

# Kettle Creek Watershed Association News



Volume VI, Issue I

March 2005

## Volunteers Make a Difference along the Kettle

Based on the *Upper Kettle Creek Watershed Fish Habitat Conservation Plan*, a major priority has been the improvement of the native trees and shrubs along specific reaches of Kettle Creek and its tributaries. Planting trees and shrubs within stream corridors will stabilize streambanks, prevent erosion, provide shade to help cool water temperatures, enhance habitat for trout and other critters, as well as provide food for aquatic insects.

KCWA and Trout Unlimited (TU) plant only trees and shrubs that are native to the Kettle Creek area because native plants are well-adapted to local soil and growing conditions, so they need little to no maintenance and do not need to be watered or fertilized. Native trees and shrubs planted typically include American sycamore, Eastern white pine, Eastern hemlock, white oak, buttonbush, and common winterberry, among others.

To date KCWA and TU have planted

more than 2000 native trees and shrubs on well over two miles of Kettle Creek. During last April and May alone, 648 hours were graciously contributed by volunteers from the KCWA and Kettle Creek TU Chapter to planting along Kettle Creek. At the standard \$15 per hour typically allowable for in-kind services, this amounts to \$9,720.00 of donated labor! It is amazing what can be accomplished without having to spend a single penny. Of course our volunteers are always fed a good lunch and sometimes scrumptious homemade cookies! Additionally, everyone walks away with a feeling of true accomplishment knowing their voluntary efforts will help to ensure the health of Kettle Creek for many generations to come.

On Saturday, November 20, several KCWA volunteers planted 250 white pines and Eastern hemlocks along Kettle Creek. Planting another 1.5-miles is planned for this coming spring. Please stay tuned; we'd love to have your help!



*Many, many thanks to each of you for your hard work and dedication!*

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Amy Wolfe

**Project Coordinator**  
Amidea Daniel

*Please contact Amy Wolfe or Amidea Daniel  
for more information on Kettle Creek projects:*

#### **E-mail**

Amy Wolfe - awolfe@tu.org  
Amidea Daniel - adaniel@tu.org

#### **Telephone**

(570) 726-3118

#### **Or write to the KCWA at:**

KCWA, P.O. Box 317  
Cross Fork, PA 17729

More information is also available at:  
[www.kettlecreek.org](http://www.kettlecreek.org)

## **KCWA Board Member Saves Many Trout After Ivan's Wrath**

On September 22, Eric and a friend had just finished pre-season scouting for archery season when they received a phone call from a fraternity alumni. He explained to them that there was a large number of trout landlocked due to the recent flooding at Benner Springs hatchery. Hearing this they immediately drove to the area of turmoil. Upon arrival a fish commission officer, WCO Dave Decker, had also arrived. They asked permission to assist in the rescue and proceeded to the two puddles of water where the fish lay in exhaustion. His friends and the officer used nets, but Eric dove in with his bare hands! This heroic effort saved 150-200 brook and wild browns, now flourishing in the waters of Spring Creek, thanks to Eric and his friends.

On the following day another friend had returned to the site and observed that the puddles, once holding many trout, were now gone.... good thing Eric and his comrades were there to save the fish the previous day!

On another note, Eric is currently taking a master of fly fishing class at Penn State and will be featured in an upcoming ESPN show. The program will air between April and June of 2005 on Fly Fishing America.



*Way to go Eric!*

## **Kettle History Korner**

*Did you know.....*that in the early 1900's fisherman would flock to retreats such as Olsen's and the Trout Run Hotel in the Kettle Creek watershed by the hundreds in hopes of being the first on the water for the remarkable brook trout "runs"! The runs would be in the vicinity of the Trout Run hotel by Memorial Day, and then as weeks passed would work their way into the uppermost tributaries of the Kettle Creek watershed. Native brook trout numbers were so large

that it was not uncommon for fishermen to return home with fifty or sixty trout in their creel. Yes, the old days on Kettle Creek are hard to forget.... its fabulous spring run of brook trout possessed a magnetic, almost irresistible appeal with its wild beauty that entranced the very soul of man. The Kettle drew all who fathomed and admired the native brook trout and their wild surroundings. *(adapted from Pennsylvania Angler; May 1969 Author: Don Neal)*

## Stream Habitat Improvement Projects Fare Well After the Hurricane

On September 18, 2004 one of the worst tropical weather systems since Hurricane Agnes of 1972 hit Pennsylvania, dumping 6 to 10 inches of rain in some areas. Many watershed projects throughout the state along with roads, homes and businesses were destroyed or severely impacted by the remnants of Hurricane Ivan. The residents of Kettle Creek were not left out of the turmoil. They too were impacted by the storm, but as observed by the Kettle Creek Fish Habitat Advisory Committee, Ivan - in conjunction with the instream struc-



*Kettle Creek floods over its banks as seen from the Road Hollow bridge. (Picture by Barry Fritzing)*



*Looking downstream at Kettle on upper end of Delayed Harvest Special Regulations project site. Notice how the cross vane diverts flow away from streambanks.*

tures of the habitat projects - the storm may have given a boost to improving habitat on Kettle Creek.

Inspections of Kettle Creek habitat projects following the major flood event yielded no significant damage to stream channels, habitat structures, or recently planted trees and shrubs. In fact, observations on several project reaches demonstrated that the rock vanes had promoted deposition of large cobble-sized sediment resulting in deeper and narrower meandering channels. There is no doubt these structures are functioning as intended.

## Headgate Project Continues to Boast “Success”

If it were not for the “Headgate” stream-bank stabilization and habitat improvement project, it is not unlikely that State Route 144 might have been significantly damaged by the erosive forces of Ivan’s strong flood waters at that location. The J-hooks, cross vanes, and mud sill helped to control the flood waters and prevented the swiftly flowing Kettle from undercutting or washing away any portion of the road at that location.

PennDOT can rest assured that the money it spent to purchase 1400 tons of rock for this project was indeed money well-spent. Our other partners, including the U.S. Fish and Wildlife Service, PA Fish and Boat Commission, Natural Resources Conservation Service, Dominion Foundation, Growing Greener Grants Program, Wildlife Forever, Fish America Foundation, and National Fish & Wildlife Foundation can all give themselves big pats on the back as

well, as this Headgate Project has proved to be a win-win for everyone involved.



*Looking downstream at the Headgate project (State Route 144 on right). Picture taken in mid-October 2004, approximately one month after Ivan.*

## Twomile Run Surface Reclamation Project Almost Complete

It was originally hoped that project construction would begin in summer 2001. However, significant time delays were experienced due to the private landowner's "last-minute" decision to not sign the landowner agreement after originally having given permission to proceed with project plans and to secure the necessary funds. Fortunately, this matter was eventually resolved through DCNR Bureau of Forestry's purchase of the private property, now part of the Sproul District State Forest. After much frustration and waiting, the reclamation activities finally began the last week in September 2003.

A total of \$626,712 for the project was awarded to the KCWA and Trout Unlimited by the PA Growing Greener Grants Program and the Office of Surface Mining's Appalachian Clean Streams Initiative.

The DEP Bureau of Abandoned Mine Reclamation (BAMR) provided the plans for reclamation and the "Swamp Area" collection sys-

tem. Gannett Fleming, Inc. was contracted to design and incorporate the soil amendment (WesTan soils) plans into the regrading design, prepare the project engineering specs and bid package, and provide engineering oversight. E.M. Brown, Inc. was selected through a competitive bid process as the construction contractor. Hedin Environmental came onboard later in the project to redesign BAMR's original plans for the "Swamp Area" collection system (based on their experience with our water collection system for discharges in the Huling Branch watershed) and provide oversight for its construction.

When work resumes this spring, E.M. Brown will remove and regrade the sediment retention basins and temporary conveyance ditches, reseed the south-facing slope, and submit as-built drawings which will be subject to final approval by Gannett Fleming, Inc. The site will be limed in the summer or fall to further boost vegetative growth.



*Piles of WesTan soil on the abandoned mine site await spreading and mixing into the top 6 to 10 inches of surface material which consists primarily of shale and sandstone.*



*Photo taken in late September 2004 shows the vegetation beginning to take hold across the reclaimed abandoned mine. The site was hydro-seeded with an elk food plot mix consisting of trefoil, clover, orchard grass, and wheat.*



*In mid-August 2004, mulch and seed were spread over the entire project site. Once the vegetation reaches 70% growth, the temporary conveyance ditches and sediment retention basins can be removed. This will likely take place in the spring or early summer.*



*In mid-October 2004, construction began for the subsurface collection system in the "Swamp Area" downgrade of the project site. Perforated and solid pipe is installed in trenches, some as deep as 11 feet, for the purpose of collecting and monitoring the remaining flows of acid mine drainage to aid in designing a passive treatment system for the remaining discharges.*

## Robbins Hollow Passive Treatment Systems Nearly Completed

The abandoned mine drainage (AMD) remediation project on Robbins Hollow, a tributary to Twomile Run, will be completed this spring. Project design, construction, and oversight cost a total of \$379,175 that was funded to the KCWA and Trout Unlimited through the PA Growing Greener Grants Program and the Office of Surface Mining's Appalachian Clean Streams Initiative.

This project includes four individual passive treatment systems that were designed by Hedin Environmental to treat AMD discharges impacting the East Branch and North Branch of Robbins Hollow in its headwaters. E.M. Brown was selected through a competitive bid process



*Six-inch perforated PVC pipes were installed horizontally toward the top of the limestone layer in the vertical flow ponds. These pipes are used for flushing metal precipitates from the pond.*

as the construction contractor.

The project consists of vertical flow ponds (some containing limestone and others containing both limestone and mushroom compost), each equipped with plumbing to allow manual flushing, in addition to limestone "dams", anoxic (oxygen deficient) limestone ponds and sediment retention/flush ponds.

When construction is complete this project will treat highly acidic discharges from abandoned surface and deep mines that pollute Robbins Hollow. These systems will continue to be monitored to assure they are working properly and to document their performance.



*Ted Weaver (Hedin Environmental) and Amy Wolfe (KCWA/TU) inspect construction progress as E.M. Brown installs the limestone channel leading from vertical flow ponds to the settling pond (or sometimes called a flush pond).*

## Huling Branch Remediation Plan Now Available on Website

In March 2004, Hedin Environmental completed the *Huling Branch Mine Complex: Investigation of Acid Mine Drainage and Recommendations for Remediation*. Kim Weaver, Hedin Environmental's engineer, presented the plan at the KCWA's annual public meeting in May 2004.

Huling Branch, a major tributary to Twomile Run, is a significant contributor of acid mine drainage to Twomile Run and lower Kettle Creek. A complex of abandoned surface and deep coal mines exist within the Huling Branch watershed that begin polluting Huling Branch approximately 2.5 miles upstream from its mouth. The headwaters of Huling Branch, however, contain Class A populations of brook trout.

Funded by a grant from the PA Growing Greener Grants Program, TU and KCWA contracted Hedin Environmental to install several subsurface collection systems to collect and accurately monitor flows and chemistry of mine drainage, and to thoroughly investigate the area

surrounding an abandoned mine tippie where the majority of pollution originates in the Huling Branch watershed.

In a brief summary, the abatement alternatives presented in the final plan include: 1) Chemical treatment, 2) Regrading and revegetation of unreclaimed mine spoils, 3) Reclamation with massive alkaline addition, or 4) Mining of remaining coal in combination with massive alkaline addition and reclamation.

The KCWA and Trout Unlimited are working in cooperation with the DCNR Bureau of Forestry and DEP Moshannon District Mining Office to pursue Alternative #4 at this time. A combination of re-mining, daylighting the deep mines, and massive alkaline addition and reclamation is truly the best option we have for such an impacted watershed because it is highly likely these combined activities would reduce the majority of AMD in the Huling Branch watershed and eliminate the need for a costly, high maintenance active treatment system.

## Bench-scale Tests Planned as a Result of Middle Branch Autopsy

After 1 1/2 years of effective treatment, the Middle Branch system's ability to produce alkalinity and reduce metal concentrations of aluminum and iron decreased; as a result, Trout Unlimited and KCWA applied for and received a \$25,235 Growing Greener grant to complete an "autopsy" on the system.

The autopsy was held in June 2004. An excavator dug down through the limestone treatment beds and the vertical flow pond (through the layers of mushroom compost and limestone). Samples of limestone, mushroom compost and precipitate were collected from the limestone treatment beds and vertical flow ponds and analyzed by Jane Hammerstrom of the U.S. Geological Survey, Dr. Art Rose of Penn State University, and Dr. Karl Kirby of Bucknell University. After the analyses were completed, a meeting was held in September to discuss the findings and future plans for the

treatment system. It was decided that the next step should be to set up a bench-scale test of five different treatment scenarios that will be monitored for four to six months. The bench-scale tests will utilize 55 gallon barrels to test different mixtures of limestone, compost, and mulch, as well as different methods of plumbing to allow for the flushing of precipitates.

The bench-scale test results would then be evaluated and the best treatment scenario will be taken to the next step of full-scale retrofitting the Middle Branch Passive treatment system. The bench-scale tests will be set up this spring at the Middle Branch passive treatment system site.

This project offers a tremendous insight into passive treatment technology for acid mine drainage with high concentrations of aluminum, which poses a significant challenge to available passive treatment options.



*Left to right: Dr. Carl Kirby (Bucknell University), Neil Wolfe (Skelly & Loy, Inc.), Jane Hammarstrom (USGS), and Joe Schueck (DEP) were among the autopsy participants who offered technical guidance and expertise.*



*The excavator digs a pit in the limestone treatment beds in order to observe the condition of the limestone and metal precipitates that have accumulated at various depths.*

## Additional Project Updates



The design plan for the 3.5 mile natural stream restoration project on Cross Fork between Yochum Run and Windfall Run has been completed by Larson Design Group. The next step is receiving approval for the permits and securing all the funds necessary for construction, which will most likely occur in several phases.



The Kettle Creek TU Chapter's "Heivly" stream habitat improvement project, located approximately 1/2 mile upstream of Hammersley Fork on Kettle Creek, was partially completed in September 2004 before the tropical storm Ivan. It is anticipated that one to two more days of work this summer will be necessary to complete the installation of the log vanes.



Amidea Daniel, the new Kettle Creek Project Coordinator, has been working with webmaster John Luer (Thumtpown Web) to update the KCWA's website. Please be sure to check it out at [www.kettlecreek.org](http://www.kettlecreek.org)!

## KCWA and TU Welcome New Project Coordinator, Amidea Daniel

The KCWA and TU are pleased to announce the hiring of Amidea Daniel as the new Kettle Creek Project Coordinator. Employed by TU and working closely with the KCWA through TU's Kettle Creek Home Rivers Initiative, Amidea started her new position on August 30, 2004. Amidea will work with the KCWA on preparing them for long-term sustainability as a volunteer-based organization, reviving the Partners Program for volunteer monitoring in the watershed, and many other education/outreach and upper watershed habitat projects.

Please note that Amy Wolfe, the Kettle Creek Watershed Director, has recently been promoted to TU's Director of Abandoned Mine Programs. As such, Amy's current job responsibilities have greatly increased and expanded beyond Kettle Creek (see article below). Nevertheless, Amy will maintain her position as Kettle Creek Watershed Director and continue to oversee all Kettle Creek projects.

### *A few words from Amidea...*

As a newcomer I would like to say HELLO to all Kettle Creek Watershed volunteers and supporters. It has been an exciting 5 months so far and I am looking forward in working together to help keep KCWA active with on-the-ground projects, education/outreach programs, completing Upper Kettle Creek projects and assisting Amy with her ongoing work.

Before joining the team I was employed



*Much of Amidea's free time (when she has some!) is spent fishing, hiking, riding horses, and painting.*

by the Clinton County Conservation District as the Watershed Specialist and Education Coordinator for two years. While there I coordinated many education programs, wrote grants and worked with watershed groups to reach their goals. I hope to continue the successes on Kettle Creek and utilize some of my experiences/talents to complement what Amy has accomplished in the past 6 years. The challenges of tomorrow are opportunities of today!

## TU's Efforts to Cleanup Abandoned Mine Drainage in Kettle Creek are Expanded into the West Branch Susquehanna River Watershed

Since the inception of Trout Unlimited's Home Rivers Initiative in the Kettle Creek watershed in 1998, TU has been working in partnership with the KCWA and a host of other local, state, and federal agencies and non-government organizations to address AMD in the lower watershed (in addition to the upper watershed habitat projects and environmental education). Using the success TU has had in working with its many partners toward AMD remediation in the Kettle Creek Home Rivers Initiative as its foundation and a model for restoration, it has expanded its restoration efforts into a West Branch Susquehanna Restoration Initiative.

Even though TU is embarking upon a new initiative, TU stays completely committed to working with the KCWA and other partners to complete the cleanup of the lower Kettle Creek

watershed.

The West Branch is home to more than 1,100 stream miles impacted by AMD. Over 900 of those miles are coldwater tributaries that have Class A wild trout populations in their headwaters above the AMD. (AMD is the cause for over sixty-percent of the pollution to the West Branch mainstem and its tributaries.)

The kickoff to this comprehensive, coordinated, collaborative approach to restoration of the West Branch is the West Branch Susquehanna Restoration Symposium on May 6-7, 2005 hosted by TU and co-sponsored with the DEP, DCNR, PA Fish & Boat Commission, Western PA Watershed Program, and Canaan Valley Institute. Please contact Amy Wolfe if you are interested in learning more or would like to attend the West Branch Susquehanna Restoration Symposium.

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

Address Correction Requested

*Important Dates to Remember*

KCWA Annual Public Meeting - Friday, April 1, 2005 at the Kettle Creek Hose Co. in Cross Fork

3rd Kettle Creek Landowner Stewardship Workshop - Saturday, April 2, 2005 at the Germania Hotel in the village of Germania

West Branch Susquehanna Restoration Symposium - Fri/Sat, May 6 - 7, 2005 at the Penn Stater Conference Center Hotel in State College

Volunteer Tree Planting along Kettle - Sunday, May 15 (meet at 8:30 a.m. at the DCNR Bureau of Forestry maintenance garage parking lot in Cross Fork) *Lunch will be provided*

West Branch Susquehanna River Sojourn - (Hosted by the Alliance for the Chesapeake Bay, begins at Keating and ends in Williamsport) Thurs to Monday, June 2 - 6, For more information contact Deborah Rudy at (717) 737-8622, drudy@acb-online.org, or www.alliancechesbay.org

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**Help support the KCWA's projects and educational programs - "Each dollar goes a LONG way!"**

Yes, sign me up as a KCWA member for 2005! I choose to make a tax-deductible membership contribution as indicated (please check one):

- Regular                    \$5
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