

Bear Run Phase 1 Passive Treatment System
SRI O&M TAG Project # 10 Request #1
OSM PTS ID: PA-306

Requesting Organization: Indiana County Conservation District (in-kind partner)
Receiving Stream: Bear Run (Bear Run Watershed)
Hydrologic Order: Bear Run→West Branch Susquehanna River→Susquehanna River
Municipality/County: Banks Township, Indiana County.
Latitude/ Longitude: 40°51'46.0008"N / 78°50'53.0016"W
Construction Year: 2008

In 2008, the Bear Run Phase 1 Passive Treatment System was constructed on PA State Gamelands to treat an abandoned underground mine discharge in Banks Township, Indiana County, PA. The original passive system was designed by Eric Robertson of the Pennsylvania Association of Conservation Districts (PACD) and consisted of a multi-cell wetland with a primary focus on removing metal oxides. The Evergreen Conservancy and the Indiana County Conservation District (ICCD) have monitored and maintained the system since installation.

Stream Restoration Inc. (SRI) was originally contacted by Adam Cotchen of the ICCD on 11/30/11 regarding the blockage of an 8" pipe that conveyed water underneath the road (SR-1053) from the Pre-treatment Wetlands to the Primary Treatment Component at the Bear Run Phase 1 PTS. The ICCD had tried unsuccessfully to use a pump to remove the blockage. SRI contacted Adam on 12/1/11 to acquire more information about the problem and project information, such as as-built drawings, before going out to the site. The ICCD decided to conduct a second attempt to clean the pipe and was successful resulting in no further assistance required by SRI.

On 4/11/12, SRI was contacted by Adam as the same pipe had become plugged again. On 5/4/12, Cliff Denholm met Adam Cotchen and Megan from the ICCD, John Dudash from Evergreen Conservancy, and Tom Clark from the Susquehanna River Basin Commission to investigate the site. Using a clean-out tool provided by BMI, the pipe was unplugged. The group assisted in the process and determined that they could build a similar clean-out tool themselves for future issues.

The project team thanks the Indiana County Conservation District, Evergreen Conservancy, and Susquehanna River Basin Commission for all of their efforts including support and assistance. Funding for technical assistance and maintenance was provided by the PA DEP's Growing Greener and the Foundation for Pennsylvania Watersheds grant programs and in-kind services by project partners.

Additional Recommendations & Considerations:

- Continue to conduct site inspections and water quality monitoring on a quarterly basis (minimum). Include field parameters of pH, iron, and flow rate at a minimum. Alkalinity is also recommended. Iron measurements in particular will be useful for indicating treatment issues for this particular system.



An inlet box and pipe had become plugged at the Bear Run Phase 1 Passive Treatment System causing the water level to rise in the Pre-treatment Wetlands (*top left*). BioMost, Inc., worked with volunteers from the Indiana Conservation District, Evergreen Conservancy, and the Susquehanna River Basin Commission to unplug the pipe (*top right*). Once the clog was eliminated, the water level quickly returned to normal (*bottom*).