

National Fish and Wildlife Foundation

NFWF/Legacy Grant Project ID: 0603.09.018621

Chesapeake Bay Small Watershed Grants 2009 - Submit Final Programmatic Report (Activities)

Grantee Organization: Ducks Unlimited, Inc.

Project Title: Restoring Delaware's Chesapeake Bay Resources

**Project Period** 08/01/2009 - 08/31/2011  
**Award Amount** \$20,332.50  
**Matching Contributions** \$19,742.00  
**Project Location Description (from Proposal)** Two wetland restoration projects in Sussex County, Great Cypress Swamp (38.493611, -75.315833) and Newton Woods II (38.76444, -75.59), lie adjacent to the Pocomoke and Nanticoke Rivers, respectively.

**Project Summary (from Proposal)** Restore 457 acres of forested wetlands in the Chesapeake Bay watershed region of Delaware. Project will expand a coalition of non-governmental organizations and federal agencies committed to improving water quality and wildlife habitat.

**Summary of Accomplishments** The successful restoration of 444 acres of floodplain forests and 86 acres of Atlantic white cedar accomplished several important objectives. First, the newly installed earthen plugs and water control structures have already resulted in significant inundation during winter and spring. These improvements increase flood retention, water filtration, and wildlife habitat. Second, Restoring Delaware solidified partner support and secured political attention. A multitude of federal, state, and non-governmental partners participated in all or some aspects of the restoration. Several partners (Ducks Unlimited, the Nanticoke River Watershed Conservancy, Delaware Department of Natural Resources and Environmental Control, and the U.S. Fish and Wildlife Service) hosted a press event at the Newton Woods II site. The event featured presentations by Rep. Dave Wilson (Delaware House of Representatives, 35th District), Dave Saveikis (Director, Delaware Division of Fish and Wildlife), and others. The event served as a platform for public outreach and education, featuring a sizable press corps and wetland adoption by a local high school group (Fig. 5). Partners anticipate that this project will serve as a catalyst and model for similar efforts elsewhere in the state.

**Lessons Learned** Restoring Delaware required extensive collaboration and coordination between natural resources professionals and programs and the public at-large. The innovative yet functional approach is a direct result of the outstanding partnerships developed in support of the project. Restoring Delaware offers a valuable lesson in communication between multiple agencies.

Conservation Activities	Restore hydrology and function to at least 457 acres of floodplain forests
Progress Measures	Acres of wetland habitat improved
Value at Grant Completion	460
Conservation Activities	RE-establish 84 acres of globally-rare Atlantic White Cedar
Progress Measures	Acres of wetland habitat improved
Value at Grant Completion	86















## Chesapeake Bay Stewardship Fund Final Programmatic Report Narrative

**Instructions:** Save this document on your computer and complete the narrative in the format provided. The final narrative should not exceed ten (10) pages; do not delete the text provided below. Once complete, upload this document into the on-line final programmatic report task as instructed.

### 1. Project Description.

*Briefly describe your project, including a description of the problem your project is trying to address, the project's objectives and strategies, as well as the project location, and a characterization of the watershed and the relevant characteristics of the community's natural resources, population, and economy.*

Restoring Delaware's Chesapeake Bay Resources (*Restoring Delaware*) consisted of two wetland restoration sites: Great Cypress Swamp (38.493611, -75.315833) and Newton Woods II (38.76444, - 75.59). Both are located in Sussex County, Delaware, adjacent to the Pocomoke and Nanticoke Rivers, respectively.

The Great Cypress Swamp is the largest remaining tract of contiguous forest on the Delmarva Peninsula. It has suffered greatly from hundreds of years of non-sustainable forestry practices and several decades of ditching, both of which have resulted in a landscape that is unrecognizable from its original forested wetland state. Consequently, only remnant cedar-cypress tracts remain on the property. *Restoring Delaware* has helped to restore the historic wetland functions within the most heavily-ditched portion of the Cypress Swamp.

The Newton Woods II site is located along the upper reaches of the Nanticoke River, which in that section has been channelized and is used as a tax ditch. The channelization created spoil pile mounds along the length of the river and effectively disconnected it from the adjacent floodplain. Therefore, the natural hydrologic regime within the Newton Woods II site was disrupted, resulting in an invasive species infestation and reduced wildlife habitat value. Breaches installed along the spoil piles (Fig. 1) has resulted in a significant increase in wetland function by reconnecting the Nanticoke River to the floodplain during high water events (Fig. 2).

### 2. Summary of Accomplishments

*In four to five sentences, provide a brief summary of the project's key accomplishments and outcomes that were observed or measured.*

*Restoring Delaware* restored wetland hydrology and function to at least 444 acres of floodplain forests, re-established 86 acres of globally-rare Atlantic white cedar, and accomplished several important objectives. First, the ditch plugs and water control structures installed at the Great Cypress Swamp have resulted in significant inundation during winter and spring (Fig. 3), thereby increasing flood retention, water filtration, and wildlife habitat. Second, *Restoring Delaware* solidified partner support and secured political attention. A multitude of federal, state, and non-governmental partners participated in all or some aspects of the restoration. Several partners (Ducks Unlimited, the Nanticoke River Watershed Conservancy, Delaware Department of Natural Resources and Environmental Control, and the U.S. Fish and Wildlife Service) hosted a press event at the Newton Woods II site. The event featured presentations by Rep. Dave Wilson (Delaware House of Representatives, 35<sup>th</sup> District) (Fig. 4), Dave Saveikis (Director, Delaware Division of Fish and Wildlife), and others. The event served as a platform for public outreach and education, featuring a sizable press corps and wetland adoption by a local high school group (Fig. 5).

### 3. Project Activities & Outcomes

#### Activities

- *Describe and quantify (using the approved metrics referenced in your grant agreement) the primary activities conducted during this grant.*

The Great Cypress Swamp restoration included the installation of six water control structures and five ditch plugs at strategic locations within portions of the drainage system. All effectively block outflow, thereby raising the elevation of the phreatic zone and lengthening the hydroperiod. Additionally, over 33,000 Atlantic white cedars were planted across 86 acres of the site (Fig. 6).

The Newton Woods II restoration reconnected 16 acres of floodplain forest to the Nanticoke River via three breaches installed in the spoil piles along the main channel that encourage seasonal inundation. The elevation of the breaches was set using a U.S. Geological Survey (USGS) gauge downstream of the project site.

- *Briefly explain discrepancies between the activities conducted during the grant and the activities agreed upon in your grant agreement.*

All activities in *Restoring Delaware* were consistent with the grant agreement.

## **Outcomes**

- *Describe and quantify progress towards achieving the project outcomes described in your grant agreement. (Quantify using the approved metrics referenced in your grant agreement or by using more relevant metrics not included in the application.)*

*Restoring Delaware* restored wetland hydrology and function to a minimum of 444 acres of floodplain forest in the most heavily-ditched portion of the state and re-established 86 acres of globally rare Atlantic white cedar.

- *Briefly explain discrepancies between what actually happened compared to what was anticipated to happen.*

No discrepancies exist between expected and actual outcomes in *Restoring Delaware*. If anything, the immediate and overwhelming response of the natural wetland systems to a restored hydrologic regime serves as cause célèbre for future projects of this nature. However, it is likely the maximum benefits of *Restoring Delaware* have yet to be realized.

- *Provide any further information (such as unexpected outcomes) important for understanding project activities and outcome results.*

The outcomes of *Restoring Delaware* have exceeded partner expectations, and will serve as a catalyst and model for similar efforts elsewhere in the state.

## **4. Challenges and Lessons Learned**

*Describe any specific challenges that have arisen during the course of the project and how they have been addressed. Also describe the key lessons learned from this project, such as the least and most effective conservation practices or notable aspects of the project's methods, monitoring, or results. How could other conservation organizations adapt their projects to build upon some of these key lessons about what worked best and what did not?*

*Restoring Delaware* required extensive collaboration and coordination between natural resources professionals and programs and the public at-large. The innovative, yet functional approach is a result of the outstanding partnerships developed in support of the project. *Restoring Delaware* offers a valuable lesson in effective communication among various agencies and stakeholder groups.

## **5. Dissemination**

*Briefly identify any dissemination of lessons learned or other project results to external audiences, such as the public or other conservation organizations.*

*Restoring Delaware* was featured prominently in the DU magazine, press releases, and on project signage.

## **6. Project Documents**

*Include in your final programmatic report, via the Uploads section of this task, the following:*

- *2-10 representative photos from the project. Photos need to have a minimum resolution of 300 dpi;*
- *report publications, GIS data, brochures, videos, outreach tools, press releases, media coverage;*
- *any project deliverables per the terms of your grant agreement.*

***POSTING OF FINAL REPORT:*** *This report and attached project documents may be shared by the Foundation and any Funding Source for the Project via their respective websites. In the event that the Recipient intends to claim that its final report or project documents contains material that does not have to be posted on such websites because it is protected from disclosure by statutory or regulatory provisions, the Recipient shall clearly mark all such potentially protected materials as “PROTECTED” and provide an explanation and complete citation to the statutory or regulatory source for such protection.*