Growing our Communities
Growing Greener

For DEP use only:
MD070052

ENVIRONMENTAL STEWARDSHIP AND WATERSHED PROTECTION GRANT APPLICATION 2007

1. **Short Title**: ER-13 AMD Treatment Project

2. **Project Location**:

Watershed: Emigh Run Latitude: 4094781 Longitude: 7826567

County(ies): Clearfield Municipality(ies): Morris

(Include an 8.5"x11" copy of a USGS 1:24000 topographic map with project boundaries and quadrangle name clearly marked.)

Legislative District where the project is located: House 74 Senate 35

3. **Application/Project Type**:

Watershed Protection (includes Section 319) *(indicate size, then check only one)*

Watershed size: 6.1 sq. mi

a. ☐ Watershed group organization/support
b. ☐ Develop a watershed plan
c. ☐ Education/outreach
d. ☒ Design and/or construction
e. ☐ Operation, maintenance and replacement
f. ☐ Technical Assistance
g. ☐ Evaluation, Assessment or Monitoring Tools

Flood Protection *(check all that apply)*

h. ☐ Project improvement
i. ☐ Non-routine maintenance
j. ☐ Specialized equipment

4. **Applicant/Sponsor Information**:

APPLICANT

Organization: Emigh Run Lakeside Watershed Association

Street: P.O. Box 204

Morrisdale, PA 16858
City/State/(9 Digit) Zip:

Contact: Anna Mae Pezzulla, President

Tel: (814) 345 -5920 Fax: ( ) -

E-Mail:

Federal Employer ID #/SAP Vendor # 41-2054562

SPONSOR (If different from Applicant)

Tel: ( ) - Fax: ( ) -

E-Mail:

Federal Employer ID #/SAP Vendor #:

5. **Type of Organization**:

☐ School
☐ Conservation District
☐ Council of Governments
☐ Government
☒ Incorporated Watershed Group
☒ Incorporated Non-profit Organization
501(c)(3) status? Yes ☒ No ☐
Charitable Organization status? Yes ☒ No ☐

6. If applicable, is this project consistent with local comprehensive land use plans and zoning ordinances under Acts 67 & 68 of 2000? Yes ☐ No ☒. DEP policy documents 012-0200-002 and 012-0200-004 and the appropriate forms are available at http://www.depweb.state.pa.us/growinggreener select "Help for Applicants" in the Resources section.

7. Name of the DEP Regional Watershed Manager, Mineral Resources Watershed Manager or Bureau of Watershed Management staff person with whom you consulted about the proposed project (see Appendix 3): Mario Carrello

8. Will this project implement recommendations of an existing watershed, river conservation, source water protection plan or conservation district implementation or strategic plan? Yes ☒ No ☐
If yes, attach Executive Summary and pertinent pages, identify the plan and responsible organization:

Emigh Run Watershed Mine Drainage Assessment and Restoration Plan - Emigh Run Lakeside Watershed Association (ERLWA)

9. Will your project hinder the practice of sustainable forestry? Yes ☐ No ☒

10. Will your project be conducted on land owned by other Commonwealth agencies and have you contacted the appropriate agency? Yes ☐ No ☒

If yes, identify agency contacted: _____

11. Is your project located within an existing federal or state funded flood protection project? Yes ☐ No ☒

If yes, provide a copy of previous year's inspection report conducted by DEP or the U.S. Army Corps of Engineers.

12. Attach a detailed **project description** per suggested outline and Task and Deliverable Worksheet.

13. Budget Summary (Must be from attached DEP Detailed Budget Worksheet forms – do not include cents; round to the nearest dollar.)

Category	Grant Request	+	Match	=	Project Cost
Salaries/Benefits		+		=	
Travel		+		=	
Equipment and Supplies		+		=	
Administration (max 5%)		+	1280	=	1280
Contractual	38,765	+	1500	=	40,265
Construction	271,290	+	46,000 (Applied For)	=	317,290
Other		+	5640	=	
Total for each column:	310,055	+	54,420	=	364,475

14. Will competitive bidding or Request for Proposals be used? Yes ☒ No ☐

If yes, for which budget items? Construction, Material, and Labor

15. Was this proposal submitted to another source for funding? Yes ☒ No ☐

Name of other source: Chesapeake Bay Small Watershed

16. Are you willing to accept federal funding for this project? Yes ☒ No ☐

17. Are you willing to accept Growing Greener II Bond funding? Yes ☒ No ☐

18. Do you wish to be considered for other state grant programs? Yes ☒ No ☐

CERTIFICATION AND SIGNATURE OF APPLICANT (REQUIRED) AND SPONSOR (IF APPLICABLE)

Applicant: I certify that the information in this application is true and correct to the best of my knowledge.

Emigh Run Lakeside Watershed Association, Inc — Applicant Organization — 3/27/07 Date

Anna Mae Pezzulla — Printed Name — Anna Mae Pezzulla — Signature — President — Title

Sponsor: I certify that the information in this application is true and correct to the best of my knowledge. I certify that I am willing to accept responsibility for a grant on behalf of the applicant.

_____ Applicant Organization _____ Date

_____ Printed Name _____ Signature _____ Title

TWO SIDED PAGES ONLY - NO PERMANENT BINDING (USE STAPLES ONLY) – NO FAXES

SEE PAGE 37 FOR SUBMITTAL INSTRUCTIONS

DEADLINE FOR SUBMITTAL IS APRIL 13, 2007

TASK AND DELIVERABLE WORKSHEET

Identify each deliverable, title, dollar amount, estimated date of completion for deliverable, person responsible for task, and associated tasks (including tasks provided as match).

Deliverable #:	1				
Title:	Bid Process/Pre Construction Coordination				
Dollar Amount for Grant Request:	3,680	**Match Dollar Amount:**	1,500	**Total Cost:**	5,180
Estimated Date of Completion for Deliverable:	June 2008				
Salary Staff/Contractor/Match Contributor:		**Tasks:**			
•	Contractor	Pre-bid meetings, meetings to choose bidder, bid documents			
•					
•					
•					
•					
•					
Deliverable #:	2				
Title:	Constructed Treatment System				
Dollar Amount for Grant Request:	271,290	**Match Dollar Amount:**	46,000	**Total Cost:**	317,290
Estimated Date of Completion for Deliverable:	June 2009				
Salary Staff/Contractor/Match Contributor:		**Tasks:**			
•	Contractor	All tasks associated with treatment system construction			
•					
•					
•					
•					
•					

TASK AND DELIVERABLE WORKSHEET

Identify each deliverable, title, dollar amount, estimated date of completion for deliverable, person responsible for task, and associated tasks (including tasks provided as match).

Deliverable #:	3				
Title:	Construction Management				
Dollar Amount for Grant Request:	23,395	**Match Dollar Amount:**		**Total Cost:** 23,395	
Estimated Date of Completion for Deliverable:	June 2009				
Salary Staff/Contractor/Match Contributor:		**Tasks:**			
•	Contractor	On-site visits, construction oversite			
•					
•					
•					
•					
•					
Deliverable #:	4				
Title:	Post Construction Monitoring				
Dollar Amount for Grant Request:	4,085	**Match Dollar Amount:**	640	**Total Cost:** 4,725	
Estimated Date of Completion for Deliverable:	June 2010				
Salary Staff/Contractor/Match Contributor:		**Tasks:**			
•	Match Contributor	Monthly Sampling of treatment system			
•					
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TASK AND DELIVERABLE WORKSHEET

Identify each deliverable, title, dollar amount, estimated date of completion for deliverable, person responsible for task, and associated tasks (including tasks provided as match).

Deliverable #:	5		
Title:	As-built drawings and OM& R plan		
Dollar Amount for Grant Request:	5280	**Match Dollar Amount:** 1500	**Total Cost:** 6,780
Estimated Date of Completion for Deliverable:	June 2010		
Salary Staff/Contractor/Match Contributor:		**Tasks:**	
•	Contractor	Modify original site plans	
•	Contractor	Final as-built drawings with all system components	
•	Contractor	Final OM&R plan to maintain success of system	
•			
•			
•			

Deliverable #:	6		
Title:	Administration		
Dollar Amount for Grant Request:		**Match Dollar Amount:** 1,280	**Total Cost:** 1,280
Estimated Date of Completion for Deliverable:			
Salary Staff/Contractor/Match Contributor:		**Tasks:**	
•	Salary Staff	Administrative Tasks	
•			
•			
•			
•			
•			

TASK AND DELIVERABLE WORKSHEET

Identify each deliverable, title, dollar amount, estimated date of completion for deliverable, person responsible for task, and associated tasks (including tasks provided as match).

Deliverable #:			
Title:			
Dollar Amount for Grant Request:		**Match Dollar Amount:**	**Total Cost:**
Estimated Date of Completion for Deliverable:			
Salary Staff/Contractor/Match Contributor:		**Tasks:**	
•			
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•			
Deliverable #:			
Title:			
Dollar Amount for Grant Request:		**Match Dollar Amount:**	**Total Cost:**
Estimated Date of Completion for Deliverable:			
Salary Staff/Contractor/Match Contributor:		**Tasks:**	
•			
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Detailed Budget Worksheet

This worksheet should be used to prepare Application Item #13, Budget Summary, and must be submitted with the application package. The totals for each of these categories must match those entered on the application form. Do not use cents; round to the nearest dollar.

Certain restrictions apply to Growing Greener II projects (Refer to Appendix 1)

1. SALARIES/BENEFITS

INDIVIDUAL	POSITION	HOURLY RATE	HOURS	BENEFITS	TOTAL COST
TOTAL SALARIES/BENEFITS					

2. TRAVEL – Travel costs are not eligible for GG II projects.

Mileage: _____ miles @ $_____/mile = _____
Meals: _____ = _____
Lodging: _____ nights @ $_____/night = _____

TOTAL TRAVEL = _____

Ensure that maximum reimbursement is not exceeded. Rates can be found at http://www.depweb.state.pa.us/growinggreener under "Help for Recipients", "Tips for Travel Reimbursement".

3. **EQUIPMENT AND SUPPLIES** (Non-Construction-Related Costs)

ITEM	QUANTITY	COST PER ITEM	TOTAL COST
TOTAL EQUIPMENT AND SUPPLIES			

4. **ADMINISTRATIVE** (List all overhead -- 5% maximum – see Instructions) (not permitted for GG II grants or Flood Protection Grant Program)

ITEM	COST
TOTAL ADMINISTRATIVE	

5. **CONTRACTUAL**

A. **Contractor Salaries** (List exact billing rate by task with no salary ranges, see Instructions)

TASK	CONTRACTOR	HOURLY RATE	HOURS	BENEFITS	CONTRACTOR SALARY
Project Engineer	NMBS/ARE	$75.00	220		16,500
Project Professional	NMBS/ARE	$75.00	180		13,500
Engineering Technician	NMBS/ARE	$45.00	88		3,960
Survey Crew - 2 person	NMBS/ARE	$100.00	20		2,000
CAD Draftsman	NMBS/ARE	$45.00	24		1,080
Also see Appendix A for more info					
TOTAL CONTRACTUAL SALARIES					$37,040

B.

Other Contractual Expenses

ITEM	COST
Water Sample Analysis	$600
Photocopies/Reproduction	300
Drawings	750
Postage	75
TOTAL OTHER CONTRACTUAL EXPENSES	$1725

C. Total Contractual (A+B)

CONTRACTOR SALARIES	OTHER CONTRACTUAL EXPENSES	TOTAL CONTRACTUAL
37,040	1,725	38,765

6. CONSTRUCTION (List materials (including plants) and labor)

A. Materials

TYPE OF MATERIAL	COST PER UNIT	COST
Access		32,900
Earthwork		80,875
Limestone and OM		65,700
Piping and other water contol structures		33,660
Site Restoration		7,805
Other		26,500
SEE APPENDIX A FOR A MORE ITEMIZED DETAILED COST		
Mobilization Costs		28,845
TOTAL MATERIALS		271,290.00

B. Labor

JOB	TOTAL HOURS	HOURLY RATE	COST
Construction, Labor included with materials costs as a lump sumproject bid			
TOTAL LABOR			

C. Total Construction (A+B)

TOTAL MATERIALS	TOTAL LABOR	TOTAL CONSTRUCTION
271,290		$271,290

7. OTHER

ITEM	COST
TOTAL OTHER	

8.

MATCH

Please use the following table to calculate matching contributions of cash, goods and services to enter on the application form. Do not include other DEP funding sources or DEP in-kind services. **A CURRENT LETTER OF COMMITMENT IDENTIFYING DOLLAR AMOUNT AND TYPE OF MATCH MUST ACCOMPANY ALL PLEDGED OR IN-HAND ITEMS LISTED. DOCUMENTATION REQUESTING FUNDING MUST ACCOMPANY ALL APPLIED-FOR ITEMS LISTED.**

CONTRIBUTOR	BUDGET CATEGORY (purpose in project)	DESCRIPTION (cash, goods or service)	STATUS (applied for, pledged or in-hand)	VALUE in DOLLARS
Chesapeake Bay Small Watershed Grant	Construction	Grant Submitted	Applied For	46,000
NMBS	Contractual	grant preparation services and associated expenses	in-hand	1500
MCWC	Salary	Monitoring	Pledged	640
Property Owner		Land and Timber	Pledged	5000
ERLWA	Salary	Admin	Pledged	1280

Department of Environmental Protection

Environmental Stewardship and Watershed Protection Grant Application

CHECKLIST FOR APPLICATION COMPLETENESS

(Complete and submit as the last page of your grant submittal.)

Applicant/Sponsor:

Emigh Run Lakeside Watershed Association

Project Title:

Emigh Run 13 (ER-13) Acid Mine Drainage Treatment Project

Use a check if contained in your application. Indicate N/A if "Not Applicable".

GENERAL

☒ Discussed project with DEP Regional Watershed Manager, Mineral Resources Watershed Manager or Bureau of Watershed Management staff person by March 16,2007.
☒ The project addresses pollution through local, watershed-based planning, restoration or protection.
☒ The project participants/responsible parties are identified.
☒ All tasks required to implement project are identified and assigned.
☒ The project deliverables are clearly identified.

APPLICATION

☒ The application, including Detailed Budget Worksheet and Task and Deliverable Worksheet, is complete and signed by the Applicant and Sponsor (if applicable) for funding consideration.
☒ The application includes the original and four copies (a total of five).
☒ A copy of the application has been sent to the county conservation district where the project is located (not applicable for Flood Protection Grant Program).

The proposal body and attachments include:

☒ Project Location Map.
☒ Document how proposal will implement recommendations of an existing watershed plan.
☒ Detailed Project Description, including a breakout of costs for each work element.
Signed Landowner Access Authorization Form
Signed Letter of Commitment from landowner(s) or executed Landowner-Grantee Agreement.
****"Old" landowner agreement is being submitted with grant, if awarded, a new landowner agreement will be signed**
☒ Current Letters of Commitment from project partners for match identified are included.
☒ Current, project-specific Letters of Support.
☐ Letter of Acknowledgement (Mining projects only) from the WPCAMR or EPCAMR.
☐ Land Use Planning Form (LPF) or approval letter / Multi-Municipal Planning Form or letters from the municipality or appropriate planning office, if applicable (not applicable for Flood Protection Grant program).
☐ For Flood Protection Grants, copy of previous year's inspection report conducted by DEP or the U.S. Army Corps of Engineers.

Late submissions will not be considered. Faxes will not be accepted. Use staples only, no binding or cover pages, please. Application materials must be submitted in the order established by the instructions.

DETAILED PROJECT DESCRIPTION
EMIGH RUN 13 ACID MINE DRAINAGE TREATMENT PROJECT

EXECUTIVE SUMMARY

The Emigh Run Lakeside Watershed Association (ERLWA) is proposing to secure funding for the construction of the ER-13 Acid Mine Drainage Treatment Project. Through the initial assessment of Emigh Run performed by the ERLWA and the West Branch Area School District (WBASD), we have determined that construction of a passive treatment system at this discharge will allow us to continue with the goal of restoring Emigh Run as a cold water fishery. The ER-13 and ER-14 discharges will both be treated by this treatment system. The ER-13 discharge which is a discharge created by toe of a spoil seepage from a reclaimed surface mine site. Water seeps along the edge of the reclaimed area creating a large wet, iron laden biologically dead area. The water collects into a discrete channel that flows to Emigh Run. Two abandoned settling ponds also remain in the area, which also discharge into ER 13. Water also collects from the ER 14 discharge which is a channel which forms from seep emanating from abandoned spoil with large conifers, but no ground cover. The channel flows through a wet area and forms a channel to Emigh Run. The first source of pollution to Emigh Run has already received funding for the construction to relocate the headwaters away from spoil material. This project is the next step to continue efforts put forth by project partners.

Funding has previously been awarded for project design and permitting phase through the Growing Greener Program. The design of this passive treatment system includes an equalization basin followed by a series of two limestone cells and settling basins before outflow through a mitigation wetland. This project has been discussed by all project partners to reach an understanding on how to best treat this discharge with impacting minimal wetlands. They are all supportive of the project and spent additional time in the field collecting information to aid in the design.

Funding is requested for the construction of a passive treatment system. The project would eliminate pollutant loadings in Emigh Run, and further the re-

establishment of aquatic life in Emigh Run. A significant pollution load from the ER-13 and ER-14 discharges would be removed if treatment were to occur at this site. Wetland impacts will be minimal, and the project will result in improvements in water quality flowing to existing downstream wetlands. A mitigated wetland will also be constructed to account for impacts to wetlands. The appropriate water management and wetland permits are currently being obtained.

STATEMENT OF ENVIRONMENTAL NEED

The Emigh Run Watershed is located in Central Pennsylvania in Morris Township, Clearfield County. The watershed is located on the USGS 7.5 minute series topographic maps of Wallaceton and Philipsburg near Wallaceton, PA. A project location map has been provided with this application.

Emigh Run is a subwatershed of Moshannon Creek. The Moshannon Creek Watershed totals 288 square miles as it flows through 8 townships and two counties. The Operation Scarlift Report on Moshannnon Creek indicates that Moshannon Creek was (and still is) significantly degraded by abandoned mine drainage (AMD). The Creek contributed to 130,000 pounds per day (lb/day) of acidity to the West Branch of the Susquehanna River in 1973, degrading the river for many miles below its confluence with Moshannon Creek. The proposed project would remove acidity, iron, and aluminum loadings from Emigh Run and subsequently, Moshannon Creek.

Emigh Run is also severely impacted by AMD, a non-point source pollutant, resulting from years of deep mining and surface mining for bituminous coal in the watershed. Deep mining began in the area in the 1800s, and slowly increased through the Civil War era. During the 1940s strip mining became the dominant mining practice in the area. As with most of the watershed, Emigh Run was severely impacted by past mining practices, which have scarred the landscape and severely impacted the hydrology.

The main stem of Emigh Run is approximately 5.2 miles in length and the watershed is comprised of 6.1 square miles. A few tributary streams feed Emigh Run,

and they are of good water quality. The stream enters Moshannon Creek between Hawk Run and Troy off of State Route 53 between Philipsburg and Morrisdale.

Water sampling has been performed along Emigh Run as part of the assessment performed by the ERLWA and the WBASD. The sampling has verified that Emigh Run is severely impaired by AMD. There are unconfirmed, anecdotal reports of individuals stocking trout, which reportedly survive, in the swampy area below Lakeside Dam, but these reports have not be substantiated. Emigh Run is a significant contributor of acidity and metals loadings to Moshannon Creek, and as such is a priority for the restoration of Moshannon Creek.

Emigh Run provides the only source of surface water hydrology for the 22 acre Lakeside Dam, which is located between Troy Hill and Morrisdale. (Lakeside Dam is often referred to as Morrisdale Dam by local residents.) The Dam was built in the 1800s by a mining company and was the primary source of drinking water for the town of Morrisdale. The Dam is now privately owned. The owner hopes to donate the Dam along with five acres of wooded area to create a nature park. Before repairs on the Dam can occur, there is a great need to treat the AMD that is severely affecting the water quality and in turn, the aquatic life of the Dam. A complete watershed assessment and restoration plan has been developed in order to recover this area as both a potential water source and a recreational/educational area.

As stated previously, the Emigh Run Watershed is the only source of surface water feeding the Lakeside Dam, and therefore, its clean-up is an essential factor in establishing the Lakeside Dam as a recreational area. Lakeside Dam is located directly off of State Route 53, and its re-establishment as a recreational area would be a valuable promotional project for various grant agencies. Its close proximity to both the West Branch and Philipsburg-Osceola School Districts would allow it to be used as an educational area. Both the dam itself and the subsequent recreational areas that will be established will provide valuable educational services to the surrounding schools and communities. Projects that are highly visible and successful are great motivators for the community to get involved in future projects.

Extensive mining occurred in the headwaters of Emigh Run prior to the Surface Mine Conservation and Recovery Act (SMCRA), leaving abandoned highwalls and spoil

areas that degrade stream quality. Efforts are underway to remine some areas in the headwaters. With the addition of lime to the backfill, we are confident we will see improvement in the quality of some of the discharges. The remining efforts, in combination with proposed restoration of water quality, including ER-8, are the first necessary steps in the restoration of Emigh Run.

The discharges of ER 13 and ER-14 seep through a reclaimed surface mine, severely degrading water quality to Emigh Run. We feel that through treating the discharge by constructing a passive treatment system, water quality will improve and a higher pH and lower metal concentrations will be noticed in the stream. This will have a beneficial effect throughout the watershed. The ER-13 discharge is the next important step in restoring Emigh Run and, subsequently, the Morrisdale Dam.

The Emigh Run Watershed is a valuable resource to local residents as a haven for outdoor activity. The watershed is used recreationally by outdoorsmen through hiking and hunting. Hunters and hikers are able to enjoy the watershed throughout the year, but due to the degraded state of Emigh Run, fishermen are not yet able to take pleasure in the benefits of the wilderness within the watershed. It is the goal of all partners to restore Emigh Run to a stream able to support aquatic organisms, from mayflies to brook trout.

Through a combination of efforts in the watershed, we feel strongly that Emigh Run and subsequently the Lakeside Dam will support fish and other aquatic life. The ER-13 treatment project will play a significant role in the success of watershed restoration. Through this project, a significant pollution load will be removed from the main stem of Emigh Run, while extending the length in which aquatic life will re-establish.

COMMONWEALTH INVESTMENT CRITERIA

As part of any passive treatment construction project, the goal is to restore the watershed for recreational purposes in the hopes of attracting tourist and local dollars to the area. Specific jobs will be created through restoration projects. Local individuals work for construction companies who build the treatment systems and the trucking

companies that haul the limestone and organic matter to the site. Sustainable businesses could be developed through canoe rentals or fishing tours when restoration is complete in the watershed. In this case, the clean up of Emigh Run will have beneficial effects to Moshannon Creek as a whole.

As of now the recreational opportunities are minimal for Emigh Run and the Morrisdale Dam. There is no fishery and few want to boat or swim in "orange" water. Restoration efforts throughout the watershed will help the local community take pride in their backyard and begin using Emigh Run for recreational purposes. As stream miles are restored, individuals from outside the area will begin using the stream for fishing and canoeing, bringing tourist dollars to the area. An exact value is hard to calculate, though some have tried. The area is already used extensively by hunters and it is a natural jump to use the stream for fishing.

NON-POINT SOURCE POLLUTION FROM THE DISCHARGE

There is no discrete AMD discharge that pollutes the ER-13 and ER-14 discharges. Instead, the discharge picks up contaminants as it flows through the reclaimed surface mine area. Contaminants are released though the contact of water and the acidic mine spoil. Though we cannot remove all the acidic mine spoils that is degrading water quality, we can treat the water as is flows from the contaminant soils. Photographs of the project area are provided in Appendix C.

Water quality and flow data have been collected for a period of one year which indicated a pH of 3.8 and elevated levels of acidity, aluminum, and iron. Data collected during the assessment of Emigh Run is provided in Appendix B. Data collection is ongoing during the design phase of this project.

With treatment occurring in the headwaters, the pH of Emigh Run should average from 5.5 to 6.0. If the ER-13 discharge were to be left untreated, pH would be significantly lowered while metal concentrations would remain too high to support an aquatic ecosystem. An equalization basin followed by a series of two limestone cells and settling basins will be installed. This treatment train will provide a much-needed boost of alkalinity (100 mg/L), while removing 156 lbs/day of acidity, 7 lbs/day of iron, and 8 lbs/day of aluminum at design flow of 100 gallons per minute.

PROJECT'S RELATIONSHIP TO WATERSHED PLANS

A partnership between Morris and Boggs Townships, ERLWA, New Miles of Blue Stream (NMBS), and the West Branch Area School District (WBASD) has completed a restoration plan for Emigh Run. The ER-13 Acid Mine Drainage Treatment Project is the second priority mentioned in the restoration plan for Emigh Run. ERLWA has secured funding for the construction of the headwaters stream relocation project, while securing funding for the design and permitting for the passive treatment system on the ER-13 discharge, as well as, funding for design and permitting of a passive treatment system on the ER-8 discharge. The funding identifies the top three priorities identified in the restoration plan. The next step is to start construction of the second and third priorities within the watershed. We feel that the ER-13 and ER-14 discharges needs to be addressed due to its downstream location from the headwaters relocation project, and its significant pollution loading. ERLWA recognizes the impact that the water seeping from the reclaimed surface mine has on the stream and the need to address this problem.

This project is the next step in the restoration of Emigh Run. Through efforts of the local townships, school districts, and watershed groups, we are seeing success in our watershed. We have received funding totaling approximately $300,000 to perform an assessment, design/permitting on the top three priorities, and construction for the headwaters project. We have momentum and are gaining additional community support. Success breeds success and that is what we hope to continue building on with this project.

Efforts are also underway in the restoration of Moshannon Creek, the receiving water of Emigh Run. A watershed group has formed, the Moshannon Creek Watershed Coalition (MCWC). The group is now in the process of performing an assessment and restoration plan for the headwaters of that stream. Restoring Moshannon Creek is a daunting task, but it can be reached by focusing on one tributary at a time. Mining has impacted the largest watershed in the state, but we must start with the subwatersheds and strive forward with our stream restoration efforts. This treatment project in Emigh Run will help build on the overall efforts in restoring stream miles in Pennsylvania.

Following the construction of the first three priorities in the watershed, which include the ER-13 Acid Mine Drainage Treatment Project, remediation activities will shift to the next downstream pollutant source until Emigh Run completely restored and is able to support a healthy aquatic ecosystem. The remediation activities are being carefully coordinated with ongoing active surface mining in the watershed as it is hoped that the mining and re-mining will result in improved water quality. This careful coordination will ensure that no reclamation or remediation efforts are duplicated. Each small success will lead to the improvement in water quality in Emigh Run and Moshannon Creek.

JUSTIFICATION OF FUNDING

The ER-13 Acid Mine Drainage Treatment Project will help to restore the water quality in Emigh Run, while reducing chemical contaminants and improving the water quality to levels where aquatic organisms can re-enter the stream. The ER-13 Acid Mine Drainage Treatment Project will address many issues as outlined in the Chesapeake 2000 Agreement and will reduce non-point source pollutant loads in a watershed that is known to be impaired. The project is located within the West Branch of the Susquehanna Watershed. The project results from local, watershed-based restoration efforts.

The ERLWA will encourage sound land use conservation and develop educational and recreational areas near the Lakeside Dam and project site. We will disturb the minimum area necessary to successfully and efficiently complete the project. We will ask for community stewardship for the watershed through our local watershed groups and public meetings. We will reach out to our community through public meetings, and through the local school district. We will partner with local watershed groups, landowners, sportsmen's groups, school districts, townships, and any other organization making a commitment to this environmental issue we are all facing. It will be through this cooperative effort that we will see the restoration of Emigh Run.

This project is another step in the restoration of Moshannon Creek, a large undertaking, but by working one tributary at a time, our goal could become a reality. The

effort to restore Moshannon Creek is a daunting task, but through efforts of the ERLWA in partnership with MCWC, we are focusing on the restoration of one tributary at a time. Each small success will lead to the improvement in water quality in Moshannon Creek.

The benefits of this restoration project are important steps towards the goals of the ERLWA which include: a) improved water quality in the stream and Morrisdale Dam, b) restoration of native fish populations, c) improved wildlife habitat, d) development of a future sport fishery in Emigh Run, f) reduction of a significant non-point source pollution to Emigh Run and Moshannon Creek, and g) important educational opportunities to provide local citizens information to better understand AMD and treatment systems. The positive economic impacts that are generated from these benefits translate into a better way of life for local communities and for visitors to the Emigh Run and Moshannon Creek Watersheds, and the results will be enduring.

The local schools could use this site regularly to learn about the impact of AMD in aquatic ecosystems, benefits of wetlands to the environment, water monitoring, watersheds and AMD reclamation. All of the activities listed above will be well received by the school districts, as the new Pennsylvania science standards for 2002 require education in these fields. Many teachers at the elementary and high school level are not familiar with these fields and would appreciate the expertise of the ERLWA, the Conservation District, and NMBS in educating the school children in the watershed.

The project applicant, the ERLWA has limited assets. Without a Growing Greener Grant or some other type of funding, this project cannot be completed. The reclaimed surface mine area will continue to be a source of pollution to Emigh Run, and the goal of restoring Emigh Run cannot be realized. This grant is needed to construct a passive treatment system and ensure that the project is constructed according to plan in a technically correct manner.

The project is in accordance with local, watershed-based planning and restoration efforts. The DEP has already invested significant effort in West Branch Susquehanna River Watershed, for AMD remediation, and this project would further the efforts to restore the receiving waters of Moshannon Creek and, subsequently the West Branch of the Susquehanna RIver.

PROPOSED SCOPE OF WORK

GOALS, OUTCOMES, AND MEASURABLE ENVIRONMENTAL RESULTS

The major goal of this project is to treat water seeping through the reclaimed surface mine area and passively treat that water by constructing an equalization basin followed by a series of two limestone cells and settling basins. Reclamation and abatement of AMD, one of the largest causes of non-point source pollution in Pennsylvania, is considered a main objective of the ERLWA in their goal of watershed restoration.

Addressing this AMD discharge will eliminate a source of pollution to Emigh Run, and subsequently to Moshannon Creek. The construction of this proposed treatment system will remove the loadings of roughly 145 lb/day acidity, 7 lb/day of iron and 8 lbs/day of acidity from Emigh Run plus adding 100 mg/L of net alkalinity to the stream. Treatment of this discharge will continue our efforts downstream to restore the main stem of Emigh Run to a state that would support aquatic life.

A secondary benefit of the project will be public awareness of the problems associated with the Emigh Run Watershed. The support of the public will be essential to the restoration of the watershed. Continued support of the community can be garnered by showing them successes in the watershed, i.e. stream miles recovered. Action brings involvement, and success breeds success.

Along with the improvement to Emigh Run, improvement should be seen in Moshannon Creek. The cleanup of Moshannon Creek is a daunting task, but by focusing on one tributary at a time, impacts will be seen in the overall quality of the creek. It is a difficult battle, but we feel that through the restoration of Emigh Run, the community will see that successes can occur, and the greater public involvement will help in the larger picture.

SCOPE OF WORK

The ongoing design project, which will be completed in June 2007, will have produced a detailed design and construction drawings and specifications, resolved all landownership and access issues, and obtained all necessary permits for construction of this project. A Joint Permit Application will be submitted to the DEP and the U.S. Army Corp of Engineers in the near future. The proposed project includes construction of the passive treatment system and construction management and inspection services.

The construction work is to be performed by a construction contractor experienced in stream relocation and the construction of AMD treatment systems. The construction work to be done by the construction contractor will include furnishing of all materials and labor necessary to complete the stream relocation and AMD treatment components in the abandoned stream channel. An itemized list of construction materials and activities is provided in Appendix A with the project cost estimate. The contractor will return the project access road to a condition equal to or better than its existing condition. The contractor will also provide construction surveying services, including project stakeout, project supervision, and project quality control.

Competitive bidding will be used for the construction portion of this project. Contractor selection will be based on the factors of price, past experience with stream relocation, mine reclamation, and installation of passive treatment systems, and past relationships with ERLWA.

The ERLWA has turned to New Miles of Blue Stream (NMBS) and Alder Run Engineering (ARE) to provide professional support in this endeavor as included in the contractual services portion of this proposal. NMBS/ARE is providing the design services for the ongoing design project and is most familiar with the project. NMBS has assisted with the assessment and restoration plan of Emigh Run. The partners would like to continue to utilize the services of the local professionals who are familiar with the project and who provide services at rates that are comparable to other larger engineering firms who specialize in AMD-related work.

Contractual construction management and inspection activities will be performed by NMBS/ARE personnel experienced in hydraulics, stream restoration, the

construction of passive treatment systems, and construction practices. The management and inspection will consist of four tasks: pre-construction coordination, construction management, post-construction monitoring, and development of as-built drawings and an operation and maintenance plan.

NMBS/ARE will assist ERLWA as needed throughout the bidding processes through pre-construction coordination. This work may include issuance of bid documents, clarification of design issues, and attendance at pre-bid field visits, as desired by the ERLWA.

NMBS/ARE will provide construction inspection to ensure that construction occurs according to the project plans and specifications. Following construction, as-built drawings will be developed and provided to ERLWA and DEP. An operation, maintenance, and replacement (OM&R) plan will also be developed, although OM&R needs should be minimal. Post-construction and sampling of the treatment system will be provided by NMBS/ARE and the ERLWA at points upstream and downstream of the project for a period of one year following the completion of construction.

NMBS/ARE will provide reports during the duration of the project, leading up to the final report. The quarterly reports will contain progress of the overall completion of the project. The reports will give the ERLWA and NMBS/ARE the opportunity to correct problems and make adjustments as needed to insure the success of the project. A final report will be prepared by NMBS/ARE.

The project will include the installation of a project sign, to be coordinated by the ERLWA. The sign will be erected in conjunction with the headwaters relocation project and other treatment projects at a nearby public road (as preferred by the DEP) to explain the purpose of the project and to credit the Growing Greener Program (or other funding source). An existing sign at the Lakeside Dam provides information about the Emigh Run Watershed.

DISCUSSION OF PROPOSED PROJECT

The design of the project and submission of the appropriate permits will occur before June 2007. The site has been surveyed, wetlands have been delineated, onsite

filed meeting with project partners have been conducted, and permit preparation is underway.

The ER-13 and ER-14 discharges emanate from a reclaimed surface mining area. Due to landowner issues with this project, PADEP is in the process of building a 400 foot conveyance ditch which will capture the two discharges and divert them to an adjoining property for construction.

The conveyance ditch will enter an equalization basin, followed by a vertical flow wetland with 1200 tons of limestone. The outflow will enter a settling basin to allow metals to precipitate. A second vertical flow wetland with 1800 tons of limestone will follow and discharge into another settling basin. A final mitigation wetland will be constructed and will contain good quality water.

For additional system information please see attached Project Design Report.

WORK PLAN WITH TIMELINE

The design and permitting of the treatment system are scheduled to be completed by the end of June 2007. Project bidding activities would commence in April of 2008 if the grant is awarded, and would be completed in time to allow construction during the dry periods of late summer and fall of 2008.

The construction work of this project would be completed within approximately 12 months. However, the construction schedule was selected to allow more time than necessary for actual construction, due to unforeseen difficulties such as wet weather, which could delay construction considerably. If local municipalities are able to provide construction assistance, an extended schedule also allows ERLWA to accommodate the other construction and maintenance responsibilities of the municipalities. Sampling activities are proposed to occur for a period of 12 months following system construction.

A project timeline, including task, timeframe, and responsible party, is as follows:

PROJECT TIMELINE

ACTIVITY	TIMEFRAME	RESPONSIBLE PARTY
Design and permitting of treatment system	Completed by June 2007	ARE/NMBS **
Bid process begins	April 2008	ERLWA, ARE/NMBS
Bid process completed and contract awarded	May 2008	ERLWA, ARE/NMBS
Construction commences	May 2008	Construction Contractor (With assistance by local municipalities)
Construction inspection and management	Concurrent with construction activities (May 2008 to May 2009)	ARE/NMBS
Construction completed	May 2009	Construction Contractor
Post-construction sampling and surveying begins	May 2009 or at completion of construction (if earlier)	ERLWA, ARE/NMBS
As-built drawings and O&M plan completed	January 2010	ARE/NMBS
Sampling ends and final project report completed	April 2010	ARE/NMBS
**Work is funded by prior grants and is not part of this grant request.		

PROJECT COSTS AND YEARLY BUDGET BREAKDOWN

The estimated total cost of the project is $364,475. We are requesting $310,055 of Growing Greener money to construct the treatment system. A Chesapeake Bay Small Watershed Grant was submitted for $46,000 to help meet the 15% match requirements. Additional match is provided by project partners. The design and permitting phase has already been awarded through the Growing Greener program and will be completed in June 2007. An itemized listing of construction activities, materials, and associated costs is provided in Appendix A as the standard budget form did not accommodate all of the construction items. An itemized listing of personnel, rates, and direct expenses for the contractual services is also provided in Appendix A.

Funding has been requested over the three fiscal years of the funding program. The project would begin in summer of 2008 at the latest, with grant being awarded in a timely manner. The project design and permitting phase will be completed in March of 2009. With funding secured this will allow for the work to be completed by April of 2010.

PARTNERSHIPS

The ERLWA is the project applicant. Through its ongoing efforts to remediate AMD in the area, the organization has demonstrated the commitment and ability to provide continued support for the project in the long term. Proof of that commitment can be seen in the past successes of the ERLWA with the assessment of Emigh Run, obtaining funding for three design projects, and funding for construction of one project.

Participating organizations and their primary roles in the project are as follows:

- **The Emigh Run-Lakeside Watershed Association** is the project applicant. They will be providing field help such as sample collection as needed. They are responsible for getting all partners involved and will help organize any public meetings or press releases. In the past, they have provided volunteer monitoring services, outreach activities, and participation in the watershed during the data collection and assessment phases of this construction project. They will continue to provide these functions during the construction project.

- **Morris Township** will act as a support structure for field work or the use of equipment. They are acting as our fiscal agent for other grants and have played a vital role in the success the ERLWA is having. They have taken it upon themselves to be responsible for the Lakeside Dam once it is restored.

- **The Clearfield County Conservation District (CCCD)** will be acting as a resource tool for the project. They have been highly involved with the restoration efforts on Emigh Run and will continue to do so.

- **Moshannon Creek Watershed Coalition (MCWC)** is the watershed organization whose goal is to restore Moshannon Creek and is doing so by concentrating on one tributary at a time, where significant public support has been shown. As Emigh Run is a tributary to Moshannon Creek the MCWC members will provide support as necessary to the project.

- **The Pennsylvania Department of Environmental Protection (PADEP)** provided historical data on AMD and other sources in the watershed.

- **NMBS/ARE** is providing consulting services for the design phase of this project. They will continue to provide consulting services for the construction of the project. They will be responsible for bidding assistance, construction management, and providing as-built drawings and an operation and

maintenance plan. NMBS/ARE has provided matching funds for the project in the form of grant preparation services and associated reproduction costs.

- **West Branch Area School District (WBASD)** will continue to play a role in all projects on Emigh Run. They were extensively involved in the watershed assessment and will continue to conduct field testing as needed. They can help with soil sampling and the wetland delineation aspect of the project. They can play a larger role in the construction phase by digging up and saving any wetland species along the stream channel to be abandoned to be replanted elsewhere on the project site or in the watershed.

- **The Clearfield County Senior Environmental Corps** has provided data collection, volunteer monitoring, and participation in the watershed during the data collection and assessment phase of this construction project. They will continue to provide volunteer monitoring and participation in the watershed during and following this proposed construction project.

We hope to attract additional partners and community involvement through public outreach. We will prepare a press release and/or hold a meeting upon the award of a grant to inform the local community about our activities in the watershed, to garner additional support, and to show the successes that we are accomplishing. We hope to reach at least 50 people through this outreach effort. We hope to educate the public that restoring the Morrisdale Dam is an achievable goal will be accomplished one project at a time.

LANDOWNER-GRANTEE AGREEMENT

At this time the ERLWA has contacted the landowner to obtain permission to construct the project at this site. ERLWA has received an "old" landowner agreement. We contacted Harrisburg, and they said that would be sufficient for the grant submission, however, if the grant is funded we will need to secure the new landowner agreement with OM&R.

EQUIPMENT DISPOSITION

No equipment funding is requested. Therefore, this section is not applicable to the project.

OPERATION, MAINTENANCE, AND REPLACEMENT TASKS AND RESPONSIBILITIES

Funding for the ER-13 Acid Mine Drainage Treatment Project is requested at this time. Long term protection of the project will be maintained by a partnership between the ERLWA, the WBASD, MCWC, and the townships, which have a vested interest in improving the quality of streams in their community. The organizations will be responsible for ongoing maintenance of the treatment system in the future, and the partners have made a strong commitment to the restoration of the stream and dam. However, maintenance needs are expected to be minimal as with many passive treatment systems.

The system is being designed to allow for permanent access for maintenance activities. This will allow access for replenishment of limestone and removal of precipitates in the settling basin. Existing access roads will be upgraded and maintained to allow for these maintenance activities to occur.

APPENDIX A—DETAILED COST ESTIMATES AND YEARLY BUDGET BREAKDOWN

ER 13
CONSTRUCTION COST ESTIMATE

DESCRIPTION	ESTIMATED QUANTITY	UNITS	UNIT COST	TOTAL COST
Access Roadway Maintenance & Repair	4300	LF	$6.00	$25,800.00
Additional Culverts in Access Road	4	EA	$900.00	$3,600.00
Emigh Run Stream Crossing	1	LS	$10,000.00	$10,000.00
Clearing and Grubbing	3.5	AC	$1,000.00	$3,500.00
Geotextile, Class 2, Type A	200	SY	$3.00	$600.00
Excavation	9000	CY	$6.00	$54,000.00
Fill	6750	LF	$2.50	$16,875.00
Rock Excavation	1	LS	$10,000.00	$10,000.00
Hauling and Disposal of Excess Materials		CY	$2.00	$0.00
Pipe--4-inch dia. Sch 40	730	LF	$16.00	$11,680.00
Pipe--8-inch dia. Sch 40	130	LF	$26.00	$3,380.00
Pipe Fittings	30	EA	$60.00	$1,800.00
Piping--18 inch dia slcpp	280	LF	$16.00	$4,480.00
Anti-seep collars	4	EA	$130.00	$520.00
Inlet and Inline flow control structures	4	EA	$1,200.00	$4,800.00
Rodent Guard--<6" dia	5	EA	$30.00	$150.00
Rodent Guard--12" dia	4	EA	$50.00	$200.00
Valves	5	EA	$700.00	$3,500.00
Manholes	1	EA	$3,500.00	$3,500.00
Limestone for Treatment Cells	2400	TONS	$28.00	$67,200.00
Limestone Aggregate for Rock Aprons and Spillways	200	SY	$40.00	$8,000.00
Compost for Treatment Cells	1050	CY	$30.00	$31,500.00
Curled wood mat	730	SY	$3.50	$2,555.00
Seeding	3.5	AC	$1,000.00	$3,500.00
Mulching-Straw	3.5	AC	$500.00	$1,750.00
Cofferdams/Water Handling During Construction	1	LS	$5,000.00	$5,000.00
Silt Fence 18"	210	LF	$3.50	$735.00
Silt Fence 30"	720	LF	$3.50	$2,520.00
Rock Filters	2	EA	$500.00	$1,000.00
Other Erosion and Sediment Controls	1	LS	$5,500.00	$5,500.00
Project Sign	1	LS	$800.00	$800.00
Subtotal Construction Materials				$288,445
Mobilization (10% of construction costs)				$28,845
Subtotal				$317,290
TOTAL CONSTRUCTION COST				**$317,290**
Requesting Matching Funds for Limestone from NFWF's Chesapeake Bay Small Watershed Grants				**-$46,000**
Total Construction Request from GG				**271,290**

2007 GROWING GREENER GRANT APPLICATION
EMIGH RUN LAKESIDE WATERSHED ASSOICATION
ER-13 AMD TREATMENT SYSTEM CONSTRUCTION

5A. CONTRACTOR SALARIES

		HOURS				CONTRACTOR
DELIVERABLE	HOURLY RATE	TASK 1	TASK 2	TASK 3	TASK 4	SALARY
ENGINEERING SERVICES						
Professional Engineer	$75	20	160	16	24	$16,500
Professional Geologist	$75					$0
Project Professional	$75	20	120	16	24	$13,500
Engineering Technician	$45	4	60	24		$3,960
Geologic Technician	$45					$0
Survey Crew-2 man	$100				20	$2,000
CAD Draftsman	$45				24	$1,080
TOTAL SALARIES		44	340	56	92	$37,040

5B. OTHER CONTRACTUAL EXPENSES

ITEM	DESCRIPTION	TASK 1	TASK 2	TASK 3	TASK 4	TOTALS
Laboratory Analysis-water	$25/sample x 24 samples			$600		$600
Photocopies/reproduction	$0.15/copy	$150	$75		$75	$300
Drawings	$0.50/sf	$300	$150		$300	$750
Postage		$50	$10	$5	$10	$75
TOTAL OTHER EXPENSES		$500	$235	$605	$385	$1,725

TASK 1: Bid process and pre-construction coordination
TASK 2: Construction management
TASK 3: Post-construction monitoring
TASK 4: As-built drawings and O&M plan

APPENDIX B—SITE DESIGN INFORMATION

DRAFT

PROJECT DESIGN REPORT

EMIGH RUN 13 (ER-13)
ACID MINE DRAINAGE
TREATMENT SYSTEM

MORRIS TOWNSHIP, CLEARFIELD COUNTY, PENNSYLVANIA

PREPARED FOR:

EMIGH RUN LAKESIDE WATERSHED ASSOCIATION

PREPARED BY:

NEW MILES OF BLUE STREAM
103 FAIRWAY DRIVE
PHILIPSBURG, PA 16866

AND

ALDER RUN ENGINEERING
107 COAL STREET
OSCEOLA MILLS, PA 16666

MARCH 2007

PROJECT DESIGN REPORT

EMIGH RUN 13 (ER-13)
ACID MINE DRAINAGE TREATMENT PROJECT

BACKGROUND

The Emigh Run 13 (ER-13) Acid Mine Drainage Treatment Project is proposed to treat an acid mine drainage (AMD) discharge located in Morris Township, Clearfield County, Pennsylvania. A project location map is provided in Appendix A.

Emigh Run is severely impacted by AMD. A restoration plan for the Emigh Run watershed was completed in December of 2004, and the plan identified priority treatment areas where reclamation or treatment is necessary in order to restore the water quality in Emigh Run. Restoration goals include restoration of the cold water fishery and restoration of water quality in Morrisdale Dam to a level sufficient to allow recreational use. The plan identified seven priority treatment areas in the watershed. The combined ER-14 and ER-14 discharge was identified as priority # 2.

The ER-13 discharge is a channel created by toe of a spoil seepage from a reclaimed surface mine site. Water seeps along the edge of the reclaimed area creating a large wet, iron laden biologically dead area. The water collects into a discrete channel that flows to Emigh Run. Two abandoned settling ponds also remain in the area, which also discharge into ER-13. Water also collects from the ER-14 discharge which is a channel that forms from seeps emanating from abandoned spoil with large conifers, but no ground cover. Both of these discharges flow through a conveyance ditch which flows to the location where the treatment system will be located.

The ER-13 discharge contributes an average of 90.7 gallons per minute (gpm) of acid mine drainage to Emigh Run. The water quality has average parameters of a pH of 3.95, acidity of 98 milligrams per liter (mg/L), iron concentrations of 3.0 mg/L, aluminum of 7.7 mg/L, sulfate of 429 mg/L, and manganese of 20 mg/L. The ER-14 discharge contributes an average of 7 gallons per minute (gpm) of acid mine drainage to Emigh Run. The water quality has average parameters of a pH of 4.4, acidity of 35 milligrams per liter (mg/L), iron concentrations of 2.8 mg/L, aluminum of 0.3 mg/L, sulfate of 58 mg/L, and manganese of 3 mg/L. To put this water quality onto perspective, an aluminum concentration of approximately 1 mg/L prevents fish from living in a stream, and the aluminum concentration of the ER-13 discharge is 7.7 mg/L. See attached water quality data. The discharge degrades water quality in the main stem of Emigh Run down to the next acid mine drainage discharge which comes from an active re-mining site.

Restoration activities that target priorities #1 (Emigh Run Headwater Relocation Project) and #3 (ER-8 AMD Treatment Project) are underway, so addressing the combined ER-13

discharge, priority #2, is a necessary step in restoration of the Emigh Run Watershed. A passive treatment system is proposed to treat the combined ER-13 discharge to increase pH and alkalinity and reduce acidity and metals concentrations in the discharge. The design of the passive treatment system is described in detail in the following section of this narrative.

Treatment system component selection and sizing were performed by New Miles of Blue Stream based on their restoration concept for the Emigh Run Watershed. Alder Run Engineering assisted with site design services and hydraulic analysis of treatment system components.

TREATMENT SYSTEM DESIGN

HIGH FLOW BYPASS TREATMENT SYSTEM

During periods of flow greater than 100 gpm design flow, water flowing from the combined discharge will bypass the primary treatment system. A structure will divert all flow over 100 gpm to a constructed limestone channel where flow will travel 175 yards until it conveyance with Emigh Run. The high flow bypass limestone channel will not allow excess flows over 100 gpm to enter the equalization basin, vertical flow wetlands or settling basins to protect the integrity of the system. During these high flow events, water shall be mainly surface runoff and metals will be diluted.

PRIMARY TREATMENT SYSTEM

Equalization Basin, A

Initial treatment will consist of an equalization basin that will provide for initial detention and settling of metals of the combined discharge. A berm will be placed around the basin. Before water can enter the basin, an inlet water level control structure will allow flows under 100 gpm to enter into the primary treatment system. Excess flow over 100 gpm will be diverted to the high flow bypass channel.

Combined ER-13 Discharge: Design Water Quality Data Based on 90% CI

Flow	98pm
Design Flow	100 gpm
Acidity	130 mg/L
Aluminum	7 mg/L
Manganese	25 mg/L
Iron	6 mg/L

Vertical Flow Wetland, B

The system will be designed to allow for flushing events to occur to stop the potential aluminum from clogging the pore space and decreasing permeability. The system will

have both an automatic flushing device, in the form of an automatic dosing siphon, along with valves for manual flushing.

The design size will be based on a limestone tonnage of 1200 based on monthly samples collected from May 2003 to May 2004. Additional flow measurements and samples have been taken periodically since May 2004 to monitor any changes in chemistry or flow. (Please see design chemistry above)

The calculations for sizing of the vertical flow wetland allowed for a design life of 20 years based on the non-manganese acidity and 24-hour residence time. The total limestone needed for the maximum treatment in the primary treatment train in 3000 tons of limestone. This tonnage is divided among the two vertical flow wetlands which will treat the mine water. The limestone will be placed as a 3 ft layer. Included under the limestone layer will be a grid-like piping system to decrease preferential flow within the system and to allow for the maximum area and volume of limestone to be flushed.

High quality limestone with a range of 85% to 90% CCE equivalent will be used in the treatment train to insure neutralization and precipitation events to occur. The piping system will consist of 3 main trunks.

The vertical flow wetland was designed using DEP and BAMR accepted design parameters, along with calculations as accepted in the academic world of passive treatment research.

Settling Basin, C

The settling basin will serve as a treatment component that will provide detention time to allow for the settling of metals before discharge to Vertical Flow Wetland D. When the basin is initially constructed, the design allows for 40 hours of detention at the design flow rate of 100 gpm. After aluminum and other metals precipitates accumulate, the detention time will be decrease before cleanout.

The initial settling basin will provide detention and settling of metals before outflow to the rest of the treatment train. The basin was sized to be cleaned out every 5 years as necessary. It would have been ideal to allow for longer cleaning times, but space availability was an issue. The top of the freeboard size is 150 ft by 80 ft. An adjustable inlet water level control structure will be provided to ensure that discharge occurs from the cleanest water at the top of the pool and to allow the basin to be dewatered for cleaning if desired.

Vertical Flow Wetland, D

The system will be designed to allow for flushing events to occur to stop the potential aluminum from clogging the pore space and decreasing permeability. The system will have both an automatic flushing device, in the form of an automatic dosing siphon, along with valves for manual flushing.

The design size will include a total of 1800 tons of limestone is based on monthly samples collected from May 2003 to May 2004. Additional flow measurements and samples have been taken periodically since May 2004 to monitor any changes in chemistry or flow. (Please see design chemistry above)

The calculations for sizing of the vertical flow wetland allowed for a design life of 20 years based on the non-manganese acidity and 24-hour residence time. The limestone will be placed as a 3 ft layer. Included under the limestone layer will be a grid-like piping system to decrease preferential flow within the system and to allow for the maximum area and volume of limestone to be flushed.

High quality limestone with a range of 85% to 90% CCE equivalent will be used in the treatment train to insure neutralization and precipitation events to occur. The piping system will consist of 3 main trunks.

The vertical flow wetland was designed using DEP and BAMR accepted design parameters, along with calculations as accepted in the academic world of passive treatment research.

Settling Basin, E

This settling basin will serve as the final treatment component and will provide detention time to allow for the settling of metals before discharge to Emigh Run. When the basin is initially constructed, the design allows for 40 hours of detention at the design flow rate of 100 gpm. After aluminum and other metals precipitates accumulate, the detention time will be decrease before cleanout.

The initial design concept was for the basin to have a cleanout frequency of 5 years. Since the combined ER-13 discharge can see very low flow in the summer, actual cleanout frequencies may be extended to periods longer than 5 years due to lack of inflow. Detention times of less than 24 hours may be adequate depending on particle settling rates. It would have been ideal to allow for longer cleaning times, but space availability and potential wetland impacts prevent a larger basin from being constructed. The top of the freeboard size is 150 ft by 80 ft.

OTHER CONSIDERATIONS

Other considerations applicable to the design of this treatment system are maintenance considerations, soils considerations, and wetland impacts. Each consideration is discussed in the following paragraphs.

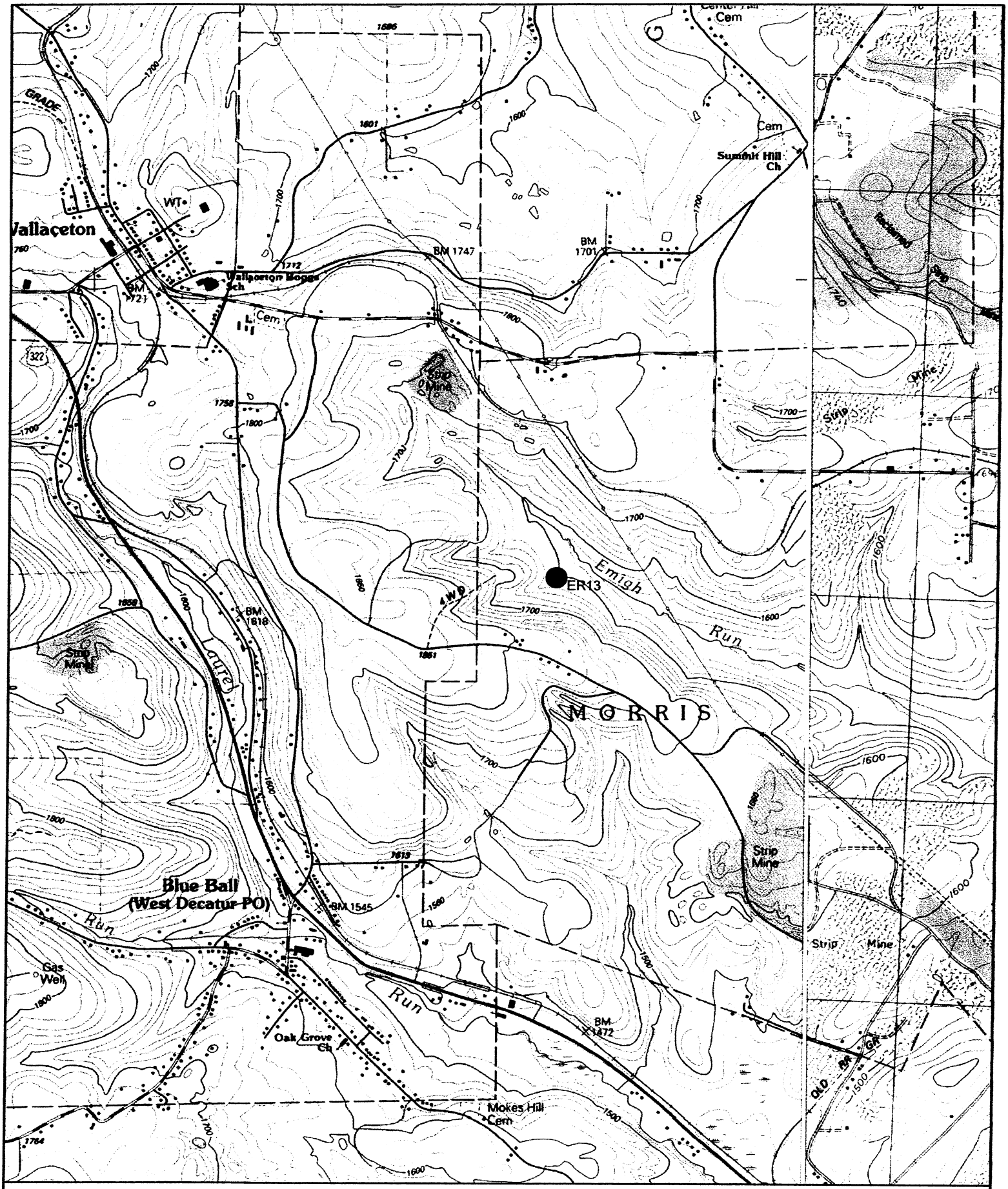
Maintenance considerations were addressed by providing access areas connecting the existing access road used for prior mining to the treatment cells. The areas will allow equipment access for construction and maintenance purposes. Sufficient width and slope for access has been provided. In addition, a 10 ft berm width is provided between all

treatment system components. The berms will be of sufficient width to allow for access for maintenance for the equalization basin, vertical flow wetlands, and settling basins.

Automatic flushing mechanisms have been provided in the vertical flow wetlands to prevent aluminum clogging of the systems and to eliminate the need for regular manual flushing. Manual flushing valves have been provided to allow the system to be fully flushed on a semi-annual basis. The manual flushing valves will allow for complete dewatering of the cells. An adjustable water level control structure and manual drainage valve have also been provided for the settling basin to allow for complete dewatering on an as-needed basis.

Site soils were considered in terms of constructability and compactibility. While nearby soils have been disturbed by mining, the soils on the site appear to be the original site soils, identified by the Clearfield County Soil Survey as Atkins silt loam. The soil is described as nearly level, deep, and poorly drained, with permeability that is slow to moderate in the subsoil and moderately slow to rapid in the substratum. Because of potential water issues, construction should occur during dry periods, preferably in summer, and provisions for dewatering the work area have been provided in the erosion and sediment pollution control plan. In terms of use for construction, these soils should be adequate for use in construction of berms, embankments, and sediment basin lining, especially if the most suitable materials are salvaged from excavated areas. Since upflow and infiltration into the limestone cells is important in this situation, no impervious or synthetic cell linings are proposed for the site.

Wetland impacts played a major role in the design of this system. The treatment site is bounded by forested wetlands. The system was designed to fit within available upland areas so only minimal wetland impacts would result. A minimal impact situation was deemed to be more desirable than construction of a larger treatment system with more substantial wetland impacts. Impacts to wetlands will be mitigated for onsite by the expansion of an existing wetland, and by the enhancement of wetlands due to improved water quality entering downstream wetlands.



Name: WALLACETON
Date: 3/13/2007
Scale: 1 inch equals 2000 feet

Location: 040.9442640° N 078.2679665° W
Caption: ER13 Construction Project Location Map, Wallaceton Quad

Emigh Run – ER-13 and ER-14 Discharge

Water quality ER-13

	gpm Flow	pH	Umhos /cm Cond	mg / L Acidity	lbs/day Acid Load	mg/L Alk	mg/L Fe	lbs/day Fe Load	mg/L Al	mg/L Mn	mg/L SO4
Ave	95.5272727	3.95	771.25	77.917	46.115	1.75	2.349	1.039	6.003	16.022	338.25
Max	154	4.9	1240	136	106.323	6	6.04	3.081	9.77	26.5	687
Min	27.5	3.4	131	10	0.307	0	0.39	0.047	0.1	1.26	29
75% Conf	131.11	4.107	894.736	92.158	64.135	2.587	2.862	1.457	7.193	18.558	401.799
90% Conf	90.7181131	4.175	947.889	98.289	71.892	2.947	3.083	1.638	7.705	19.65	429.153

Water quality ER-14

	gpm Flow	pH	Umhos /cm Cond	mg / L Acidity	lbs/day Acid Load	mg/L Alk	mg/L Fe	lbs/day Fe Load	mg/L Al	mg/L Mn	mg/L SO4
Ave	9.71	4.471	154.714	21.143	22.667	3.143	1.771	1.21	0.22	2.334	43.143
Max	13.75	4.7	254	76	130.187	6	3.99	6.835	0.32	5.58	94
Min	1.1	4	100	8	0.159	0	0.23	0.017	0.1	1.16	23
75% Conf	4.995329	4.569	180.615	30.998	45.244	4.085	2.412	2.392	0.258	2.997	53.338
90% Conf	7.142684	4.611	191.763	35.241	54.962	4.49	2.688	2.9	0.274	3.282	57.726

APPENDIX C—SITE PHOTOGRAPHS

PHOTOGRAPHS

PHOTO 1: Main Stem of Emigh Run near where ER-13 discharge will enter the stream

PHOTO 2: Near origination point where treatment will begin

PHOTO 3: ER-13 treatment area

PHOTO 4: Access Road

APPENDIX D—LETTERS OF COMMITMENT AND SUPPORT

LANDOWNER-GRANTEE AGREEMENT

This Agreement, made this 12-21-2003
(Date)

by Joseph Shannon
(Landowner(s))

EIN/SSN: _____
EIN/SSN: _____

residing at 142 Monmouth Road
Oakhurst, New Jersey
(city)

telephone # 732-517-1018

[redacted] 07755
(ZIP)

and Lehigh Run/Lakeside Watershed Assn., Inc.
(Grantee Name)

Section 1—Agreement Provisions

A. Each undersigned landowner agrees to participate in the Growing Greener Grants Program and comply with terms set forth herein for the period covered by this Agreement. The undersigned landowner(s) represent and agree that:

1. Landowner(s) agree that the Commonwealth of Pennsylvania, Department of Environmental Protection ("PADEP") and/or Lehigh Run/Lakeside Watershed Assn., Inc
(Grantee Name)
its employees, agents, and contractors shall have the right to enter upon the premises to perform the work described in Attachment D – Scope of Work.

2. The Conservation Practices ("CP(s)") needed to correct the identified problems shall be performed according to the Pennsylvania Soil and Water Conservation Technical Guide.

3. The CP(s) shall be maintained properly for their lifespan as specified in the Pennsylvania Soil and Water Conservation Technical Guide, the designated lifespan, or the permitted lifespan.

4. The terms of this Agreement shall cover the lifespan of the longest-lived CP paid for under this agreement.

5. By signing this Agreement, the Landowner(s) warrant that he/she is the co-owner of the real property on which the project is to be performed, or has secured a sufficient property interest.

6. Landowner(s) shall permit the PADEP and/or Emigh Run/Lakeside Watersh (Grantee Name) Assn., Inc it employees and agents, upon presentation of proper identification, to enter upon my premises to inspect and observe CP(s) or any records associated with these CP(s) or other conditions of this Agreement.

7. This Agreement shall be binding on the parties, their heirs, legal representatives, successors, and assigns.

Section 2 – Additional Agreement Provisions

Section 3 – Agreement Signatures

In Witness Whereof, the parties hereto have executed this Agreement on the date first state above.

Landowner(s):

Grantee:
Emigh Run/Lakeside Watershed Assn. Inc
Anna Mae Pezzella

LANDOWNER-GRANTEE AGREEMENT

This Agreement, made this 1-4-04 (Date)

by Dorothy White (Landowner(s)) EIN/SSN: _____ EIN/SSN: _____

residing at P.O. Box 216 Morrisdale, (city) telephone # 342-3706 PA 16858 (ZIP)

and Emigh Run/Lakeside Watershed Assn. Inc (Grantee Name)

Section 1—Agreement Provisions

A. Each undersigned landowner agrees to participate in the Growing Greener Grants Program and comply with terms set forth herein for the period covered by this Agreement. The undersigned landowner(s) represent and agree that:

1. Landowner(s) agree that the Commonwealth of Pennsylvania, Department of Environmental Protection ("PADEP") and/or Emigh Run/Lakeside Watershed (Grantee Name) Assn. Inc its employees, agents, and contractors shall have the right to enter upon the premises to perform the work described in Attachment D – Scope of Work.

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5. By signing this Agreement, the Landowner(s) warrant that he/she is the co-owner of the real property on which the project is to be performed, or has secured a sufficient property interest.

6. Landowner(s) shall permit the PADEP and/or _____
(Grantee Name)
it employees and agents, upon presentation of proper identification, to enter upon my premises to inspect and observe CP(s) or any records associated with these CP(s) or other conditions of this Agreement.

7. This Agreement shall be binding on the parties, their heirs, legal representatives, successors, and assigns.

Section 2 – Additional Agreement Provisions

Section 3 – Agreement Signatures

In Witness Whereof, the parties hereto have executed this Agreement on the date first state above.

Landowner(s): Dorothy N White

Grantee: Emigh Run/Lakeside Watershed Assn., Inc.
Anna Mae Pezzulla, President

LANDOWNER-GRANTEE AGREEMENT

This Agreement, made this _____
(Date)

by Margaret Paul
(Landowner(s))

EIN/SSN: _____
EIN/SSN: _____

residing at 502 Berkley St. telephone # _____

Philipsburg, PA 16866
(city) (ZIP)

and Emigh Run/Lakeside Watershed Assn., Inc.
(Grantee Name)

Section 1—Agreement Provisions

A. Each undersigned landowner agrees to participate in the Growing Greener Grants Program and comply with terms set forth herein for the period covered by this Agreement. The undersigned landowner(s) represent and agree that:

1. Landowner(s) agree that the Commonwealth of Pennsylvania, Department of Environmental Protection ("PADEP") and/or Emigh Run/Lakeside Watersh (Grantee Name) Assn., Inc. its employees, agents, and contractors shall have the right to enter upon the premises to perform the work described in Attachment D – Scope of Work.

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3. The CP(s) shall be maintained properly for their lifespan as specified in the Pennsylvania Soil and Water Conservation Technical Guide, the designated lifespan, or the permitted lifespan.

4. The terms of this Agreement shall cover the lifespan of the longest-lived CP paid for under this agreement.

5. By signing this Agreement, the Landowner(s) warrant that he/she is the co-owner of the real property on which the project is to be performed, or has secured a sufficient property interest.

6. Landowner(s) shall permit the PADEP and/or Emigh Run/Lakeside Watershed Assn., Inc (Grantee Name) it employees and agents, upon presentation of proper identification, to enter upon my premises to inspect and observe CP(s) or any records associated with these CP(s) or other conditions of this Agreement.

7. This Agreement shall be binding on the parties, their heirs, legal representatives, successors, and assigns.

Section 2 – Additional Agreement Provisions

Section 3 – Agreement Signatures

In Witness Whereof, the parties hereto have executed this Agreement on the date first state above.

Landowner(s): Margaret E. Faust

Grantee:
Emigh Run Lakeside Watershed Assn., Inc.
Anna Mae Peggy Da. President

LANDOWNER-GRANTEE AGREEMENT

This Agreement, made this 12/18/03
(Date)

by Rosemary Sotak
Rosemary Sotak
(Landowner(s))

EIN/SSN: _____
EIN/SSN: _____

residing at 1398 Waukazoo Drive telephone # 616-786-3508

Holland Michigan 49424
(city) (ZIP)

and Emigh Run/Lakeside Watershed Association, Inc.
(Grantee Name)

Section 1—Agreement Provisions

A. Each undersigned landowner agrees to participate in the Growing Greener Grants Program and comply with terms set forth herein for the period covered by this Agreement. The undersigned landowner(s) represent and agree that:

1. Landowner(s) agree that the Commonwealth of Pennsylvania, Department of Environmental Protection ("PADEP") and/or Emigh Run/Lakeside W. Assn. Inc
(Grantee Name)
its employees, agents, and contractors shall have the right to enter upon the premises to perform the work described in Attachment D – Scope of Work.

2. The Conservation Practices ("CP(s)") needed to correct the identified problems shall be performed according to the Pennsylvania Soil and Water Conservation Technical Guide.

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4. The terms of this Agreement shall cover the lifespan of the longest-lived CP paid for under this agreement.

5. By signing this Agreement, the Landowner(s) warrant that he/she is the co-owner of the real property on which the project is to be performed, or has secured a sufficient property interest.

6. Landowner(s) shall permit the PADEP and/or Emigh Run/Lakeside Watershed Assn. (Grantee Name) it employees and agents, upon presentation of proper identification, to enter upon my premises to inspect and observe CP(s) or any records associated with these CP(s) or other conditions of this Agreement.

7. This Agreement shall be binding on the parties, their heirs, legal representatives, successors, and assigns.

Section 2 – Additional Agreement Provisions

Section 3 – Agreement Signatures

In Witness Whereof, the parties hereto have executed this Agreement on the date first state above.

Landowner(s):
Rosemary Sotak

Grantee:
Emigh Run/Lakeside WatershedAssn. Inc.,
Anna Mae Pezzulla, President.

LANDOWNER-GRANTEE AGREEMENT

This Agreement, made this 1.12.04
(Date)

by Roberta Stewart
(Landowner(s))

EIN/SSN: _____
EIN/SSN: _____

residing at 123 Tapawingo Road
Vienna, Virginia
(city)

telephone # _____

22180
(ZIP)

and Emigh Run/Lakeside Watershed Assn., Inc,
(Grantee Name)

Section 1—Agreement Provisions

A. Each undersigned landowner agrees to participate in the Growing Greener Grants Program and comply with terms set forth herein for the period covered by this Agreement. The undersigned landowner(s) represent and agree that:

1. Landowner(s) agree that the Commonwealth of Pennsylvania, Department of Environmental Protection ("PADEP") and/or Emigh Run/Lakeside Watershed Assn., Inc (Grantee Name) its employees, agents, and contractors shall have the right to enter upon the premises to perform the work described in Attachment D – Scope of Work.

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3. The CP(s) shall be maintained properly for their lifespan as specified in the Pennsylvania Soil and Water Conservation Technical Guide, the designated lifespan, or the permitted lifespan.

4. The terms of this Agreement shall cover the lifespan of the longest-lived CP paid for under this agreement.

5. By signing this Agreement, the Landowner(s) warrant that he/she is the co-owner of the real property on which the project is to be performed, or has secured a sufficient property interest.

6. Landowner(s) shall permit the PADEP and/or Emigh Run/Lakeside Watershed (Grantee Name) Assn., Inc. it employees and agents, upon presentation of proper identification, to enter upon my premises to inspect and observe CP(s) or any records associated with these CP(s) or other conditions of this Agreement.

7. This Agreement shall be binding on the parties, their heirs, legal representatives, successors, and assigns.

Section 2 – Additional Agreement Provisions

Section 3 – Agreement Signatures

In Witness Whereof, the parties hereto have executed this Agreement on the date first state above.

Landowner(s): Robert S. Stewart

Grantee:
Emigh Run/Lakeside Watershid Assn, Inc.
Anna Mae Tezzulla

LANDOWNER-GRANTEE AGREEMENT

This Agreement, made this Jan. 20, 2004 (Date)

by Albert Shannon (Landowner(s)) EIN/SSN: _____ EIN/SSN: _____

residing at 368 Sycamore Lane, Gahanna, Ohio (city), PA Ohio 43230 (ZIP) telephone # _____

and EmighRun/Lakeside Watershed Assn., Inc. (Grantee Name)

Section 1—Agreement Provisions

A. Each undersigned landowner agrees to participate in the Growing Greener Grants Program and comply with terms set forth herein for the period covered by this Agreement. The undersigned landowner(s) represent and agree that:

1. Landowner(s) agree that the Commonwealth of Pennsylvania, Department of Environmental Protection ("PADEP") and/or Emigh Run/Lakeside Watershed Assn. Inc. (Grantee Name) its employees, agents, and contractors shall have the right to enter upon the premises to perform the work described in Attachment D – Scope of Work.

2. The Conservation Practices ("CP(s)") needed to correct the identified problems shall be performed according to the Pennsylvania Soil and Water Conservation Technical Guide.

3. The CP(s) shall be maintained properly for their lifespan as specified in the Pennsylvania Soil and Water Conservation Technical Guide, the designated lifespan, or the permitted lifespan.

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5. By signing this Agreement, the Landowner(s) warrant that he/she is the co-owner of the real property on which the project is to be performed, or has secured a sufficient property interest.

6. Landowner(s) shall permit the PADEP and/or Emigh Run Lakeside Watershed Ass
(Grantee Name) Inc.
it employees and agents, upon presentation of proper identification, to enter upon my premises to inspect and observe CP(s) or any records associated with these CP(s) or other conditions of this Agreement.

7. This Agreement shall be binding on the parties, their heirs, legal representatives, successors, and assigns.

Section 2 – Additional Agreement Provisions

Section 3 – Agreement Signatures

In Witness Whereof, the parties hereto have executed this Agreement on the date first state above.

Landowner(s): Alberta L. Shannon

Grantee:
Emigh Run/Lakeside Watershed Assn. Inc.
Anna Mae Pazzaglia, President

Attachment D: Scope of Work

The Emigh Run Lakeside Watershed Association (ERLWA) in partnership with Morris Township has received funding to design with the intent to install a passive treatment system that will abate an abandoned mine drainage (AMD) discharge, S8-14, that flows into Emigh Run. Through the preliminary stages of our watershed assessment, we have found this discharge to be the first significant pollutant source that flows from the South side of the stream. We feel that in combination with the stream relocation in the headwaters and the remining efforts on the North side, this is the first discharge that needs to be addressed in the overall restoration of Emigh Run. Phase I of the project will involve development activities on site including test pits, wetland delineation, and further sampling to complete the detailed design and permitting of the treatment plan that will address the discharge. Phase II of the project will include the construction and installation of the passive treatment system.

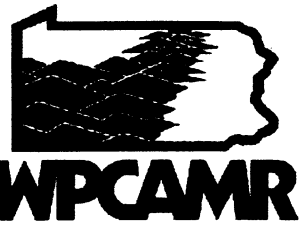
A conceptual design has been developed for this site. The site is comprised of three wet seepage areas that gather into one discrete channel that enters Emigh Run. We are planning on collecting all of the seepage into one drainage system and incorporate them into one overall treatment system. The conceptual design consists of the collection ditch entering an anaerobic wetland, which flows subsurface to a vertical flow wetland (VFW) to insure the removal of dissolved oxygen. The VFW then discharges into a settling pond before entering a final polishing wetland. The outflow from the wetland will flow through a limestone filled channel before entering the stream. This is only a conceptual design. During the development phase we will be gathering additional information that may change the final design.

The area to be disturbed for the construction of the system will be 3.5 to 5.0 acres in size. The system will appear as a series of shallow ponds, before discharging back into the stream. We will disturb the least amount of areas as possible, while still effectively treating the discharge.

An application for the Good Samaritan Act will be submitted to cover all aspects of the project, including the development phase. This Act will provide protections and immunities to landowners and those participating in these activities once a written plan of the proposed reclamation project is submitted and approved by the PA Department of Environmental Protection. Eligible projects are projects that treat or abate water pollution caused by mining. This application will be submitted to include the ditching and pits necessary for the development phase. (Please find enclosed an information sheet on the Good Samaritan Act).

If you have any further questions concerning the Scope of Work, please call our consultant, Jennifer Demchak, for further details, 814-343-5676.

Western Pennsylvania Coalition for Abandoned Mine Reclamation
226 Donohoe Road Suite 110, Greensburg, PA 15601
(724) 832-3625 (724) 832-3625 (fax)
bruce@wpcamr.org www.wpcamr.org www.AMRClearinghouse.org



March 29, 2007

Anna Mae Pezzula
Emigh Run Lakeside Watershed Association
P.O. Box 204
Morrisdale, PA 16858

REF: WPCAMR Letter of Acknowledgement

Dear Anna Mae Pezzula:

Thank you for informing us of the project "Emigh Run 13 Acid Mine Drainage Treatment Project" you have proposed for Growing Greener funds in the Emigh Run watershed. In order for us to become more familiar with your proposed project, we would like a copy of your application form, scope of work and a location map. Once the application is completed and submitted to the DEP, we are requesting that you send us a copy of your workplan including budget information for our files.

In addition, we may be able to assist you with your AMD related project if necessary. You can reach us at (724) 832-3625. Good luck with your proposal.

Sincerely,

Bruce Golden
Regional Coordinator

"Take a stand for reclamation"

MCWC
P.O. Box 4
Osceola Mills, PA 16666
814-339-7607

March 27, 2007

DEP Grants Center
P.O. Box 8876
Harrisburg, PA 17105-8776

RE: Operation, Maintenance and Replacement Plans for ER-13 AMD Treatment Project

Dear Sir or Madam:

The Moshannon Creek Watershed Coalition (MCWC) has accepted the Operation, Maintenance and Replacement Plans for the Emigh Run 13 AMD Treatment Project. The group is partnered by the Emigh Run Lakeside Watershed Association (ERLWA), and Boggs and Morris Township. The group will be responsible for routine operations which will include: inspections, flushing, monitoring of water quality and other operations deemed necessary by the group.

Maintenance and Replacement issues will be addressed by the MCWC contacting local townships or excavating companies to see if they are willing to donate their time and equipment to perform necessary maintenance or repair activities that may arise. If the townships or excavating companies are unwilling to donate their time and equipment to maintenance, repair, or replacement issues, the group shall request funding from local, state, or federal sources to address maintenance, repair and replacement of the treatment system. MCWC funds are limited and in no way shall the group be responsible to pay for maintenance, repair, or replacement of the treatment system, unless the group decides to do so.

Sincerely,
MCWC

Art Beveridge
President

[redacted]

March 19, 2007

DEP Grants Center
P.O. Box 8776
Harrisburg, PA 17105-8776

RE: Emigh Run Mine Drainage Treatment Project: ER-13
Matching Funds Commitment

Dear Sir or Madam:

The MCWC is pleased to support the on-going efforts to restore water quality in the Emigh Run Watershed by implementing mine drainage treatment projects. We understand that you intend to apply for a Growing Greener Grant for the construction of a treatment system to treat abandoned mine drainage.

The Growing Greener Program is seeking projects that reduce non-point source pollution loadings by implementing projects in target watersheds. The proposed projects would serve to improve water quality in Emigh Run, and Moshannon Creek by removing acid and metal loadings from the stream.

The MCWC is willing to serve as a project partner for this project. We are willing to donate 40 hours of project time that will include system checks and sampling at a rate of $16/hour. Our in-kind match would be a total of $640.00.

We look forward to working with all project partners in efforts to restore water quality in the Emigh Run Watershed.

Sincerely,
MCWC

Art Beveridge
President

March 19, 2007

DEP Grants Center
P.O. Box 8776
Harrisburg, PA 17105-8776

RE: Emigh Run Mine Drainage Treatment Project: ER-13
Matching Funds Commitment

Dear Sir or Madam:

The Emigh Run Lakeside Watershed Association Inc (ERLWA) is pleased to support the on-going efforts to restore water quality in the Emigh Run Watershed by implementing mine drainage treatment projects. We intend to apply for a Growing Greener Grant for the construction of a treatment system to treat abandoned mine drainage.

The Growing Greener Program is seeking projects that reduce non-point source pollution loadings by implementing projects in target watersheds. The proposed projects would serve to improve water quality in Emigh Run, and Moshannon Creek by removing acid and metal loadings from the stream.

The ERLWA is willing to serve as the applicant for this project. We are willing to donate 80 hours of project time that will include administrative cost at this same rate of $16/hour. Our in-kind match would be a total of $1,280.00.

We look forward to working with all project partners in efforts to restore water quality in the Emigh Run Watershed.

Sincerely,
ERLWA

Annamae Pezzula
President

NMBS
103 Fairway Drive
Philipsburg, PA 16866
814 343 5676
www.newmilesofbluestream.com

March 19, 2007

DEP Grants Center
P.O. Box 8776
Harrisburg, PA 17105-8776

RE: Emigh Run Mine Drainage Treatment Project: ER-13
Matching Funds Commitment

Dear Sir or Madam:

NMBS is pleased to support the on-going efforts to restore water quality in the Emigh Run Watershed by implementing mine drainage treatment projects. We understand that you intend to apply for a Growing Greener Grant for the construction of a treatment system to treat abandoned mine drainage.

The Growing Greener Program is seeking projects that reduce non-point source pollution loadings by implementing projects in target watersheds. The proposed projects would serve to improve water quality in Emigh Run, and Moshannon Creek by removing acid and metal loadings from the stream.

NMBS is willing to serve as a project partner for this project. We have already donated 20 hours of grant writing and project development at $75/hour and are willing to donate 20 more hours of project time at this same rate or equivalent mileage. Our in-kind match would be a total of $3,000.00. These additional activities may include overseeing construction activities or attendance to meetings depending on needs as the project develops.

We look forward to working with all project partners in efforts to restore water quality in the Emigh Run Watershed.

Sincerely,
New Miles of Blue Streams

Jennifer Demchak
President

March 19, 2007

DEP Grants Center
P.O. Box 8776
Harrisburg, PA 17105-8776

RE: Emigh Run Mine Drainage Treatment Project: ER-13
Matching Funds Commitment

Dear Sir or Madam:

The landowners at the ER-13 project site are pleased to support the on-going efforts to restore water quality in the Emigh Run Watershed by implementing mine drainage treatment projects. They understand that the ERLWA intends to apply for a Growing Greener Grant for the construction of a treatment system to treat abandoned mine drainage.

The Growing Greener Program is seeking projects that reduce non-point source pollution loadings by implementing projects in target watersheds. The proposed projects would serve to improve water quality in Emigh Run, and Moshannon Creek by removing acid and metal loadings from the stream.

The landowners are willing to donate 5 acres at an estimated price of $1000/acre for the treatment project. This valued includes the land and timber value on the property. The match from this donation of land is estimated at $5000

**Landowner permission attached*

CAMILLE "BUD" GEORGE, MEMBER
ROOM 38B MAIN CAPITOL BUILDING (EAST WING)
P.O. BOX 202074
HARRISBURG, PENNSYLVANIA 17120-2074
PHONE: (717) 787-7316

275 SPRING STREET
HOUTZDALE, PENNSYLVANIA 16651
PHONE: (814) 378-6279

HOME PAGE ADDRESS:
www.pahouse.net/george

E-MAIL ADDRESS:
cgeorge@pahouse.net

House of Representatives
COMMONWEALTH OF PENNSYLVANIA
HARRISBURG

COMMITTEES

ENVIRONMENTAL RESOURCES AND ENERGY COMMITTEE, DEMOCRATIC CHAIRMAN
ENVIRONMENTAL QUALITY BOARD
PENNSYLVANIA INFRASTRUCTURE INVESTMENT BOARD
JOINT LEGISLATIVE AIR AND WATER POLLUTION CONTROL AND CONSERVATION COMMITTEE
WILD RESOURCE CONSERVATION BOARD
RULES COMMITTEE

March 6, 2007

Growing Greener Program
Pennsylvania Department of Environmental Protection
DEP Grants Center
Rachel Carson Office Building, 15th Floor
PO Box 8776, 400 Market Street
Harrisburg, PA 17105-8776

Dear Sir or Madam:

I am writing to express my support for the Emigh Run Lakeside Watershed Association and their requesting of a grant for the construction for the #2 priority in the watershed, ER-13. This project is located within the Emigh Run Watershed in Morris Township, Clearfield County.

This project will treat a combined discharge that seeps from a reclaimed surface mine. This project is in conjunction with ER-8 and another project already funded will greatly improve water quality to 1.0 miles of the main stem of Emigh Run.

Please accept this as my full and wholehearted support for this group and their grant request. I ask you to support them in their efforts and help them to continue to make a difference in our most valued natural resource.

Sincerely,

Camille George

Camille "Bud" George
STATE REPRESENTATIVE

CG/rm

H. SCOTT CONKLIN, MEMBER

CAPITOL OFFICE:
101B EAST WING
P.O. BOX 202077
HARRISBURG, PENNSYLVANIA 17120-2077
(717) 787-9473
FAX: (717) 780-4764

CONSTITUENT SERVICE CENTER:
301 S. ALLEN STREET, SUITE 102
STATE COLLEGE, PENNSYLVANIA 16801
(814) 238-5477
FAX: (814) 863-3898

CONSTITUENT SERVICE CENTER:
209 E. PRESQUEISLE STREET
PHILIPSBURG, PENNSYLVANIA 16866
(814) 342-4872
FAX: (814) 342-4874

House of Representatives
COMMONWEALTH OF PENNSYLVANIA
HARRISBURG

COMMITTEES

AGRICULTURE AND RURAL AFFAIRS
APPROPRIATIONS
EDUCATION
ENVIRONMENTAL RESOURCES AND ENERGY,
MAJORITY SECRETARY
POLICY, MAJORITY VICE-CHAIRMAN

MEMBER

NORTHWEST CAUCUS
PENNSYLVANIA SPORTSMEN CAUCUS, TREASURER

WEBSITE: WWW.PAHOUSE.COM/CONKLIN

March 2, 2007

Rachel Carson
Growing Greener, Pennsylvania DEP Grants Center
State Office Building, 15th Floor
PO Box 8776
400 Market St.
Harrisburg, PA 17105-8776

Dear Ms. Carson:

I am writing on behalf of the Emigh Run Lakeside Watershed Association, who has filed a grant application with the Growing Greener Grant Program of the Department of Environmental Protection of Pennsylvania.

The Emigh Run Lakeside Watershed Association is requesting funds for a project that will aid in remediation of a discharge from a reclaimed surface mine in ER-13, priority area #2. This funding specifically would allow for construction to treat a combined discharge seeping into the Emigh Run Watershed. Funding this project will allow for a project already funded in ER-8 and another project to work together in improving the water on the main stem of Emigh Run.

I support this project and ask that their grant request be given full and favorable consideration. If I can be of any assistance, please do not hesitate to contact me at 814-238-5477.

Sincerely,

Scott Conklin
Centre County State Representative

cc: Tor Michaels, Chief of Staff

35TH DISTRICT
JOHN N. WOZNIAK

SENATE BOX 203035
THE STATE CAPITOL
HARRISBURG, PA 17120-3035
(717) 787-5400
FAX: (717) 772-0573

2307 BEDFORD STREET
JOHNSTOWN, PA 15904
(814) 266-2277

12 N. FRONT STREET
PHILIPSBURG, PA 16866
(814) 342-5920

399 WEST CHURCH STREET
SUITE J-100
LOCK HAVEN, PA 17745
(570) 748-1383

Senate of Pennsylvania

COMMITTEES

FINANCE, DEMOCRATIC CHAIRMAN
AGRICULTURE AND RURAL AFFAIRS
COMMUNITY AND ECONOMIC DEVELOPMENT
GAME AND FISHERIES
COMMUNICATIONS & TECHNOLOGY
CONSUMER PROTECTION
PROFESSIONAL LICENSURE
POLICY
LOCAL GOVERNMENT COMMISSION
JT. LEGISLATIVE AIR & WATER POLLUTION CONTROL & CONSERVATION COMMITTEE
LEGISLATIVE BUDGET & FINANCE COMMITTEE
CAPITOL PRESERVATION COMMITTEE
CENTER FOR RURAL PENNSYLVANIA

February 26, 2007

Department of Environmental Protection
Growing Greener – Grant Center
Rachel Carson State Office Building
15th Floor
P.O. box 8776
400 Market Street
Harrisburg, Pa. 17105-8776

To Whom It May Concern:

I am writing this letter to show my full support for the Growing Greener Application submitted by the Emigh Run Lakeside Watershed Association. Funds will be used for a project that will include the construction for the #2 priority in the watershed ER-13. This construction project is also located within the Emigh Run Watershed in Morris Township, Clearfield County. The design and permitting phase of this project was completed in March 2007. This project will treat a combined discharge that seeps from a reclaimed surface mine. This project in conjunction with ER-8 and another project already funded will improve water quality to 1.0 miles of the main stem of Emigh Run.

I admire the hard work of those involved. Through individuals such as the Association, this is a dream within reach. Funding is a major component in order to achieve success and it is my hope that this application will be approved to ensure another step in the completion of this project.

I appreciate the opportunity to write this letter on behalf of those involved and I wish them the best at attaining their goal. Please don't hesitate to contact my Philipsburg District Office if I can be of further assistance. The telephone number is (814) 342-5920.

Sincerely,

John N. Wozniak
State Senator
35th District

CLEARFIELD COUNTY CONSERVATION DISTRICT

650 LEONARD STREET - CLEARFIELD, PA 16830 - PHONE (814) 765-2629

March 7, 2007

Growing Greener
PA DEP; DEP Grants Center
Rachel Carson State Office Building
15th Floor
P. O. Box 8776
400 Market Street
Harrisburg, PA 17105-8776

RE: Passive Treatment Construction on ER-13, Morris Township, Clearfield County

To Whom It May Concern:

This letter will offer support to the Emigh Run Lakeside Watershed Association and their efforts to obtain a grant for the construction of a passive treatment system on ER-13 which is located in the Emigh Run Watershed in Morris Township, Clearfield County.

We understand that this project will treat a combined discharge that seeps from a reclaimed surface mine.

The Clearfield County Conservation District supports this project and the efforts of the Emigh Run Lakeside Watershed Association as they work towards improving the waters of the Commonwealth.

Sincerely,

Susan G. Reed
District Manager

Clearfield County

PA Senior Environment Corps

650 Leonard Street ***Clearfield, PA 16830***

(814) 765-8130 or (814) 857-7748

March 5, 2007

Growing Greener
PA Department of Environmental Protection
DEP Grant Center
Rachel Carson State Office Building15th Floor
PO Box 8776, 400 Market Street
Harrisburg, PA 17105-8776

RE: Construction of passive treatment on ER-13, Morris Township, Clearfield County

Dear Grant Center:

I am writing this letter in support of the Emigh Run Lakeside Watershed Association's attempts to gain funding for construction of a passive treatment system on the ER-13 discharge located in the Emigh Run watershed. This site has already received funding for design and permitting, so construction of this system is the next step in cleaning up this discharge and improving water quality in Emigh Run and Morrisdale Dam.

Volunteers from our group have been assisting in restoration efforts in the Emigh Run watershed for several years now and will continue to aid the group in any way that we can as they move toward their goal of cleaning up Emigh Run/Morrisdale Dam.

Please consider ERLWA for funding under your grant program as they have our continued support as they move forward in their restoration efforts. Thank you!

Sincerely,

Raymond Sacolic

Raymond Sacolic
President

WATERSHED, SOURCE WATER, AND FLOOD PROTECTION GRANT APPLICATION 2007

DETAILED PROJECT DESCRIPTION

CONSTRUCTION OF THE EMIGH RUN 13 ACID MINE DRAINAGE TREATMENT PROJECT MORRIS TOWNSHIP, CLEARFIELD COUNTY, PENNSYLVANIA

SUBMITTED BY:

EMIGH RUN/LAKESIDE WATERSHED ASSOCIATION
P.O. BOX 204
MORRISDALE, PA 16858

APRIL 13, 2007