

Stonycreek-Conemaugh River Improvement Project

AMD Treatment Systems Must be Maintained to Preserve Improved Water Quality by Len Lichvar

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Number 3
Summer 2014

- Save the Date:
- Sept. 18– Ohio River Watershed Celebration
 - Sept. 19- SCRIP Board Meeting, Centennial Club, 9am
 - Sept. 25– Ground Conservation Project Tour
 - Oct. 17 - SCRIP Board Meeting, St Francis University, 9am; 2pm program (tentative)
 - Oct. 26– Thirty-One Bingo Basket Party

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Dave Leiford, left, of the Pennsylvania Department of Environmental Protection's Bureau of Conservation and Restoration and Somerset Conservation District Watershed Specialist Greg Shustrick, examine and discuss the maintenance issues at an AMD treatment site. *Photo by Len Lichvar*

Today the Cambria-Somerset region has more water oriented opportunities for fishing, boating, kayaking, float tubing, swimming, bird watching and scenic beauty than ever before.

This was not always the case. Many life-long residents all too well remember the yellow and orange stained waters that abounded. The primary culprit was and still is abandoned mine drainage (AMD)

infiltrating our waterways and impoundments for much of the 20th Century. It has only been in the past 25 years that dramatic improvements through innovative technology, public-private partnerships and public and private investment have reversed that trend. Today many new residents to the region, as well as the younger generation, actually have little knowledge or understanding of what this region endured for over 100 years because of the natural resources that were extracted. The use of these resources powered America's Industrial Revolution and helped win two world wars. The unfortunate part was the staggering negative environmental and economic impacts it left in its wake. *(cont. on page 2)*

Rock Tunnel Project By Len Lichvar



Soil from the Route 219 Construction Project is delivered and spread during construction of the Rock Tunnel Rehabilitation Project. *Photo by Len Lichvar*
Story on page 4.

(cont. from page one)

These days it is a commonly held belief that our waterways are much improved which is true. But, the not so common knowledge is that the pollution sources that impaired them have only been masked and treated – not eliminated.

Beginning of Passive Wetland Treatment Systems

In the late 1980's and early 1990's a new technology, known as passive wetland treatment, began to be pioneered by public resource agencies such as the federal Office of Surface Mining, Natural Resources Conservation Service and the PA Department of Environmental Protection (PA DEP). That same public sector capacity to design, fund and construct these treatment systems that relied on natural processes such as retention time and acidic reducing and alkaline generating compost and rocks, rather than chemical treatment, flourished. Local grassroots organizations and non-profits such as the Southern Alleghenies Resource Conservation and Development Council and Conservancy, Somerset County Conservancy, Mountain Laurel Chapter of Trout Unlimited, Stonycreek-Conemaugh River Improvement Project, Somerset and Cambria County Conservation Districts and local watershed groups provided the needed administrative and coordinating delivery mechanisms.

In addition, local, state and national elected officials, such as the late U. S. Congressman John Murtha put their political capital into pursuing the on the ground implementation of this new technology.

A more detailed historic story of how all this came to be can be found on the **Somerset Conservation District's** website at www.somersetcd.com.



The Oven Run AMD Passive Treatment Systems, and other similar projects, have succeeded in significantly improving the water quality of the Stonycreek River watershed since their construction in the 1990's. Photo by Len Lichvar

The 6 site 5 million dollar Oven Run AMD abatement project on the main stem of the Stonycreek River was the hallmark of these efforts. But, other sub-basins, coordinated by local watershed groups, have also constructed similar treatment systems in the Quehahoning Creek, Wells Creek, Lamberts Run, Shade Creek and Paint Creek watersheds.

The result has been the reestablishment of over 20 miles of coldwater fishery that had been absent for nearly 100 years and the creation of a new and growing boating, kayaking and whitewater destination point. However, as it turns out the real heavy lifting was and is not the resurrection of the fishery and the startup of water sport opportunities, but the continuation of them.

Very Thin Line Separates Improvements from Reversal

All these constructed systems have two things in common. Most importantly they all have effectively served their intent by reducing impacts of AMD. The other common denominator is that they must be maintained in order to continue to function. When these systems were originally constructed the guesstimate was they should operate well for 20 years or so. The real world reality is that even before the 20 year mark a lot has been learned about these now not so new technologies. The hard lesson is that operation and maintenance is often required well before the two decade mark and even more is required once they do which is now. The other sobering reality is that when they were built no funds were set aside to pay for that upkeep.

Consequently, the task of maintaining the effectiveness of the systems falls on the backs of organizations such as the Somerset Conservation District, which signed legal documents 20 years ago to be responsible to maintain treatment systems at Oven Run. Local all volunteer groups such as the Somerset County Conservancy, Wells Creek Watershed Association, Shade Creek Watershed Association and the Paint Creek Regional Watershed Association have also assumed much of the same responsibility for their systems as well.

(cont. on page 3)

The Somerset County Conservancy owns the land on which several of the treatment systems reside. Conservancy President Jim Moses knows all too well that, “We have made tremendous improvement in water quality in the Stonycreek River and operation and maintenance of these systems is the key to preserving the improved water quality now and in the future.”

All of these groups have struggled operationally as well as monetarily to keep these treatment systems providing the band aid treatment they apply since the source of the AMD at each continues to flow. At any given time there is a very thin line separating our continued water quality improvements and a quick and severe reversal of fortune for those resources. That tipping point is closer than anyone seems to realize. Historic and ongoing water quality sample data, collected by the Kiski-Conemaugh Stream Team, confirm this reality check

Innovations and Partnerships Help to Extend Life Span of Systems

The Somerset Conservation District, knowing full well of the situation at hand, has stepped up its obligation to the Stonycreek River by making sure each system is on a regular flushing schedule. The District has already designed and installed small scale innovative and cost effective retrofits that have increased the life span of the systems and bought valuable time. The District has also secured a significant grant from the Department of Community and Economic Development Act 13 funds to rehab the

region’s oldest AMD treatment system, the Rock Tunnel site on Bens Creek, that was originally constructed in 1993.

Perhaps more importantly the District has reinforced its partnership with the PA DEP and the PA Association of Conservation District Technical Assistance Group, in reevaluating the more significant needs of the systems. With data derived from that partnership, Conservation District Watershed Specialist Greg Shustrick is preparing a major PA DEP Growing Greener grant request to fund the design and construction of needed extensive repairs and upgrades. As Shustrick points out, “The window of opportunity may be opening for us to secure the future integrity of these systems. We need to be and we are ready to act now to take advantage of this financial and technical assistance opportunity.”

At the same time the District, PA DEP and local landowners are examining the additional opportunity and potential for an Oven Run II project to reduce the impacts of still remaining sources of AMD that continue to impair aquatic life, limit the further expansion of the fishery and degrade water quality in the Stonycreek River.

The emphasis for the short term, however, is maintaining what is currently functioning to reduce the potential for a catastrophic failure. The real key to maintaining and improving not only our region’s ever increasing notoriety as a recreational destination point, but all the sustainable economic impacts it generates, is to reinforce our defenses against a pollution enemy that although is beaten back, has never really been defeated.



Clarence Weyand, of CW Handyman Service, directs the positioning of a new and innovative designed intake cover at one of the Oven Run AMD passive treatment systems.

Photo by Len Lichvar

Rock Tunnel AMD Rehabilitation Project is Underway by Len Lichvar



The Somerset Conservation District's Rock Tunnel AMD Rehabilitation project is underway. The Rock Tunnel site, located along the

South Fork of Bens Creek near Thomas Mills in Somerset County, has historical significance since it was the first on the ground AMD passive treatment project in the Stonycreek River watershed, coordinated by SCRIP in 1993, prior to the start of the Oven Run projects.

Unfortunately, the footprint of the project, due to adjacent wetland constraints, could never be sized large enough to effectively reduce the iron loading from the discharge into Bens Creek. An attempt to rehab the project in 2002 provided limited success.

* A trompe is a device that operates without electricity to add air to the water which causes the iron to drop out and help to clean the water. For more information and to see how a trompe works, watch the following video by the U. S. Department of the Interior and Office of Surface Mining and Reclamation and Enforcement as it operates on a site near the Pittsburgh International Airport:
<https://www.youtube.com/watch?v=I85esMMoRa4>.

SCRIP Scholarship

There were no applications for the \$500 SCRIP Scholarship that had a deadline of August 1, 2014. The scholarship will be offered again in 2015. More details will be published in the Fall 2015 newsletter.

The Somerset Conservation District began seeking options for one more attempt at creating a more effective system. With the assistance of the PA Association of Conservation District's Technical Design Team a plan was developed to create a more effective system. The new concept will create a designed wetland within the original area that will enable the site to retain the heavy iron loading that continued to short circuit the original system.

The District secured a \$215, 141.00 grant from the Act 13 funds through the Commonwealth Financing Authority. Local matching funds came from SCRIP, Mountain Laurel Chapter of Trout Unlimited, Somerset County Sportsmen's League and the Boswell American Legion. A crucial in-kind match of soil came from the Route 219 construction project. Earthshapers of Ebensburg is the contractor. A trompe* will also be added. After planting, the wetland system is scheduled to be fully on line and functional by late summer.

Conservation Project Tour Slated for September 25

An on the ground conservation project tour will be held on Thursday, September 25, 2014 beginning at 10am and concluding at approximately 3 pm. The tour will begin at the Allegany College of Maryland Partners Hall located at 6024 Glades Pike Somerset, PA 15501.

The tour includes stops at:

- Rock Tunnel AMD Rehab site
- Quemahoning Creek Habitat Restoration Project site
- Boswell Area Historical Society's Orenda Park (lunch)
- Partner's Hall (visit and formal dedication of Somerset Conservation District's Demonstration Rain Garden)

The tour is sponsored by the Somerset Conservation District, in cooperation with the Pennsylvania Association of Conservation Districts whose staff and project partners will be on hand to discuss each site and be available for questions.

A box lunch and transportation will be provided. RSVP's are required and can be made to somersetcd@wpia.net or by calling 814-445-4652 ext. 136.

Ohio River Watershed Celebration

Registration Still Open



Guest Author, Shaun Busler, Stream Restoration Inc.

After more than a decade, come join us for the first, land-based, Ohio River Watershed Celebration!!! Registration is still open. Go to www.orwc.org.

This year's event will be held on Thursday, September 18, 2014 in the 3000-acre North Park in Allegheny County, north of Pittsburgh, PA.

Take a free canoe ride on the 75-acre North Park Lake, watch a falconry demonstration, visit the alternative fuel vehicles on display, learn about energy conservation and watershed restoration efforts, go on a bus tour of the Pine Creek Watershed, or participate in the many other event activities.

Also, don't forget to visit the displays by the watershed groups that highlight the unwavering efforts of the volunteers. There will be cash awards to help support their projects.

The event as well as parking is being provided free-of-charge due to the generosity of our sponsors. Registration is required, however, as space is limited for some venues. Remember that each person must register separately.

If you have any questions, please email us at orwc@streamrestorationinc.org.

Looking forward to seeing you for another wonderful celebration!!!!



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New Hires at the Center for Watershed Research and Service at St. Francis University by Kelsea Palmer



The Center for Watershed Research and Service (CWRS) is proud to announce three new hires at Saint Francis University of Loretto. Environmental Chemist, Dr. Peter Smyntek, will be the new, and first, Postdoctoral Researcher within the Environmental Engineering Program at the University as well as leading student projects outside of the classroom. His experience with aquatic ecosystems, atmospheric and marine pollutants and work with local communities will bring a great amount of technical knowledge useful to the local watersheds and SCRIP. Environmental Engineer,

Ms. Kelsea Palmer, is the new Engineering Lab Manager. Her experience working with acid mine drainage treatment and within the consulting realm will drive her to be further involved in SCRIP and be a resource for student projects in the lab and as a volunteer. Ms. Morgan Whited, a former and very active intern for CWRS, is the new Engineering Lab instructor. Her hard work within CWRS and the local watersheds, as well as experience in industry, will make her another great asset for local watershed and SCRIP!

For more information on the Center for Watershed Research and Service, see their website, <http://francis.edu/center-for-watershed-research-and-service> or Facebook page, <https://www.facebook.com/CenterForWatershedResearchAndService>.

Growing Stream Team

by Melissa Reckner



I am pleased to announce that the Kiski-Conemaugh Stream Team now has the permit, equipment, and personnel needed to perform its own fish surveys. We sought this to expand our monitoring efforts and technical assistance.



A brown trout eating a darter in our collection buckets during a survey of Cherry Run in Armstrong County. *Photo by Melissa Reckner*

We've already started completing fish surveys at our data logger locations to supplement the chemical data and macroinvertebrate counts we've done as baseline on these streams, so we have a complete snapshot of the current state of select streams.

We're happy to partner with conservation districts and watershed groups to accomplish this work. This service is available to groups at a modest rate. Please contact me for details: mreckner@kcstreamteam.org or 814-444-2669.

Stream Team Fundraiser

By Melissa Reckner



As many of you know, general operating funds are the hardest to secure, but are the most necessary to

continue basic organizational function. In light of this, the Stream Team is holding a Thirty-One Bingo Basket Party on Sunday, October 26 at the Elks Lodge, 60 East Campbell Street in Blairsville.

Thirty-one is a company that has consultants who sell high quality products including thermal bags, beach totes, purses, wallets, closet organizational items, and more!

Former Stream Team AmeriCorps, Katie (Tantlinger) Moser is a 31 Consultant and will be helping me coordinate this event. She is putting together 20 baskets valued at \$115 each of 31 products. Your admission ticket, which is \$20, will allow you to play 20 Bingo games. The winner of the Bingo wins the basket!

Other baskets will be available as separate, unique games, and we'll likely have tickets available for a lottery tree, 50/50, and a Chinese auction. Prizes make great Christmas gifts! Undoubtedly, this event is geared more for women, so if the ladies in your life would like to attend, please contact me for tickets at 814-444-2669.

Doors will open at 1 PM, with games starting at 2 PM. Light refreshments will be provided. The event should wrap up by 5 PM or a little after, so you'll only miss the first quarter of the Steeler game! Thanks so much for your anticipated support!



Two enthusiastic participants, Malcolm Crittenden (*left*) and Larry Hutchinson, SCRIP board member, take advantage of the beautiful weather to practice their paddling skills on the Que reservoir.

Photos by Len Lichvar



PA Fish and Boat Commission Holds Paddle the Que Event on August 20

The Pennsylvania Fish and Boat Commission (PFBC) held a paddling skills educational program at the Family Recreation Area at the Quemahoning Reservoir on August 20. The purpose of the event was to give new or inexperienced kayakers or canoeists information on paddling skills, PFDs (personal flotation devices), and other boating information.

The participants then had 30-45 minutes to put their new information and skills to practice on the water. In addition to PFBC staff, the attendees were assisted by members of SCRIP and the Benscreek Canoe Club. Greg Christofes, from Kayak Anglers of Western PA, provided information on kayak fishing and had a kayak used for this purpose on display.

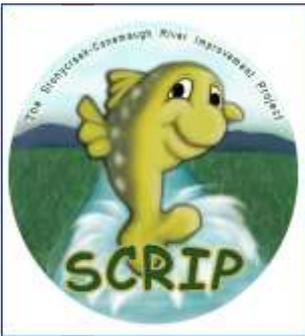
PFBC staff member, Jim Delesandro, instructs the group on proper use and fit of PFDs.



Miranda Smith, PFBC Education Specialist, shares paddling techniques while Kristi Niekamp, PFBC staff (*far right*) and SCRIP board members, Jim Eckenrode and Melissa Reckner (*background*) look on. Joe Gorden (*not pictured*) also assisted.

Richard Bloom of the Benscreek Canoe Club assists a pair of participants as they navigate their tandem kayak.





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Make your check payable to SCRIP, or for a tax-deductible contribution, make the check to Southern Alleghenies Conservancy/ SCRIP.

* If you are not sure of your membership status contact SCRIP's secretary at mreckner@kcstreamteam.org or 814-444-2669.

Send donations to:
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