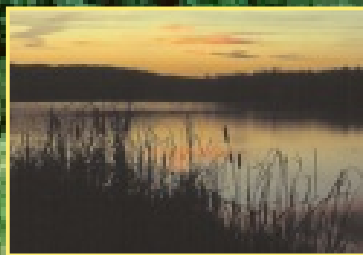


Pennsylvania Wetland Replacement Project

STATUS REPORT 1996 -1998



Commonwealth of Pennsylvania • Tom Ridge, Governor
Department of Environmental Protection • James M. Seif, Secretary
Bureau of Water Quality Protection • Division of Waterways, Wetlands and Erosion Control

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I ntroduction

In February 1996, the Pennsylvania Department of Environmental Protection (DEP) implemented the Pennsylvania Wetland Replacement Project. Designed as an alternative to the traditional wetland mitigation requirements, the project allows permit applicants to contribute to a mitigation fund for wetland impacts less than 0.5 acre of wetland instead of creating small, costly and often unsuccessful wetlands. In turn, DEP, in cooperation with other federal, state and local agencies and private landowners, creates or restores former wetlands to productive and beneficial ecosystems. The project is managed jointly by DEP and the National Fish and Wildlife Foundation.

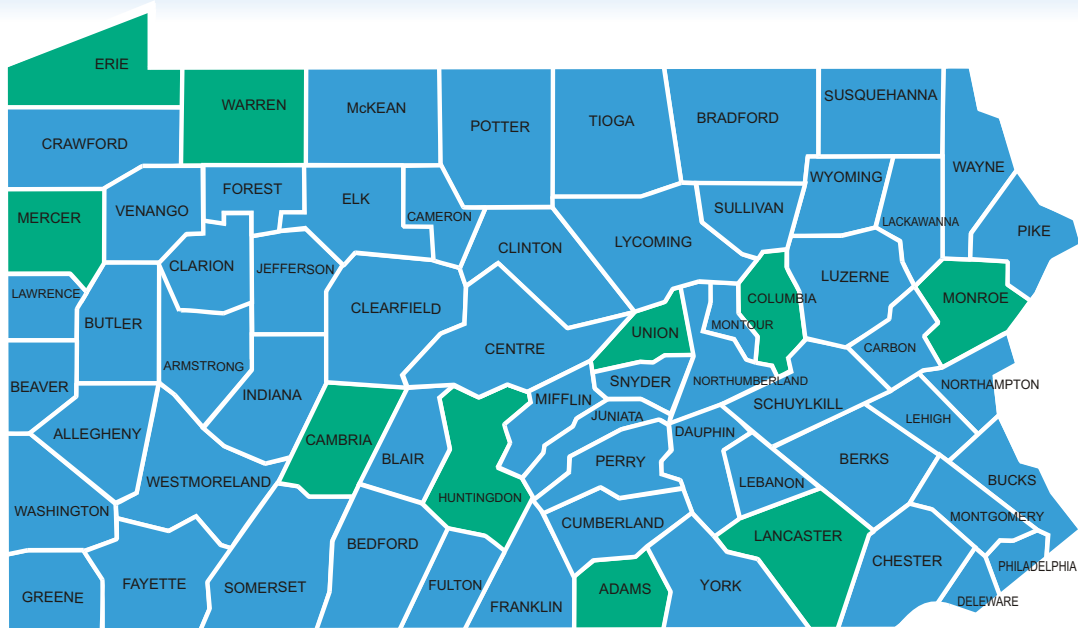
Since project's inception, DEP, with the assistance of the Natural Resources Conservation Service and county conservation districts, has investigated numerous sites across the state to determine their suitability as wetland creation or restoration sites. Thirty sites were selected for follow-up surveys and design. DEP and its participating partners completed fourteen wetland projects totaling 41.4 acres of wetlands, and secured landowners approval for the construction of five projects for an additional fifteen acres in 1999. Since March 1996, \$249,641 has been disbursed from the fund, at an average cost of \$6,030 per restored acre.

For more information, visit us through the Pennsylvania website at www.state.pa.us, or visit DEP directly at www.dep.state.pa.us
Choose Water Management, then Wetlands.



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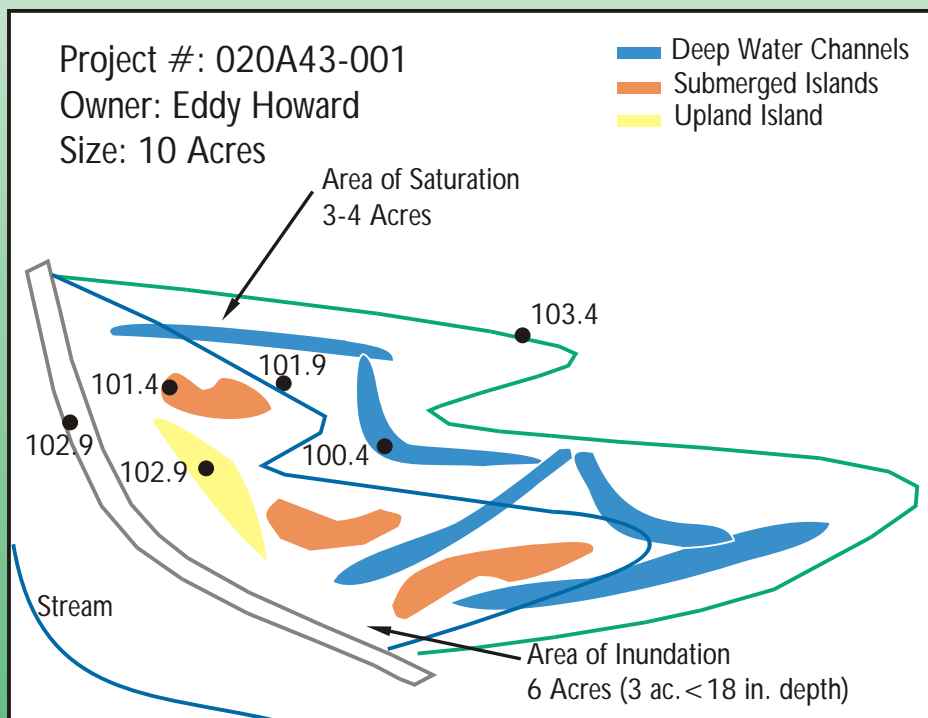
Location of Completed Projects



Project Name	County	Acres Restored	Cost
1 Tarutis	Monroe	0.4	\$ 7,500
2 Lake Naomi	Monroe	3.5	11,436
3 Wenner	Columbia	1.7	11,000
4 Seigel	Union	0.5	40,600
5 Stewart	Huntingdon	2.0	9,000
6 Bear Hollow	Cambria	1.3	7,875
7 Howard	Mercer	11.5	16,000
8 Hemlock Council of Girl Scouts	Huntingdon	1.0	7,000
9 Skopic	Adams	4.7	40,000
10 Levan	Columbia	2.0	14,000
11 Phadt	Erie	4.0	9,500
12 Ryan	Adams	2.0	730
13 Carlisle	Warren	4.2	45,000
14 Santo Domingo	Lancaster	2.6	30,000
	Totals	41.4	\$249,641

Howard Restoration

In September 1997, 11.5 acres were restored on the farm of Mr. and Mrs. Eddy Howard in Greene Township, Mercer County. The development plan emphasized the creation of a diverse ecosystem consisting of several islands, deep water channels and submerged terraces to enhance wildlife diversity. Total project costs were \$16,000. The project was evaluated by DEP in October 1997, January 1998 and April 1998 and is progressing nicely.



Howard Restoration



Construction started on Sept. 5, 1997. Topsoil is being removed for stockpiling for later use as the growing medium.



The 1500-foot long berm was constructed utilizing two pull pans. The entire site was finished in less than two weeks.



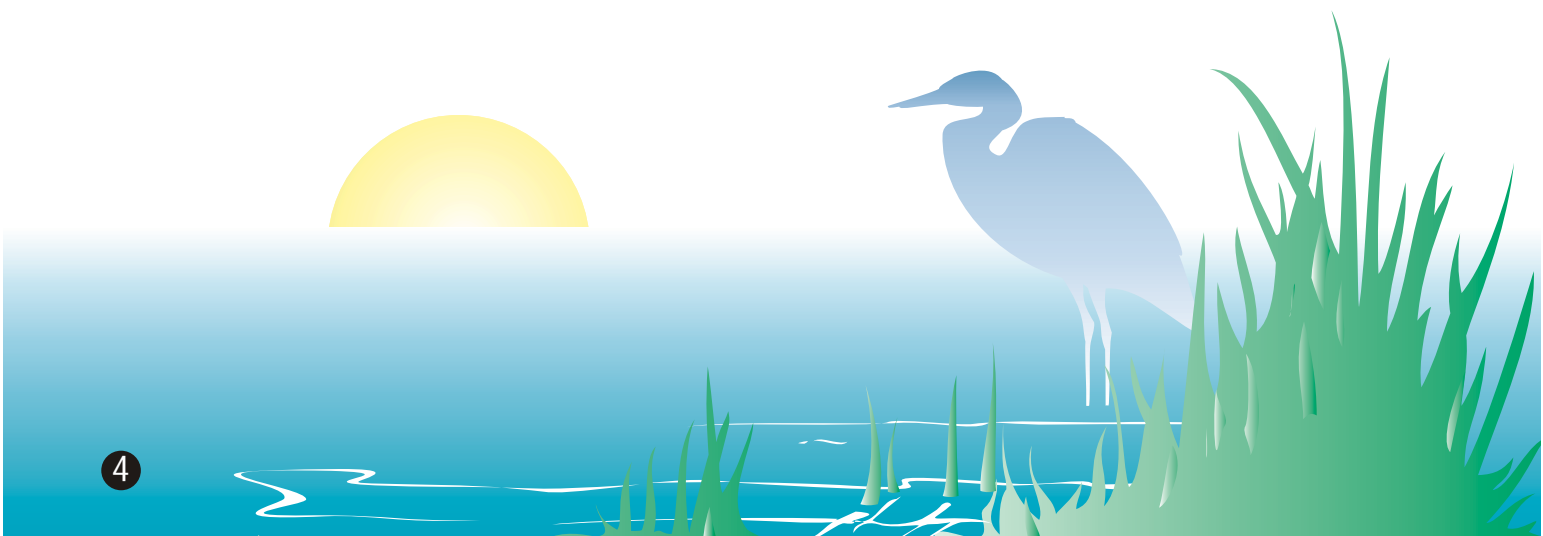
The same site in April 1998. Vegetation is just beginning to grow, in the fringe and shallow water areas.



Wenner Restoration

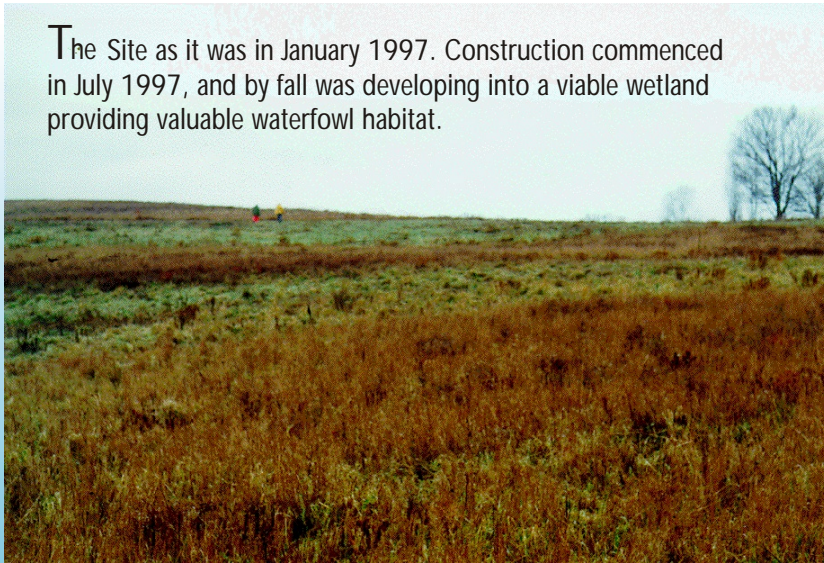
In July 1997, DEP, in cooperation with Richard Wenner, the Natural Resources Conservation Service, and the Fishing Creek Rod & Gun Club, restored 1.7 acres of wetlands on the Wenner's farm in Fishing Creek Township, Columbia County.

The primary goal of Mr. Wenner's wetland restoration project is to provide waterfowl and wading bird habitat. Final cost at the Wenner farm was \$11,000. Volunteers from the Fishing Creek Rod & Gun Club assisted in the restoration by planting red maple and pin oak saplings in this former wetland.



Wenner Restoration

The Site as it was in January 1997. Construction commenced in July 1997, and by fall was developing into a viable wetland providing valuable waterfowl habitat.



Jim Stewart's Woodcock Hollow Farm

Landowner, Jim Stewart and DEP, in association with the Natural Resources Conservation Service, restored approximately two acres of wetland in Penn Township, Huntingdon County at a cost of \$9,000.

The site was planted with alders and pin oaks to expand existing woodcock habitat, a species of special interest to Mr. Stewart and the Pennsylvania Game Commission.



May 22, 1997



Oct. 1, 1997



Phadt Wetland Restoration

The project on the farm of Mr. and Mrs. Jack Phadt of Venango Township in Erie County included plugging field drainage ditches and some minor excavation to restore four acres of wetland. A planting plan, focusing on colorful wetlands plants, was implemented in Fall 1998. Cost for the project was approximately \$9,500. Mr. and Mrs. Phadt's restoration project was featured in the Erie Daily Times in October 1998.

Levan Wetland Restoration

In July 1998, DEP in cooperation with Mr. Dennis Levan and the Natural Resources Conservation Service implemented a project to restore two acres of prior converted cropland in Columbia County. The project created two acres of wetlands by blocking a field drain that was installed to collect and divert several spring seeps. During construction, four other field drains were found and blocked. Cost for the project was \$14,000.

Hemlock Council of Girl Scouts

At the Golden Pond girl scout camp in the Upper Susquehanna River drainage basin in Huntingdon County, the Hemlock Council of Girl Scouts restored approximately an acre of wetland in cooperation with DEP and the Natural Resources Conservation Service. The project was successfully completed by building a small berm and breaking a tile drainage line, thereby restoring an onsite springfed wetland community.

Lake Naomi Restoration

DEP, in cooperation with the Lake Naomi Club and Ducks Unlimited, and with design and construction inspection provided by the U.S. Fish and Wildlife Service, created 3.5 acres of wetland at the Lake Naomi Club in Tobyhanna Township, Monroe County.

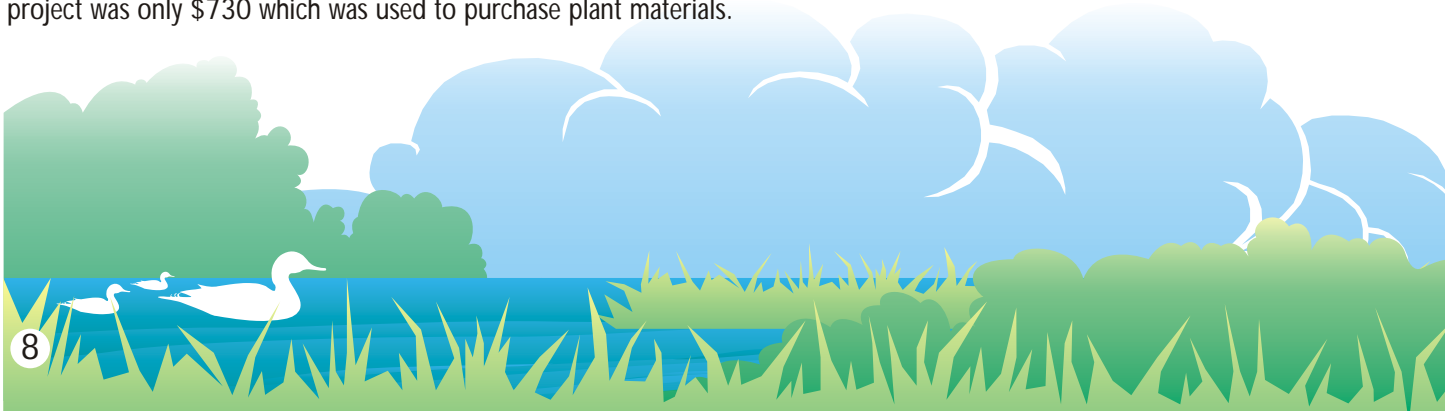
The goal of the Lake Naomi project was to restore a wetland to provide habitat for a diversity of wildlife through the restoration of an abandoned sand and gravel mine site, and eliminate a physically degraded area on the property of the Lake Naomi residential community. Winterberry, a valuable food source for winter birds, such as chickadees, cardinals and cedar waxwings, was planted throughout the site which is surrounded by a hemlock forest. Construction was completed in November 1996. Total project cost was \$11,436.

Tarutis Restoration

This site is located along Stony Hollow Road in the Tunkhannock Township, Monroe County portion of the Tunkhannock Creek watershed and is part of expansive peatbog. Peatbogs, which take thousands of years to develop, are special aquatic sites because of their complex ecology and their support of unique flora and fauna. The restoration involved the removal of approximately 0.4 acre of fill. Due to its proximity to existing bog plants, natural re-vegetation is expected. The work took three days at a cost of \$7,500.

Ryan Wetland Restoration

In cooperation with Mr. Russell Ryan, the U.S. Fish & Wildlife Service, and DEP contributed to the restoration of two acres of wetland on the Ryan property near the community of Fairfield, in Adams County. This highly successful site has been featured in local articles on environmental restoration. Due to the variety of funding sources, the cost to the project was only \$730 which was used to purchase plant materials.



Santo Domingo Creek

The Santo Domingo Creek wetland project is an excellent example of local community involvement in watershed restoration. The primary sponsors of the project, the Lititz Run Watershed Alliance and Warwick Township, with funding support from DEP and the U.S. Environmental Protection Agency, restored 2.6 acres of wetlands as part of a watershed restoration and protection program. Local volunteers and students from area schools supported the project by providing construction and planting assistance.

As an alternative to standard stormwater management practices in the region, the wetland will manage approximately 90 percent of the storm events in this watershed. Water quality will be improved by the wetland which will capture and assimilate the majority of the flows and pollutant loads (sediment, nutrients, metals, organic chemicals).

The facility is connected to an existing linear park. An observation deck overlooking the wetland provides information describing the facility's function and values. The area adjacent to the wetland will be landscaped with native plants and warm season grasses to minimize maintenance and provide additional wildlife habitat.

Bear Hollow Farm Wetland Restoration

The goal of the 1.3 acre Bear Hollow Farm wetland project, completed in July 1997, was to create a mosaic of aquatic habitat by restoring emergent wetland adjacent to two existing ponds. Bear Hollow Farm, near Edensburg, developed as an Environmental Education Center for Cambria County, will be used by schools throughout the county to educate students on the importance of wetlands in our natural environment. Total project cost was \$7,875.



Pennsylvania Achieves Net Gain of Wetlands

Over the past several years, many private, local, state and federal efforts were initiated to protect, preserve and restore Pennsylvania's wetland resources. Through the efforts of the U.S. Fish & Wildlife Service, the Natural Resources Conservation Service, DEP, private clubs, and most importantly, volunteer landowners, the Commonwealth has gained more than 3,100 acres of wetlands. Wetlands offer many benefits for property owners such as wildlife habitat, improvement of water quality and the enjoyment of unique and special plants and wildlife. If you are interested in participating in this important effort, please contact DEP at 717-787-6827 or visit our website at www.dep.state.pa.us.



Local school children participate in the wetland planting.

