

Joint Information Center Swanson Creek Bulletin Final Edition

Summer 2003



Photo by Rick Giammaria courtesy of Pepco Holdings, Inc.

Site of pipeline rupture in marshland bordering Swanson Creek. Photo taken September 4, 2001.

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All Zones Meet Phase II/Provisional Cleanup Guidelines – Cleanup Operations End

On April 7, 2000, approximately 140,000 gallons of oil were spilled into Swanson Creek, a tributary of the Patuxent River. The source of the spill was a rupture in an oil pipeline, operated by Support Terminal Operating Partnership (ST Services), which supplied oil to the electric generating facility at Chalk Point, then owned by the Potomac Electric Power Company (Pepco). As the result of a severe storm on the evening of April 8, 2000, the oil escaped from multiple containment booms, entered the Patuxent River, and traveled approximately 17 miles downstream.

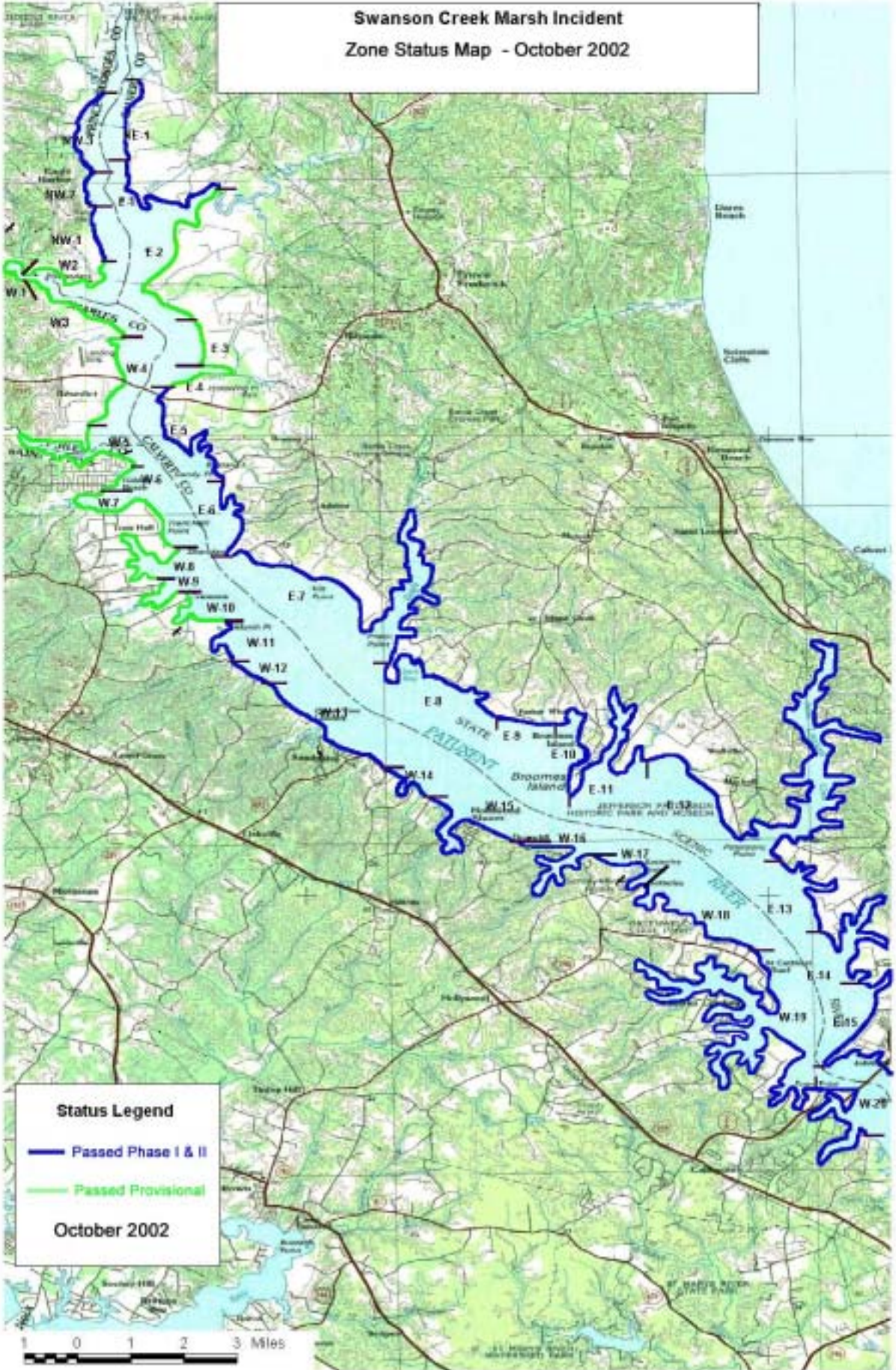
A geographical area was mapped out for Shoreline Cleanup Assessment Team (SCAT) inspections and was divided into 53 zones, which included areas north of the Chalk Point Generating Station downriver to the Chesapeake Bay (see Zone Map on page 10). Emergency spill response and cleanup, led initially by the U.S. Coast Guard and then the U.S. Environmental Protection Agency (EPA), with major involvement of Pepco and ST Services, the Maryland Department of Environment (MDE), The Maryland Department of Natural Resources (MDNR), the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA), began within hours of the spill. Cleanup efforts during the emergency phase of the project included boom deployment and maintenance, skimming and pumping of mobile oil, swabbing, trenching, pressure washing, raking, and removing oiled vegetation.

On May 16, 2000, the emergency response phase of the cleanup was complete and activities focused on continued SCAT inspections and follow-up natural resource trustee (NOAA, USFWS, MDE and MDNR) inspections. These inspections identified areas within the 53 zones which could benefit from additional cleanup. The identified areas were worked during the spring, summer, and fall of 2000, 2001 and 2002.

As a result of this intense inspection and cleanup process over the three-year period, all 53 of the zones passed the Phase I Cleanup Guidelines (free of substantial mobile, liquid or black oil), and 40 of the 53 zones have passed the Phase II Cleanup Guidelines (no rainbow sheen on the sediment, soil, or water). Oil that produces a silver sheen may be present and will be allowed to degrade naturally. As a result of the cleanup status within Swanson Creek, the long-term boom and supporting pilings were removed.

The 13 remaining zones have passed the Phase II Provisional Guidelines (see Zone Status Map on page 3). These contain environmentally sensitive areas, such as marshes, that present a cleanup challenge, and are more difficult to clean using mechanical/manual cleanup techniques without the likelihood of causing more environmental harm than good. For these zones, a Provisional Approval procedure has been incorporated which allows the portions of the zones that meet the Phase II criteria to be signed off as complete and places the remaining portion/s of the zones into a long-term monitoring program. These long-term monitoring areas were identified using detailed GPS coordinates, notes, and maps and will continue to be monitored on a regular basis until these environmentally sensitive areas heal on their own through natural ecological processes. Once these areas are judged to meet the Phase II cleanup criteria, natural resource trustee inspections will be conducted to validate that Phase II Cleanup Guidelines have been met.

Swanson Creek Marsh Incident
Zone Status Map - October 2002



Cleanup Transitions into Long-Term Monitoring Program

Upon completion of active cleanup operations, a Long-Term Monitoring (LTM) Program was established to periodically assess designated areas for the presence of residual oil from the April 2000 oil spill from the Chalk Point facility. The LTM Program incorporates the results of the Site Characterization Study, the Biostimulation Program and Shoreline Assessments into an all-inclusive monitoring program. Objectives of the Long-Term Monitoring Program are as follows:

- Assess the persistence of residual oil from the April 2000 oil spill in the intertidal and subtidal sediments in the Patuxent River and its tributaries through sampling and hydrocarbon analysis;
- Collect and analyze bivalves in Swanson Creek to measure long-term water quality;
- Assess potential long-term toxicological effects of the residual oil and demonstrate protection of the environment;
- Visually monitor oiled intertidal zones along the Patuxent River and tributaries that have received Provisional Phase II Approval and continue to evaluate these areas against the Phase II criteria.

Intertidal/subtidal sample locations were selected based on the results of the Site Characterization Study. Out of 46 stations that were analyzed for the released oil during the Site Characterization Study, three areas exhibited signs of residual oil and were recommended for the long-term monitoring. Intertidal/subtidal sediment sampling will be conducted at sampling stations in Swanson Creek, Trent Hall Creek and Indian Creek. A sample collection station on the Patuxent River and north of Swanson Creek has been added to provide reference sediment data.



Photo by Rick Giammaria courtesy of Peppo Holdings, Inc.

Subtidal sampling.

The LTM Program will also include monitoring of marsh sediments in Swanson Creek Marsh in and around the actual location of the pipeline break. The long-term monitoring of the marsh sediments will continue to assess the break down of oil in sediments that were treated with nutrients during the biostimulation activities. Eight stations within Swanson Creek Marsh that received nutrients have been selected. These stations represent the heaviest-oiled locations and have demonstrated the highest levels of total petroleum hydrocarbons (TPAH) over time. Marsh core sediment sampling in Swanson Creek Marsh will also be included in the long-term monitoring program. Ten stations will be monitored to further assess the break down of oil and conditions of subsurface sediments within the marsh. The vegetation in and around the marsh core sediment samples will also be evaluated as part of the monitoring program. Stem height, stem density, plant condition and aerial coverage will be evaluated in conjunction with the sediment chemistry data collected.

Water column sampling was conducted in the Patuxent River and its tributaries during the previous Site Characterization Study. Results from the water column sampling showed PAH levels to be below regulatory guidelines and therefore not included in the long-term monitoring program. Due to some concerns of the natural resource trustees that the discrete water column sampling conducted earlier may have missed the periodic presence or release of oil in the water column due to variable environmental conditions (i.e. storms or hot weather), bivalve sampling in Swanson Creek was added to the monitoring program. Bivalve species (*Rangia cuneata*) will be collected from both the upper and lower portions of Swanson Creek for PAH analysis. This analysis will provide a long-term measure of water quality and provide a comparison with established local reference analytical data.

The last part of the long-term monitoring program will include qualitative monitoring of the zones that have received Provisional Approval under the Phase II inspection process. The areas to be monitored have not met the Phase II criteria but no further cleanup operations can be conducted without causing damage to environmentally sensitive areas. The monitoring will be based on modified shoreline assessment procedures and will characterize existing oil conditions by means of visual observations. The monitoring locations have been established as a result of Phase II trustee inspections and documented in a Provisional Approval package. The established Phase II cleanup criteria will serve as the endpoint criteria for the qualitative monitoring program. Closure of the monitoring locations will require an inspection be conducted by the trustees and final approval by the Unified Command.

Completion endpoints have been established for the different monitoring programs and are further described in the approved Swanson Creek and Patuxent River Long-Term Monitoring Plan dated April 2002. The monitoring data will be evaluated against the established endpoints and presented in an annual Long-Term Monitoring Report. Long-term monitoring stations that meet endpoints for two consecutive monitoring events will be proposed for closure in the annual report.



Photo by Rick Giammaria courtesy of Pepco Holdings, Inc



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Celebrating the Seeds of Restoration

On December 12, Congressman Steny Hoyer joined officials from the trustee agencies (the National Oceanic and Atmospheric Administration (NOAA), United States Fish and Wildlife Service (USFWS), Maryland Department of the Environment (MDE) and Maryland Department of Natural Resources (MDNR), Pepco, the Governor's Oil Spill Citizens Advisory Committee, and local and national media to celebrate the start of restoration for the Patuxent River oil spill. The event took place at the Greenwell State Park Manor House—site of one of the 11 projects described in the trustees' *Restoration Plan and Environmental Assessment*. This plan provides results from the natural resource damage assessment underway since the April 2000 oil spill and describes—

1. The resources and recreational services affected by the oil,
2. The studies conducted to assess these injuries, and
3. The restoration projects to restore the injured resources and compensate the public for lost recreational services.

The restoration plan “is the first step toward making the river and its environs whole once again. I want to thank the Trustees for their hard work and tireless efforts in crafting this plan, and express my confidence that the specific projects it contains are appropriate, well-planned, and should be embraced by the community,” commented Congressman Steny Hoyer.



From right, Congressman Steny Hoyer, James Mahoney, NOAA Deputy Administrator and former State Senator Bernie Fowler, Chair, Governor's Oil Spill Citizens Advisory Committee.

The event marked the conclusion of the damage assessment—a cooperative effort among the trustee agencies, the responsible parties Pepco and ST Services, and the affected public. Other speakers at the event included Bernie Fowler (Chair, Governor's Oil Spill Citizens Advisory Committee), Chuck Fox (then-Secretary of the Maryland Department of Natural Resources), James Mahoney (Assistant Secretary of Commerce for Oceans and Atmosphere and NOAA Deputy Administrator), and Jim Potts (Vice President of Safety and Environment, Pepco Holdings, Inc.).

Trustees are now working on implementing the restoration projects listed below (see map on page 9 for the locations of the projects). Pepco and ST Services, the respective owner and operator of the pipeline, will pay \$2.7 million to fund the restoration.

Restoration Projects

Create roughly six acres of intertidal marsh adjacent to Washington Creek, a tributary of the Patuxent River. This wetland will be similar to those impacted by the spill and provide habitat for juvenile fish, shellfish, birds, and mammals; improve water quality by filtering sediments and other pollutants from the water column; and provide storm surge and flood protection.

Form one acre of beach habitat to benefit diamondback terrapins and other organisms.

Acquire perpetual protective easements in areas of the Prairie Pothole Region of the Midwest. Ruddy ducks breed in wetlands located in the Midwest and southern Canada and migrate to the Chesapeake Bay to spend the winter. Restoring and protecting their nesting habitats will enhance ruddy duck populations in the Bay.

Create roughly five acres of oyster reef sanctuary in the Patuxent River to address injuries to fish, shellfish, birds, and benthic communities. Oyster reefs enhance benthic communities, increase aquatic food for fish, birds, and waterfowl, and improve water quality by filtering out sediments and pollutants from the water column.

Improve recreational opportunities by the following actions—

- Create two canoe/kayak paddle-in campsites on the Patuxent River (one in Prince George's County and one in St. Mary's County),
- Establish a disabled-accessible kayak/canoe launch at Greenwell State Park in St. Mary's County,
- Improve recreational opportunities at Maxwell Hall Natural Resource Management Area in Charles County,
- Improve the Forest Landing boat ramp and replace the existing fishing pier in St. Mary's County,
- Rebuild a boardwalk and provide canoes for a river education program at King's Landing in Calvert County,
- Establish boat access at Nans Cove in Calvert County, and
- Build a fishing pier at Cedar Haven in Prince George's County.

Injured Resources and Services

The projects above address the resource and recreational injuries that were identified by trustees, Pepco, and the public during the damage assessment. After data review and analyses, trustees estimated that the oil injured the following—

- Wetlands - 76 acres lightly, moderately, or heavily oiled
- Beaches - 10 acres lightly, moderately, or heavily oiled
- Ruddy ducks and other birds - 696 dead
- Diamondback terrapins - 122 dead and a 10% reduction in hatchlings during 2000
- Muskrats - 376 dead
- Fish and shellfish - 5,432 lbs. lost
- Benthic communities - 4,974 lbs. lost
- Recreational services - 125,000 river trips impacted

The *Restoration Plan and Environmental Assessment* and relating documents can be accessed at the Maryland Department of Natural Resources Information Resource Center—Carter Library, the NOAA Damage Assessment Center (addresses are listed on page 12) or on the web at www.darp.noaa.gov/neregion/chalkpt.htm. For more information about the restoration projects, please contact John Collins at NOAA (301) 713-0174 x198 or John.Collins@noaa.gov

Citizens Advisory Committee Wraps Up Work

The Patuxent River Oil Spill Citizens Advisory Committee, appointed by former Governor Parris Glendening to assist with the natural resource damage assessment and restoration planning, completed its report to the Governor in December 2002.

The report reiterated the Committee's findings in its July letter to the trustees that "...the clean-up work undertaken by Pepco to date and the ecological restoration projects put forth by the Trustees address the damages identified by scientific investigation of the oil spill," noting that "the Natural Resource Trustees...have done a thoroughly professional and comprehensive job in accordance with their obligations under the OPA."

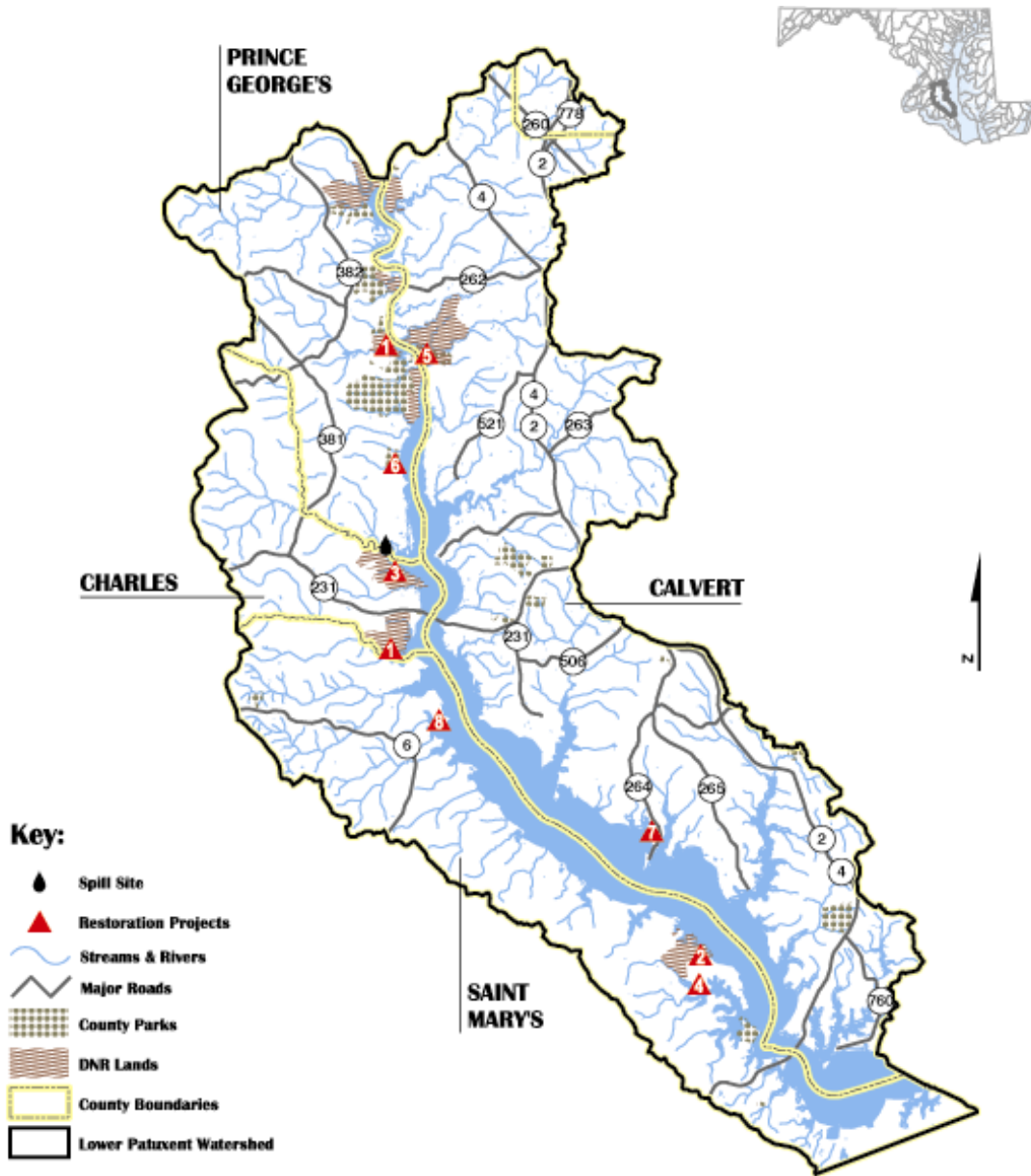
The report noted that the trustees responded favorably to the Committee's recommendation to add a recreational project in Calvert County – a canoe/kayak launch at Nan's Cove. Finally, the report expresses the Committee's satisfaction in the passage of improved pipeline oversight legislation in 2001, a bill sponsored by Committee member Senator Roy Dyson, to which its testimony contributed.

In one of his final acts as Governor, Mr. Glendening addressed letters of appreciation to each member of the Committee, and to Chairman Bernie Fowler. The Governor's letter read in part: "The cleanup of this disaster could have been another disaster. It wasn't. Indeed, the cleanup and restoration was a triumph, and showed that Maryland's citizens, whether they come from the public or private sector, can successfully overcome almost any obstacle, when people like you are willing to give of themselves, pitch in and do whatever needs doing."



Photo by Rick Giammaria courtesy of Pepco Holdings, Inc.

Members of the Governor's Oil Spill Citizens Advisory at a community meeting (from right) former State Senator Bernie Fowler, Chair and Sally Jameson, recently elected, Maryland State Delegate.



Patuxent River Oil Spill Restoration Projects

Watershed Management & Analysis Division
Chesapeake & Coastal Watershed Service



Map Key

- (1) Canoe/ Kayak Paddle-in Campsites at Milltown Landing and Indian Creek NRMAs
- (2) ADA-Accessible Kayak/ Canoe Launch at Greenwell State Park
- (3) Maxwell Hall NRMA Recreational Improvements
- (4) Forest Landing Boat Ramp
- (5) King's Landing Boardwalk and River Education Project
- (6) Cedar Haven Fishing Pier
- (7) Boat Access at Nan's Cove
- (8) Tidal Marsh Creation and Shoreline Beach Enhancement, Washington Creek

Zone Map





Photos by Rick Giammaria courtesy of Pepco Holdings, Inc.

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Information Resources:

Maryland Department of Natural Resources
Information Resource Center—Carter Library
580 Taylor Avenue, B-3
Annapolis, MD 21401
410-260-8830

Hours of Operation:
Monday-Friday 8:00am - 4:00pm

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Hours of Operation:
Monday-Friday 8:30am - 5:00pm