



## TURTLE TRACKS SUMMER 2003 EDITION

OFFICIAL NEWSLETTER OF  
THE TURTLE CREEK  
WATERSHED ASSOCIATION

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### Bio-engineering for Streams?

#### *Rootwads, Boulders, Etc.*

The term "bio-engineering" is one we generally associate with tissue engineering, the manufacture of some sort of bio-medical product, or a related idea. However, the term also applies to some innovative work being done with streambank restoration. Almost a back-to-basics approach, the techniques employed mimic natural systems to stabilize badly eroded streambanks and to create improved habitats for aquatic creatures. Rather than using the standard strategies of trying to defeat natural forces, bio-engineering works in concert with them to achieve success.

Among the techniques being employed are root wads, log sections, boulders, bend-way stone weirs, and bio-logs. Flowing water has energy, and it normally can be dissipated by eroding material on the outside bends of streambanks where the current is fastest. Material is also then deposited on the inside bends where the current is slower. Over time, this process creates the back and forth "meanders" seen in lowland meadow and woodland settings. In flooding situations where too much water is emptying into a stream at one time, water is rushing, and erosion occurs rapidly throughout the channel and along both banks, but deposition only occurs miles downstream as the water velocity drops.

In the fall issue, we will take a closer look at the reasons why we have problems with erosion and how bioengineering methods address them.

### Fun Day Fishing Derby

*B-Y Pond in Trafford May 31st*



Despite the morning rain, the pond was well stocked, and the fish were biting. Those who braved the weather were rewarded with good catches and maybe some prizes to boot!



The Trafford Sportsmen's Club gave one-on-one archery lessons to kids of all ages.

# Streambank Stabilization

Sugar Camp Park in Pitcairn



Bank erosion from regular flooding is evident.



Banks have been regraded to a 1:1 slope. Boulders have been placed at the toe and stones above.



Matting, straw, trees, shrubs, & grasses in place.

# Project Updates

## *Borland Farm Road Abandoned Mine Drainage (AMD) Remediation; Phase I and Phase II*

We now have two disposal sites for the coal refuse pile material – the Viacom brownfield reclamation site in Trafford and the Jones Farm Road park site in Export. Working with Robindale Energy Services, the 12<sup>th</sup> Congressional Regional Equipment Center in Blairsville and the Pennsylvania Reclamation and Revitalization Society in Harrisburg, we have been able to expand the potential for the project to use waste materials for beneficial purposes and to acquire the extra funds it needs.

As soon as the site plan and conditional use permits are approved by Murrysville, we will be able to move the project forward.

## *Borland Farm Road AMD Remediation - Phase III*

It turned out that more loose ends than initially realized needed attention before this part of the project could begin. Now that these are being addressed, we hope to be ready to construct the ponds and polishing wetland before the end of the year.

## *Export Mine Discharge Remediation - Phase II*

The state budget situation has delayed final decisions from the PA DEP about the Growing Greener Program awards until the fall.

## *Streambank Stabilization*

Pictures on the left show the condition of the stream in Sugar Camp Park before work began, while in progress, and the finished product. Funding was provided by the Western Pennsylvania Watershed Protection Program, and the work was done by Ecological Restorations, Inc. Our thanks go to the Borough of Pitcairn, Mr. John Dawes of the WPWPP, Dave Hails of ERI, the Natural Resources Conservation Service in Greensburg, Rich Kowalski, Watershed Specialist for Allegheny County, and Craig Barras, Watershed Specialist, Westmoreland Conservation District.

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## OSM Internship

### Successful Accomplishments

The US Office of Surface Mining sponsors paid internships so college students can get first hand experience working with watershed organizations dealing with the effects of AMD.

Our intern, Sean Conroy of Delmont, is a CMU student majoring in physics. He has been able to lay the groundwork for a comprehensive water monitoring program - compiling photographs, notes, driving directions, and property owner permission for each of our 67 sampling sites. Sean has also been working with some volunteers, training them to do regular sampling. *More are needed to make the program a long term success!!*

As anyone who has found our website knows, it needed help - starting with the correct address! Not all the hyperlinks worked, the newsletters were not up to date, - the list goes on. As if the water monitoring program chores weren't enough, Sean also undertook the task of upgrading and expanding the site. Please visit [www.trfn.org/tcwa](http://www.trfn.org/tcwa) to see the results. We welcome suggestions for continuing improvement and are looking for a volunteer interested in maintaining the site.

## Allegheny County Health Department Grant

### Water Monitoring Experience

Learning science in the classroom is one thing, but applying it the real world makes it come alive. Then using the results of that application to improve the local environment provides a sense of satisfaction and accomplishment.

Partnering with Greater Works Outreach, their honors high school biology and chemistry students and faculty will be sampling three sites in Boyce Park & one at Saunders Station Bridge for both AMD and biological parameters. Funds from the ACHD's Tony Stagno Environmental Health Mini-grant Program have purchased Hach water testing kits, extra reagents, nets, and reporting supplies. ↑

## Volunteers Needed

### Water Sampling

Over the years, water monitoring throughout the watershed has been done on a sporadic basis. Sixty seven sites have been identified as being important to get a clear picture of water quality in this area. Some sites need to be sampled monthly, others quarterly, and some just twice each year. AMD related parameters are important, and those have been the ones most often taken. However, because the PA Fish & Boat Commission could use data including biotic parameters, we are starting to include those as well.

Learning to do sampling is not difficult. If you can find your way around a kitchen, can fill out paperwork, and enjoy being outdoors playing in the creek, then you are a good candidate to do water sampling. Adopt one site or several! Please call us at 412/829-2817 for more details.

## Calendar

### Westmoreland County Fair

August 15<sup>th</sup> - 23<sup>rd</sup> 4:00 - 11:00 p.m.

Visit our booth near the Westmoreland County Sportsmen's tent! Go to [www.westmorelandfair.com/](http://www.westmorelandfair.com/) for more information.

### Murrysville Summer Celebration

September 13<sup>th</sup> noon until 6:00 p.m.

Rained out on its original date back in June, we hope for better luck at the end of summer. Held at Murrysville Community Park on Wiestertown Road, check [www.murrysville.com](http://www.murrysville.com) for a map and more information. Visit our booth, enjoy the exhibits and activities, and stay for the fireworks.

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➔ Results of this work will be used to augment the AMD remediation project currently underway in Boyce Park and assist the PA Fish & Boat Commission in making decisions about trout stocking.

This is a one year program. We are seeking funding to sponsor it in future years.

Join Us !! Become a member of the Turtle Creek Watershed Association and become a partner in a dynamic local conservation effort. A broad base of financial and volunteer support from local individuals, families, communities, businesses, and industry will allow all of us together to continue improving the quality of life in this region.

(Don't forget - it's tax deductible!)

### Membership Form 2003

Name: \_\_\_\_\_

Individual \$10       Family \$15

Address: \_\_\_\_\_

Organization/Municipality \$25

\_\_\_\_\_

Small business \$50       Life \$100

E-mail: \_\_\_\_\_

Corporate \$150       Other \$\_\_\_\_\_.

Phone: \_\_\_\_\_ (h)

\_\_\_\_\_ (w)

Permission to list donor name:     Yes     No

Please make checks payable to:  
**Turtle Creek Watershed Association**

Mail to:  
325 Commerce Street, Suite 204  
Wilmerding, PA 15148

**Thank you very much!**



**TURTLE CREEK WATERSHED ASSOCIATION**  
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Murrysville Summer Celebration

Sept. 13th Noon until 6:00 p.m. Fireworks at night.

**Come see us at Murrysville Community Park on Sept. 13th !!**