

Lehigh Valley Greenways Conservation Landscape **SUCCESS STORY**

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Monocacy Creek Ecological Restoration Project (2015)

SUMMARY

The Monocacy Creek Chapter of Trout Unlimited partnered with Wildlands Conservancy to restore a degraded section of Monocacy Creek in Northampton County. Monocacy Creek is a High Quality Coldwater Fishery and a Class A wild trout stream, but a run-of-the-river dam was degrading habitat, water quality and obscuring fish passage. We removed the dam to restore natural flow and wildlife habitat while reducing flooding and erosion. To further improve stream conditions and habitat, we planted a native riparian buffer along both sides of the stream. The stream has improved significantly and will continue recovering over time.



CHALLENGE

The dam on Monocacy Creek no longer served a purpose but was instead causing negative impacts to the stream. It was exacerbating flooding and erosion issues on the adjacent properties, blanketing the stream substrate with sediment, and degrading water quality by increasing temperature and decreasing dissolved oxygen in the impoundment behind the dam. The stream was further degraded by the lack of a riparian buffer that would provide habitat, essential nutrients and canopy cover. Macroinvertebrate sampling completed before the dam removal found that the impoundment behind the dam was dominated by pollution tolerant species as well as species normally associated with stagnant ponds. Monocacy Creek, this section included, is a popular destination for fishing and outdoor recreation. However, the presence of the dam degraded available habitat and limited recreational opportunities.

FUNDING

Grant Award:
\$12,500.00

Match:
\$12,500.00

Total Project Cost:
\$25,000.00

PARTNERSHIP IS KEY

Key partners in this project were Wildlands Conservancy and the Monocacy Creek Watershed Association. These partnerships allowed us to complete a successful dam removal and stream restoration project.



SOLUTION

This project was designed to address the negative impacts associated with the presence of the dam and the lack of riparian buffer. The only way to improve fish habitat and recreational opportunities on this stretch of Monocacy Creek was to remove the dam. This project was part of a larger effort in the Lehigh River Watershed to remove dams and restore degraded waterways. Trout Unlimited, Wildlands Conservancy and other partners have engaged many community members and watershed organizations in these efforts. As dam removal and stream restoration gains momentum in the state, support continues to grow among local communities. This project continued the watershed-wide effort by educating and engaging local community members, restoring habitat and water quality in a main tributary, and improving recreational opportunities.

RESULTS

Removing the dam and stabilizing the streambanks produced immediate observable benefits for the stream. As the impoundment was drained, the stream began to narrow and cut a deeper, cooler channel that is more suitable for our native aquatic species. A few months later, much of the sediment buildup has been cleared from the gravel and cobble on the stream bottom, a natural riffle has formed where the dam once stood, and the newly stabilized banks have begun to revegetate. The newly planted riparian buffer has further stabilized the banks and provides valuable nutrients, habitat and cover for aquatic and terrestrial wildlife.

Specifically, this project:

- Restored free-flowing conditions to 650 feet of impounded water upstream
- Improved 800 linear feet of streambanks by establishing a native riparian buffer
- Planted 50 native trees and shrubs along with 100 native herbaceous plugs
- Engaged more than 50 members of the local community through watershed groups and educational outreach

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