

FOUNDATION FOR PENNSYLVANIA WATERSHEDS

Final Report



APPLICANT INFORMATION (MUST MATCH IRS DETERMINATION LETTER)			
Name: Pittsburgh		Sponsor:	Date: 2/13/12
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Contact Person: Kitty Vagley			
Executive Director: Greg Nace			
PROJECT INFORMATION (REFER TO GRANT PACKET FOR ASSISTANCE ANSWERING THESE QUESTIONS)			
Project Title: PBG Acid Mine Drainage & Education Initiative			
When was your project funded? May 2011			
Total Project Cost: \$48,000	Funds Committed: \$23,200	Grant Request: \$20,000	
List Project Partners: Trout Unlimited, Hedin Environmental, Scaife Foundation, PA American Water, Scouts, Volunteers			

The Pittsburgh Botanic Garden Acid Mine Drainage & Education Initiative

Project Summary

The Pittsburgh Botanic Garden is transforming a 460-acre brownfield site into a world-class, comprehensive Botanic Garden. Initial Garden development is concentrated on the Woodland Gardens, an area that was deep mined but never strip mined. This project was to study and monitor an acid mine drainage discharge in the woodlands. The discharge flows into a pond and into a stream before going into a wetland and eventually into Pinkerton Run. Much work was accomplished in the Woodland area and an Eagle Scout candidate built a weir and measured flow and chemistry of the water, allowing us to formulate a treatment plan,

Accomplishments

In 2011, over nine acres of the Appalachian Plateau Woodlands was cleared of invasive species, over 300 native trees and over 1,000 native shrubs and herbaceous perennials were planted. A solar powered irrigation system was built to care for the new plants. Two miles of trails were built throughout the woodland area. The Sprout Tree Nursery with its own solar powered irrigation system was built in another area of the site. Metal debris and other trash was cleared from the pond, stream and wetland areas. Native aquatic species were added to the wetland area to augment its capacity to restore the water. Eagle Scout Brandon Growark spent considerable time and effort to build the weir and monitor the flow and chemistry. Sufficient data was collected to guide the design of the treatment system to be built to treat the water and restore the pond to life and improve the remainder of the stream.

Differences?

The results were expected.

Beneficiaries

The primary beneficiary is the Pittsburgh Botanic Garden as the project allows the Botanic Garden to move forward on its 2013 Opening. We expect to open the trails to the public this fall. To have the treatment system in place before the public has access is a real coup – and a real public education point. An AMD class this past fall proved to be a hit with two groups of citizen students. The secondary beneficiary was Brandon Growark and his family and helpers. They learned so much and were able to contribute such a great deal to the Botanic Garden and the watershed.

More general beneficiaries are those plants and animals that are impacted by the degraded water. Resolution of such degradation will inure to their benefit. The general public is also a beneficiary for they will get to enjoy the fruits of the clean water and see more birds, animals and plants as well as gain an appreciation for the story of acid mine drainage. Also, the Chartiers Creek Watershed is a beneficiary as are all those who will be impacted by cleaner water.

Lessons

The lessons we are learning focus on these special precautions and protections necessary because the project is situated in a world-class Botanic Garden.

Completion

The project is essentially complete at its first stage - assessment. The treatment system has been designed and now must be built. We were not able to get the conduct the biological study of the wetland or fund all of the Master Plan design work.

Monitoring, operations

The monitoring was performed by Brandon Growark and Bob Hedin, our environmental engineer. We continue to measure flow on weekly basis and chemistry every two months. When the treatment system is built we will monitor the AMD flow rate and the treatment system effluent monthly. We will develop an operation and maintenance plan when the treatment system is complete.

Benchmarks

No new benchmarks.

Foundation Funds

The Foundation funds were used to fund both Brandon Growark's monitoring expenses and Bob Hedin's oversight and testing. The funds were also used to fund the design of the passive treatment system which is the next step. Please see grant budget chart.

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Outcomes Sheet



Foundation has set forth an aggressive transparency program, that provides information on our grantmaking and its overall impact. It is important that you answer all the questions provide below. Your answers are for benchmark and quantification purposes, you are not contractually bound by these numbers.

1) AMD Projects:

- How many stream miles improved? 0
- Fe mg/L (current) 1.3 after system installation _____
- Al mg/L (current) 25 after system installation _____
- Mn mg/L (current) 1 after system installation _____
- pH (current) 3 after system installation _____
- Acres restored _____

2) Riparian Projects and Natural Stream Channel Projects:

- How many linear feet? _____ (for buffers be sure to count for both stream banks if applicable)
- Nutrient reduction (P) _____ lbs/yr (N) _____ lbs/yr
- Total Dissolved Solids (current) _____ after system installation _____

3) Preservation Projects:

- Acres preserved 9
- Trees planted 300+

Please provide any additional information that is specific to your project, and that illustrates how you intend to monitor success.

The AMD Project, in 2011, was an assessment project. It was to provide a basis for a design for an AMD treatment system. Concurrent with this monitoring project, we were restoring a nine-acre Appalachian Woodlands area. Invasive species were cleared, over 300 native trees planted and over 1,000 native shrubs and herbaceous perennials were added. The stream areas and pond were cleared of debris and native aquatic species were added to the wetlands, just before Pinkerton Run. After the system is installed in the woodland garden area, which is a very public place, we will report on new – and better – water chemistry.

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Final Report Checklist



All items on the following checklist should be submitted with your application, including the checklist.

Copy of report	
Digital copy of report	
Digital project pictures (before, during, after)	
Contact Gwen Johnson about Rhiza Site	
Reviewed http://fpw.rhizalabs.com/folio/home	
Provided copies of any news/press	
Provided copies of any relevant project materials	
Updated Outcome Sheet	

Signature of person responsible for completing this checklist

Date: _____

Print name: _____

Mail your report to:

Branden S Diehl
Grant and Project Consultant
Foundation for Pennsylvania Watersheds
9697 Loop Road
Alexandria, PA 16611

Gwen Johnson is the Project Coordinator that is responsible for managing Foundation's online, grants' database (Rhiza Site). Please contact her to obtain instructions on how you can review your project, and provide additional input. She can be reached at either: 814-442-5436 (cell) or 814-669-4244 (office).

Organization	Service	In-kind	Cash	Cost
Trout Unlimited	technical assistance		\$5,000	\$5,000
Foundation for PA Watersheds	materials	\$500	\$1,000	\$1,500
	Hedin labor	\$500	\$2,000	\$2,500
	design		\$12,000	\$12,000
Scaife Foundation	Staff, overhead, project manager		\$3,500	\$3,500
PA American Water	educational materials		\$300	\$300
		\$1,000	\$23,800	\$24,800