

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

**Annual Report  
FY 2008**



**F/V Blue Sea Shipwreck  
May 19, 2008**

**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

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## **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 2008.

### **Revenues & Expenditures – FY2008**

The OSPAR account started FY 2008 with a balance forward of \$4,388,442. During FY 2008, the \$0.05 per barrel fee resulted in the collection of \$2,424,355 after the ten percent cost recovery fees. Personnel, operating and project expenditures for FY2008 totaled \$1,468,553 that included \$100,000 to CRMC for the Ten Mile River Fish Passage Project. The balance of \$6,812,797 minus personnel, operating and project expenditures for FY2008 of \$1,468,553 provided a FY2009 total beginning balance of approximately \$5,344,244. 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 2001.

## OSPAR FUND

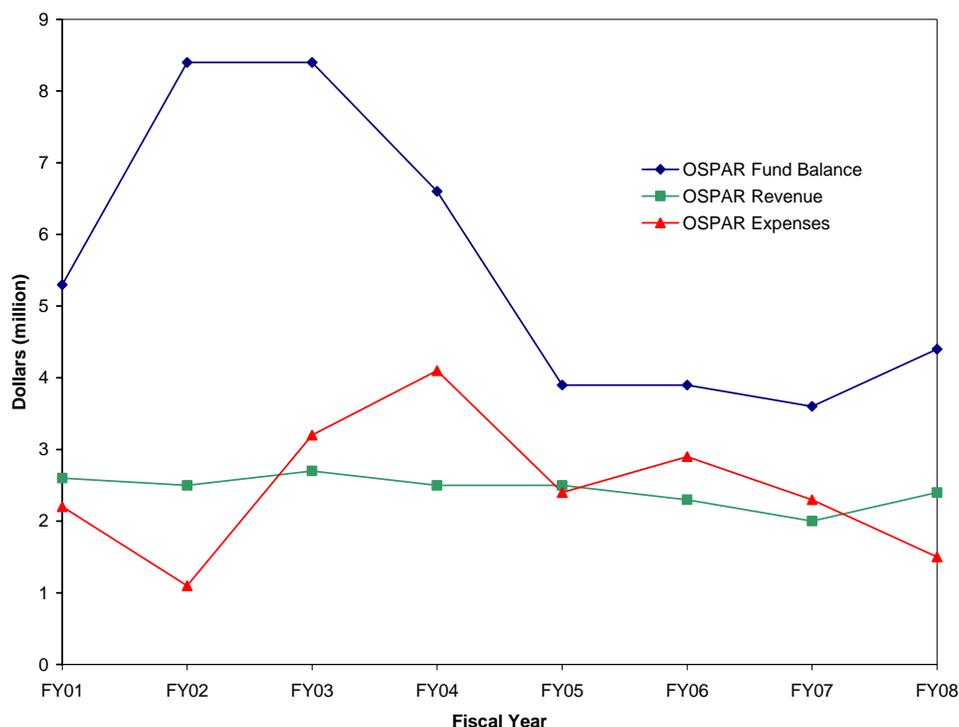


Figure 1. OSPAR Fund

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. This is partially explained by an increase in cost recovery from 7 percent to 10 percent. In FY2008 the downward trend has finally shown an upward response in revenue. The increased revenue might be explained by the reopening of the Motiva facility. Hopefully this trend will continue now that the pier is fully operational.

## ACTIVITIES– FY2008

### Summary

With regard to pre-spill preparedness, the OSPAR Fund was used in FY2008 for personnel and operating expenses. Personnel costs assigned to the OSPAR Fund included the following: Office of Emergency Response (full salaries of Emergency Response Administrator and a technical assistant) and partial salaries of five first responders; DEM GIS Supervisor (partial); staff from DEM Office of Waste Management. These salary and benefit costs totaled \$745,968. Major operating expenses charged to the OSPAR Fund included: vehicle readiness and maintenance

(\$188,473); emergency response equipment, maintenance, supplies and miscellaneous (\$52,005); computer hardware, software and telecommunications (\$6,439) and two emergency response vehicles (\$58,650). These operating expenses totaled \$290,537.

In FY2008 the Office of Emergency Response, 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 899 emergency response investigations undertaken by the Office during FY2008. The incidents comprised two primary categories, hazardous material responses and oil spills. Seventy percent of these responses, a total of 628 incidents, were related to oil spills.

Figure 2 tracks the number of emergency response activities for a thirteen year period. While there is some annual variation in the number of emergency responses, the trend of the data demonstrates a significant increase. Activities undertaken by the Department's emergency response team have, on average, increased since 1996, placing ever increasing pressure on the limited available response resources.

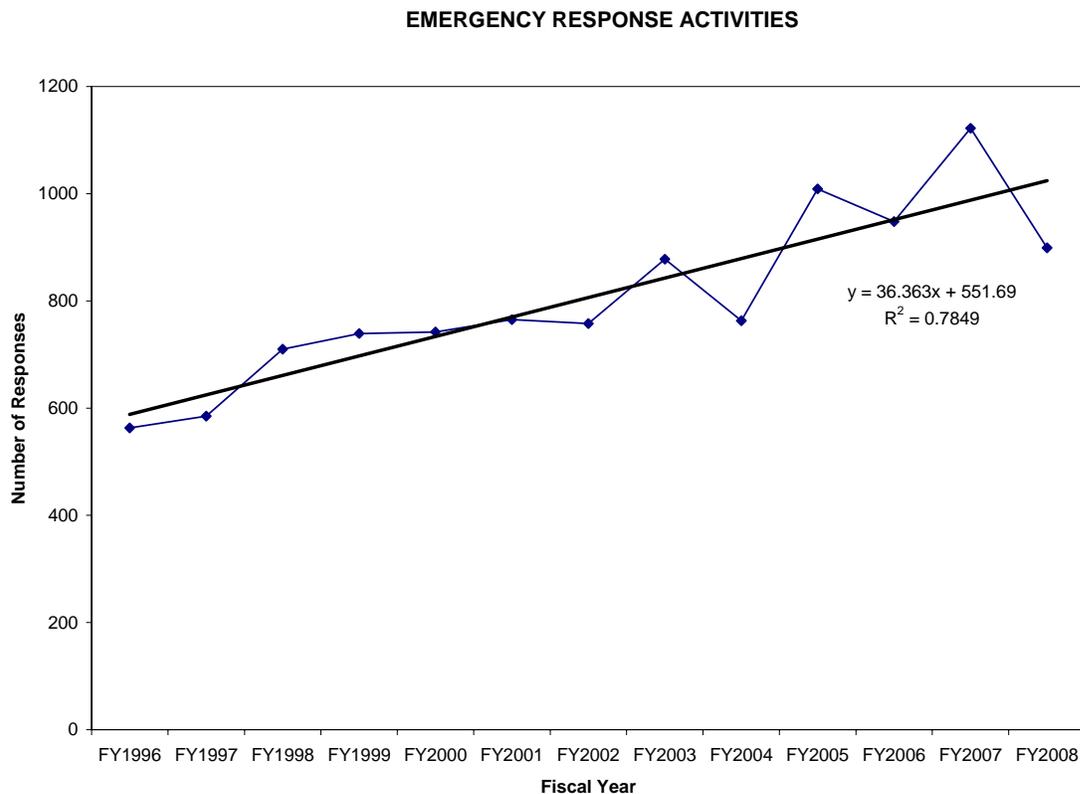


Figure 2. Response Activities

## **FY2008 EXPENDITURES**

### **Personnel**

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- Full salaries 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.
- Partial support of salary and benefits of DEM 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 locational 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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**\$ 745,968**

### **Major Operating Expenses**

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Vehicle Maintenance & Readiness	\$188,473
Cell phones, pagers	\$ 6,439
Supplies: Office, Scientific, Miscellaneous	\$ 15,030
Emergency Response Vehicle Purchase/Replacement	\$ 58,650
Equipment & Repairs	\$ 36,975

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**\$ 305,567**

### **Other Projects supported by the OSPAR Fund**

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Ten Mile River Restoration Project	\$ 100,000
Rivers, Bays & Watershed Coordination Team	\$ 240,650

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**\$ 340,650**

**Total OSPAR Expenditures**

**\$1,468,553**

## **OIL SPILL CLEAN-UP ACTIVITIES**

The DEM emergency response team responded to 628 oil spills during FY2008. The amount of oil products and oil spill debris remediated during these response activities is estimated to be 37,500 gallons of oil and 2,500 tons of oil spill debris.

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

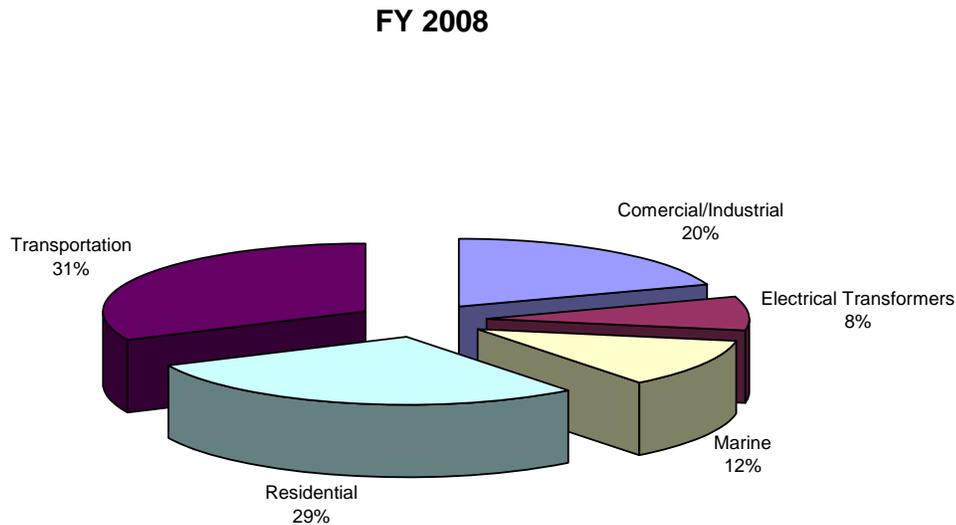


Figure 3. FY2008 Oil Spills by Category

The greatest percentage of spills, 31 percent, was related to transportation incidents. Residential oil spills comprised the next largest category accounting for 29 percent of department responses. Releases from residential heating oil tanks are extremely problematic. Cleanup can be expensive (particularly if the oil migrates into the subsurface) and many homeowner insurance policies do not provide coverage. 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 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.state.ri.us/dem/programs/director/emerresp/prevent.htm>. Commercial/Industrial spills accounted for 20 percent of the spill events in FY2008. Oil spills in Narragansett Bay comprised 12 percent of response activities. Spills from electrical transformers comprised 8 percent of the spill events. The category and percentage of spills has remained relatively constant.

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

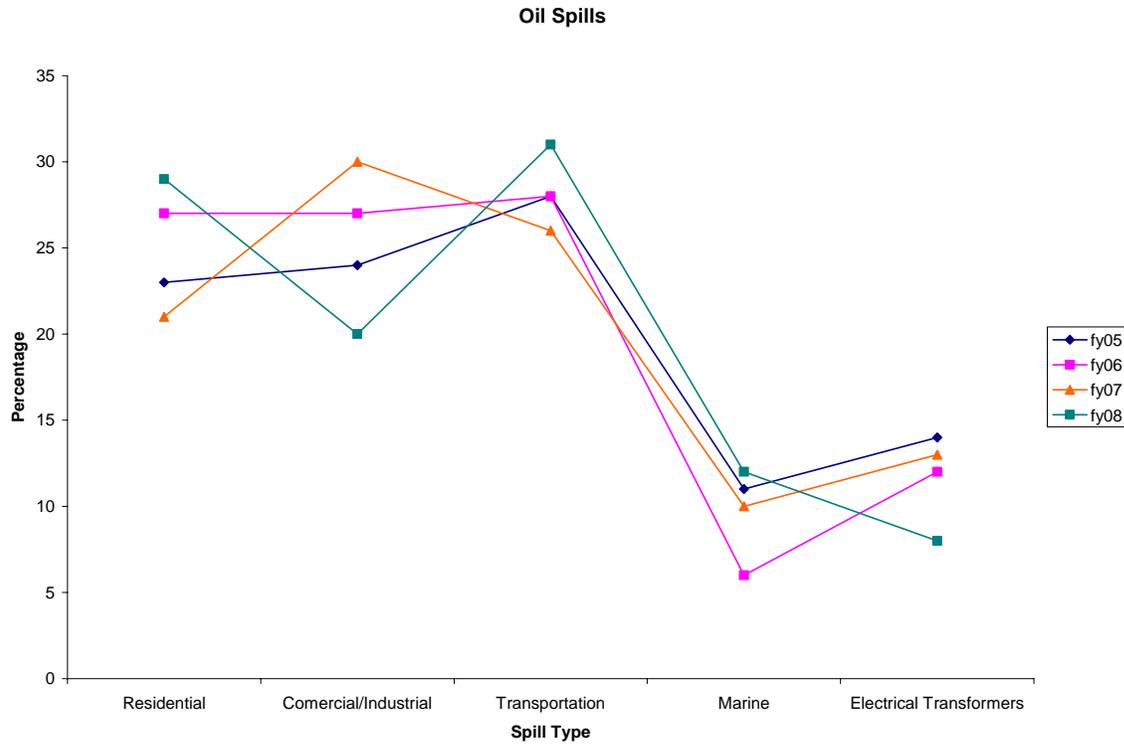


Figure 4. Comparison of Oil Spills FY2005, FY2006, FY2007 and FY2008

### F/V BLUE SEA GROUNDING

On Saturday May 19<sup>th</sup>, 2008 at about 3:00 AM the F/V Blue Sea ran hard aground approximately 100 yards east of United States Coast Guard Station (USCG) Point Judith at position 41.3625/071.4467. The vessel contained 3,000 gallons of diesel fuel and 500 gallons of hydraulic fluid. The 68 foot long western dragger was constructed of fiberglass with a single 6 cylinder diesel engine. There were six steel tanks, three on each side. Five of the tanks were for diesel fuel and the sixth tank contained hydraulic fluid. The tanks were not part of the hull and they had separate fill ports but one common PVC vent. At the time of the grounding the F/V was carrying 13,000 pounds of squid. The seas were about 3 to 4 feet with a wind from the southwest at about 15-20 knots.



Figure 5. F/V Blue Sea aground off of USCG Station Point Judith

The USCG and the DEM required that the Responsible Party (RP) Barbara Joan Fisheries, Incorporated develop a salvage plan for the vessel recovery and removal of the remaining petroleum on board. The RP hired Clean Harbors for pollution removal and Northeast Diving Services, Inc. to conduct underwater surveys and inspect the fuel tank vents. The marine surveyor was Marine Safety Consultants, Incorporated and Tucker Roy was contracted to potentially salvage the vessel using their crane barge.

The salvage and safety plan for day one was drafted by Northeast Diving Services with the intent of using air bags to refloat the vessel and tow it to Galilee with the Tug Otter. Northeast Divers also planned to seal the tank vents to prevent the release of fuel. The divers were able to survey the vessel and reported that the keel was missing in the bow area. As a result, it was impossible to utilize air bags and tow the vessel into Galilee. However, the PVC vents that ran up along the side of the cabin were sealed. The deck of the vessel was packed with oil absorbent booms and pads to capture oil released. At about 5:00 pm that day the salvage operation on the vessel was stopped since the cabin was breaking free from the deck making it to dangerous to operate on board the vessel. The vent lines also broke at the base of the cabin allowing seawater to enter the tanks.



Figure 6. Support line and transfer hose from shore to vessel.

During the final meeting of the day it was determined by unified command that a 110-yard line would be installed from shore out to the vessel to support a 2 inch transfer hose. The clean up contractor would deploy a diaphragm pump on board the vessel to pump the fuel ashore using a vacuum truck. Arrangements were being made to have all the equipment on-site for first light. It was also determined that Tucker Roy would have to bring a crane barge on-site to lift the vessel from the water.



Figure 7. F/V Blue Sea with support line and transfer hose.

The following day (May 20<sup>th</sup>) the F/V Blue Sea remained aground and was losing structural integrity due to the tide and wave action. The Tucker Roy crane barge was being delayed due to the unruly weather and waves out at sea. The conditions on-site were hampering the operations with strong swells that were 3 to 5 feet and winds out of the southwest at 5 to 10 knots. The vessel was being packed with absorbent pads and booms were deployed around the stern of the vessel. The observed oil sheen escaping the containment was being blown off shore and dissipating with the wind and current. The cleanup contractor hired by Marine Safety Consultants had all the required equipment on-site to begin fuel removal from the tanks that afternoon. The operation required a double diaphragm pump to lift the fuel from the tanks into the hose line where the vacuum truck could pull the oil into the vehicle stationed onshore. Approximately 2,100 gallons of oily water was removed from three of the five accessible fuel tanks. An estimated 200 gallons of diesel fuel was removed with the remainder consisting of oily sea water. The starboard side fuel tanks had dislodged from their tie downs and moved to unreachable locations under the deck. The decision was made at the evening meeting to discontinue oil pumping and concentrate on using absorbent materials to soak up recoverable oil in the hull before the vessel broke apart.



Figure 8. F/V Blue Sea inundated with waves.

On May 21<sup>st</sup> the vessel was showing signs of breaking into pieces with debris from the boat floating on the water and moving onto the shore north of the wreckage. A roll-off container was brought on-site and debris was manually being removed from the area to be deposited into the container. A second roll-off brought on-site was being used to store oil contaminated absorbent material for proper disposal. The plan for the morning was to put together shoreline contamination assessment teams (SCAT) made up of

USCG Southeastern New England personnel, Atlantic Strike Team members and DEM trained oil response employees. These personnel had completed NOAA SCAT training and have kept their credentials up to date. For more information on Shoreline Contamination Assessments see <http://response.restoration.noaa.gov>.



Figure 9. F/V Blue Sea partially submerged.

The teams were divided into two groups with one group covering the area south of the grounded vessel and another group covering the sector north of the vessel. The southern sector ran from the Point Judith Lighthouse to the south end of Roger Wheeler Beach and the northern sector was inspected from the vessel up to Ocean Spray Avenue. There were no signs of oil or vessel wreckage documented in the southern sector. SCAT personnel in the northern sector picked up vessel debris for disposal but no signs of oil were identified.



Figure 10. Crane Barge and Tug on scene.

On May 22<sup>nd</sup> the vessel remained aground and was being broken up by the wave action. The crane and salvage barges were anchored in the Harbor of Refuge until weather permitted bringing them onto the scene. The oil absorbent material in and around the vessel were changed out with clean absorbents. Tucker Roy personnel were able to conduct some work on board the vessel and had begun to pre-cut the rigging. Over the next couple of days Tucker Roy personnel removed the net reels, outriggers, "A" frame and the main gantry. However, they were unable to get the crane and salvage barges into position to remove the vessel due to the sea conditions. The work plan for the following day (Saturday) consisted of removing metal from the deck which included deck winches and a conveyer system on the stern so that the vessel could be guillotined into sections. The pieces and the tanks would be put on a barge and shipped to New Bedford.

On May 24<sup>th</sup> it was a sunny warm morning with calm seas. SCAT members went out early in the morning into the southern and northern sectors to identify oil sheens or pieces of the boat that had broken free. The teams did not notice oil or boat debris in either sector. At approximately 8:00 am the tug and barge had arrived on-scene from the Harbor of Refuge. A 9:00 am briefing was conducted with the USCG Captain of the Port, DEM and the responsible party as well as their contractors. The vessel removal and safety plan were provided at the meeting and once they were accepted the removal operation commenced. Divers picked up underwater wreckage and put slings on the tanks to raise them up out of the remaining portions of the hull.



Figure11. F/V Blue Sea and barge in containment boom.

The barge and vessel were surrounded with boom to capture any remaining oil on the vessel or in the tanks. All six tanks were removed and cutting began on some of the hydraulic lines to remove the fish conveyor which would lighten the weight on the vessel. Hydraulic fluid leaked from one of the lines and was immediately cleaned up by the contractor. A propeller shaft was removed along with the reduction box and the engine all in one piece. The first barge was filled with the pieces of the vessel and a second barge was brought over from the Harbor of Refuge. The crane barge was then retrofitted with a guillotine to cut the vessel into four sections so that it could be put on the empty barge. By 8:00 pm that night the four sections of the vessel had been loaded on the barge.



Figure 12. Salvage operations underway.

The following day netting, large pieces of fiberglass, other small items and four large D-cell batteries were removed. The barges then transported all the debris to New Bedford for recycling and disposal.



Figure 13. A large piece of the hull being lifted.

The responsible party reimbursed DEM for the expenditures regarding over-site and SCAT inspections conducted along the adjacent shorelines. The number of marine incidents has increased over the last few years so having the ability to utilize the OSPAR Funds in an emergency situation has been a great asset. The fund allows DEM to complete necessary work that will protect the environment without having to wait for a responsible party to make arrangements with contractors. This ability can save thousand of dollars for costs associated with natural resource damages assessed down the road.

## **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. In the last year 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 are still reviewing the possibility.

## **Training Activities**

The Emergency Response team continued to improve its response capabilities through training. During FY2008 team members continued to build on the all hazard model. Members of the Emergency Response team participated in courses and training in *Risk Response to Radiological Emergencies, Hazwoper Refresher Training, WMD Radiological/Nuclear Responder Operations, DEA Clandestine Lab Awareness Training*, as well as Weapons of Mass Destruction 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, *Homeowner Oil Spill Handling* for oil companies, *Chemical Safe Schools* for educators and *Environmental Health & Pesticide Safety Education* for the University of Rhode Island.

## **HABITAT RESTORATION PROGRAM**

Funding from the OSPAR fund is transferred to CRMC in accordance with RIGL § 46-23.1-3. The funding is in support of the Rhode Island coastal and estuarine habitat restoration trust fund. The following short project description is taken from the CRMC web site. Additional information can be found at <http://www.crmc.state.ri.us/>

### **Ten Mile River Fish Passage Restoration, East Providence**

The goal of this project is to restore habitat for several species of diadromous fish on the Ten Mile River system in East Providence, Rhode Island. Large numbers of anadromous river herring (alewives and bluebacks), American shad and catadromous American eels migrate inland from coastal waters each year, but obstructions such as dams impede migrants in reaching appropriate upstream habitat. According to the Atlantic Marine States Marine Fisheries Commission (ASMFC), harvest pressure and habitat loss are listed as the primary causes of any possible historic and recent decline in abundance of fish populations. The awarded funds will be used for labor and materials to construct Denil fishways and eel passages at Omega Pond Dam, Hunts Mill Dam, and Turner Reservoir Dam. The three new fishways will provide anadromous river herring and American shad access to valuable nursery and spawning habitat. The three new eel passages will connect the Ten Mile River with Narragansett Bay and provide prime fish habitat which was previously limited due to the obstructions.

## **RI BAYS, RIVERS and WATERSHEDS COORDINATION TEAM PROJECTS**

In 2007 the general assembly provided OSPAR funding to the RI Bays, Rivers and Watersheds Coordination Team. In FY2008, the Coordination Team made investments totaling \$240,650 in environmental and economic monitoring programs associated with its authority to expend OSPAR funds pursuant to RIGL 46-31.

### **Fixed- Site Network in Narragansett Bay**

The network was expanded by one station in 2008 (Sally Rock – Greenwich Bay) bringing the total to 13 locations: 7 buoys and 6 land-based sites. Eight of the 13 stations are maintained under an agreement between the DEM Office of Water Resources and the University of Rhode Island Graduate School of Oceanography. The remaining five stations are operated by network partners including the Narragansett Bay Commission (NBC) and Narragansett Bay National Estuarine Research Reserve (DEM/NOAA). The network is standardized on YSI equipment that uses sensors to measure water quality every 15 minutes, 24 hours per day. Data was reviewed weekly as part of DEM's tracking of Bay conditions during May-October. Datasets processed and posted to the web (2003-2006, 2007 pending). In 2008, an analysis of multiple years of data, led DEM to designate an additional 7.62 square miles of the upper bay region as impaired due to low dissolved oxygen.

### **Large River Water Quality Monitoring**

DEM maintained and expanded water quality monitoring on the State's largest rivers in 2008. Via a cooperative agreement with the U.S. Geological Survey, which was re-established in February 2007, six stations were sampled monthly on the Blackstone and its tributary the Branch River, the Pawtuxet and Pawcatuck Rivers. The sampling program measures 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. One station is monitored near the MA/RI state line on the Blackstone in order to help define pollutant contributions from the Massachusetts portion of that watershed. Three others 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.

### **Streamflow Gage Network**

A portion of the network of 28 continuous streamflow gages in RI was maintained in 2008. Installed in 2007, three permanent gage stations were operated by USGS under contract to DEM: Blackstone River at Pawtucket, Hunt River at Davisville, and the Pawcatuck River at Kenyon. Data from the gages are used by multiple agencies for a number of programs including drought management, water quality restoration, permitting etc.

### **Economic Monitoring**

The Rhode Island Economic Monitoring Collaborative, in collaboration with the RI Economic Policy Council, was funded to conduct a project to collect more detailed information on the size and performance of a portion of the water-dependent sectors of the RI economy. The data collected was designed to produce a value chain mapping of selected elements of the water-dependent sectors, including marine recreation and tourism.

## **OUTLOOK AND PROJECTIONS**

OSPAR-related expenditures during FY2009 are expected to be similar to FY2008 absent any major spills and associated response needs. 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 Acting Emergency Response Administrator, Chief Office of Emergency Response at 401-222-4700 extension 7129 or at [james.ball@dem.ri.gov](mailto:james.ball@dem.ri.gov).