

**Oil Spill Prevention, Administration and Response
(OSPAR) Fund**

**Annual Report
FY 2016**



**Elizabeth Victoria
Sinking and Oil Release 7/10/2015**

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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CONTENTS

1. INTRODUCTION	3
2. REVENUES & EXPENDITURES – FY2016	3
2.1 EXPENDITURES	4
2.1.1 Personnel Cost	4
2.1.2 Major Operating Expenses	4
2.1.3 Capital Projects	4
2.1.4 Other Projects supported by the OSPAR Fund	5
2.1.5 Total OSPAR Expenditures	5
2.1.6 Cost Summary	5
3. RESPONSE ACTIVITIES – FY2016	5
4. OIL SPILL CLEAN-UP ACTIVITIES	7
5. FY2016 OER Incidents and Drills	9
5.1 Elizabeth Victoria Sinking and Oil Release 7/10/2015	9
5.2 Galilee/Pt Judith Oil Release	10
5.3 Motiva (Shell) Real-Time Functional Exercise and Table Top Exercise July 8, 2015	10
6. PORTS PROGRAM	12
7. TRAINING ACTIVITIES	13
8. HABITAT RESTORATION PROGRAM	14
8.1 Grinnell’s Beach Coastal Adaptation Project, Tiverton	15
8.2 RI Oyster Restoration Guidance Document, South County	15
8.3 Manton Pond Dam Fishway, Providence	16
8.4 Bradford Dam, Westerly/Hopkinton	16
8.5 R.I. Department of Environmental Management	17
8.6 Taylor Point Restoration, Jamestown	17
8.7 Shady Lea Dam Removal, North Kingstown	17
9. WATER QUALITY MONITORING (FORMERLY THE RI BAYS, RIVERS and WATERSHEDS COORDINATION TEAM PROJECTS)	18
9.1 Cooperative Agreement with United States Geological Survey	18
10. OUTLOOK AND PROJECTIONS	19
11. CONTACT INFORMATION	19

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).

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 2016.

2. REVENUES & EXPENDITURES – FY2016

The OSPAR account started FY 2016 with a balance forward of \$4,008,689 and ended the fiscal year with a balance of \$3,343,238.00. . During FY 2016, the \$0.05 per barrel fee resulted in the collection of \$1,752,045 after the ten percent cost recovery fees per RIGL 46-

12.7-4.1(g), \$216,248 was transferred to CRMC for the Coastal & Estuarine Habitat Restoration Fund. Personnel, operating and project expenditures for FY2016 totaled \$2,306,677 that included \$250,000 for PORTS Navigational System for Narragansett Bay as well as \$281,624 for the Water Quality Monitoring Team.

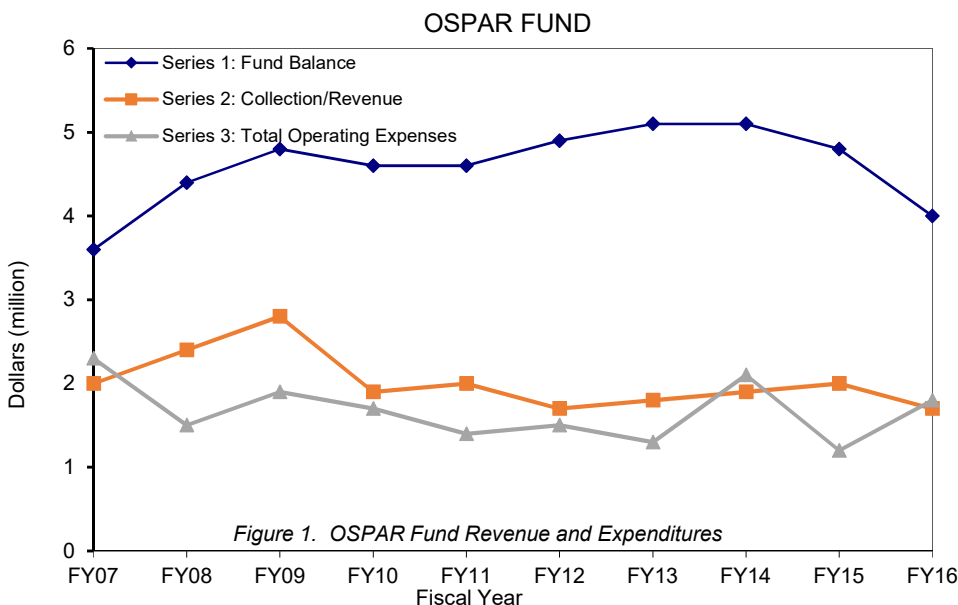


Figure 1. OSPAR Fund Revenue and Expenditures

Figure 1 provides an overview of the OSPAR Fund revenues and expenditure activities since fiscal year 2016.

2.1 EXPENDITURES

2.1.1 Personnel Cost

- 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 is also part of the Emergency Response Office and the OSPAR program.
- A State Meteorologist to provide weather information before, during and post-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.

Personnel Cost	\$ 1,167,796
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2.1.2 Major Operating Expenses

Vehicle Purchases, Maintenance & Readiness	\$ 272,660
Building Maintenance	\$67,669
Cell phones, IT Support	\$ 6,972
Supplies: Office, Scientific, Miscellaneous	\$65,016

Major Operating Expenses	\$ 412,317
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2.1.3 Capital Projects

Narragansett Bay PORTS SYSTEM	\$ 250,000
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Capital Projects	\$ 250,000
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2.1.4 Other Projects supported by the OSPAR Fund

Audubon Society – Narragansett Bay Estuarine Program	\$ 45,058
Coastal and Estuarine Habitat Restoration Trust Fund	\$149,882
Water Quality Monitoring Team	\$281,624

Other Projects supported by the OSPAR Fund	\$ 476,564
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2.1.5 Total OSPAR Expenditures \$2,306,677

This is an approximate breakdown of the larger cost associated with the funding for FY2016

2.1.6 Cost Summary

With regard to pre-spill preparedness, the OSPAR Fund was used in FY2016 for personnel and operating expenses. Personnel costs assigned to the OSPAR Fund included the following: Office of Emergency Response (Emergency Response Administrator, Administrative Officer and State Meteorologist) and partial salaries of four first responders; Tier II Specialist, DEM GIS Supervisor (partial); staff from DEM Office of Waste Management. These salary and benefit costs totaled \$1,167,796. Major operating expenses charged to the OSPAR Fund included: vehicle readiness and maintenance (\$272,660); emergency response equipment, cleanup services, maintenance and supplies (\$73,886); computer hardware, software, telecommunications and miscellaneous (\$65,016), Ports Real-Time Navigation System (250,000) and Audubon Society Narragansett Bay National Estuarine Research Reserve Coastal Training Program (\$45,058).

3. RESPONSE ACTIVITIES – FY2016

In FY2016 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 738 emergency response investigations undertaken by the Office during FY2016. The incidents comprised two primary categories, hazardous material responses and oil spills. The amount of hazardous materials/waste remediated or removed from the environment during these response activities was estimated to be 903 gallons of hazardous materials/waste and 1.7 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. However, the bulk of the responses are for oil related issues. Seventy-eight percent of these responses, a total of 579 incidents, were related to oil spills.

EMERGENCY RESPONSE ACTIVITIES

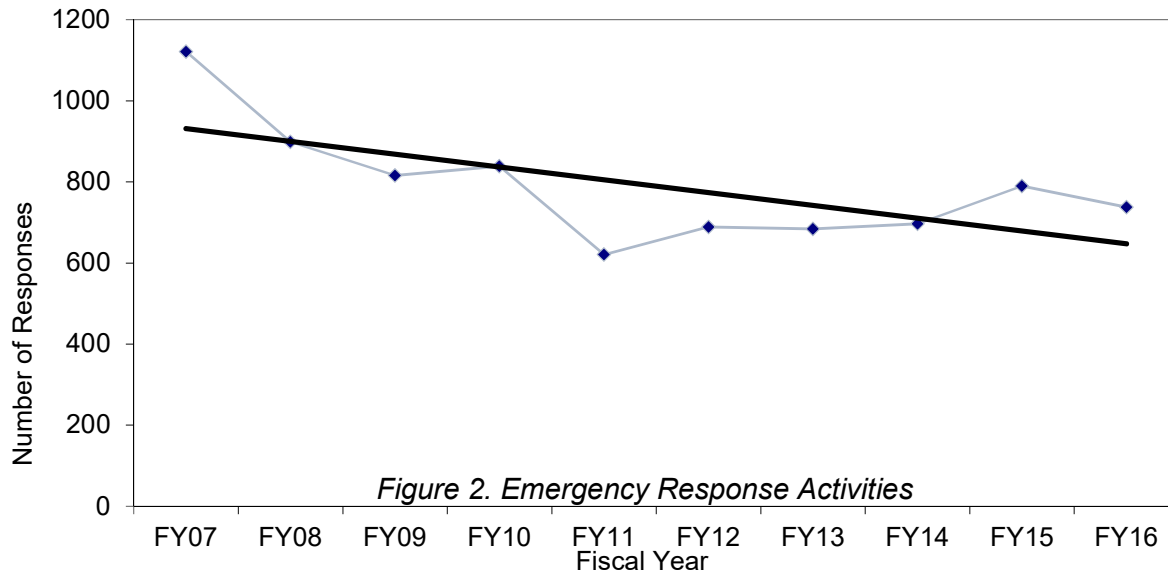


Figure 2, tracks the number of emergency response activities for a ten-year period.

While there is some annual variation in the number of emergency responses, the trend of the data has been demonstrating a relatively downward average. The 2007 fiscal year response activities were abnormally high due to a large increase in seaweed responses. Activities undertaken by the Department's emergency response team have, on average, been constant since 2008 with annual fluctuations.

Seaweed* removal from a few area beaches was not conducted this year but responses to these locations to complete beach assessments continued from May to September. The lack of actual seaweed removal appears to be a result of state regulations enacted in 2003 after a massive fish kill in Greenwich Bay that required sewer treatment plants to reduce nitrogen discharges by 50 percent. There was also the installation of the stormwater storage tunnels by the Narragansett Bay Commission that reduced the level of bacteria in the bay and may contribute to decreases in nutrient levels. These improvements have led to fewer beach closures and opening areas to swimming that have been closed for decades. It may also be linked to the reduction of the amount of *Ulva Lactuca* that grows in several beach areas. Other than conducting beach inspections for seaweed, we did not spend FTE hours conducting seaweed removal.

* The seaweed also known as sea lettuce, or *Ulva Lactuca*, is green algae that grow near and below the low tide mark. Under normal conditions it is beneficial to the environment. However, under certain conditions that may include excessive nutrients and warmer water temperatures, the growth of sea lettuce explodes. When the seaweed dies, wind and ocean currents can push and keep the decaying seaweed to the shoreline where it becomes stranded in the shallow water and forms large green mats. As these mats decay they can produce hydrogen sulfide (H_2S), a gas with a foul or rotten egg odor. The decomposition of excessive sea lettuce in the Conimicut section of Warwick, the Still House Cove section of Cranston and the Riverside Terrace section of East Providence has resulted in the production of concentrations of H_2S gas. These episodic H_2S events create nuisance

conditions and potential health concerns for those living in the area with compromised respiratory functions. Since the establishment of the program in 2003 several hundred cubic yards of sea lettuce have been removed from the environment and composted by the local cities impacted. From 2003 until 2006 the sea lettuce had been removed manually with OER personnel and prisoners. In 2006 the OER purchased a surf rake and John Deere tractor to more effectively remove the sea lettuce from the beaches, reducing the potential for the formation of H₂S gas. Under the auspices of the OER, two seasonal employees, an equipment operator and a technical support intern, work the beaches to remove the seaweed during the summer months. As a result, complaints have been addressed by the ongoing seaweed removal and/or continuous field monitoring.

4. OIL SPILL CLEAN-UP ACTIVITIES

The DEM emergency response team responded to 579 oil spills during FY2016. The amount of oil products and oil spill debris remediated or removed from the environment during these response activities was estimated to be 5,390 gallons of oil and 723 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.

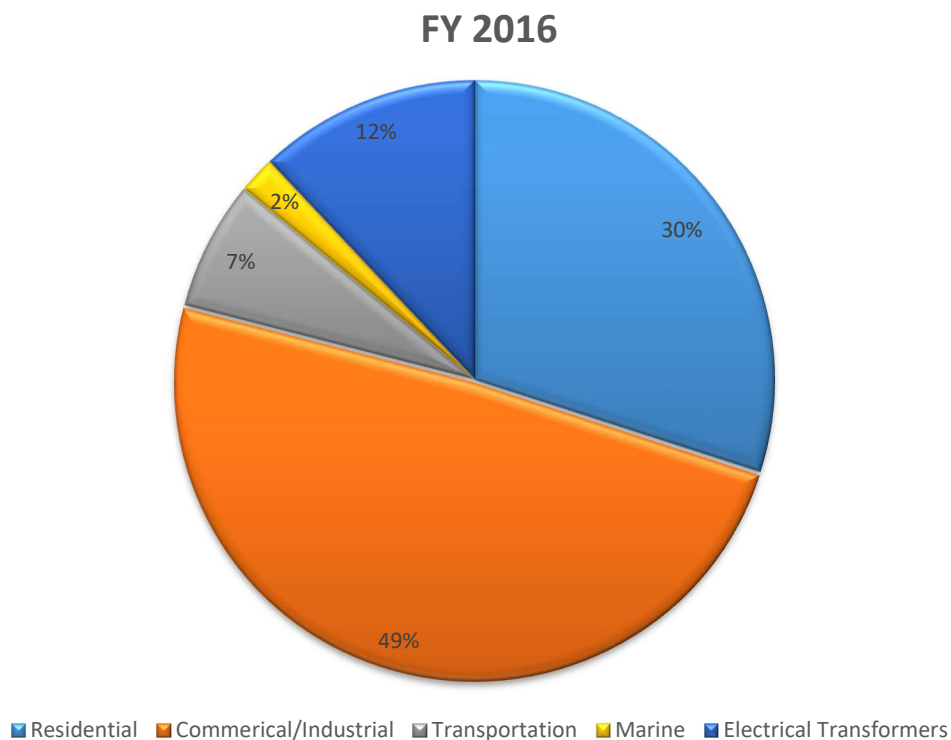


Figure 3. FY2016 Oil Spills by Category

The greatest percentage of spills, 49 percent, was related to commercial and industrial incidents. Residential oil spills comprised the next largest category accounting for 30 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. Spills from electrical transformers comprised 12 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. Transportation related spills accounted for 7 percent of the spill events in FY2016. Oil spills in Narragansett Bay and other marine areas comprised 2 percent of response activities. The category and percentage of spills has remained relatively constant over the last few years.

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

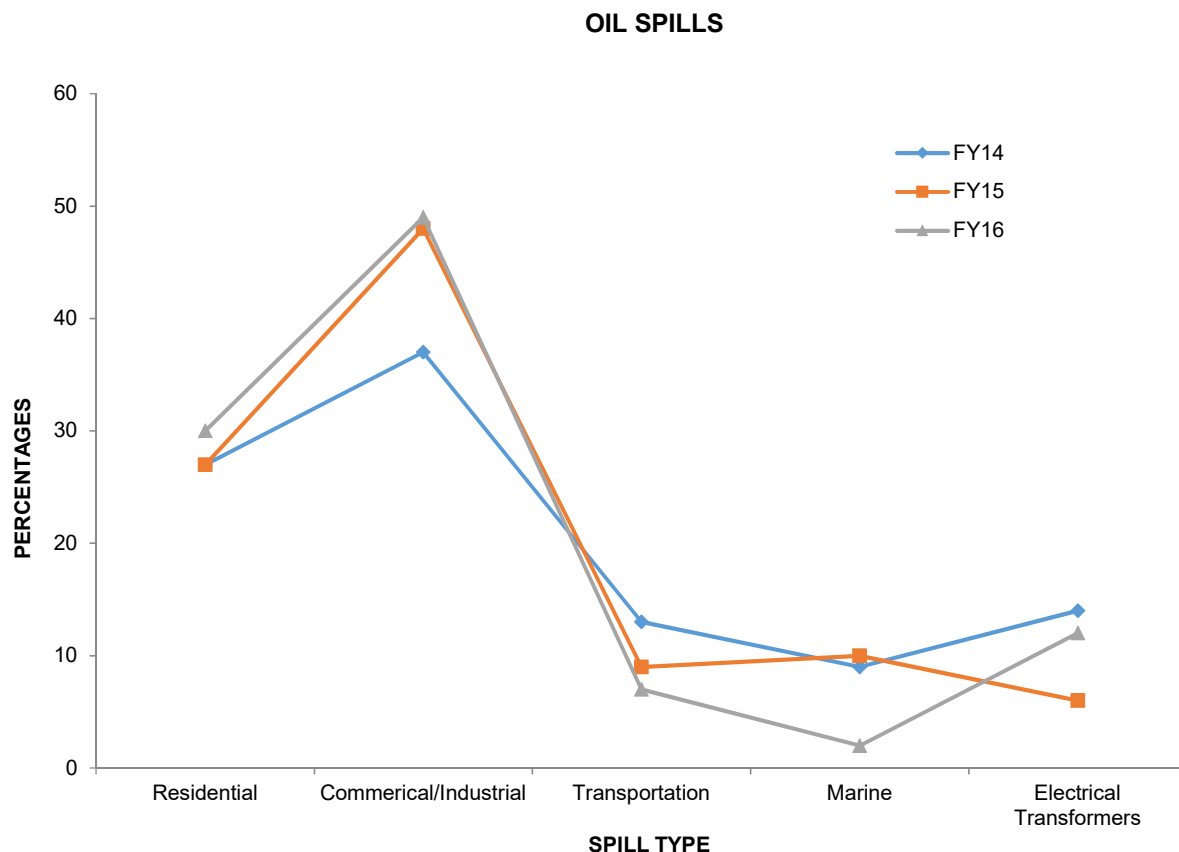


Figure 4. Comparisons of Oil Spills FY2014, FY2015 and FY2016

5. FY2016 OER Incidents and Drills

5.1 Elizabeth Victoria Sinking and Oil Release 7/10/2015

On Friday the 10th of July, the Elizabeth Victoria, a 46-foot dragger was reported burning at Pier X off of State Street in Galilee around 1:30 am. There were two other vessels in the area that were involved with fires that same night. However, the Elizabeth Victoria was fully involved when the fire department arrived and while putting out the fire, the boat sank at the dock releasing diesel and lube oil into the water. This vessel was the only one that released oil. It was resting on its starboard side on the bottom and all upper



portions were burned away with only the hull remaining. DEM hired a contractor to install both containment and absorbent boom around the wreck to control the release of oil into the harbor. The contractor installed 200 feet of containment and 200 feet of absorbent boom. The State On-Scene Coordinator reported the incident to the National Response Center to notify the federal agencies of the spill and to obtain a Federal Incident Report Number. As a result of the fires, the incident soon became a crime scene involving the DEM Environmental Police, Narragansett Police, RI Fire Marshal's Office, and the USCG Special Investigative Service. This investigation brought the fuel removal operation to a halt. On Tuesday July 14th, the vessel was finally raised so that representatives from the State Fire Marshal's Office could board and inspect the vessel prior to anyone else going on the boat. After their inspection was complete, the contractor was able to remove 3 cubic yards of oily debris and oil saturated cleanup booms/pads from in and around the wreckage. The OSPAR Fund was used to pay for the cleanup cost. The total DEM cost was then submitted to the National Pollution Fund Center (NPFC) for reimbursement from the Oil Liability Trust Fund (OLTF). The department later received reimbursement from

the NPFC for the remediation response work conducted at the site in the amount of \$14,809.08. This money was deposited back into the OSPAR Fund.

5.2 Galilee/Pt Judith Oil Release

On February 16, 2016, DEM personnel received a call from the USCG (Point Judith Station) regarding a large stretch of oil found along the bulkhead on the eastside of the harbor.



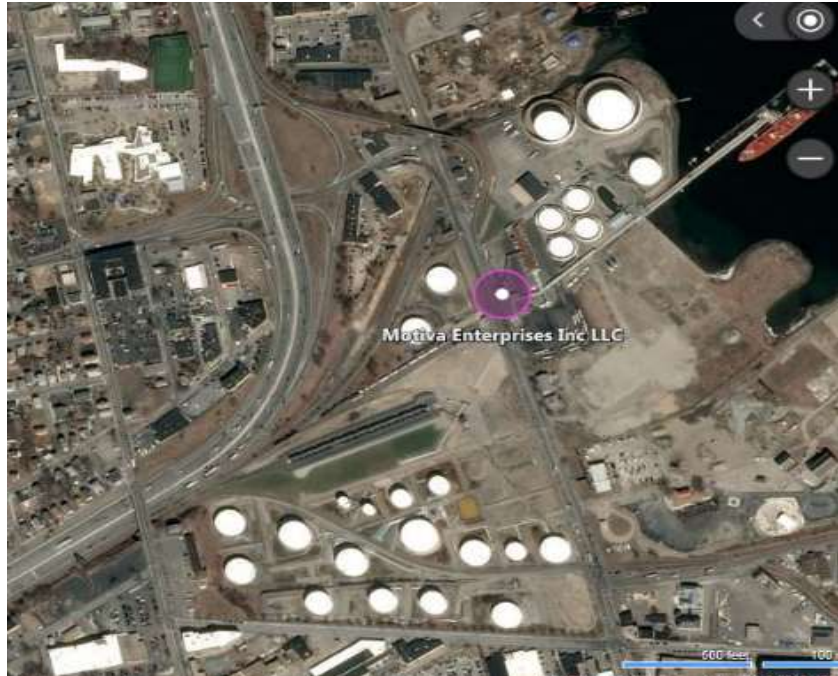
The section of the sheen was near 276 Great Island Road, Narragansett. The oil was heavily emulsified and appeared to be on the water for some time. It had been noticed the preceding days by several fishermen but no one contacted DEM. On the 16th a person called the USCG to indicate there was a strong odor of oil and they noticed oil on the water in the area. Due to the number of oil releases in the Port of Galilee the DEM Office of Emergency Response purchased an oil spill equipment trailer with the OSPAR Funding to rapidly contain oil releases and protect the local environment. As a result of the size of the spill, DEM Coastal Resources utilized the items in the on-site boom trailer to contain the oil along the bulkhead. The On-Scene Coordinator from DEM hired a cleanup contractor to remediate the release along the bulkhead. The contractor brought in a vacuum truck to skim the oil from the surface of the water. They removed approximately 580 gallons

oily/water and five drums of oil contaminated debris from the bulkhead area. The total DEM cost was submitted to the NPFC for reimbursement from the OLTF. The department later received reimbursement for the response in the amount of \$6,511.97 to reimburse the expenditures back into the OSPAR Fund.

5.3 Motiva (Shell) Real-Time Functional Exercise and Table Top Exercise July 8, 2015

On July 8th RI DEM participated in a real-time functional exercise and table top exercise (TTX) with United States Coast Guard (USCG), National Oceanic Atmospheric Administration (NOAA), First Coast Guard District, National Command Center, Environmental Protection Agency (EPA), USCG Environmental DRAT Program, Narragansett Bay Commission, Save the Bay, Providence Water Supply Board, Johnson & Wales University, Tug LUCY REINAUER owner, Motiva (Shell), Providence Emergency Management Agency (PEMA), Providence Fire, Providence Police, East Providence Fire, East Providence Harbor Master, RI Emergency Management Agency, Marine Spill Response Organization and Clean Harbors. It involved a simulated scenario involving a small single engine private plane with a lone pilot who was experiencing severe chest pains

according to the tower at T.F. Green Airport. In the simulation, the tower lost communication with the pilot and minutes later the single engine plane crashed into Tank #1 at Motiva's Providence Terminal. Tank #1 contained approximately 71,000 barrels with a capacity of 78,000 barrels of diesel fuel at the time of the crash. In the drill, the impact caused the side of the tank to collapse sending a wall of oil toward and over the berm into the Providence River. Fortunately, there was no fire. The berm surrounding



the tank was filled with oil and the ground between the berm and the water's edge was covered with oil. At the time of the crash, a barge RTC 101 with the tug LUCY REINAUER were tied up at the terminal dock, north side, offloading gasoline. Several thousand barrels of the oil reached the water and spread out along the pier and area surrounding the tug and barge. The tug had a crew of 5 people and there was a Motiva representative overseeing the transfer on the pier. The weather at the time was 27 degrees F, Winds from the SSE at 9 mph, gust 14 mph, sunrise 0713, sunset 1632, partly cloudy, 20% chance of snow, low tide 0620 (0.54 ft), high tide 1344 (4.31 ft) and low tide 1841 (0.25 ft). The Emergency Operation Center (EOC) was set up at PEMA and the command post was set up at Motiva. The real-time functional exercise involved the use of the Providence's Reverse E-911 system for the evacuation of the port by participating agencies. The functional portion ended in the late morning followed by a TTX at PEMA. Over fifty people participated in the TTX. Motiva called 911, contacted National Response Center, their contractors U.S. Coastline Services and Clean Harbors. The fire department was first to arrive and foamed the diesel filled berm to reduce the vapors in an effort to protect public safety from the fumes. RI DEM then helped Providence HazMat install air monitoring instruments to identify harmful/dangerous levels of volatile organic compounds (VOC) and diesel fuel constituents. The public health concerns involved RI Hospital, Women and Infants Hospital of RI, Hasbro Hospital, Johnson and Wales University, other industrial facilities and residential areas. The contractors were used to first control the source by containment and recovery of the spilled oil at the source and then on open water. Then stakeholders prioritize the locations in the Geographic Response Plan (GRP) for the protection of environmentally sensitive areas, while keeping in mind public safety concerns. RI DEM provided insight as to steps that would be taken for this type of incident.

1. Notifications
2. Contain spill
3. Obtain a sample of the source of the spill for legal purposes

4. Complete reconnaissance assessments
5. Shut the hurricane barrier
6. Institute Geographic Response Plan (GRP) on a priority bases (Booming Strategies)
7. Utilize the Environmental Sensitivity Index to protect sensitive environments and species.
8. Complete shoreline cleanup assessment techniques (SCAT) assessments to prioritize areas needing cleanup
9. Conduct on-water recovery with skimmers and shoreline recovery
10. Establish wildlife threat & cleaning operations
11. Develop volunteer training program [Save the Bay, Serve RI, 211 and RIVOAD (volunteer organizations active in disaster)]
12. Utilize volunteers to cleanup up litter in un-oiled areas
13. Ensure security zones are established
14. Work with USCG and DEM Enforcement on port closure
15. Utilize RI Decontamination Teams to decontaminate personnel
16. Employ EPA and Hazardous Material Response Teams to conduct air monitoring
17. Obtain assistance from RI DOH for human health issues
18. Work with RI DEM on potential fish and shellfish closures
19. Establish a Joint Information Center (JIC)
20. Conduct water and sediment sampling
21. Notify the URI Coastal Institute to activate Scientific Support for Environmental Emergency Response (SSEER) for State colleges and university assistance
22. Establish Natural Resource Damage Assessment group (NRDA)
23. Contact Sewer authorities to protect their outfalls
24. Notify facilities with water intakes

This TTX was a fantastic opportunity to improve coordination between federal, state and local agencies as well as public health facilities and universities. It also provided an opportunity to work with twenty different agencies to address issues associated with a large oil spill in a highly congested area that will be impacted by a spill of this nature.

6. 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 five monitoring stations located in Narragansett Bay that monitor stage of the tide, currents, and weather. This data is 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 RIDEM, 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 possibility. 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.

7. TRAINING ACTIVITIES

The Emergency Response team continued to improve its response capabilities through training. During FY2016 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 DEM Leadership Training, Bryant University
- 8-Hour DEM Leadership Training, Bryant University
- 8-Hour Evidence Collection (Fire Academy)
- 8-Hour Vigilant Promise (HazMat FSE), USCG
- 24-Hour Shoreline Cleanup Assessment Technique Training (SCAT), NOAA
- 24-Hour New Hampshire Haz Mat Conference, Concord, NH
- 3-Hour Hash Oil Clan Lab Training RI State Fire Marshal
- 8-Hour Climate Adaptation Strategies for Emergency Services, National Disaster Preparedness Training Center (NDPTC)
- 8-Hour Cross Boarder HazMat Full Scale Exercise (FSE), CT
- 8-Hour Cobra and Midland Kit Training
- 24-Hour Fast Water Boom Training, Tetro Tech
- 8-Hour RRT, Burlington, MA
- 4-Hour Public Records Training
- 24-Hour Public Safety Sampling, TEEEX
- 30-Hour Hazardous Materials Technician (RI Fire Academy)
- 6-Hour HazMat TTX, CT
- 16-Hours Air Monitoring Cranston & Level A Suits
- 3-Hour Biological Safety for First Responders, American Biological Safety Association
- 8-Hour HAZWOPER Refresher (RI Fire Academy)
- 24-Hour Massachusetts Association of Hazardous Materials Technicians Conference

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 and *Environmental Health & Pesticide Safety Education* for the University of Rhode Island.

8. 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. Subsidy from the OSPAR fund 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 established in 1998.

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 the Trust Fund receives \$250,000 from the OSPAR account to fund habitat restoration projects in the state. Since the inception of the Trust Fund CRMC has awarded \$3 million for 110 projects, which has leveraged more than \$23 million in matching funds. In its thirteen 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 23, 2016 semi-monthly meeting in Providence. Projects approved for funding include a coastal adaptation project, creation of a statewide oyster restoration guidance document, an extensive fishway project, a coastal habitat restoration project, fish passage improvements, and one equipment request for the RI Department of Environmental Management (RIDEM).

8.1 Grinnell's Beach Coastal Adaptation Project, Tiverton

Award: \$3,750

Lead Organization: Town of Tiverton
Conservation Commission

The Town of Tiverton's Conservation Commission received \$3,750 to restore a coastal buffer of warm season grasses, native shrubs, and beach grass at Grinnell's Beach. The restoration will restore the dune and coastal shrub habitat and create pollinator habitat, and the buffer restoration will create a dune where there is currently parking lot, which will increase the resiliency of the beach by moving the parking area inland and removing infrastructure that floods during king tides and is a hazard during storms.

CRMC has put a special emphasis on projects like this that will enhance the resiliency of Rhode Island's coastal habitats to climate change and sea level rise.



Photo Courtesy of Google Maps

8.2 RI Oyster Restoration Guidance Document, South County

Award: \$25,377

Lead Organization: R.I. Department of Environmental Management

The R.I. Department of Environmental Management, along with other partners, was awarded \$25,377 to conduct oyster monitoring, assessment, and development of a R.I. Oyster Restoration Guidance Document. The areas of study include the South Shore coastal ponds, the Great Salt Pond, and select locations in Narragansett Bay, and will provide essential guidance for future oyster restoration projects, including a prioritization of potential sites for restoration and enhancement, as well as best techniques for reef creation. Project partners include The Natural Resource Conservation Service (NRCS), U.S. Fish and Wildlife Service, via the USF&W Sportfish Restoration Program.



Photo Courtesy of Google Maps

8.3 Manton Pond Dam Fishway, Providence
Award: \$110,873
Lead Organization: Woonasquatucket River Watershed Council (WRWC)

The Manton Pond Dam nature-like fishway construction. This project, which had previously been awarded funding in 2009, 2010, 2012, and 2013, will allow migratory fish access to the nine acres of pond habitat in Manton Pond. It will also open approximately 0.7 river miles from Manton Pond Dam to the next upstream impoundment at Lyman Mill Pond Dam, bringing the total available spawning habitat from 4-6 to 5.3 river miles. This award will see the realization of the multi-year project to open a significant segment of the river, mostly to passage on this river for through the WRWC to river) Denil fish ladder (second dam) was completed in September 2010; a Denil fish ladder was completed at Atlantic Mills (third dam) in May 2009; the dam at Dyerville Mills (fourth dam) was removed in October 2009; and the fifth and final dam on the lower part of the river, Manton Pond Dam, is 90 percent design-complete and ready for construction. Project partners include USDA Natural Resources Conservation Service (NRCS) and RIDEM Division of Fish & Wildlife.



river miles. This award significant segment of of the river, mostly to passage on this river for through the WRWC to river) Denil fish ladder (second dam) was

8.4 Bradford Dam, Westerly/Hopkinton
Award: \$70,000
Lead Organization: Nature Conservancy

The Nature Conservancy (TNC) received \$70,000 for improving fish passage at Bradford Dam in Westerly/Hopkinton. TNC and project partners plan to remove the dam as part of a larger, ecosystem-wide restoration program for the Pawcatuck River Watershed, including



dam removals and fish passage restoration at White Rock, Potter Hill, and Bradford Dams. For this project, TNC plans to partially remove the right side of the dam and adjacent fish ladder, and in place of the dam to construct six raised arched stone weirs with a low flow notch in the center for fish passage and recreation boat passage during lower river levels.

8.5 R.I. Department of Environmental Management

Award: \$5,000

Lead Organization: R.I. Department of Environmental Management

DEM was also awarded \$5,000 for the purchase of an excavator. This low ground pressure equipment is used statewide for mosquito abatement and control and wetland restoration.

8.6 Taylor Point Restoration, Jamestown

Award: \$10,000

Lead Organization: Taylor Point Restoration Association

The Taylor Point Restoration project involved restoring the point by eliminating the invasive plant species and re-vegetate with native ones; to protect existing native species; to improve degraded footpaths to provide safe public shoreline access; and maintain existing views of Narragansett Bay. The long-term goal of the project is the establishment of an ecologically robust coastal area and native buffer zone, which will serve as a valuable aesthetic and recreational resource. The funding will also go toward creating base maps and collecting biological data to add to the restoration planning process.



8.7 Shady Lea Dam Removal, North Kingstown

Award: \$100,000

Lead Organization: Save The Bay

Save The Bay received \$100,000 towards removal of the Shady Lea dam on the Mattatuxet River in North Kingstown. This project received funding previously through the CEHRTF



for design and a portion of the construction costs. Additional funding has been provided through the US Fish and Wildlife Service and the dam owner.

9. WATER QUALITY MONITORING (FORMERLY THE RI BAYS, RIVERS and WATERSHEDS COORDINATION TEAM PROJECTS)

In 2007, the general assembly provided OSPAR funding to the Rhode Island Bays, Rivers and Watersheds Coordination Team (CT). It is a state interagency commission dedicated to the protection, management, restoration, and sustainable development of Rhode Island's fresh and marine water and watersheds. Effective July 1, 2015, amendments to Rhode Island General Law (RIGL) 46-12.7-13 authorized RIDEM to direct the preventative use of up to \$250,000 in OSPAR funding annually for environmental monitoring purposes. The amendment was adopted in conjunction with the repeal of RIGL 46-31 which abolished the Rhode Island Bays, River and Watersheds Coordination Team that had previously been authorized to expend the funds.

Listed below are the Strategic Investments by the Water Quality Monitoring Team (RI Bays, Rivers and Watersheds Coordination Team) to Support a Comprehensive Water Monitoring Strategy for FY2016.

9.1 Cooperative Agreement with United States Geological Survey

As authorized by the Water Quality Monitoring Team (WQMT), 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 2016 OSPAR contribution was \$281,624 contractual and the other funding came from the USGS match. During FY16, pursuant to the combined joint funding agreement, the OSPAR Fund supported the following three monitoring activities.

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 in order to be representative of the pollutant loadings from these tributaries into coastal waters.

10. OUTLOOK AND PROJECTIONS

OSPAR-related expenditures during FY2017 are expected to be similar to FY2016 absent any major spills and associated response needs. Fiscal year 2016 showed expenditures were higher than the revenue brought in by the fund. This is a concerning trend that, if continues, will have an impact on the fund balance over future fiscal years. As a result of all the initiatives, the functional capacity to respond will continue to be stressed by the continued reallocation of OSPAR funds. The constant fiscal pressure on the OSPAR fund will have a cumulative impact, compromising the ability of the program to perform the basic readiness and response tenants for which it was established.

11. CONTACT INFORMATION

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