

# Restoring Wildlife Habitat at Great Swamp National Wildlife Refuge

## *Natural Resource Damage Assessment and Restoration Program*



### The Problem

Six acres of the National Wilderness Area of the Great Swamp National Wildlife Refuge (Refuge) were declared part of a Superfund site. The site was formerly a privately-owned wooded and wetland tract where open dumping, landfilling, and burning of household, industrial, and asbestos-containing waste was conducted for many years prior to the U.S. Fish and Wildlife Service (Service) taking possession of the land in 1968. In addition to asbestos-containing waste, metals, and numerous drums of chlorinated solvents and other organic wastes were found.

### Natural Resource Damage Assessment and Restoration Program

When hazardous substances enter the environment, fish, wildlife, and other natural resources can be injured. The Department of the Interior, along with State, Tribal and other Federal partners, acts as “trustee” for these resources. Trustees seek to identify the natural resources injured and determine the extent of the injuries. Trustees work with the responsible parties to carry out restoration activities, or recover funds from responsible parties to carry out the restoration activities. These efforts are possible under the Natural Resource Damage Assessment and Restoration Program (NRDAR), the goal of which is to restore natural resources injured by oil spills or the release of hazardous substances.



*Restoring vernal pool habitat benefits many wetland dependent species including the blue spotted salamanders.*

### Highlights

- Acquired 169 acres of important wildlife habitats;
- Constructed over 1/2 mile of new ADA accessible boardwalks at the Refuge; and
- Controlled over 110 acres of invasive species.



*Restored vernal pool at the Great Swamp National Wildlife Refuge*

### Restoring the Resources

In 1993 the Service received a settlement of approximately \$3.4 million from a court-ordered Natural Resources Damage Assessment and Restoration (NRDAR) bankruptcy settlement with the National Gypsum Company. This settlement was designed to ensure that the waste generator paid for degradation of natural resources. a comprehensive restoration program was launched in November 2001, when the New Jersey Ecological Services Field Office and the Great Swamp National Wildlife Refuge implemented a broad-scale Restoration Plan. The main goal of the plan was to restore, replace, or enhance the natural resources and their services lost or impaired due to disturbance that was created by the OU3 site. The plan stressed land acquisition, invasive plant species control, enhancement of vernal pools and replacement of habitat and public access.

### *Vernal Pool Restoration*

More than 100 vernal pools have been mapped and 25 have been restored in order to maintain this unique but fragile habitat on the Refuge. The unique and highly sought after Great Swamp National Wildlife Refuge Watershed Natural Resource Restoration Assistance Project is empowering Refuge partners (such as the Ten Towns Great Swamp Watershed Management Committee and its members, Great Swamp Watershed Association, Somerset County Park Commission, New Jersey Conservation Foundation, and the Harding Land Trust) to complete eight restoration projects throughout the watershed through a competitive application and review process. These valuable restoration projects that would have otherwise gone undone, will be completed because of the program. The Service restoration Plan allocated \$350,000 toward this effort, to which the partners leveraged \$190,000 of funds or in-kind services bringing the total value of combined restoration projects to \$540,000.



### Land Acquisition

Over 160 acres of land have been added to the Refuge. CAN YOU SAY MORE HERE? WHAT KIND OF HABITAT? WHO IS IT GOOD FOR?

### Invasive Species Removal

Restoration funds have aided in the control of over 110 acres of invasive species and more work is planned for the coming year. Approximately 17 acres of impervious cover and nearly 1,600 tons of demolition debris have been removed from the refuge by biological control, mechanical harvester, and pesticide application. The 17 acres were replanted with desirable and sustainable vegetative communities. A major portion of that 1,600 tons of demolition debris, over 425 tons of concrete and 275 tons of asphalt, were recycled rather than disposed of in a landfill. The remaining debris was screened for metals and other recyclable materials prior to disposal.

### Public Use

Over a half-mile of new boardwalks, constructed with recycled materials, have been added to the Refuge's Wildlife Observation Center, located just 26 miles west of New York City, bringing wildlife closer to public view. Over 100,000 visits per year are now made to the Wildlife Observation Center boardwalk and trail system.

### Thanks to Our Partners

Without the help of the numerous partners restoration (DO YOU WANT TO NAME THEM?) at the Great Swamp National Wildlife Refuge would not have been possible.



USFWS



USFWS

*Biological control of purple loosestrife is successful after several years of Galerucella ("purple loosestrife beetle") influence in the Refuge's management pools.*



William Majoros

USFWS

*Land acquisition, restoration, and invasive plant removal benefit many species including Snowy Egret.*



*Over 1/2 mile of boardwalk was built to replace lost public use.*

### For additional information or questions contact:

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