. Later that week the barge was refloated, and the diesel was pumped out of the tanks. In June URI removed the F/V from the water and demolished it. DEM submitted a claim to the United States Coast Guard Oil Liability Trust Fund and recovered \$16,868.32 to reimburse the funds spent out of the OSPAR Fund.

5. PORTS PROGRAM

OSPAR 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. These data are reported every six minutes to a central receiving computer, which processes the information. Real-time information regarding tides, current and weather can be accessed by telephone at 401-849-8236 and 1-888-301-9983 or on the internet at,



<http://tidesandcurrents.noaa.gov/ports/index.html?port=nb>. 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 are able to make decisions on vessel movements with real-time information. Over the last few years the host agencies for PORTS, including DEM, have formed a coalition to petition the Federal Government to include the maintenance of the PORTS system as part of the NOAA budget. NOAA has not taken over the maintenance expenditures, but is still reviewing the request.

State-licensed pilots can directly access PORTS information while traversing Narragansett Bay using the Raven Portable Pilot Navigation System purchased with OSPAR funds. The Raven Portable Pilot Navigation Systems have wireless/Bluetooth capability that allows the acquisition of real-time data from PORTS as well as real-time weather information from the National Weather Service. The navigation systems are extremely sophisticated, utilizing a Differential Global Positioning System that accurately and safely determines the position of a vessel being piloted through the bay. The system uses the U.S. Department of Defense Global Positioning System and the Canadian Coast Guard network of differential radio beacons to provide accurate navigation information in conjunction with accurately surveyed maritime charts provided by the U.S. Army Corps of Engineers. It is the only commercially available portable piloting navigation system incorporating U.S. Army Corps of Engineer channel data on customized vector electronic charts with sub-meter positional accuracy necessary for precision navigation in RI 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.

6. TRAINING ACTIVITIES

The Emergency Response team continued to improve its response capabilities through training. During FY2018 team members continued to build on the all hazard model. Members of the Emergency Response team participated in courses, training and exercises that included:

- 4-Hour Annual Cybersecurity Awareness Training
- 8-Hour Curious Disintegration Training & Exercise
- Nuclear & Radiological Countermeasure Unit & FBI
- 8-Hour Ethanol Safety Seminar
- 8-Hour Regional Response Team Meeting
- 8-Hour Drug IQ Training
- 8-Hour Biological Incident Training
- 16-Hour Shell TTX
- 8-Hour Environmental Justice Training
- 7-Hour PRND Training
- 7-Hour PRND Training
- 5-Hour State Emergency Operation Center Training
- 5-Hour Fentanyl Training
- 3-Hour PPE Training
- 4-Hour Warwick Police TTX
- 2-Hour ICS Training
- 3-Hour SCBA Training
- 1-Hour Managers Writing Class
- 8-Hour Regional Response Team
- 1-Hour Preventing Sexual Harassment for Employee
- 4-Hour Propane Training
- 8-Hour Operation Cliffhanger
- 16-Hour Hazardous Materials Technicians Training
- 8-Hour Radiological Nuclear Detection QuickStart Train-The-Trainer
- 16-Hour Radiological Nuclear Detection QuickStart Training
- 1-Hour Air Monitoring
- 8-Hour HAZWOPER Refresher
- 8-Hour Rhode to Resiliency Conference
- 8-Hour Operation Downpour (Decontamination Drill)
- 4-Hour Industry Training

The DEM Emergency Response program also continued to provide training. The training provided included *Hazardous Materials & Criminal Investigation* for the State Police Training Academy, *WMD Hazardous Material Evidence Collection* with the Cranston Fire Department, *Radiation Safety Training* with Local Hazardous Material Teams, *Homeowner Oil Spill Handling* for oil companies, *Chemical Safe Schools* for educators, *Hazardous Materials Recognition & Identification Refresher* for RI DOT, *Traffic Incident Management Training* for RI DOT, cities/towns, *Cardiopulmonary Resuscitation (CPR) Training*, *Hazardous Materials Sampling* for the National Guard Civil Support Teams, Northeast Environmental Enforcement Project (NEEP) training and *Environmental Health & Pesticide Safety Education* for the University of Rhode Island.

7. HABITAT RESTORATION PROGRAM

In June 2002, the RI General Assembly enacted legislation (RIGL 46-23.1) that established a coastal and estuarine habitat restoration program administered by CRMC. Funding from the OSPAR Account continues to be transferred to CRMC in accordance with RIGL § 46-23.1-3. The financial support is for the Rhode Island Coastal and Estuarine Habitat Restoration Trust Fund (CEHRTF). Habitat restoration projects are selected from recommendations by the RI Habitat Restoration Team established by CRMC, Save The Bay and the Narragansett Bay Estuary Program.

In general, proposals are evaluated based on the habitat type being targeted, the extent to which the project seeks to restore an area that has been degraded by human impacts, 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, criteria have been added that incorporate climate change and sea level rise considerations into the scoring.

Each year, up to \$250,000 is authorized from the OSPAR account to fund habitat restoration projects in the state. Since the inception of the Trust Fund, CRMC has awarded \$3.25 million for 121 projects, which has leveraged more than \$23 million in matching funds. In its 14 years, the Trust Fund has helped to restore over 300 acres of Rhode Island habitat. The following short project descriptions are taken from the CRMC web site. Additional information can be found at <http://www.crmc.state.ri.us/>.

The Council approved the funding at the February 28, 2019 semi-monthly meeting in Providence. Projects approved for funding include a salt marsh restoration and enhancement project, a statewide salt marsh monitoring effort, eelgrass monitoring and assessment, two coastal resiliency projects, construction of a fishway, an urban habitat restoration pilot project, and evaluation of strategies to facilitate salt marsh migration.



*Funded in 2015, The Nature Conservancy received \$9,300 to restore native plants within Goosewing Beach complex in Little Compton and manage the invasive *Phragmites australis*. (Photos: TNC)*

As with the previous two years, in its request for proposals the CRMC put special emphasis on projects that would enhance the resiliency of Rhode Island's coastal habitats to climate change and sea level rise. One of the funded projects, improving coastal resiliency at Longmeadow coastal access site, exemplifies these goals. Through the Trust Fund, the R.I. Department of Environmental Management was awarded \$4,225 to restrict vehicular access over sensitive coastal habitats that have been damaged by traffic. In addition, RIDEM will remove 1,000 square feet of asphalt and repair and revegetate a dune to address the severe coastal and erosion that has occurred at the site.

Habitat restoration projects are funded through the RI Coastal and Estuarine Habitat Restoration Trust Fund (CEHRTF) and are selected from recommendations by the fund's Technical Advisory Committee. Projects funded this year include:

7.1 Bradford Dam in Westerly and Hopkinton Fish Passage Improvement, Charlestown

Award: \$64,000

Lead Organization: The Nature Conservancy

The Nature Conservancy was awarded funding for improving fish passage at Bradford Dam in Westerly and Hopkinton. This project, which was awarded funding in 2016 for the removal of the dam and construction of a nature-like step-pool in its place, will receive partial funding associated with increased project costs due to project design changes and construction.



7.2 Factory Brook Dam Fishway Installation, South Kingstown

Award: \$40,000

Lead Organization: Department of Environmental Management (DEM)

DEM's Division of Fish & Wildlife was awarded funding for the construction of the Factory Brook Dam Fishway in South Kingstown. A fish ladder will be constructed at a small, privately-owned dam for the purpose of restoring river herring to Factory Brook and Factory Pond. The existing five-foot-high dam prevents herring passage to spawning and nursery habitat in the 30-acre pond and one mile of stream habitat. Fish passage would potentially result in tens of thousands of returning river herring annually, which will enhance freshwater and marine ecosystems.

7.3 Salt Marsh Migration Project at Sheep Pen Marsh, Prudence Island

Award: \$20,424

Lead Organization: Narragansett Bay National Estuarine Research Reserve

Narragansett Bay National Estuarine Research Reserve (NBNERR) was awarded funding toward the evaluation of strategies to facilitate salt marsh migration at Sheep Pen Marsh on Prudence Island. It is estimated that Rhode Island has lost 53 percent of its marsh area since 1832 and researchers fear additional losses may be accelerating due to sea level rise. Ideally, marshes will migrate landward with rising seas, but current research shows that some types of upland vegetation can prevent migration. NBNERR will create a field project to determine how the removal of three different types of upland vegetation affects marsh migration.

7.4 Salt Marsh Monitoring at Multiple Salt Marshes, Rhode Island

Award: \$19,427

Lead Organization: NBNERR

NBNERR was also awarded funds toward salt marsh monitoring in Rhode Island at multiple salt marshes across the state. The project is designed to improve understanding of marsh vulnerability to sea level rise at a broad scale that can be used to guide restoration and adaptation project funding. The monitoring will occur over a small network of marshes and answer specific questions about marsh condition and response to sea level rise.

7.5 Sapowet Creek Salt Marsh Adaptation and Coast Restoration, Tiverton

Award: \$19,242

Lead Organization: DEM



The CRMC also awarded funds to DEM’s Division of Fish & Wildlife for the Sapowet Creek salt marsh adaptation and coastal restoration in Tiverton. DEM plans to restore 21 acres of cultivated agricultural field to coastal grasslands by planting native warm season grasses and forbs and managing invasive species in the surrounding buffer. Improvements will also be made to the adjacent marsh to restore natural drainage

patterns and remove ponding that has resulted from sea level rise.

7.6 Electronic Mapping Eelgrass, Rhode Island

Award: \$17,982

Lead Organization: URI Environmental Data Center

The University of Rhode Island’s Environmental Data Center (EDC) received funding for eelgrass Tier 1 accuracy assessment and monitoring.



Eelgrass and widgeon grass are the main species of seagrasses found in Rhode Island coastal waters. Mapping the distribution and extent of seagrasses is a critical first step in understanding, managing, and protecting these shallow-subtidal estuarine habitats. The extent of seagrasses, however, is sensitive to environmental conditions like water quality, storms, disease, and coastal development. The EDC will refine eelgrass maps created in 2016 from aerial photography by mapping eelgrass beds in the field and comparing the two datasets.

7.7 Coastal Barrier Protection and Plant Community Restoration, Westerly

Award: \$15,000

Lead Organization: Watch Hill Fire District and Watch Hill Conservancy

Watch Hill Fire District and Watch Hill Conservancy were awarded partial funding for coastal barrier protection and plant community restoration in the Napatree Point Conservation Area in Watch Hill. This project will expand previous efforts to restore native plants on Napatree by adding species to benefit pollinator species and managing invasive species.



The CRMC awarded \$15,000 for coastal barrier protection and plant community restoration at Napatree Point Conservation Area in Watch Hill. (Photos: Watch Hill Conservancy)

7.8 Diamondback Terrapin Nesting Habitat Restoration, East Greenwich

Award: \$15,000

Lead Organization: URI

The Council awarded partial funding to URI for the restoration of diamondback terrapin nesting habitat on the Potowomut River in East Greenwich. During the spring and summers of 2015-2016, URI and Rocky Hill School faculty and students documented a previously unknown population of diamondback terrapins living in Potowomut River and nesting and using the beach and salt marsh habitat along the river. This is only the second documented significant population of the turtles in the state. This project will restore and improve habitat for the population of terrapins that uses the location for nesting and overwintering of hatchlings. The funding will go toward planning for this project, data collection, obtaining necessary permits, terrapin monitoring, and developing a long-term monitoring program for the population post-restoration.



7.9 Revegetation and Slope Stabilization in Blackstone Park Conservation District, Providence

Award: \$5,000

Lead Organization: Blackstone Parks Conservancy

The council awarded funding to the Blackstone Parks Conservancy (BPC) for the revegetation and slope stabilization in Blackstone Park Conservation District in Providence. The BPC plans to continue previous work to stabilize the slope in the area, which will stem erosion and create favorable conditions for plant survival. Native plants will be added to the 4-acre restoration site, and fences will be installed to protect the new plants.

7.10 Woonasquatucket River Urban Habitat Restoration, Providence

Award: \$4,700

Lead Organization: Blackstone Parks Conservancy

The Woonasquatucket River Watershed Council (WRWC) received funding for an urban habitat restoration pilot project along the Woonasquatucket River on Promenade and Kinsley Avenue in Providence. This project will continue work being done by the WRWC and the Providence Parks Department to manage invasive plants in the area. Before beginning the project, invasive plants were strangling and killing many of the native trees and shrubs on the site. Funds will go toward the purchase of native plants to increase habitat in the very urbanized stretch of river.

8. WATER QUALITY MONITORING

Effective July 1, 2015, amendments to Rhode Island General Law (RIGL) 46-12.7-13 authorized RIDEM 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. Rhode Island's Water Quality Team includes members from Save the Bay, US Natural Resource Conservation Service, Narragansett Bay Estuary Program, Warwick Sewer Authority, Narragansett Water Pollution Control Authority, Water Resources Board, Department of Health, Rivers Council, Narragansett Town Engineer, Providence Planning Department, Department of Transportation, RI Audubon Society, Woonasquatucket Watershed Council, South Kingstown Planning Department, West Greenwich Planning Department, US Environmental Protection Agency, University of Rhode Island – Coastal Institute, Westerly Town Planner. This section lists the strategic investments by the WQMPAC that support a Comprehensive Water Monitoring Strategy for FY2018.

8.1 Cooperative Agreement with United States Geological Survey

As authorized by the WQMPAC, DEM continued its cooperative agreement with the United State Geological Survey (USGS) to maintain long-term monitoring programs that collect data on streamflow, groundwater levels and water quality in the State's largest rivers. The 2018 OSPAR contribution was \$250,000 contractual and the other funding came from the USGS match. Funding from the RI Water Resources Board also contributed to the jointly negotiated program of activities. During FY18, 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 9 observation wells located throughout RI. 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 RI's three largest rivers. With one exception, five stations were sampled monthly on the Blackstone River and its tributary the Branch River, the Pawtuxet River and the Pawcatuck River for a range of water quality parameters including nutrients and pathogens. Due to rising costs, monthly sampling at the Pawcatuck Station was eliminated from the agreement for the months of November, January and February. Samples at all stations are also analyzed for metals quarterly. Data undergoes federal quality assurance procedures and then is made available via USGS information system – NWIS. Data is important for evaluating long-term trends and tracking pollutant loadings into the upper bay from the rivers. Data is used in various state water programs. 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.

9. OUTLOOK AND PROJECTIONS

OSPAR-related expenditures during FY2019 are expected to be similar to FY2018 absent any major spills and associated response needs. Fiscal year 2018 showed expenditures continued to be higher than the revenue brought in by the fund. This is a concerning trend that will draw down the fund balance over future fiscal years. Without an increase in revenue into the OSPAR fund, the constant fiscal pressure will have a cumulative negative impact, compromising the ability of the program to perform the basic readiness and response tenants for which it was established.

10. CONTACT INFORMATION

For further information regarding this report, the activities of the emergency response team or OSPAR, contact James Ball, DEM Emergency Response Administrator, Chief Office of Emergency Response at james.ball@dem.ri.gov or 401-222-4700 extension 7129.