

Oil Spill Prevention, Administration and Response (OSPAR) Fund

Annual Report FY 2013



“The Bad Penny” Removal

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Janet Coit, Director

James Ball, Emergency Response Administrator,
Chief Office of Emergency Response

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 2013.

Revenues & Expenditures – FY2013

The OSPAR account started FY 2013 with a balance forward of \$5,097,092. During FY 2013, the \$0.05 per barrel fee resulted in the collection of \$1,820,381 after the ten percent cost recovery fees. Personnel, operating and project expenditures for FY2013 totaled approximately \$1,289,999 that included \$243,333 to Coastal Resource Management Council (CRMC) for the Coastal and Estuarine Habitat Restoration Trust Fund and \$250,000 for the River, Bays and Watersheds Coordination Teams. The usual \$250,000 for the PORTS Navigational System for Narragansett Bay was not transferred this fiscal year and \$500,000 will have to be transferred next fiscal year. A detailed review of expenditures is provided in the expenditure section of the report.

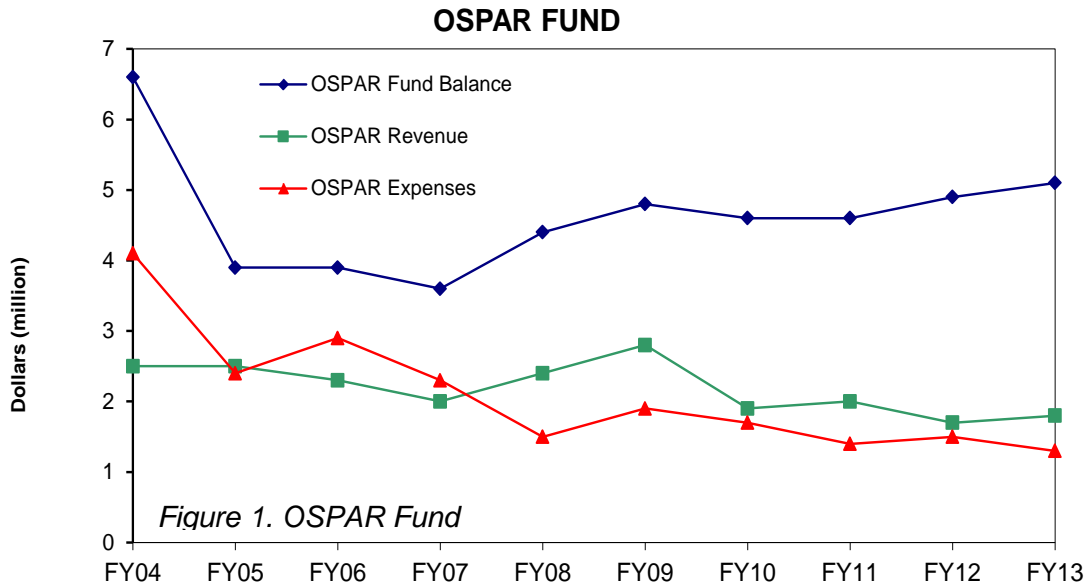


Figure 1 provides an overview of the OSPAR Fund revenues and expenditure activities since fiscal year 2002.

The OSPAR fund reserve balance has not recovered since being utilized as state match for the Providence River dredging project in fiscal years 2003 and 2004. The project restored the shipping channel to the federally authorized dimensions of 40 foot depth and a channel width of 600 feet. Six million cubic yards of dredged material were removed during the project. The fiscal impact to OSPAR was 3.2 million dollars in FY2003 and 4.1 million dollars in FY2004.

Previously, net revenue, while relatively constant, had exhibited a declining trend until FY08. This is partially explained by an increase in cost recovery from 7 percent to 10 percent. In FY2013 the revenue and expenses have remained relatively constant, but rising.

ACTIVITIES– FY2013

Summary

With regard to pre-spill preparedness, the OSPAR Fund was used in FY2013 for personnel and operating expenses. Personnel costs assigned to the OSPAR Fund included the following: Office of Emergency Response (Emergency Response Administrator, Technical Assistant and State Meteorologist) and partial salaries of four first responders; DEM GIS Supervisor (partial); staff from DEM Office of Waste Management. These salary and benefit costs totaled \$787,108. Major operating expenses charged to the OSPAR Fund included: vehicle readiness and maintenance (\$192,922); emergency response equipment, cleanup services, maintenance and supplies (\$1,680); computer hardware, software, telecommunications and miscellaneous (\$20,201), Audubon Society Narragansett Bay National Estuarine Research Reserve Coastal Training Program (\$35,612) and Dawley

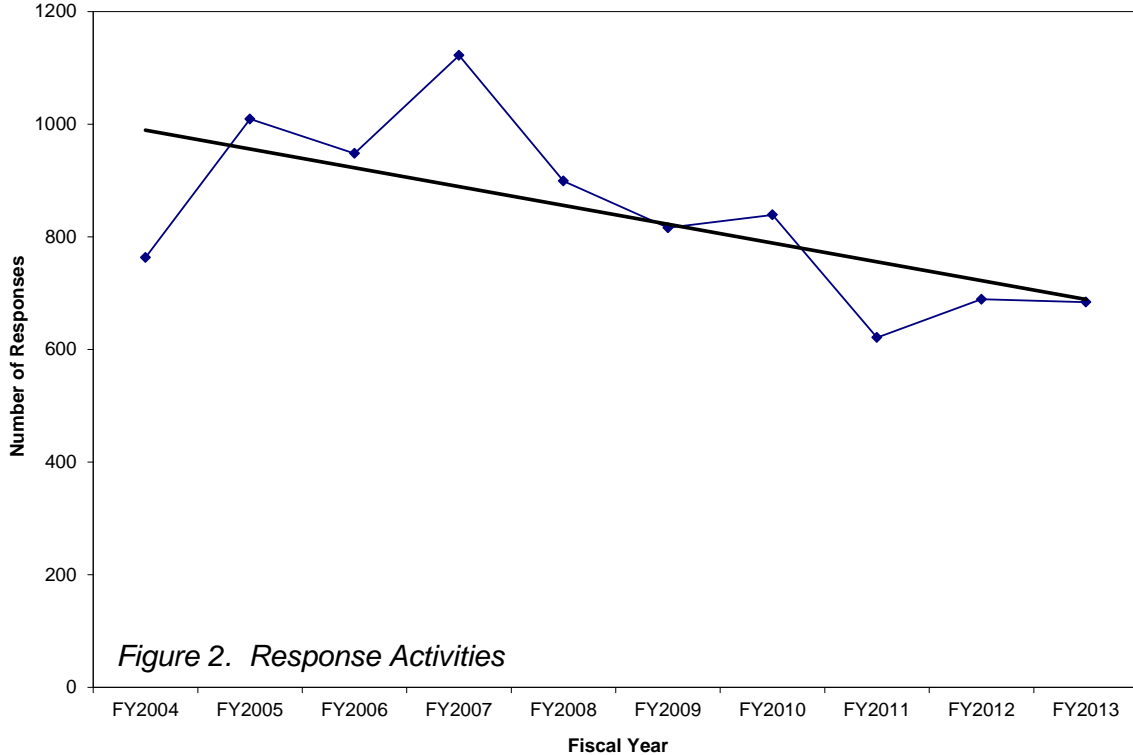
Park building utilities (\$1,922). These operating expenses totaled \$252,337.

In FY2013 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 684 emergency response investigations undertaken by the Office during FY2013. The incidents comprised two primary categories, hazardous material responses and oil spills. Seventy-nine percent of these responses, a total of 531 incidents, were related to oil spills.

Figure 2 below, 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 is now demonstrating a relatively constant average. Activities undertaken by the Department's emergency response team have, on average, been constant since 2003 with annual fluctuations. However, seaweed monitoring continues to be an issue placing ever increasing pressure on the limited available response resources. The downward slide in the last few fiscal years maybe due to the fact that seaweed* related responses have not been included in the tally since it became an issue in 2003.

* 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 H_2S 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 continuous field monitoring but have not been included in the tally.

EMERGENCY RESPONSE ACTIVITIES



FY2013 EXPENDITURES

Personnel

- 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.
- A Technical Assistant 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.
- 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 Costs

	\$ 787,108
Major Operating Expenses	
Vehicle Maintenance & Readiness	\$ 192,922
Cell phones, IT Support	\$ 6,342
Supplies: Office, Scientific, Miscellaneous	\$ 15,539
Emergency Response Vehicle Purchase/Replacement	\$ 0.00
Equipment, Repairs & Cleanup Services	\$ 0.00
	<hr/> \$ 214,803
Capital Projects	
Narragansett Bay PORTS (Pilot Navigation System)	\$ 0.00
Design/Construction/Utilities Dawley Park ER/OSPAR	\$ 1,922
	<hr/> \$ 456,592
Other Projects supported by the OSPAR Fund	
Coastal and Estuarine Habitat Restoration Trust Fund	\$ 243,333
Rivers, Bays & Watershed Coordination Team	\$ 250,000
Audubon Society – Narragansett Bay Estuarine Program	\$ 35,612
	<hr/> \$ 528,945
Total OSPAR Expenditures	\$1,987,448

OIL SPILL CLEAN-UP ACTIVITIES

The DEM emergency response team responded to 531 oil spills during FY2013. The amount of oil products and oil spill debris remediated or removed from the environment during these response activities was estimated to be **4,500 gallons** of oil and **405 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 2013

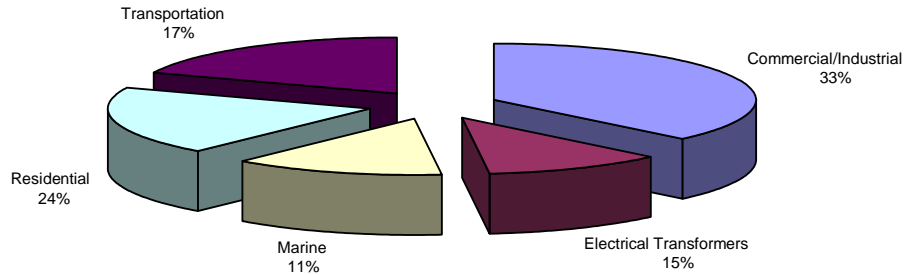
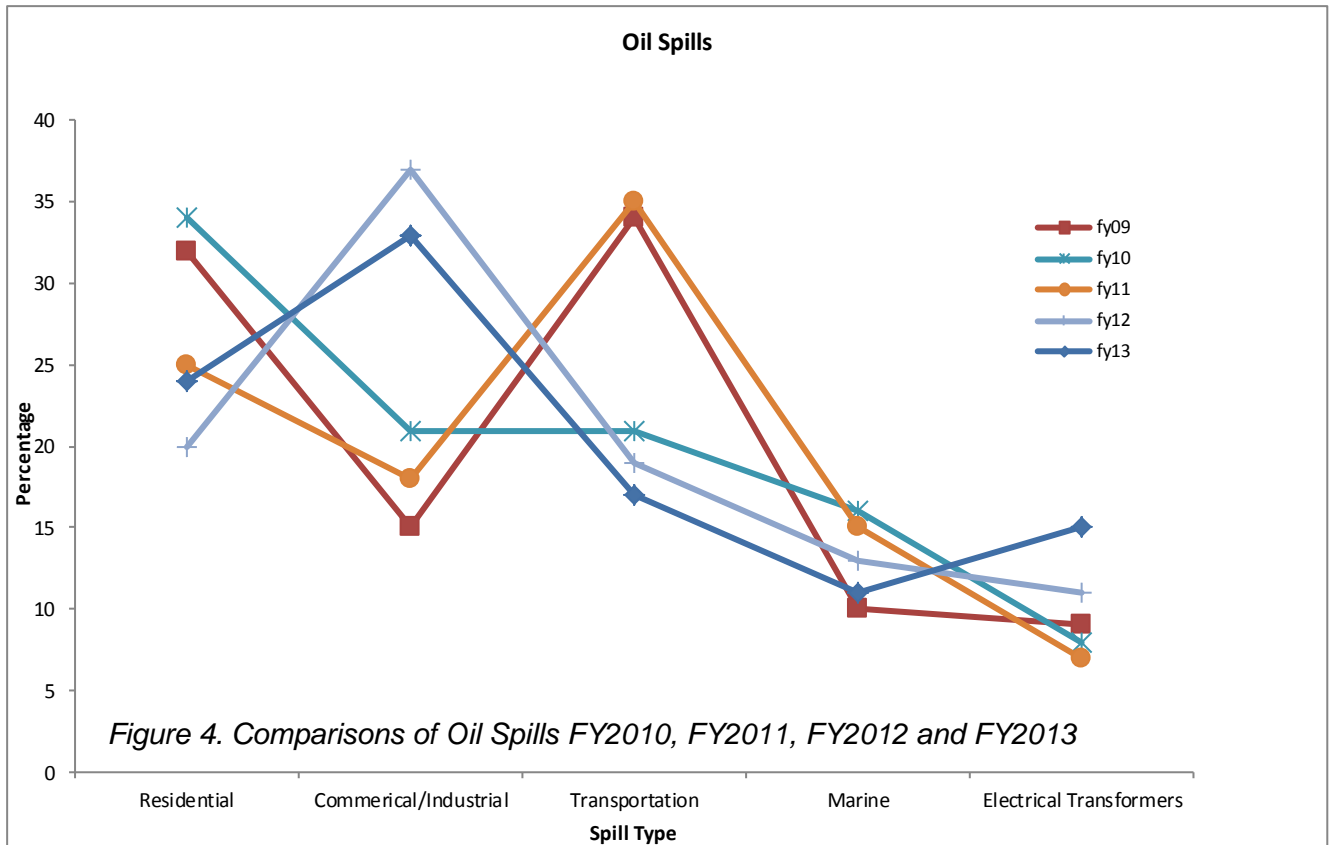


Figure 3. FY2013 Oil Spills by Category

The greatest percentage of spills, 33 percent, was related to commercial and industrial incidents. Residential oil spills comprised the next largest category accounting for 24 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 17 percent of the spill events in FY2013. Spills from electrical transformers comprised 15 percent of the spill events. Personnel from the OER met 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 11 percent of response activities. The category and percentage of spills has remained relatively constant except with the commercial/industrial category, which had the largest jump in responses over the last two years.

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



Naval Station (NAVSTA), Full Scale Exercise, Newport, Oil Spill Exercise

On June 27, 2012 NAVSTA Newport (Naval Station Newport) conducted a full scale exercise simulating a 100,000 gallon marine diesel spill caused by the rupture of a fuel barge colliding with Pier 2. The barge arrived at Pier 2 around 7:30 a.m. to fuel a ship when it crashed into the bulkhead. As a result, diesel oil released into the bay; prompting NAVSTA's spill response team made up of personnel from Port Operations, Environmental Operations, Fire Personnel and Emergency Services to start booming operations. The boom installation had to be completed quickly before the noon tide change began to guide the "spill" out into the bay. The seriousness of the accident prompted the notification of the USCG, Sector Southeastern New England and the RI DEM. They then activated their emergency operations center (EOC) at 8:00 a.m. and manned it with the command's incident management team (IMT). The initial assessment from the incident commander on-scene was that three of the barge's eight tanks were compromised and leaking oil. The marine task force from Warwick Fire Department provided air quality reports to the EOC and determined the air quality to be safe for the responders and the public. The USCG and DEM provided personnel to oversee operations at Pier 2 and integrate into the IMT at the EOC. Port Operations personnel deployed approximately 1000 feet of boom around the pier and DEM personnel pointed out the environmentally sensitive areas using the Environmental Sensitivity Index and the Rhode Island Upper Narragansett Bay/Providence River Geographic Response Plan to explain the required booming strategies for protecting these locations. They also used the base's Environmental Facilities Response Plan to

identify their listed sensitive areas as well. The unified command structure allowed the USCG to notionally federalize the incident to pay for contractors and allowed DEM to provide the three oil skimmer vessels the OER owns. The drill provided NAVSTA with insight on how the USCG and DEM use the incident command system (ICS), provide assistance, what assets we bring to the scene and how we coordinate activities within our chain of command. The drill was invaluable since it will enable all participating agencies to work together more effectively and efficiently in the event of a real-world incident. It was a great opportunity for partners to come together and work under ICS as a unified command structure. The ICS format requires that Unified Command set the priorities and the Operation Section and the Planning Section determine how to accomplish these priorities. The priorities as set by Unified Command were as follows:

- 1 Safety of public and responders (on-water & shoreside)
- 2 Stop the oil spill at the source.
- 3 Control the spread of oil.
- 4 Remove the oil from the water.
- 5 Control shoreline impacts and protect environmentally sensitive areas.
- 6 Keep the public informed.



Photo **COURTEOUS** of Dave Hansen, Staff Photographer, NewportRI.com, Posted: Thursday, June 27, 2013.

Figure 5. Naval Station Newport Port Operations personnel place a second boom around the west end of Pier 1 during a mock oil spill emergency response drill on Thursday.

Marine Vessel “The Bad Penny” Grounding 11/8/2012



On the 8th of November, The Bad Penny, a 56 foot pleasure craft broke free of its mooring and grounded on the rocks near Castle Hill Cove. DEM personnel assembled with individuals from the USCG and the care taker of Hammersmith Farm where the vessel washed ashore. At low tide the group boarded the vessel to inspect it for damage and pollution issues. They determined that there were several hundred gallons of fuel in the fuel tanks and some oil the engine room. The insurance company for the vessel owner was

contacted and when he arrived on seen USCG and DEM personnel provided him with a list of concerns that need to be addressed before the vessel could be moved. The agent indicated that all petroleum on board would be removed by a proper contractor. The vessel was then

secured so that it would not float of the shore and sink. The following day the insurance agent hired a contractor to pump off approximately 1000 gallons of fuel and oil from the vessel. The insurance agent then hired a salvage company to remove the vessel from the shore and transport it to Hinkley to be repaired.



M/V Tancred Grounding (TTX) Ohio Ledge East Providence

On April 9, 2013 DEM personnel received a call from the USCG Captain Sector Southeastern New England regarding the grounding of M/V Tancred off of Colt State Park as part of a Table Top Exercise (TTX). The vessel contained a total of 702,366 gallons of crude oil and two of the vessel's tanks that contained 449,303 gallons were ruptured. The vessel went hard aground at high tide and was moved to a safe haven anchorage to prevent further damage. Personnel from the OER responded to USCG East Providence's Emergency Operation Center (EOC) to participate in the TTX under the Incident Command System. Jim Ball was part of Unified Command, Ray Meunier was in the Environmental Group and Tom Campbell was part of the Shoreline Clean Assessment Technique (SCAT) group. Initial Response Objectives were developed that included:

- 1 Safety of public and responders (on-water & shore side)
- 2 Environmental protections (sensitive areas, secure source and resource list)
- 3 Re-establish marine transportation service (impacts of port closure, notify stakeholders)
- 4 Volunteer management spear headed by Save the Bay
- 5 Public messaging and political stakeholders' engagement (draft press release, press conference)

Colt State Park was used as the staging area for contractors, boom and equipment. Oil plume trajectories indicated that the oil was impacting Popasquash Neck and Prudence Island. The trajectories below show the impact of those locations after 6 and 12 hours.

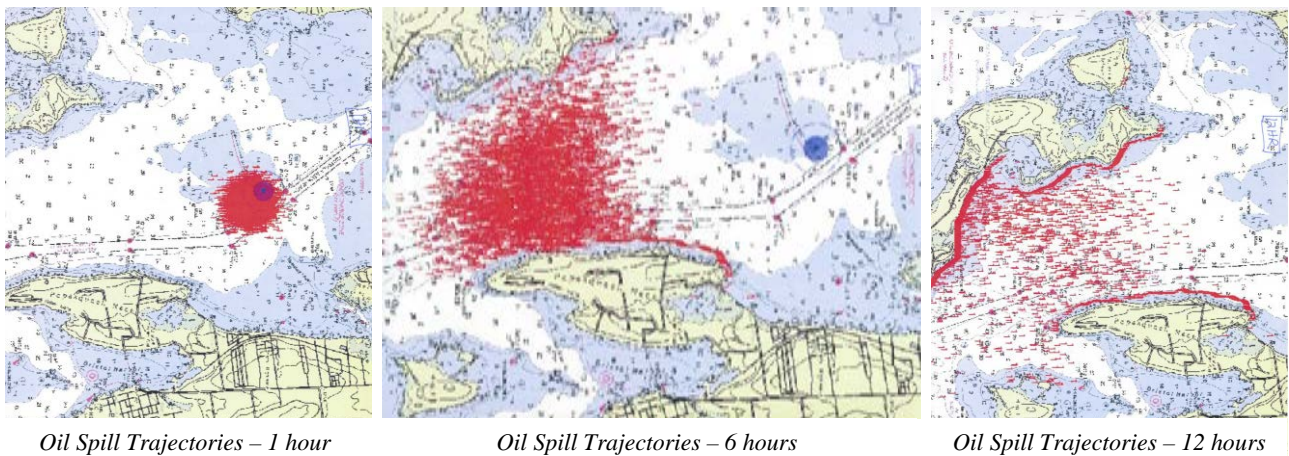


Figure 6

The Rhode Island Upper Narragansett Bay/Providence River Geographic Response Plan (GRP) was used to develop protection strategies for environmentally sensitive areas such as: Potters Cove and Mill Gut. DEM oil recovery skimmers were used by contractors to remove free oil from the water surface. Vessel damage assessments were completed and the vessel was patched so that it could be offloaded at a nearby fuel terminal. The knowledge gained and relationships forged during this drill will be beneficial during an actual emergency.

Sentinel Hope 6/12/13 Full Scale Exercise (FSE)

At 0815 June 2013 a small vessel sped towards the M/V Carol Jean (Ferry), on its way from Block Island to Point Judith, and hypothetically exploded next to the ferry as part of the FSE. The ferry was approximately halfway between Block Island and Point Judith at the time. The explosion caused a large hole to be ripped in the port side of the vessel. Multiple people were thrown into the water. The ferry was carrying 237 passengers and 8 crew members at the time of the explosion. The purpose of the exercise was to provide participants an opportunity to implement their current response concepts, plans and



capabilities in response to a Transportation Security Incident (TSI) involving a large passenger vessel in RI. The exercise focused on emergency responder command and control coordination, critical decisions, notifications, and the integration of local, state and federal assets necessary to save lives and protect public health and safety as well as the environment. The exercise examined the ability of law enforcement, security and emergency response organizations to communicate, coordinate and respond to the threat. The

exercise included decontamination of the afflicted passengers, medical triage, transportation to area hospitals, crime scene evaluation by FBI, vessel security, pumping to keep vessel afloat, oil absorbent booms around the vessel and determination of what port to bring the vessel into for criminal sampling and to remove fuels. Agencies that participated in the drill included: Narragansett Police, Narragansett Fire Department, Hospital Association, Department of Health, Department of Environmental Management, RI Emergency Management Agency, Department of Justice (FBI) and United States Coast Guard.

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/nbports/nbports.shtml?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.

Training Activities

The Emergency Response team continued to improve its response capabilities through training. During FY2013 team members continued to build on the all hazard model. Members of the Emergency Response team participated in courses, training and exercises that included:

- 5-Hour Newport Navy (NAVSTA) Full Scale Exercise
- 3-Hour Pipeline Safety Training
- 8-HazMat ID 360 Fourier Transform – Inferred Spectroscopy (FT-IR) Training
- 8-Hour Emergency Management Training Exercise Program Workshop (TEPW)
- 16-Hour Management Leadership Training
- 4-Hour Tank Ship Red Grounding Table Top Exercise (TTX)
- 4-Hour Portacount Training
- 4-Hour Oil Equipment Training with Maine DEP
- 8-Hour HazMat Drill
- 24-Hour National Conference on Science and Environment
- 8-Hour School Safety & Mitigation Conference
- 4-Hour Sleep for Emergency Responders
- 4-Hour Radiation Training
- 24-Hour Competencies
- 8-Hour Air Monitoring
- 8-Hour Evidence Collection
- 4-Hour Nationwide Suspicious Reporting Initiative Line Officer
- 4-Hour Clan Lab Training
- 8-Hour Functional Exercise Tri-State
- 8-Hour Air Monitoring Class

- 24-Hour Plymouth Haz/Mat Training
- 16-Hour Northeast Mutual Aid Compact Training
- 16-Hour Regional Response Team (RRT)
- 8-Hour HAZWOPER Refresher
- 8-Hour Vigilant Guard FSE
- 8-Hour Environmental Justice Training
- 4-Hour WebEOC Training
- 4-Days Metering and Monitoring for Tall Ships

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, *Homeowner Oil Spill Handling* for oil companies, *Chemical Safe Schools* for educators, *Hazardous Materials Recognition & Identification Refresher* for RI DOT, Smithfield Police Department, *Hazardous Materials Sampling* for the National Guard Civil Support Teams and *Environmental Health & Pesticide Safety Education* for the University of Rhode Island.

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. 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. 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 \$1.87 million for 67 projects, which has leveraged more than \$18 million in matching funds. The following short project descriptions are taken from the CRMC web site. To date and including this year, the Trust Fund has awarded \$2.3 million for 87 projects, which have leveraged more than \$23 million in matching funds. Additional information can be found at <http://www.crmc.state.ri.us/>

April 25, 2013, WAKEFIELD – The RI Coastal Resources Management Council has awarded funding for ten habitat restoration projects through its RI Coastal and Estuarine Habitat Restoration Trust Fund. The Council approved the funding at the March 26 semi-monthly meeting in Providence. Projects approved for funding include five salt marsh restoration projects, two freshwater restoration projects and two anadromous fish passage projects.

Fish Passage Improvements at the Manton Pond Dam Nature-Like Fishway Construction Project, Johnston

Award: \$56,401

Lead Organization: Woonasquatucket River Watershed Council

The Council awarded \$56,401 to the Woonasquatucket River Watershed Council for the Manton Pond Dam Nature-Like Fishway Construction project in Johnston. This project will construct a nature-like fishway at the dam to complete the group’s long-running project to restore diadromous fish passage at different points along the Woonasquatucket River. Once this final obstruction is removed, the river will offer spawning habitat in both the river and Manton Pond for 40,000 river herring. The fishway will allow migratory fish access to nine acres of pond habitat and open up nearly a mile of river.



Manton Pond Dam fishway construction in Johnston

Restoring Fish Passage and the Removal of the Shady Lea Mill Dam: Shady Lea Mill Dam, North Kingstown

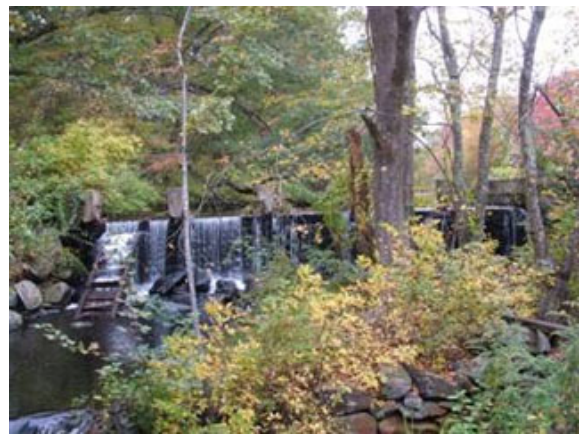
Award: \$40,000

Lead Organization: Save The Bay

The Council also awarded \$40,000 to Save The Bay for the Shady Lea Mill dam removal project in North Kingstown. A previous Trust Fund award allowed for the hiring of a contractor to assess the dam’s structure and the sediment built up in the impoundment.



Shady Lea dam removal in North Kingstown



Shady Lea dam removal in North Kingstown

Now the partners will examine the extent of the dam removal necessary and develop a design, in addition to a sediment management plan for the estimated 1,700 cubic yards of sediment in the impoundment. The long-term plan is for removal of the dam, which will restore two acres of diadromous fish access and a half-mile of stream habitat.

Long Pond Habitat Restoration, Little Compton

Award: \$25,000

Lead Organization: Group to Save Long Pond

The Group to Save Long Pond received \$25,000 in funding for the Long Pond Habitat Restoration Planning effort for Long Pond in Little Compton. The group plans to study the pond and adjacent natural habitats, totaling 165 acres and including 50 acres overrun by invasive *Phragmites australis*, the primary focus of the restoration. The group plans to submit a management plan to the CRMC and to RI DEM as part of permitting.

Coggeshall Salt Marsh Restoration, Prudence Island

Award: \$23,000

Lead Organization: Narragansett Bay National Estuarine Research Reserve

The Council also approved \$23,000 in funds toward the restoration of northern Coggeshall salt marsh on Prudence Island in Portsmouth. The Narragansett Bay National Estuarine Research Reserve (NBNERR) plans to restore the ecological structure and function of the section of marsh by removing *Phragmites*, cleaning out existing clogged creeks and extending the creek and pool network, and removing all portions of an artificial berm to enhance tidal flow. The area will be monitored over a multi-year period.

RI Salt Marsh Assessment: Phase 2

Award: \$19,730

Lead Organization: Save the Bay

Save The Bay was awarded \$19,730 for its Rhode Island Salt Marsh Assessment: Phase 2 effort. Save The Bay began assessment in 2012 of Rhode Island's salt marshes to assess the extent of die-off in the high marsh in response to sea level rise, higher tides and heat/drought; to assess the extent of die-off along the low marsh edge in response to herbivore grazing; and to identify any restoration or adaptation opportunities. The group's next goals will be to implement all three tiers of their previous assessments (GIS, field and detail and research-based assessments) and begin adaptive management planning. Save The Bay will also continue Tier 1, 2 and 3 work and still plans to seek other partners for broader assessment and application.

RI Salt Marsh Assessment: Phase 2

Award: \$18,590

Lead Organization: Cocumscussoc Association

The Cocumscussoc Association was awarded \$18,590 for its Cocumscussoc Brook and Meadow Brook Wetlands Restoration project at Smith's Castle in North Kingstown. The group plans to conduct a study to examine ways to restore and enhance declining wetland features within the national landmark Cocumscussoc Historic Site, 11 acres along Mill Cove. There are two freshwater streams that flow through the site and empty into Mill Cove. *Phragmites* is a problem in the wetland areas, and the coastal buffer also contains a number of invasive species. Areas of Cocumscussoc Brook have also been overtaken by

invasive plants and erosion has jeopardized the integrity of two culverts. The funding will go toward detailed study of these problems, with an eventual restoration plan and project.

RI Department of Environmental Management: Mosquito Abatement

Award: \$6,000

Lead Organization: RI DEM

The RI Department of Environmental Management received \$6,000 for its Flail Mower equipment. This low ground pressure equipment is used statewide for mosquito abatement and control and wetland restoration.

Barrington Salt Marsh Adaptation Project: Barrington

Award: \$4,600

Lead Organization: RI School of Design

The Rhode Island School of Design was awarded \$4,600 in funding for its Barrington Beach Salt Marsh Adaptation project. The beach salt marsh is a back barrier marsh owned by the school. A culvert that historically provided tidal flow has filled in, leaving only 4 acres of the total 16-acre marsh open water. The project will restore tidal flow to the blocked section of marsh and reduce impounded water on the marsh surface. Adaptive management measures will restore the natural system, and assist the marsh in adapting to rising sea level and migration of the barrier beach.

Potowomut Salt Marsh Restoration: Warwick

Award: \$3,186

Lead Organization: Rocky Hill School

The Rocky Hill School also received \$3,186 toward the Potowomut Salt Marsh Restoration project in Warwick. Over time, the creek has clogged, water is now impounded and short form *Spartina alterniflora* is prevalent.

The restoration project will reduce the amount of impounded water by excavating the clogged creek and allowing the marsh surface to drain. The long-term goal is to create conditions allowing the marsh surface to accrete. An additional benefit is the opportunity for school students to observe conditions in the marsh, using it as a living classroom.



Potowomut Salt Marsh restoration in Warwick

Narrow River Erosion Control and Habitat Enhancement: Narragansett

Award: \$28,493

Lead Organization: The Nature Conservancy and U.S Fish and Wildlife

The Council approved \$28,493 in partial funding to The Nature Conservancy and U.S. Fish and Wildlife for saltmarsh erosion control and habitat enhancement in Narrow River. The project partners will test a variety of treatments to evaluate their impact and effectiveness on erosion control. The techniques include using coconut fiber or coir logs and bags of

shell anchored to the river bottom to help dissipate vessel generated waves (VGW) that can erode the marsh edge. The restoration sites will span approximately 200 feet of shoreline, and each treatment (40-foot sections) will be tested repeatedly at different sections of the river.

RI BAYS, RIVERS and WATERSHEDS COORDINATION TEAM PROJECTS

In 2007 the general assemble 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. Through strategic coordination of government programs, the CT ensure the well being and sustainable use of Rhode Island's water and watersheds, increases the vitality of our marine economy and water intensive industrial sectors, and prepares Rhode Island for future environmental and socioeconomic imperatives. Additional information can be found at <http://www.dem.ri.gov/bayteam/index.htm>. Listed below are the Strategic Investments by the RI Bays, Rivers and Watersheds Coordination Team to Support a Comprehensive Water Monitoring Strategy for FY2013.

Cooperative Agreement with United States Geological Survey

As authorized by the RI Bays, Rivers and Watersheds Coordination Team (BRWCT), 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 2013 OSPAR contribution was \$250,000 contractual and the other funding came from the USGS match. During FY13, pursuant to the combined joint funding agreement, the OSPAR Fund supported the following three monitoring activities.

Streamflow Measurements: USGS operated and maintained 13 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 a number of programs including flood forecasting, drought management, water quality restoration, water management and permitting.

Groundwater Elevation Measurements: USGS collected monthly groundwater elevation readings from 19 observation wells located throughout RI. The data can have applicability to drought management, permitting and water management programs.

Large River Water Quality: USGS continued monthly sampling at five stations located on RI's three largest rivers. 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. Samples are 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.

OUTLOOK AND PROJECTIONS

OSPAR-related expenditures during FY2014 are expected to be similar to FY2013 absent any major spills and associated response needs. However, the office is looking to expand on the Geographic Response Plan (GRP) that was completed for the Upper Narragansett Bay / Providence River in the near future. The next phase will include completing the GRP for the lower Narragansett Bay and the eastern coastal areas. As a result of all these 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.

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.