

## Cleanup and Restoration Highlights at *Chalk Point, Maryland*

NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP) acts as a trustee on behalf of the public, to protect and restore natural resources injured by releases from waste sites, oil spills, and ship groundings.

### Site History

On April 7, 2000, a leak was detected in a 12-inch underground pipeline that supplied oil to the Potomac Electric Power Company (PEPCO) Chalk Point generating station in Aquasco, Maryland. Approximately 140,000 gallons of fuel oil spilled into Swanson Creek, a small tributary of the Patuxent River. The spill resulted in lost recreational use, damage to wetlands and beach shorelines, and injuries to muskrats, waterfowl and other birds, fish and shellfish, diamondback terrapins, and benthic organisms (living in and on river sediments).



An aerial photo of the PEPCO facility. The dark areas in the water indicate the presence of oil.



The wetlands assessment team samples the sediment to determine the presence of oil.

### *Success of Cooperative Assessment Process*

*The Trustees worked with PEPCO in a cooperative assessment process that facilitated an expedited settlement for the Chalk Point case. Funds from the settlement have been used to: create 6 acres of intertidal wetland, 5 acres of oyster reef sanctuary, and an acre of beach nesting habitat for terrapins; protect 1800 feet of shoreline; restore nesting habitat for the ruddy duck; and provide recreational fishing and boating improvements.*

### Assessment

The natural resource trustees (MD Department of Natural Resources, MD Department of Environment, U.S. Fish and Wildlife Service, and NOAA) conducted a Natural Resource Damage Assessment (NRDA) to determine appropriate types and amount of restoration needed to compensate for injuries to natural resources from

the spill. NOAA acted as lead trustee coordinating the damage assessment and restoration planning phases with all trustees.

After conducting multiple reviews and analyses, the trustees determined that oil affected the following resources:

- Wetlands – 76 acres lightly, moderately, or heavily oiled.
- Beaches – 10 acres of shoreline lightly, moderately or heavily oiled.
- Ruddy ducks – 553 estimated dead.
- Other birds – 143 estimated dead.
- Diamondback terrapins – 122 estimated dead and a 10% reduction in hatchlings for year 2000.
- Muskrats – 376 estimated dead.
- Fish and shellfish – estimated total biomass loss of 2,464 kg (5,432 lbs).
- Benthic communities – estimated total biomass loss of 2,256 kg (4,974 lbs).
- Recreational services – an estimated 125,000 trips on the river affected by the spill.

## Restoration

The trustees completed the following restoration projects to address the injuries:

### Ecological restoration

- Created 6 acres of intertidal wetland adjacent to Washington Creek, a tributary of the Patuxent River (NOAA implemented);
- Enhanced and protected shoreline by creating one acre of new beach and protecting 1800 feet of shoreline with a combination of sills and offshore breakwaters to compensate for injuries to beach and terrapins (NOAA implemented);
- Restored ruddy duck nesting habitat by converting marginally productive agricultural land in the Prairie Pothole Region of the midwestern United States into seasonal wetlands and protecting them with conservation easements. This project was done with the goal of enhancing ruddy duck populations that spend the winter in the Chesapeake Bay region and were affected by the spill (USFWS implemented); and
- Created 5 acres of oyster reef sanctuary in the Patuxent River and seeded it with native oysters to address injuries to fish, shellfish, birds, and benthic communities (NOAA implemented).

## Lost Recreational Use Restoration

Restoration efforts to compensate for 125,000 lost river trips include the following projects (all implemented by the Maryland Department of Natural Resources):

- Two new canoe/kayak paddle-in campsites on the Patuxent River (Prince George's and St. Mary's counties);
- Forest Landing boat ramp and fishing pier improvements (St. Mary's County);
- Nan's Cove boat launch improvements to an existing fishing pier (Calvert County);
- Recreational improvements at Maxwell Hall Natural Resource Management Area (Charles County); and
- Persons with disability-accessible kayak/canoe launch built at Greenwell State Park (St Mary's County).

In addition, two additional projects are being planned.

## Monitoring Report

Seven years after the 2000 spill, NOAA funded a field and laboratory study to assess recovery of the most heavily oiled interior marshes in Swanson Creek.

The results indicate about half of the marsh soils were still contaminated with oil to depths of 12 inches or more. Some of the residual oil was only moderately weathered, indicating very slow natural removal by flushing or degradation. About half of the marsh soils had enough oil to be toxic to benthic animals and adverse effects on vegetation were also observed.

These results will help NOAA and Co-Trustees make appropriate response and restoration decisions in the event of future spills in these kinds of sensitive habitats.



*Photo of beach construction taken in September 2005.*

## Further information

For further information about this case, contact [John.Collins@noaa.gov](mailto:John.Collins@noaa.gov) or visit the DARRP Web site at [www.darrp.noaa.gov](http://www.darrp.noaa.gov).

**For further information about DARRP, please visit**

**<http://www.darrp.noaa.gov>**

