

# Kettle Creek Watershed Association News

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## Beaverdam Run Dump Site Cleaned Up

On Saturday, October 20, twenty-six volunteers participated in the cleanup of a dump along Beaverdam Run Road near Kettle Creek State Park. The dump site has for a long time been an eyesore along the road that parallels Beaverdam Run, a Class A native brook stream. The site will be monitored to ensure that illegal dumping does not continue.

This event was sponsored by the KCWA, Bureau of Forestry, and Bureau of State Parks and made possible through the coordination of PA CleanWays. Groups and institutions represented by volunteers included the Geoscience and Biology Clubs of Lock Haven University, Kettle Creek Chapter of Trout Unlimited, National Trout Unlimited, the KCWA, and the Twomile Run Gun Club. Other valuable contributors to this effort were the Clinton County Solid Waste Authority, George Labant Construction, PennDOT, Sheetz of Mill Hall, and the Central PA Appaloosa Club.

Over 12 tons of waste and scrap metal were

removed from the site on Saturday. The preceding Wednesday, 5 tons of scrap metal were removed and properly recycled. The site was regraded and seeded after the work was completed on Saturday.



*A group of volunteers gather for a photo after a job well done.*

## Fish Habitat Conservation Plan in the Works

In July 2001, Trout Unlimited contracted Larson Design Group, Inc. (LDG) from Williamsport, PA to develop a Fish Habitat Conservation Plan for the Kettle Creek watershed. The objective of the Plan is to provide a strategic and prioritized framework for habitat improvement that maximizes benefit while minimizing cost and effort. The Plan focuses on the portion of the watershed upstream from the Kettle Creek reservoir (the Lower Kettle Creek Restoration Plan already covers the lower watershed below the reservoir by addressing acid mine drainage problems).

Jonathon Klotz, a fluvial geomorphologist and the LDG project manager for this task, has completed geomorphic surveys on 30 miles of Kettle Creek and several of its major tributaries. Klotz's surveys identify both areas of high quality habitat and poor quality habitat, instability, and the features that create or contribute to habitat problems. LDG is also reviewing and analyzing existing data on fish, macroinvertebrates, and riparian buffer conditions. The Plan will be completed by early February.

## Headgate Project Update

The Headgate Stream Habitat Improvement Project did not take place as planned this year due to a backup of other similar projects of the U.S. Fish and Wildlife Service (FWS). Work on the Headgate Project will most likely begin late summer next year. As mentioned in previous newsletter articles, the FWS is a major partner in this project – David Putnam, Fish and Wildlife Biologist for the FWS,

provides the project design and oversees on-the-ground construction and the highly skilled equipment operator for the FWS does the actual construction. Both of these “services” are provided through this valuable partnership between the KCWA/TU and the FWS as in-kind contributions toward the overall project cost. We will keep you posted on activities regarding this project.

## Middle Branch Passive Treatment System Update

The Middle Branch Passive Treatment System was inoculated with the Pyrolusite Microbiological System® (a product of Allegheny Mineral Abatement Company, Midland, Maryland) in early November. The Pyrolusite Microbiological System® is essentially a “super” culture of microorganisms that are found naturally in acid mine drainage where the metal manganese is often present in high concentrations. The biological activity of these microorganisms is claimed to result in a reduction of up to 99.97% of the manganese. The cultured microorganisms were added to one of the two limestone treatment beds. The limestone bed that was not inoculated will be used as a control to study the effectiveness of the microorganisms in the treated bed.

Water has been flowing quite steadily through the treatment system - which contains a collection pond, 2 vertical flow ponds, settling pond, wetland, and 2 limestone treatment beds – since early last spring (construction was completed in November 2000) and the results thus far are positive. The table below compares the chemistry of the acid mine drainage before treatment to the treated water as it leaves the system and is routed back to the Middle Branch.

	<u>Pre-Treatment</u>	<u>After Treatment</u>
<b>pH</b>	2.8	7.2
<b>Iron (mg/L)</b>	11.6	2.8
<b>Aluminum (mg/L)</b>	78.1	0.1
<b>Manganese (mg/L)</b>	24.9	3.0
<b>Acidity (mg/L)</b>	601.7	0.0
<b>Alkalinity (mg/L CaCO<sub>3</sub>)</b>	0.0	194.0

## Downstream Wings Installed on Germania Branch Adopt-A-Stream Project

Many thanks to the 14 volunteers who spent a sunny day working in Germania Branch on Saturday, July 14. With guidance from the PA Fish & Boat Commission, volunteers installed downstream wings on the 3 water jack dams they constructed last summer. The purpose of this Adopt-A-Stream project (materials paid for by PA Fish & Boat Commission) is to create habitat for the native brook trout in this headwaters reach of Germania Branch that is confined between a township road and state road (Route 144).

The scouring action from water flowing over the water jack dams creates pools below each dam that serve as great holding pools for the fish. However, after the water jack dams were constructed last year, high flows resulted in streambank erosion downstream of each water jack dam. The downstream wings will function to prevent this erosion. With support and permission from the township, the KCWA still intends to plant some small trees and shrubs along the stream to provide important cover for the trout.



*Close-up view looking at the downstream wings installed below one water jack dam on Germania Branch.*

## Huling Branch Geophysical Survey

Work has started for the "Huling Branch Collection System and Remediation Plan" project recently funded through the Growing Greener Grants Program this past summer. A geophysical survey has been conducted on Huling Branch to locate acid mine drainage (AMD) discharges by taking advantage of AMD's high electrical conductivity. When the conductivity of the area is mapped the discharges show up as "hot" spots. The goal of this is to aid in the design of a collection system to monitor and eventually treat the AMD that pollutes Huling Branch. The geophysical survey is funded through a matching grant of Trout Unlimited. Hedin Environmental will install the collection system this spring and develop a remediation plan for Huling Branch.

Huling Branch is a major tributary of Twomile Run that contributes over 50% of the AMD to Twomile Run, which in turn pollutes lower Kettle Creek and makes its way into the West Branch Susquehanna River. Numerous unreclaimed surface mines, abandoned deep mines, and refuse piles scar the Huling Branch watershed, leaving behind a legacy of AMD with high acidity and metal concentrations. However, it

is encouraging to note that reproducing populations of native brook trout do exist in the upper reaches of Huling Branch upstream from the AMD.



*Neil Wolfe, a Lock Haven University geology student, uses an EM31 instrument to measure conductivity in the Huling Branch area.*

## Additional Kettle Creek News



The KCWA is featured as a "Success Story" in the DEP's Growing Greener Second Year Report 2001; highlights include the national attention the watershed received via partnership with Trout Unlimited through TU's Home Rivers Initiative and the overall importance of all the watershed partnerships with respect to successfully accomplishing watershed projects.



The Kettle Creek Watershed Director, Amy Gottesfeld, gave a presentation "Pullin' It Together for the Kettle" at the 2001 PA Watershed Conference held October 5-6 at The Resort at Split Rock, Lake Harmony, PA. Copies of the powerpoint presentation are available upon request (please contact Amy).



New, colorful membership brochures have been developed for the KCWA. If anyone is interested in making these brochures available to the public, please contact Amy Gottesfeld.



The Kettle Creek Watershed Conservation Guide: A Landowner's Handbook will be distributed early in 2002. Copies will be mailed to all property owners in the Kettle Creek watershed. Look for your copy in the mail! \*\*Note: If you do not own property in the watershed, but you are a KCWA member and interested in receiving a copy, please contact Amy Gottesfeld so your name can be added to the distribution list.



A collection system has been installed to collect AMD discharges that pollute Robbins Hollow, a tributary to Twomile Run. Chemistry and flow will be monitored and used to design a passive treatment system. Funding for the project is through the Growing Greener Grant Program, Department of Interior Office of Surface Mining, and Trout Unlimited. Hedin Environmental is contracted for this project.



No significant progress is reported for the Twomile Run Surface Reclamation project. However, the KCWA and TU have been diligently working to settle liability concerns of the landowner who owns a major portion of the project area. This half-million dollar project funded through the Growing Greener Grant Program and Department of the Interior Office of Surface Mining will reclaim 57 acres of abandoned surface mines and reduce a considerable amount of AMD that pollutes Twomile Run. Gannett Fleming, Inc. is the consulting company contracted for this project.



The Keystone Coldwater Conference is scheduled for Saturday, February 16, 2002 to be held at the Penn State Conference Center Hotel in State College, PA. The theme for the conference is "Headwater Habitats: The Importance of Native Plants and Animals." Check PA Trout's website at [www.patROUT.org](http://www.patROUT.org) under "Latest News" for more details and registration information.



**Kettle Creek Watershed Association**  
**P.O. Box 317**  
**Cross Fork, PA 17729**

Address Correction Requested

***Happy Holidays!***



## **DEP Secretary David Hess Visits Kettle Creek**

On July 2, DEP Secretary David Hess visited one of the first Growing Greener projects completed in the Kettle Creek watershed. At the stream habitat improvement project constructed on Kettle Creek's "Delayed Harvest/Fly-Fishing Only" section, Hess and others planted fascine bundles they made from live willow cuttings. Employing bioengineering techniques, they installed the bundles in trenches they dug along the contour of a regraded streambank at the project site.

"It's truly amazing to see firsthand all that can be accomplished in a short time when people and organizations from the local, state and federal level work together," stated Secretary Hess.

Indeed, partnership and cooperation are the real keys to success in the Kettle Creek watershed as was demonstrated by the many different agencies and organizations represented at this day's event.



*Representatives from Congressman Peterson's office, Clinton County Conservation District, Dominion Transmission, Senator Corman's office, Trout Unlimited, U.S. Fish & Wildlife Service, and KCWA join DEP Secretary Hess (kneeling, front left ) for a group photo.*

### ***Kettle Creek Watershed Association***

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For more information on Kettle Creek watershed projects or Trout Unlimited's Kettle Creek Home Rivers Program, please contact the Kettle Creek Watershed Director, Amy Gottesfeld at (570) 726-9907 or [agottesfeld@tu.org](mailto:agottesfeld@tu.org). You can also visit the KCWA website at [www.kettlecreek.org](http://www.kettlecreek.org). Membership donations may be sent to KCWA, P.O. Box 317, Cross Fork, PA 17729.