LIST TITLE OF GRANT LIST GRANT OR PROJECT NUMBER LIST NAME OF GRANTEE OR SPONSOR

PROJECT DESCRIPTION

DESCRIBE PROJECT IN A FEW SENTENCES INCLUDING BMPS INSTALLED, TIMEFRAME OF PROJECT AND WHETHER THE PROJECT WAS DONE IN PHASES.

PROJECT GOALS

BRIEFLY DESCRIBE WHAT THE GOALS OF THE PROJECT WERE.

PROJECT RESULTS

INCLUDE A NARRATIVE DESCRIPTION AND A CHART OF BEFORE AND AFTER PROJECT RESULTS/ WATER QUALITY RESULTS. INCLUDE ANY LOAD REDUCTIONS ACHIEVED FROM THE PROJECT, LENGTH OF STREAM IMPROVED, AREA OF BUFFERS INSTALLED, ETC.

PICTURES

INSERT BEFORE AND AFTER PICTURES OF THE PROJECT AREA. IF "BEFORE" PICTURES NOT AVAILABLE, INCLUDE TWO "AFTER" PICTURES. LIMIT TO TWO PICTURES.

PROJECT COSTS

LIST TOTAL PROJECT COSTS AND SPECIFIC GRANT AMOUNTS AND SOURCES OF MONEY (GROWING GREENER, 319).

LESSONS LEARNED

BRIEFLY DISCUSS THINGS THAT WERE IMPORTANT TO THE PROJECT, THINGS DETRIMENTAL TO ACCOMPLISHING GOALS, PROBLEMS ENCOUNTERED AND WHAT WAS DONE TO OVERCOME PROBLEMS AND SUGGESTIONS FOR DOING THE PROJECT MORE EFFICIENTLY AND EFFECTIVELY.

PARTNERS

LIST ALL PARTNERS INVOLVED IN THE PROJECT

CONTACT INFORMATION

INCLUDE NAME AND CONTACT INFORMATION FOR THE GRANTEE OR PROJECT SPONSOR. (MAY BE WEBSITE ADDRESS, EMAIL ADDRESS AND PHONE NUMBER)

Silver Creek Mine Tunnel Acid Mine Drainage Restoration 319 NPS Program Project # 2728

Sponsor: Schuylkill Headwaters Association, Inc.

PROJECT DESCRIPTION The Silver Creek Mine Shaft contributes abandoned mine drainage with high concentrations of iron, aluminum and manganese to Silver Creek, a tributary to the upper Schuylkill River in Schuylkill County leading to metals impairment of the Schuylkill River. This project was for the design, installation and evaluation of a passive treatment system to treat the Silver Creek discharge. The system consists of a scour pool, aeration pond, settling pond, wetland cell and a variable level pond for oxidation and settling of metals. Project timeframe: 6/1/08-9/30/10.

<u>PROJECT GOALS</u> reducing iron, aluminum and manganese concentrations in the discharge, increasing the alkalinity of the discharge, reducing the metal loading entering Silver Creek and the Schuylkill River

<u>PROJECT RESULTS</u> The passive treatment system consists of five separate cells. The flow first enters a scour pool which acts as a leveling area for the water. The discharge then flows through an aeration pond, settling pond, wetland cell and then a final pond. The project is effectively removing 171lbs/day iron, 14.6lbs/day aluminum, 5.1lbs/day manganese.

WATER QUALITY	PRETREATMENT DISCHARGE	POST TREATMENT DISCHARGE
рН	6.4	7.6
aluminum	0.782mg/l	<0.2mg/l
iron	21.7mg/l	0.4mg/l
manganese	2.9mg/l	1.2mg/l

Before Treatment (AMD discharge)



After Treatment (treatment ponds)



PROJECT COSTS \$853,402 319 Nonpoint Source Grant.

<u>LESSONS LEARNED</u> The value of the level spreaders was most important in a totally passive system.

<u>PARTNERS</u> Schuylkill Headwaters Association, Inc.; Schuylkill County Conservation District; Schuylkill Action Network; Northampton Fuels; Premium Fine Coal; Reading Anthracite Coal and Rettew Associates. Flyway Excavating was the contractor.

CONTACT INFORMATION Schuylkill Headwaters Association, William Reichert at wreichert@co.schuylkill.pa.us