

GROWING GREENER GRANT
NORTH BRANCH RESTORATION MAINTENANCE
PADEP NO. C990002567

GRANTEE: MEHOOPANY CREEK WATERSHED ASSOCIATION, INC.

PROJECT DESCRIPTION: A severely deteriorated portion of the Mehoopany Creek North Branch was designated for stream restoration maintenance to reestablish sediment loading reduction to the Susquehanna River and the Chesapeake Bay, as well as flood risk mitigation for nearby properties. Severe storm events critically impaired the project reach by displacing large rock structures and redirecting designed typical stream flows. Existing impairments included magnified storm runoff and sediment supply from upstream areas (leading to major flooding and infrastructure damage along with significant sediment deposition); severe streambank erosion, channel migration, uprooting of mature trees along stream banks, and in-stream habitat degradation. The stream had threatens local and state infrastructure in the form of Windy Valley Road and S.R. 0087, alongside the residences of the local population. The damaged condition reduced the overall habitat and water quality in this section of stream.

This project was for the restoration maintenance of designed structures including the resetting of cross rock vanes with additional bedrock shear pinned reinforcement, and placement of scour protection rock and streambed cobble material to fill voids between the cross-rock vane arms and bankfull features. The North Branch of Mehoopany Creek had been previously restored through natural stream design methods such as cross rock vanes and floodplain groins, and the reseeded and mulching of all disturbed areas. The stream restoration is anticipated to restore community safety by preventing further embankment erosion of Windy Valley Road and re-establishing stability for the nearby residences. The restoration will enhance the habitat and stream health, which has the cascading effect of improving the community's enjoyment of the river through improved fishing and river-related recreation.

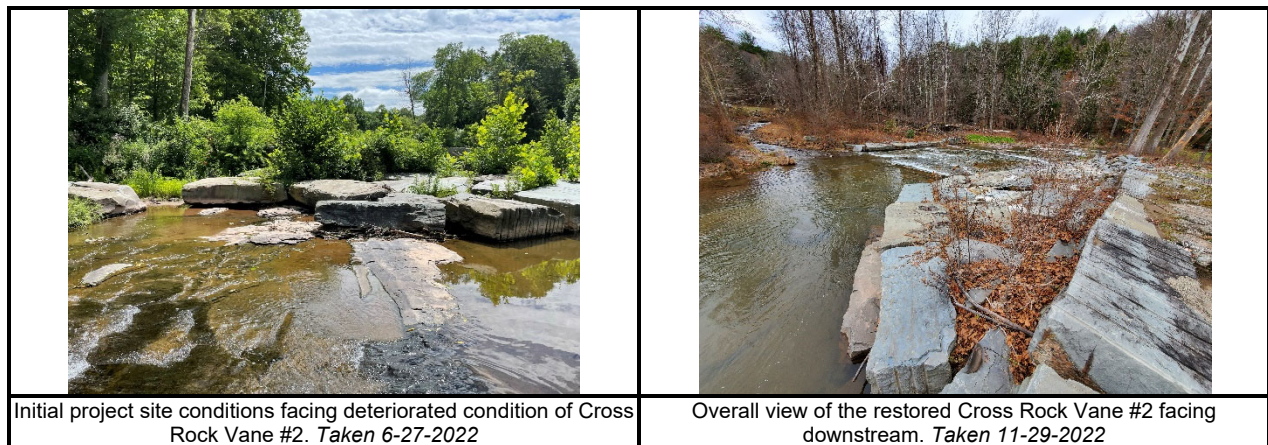
PROJECT GOALS: The entire project included the restoration and reinforcement of cross-rock vanes. The flood prone upper area of structure rocks was grouted and protected by large riprap to provide further protection, while the arms of cross-rock vanes further downstream received riprap protection. Slight channel rehabilitation to address erosion concerns in the downstream end were also included in the project. Seeding and mulching of disturbed work areas was completed following construction to restore vegetative cover within the project area.

PROJECT RESULTS: The implementation of proposed maintenance restoration features is complete; the design and permitting was updated for the restoration maintenance; and construction funding came from the PADEP Growing Greener Grant Program.

Total Estimated Sediment Reduction Resulting from Project Implementation

Pollutant	Reduction (Pound per year)	Note: Sediment Reduction analyzed utilizing the Model My Watershed® (https://wikiwatershed.org/model/) computer simulation, based on the Generalized Watershed Loading Function – Enhanced (GWLFE, a.k.a. MapShed) model.
Sediment	136,094	
Phosphorus	1,346	
Nitrogen	331	

PICTURES:



PROJECT COST: Total Project Cost: \$217,350.00; includes PADEP Growing Greener Grant (\$189,000.00) and Cash and/or In-kind Match (\$28,350).

LESSONS LEARNED: The project was typical for the construction and monitoring phases.

PARTNERS:

- Mehoopany Creek Watershed Association, Inc.
- PennDOT
- Skelly and Loy, Inc.

CONTACT INFORMATION: Mehoopany Creek Watershed Association, Inc., Kevin Ray, sunray3@ptd.net