

## **Bushkill Creek Stream Restoration and Habitat Enhancement**

Grant Document Number: C990000838

The Bushkill Creek Stream Restoration and Habitat Enhancement project involved design, permitting, and construction of a large-scale stream and habitat restoration along the Bushkill Creek from Tatamy Borough to Palmer Township in Northampton County. The Bushkill Creek is a main tributary to the Delaware River and is designated as a High Quality – Cold water Fishery. However, runoff from surrounding infrastructure and past stream channelization has degraded this stretch of stream, which is currently listed on the Integrated list as impaired. The project expanded over multiple private and public landowners to complete over one mile of restoration. Construction was completed this past summer 2021 which involved the installation of 14 instream habitat structures, stream bank grading and stabilization, and additional instream habitat features through random boulder placement. In addition to the stream and instream habitat restoration, 185 native trees and shrubs were planted to enhance the riparian buffer over approximately one acre of stream corridor. The plantings were installed through a volunteer planting event this fall as part of the ongoing education outreach and community involvement that has been critical to the project's success.

The restoration activities have created instream habitat as well as improving water quality. The stream banks are stabilized and vegetated, and the expanded riparian buffer will help filter runoff and address nonpoint source pollution. The Bushkill Stream Conservancy has an extensive stream monitoring program and will continue to monitor the Bushkill Creek to collect and analyze water quality data and the benefits from this project. This project was part of a large-scale partnership effort through multiple funders, landowners, and supporting partners. The Bushkill Stream Conservancy met monthly, even throughout the pandemic via zoom meetings, to include the public in the planning process. Forks of the Delaware Trout Unlimited assisted in fundraising and were also integral in the project development and community outreach. Wildlands Conservancy managed the project and secured the grant money needed to complete this large-scale project. Wildlands hired experienced contractors, Hanover Engineering, and Flyway Excavating, who ensured that the design and construction met all permitting requirements and were developed for long term success. Private and public landowners were key to the project success, and approved work being done along the stream on their property. This project is located along the rail to trail path and connects two public parks. The project is in an excellent location for educational outreach and best management practices throughout public parks and open space.

The project faced many challenges that the dedicated partners overcame. The planning phase covered many years and originally were developed by a contractor who did not have the local experience with designs and permitting. Hanover Engineering was then hired and coordinated the planning with the permitting agencies. The designs followed the state permitting guidelines and the project permitting was approved. The construction contractor was also key in the project success by installing the structures that held up in the 10+ inches of rain and high flows that occurred during the middle of project construction. It was a true test to the project construction and long term success of the project. Wildlands Conservancy, Bushkill Stream Conservancy, and Forks of the Delaware Trout Unlimited worked closely together to secure all the funding needed for the project and landowner approval. Landowners granted permission for work to be done along their property. All these important factors contributed to the project success.

Project Funding:

Pa Department of Environmental Protection: \$80,000

Cash match: \$77,311

Project Partners:

Bushkill Stream Conservancy: <https://bushkill.org>

Forks of the Delaware Trout Unlimited: <https://forksofthedelaware.tu.org>

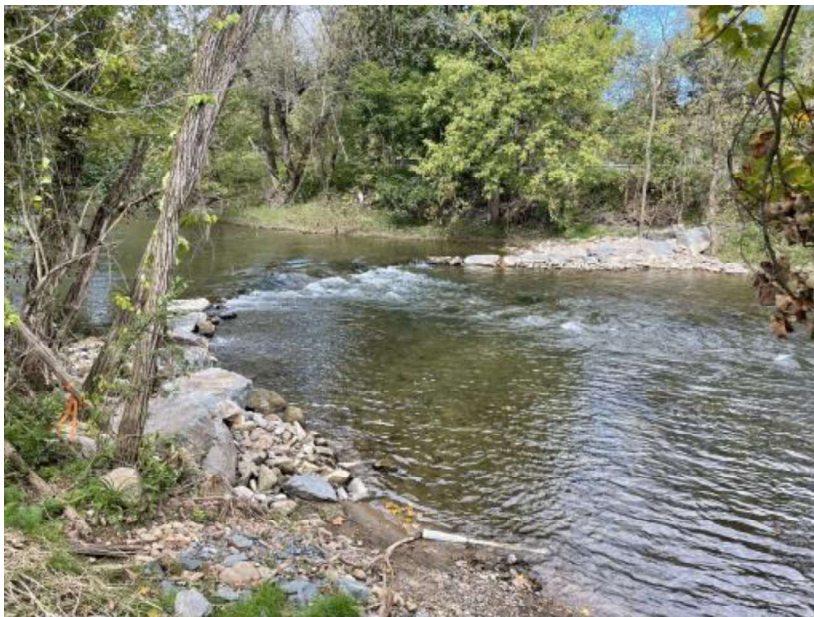
Wildlands Conservancy: [www.wildlandsp.org](http://www.wildlandsp.org)

Volunteer's site posting project photos and drone footage:

<https://public.fotki.com/fnplastics/bushkill-creek-4-30-2021/page4.html>



Before photo of uniform stream lacking instream habitat



After photo of instream habitat structure