

# Chalk Point/Swanson Creek Oil Spill

## September 2000 Status Report on the Natural Resource Damage Assessment

### Assessing the Injuries

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Week old great blue heron chick at Swanson Creek. Photo: Craig Koppie, U.S. Fish and Wildlife Service

#### Background

Trustees are assessing injuries to natural resources of the Patuxent River and Chesapeake Bay from the April 7, 2000, release of 126,000 gallons of oil from a ruptured pipeline owned by the Potomac Electric Power Company (Pepco). Trustees for the Chalk Point/Swanson Creek oil spill are the National Oceanic and Atmospheric Administration (NOAA), U.S. Fish and Wildlife Service (USFWS), Maryland Department of Natural Resources (DNR), and Maryland Department of Environment (MDE).

To evaluate the impacts of the oil released from the Chalk Point/Swanson Creek oil spill, natural resource trustees and Pepco are undertaking a number of studies to determine the oil's impact on the area's natural resources and associated services. These studies focus on wetlands, birds (including waterfowl, herons, ospreys, and eagles), wildlife (including terrapins, muskrats and other furbearers), aquatic resources (including fish, shellfish, and benthic organisms), and loss of use (including recreational fishing, boating and shellfishing). Data from these studies will help identify and evaluate projects for restoration

to address for losses and injuries resulting from the spill. The following studies are currently underway

#### Injury Assessment Studies

**Wetlands:** Injury to marshes is being quantified by: (1) using aerial photographs and shoreline observation information to map the geographic scope and extent of oiled wetland vegetation by species, physical setting, and degree of oiling, and (2) comparing the condition of oiled wetland vegetation to unexposed areas. This information will be used in a Habitat Equivalency Analysis (HEA), which is an analytical framework used to scale the amount of restoration needed to compensate for injuries to natural resources. The HEA method allows the selection of the restoration projects that provide equivalency between the quantity of natural resources and associated services lost due to the injury *and* the quantity of replacement services provided by the restoration projects.

**Birds:** Natural resource trustees are concerned about the potential effects of the oil on the reproductive success of birds that were nesting in the area when the spill occurred, including bald eagles, osprey, and great blue herons. Shoreline surveys provided an estimate of dead and oiled animals, which will be used to assess the injury to local populations of waterfowl species, particularly ruddy ducks, herons, ospreys, and eagles. Nests are also being monitored to determine impacts on the reproductive capacity of ospreys, great blue herons and bald eagles. Biweekly inspection of nests (from the spill date through August) will provide data on the number of live young and eggs.

**Wildlife:** Muskrat losses will be estimated from mortality counts, which will be compared to baseline information from historical surveys and local trappers. Estimates of injury and recovery time will be based upon the rate of recovery of the



marsh. In addition, natural resource trustees are evaluating options for assessing injuries to adult and juvenile terrapins. Efforts are underway to determine if terrapins continue to nest successfully in the spill area, and compare hatching success among oiled, unoled, and historical study areas. Assessment teams are walking the nesting beaches at least once a day to identify signs of nesting. Hatching success will be evaluated on beaches by enclosing nests with screening and making daily observations for emerging hatchlings.

**Aquatic Resources:** Fish and shellfish injuries will be determined by reviewing historical data on the composition and relative abundance of species in the spill area and comparing this information to literature values for expected effects. Water chemistry analyses conducted after the spill will provide information on petroleum aromatic hydrocarbons (PAH) levels in the water column, which can be used to estimate injuries to aquatic resources. Natural resource trustees are also sampling sediments in the marshes and intertidal areas to determine whether any oil-related differ-

ences can be detected. The sampling sites were chosen because they were exposed to different quantities of the released oil. Work has also been initiated to determine impacts on the benthic communities in the subtidal reaches of Swanson Creek and the Patuxent River.

**Lost Use:** The assessment of lost human use for the Chalk Point oil spill will cover recreational fishing and boating, as well as public and private shoreline use (including swimming, picnicking, wildlife viewing, etc.). Historical visitor counts for several sites have been collected, including sites within and beyond the spill zone. Videotaped overflights are in progress and will assist in capturing data for sites where no records have been obtained. Once initial results are compiled, the benefits and costs of additional assessment activities will be evaluated.

Using the information from these studies and other resources, trustees will develop a draft Restoration Plan that will be available for public review and comment by the summer of 2001.

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Trustees work on behalf of the public to restore natural resources injured by releases of oil and hazardous materials. For additional information about the Chalk Point/Swanson Creek oil spill, please contact

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