

aquatic life, are as much, if not more, of a concern as manganese. Discharges highest in aluminum were SGL #98 discharges, in particular D14 and D13. Iron was not as widespread of a pollutant (Figure 5); however, it is a large problem at D5 and has a huge impact at M3 (Figure 4).

Morgan Run did not support healthy populations of macroinvertebrates, and the mainstem did not support any fish populations. Recolonization potential exists through fish and macroinvertebrate populations in Crooked Sewer and the headwaters of Alberts Run. Habitat was sufficient to support a healthy, reproducing fishery, if AMD in this watershed were to be remediated.

Technology for AMD remediation varies depending on the site specific characteristics such as metal concentrations and space available for remediation systems. Site specific recommendations for the Morgan Run discharges will be made in the restoration plan. Remediation of AMD may be costly and difficult; therefore, it is important that mining companies follow current regulations and use best management practices in order to minimize or avoid any detrimental impact. For more information on mining and AMD treatment, see the following web sites and contact information:



Mouth of Morgan Run

Information on Mining - "Inspect a Surface Coal Mine" (Pennsylvania Department of Environmental Protection) http://www.dep.state.pa.us/dep/deputate/enved/go_with_inspector/coalmine/Table_of_Contents.htm

Information on Mining - Bureau of Deep Mine Safety (Pennsylvania Department of Environmental Protection) <http://www.dep.state.pa.us/dep/deputate/minres/dms/dms.htm>

AMD Passive Treatment - "Overview of Passive Systems for Treating Acid Mine Drainage" (West Virginia University Extension Service) <http://www.wvu.edu/~agexten/landrec/passtrt/passtrt.htm>

Active Treatment - "Overview of Acid Mine Drainage Treatment with Chemicals" (West Virginia University Extension Service) <http://www.wvu.edu/~agexten/landrec/chemtrt.htm>

AMD Treatment - Abandoned Mine Reclamation Clearinghouse (Pennsylvania Department of Environmental Protection and Western Pennsylvania Coalition for Abandoned Mine Reclamation) <http://www.amrclearinghouse.org/index.html> and <http://www.amrclearinghouse.org/Sub/AMDtreatment/>

AMD Information - Office of Surface Mining (U.S Department of the Interior) <http://amd.osmre.gov/amdtreat.asp>

MORGAN RUN WATERSHED CONTACTS:

Clearfield County Conservation District

(Donna Carnahan, *Watershed Specialist*)

Address: 650 Leonard Street, Clearfield, PA 16830

Phone: (814) 765-8130

Moshannon District Mining Office,

Pennsylvania Department of

Environmental Protection

Address: 186 Enterprise Drive, Philipsburg, PA 16866

Phone: (814) 342-8200

New Miles of Blue Stream

(Jennifer Demchak, *President*)

Address: 103 Fairway Drive, Philipsburg, PA 16866

Phone: (814) 343-5676

Susquehanna River Basin Commission

(Beth Dillon, *Water Quality Chemist*)

Address: 1721 North Front Street, Harrisburg, PA 17102

Phone: (814) 798-8012