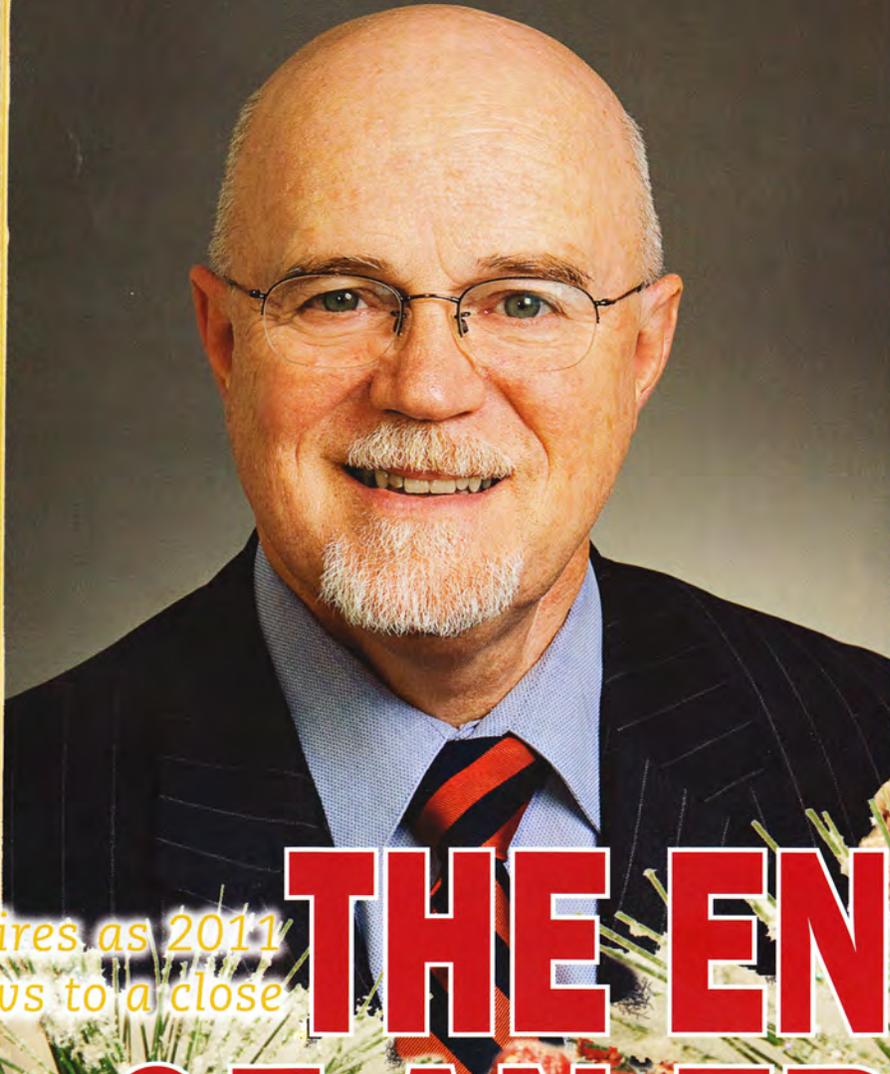


# pennsylvania **Borough** News

The Official Magazine of the Pennsylvania State Association of Boroughs



*EVP retires as 2011  
draws to a close*

## **THE END OF AN ERA**

# The Dollars and Sense

## *Cleaning up abandoned mine drainage*

By **Rachel Kester**, Eastern Abandoned Mine Program, Trout Unlimited

**C**oal mining has been a way of life in Pennsylvania for well over a century. In fact, many small towns throughout the state owe their very existence to the former coal mines around which they were built. Coal is arguably the most economically important industry in Pennsylvania's history, having helped fuel the industrial revolution and both World Wars. Coal has also been used to heat homes, power locomotives, generate electricity and drive the state's steel industry. Stop in at a local diner in the bituminous coal fields of western Pennsylvania or the anthracite region of eastern Pennsylvania and you are sure to stumble upon more than one person whose father or grandfather worked in a coal mine. If you happen to ask, they will undoubtedly share a few stories with you about what mining has meant to their families and the rich heritage that surrounds the industry.

Let there be no doubt, coal has had an important place in our state and national history and economy; however, it has also left us with a legacy of polluted water

and damaged landscapes. Prior to the passage of the federal Surface Mining Control and Reclamation Act of 1977, there were no laws requiring the reclamation of mining sites. Therefore, prior to this time, it was common practice for companies to abandon their mining operations once the extraction of coal was complete. This led to tens of thousands of acres of mine scarred lands and over 5,000 miles of polluted waterways in Pennsylvania. In fact, abandoned mine drainage (AMD) is the number one source of impairment to Pennsylvania's waterways today.

AMD is formed when pyrite, a mineral surrounding the coal, is exposed by mining to water and air. This forms an acid which leaches metals such as aluminum, iron, and manganese from the surrounding rock layers. The acidic and metal-laden water then flows to nearby streams where it kills aquatic life and coats the stream bottom with that familiar reddish-orange hue of a "sulfur creek." Fortunately, we have the technology today to build treatment systems that will remove the pollutants from the mine drainage before it reaches our local streams.

We all know that what is bad for the environment is bad for us and that water pollution should be cleaned up, but isn't environmental cleanup costly? How can local communities afford to cleanup AMD, and are the benefits worth the price tag? Recently, Trout Unlimited set out to answer some of these questions when they unveiled the results of an economic benefits analysis for AMD cleanup in the West Branch Susquehanna River basin (view the report at <http://www.trout.org/conservation/abandoned-mines/eastern-us/westb-branch-susquehanna>). The findings of the study might surprise you.

For instance, the study showed that although AMD remediation is costly (with a price tag of at least \$110 million for the West Branch Susquehanna watershed alone) investing in AMD cleanup projects actually strengthen the local economy. For every \$1 invested in AMD cleanup, \$1.36 - \$1.87 could be generated locally in the West Branch Susquehanna watershed; this could amount to over \$205 million added to the local economy. This is because local firms will be hired for everything from engineering the

mine drainage treatment systems to operating construction equipment and trucking in building materials. This money continues to cycle through the community as workers use their paychecks to purchase groceries, send their children to daycare, buy a home, and shop at local businesses. AMD remediation also generates additional tax revenue, providing a significant boost to county and local governments, as each business or worker that receives payment for remediation work will pay taxes as the investment dollar circulates through the local economy.

Cleaning up AMD will benefit landowners by increasing property values. Based on residential property sales from 2002 to 2006 in Clearfield County, it was determined that the owners of 2,700 parcels within 200 feet of AMD-impacted streams are losing \$2,500 per acre, or more than \$4 million in total. Multiply this by all of the AMD-impacted counties in the state and that amounts to some serious loss of money.

Drinking water supply options will also increase upon cleanup of AMD. In the West Branch Susquehanna watershed, government agencies have spent \$11 million to date to correct water supply problems caused by AMD. Clean streams will provide more plentiful and cheaper options for public and private water supplies throughout the state.

Restoring local streams will also lead to an increase in recreation and tourism. It is estimated that in the West Branch alone, \$22.3 million dollars in sport fishing revenue is lost annually due to AMD. The lost recreational value increases significantly when you consider other activities such as boating, swimming, hiking, and hunting that are impacted as a result of AMD pollution. Increases in recreational opportunities will, in turn, increase



**SULFUR CREEK** White Oak deep mine discharge near Madera, PA

tourism, further boosting the local economy.

Finally, aside from the economic benefits of AMD cleanup, there are also the benefits of a healthy environment and a higher quality of life for local citizens. All of these combined make the case for AMD remediation, but what can your local community do to get started?

First, you can learn more about the problem by visiting Trout Unlimited's Eastern Abandoned Mine Program page at [www.tu.org/conservation/abandoned-mines/eastern-us](http://www.tu.org/conservation/abandoned-mines/eastern-us). If you suspect your community could benefit from AMD remediation or know of a specific AMD problem that needs addressed, apply for AMD technical assistance from Trout Unlimited. All local municipalities throughout Pennsylvania are eligible for this *free* technical assistance program. To find out more about this program or to download an application, visit the Eastern Abandoned Mine Program page mentioned above and click on "Free AMD Technical

Assistance in PA" under Additional Resources at the bottom of the page. You can also contact Amy Wolfe at [awolfe@tu.org](mailto:awolfe@tu.org) or 570-748-4901. Municipalities within the West Branch Susquehanna River watershed are also encouraged to join the West Branch Susquehanna Restoration Coalition. Learn more at [www.wbsrc.org](http://www.wbsrc.org).

#### About the Organization

Trout Unlimited is the nation's largest coldwater conservation organization, with 140,000 members dedicated to conserving, protecting, and restoring North America's trout and salmon fisheries and their watersheds. Rachel Kester is the Project Coordinator for Trout Unlimited's Eastern Abandoned Mine Program. When she is not working to restore watersheds damaged by abandoned coal mine drainage, Rachel enjoys hiking and spending time outdoors with her husband, son and two dogs. She can be reached at [rkester@tu.org](mailto:rkester@tu.org) or by calling 570-748-4901. **(B)**