Oil Spill Prevention, Administration and Response (OSPAR) Fund

Annual Report

FY 2001

Ninigret Pond as viewed from Arnold Farm, Charlestown

February 27, 2002

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July 1, 2000-June 30, 2001

Introduction

Rhode Island General Law 46-12.7-7 requires the director of the Department of Environmental Management to submit an annual report to the legislature describing the activities of the OSPAR fund in the preceding fiscal year.

As of June 30, 2001, the OSPAR fund had a balance of $5,343,478. The OSPAR fund balance brought forward into FY 2001 from FY 2000 was $6,550,868. The $0.05 per barrel fee assessed on petroleum products received at marine terminals by vessels whose point of origin is outside the state of Rhode Island resulted in the collection of $2,617,728. Total expenditures for FY2001 were $3,825,118 (table 1).

Table 1. OSPAR EXPENSES FY 2001

Personnel	**$551,166**
Includes:	
Environmental Response	$156,645
Environmental Response Overtime	$21,504
Enforcement Overtime (Penn 460)	$14,750
GIS	$32,500
Tire Removal	$11,033
Waste Management	$67.530
Administration (Admin. Env. Resp. & Exec. Asst.)	$193,261
Seasonal, Prudence Island	$14,675
Contractual Services	**$860,727**
Includes:	
Site Cleanup	($154,978)
Tire Removal	$979,537
Modeling (Penn 460)	$20,060
Shellfish Transplant	$16,108
Operating	**$799,225**
Includes:	
PORTS O&M (NOAA)	$250,000
Vehicle Readiness Maintenance	$163,571
Oil Skimmers Maintenance and Retrofit	$61,257
Vehicle Lease	$7,897
Vessel Purchase (4 Outboard Motors)	$53,992
Oil Storage Bladders	$20,685
Communications and Computers	$79,215
Gas Chromatograph/Mass Spectrometer (URI GSO)	$92,831
Land Purchase:	
60 Acres to Provide Coastal Pond Habitat Protection (OSPAR to be reimbursed from North Cape settlement)	**$1,614,000**
TOTAL:	**$3,825,118**

Activities

During FY 2001 activities included post-spill cleanup, pre-spill preparedness and restoration.

POST-SPILL CLEAN-UP

Penn 460 Spill

Five days after the start of fiscal year 2001 the emergency response preparedness and capabilities of the Department were tested. On July 5th the tank barge PENN 460 was holed by its tugboat during a maneuver to adjust the tow configuration. The breech of the tank barge resulted in the release of 14,000 gallons of number 6 fuel oil into the East Passage of Narragansett Bay. The oil impacted the shoreline of Aquidneck Island from Carr point to Coddington Cove. The greatest impact was at McAllister Point. A full-scale response by State and Federal Agencies was initiated. Resources at risk and shoreline impacts were continuously evaluated. DEM initially established a 4400-acre fishery closure. Concomitantly the department collected oil and environmental samples within the closure area. The analysis of these samples by the University of Rhode Island Graduate School of Oceanography and the computer modeling conducted by the department's contractor permitted the reduction of the closure area by 50 percent within two days. The closure area was further reduced to less than 180 acres within one week.

Boom and absorbent placement around Penn 460

The principle avian resource at risk was the resident population of Canadian Geese. DEM contacted Tri-State Bird Rescue to establish bird rehabilitations operations with DEM Fish

and Wildlife personnel. DEM staff captured 42 geese and 5 mute swans. Of the birds captured, 41 survived and were release back into the wild.

Shore line cleanup following the Penn 460 spill.

Oil recovery operations were initiated immediately and remained a prime focus throughout the spill response. The strategy was to recover as much oil as possible before the oil coalesced with the beach sand and cobble. Innovative recovery methods were developed to increase the oil recovery rate within the intertidal zone. At the completion of active remedial activities 13,000 gallons of oil/water mixture were recovered along with 232,000 pounds of oil soaked adsorbents. An area of McAllister beach that did not respond to recovery operations required the removal and replacement of 155 tons of beach material.

Heavy equipment used to re-suspend oil trapped in the intertidal zone.

The response to the Penn 460 oil spill revealed that the department and the state as a whole are much better prepared and capable to respond to marine oil spills than at the time of the North Cape oil spill. This is directly related to the preplanning effort and equipment acquisitions that have occurred since the inception of OSPAR. The Penn 460 incident reinforced many of the realities of oil spill response. First, marine oil spill response of even a relatively small incident requires considerable staffing and physical resources. This response required the utilization of nearly 90 DEM employees. Fortunately, the majority of response activities were completed within the week that followed. The response effort required by the DEM to a relatively small incident like the PENN 460 is significant. Sustaining a response of longer duration would have a serious consequence on other DEM responsibilities. One area of the Department's response effort that needs further refinement is communication. Communication both within a response organization and with the general public is a difficult task. At a national level, the area most identified during response critiques that needs improvement is communications. Internally the department is investigating ways to improve communication and to insure the maintenance of adequate communication during a manmade or natural disaster. External communications will take advantage of the web to provide near real-time information as possible. The department is also making some inroads in electronic data acquisition through the use of global positioning systems (GPS), digital photography and wireless Internet systems.

Rt. 37 Spill, Warwick/Cranston RI

While the Department was still addressing the aftermaths of the Penn 460 spill, one of the most dramatic Emergency Response events to occur in RI happened when an 8,000-gallon tank trailer overturned and caught fire on Rt. 37 on the Warwick/Cranston border. The plume of smoke could be seen for many miles. The fire was of such intensity that the tank trailer literally melted. Amazingly, there were no significant injuries related to the spill and subsequent fire. The DEM Emergency response team worked with local fire departments and the Coast Guard during the initial phases of the incident. Subsequent removal of contaminated material and monitoring of the Pawtuxet River was managed by the Department.

Davis Tire Pile Removal, Smithfield

The cleanup of one of Rhode Island's more infamous waste sites, the Davis tire pile in Smithfield was completed on December 20, 2000 when the last truckload of tires left the site. The Davis tire pile was once considered the second worst tire pile in the country and was considered the state's gravest environmental threat should a fire occur. During FY 2001, $979,536 of OSPAR funds was utilized to complete the project. The final removal count was 6,024,992 tires.

Royal Mills Spill Mitigation, West Warwick

The Royal Mills oil spill mitigation project was completed in January 2001 when OSPAR received reimbursement of $174,788 from the National Pollution Fund Center (NPFC). OSPAR provided the initial funding to conduct the project. OSPAR was then reimbursed through a claim submitted to the NFPC.

The project is an excellent model of how federal pollution response funds can be utilized to conduct spill prevention projects of state interest.

The process begins when DEM identifies, develops, and presents potential projects of state interest to the EPA New England Federal On-scene Coordinators (FOSCs) for funding using the Pollution Removal Funding Authorization (PRFA). After a potential project has been tentatively selected, DEM presents a scope of work to the FOSC. If the project is acceptable, the FOSC secures the PRFA and a cost ceiling is established. The DEM then acts as the FOSC subcontractor and manages and initially finances the project. To date, DEM has completed removal actions using this model at three abandoned facilities. The costs and magnitude of the projects have ranged from approximately $17,000 for the removal and remediation of 3300 gallons of oil and contaminated soils to $174,788 for the removal and remediation of 500,000 gallons of oil and contaminated soils.

Former Royal Mill Complex, West Warwick

In 2000 DEM secured a PRFA with the EPA for conducting remedial activities at the Royal Mills Complex. This was an extremely ambitious project. The complex spans both banks of the Pawtuxet River. It was once one of the largest textile mills in New England. Unfortunately the facility is currently abandoned. The mill complex contained several aboveground (ASTs) and underground (USTs) storage tanks that contained over 500,000 gallons of #6 oil and other distillate fuels. Following the failure of a down stream dam, a small oil sheen was observed seeping into the river. Up-gradient of the site, hidden in the woods, there was a nearly full 400,000-gallon AST that was constructed during World War II to insure that the mill had an uninterrupted fuel supply. This tank gravity fed three 23,000-gallon USTs. These three tanks supplied oil via underground piping that crossed the river and supplied a 15,000 gallon day tank. Several other independent ASTs and USTs containing approximately 10,000 gallons of #2 and diesel were discovered on-site. Investigation and analysis of the product contained in the 400,000 gallon AST revealed that some of the oil was useable #6 oil. Approximately 300,000 gallons of this oil was transported to a bulk terminal where it was blended and sold as fuel. The Department

received a credit for this oil, which offset some of the project costs. The cleanup included the removal of 123 tons of oil contaminated soil that was located under and around the three 23,000 gallon USTs, the disposal of 200,000 gallons of oil and the reuse of nearly 300,000 gallons of bunker oil.

Removal of USTs Up-Gradient of the Pawtuxet River

Cove Machine/ Woonsocket (EMC) Mills

On April 13, 2001, DEM personnel responded to a complaint of an oil sheen on the Branch River. The complaint was received on the eve of the opening of the trout-fishing season. The source was determined to be the former Cove Machine complex. The site was the location of an old textile mill that had burned down in 1990.

Cove Metals Tail Race, Harrisville

The Department initiated emergency response actions to contain the oil. An oil spill response contractor was retained by DEM to control the release. The department contacted the EPA Region 1 FOSC to begin the PRFA process and attempted to determine if there was a viable property owner. The origin of the release was determined to be two abandoned 30,000-gallon USTs located approximately 100 yards up gradient of the river. The release was the result of surface water runoff entering the USTs and floating the oil out of the tanks into below grade piping. The fuel migrated from the tanks through the rubble and into the mill tailrace. The investigation and remedial actions were complicated by the tons of debris in and around the former boiler house as well as the instability of the remaining mill structure. Over 100,000 gallons of oil/water were pumped out of the USTs and the surrounding groundwater. Approximately 518 tons of oil-contaminated soil was removed.

Removal of abandoned USTs, Cove Metals, Harrisville

Several days after the emergency response was initiated the owner of the property came forward and took responsibility for the cleanup. The responsible party (RP) directly paid the cost of the DEM contractor, which eliminated the need to use the allocated OSPAR funds. The RP assumed remedial activities and cleanup of the site under the DEM supervision. Eight drums of hazardous waste were also found on-site and were disposed of properly. The projected cleanup costs for the site will exceed $400,000.

On April 28, 2001, thirteen days after the initiation of the Cove Machine response, DEM personnel responded to a release of oil to the Peters River in Woonsocket. The investigation found that oil was migrating over the ground from a 15,000-gallon abandoned UST that had overfilled with surface water runoff. The site was a former mill, which had been destroyed by fire several years prior to the event. The site had been cleared of rubble and re-graded, however the UST adjacent to the boiler room was not removed.

Approximately, 1,300 gallons of # 4 oil was released to the ground surface, with 300 gallons of the black heavy oil directly impacting the river.

RIDEM Response Contractor Recovering Oil at EMC Mill, Woonsocket

As with the Cove Machine incident, DEM initiated a three-prong response: 1) Allocate funds for immediate cleanup and containment activity, 2) investigate legal ownership of the property, and 3) contact FOSC and begin initial stages of the PRFA process. The owner eventually came forward and took responsibility for departmental costs. Approximately 37,000 gallons of oil/water were recovered in and around the UST.

UST Removal, EMC Mill, Woonsocket

Over 25 cubic yards of oil-contaminated soil were removed. Two months prior to the release 6,000 gallons of #4 oil was removed from the tank. The RP did not complete the removal project at that time .The original cost quote to clean and remove the UST was $10,000.00. The final cost for the RP to cleanup the spill was in excess of $140,000.00.

PRE-SPILL PREPAREDNESS

PORTS

OSPAR continues to support the Narragansett Bay Physical Oceanographic Real-Time System (PORTS) that began operation in June of 2000. The system is operated by the National Oceanic and Atmospheric Administration (NOAA). PORTS is comprised of 5 monitoring stations located in Narragansett Bay that monitor stage of the tide, currents and weather. This data is reported every 6 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 www.co-ops.nos.noaa.gov/nbports/nbports.html. 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 are able to make decisions on vessel movements with real time information. Accurate information to make navigational decisions is extremely critical because it is not unusual for a vessel to have less than three feet of clearance between its keel and the bottom of the channel.

Department Preparedness

The department continues to upgrade spill response capabilities. During FY2001 the three JBF oil skimmers were upgraded to improve their ability to respond. In addition three oil storage bladders were purchased to compliment the skimmers. These bladders along with the skimmer modifications provide several storage options that will increase the efficiency of skimming operations. Collected material can be transferred to the storage bladder on the water or from the skimmer to shore. Two enforcement boats, which played an important role in the Penn 460 response, have been repowered. In addition, a boat, which will be used as a sampling platform, has been repowered and is currently stationed at the Narragansett Bay National Estuarine Research Reserve at Prudence Island. The need to have the ability to perform early sample collection and analysis during a spill event is one of the lessons learned during the North Cape spill and put into practice during the Penn 460 event. In an effort to improve and enhance this capability, the Department along with representatives from URI GSO and NOAA has formed a Science Committee to develop a scientific response team to be utilized in oil spill and other emergency response scenarios. As one of the first steps in improving our scientific readiness, a gas chromatograph/mass spectrometer (GC/MS) was purchased for the URI GSO Organic Chemistry Laboratory. The GC/MS is used to analyze samples for oil and there constituent chemicals. The immediate availability of this equipment provides a means to quickly evaluate the need and size of fishery closures. The equipment also provides valuable baseline information for any subsequent natural resource damage investigation by determining pre-impact water quality conditions.

RESTORATION

Quahaug Transplant

In May of 2001 the Department conducted seven quahaug transplants. Approximately 800,000 pounds of quahaugs from over crowded areas in Narragansett Bay were relocated to depleted areas and coastal salt ponds. The project was a cooperative effort between DEM, the Narragansett Bay Commission, the shellfish industry, volunteers and the Department of Health. Annual shellfish transplants have helped to restore quahaug populations and provide increased winter fishery. As part of the North Cape restoration, quahaugs harvested in Mill, Greenwich and Warwick Coves were transplanted to Quonochontaug, Winnapaug and Ninigret ponds.

Preservation, Arnold Farm, Charlestown

One of the most important OSPAR related projects occurred at the close of FY 2001. In June 2001, the 64-acre Arnold Family Farm on Ninigret Pond was permanently preserved under the terms of a conservation easement. The procurement of this easement was an important step to insure the health of the state coastal ponds. The protection of this acreage from development will preserve Ninigret Pond's vital role in sustaining marine life and shorebirds, and thereby help to reestablish the populations that were lost as a result of the North Cape spill. The OSPAR contribution to the purchase was 1.62 million dollars. The state will be reimbursed from the 18 million dollar North Cape natural resource damage assessment.

Coastal Habitat Preserved by the Acquisition of a Conservation Easement at Arnold Farm

FY 2002 PROJECTIONS

DEM will continue the natural restoration projects necessitated by the environmental damage inflicted by the North Cape oil spill. The type and costs of the restoration projects are part of the court order resolving the Natural Resource Damage claim, which will be administered jointly by DEM and its federal partners, NOAA and the US Fish and Wildlife Service.

DEM will continue to improve its ability to respond to oil spills and other incidents that endanger public health and the environment. In the aftermath of September 11th, the role of emergency responders has been redefined. Responders now must be prepared to not only face the aftermath of natural disasters and human error but also must be ready to respond in the in the wake of a terrorist attack. To meet these new challenges the Department is participating in Weapons of Mass Destruction and Domestic Preparedness Training. OSPAR funding will be utilized to provide a semi-annual high hazard oil spill response training and preparedness program for the DEM response team.

For further information regarding this report or the activities of OSPAR, please contact Michael Mulhare, RIDEM Environmental Response Administrator, at 401-222-4700 extension 7124 or at mmulhare@dem.state.ri.us.