

RECOVERY OF DAMAGED SINNEMAHONING CREEK

Aided by Two Grant Programs



photos: Philip Thomas

Trout Unlimited removed a fish passage barrier through replacement of an undersized, metal pipe culvert with a bottomless arch at bankfull width on Little Lyman Run, a wild Brook Trout tributary to Cross Fork Creek, Potter County. The project was completed with a Pennsylvania Fish & Boat Commission grant and significant additional funding from partners.

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On June 30, 2006, a Norfolk Southern train derailment released 42,000 gallons of sodium hydroxide (NaOH) into Big Fill Hollow, north of Gardeau, southeastern McKean County. The sodium hydroxide solution (also known as caustic soda) flowed from the spill site into Sinnemahoning Portage Creek and traveled 11 miles downstream, where the pollution slug moved into the Driftwood Branch of the Sinnemahoning Creek at Emporium. The sodium hydroxide continued to impact the aquatic ecosystem for an additional 19 miles downstream to where the Driftwood and Bennett Branches of the Sinnemahoning Creek join to form the main stem of Sinnemahoning Creek. Fish were killed or stressed for 34 miles downstream from the spill site.

In July 2006, the Pennsylvania Fish & Boat Commission (PFBC) conducted a fish survey to assess damages. The PFBC and the Pennsylvania Department of Environmental Protection (PA DEP) sampled fish, amphibians and aquatic insects as part of the chemical spill impact assessment. The impacted area on Sinnemahoning Portage Creek suffered a complete loss of all fish species. Aquatic insects and plants were also chemically scrubbed from this stream. Biological surveys showed Driftwood Branch had received high mortality of both game and nongame fish populations. The remains of dead fish and hellbenders were both chemically burned and dissolved.

Sodium hydroxide is a strong alkaline base with an approximate pH of 14 that burns and ulcerates skin upon contact and breaks down other tissues. Following the pollutant spill, the pH of the Sinnemahoning Portage Creek was elevated above 12 in some areas. The PFBC samples of this stream in years prior to the spill had a pH of 7.0 in the vicinity of Big Fill Hollow. A pH of 7 is neutral; higher pH is basic; lower pH is acidic.

Prior to the chemical spill, the areas impacted in Sinnemahoning Portage Creek were highly valued by anglers for the wild Brook Trout and Brown Trout fishery they provided. Further downstream, below Sizerville within Sinnemahoning Portage Creek and continuing downstream of Emporium and into the Driftwood Branch, a stocked trout and wild Smallmouth Bass and Rock Bass fishery was also highly regarded by anglers. The sodium hydroxide spill caused an immediate yet short-term lethal event. Once the pollutant traveled downstream and became diluted, the acute event was over and recovery of the damaged ecosystem could begin. The July/August 2016 issue of *Pennsylvania Angler & Boater* discussed the biological recovery of this severely impacted aquatic ecosystem since the spill.

In mid-November 2007, Pennsylvania's four natural resource agencies reached a legal settlement with Norfolk Southern Railway Company. Under this settlement, Norfolk Southern agreed to pay the Commonwealth \$7.35 million as restitution for environmental damages. The PA DEP received \$3.675 million of the settlement with \$0.5 million used to pay for damage response costs and the remainder to establish a Community Environmental Projects Grant Program. Through a Memorandum of Understanding between the PA DEP and Headwaters Resource Conservation and Development Council (RC&D), the Sinnemahoning Stakeholders Watershed Grant Program (SSWGP) was formed. The SSWGP is responsible for the management and distribution of PA DEP funds derived from the civil settlement with the railway to support projects that benefit the aquatic resources located solely within the Sinnemahoning Portage Creek Watershed, the Driftwood Branch of the Sinnemahoning Creek Watershed and the portion of the main stem of Sinnemahoning Creek Watershed upstream of the confluence with the First Fork of Sinnemahoning Creek.

The PFBC also received \$3.675 million of the legal settlement and must use the funds to develop and implement projects that benefit recreational fishing and boating and the aquatic resources in Cameron, Elk, McKean

and Potter counties—through which the Sinnemahoning Creek and its tributaries flow. This money has been placed in a restricted, interest-bearing account at the Pennsylvania Treasury and may be used for grants, contracted services or projects implemented by PFBC staff. While PFBC funds are to be used primarily within “the Sinnemahoning Creek Watershed upstream of the confluence with the First Fork of Sinnemahoning Creek,” they may also be used elsewhere within the aforementioned four counties. This provision of the legal settlement allows PFBC some flexibility to distribute funds to make improvements to other watersheds with degraded aquatic habitat, limited public fishing and boating access or other aquatic resource needs. Given the large amount of total funds provided to both state agencies, this geographic flexibility provides the opportunity to select high quality projects by minimizing concentration of marginally desired projects within a required, small geographic area. The two grant programs were intended to complement each other rather than compete for quality projects within a small area, and this flexibility afforded to PFBC helps accomplish that goal.

A portion of PFBC settlement funds were earmarked for agency training and equipping of its Waterways Conservation Officers for effective investigation of water pollution events. A \$93,000 portion of the funds was specifically for the investigative and administrative costs incurred by PFBC and McKean County. Additional funds were specified for distribution to the Boondocs Program of the McKean County Juvenile Probation Department for the completion of projects that benefit recreational fishing and boating and the aquatic resources within the county. The PFBC has also developed and administers a grant program known as the Sinnemahoning Creek Watershed Restoration Grant Program. Since the inception of this program in 2008 through 2014, PFBC has awarded 27 grants valued at \$2.1 million to various project partners external to the agency. The fourth round of grants with an additional six external awards valued at approximately \$350,000 was announced in July 2016. The Commission has also committed \$95,500 from this settlement account for PFBC internal use in partnership with the Pennsylvania Department of Conservation and Natural Resources (PA DCNR) to install fish habitat improvement structures within the fishing lakes at Sinnemahoning State Park and Elk State Park. From the outset, these grants have been dispersed to County Conservation Districts, the Pennsylvania Department of Conservation and Natural Resources (PA DCNR), the Pennsylvania Department of Agriculture, the United States Fish and Wildlife Service, Allegheny National Forest, universities, conservancies, sportsman’s groups, watershed associations and other non-governmental organizations.

The PFBC grant program relies on a collaborative partnership with our grantees and public and private property owners to accomplish the funded projects. The grantees must provide at least a 25 percent match of the total project cost through a combination of funds and/

or in-kind services or materials. This minimum match amount equals 1/3 of the grant amount provided by PFBC. This expectation leverages funding from other sources with shared project goals.

Projects may receive funds from the PA DEP/RC&D and PFBC grant programs, and several projects have been completed through this joint funding collaboration. For example, both programs provided funds to the Western Pennsylvania Conservancy for a property purchase along the Bennett Branch at the village of Medix Run, Elk County, which provides public fishing and boating access. Both grant programs have also provided funding to PA DCNR for the construction of a public fishing and boating access on property along S.R. 555 in Cameron County that is already owned by the Commonwealth and managed as part of the Elk State Forest District. Another project that was funded by both grant programs includes the removal of the Picric Dam (a.k.a. Steel Dam) on the Driftwood Branch in Emporium and subsequent instream restoration to enhance fish habitat. The Cameron County Conservation District received a PFBC grant to complete the dam removal phase. For the next project phase, this grantee has received funds from the PA DEP/RC&D grant program to enhance instream fish habitat in the vicinity of the former dam.

Projects funded by PFBC grant program included (in part) tree planting and invasive plant eradication to establish and improve forested riparian buffers; design, permitting, and installation of structures to enhance fish habitat in lakes and streams and to stabilize severely eroding streambanks; construction and operation of acid mine drainage treatment facilities; removal of dams in order to restore the waterway capacity to allow fish movement; replacement of roadway, perched culverts with stream conveyance structures that allow fish passage; studies of trout seasonal movement patterns, population abundance, and stream habitat condition and use; field assessments of streams to identify locations and causes of degraded habitat for potential treatment; installation of interpretive signage within state parks and forests; curriculum development for the Trout In the Classroom program; purchase of property for improved public recreational fishing and boating access; and construction of new facilities for public recreational fishing and boating. Multiple stakeholders, including many unpaid volunteers, and additional contributors of funds have worked together to accomplish these projects that benefit aquatic resources and provide recreational fishing and boating to the public.

Additional information regarding PFBC’s Sinnemahoning Creek Watershed Restoration Grant Program, including a list of grant funded projects, is available on PFBC’s website at www.fishandboat.com/promo/grants/sinn/00sinn.htm. A description of the project types eligible for grant funding is contained within the *Program Guidance* document. Information regarding the PA DEP/RC&D Sinnemahoning Stakeholders Watershed Grant Program is available at www.headwaterspa.org. □