



Section 319

NONPOINT SOURCE PROGRAM SUCCESS STORY

West Virginia

Trout Waters Restored from Acid Pollution

Waterbody Improved

Two streams, Sugar Creek and Dogway Fork, designated as trout waters by West Virginia, were affected by acid rain deposition and did not meet the state's water quality standards for pH. The state listed both streams on its section 303(d) (impaired waters) list in 1998, 2002, and 2004.

West Virginia Division of Natural Resources (WV DNR) applied limestone sand into both streams to neutralize the acid in the waters. This treatment helped bring the streams' water pH back into compliance with water quality standards. The state removed sections of both streams from its impaired waters list in 2006.

Problem

Sugar Creek is a tributary of the Williams River in Pocahontas County. Dogway Fork is a tributary of the Cranberry River, spanning Pocahontas and Webster Counties, in the southeastern part of the state. Both ultimately drain to the Gauley River. For both streams, their most sensitive use designations are Trout Waters—waters that sustain year-round trout populations—and Water Contact Recreation, including swimming and fishing uses.

Sugar Creek and Dogway Fork were originally listed on West Virginia's 303(d) List of Impaired Streams in 1998 with pH water quality violations. The pH readings were typically 3.7 in Sugar Creek and 3.8 in Dogway Fork. The state's water quality criterion for the streams' use designations specifies a pH of 6.0–9.0.

Project Highlights

West Virginia's Department of Environmental Protection (WV DEP) identified these acid-impacted streams for water quality restoration efforts. WV DNR deposited fine limestone granules into the streams. Adding alkaline

limestone sand helps raise the water's pH and neutralize the acidity. WV DNR is able to finance the long-term restoration of such acid-impacted water quality problems through funding set up through a portion of license fees and various legal settlement proceeds.

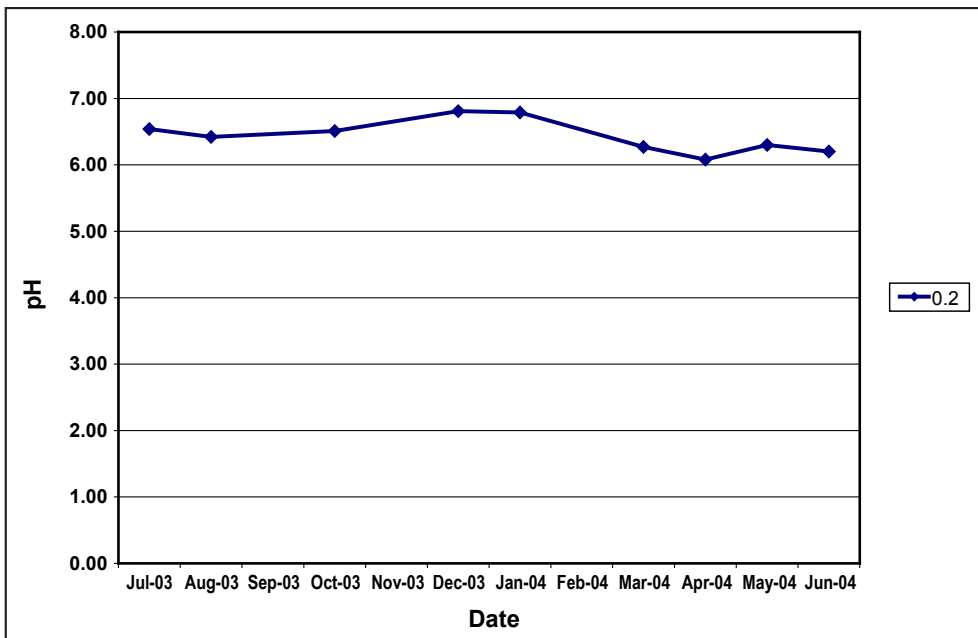
Results

The limestone sand treatment raised the pH of the streams. Recent water quality monitoring has shown that the typical pH reading in Sugar Creek is now 6.4, and in Dogway Fork it is 7.0. After the limestone treatments, WV DNR began stocking trout and has maintained trout life in the streams. In total, 2.5 miles of Sugar Creek and 6.8 miles of Dogway Fork have been restored to viable trout fisheries.

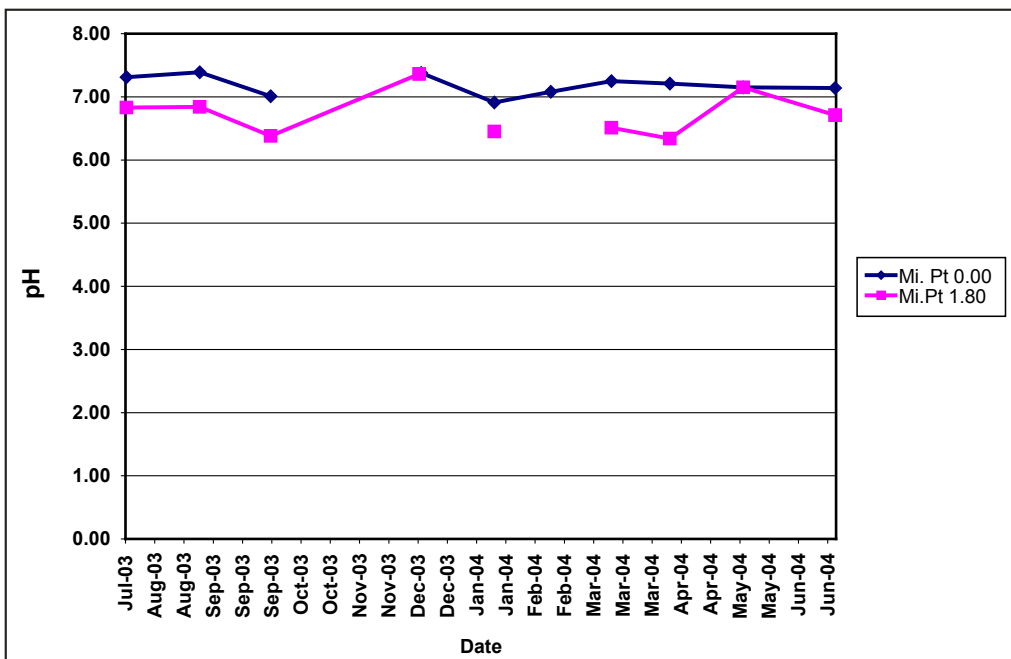
Partners and Funding

WV DNR uses license fees and funds invested from various legal settlements for their limestone sands treatment program. WV DEP is the state's water quality management agency and assists WV DNR in identifying opportunities for restoration. WV DEP's Nonpoint Source Program has since worked with WV DNR to

target stream restoration projects on priority nonpoint source pollution control sites in the Upper Buckhannon watershed.



pH data from WV for Sugar Creek mile point 0.2.



pH data from WV for Dogway Fork mile points 0.0 and 1.80.



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