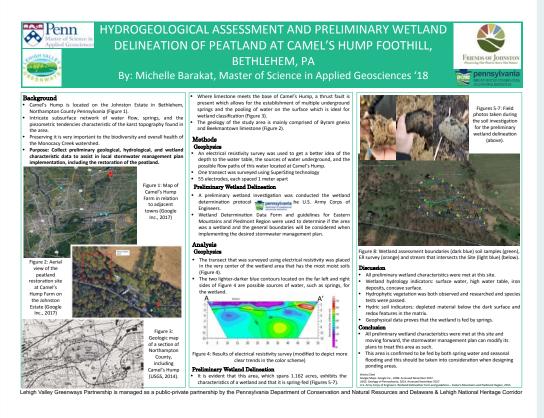
Lehigh Valley Greenways Conservation Landscape SUCCESS STORY

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Johnston Preserve Bog Study

SUMMARY

The Friends of Johnston are studying the only known bog in Northampton County as part of a university study in hopes of restoration of the unique habitat for wildlife, stormwater management and as a study site for citizen science bird banding and research for the nature center.



FUNDING

Grant Award: \$9,500.00

Match: \$14,853.26

Total Project Cost: \$24,353.26

PARTNERSHIP IS KEY

-University of Pennsylvania and Susquehanna University provided engineering and materials

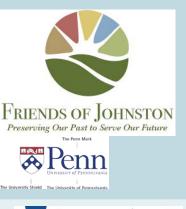
-Boy Scouts- volunteers to clear downed trees, develop paths and replant trees and shrubs

-Eagle Scout- boardwalk design and installation -Bethlehem Area School District Spirit Program- special needs students for

CHALLENGE

The bog was discovered and documented on the Johnston Preserve in 1806. Unfortunately, the bog was drained by past land owners to use the site as pastureland. The restoration of the bog will not only create unique habitat for the wildlife, but will also serve as a natural purification system for the stormwater that comes on the property and is degrading the HQ-CWF Monocacy Creek.

Our multiple challenges stemmed from working in the mucky soils, trying to protect the delicate native plants while removing invasive species and 60+ Ash trees in decline by hand.







SOLUTION

This project could not have been accomplished without the nearly 100 volunteers who worked in snow, muck, rain and sweltering heat over 8 months to accomplish our goals! The study of the bog including wetland delineation, subsurface imaging, hydrology, soil studies and vegetation inventory provided the data necessary to understand the complex properties of the site and began the process of planning and restoration. The Forest and Wetland Conservation Plan informed the planting of the native wetland trees and shrubs along the perimeter of the bog to protect the bog and provide shade for the delicate skunk cabbage and understory species that inhabit the area. The Boardwalk offers a safe path for up-close viewing and study of the bog. The project will be added to in 2019 with the planting of native wetland-bog species.

RESULTS

All work was completed to satisfy the grant in 2018

- 1) The Wetland study was completed by Michelle Barakat, University of Penn Graduate student in Hydrogeology and Susquehanna University professor and submitted as a study and poster including vegetation, soils, subsurface imaging for hydrology
- 2) 2.5 acres of bog land was cleared of invasives and hazard trees
- 3) A forest conservation plan and master plan for restoration and maintenance was developed and submitted to DCNR for approval
- 4) 100 native trees and shrubs were planted and mulched along 350' of pathway and riparian buffer along drainage swale
- 5) A 200' Boardwalk was built as an Eagle Scout project
- 6) Temporary interpretive signage was developed and installed- to explain the importance of the protection of the bog in creating habitat and protection of the waterway





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BOG RESTORATION PROJECT

Welcome to the only documented bog in Northampton County! This skunk cabbage, golden asaifrage bog was once home to bog turtles but then filled-in for pastureland. The bog was studied as a Masters in Hydrogeology Capstone Project. We are restoring the bog's natural hydrology and replanting with native wetland species including sedges. Wetlands are very unique and important they clean the stormwater and attrace many different species of flors and fauna including carnivorous plants. "The bog walk was designed and built as an Eagle Scout Project to allow students to get close to the bog without out getting mucky or disturbing the habitat. The walk also serves for access to the bird bander's nets.

Funding and materials for this project were provided by: University of Pennsylvania, Susquehanna University, Back Yards for Wildlife, Octoraro Native Plant Nursery, Home Depot, Lehigh Greenways, PA DCNR, PanoVEST. Northwrnton County Oper Space and Feinard of Idonaton volumes