



Section 319

NONPOINT SOURCE PROGRAM SUCCESS STORY

Maryland

Collaborative Planning Leads to Community-Wide Solutions

Waterbody Improved

The Georges Creek watershed in western Maryland faced challenging water quality problems from persistent flooding, acid mine drainage, and combined sewer overflows. Through a combination of projects targeting the stabilization of streambanks, removal of fish blockage, and treatment of mine seeps, the stream now supports increased fish populations and over 2,200 tons of sediment are kept out of the stream each year.

Problem

Georges Creek is listed as impaired under Maryland's 303(d) list due to acid mine drainage (AMD), nutrients and suspended sediment, and biochemical oxygen demand. In response to ongoing problems with poor water quality, the Maryland Department of Natural Resources' Watershed Services Center conducted a Stream Corridor Assessment survey of Neff Run, a tributary to Georges Creek, in 1999. The survey identified problems such as bank erosion, acid mine drainage, pipe outfalls, fish barriers, trash dumping, combined sewer overflows, failing septic systems, and other unusual conditions along Neff Run.

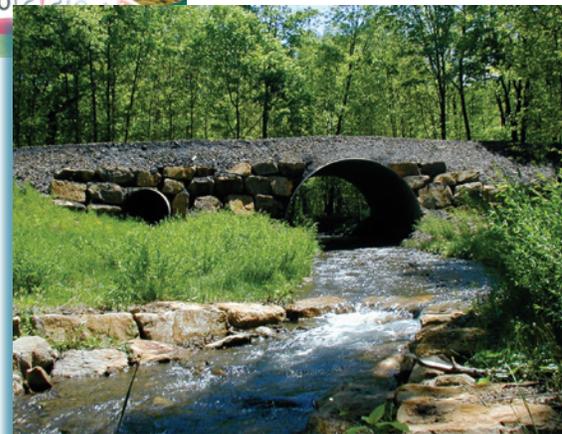
Project Highlights

In February 1999 a work group consisting of federal, state, local, and nonprofit entities received funding to develop a restoration plan through Project Impact: Mitigation Other Than Acquisition (MOTA). The two-phase Neff Run Watershed Restoration Plan outlined strategies for protecting and enhancing water quality, stream stability, habitat, and recreation opportunities in the watershed of Neff Run.

Phase I called for the removal of a major fish blockage and installation of rock cross vanes and j-hooks (both consist of rock structures placed across the stream channel) to reduce stream erosion. Also, approximately 4,000 feet of fence and stream bank protection was installed to stabilize the stream. The Phase I



Photos of the culvert/fish blockage taken before and after the Neff Run Phase I project show significant improvement. (Photographs courtesy of Maryland DNR's Watershed Services Center)



activities were mainly performed by volunteers from local community groups.

Phase II of the project included the removal of an additional fish blockage that prevented the migration of fish upstream. To eliminate the blockage, 16 rock cross vanes were installed downstream to stabilize the channel and elevate the streambed. The Allegany Soil Conservation District assisted with the restoration of an additional 1,000 feet of streambank and stream channel.

To supplement restoration efforts, the Maryland Bureau of Mines is addressing acid mine seeps at three sites of the Phase I project and two sites of the Phase II project by installing limestone leach beds.

Results

The combination of all Phase I efforts resulted in a sedimentation/siltation reduction of 1,795 tons per year and prevented more than 280 tons of manure per year from being deposited in the stream. According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Phase II efforts resulted in significant reductions in sediment loads to the stream—450 tons of sediment per year.

Since a 1999 fish population survey conducted by the Maryland Department of Natural Resources, several fish species, including central stonerollers and rosieside dace, have repopulated Neff Run below the restoration site, and white sucker have been identified in the stretch of Neff Run near the Judy Miller farm. Efforts in both phases of the project have contributed to the recolonization and repopulation of fish species in the watershed.

Improvements to Georges Creek have been successful, but to ensure continuous

protection of the water resources, the Georges Creek Watershed Association holds monthly public meetings to discuss watershed issues and potential solutions. The association remains optimistic, saying that in the future they envision healthy streams that support wildlife while also allowing for public development of the area around the creek.

Partners and Funding

Project Impact: MOTA provided funding to develop the restoration plan. The two-phase restoration effort in the Neff Run watershed cost a total of \$391,300. Section 319 funds provided through the Maryland Nonpoint Source Program provided \$173,000 for erosion control and streambank stabilization projects. In addition, approximately \$142,000 was spent implementing AMD treatment measures. Section 319 provided \$85,500 for this project and the Maryland Bureau of Mines provided the remaining \$56,500 in matching funds. The implementation of the Neff Run Watershed Restoration Plan would not have been a success without support from the Georges Creek Watershed Association, Nemascolin Chapter of Trout Unlimited, Boy Scout Troop 9, New Dominion School, Maple Run Youth Center, Maryland Department of Natural Resources' Watershed Services Center, Allegany Soil Conservation District, Maryland Department of the Environment, Maryland Department of Agriculture, USDA NRCS, and U.S. Environmental Protection Agency Region 3.

Species	1999	2002
Central stoneroller	0	133
Rosieside dace	0	61
Blacknose dace	438	623
Creek chub	55	42
Total Species	2	4

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