

NEAL RUN RESTORATION PROJECT – PHASE III

Project Summary



Location: Young Township, Indiana County, PA

Project Description: In 2011, marketable coal refuse was removed from the project site along with construction of oxidation and precipitation channels (OPC). These OPCs have removed up to 80% of the iron from the discharge; however, the concentrations are so high that a significant amount of pollutants remain. A 700-ton, limestone-only, Auto-Flushing Vertical Flow Pond (AFVFP) and a Settling Pond (SP) were added in Phase II of construction in 2018. In Phase III, a second AFVFP containing approximately 1,850 tons of high calcium carbonate (~90% CaCO₃) AASHTO #1 limestone was constructed. The AFVFP flushes approximately every other day utilizing a solar-powered Agri Drain Automatic Water Level Control Structure into OPC1. Due to the heavily impacted water quality from the discharge, additional treatment components are still needed.

Environmental Benefit: The D2 discharge is the largest contributor of iron, aluminum, manganese, and acidity to the Aultmans Run Watershed. The source of the discharge is a large coal refuse pile upgradient of the project site. With the new AFVFP2, initial monitoring indicates that directly downstream of the treatment system at NL0-MP3, Neal Run is alkaline with varying amounts of metal solids dependent on the timing of the flush (see table below).

	pH	Alkalinity (mg/L)	Acidity (mg/L)	Fe (mg/L)	Mn (mg/L)	Al (mg/L)
Before	4.7	15	103	16.1	1.2	14.9
After	7.4	75	-64	1.1	1.1	1.5

Project Cost: PA Dept. of Environmental Protection, Growing Greener – \$210,956

Partnership Participants: Aultman Watershed Association for Restoring the Environment (AWARE); BioMost, Inc.; Central Blair Electric Company; Kiski-Conemaugh Stream Team; G&C Lab; Indiana University of PA (IUP); PADEP-Cambria DMO; Stream Restoration Incorporated; volunteers

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