

My name is John Dawes, Executive Director of the Foundation for Pennsylvania Watersheds. Since our inception in 1994, we have invested in more than 1,500 projects and provided \$14m in grants that have leveraged \$180m in total project costs. Our mission is to leverage local, state, and federal funds to protect the best of the best and restore the worst of the worst water problems. We use private funding to facilitate the use of Abandoned Mine Lands (AML) fund, from the 1977 Surface Mining Control & Reclamation Act (SMCRA), from the 2016 AMLER Program—Abandoned Mine Lands Economic Revitalization, and now the recently passed Infrastructure Bill—referred to as BIL for Bipartisan Infrastructure Legislation and also known as Infrastructure Investment and Jobs Act. I cannot speak for other states, but in the case of Pennsylvania this total comes to approximately \$297m per year over each of the next 15 years. This work cannot be accomplished solely “in house”, by our well-functioning, Bureau of Abandoned Mineland Reclamation, known as BAMR. They administer the Abandoned Mine Land (AML) cleanup on an ongoing basis, from problems reported by the public, local governments, and other agencies, such as the Department of Conservation and Natural Resources (DCNR).

In Pennsylvania, we have a well-structured system of watershed associations, Conservation Districts, and municipalities (Good Samaritans) that complete restoration work. Our role at the Foundation is to provide small grants to these Good Samaritans to perform watershed assessments that document legacy mining impacts. This work includes conducting water quality sampling, documenting discharge flow measurements, calculating metals and acidity loadings, and documenting prior water quality investments within the watershed. The compiled information is submitted to BAMR for consideration and approval of a Qualified Hydrologic Unit (QHU), which is necessary to access federal funding from the Office of Surface Mining Reclamation and Enforcement (OSMRE).

Pennsylvania’s Good Samaritans have constructed 283 abandoned mine drainage (AMD) passive treatment systems (PTS) using local, state, federal, philanthropic and their own funds (BAMR constructed 50 more and operates several active AMD treatment plants). SMCRA allows a state to set aside up to 30 percent of its annual AML grant to fund future

operation, maintenance, and rehabilitation (OM&R), but does not allow OM&R funding for Good Samaritan built systems. Despite the existing set aside provision, some states have inadequate funding levels to ensure future OM&R.

The STREAM Act—Safeguarding Treatment for the Restoration of Ecosystems from Abandoned Mines, is necessary to protect the nation’s existing AMD treatment systems. After SMCRA was amended in 1992, some states built AMD treatment systems and were authorized to set aside up to 30 percent of their annual AML grants. However, SMCRA generated AML grants were limited in size and forced states with AMD to make difficult choices between addressing their huge AML health and safety inventory, polluted water supplies and AML emergencies, and AMD treatment as well as set aside. States have been responsible—balancing public perception, treatment needs, and be cognizant of future treatment expense liabilities. Consequently, few states have elected to take their full 30 percent set aside. According to the Interstate Mining Compact Commission (IMCC), states have [set aside 8 percent](#) of their total AML grants. For most AMD states, it is fiscally impossible to set aside enough money to safeguard their existing treatment systems. The STREAM Act is needed to preserve this clean water infrastructure and the hundreds of miles of restored or improved streams.

Mine drainage treatment systems are classified as either active or passive. Pennsylvania has 333 systems, we refer to “as built, water infrastructure”. In the case of passive AMD treatment, think of a natural process where ponds comprised of limestone and mushroom compost raise the water’s pH, allows the metals to drop out of solution, and pipes and valving allows the ponds to be flushed of the accumulated metals which flow into settling ponds before traveling through a wetland for final water quality improvement. Active systems look much like municipal sewage treatment facilities, require mechanical water treatment, use treatment chemicals, electricity, and are a mechanized process. Most recently, BAMR awarded the bid for construction of the Blacklick active treatment system. That bid was \$26.5m. The water leaving both passive and active systems has a water chemistry that supports aquatic life and is crucial to restoring our biologically dead streams caused by pre-law mining. Though passive systems don’t require

pumps, electric and alkaline treatment chemicals, they still need monitored and maintained. By providing a set aside provision in BIL, The STREAM Act will ensure that this water infrastructure remains viable and prior investments are safeguarded.

As we work to improve water quality, we create jobs. The Ohio River Valley Institute's ["Coal Mine Cleanup in the Bipartisan Infrastructure Law, Explained"](#), published February 2022, estimates BIL will create 4,000 direct jobs per year for 15 years. The report further references the potential for an additional 6,000 indirect jobs. This is proof that RECLAMATION EQUALS JOBS.

There is no better example I can think of than Ehrenfeld, which won the [2020 National OSMRE Reclamation of the Year Award](#), to illustrate reclamation equaling jobs. In this small, Cambria County, Pennsylvania town, the community suffered the impacts of not only lost coal mining jobs, but also lost tax revenues and decreased property values. A coal refuse pile loomed over the town casting a shadow over more than a dozen houses within 100 feet of the toe of slope and one that was merely five feet away. When it rained the fine sediment washing off the pile clogged stormwater infrastructure and localized flooding occurred. When it was dry, dust clouds settled over citizens' cars and houses, some days making it hard to enjoy outdoor spaces. In February 2016 BAMR awarded \$35m to Rosebud Mining for remediation of this 3.4m cubic yard pile (approximately 3.2m tons). That project recalled 40 furloughed miners to complete this reclamation project. Based on information contained in the [2010 Forest Hills Regional Multi-Municipal Comprehensive Plan](#), the pile occupied 45 percent of Ehrenfeld's developable land. Lastly, this project completed a critical part of the 9-11 Memorial Trail, which will connect the Pentagon, Flight 93, and the Twin Towers. Reclamation revitalizes communities, creates opportunities by mitigating hazardous lands and water, and in some cases leads to new buildings/industries that help increase tax revenues and provide jobs in financially distressed areas.

A goal is to create 40 to 45 full-time OM&R jobs nationally, 12 in Pennsylvania, through a system of routine inspections of operating AMD treatment systems. These would be long-term jobs with family sustaining wages and benefits. This calculation was based on the Foundation funded

Kiski-Conemaugh Basin Treatment system O&M Assessment Report within Cambria County, Pennsylvania.

This 2017 study evaluated the performance of 22 passive treatment systems within the Kiski-Conemaugh. The overall cost was \$85,000 (\$60,000 cash and \$25,000 in-kind). The study documented performance and indicated suggested maintenance. General recommendations (found on pages 204-205) included:

- Treatment systems should be fully funded in accordance with professional/qualified engineering designs. Reducing grant funds often results in subpar treatment performance.
- Monitoring and operation and maintenance (O&M) should be conducted consistently will dedicated staff/volunteers familiar with the system's baseline performance and operation.
- Monthly monitoring and chemical analysis are necessary.
- Dedicated funding for these activities would result in improved water treatment and increase system longevity.

While Pennsylvania has more miles of streams polluted by AMD and more AMD passive treatment systems than any other state, thirteen other states have AMD passive treatment systems. Alabama, Arkansas, Iowa, Illinois, Indiana, Kansas, Maryland, Missouri, Ohio, Oklahoma, Tennessee, Virginia, and West Virginia. All these states would benefit from passage of the STREAM Act. Long-term OM&R jobs would be created in all these states. These permanent jobs would be in communities where coal is no longer mined.

AML and streams polluted with AMD adversely affect the quality of life of the people who live in former coal mining communities. Unreclaimed mine land is not productive. These waste lands and polluted water prohibit economic development. Neither businesses nor people move to an area that does not have clean water. A clean environment and clean water are important for recreation. Former OSMRE Director Joe Pizarchik has said "Nobody goes red water rafting; they go white water rafting." Clean water is essential for both business and people to thrive. Communities with AML and AMD have been disadvantaged since before passage of SMCRA in 1977, some for 100 years or more. The STREAM

Act will help address the environmental and economic constraints imposed on them for the past several decades by AMD polluted waters.

AMD also costs local communities revenue that would be available if the streams were restored to be fishable and swimmable. In a [presentation](#) to the Statewide Water Resources Committee on July 21, 2021, the Pennsylvania Fish and Boat Commission, an independent state agency, found that the 5,559 miles of Pennsylvania streams impaired by AMD cost local community's angler generated revenue of \$24 million—\$35m per year. This angler generated revenue would occur if these streams were restored. Other water recreation, such as boating, would generate even more revenue.