

## MILL CREEK COALITION AMD ABATEMENT SYSTEMS OM&R PLAN

**Project Location:** Mill Creek Watershed  
Clarion and Jefferson Counties, PA

**Client:** Mill Creek Coalition  
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This project consists of development of a Comprehensive Operation, Maintenance and Replacement (OM&R) Plan for all Acid Mine Drainage (AMD) treatment systems within the entire Mill Creek watershed. Currently there are 17 passive treatment systems in place with plans to install numerous additional systems.

The initial phase of the project involves assessing and characterizing the current conditions of the existing passive treatment systems in the watershed. The technologies that have been utilized include ALD, Aerobic Ponds, Aerobic Wetlands, SAPS and limestone beds. Each system type will be evaluated to determine current conditions and performance, operating issues, and expected life. Criteria will be developed for each passive treatment type as triggers for required maintenance activities and ultimate system replacement. Triggers currently being considered and evaluated are: 1) effluent alkalinity, dissolved oxygen, ferrous to ferric iron for ALD; 2) influent and effluent ferrous iron and solids depth for Aerobic Ponds and Wetlands; and 3) underdrain alkalinity, dissolved oxygen and Eh, and hydraulic head differential for SAPS. Replacement recommendations will be provided for each site for utilizing current and future AMD treatment technologies.



The second effort for the Comprehensive OM&R Plan involves development of a GIS system to efficiently track the myriad of historical, current and future data from various sources (e.g., stream and discharge water quality and biological data, engineering designs, photographs, maintenance manuals, and cost models for future systems). The GIS must be a flexible and expandable document that can integrate future AMD treatment systems constructed throughout the watershed. All existing information would be inventoried and placed into database files that will be directly linked to keys and symbols on layers of a standard source base map with the ability to overlay and query so that all the data can be reviewed and analyzed, allowing for efficient decision-making by the Coalition.