Eastern PA Coalition for Abandoned Mine Reclamation

Robert E. Hughes, *Executive Director*
101 South Main Street
Ashley, PA 18706
Phone: (570) 371-3523
E-mail: rhughes@epcamr.org
Website: www.epcamr.org

March 15, 2021

RE: *Legislative Hearing on HR 1734, HR 1733, HR 1146- "Restoring Abandoned Mine Lands, Local Economies, and the Environment" before the Subcommittee on Energy and Mineral Resources*

Chairman Raul M. Grijalva of Arizona
Ranking Member Bruce Westerman of Arkansas
Representative Alan S. Lowenthal-Chairman of the Subcommittee on Energy and Mineral Resources
Members of the US House of Representatives Committee on Natural Resources

Good morning, my name is Robert E. Hughes, Executive Director, of the Eastern Pennsylvania Coalition for Abandoned Mine Reclamation (EPCAMR). I am representing the interests of community groups, Conservation Districts, and coalfield communities from Northeastern and Northcentral PA's Anthracite and Bituminous Coal Fields that cover a 16 County coverage area in Northern Appalachia.

On behalf of EPCAMR, I would like to thank you all for allowing me, a native son of the City of Wilkes-Barre, located in the heart of the Northern Anthracite Coalfields' Wyoming Valley, to speak before the Committee. It is an honor and a privilege to be a grassroots representative, coalition and consensus builder, and community organizer from the Hard Coal region and "Valley with a Heart" that has suffered tremendously from past mining practices and continued mine water pollution. The entire area is still recovering today and making positive progress towards improving the quality of life for our families that have had to endure plenty of hardships.

I have spent my entire professional career, since 1995, in the field of abandoned mine reclamation, environmental outreach and education of our youth, residents, colleges and universities, regional non-profits, and municipal leaders, building strong, diverse public-private partnerships through our Coalition to address mine-scarred landscapes and polluted waterways. I am very proud and humbled to have the opportunity to present before the Subcommittee some of my thoughts at this legislative hearing this morning.

EPCAMR

EPCAMR is a regional, environmental educational, scientific, technical and non-profit, organization whose mission is to encourage the reclamation and redevelopment of land and remediation of polluted mine water affected by past mining practices. This includes reducing hazards to health and safety, elimination of soil erosion, improvement of water quality, and returning land to productive use for economic development.

EPCAMR has more than 26 years' experience in working on abandoned mine reclamation issues in our communities at the local level. We are a small shop of **7** passionate and innovative Staff, and an AmeriCorps VISTA volunteer, supported by the Stewards Individual Placement Program. Our operations are completely funded by grants, foundation support, charitable trusts, corporate and individual donations. We have a small membership base, a Board of **32** regional community leaders that guide our policies, direction, purpose, and

mission, and hundreds of several hundred volunteers who are on call for community service and environmental action projects throughout the region as they arise. We serve an area with a population of nearly **1** million people throughout the coalfields of Northern Appalachia. We have **114** underserved, poverty-stricken school districts in our service area. Throughout Appalachia, an estimated **5.5** million people and at least **2.7** million people in PA live within **1** mile of an abandoned mine land.[1]

Northern Appalachian AML Legacy Impacts from Past Mining Practices

PA is an integral part and geographic location within northern Appalachia. Northern Appalachia, including the Bituminous Coal Region that stretches from the far southwestern corner of PA to the Marcellus Shale region of northcentral PA. It contains the largest Anthracite deposits in **4** major coalfields that encompass a **484** sq. mile area. Since coal was first discovered in the Anthracite Region over 250 years ago, approximately **18** billion tons were extracted from the ground. Our coal regions are scattered with health and safety hazards, environmental degradation, polluted mine water, and poverty-stricken environmental justice communities. Significant damage to our region is often not clearly visible until you fly over the area and see the unreclaimed stripping pits, polluted stripping pits full of mine water, and mountains of waste culm and overburden that dot the landscape, sometimes separating neighborhoods from one another. However, all of our communities are in need of more diversified economic, social, environmental, recreational, workforce development, and job opportunities.

Mine fires, abandoned mine drainage (AMD), mine subsidence, hazardous abandoned vertical shafts, air shafts, and slope openings, flooded mine pools, contaminated water supplies, water-filled stripping pits, contaminated soils, culm banks and coal refuse mountains--not just piles, vertical high walls, waste coal silt basins, and abandoned colliery grounds and foundations, are some examples of the legacy of past mining practices that have hindered economic development opportunities.

Our culm banks or gob piles are often mistaken by those who pass through the region as mountains because they have monocultures of birch or poplar trees growing on them in the acidic culm and don't really comprehend the scale of the problem that we face. The projected costs of reclamation, abatement, and remediation are substantial. Land reclamation is one cost. Trying to make a determination of what it would cost to treat the polluted mine water from abandoned mines is another. Many of our smaller municipal communities lack capital financial resources, the ability to leverage multiple sources of funding, organizational capacity, and infrastructure investment opportunities. Simply put, we are looking for better opportunities, living wage jobs, workforce development and training opportunities, and reclamation funding to significantly improve our quality of life and our surrounding environment to reclaim abandoned mine lands and restore our watersheds polluted by AMD.

I have lived in the center of the Northern Coalfields my entire life among the shadows of all of these abandoned mine features and problem areas, mine fires, and polluted streams impacted by AMD. I've seen it long enough and am pretty furious that over 2.5 decades later, my 3 children and 2 grandchildren still have to live with it as they continue to grow up.

EPCAMR and many of my colleagues, have dedicated our professional lives to making a difference focusing deeply on reclamation, remediation, education, community cleanups, and watershed restoration projects. We explore every opportunity for creative projects, ideas, collaborations, public-private partnerships, investment opportunities, and environmental action. Hundreds of community volunteers and leaders work alongside of us each year. We are determined not to let the deleterious impacts of abandoned mine-scarred lands and water pollution continue to degrade our quality of life. We've come up with innovative solutions from within our communities, yet we are at an extreme disadvantage in not having access to the resources and financial means to fully implement our ideas with enthusiasm and confidence. Community non-profits, watershed

[1] C.M. Mayne, OSMRE/AmeriCorps, May 2016 Report, Sources: US Census Bureau (2010 Census); OSMRE e-AMLIS

associations, and Conservation Districts are very capable of administering grants to assist with the expeditious flow of funding to the local communities that would leverage private interests in utilizing some of the sites for economic development and water treatment.

We don't deserve to have to wait any longer for clean streams, green spaces, vibrant and diversified regional economies, and communities in which our children can safely recreate, live, work, and play. We want to continue to revitalize and revive our communities so that people want to stay, make an honest living, have good paying jobs, a sense of place and pride, and to mostly importantly, raise their families.

We have long been a part of the PA AML Campaign and involved in an even larger National Campaign that advocates for bills that support abandoned mine land reclamation, the cleanup of AMD, the protection of our community volunteers, economic development on former abandoned mine lands, and other issues.

Support for Reauthorization in Pennsylvania and around the Country

The PA Council of Trout Unlimited and **49** PA Council of Trout Unlimited Chapters support Reauthorization. I'm extremely proud of that fact because there are over **15,000** members in PA Trout Unlimited, where I currently also serve as the Eastern Vice President. Recently, the Association of Fish & Wildlife Agencies[2] also informed us that they support Reauthorization. **24** Non-Profits, and **19** County Conservation Districts have all signed on to support Reauthorization. In addition, **19** PA County Governments have signed Resolutions, **5** Municipalities, the Susquehanna River Basin Commission, the PA General Assembly, and PA Governor Wolf, have written letters in support of Reauthorization. This is at a minimum, **128** different types of diverse interests across the coalfields of Appalachia that support Reauthorization.

Many other State organizations are also in support of Reauthorization, nationally. We have verified support from **8** organizations from West Virginia, **2** from Alabama, **2** from Ohio, and **1** from Maryland, New York, and Illinois. National partners in Central Appalachia informed us that there are over **20** organizations in support of Reauthorization. I am sure there are many others that I am not aware of outside of Pennsylvania.

National Trout Unlimited, for example, has a strong presence in Colorado provided us with information that demonstrates just how critical this funding is to other States in the Western US beyond just the Appalachian States. CO's Inactive Mine Reclamation Program (IMRP), run by CO's Division of Reclamation Mining and Safety (DRMS), has shown that in 2019, **$1,322,055** in SMCRA funds were utilized to address abandoned coal mine-related reclamation projects (suppression and mapping of coal mine fires [**>30**], subsidence, emergency) and Priority 1 Physical Hazards (hazardous openings, shafts, adits, stopes, etc.). These SMCRA funds were part of a total project budget (**23** 2019 projects) of **$2,816,305** that successfully safeguarded **404** openings and reclaimed **42** acres of disturbed land. The writing on the wall is that SMCRA funding is essential across the US to address these health and safety hazards as well as our mine water pollution problems.

Below are some examples of the types of projects SMCRA has funded in Colorado are common to many of the States across the country.

- Coal Reclamation and Mine fire abatement
    - Suppression and mapping coal mine fires
    - Subsidence abatement
    - Emergency projects
    - Coal waste/refuse reclamation and water quality improvement
    - Shaft and opening closures
- Priority 1 Physical Closures
    - Mitigation and safeguarding of hazardous openings

[2] Statement from the Association of Fish and Wildlife Agencies Supporting the Introduction of the Abandoned Mine Land Reauthorization Act-March 10, 2021)

Support Letters from PA Businesses and Industry in Support of Reauthorization

Letters of support were provided by local businesses in PA. EPCAMR submits to you with my written testimony, for the record, **5** of those letters of support for the Reauthorization of the collection of the fees to continue to support the AML Trust Fund. These letters of support emphasize job creation, economic investment, the importance of environmental cleanup, the protection of home ownership and businesses from mine subsidence, and public health and safety. The diversity of the types of entities that were able to provide me with a letter showing each of their support include, one from Frank M. Howard, III, Treasurer of Howard Concrete Pumping Company, Inc.[3], located in Cuddy, PA. A second support letter from R.J. Shaffer, General Manager of Scrubgrass Generating Company L.P.[4], located in Kennerdell, PA. A third support letter is from Timothy P. Danehy, QEP and President of BioMost, Inc., Mining and Reclamation Services[5]. A fourth letter of support comes from David L. Holman, Airport Manager of Zelienople Airport Authority[6], located in Zelienople, PA. Finally, a fifth letter of support comes from Jaret Gibbons, Executive Director of the Co-Generation Facility Trade Association, known as ARIPPA[7].

I would encourage you all to look at some of the work that is going on across PA through short video clips and interviews that were completed by EPCAMR and the Western Pennsylvania Coalition for Abandoned Mine Reclamation, supported by the Foundation for PA Watersheds. They will present you with a bigger picture of the size and scale of the enormity that we face in the State. They will highlight AMD treatment systems, the importance of jobs to local construction companies, illegal dumping on abandoned mine lands, coordination of local environmental community service projects within our coalfield communities, the benefits of the Co-Generation plants through ARIPPA, local community volunteers with EPCAMR on the need for stream channel restoration funds, land reclamation projects, and interview questions given by former US Department of Interior's Office of Surface Mining Director, Joe Pizarchik, who held his position from November 6, 2009 through January 20, 2017. Mr. Pizarchik also has some commentary in a few of the videos.

EPCAMR YouTube (6 videos)
WPCAMR YouTube (5 videos)

[3] Howard Concrete Pumping Company Inc. Letter of Support for the Reauthorization of the Collection Fees Supporting the Abandoned Mine Land Trust Fund; website link
[4] Scrubgrass Generating Company L.P. Letter of Support for the Reauthorization of the Collection Fees Supporting the Abandoned Mine Land Trust Fund; website link
[5] BioMost, Inc., Mining and Reclamation Services Letter of Support for the Reauthorization of the Collection Fees Supporting the Abandoned Mine Land Trust Fund; website link
[6] Zelienople Airport Authority Letter of Support for the Reauthorization of the Collection Fees Supporting the Abandoned Mine Land Trust Fund
[7] ARIPPA Letter of Support for the Reauthorization of the Collection Fees Supporting the Abandoned Mine Land Trust Fund; website link

Support for the RECLAIM Act-HR 1733

EPCAMR is also in support of **HR 1733**, the bipartisan ***Revitalizing the Economy of Coal Communities by Leveraging Local Activities and Investing More (RECLAIM) Act of 2021*** that has continued broad support and had passed out of Committee in the 115th (H.R. 1731) and 116th (H.R. 2156) Congress. Accelerating the release of more than **$1 billion** from the existing balance of the AML Fund to assist communities that have traditionally relied on the coal industry for employment or have recently experienced significant coal job losses will allow for more opportunities to develop and reclaim sites that might otherwise continue to sit idle, abandoned, and blighted. Otherwise, there may be very little hope of potential revenue generated from the minimally assessed value on waste culm piles. Our smaller communities and municipalities just don't have the resources to bring private investment opportunities and economic developers to the table to reclaim these lands. Without reclamation or water treatment and remediation, these lands and AMD discharges cannot support the job-creating economic development projects that our community leaders could otherwise be pursuing, and the communities would remain at risk and the potential for new jobs and economic growth will be left unrealized.

By investing in these types of projects in **20** states through the RECLAIM Act, these bipartisan bills will strengthen our infrastructure, create thousands of jobs and spark economic development across Appalachia. Restoring and reclaiming these sites can turn them into economic hubs while also putting thousands of people to work fixing our infrastructure by repairing damaged land and waterways.

The economic and public health crisis caused by COVID-19 has laid bare the long-standing issues we face in Appalachia, especially. It has showed that there is a clear and urgent need for investment in coalfield communities. The anxiety that families feel as they have lost their jobs, while their health is at risk, is not unique to the pandemic. These pressures have been felt for decades in coalfield communities and they have only been exacerbated during the last year as more mines, Co-Generation plants, and coal-fired plants closed during the dramatic downturn of the coal economy.

My community and all the coalfield communities deserve better. They were the ones that powered our Country for generations. Reauthorizing the Abandoned Mine Land Trust Fund, passing the RECLAIM Act, and support for **HR 1146** will be vital first steps and opportunities to start ensuring that we are part of the economic recovery and emerge from this pandemic stronger and more resilient.

This legislation invests in solutions crafted in, and supported by, our communities. For years, residents and local elected officials have sent letters and signed petitions by the thousands, passed dozens of supportive resolutions, and made countless trips to Washington to urge Congress to pass these job creation measures.

The RECLAIM Act:

- Accelerates the release of $1 billion from the unappropriated balance of the AML Fund over 5 years, from FY2021-FY2025
- Ensures that funds are only used for the reclamation of priority 1, 2 and 3 AML Sites
- Requires that sites reclaimed under the bill are used for future economic or community development (though States and tribes that are unable to meet this requirement on a project may request a waiver)
- Ensures that States and Indian tribes collaborate with local stakeholders on RECLAIM-funded projects, which lays a foundation for future locally driven economic development efforts

AML Reclamation and Off-site Job Generation Report

The Foundation for PA Watersheds AML Reclamation and Off-site Job Generation Report[8] from 2017 provides some insight to the jobs multiplier that occurs when reclamation projects occur that are not often counted. These are just the jobs created in our small non-profit office. The jobs created through abandoned mine land reclamation and AMD remediation are incredibly diverse and include the construction industry, equipment and materials, suppliers, academia and research institutions, engineering, land surveying, legal consultants, recreation outfitters, and the community businesses such as restaurants and gas stations that support it all. For those not directly involved in reclamation, it may be easy to view the process as strictly environmental. In actuality, many additional sectors, project services and categories are involved in abandoned mine reclamation and AMD remediation projects, that are off-site. A PA Department of Environmental Protection Bureau of Abandoned Mine Reclamation (DEP BAMR) Contractors' List of vendors expressing interest in reclamation or associated with reclamation totaled more than **600** companies.

Trout Unlimited's Eastern Abandoned Mine Program also created a report[9] in 2016 prepared by Downstream Strategies and West Virginia University on the retention of jobs regarding operation and maintenance at AMD passive treatment systems across PA.

Job Creation Opportunities

There are job creation and workforce development opportunities in the coalfields that are directly related to AML and AMD remediation. EPCAMR has many examples of job opportunities in place with our existing Staff. They include: Field Technicians who assess and monitor rivers and streams and sample AMD; Water Pollution Biologists who sample and survey rivers and streams for aquatic ecosystem health and fishery value; Visual Habitat Assessors of rivers and stream corridors for determining impacts to land prior to designing and implementing a watershed restoration plan; Culvert assessors for aquatic organism passage and stream restoration on abandoned mine lands; Technical Assistance Providers to local governments and municipalities to navigate for municipal stormwater under unfunded stormwater permits that lack resources; Environmental Educators; Urban Outreach Coordinators to build capacity from within the coalfield communities; 3D Surface and Underground Mine Mapping Modelers and Developers; Watershed GIS Outreach Technicians and Specialists that can catalog, scan, geo-reference, digitize, map, and interpret surface and underground mine; Community Development Organizers and Grant Researchers to seek additional funds and funders to pull viable projects together within the coalfield communities; Program Managers to oversee reclamation, dam removal, natural stream channel design, and habitat restoration projects; and Green Infrastructure Planners for aiding municipal officials on the best management practices to reduce flooding, control runoff, and soil erosion from abandoned mine lands.

Private Partners Leverage AML Funds & Accelerate Reclamation

EPCAMR believes that there is a strong need to coordinate with county level economic development and redevelopment authorities, Utility companies, Alternative Energy companies, Industrial water users, Chambers of Commerce, Industrial Development Authorities, Small Business Development Centers, and private sector investors to leverage State and Federal abandoned mine land funds under SMCRA. These partnerships can lead to a reduction in the overall project costs coming from one source of funding and can spur economic development, re-use and reclamation of the abandoned mine lands, the flows from the underground mine pool complexes, and the AMD surrounding these sources of water pollution. To accelerate the reclamation of these abandoned mine lands, we work hard to introduce ourselves to private developers and landowners and these entities to share with them funding opportunities that are available to make the development of the lands more attractive, cost-effective, and economically feasible.

[8] Foundation for PA Watersheds AML Reclamation and Off-site Job Generation Report, prepared by Diehl, B. (2017)

[9] Abandoned Mine Drainage Treatment Systems Jobs Analysis: PA Abandoned Mine Lands Report, prepared by Downstream Strategies, LLC and West Virginia University for Trout Unlimited's Eastern Abandoned Mine Program (2016)

Multiple Sectors Identified as Areas of Economic Improvement

EPCAMR sees the following sectors as areas of economic improvement on abandoned mine lands: agriculture, alternative energy, recreational tourism, community recreational use, solar panel farms, hemp farms, beekeeping, silviculture, greenhouses, electrical generation from wind farms, hydroelectric potential, geothermal energy, water supply, resource recovery of metals, rare earth elements recovery, consumptive use, and low-flow augmentation. EPCAMR encourages private, public, and entrepreneurial partnerships to look closely into these business sectors that have the potential to lead to a complete diversification of the local economies historically built around coal.

The Need for Reclamation is Bipartisan When It Comes to the Unreclaimed AML Inventory

For example, PA's 8th Congressional District, represented by the Honorable Matt Cartwright, is in the heart of the Northern Anthracite Coalfields of Luzerne County. It is plagued by **322** unreclaimed sites, **44** reclaimed sites, **1** active reclamation project, **1,615** unreclaimed features (63.9%), **913** reclaimed features (36.1%), for a total of **14,267** unreclaimed acres, **6,414** reclaimed acres, and **192** miles of AMD-impacted streams according to EPCAMR's PA Congressional District AML Inventory GIS Map[10]. Some of the most notable unreclaimed AML features of PA's 8th Congressional District include Old Forge Borehole and the Jeddo Mine Tunnel, (2 of the largest discharges in PA by flow volume), Duryea Breach, Plainsville Borehole, Solomon Boreholes, Askam AMD.

PA's 15th Congressional District, represented by the Honorable Glenn Thompson, is in central and western PA's Bituminous Coalfields. It is plagued by **2,649** unreclaimed sites, **75** reclaimed sites, **5** active reclamation projects, **13,673** unreclaimed features (**83.8%**), **2,637** reclaimed features (**16.2%**), for a total of **91,387** unreclaimed acres, **17,568** reclaimed acres, and **2,706** miles of AMD-impacted streams according to EPCAMR's PA Congressional District AML Inventory GIS Map[11]

Both Congressmen Matt Cartwright and GT Thompson, through their bipartisan leadership have helped to elevate the vital importance of these bills before the Committee, Congress, and the Senate. I know they have seen witnessed, first-hand, the effects and impacts that these environmental scars have caused within their Congressional Districts. We had just spoke about these same issues a few weeks ago during a call with the Choose Clean Water Coalition, that represents over **250** organizations, from within the Chesapeake Bay Watershed, one of National Treasures, that also has continued to feel the effects of pollution from abandoned mines in the headwaters of the Chesapeake Bay coming from Pennsylvania. A *Pennsylvania Clean Water Legislative Briefing Book 2021-2022*[12] was provided to legislators throughout the Bay Watershed as a guide to protect our waterways for the future, with abandoned mine reclamation and AMD highlighted on several pages.

Chesapeake Bay Watershed Impacts

PA is effectively riddled with abandoned mine lands and AMD sites that need to be cleaned up with continued bipartisan support since these landscapes and waterways show no concern for Congressional or municipal boundaries. In Northeastern PA, where the majority of the reclamation and AMD remediation needs to occur, we have to address the Chesapeake Bay restoration goal deficiencies, it is even more dire to work with PA partners at all levels to reclaim **14,562** acres of mining impacted areas by 2025, under the Chesapeake Bay Watershed Implementation Plan. There are an estimated **1,900** AML Problem Areas, **10,400** unreclaimed features totaling **73,080** acres and **2,290** reclaimed AML features totaling **13,140** acres. An estimated **1,305** stream miles impacted by AMD are in the Chesapeake Bay Watershed. This creates a lost recreational value

[10] EPCAMR's PA Reclaimed Abandoned Mine Land Inventory System (RAMLIS) 2019 8th Congressional District Map
[11] EPCAMR's PA Reclaimed Abandoned Mine Land Inventory System (RAMLIS) 2019 15th Congressional District Map
[12] PA Clean Water Legislative Briefing Book 2021-2022 (Developed by a Team of Clean Water Advocates led by the Choose Clean Water Coalition, Coalition for the Delaware River Watershed, and PennFuture)

for anglers alone, in the amount of nearly **$72** Million annually in the Susquehanna River Basin. When combined with the Delaware and Ohio River Basins, there are **2,834** stream miles impacted, for a total lost recreational value by anglers in the amount of **$146** Million annually[13].

Datashed Tool for AMD Passive Treatment Systems in PA

EPCAMR created an infographic[14] based on data found on the Datashed website that tracks **280** AMD Passive Treatment Systems in PA that has private dollars leveraging State and Federal dollars for their construction, operation, and maintenance by locally concerned citizens. Datashed is a free online tool to assist volunteers, students, industry, and government agencies in the operation and maintenance of passive treatment systems. This tool and data does not include any active AMD Treatment Systems or Plants that are operated by the PA Department of Environmental Protection. Datashed is a collaborative effort of Stream Restoration Incorporated, PA DEP, EPCAMR, WPCAMR, USGS Water Resources Research Institute, BioMost Inc., US EPA Watershed Initiative, Foundation for PA Watersheds, and 241 Computer Services, to provide the tools needed to actively monitor and maintain passive treatment systems.

There are **147** AMD Passive Treatment Systems (**44%** of the **333** AMD Treatment Systems State-wide) in the Chesapeake Bay Watershed treating **49** Billion gallons of polluted AMD treated (**58%** of the 85 Billion gallons treated State-wide) and removing **5** Million pounds of metal sediments are removed every year (iron [**68%**], aluminum [**22%**], and manganese [**10%**]). State-wide in PA, there are **133** AMD Treatment Systems treating **85** Billion gallons of polluted AMD water removing **22.8** Million pounds of metal sediments are removed in the Datashed database.
Our biggest fear is that should we lose funding from the AML Trust Fund in place to operate and maintain active and passive treatment systems, the potential for all of the stream miles that have been improved over the last four decades will be lost and will have a detrimental impact on the downstream coalfield communities and the many fisheries that have been restored.

The Susquehanna River Basin Commission has documented **489** untreated AMD discharges in the Susquehanna River Basin alone. These untreated discharges send **73.6** Million pounds of acid and **31.5** Million pounds of metal sediments (iron [**89%**], aluminum [**11%**]) downstream to the Chesapeake Bay annually.[15,16]

The Need for Additional Co-Sponsors for HR 1734

There continues to be a strong positive response for **HR 1734**, however, the bottom line is we would like to see more bipartisanship Congressional Leadership step forward and co-sponsor the bill to support my coalfield communities that are tired of not getting the attention and funding necessary to make the changes necessary to uplift us to more hopeful expectations for our future. This environmental degradation that is in our backyards and watersheds needs to be addressed. The real issue is that we would be doing an environmental injustice to our communities that are in need of environmental justice who are suffered for far too long. We want bipartisan leadership to be proactive and do what's right for my communities and communities across Appalachia and the West that are experiencing the same issues.

[13] PA Fish and Boat Commission's 2018 Non-Attaining Use of Impaired PA AMD Impacted Streams Inventory of Recreational Loss Value by Anglers/Year Excel File (2018)
[14] EPCAMR Infographic on Datashed's AMD Passive Treatment Systems: Susquehanna River Basin Drainage to Chesapeake Bay
[15] West Branch Susquehanna Subbasin AMD Remediation Strategy, Publication 254, Produced in partnership with the West Branch Susquehanna River Task Force, May 2008
[16] Anthracite Region Mine Drainage Remediation Strategy, Publication 279, Produced in partnership with EPCAMR, December 2011

Benefits of Reclamation of AML and Reauthorization

Perhaps most visibly, reclamation of abandoned mine lands can add to the economies of many of our regions by creating jobs, which generates increased tax revenue for the local municipalities, school districts, and county tax departments. But there are many ancillary benefits of AML reclamation too, including the increase of property values, increase in the sense of community pride, providing buildable sites for commercial, industrial, warehouse distribution, recreational, or residential development, increasing public health and safety by removing hazards, and providing stream-based recreation opportunities which may decrease stress-related health concerns.

The scope of the abandoned mine land and water problems continue to exhaust available resources, and the Abandoned Mine Land (AML) Trust Fund has been impacted over the years by sequestration, leading to even less funding being distributed for reclamation and water restoration to PA and other States and Tribes across the country. PA has the highest number of abandoned mine lands and AMD impacts nation-wide remaining in the e-AMLIS Inventory. Public health and welfare, restoration of the land, and cleaning of polluted streams require Congressional action.

As the sunset of SMCRA is just a few months away in September 30th of this year, EPCAMR is fully supportive of an extension of the AML Trust Fund through 2037. We, as a Nation, can't afford to let the Reauthorization run out, knowing how much more work remains to be done, nation-wide. We respectfully ask that Congress acts now and supports reauthorizing the Abandoned Mine Land Reclamation Trust Fund fee collection. Our PA AML Campaign has created a *Basics of SMCRA Title IV Reauthorization of the Abandoned Mine Reclamation Fee Collection Publication*[17] that details and outlines our collective desires and interests for the passage of **HR 1734**.

EPCAMR would like to see the fees restructured to 1977 historic levels for both underground and surface coal mining. EPCAMR supports increasing the Minimum Program State funds to **$5** Million annually since it doesn't impact the payouts to other States. These states could use the funding to speed up their progress because they are required to also use the funds for emergency projects.

Historic problems from underground mines account for more damage than from past surface mining. EPCAMR would also like to have the Title IV grants under SMCRA exempt from sequestration. The only way to end sequestration of these funds is to include it in legislation. The SMCRA Title IV AML Trust Fund Program is funded through fee collections, not tax dollars. They are dedicated funds which can only be used for AML reclamation and thus will not accomplish deficit reduction. We'd like to see all SMCRA Title IV sequestered funds returned to the States, retroactive to FY 2013, pursuant to the Budget Control Act of 2011. PA has lost **$30 Million** due to sequestration between 2007 and 2019.

We urge Congress to approve direct line-item in OSMRE's budget specifically to fund emergency projects thereby allowing the States to utilize their annual AML grants to fund high Priority 1/2 health and safety projects. The current priorities should be maintained, including the ability to fund water-related projects dealing with AMD under Priority 2/3 projects. We support the continuation of mandatory distribution of the funds so that PA can receive the most funding possible in a given year. It is also important to maintain the 30% Set-Aside provision to maintain flexibility for use of the funds for AMD treatment. We support the continuation of the transfer of the interest to the Combined Benefit Fund to defray health care costs for retired miners and their dependents whose companies have gone bankrupt or are no longer in business. We also support a continuation of the Non-Profit AMD Watershed Cooperative Agreement Program.

SMCRA continues to eliminate the health and safety hazards in our communities and create jobs and infrastructure at the same time. It's the jobs that don't get as much attention as the reclamation or remediation

[17] PA AML Campaign Basics of SMCRA Title IV Reauthorization of the Abandoned Mine Reclamation Fee Collection Publication 6 (August 2020)

that occurs on projects. As a Nation, States need to work to improve on showcasing just how many ancillary jobs and other local and regional businesses are positively impacted by reclamation and remediation projects. We need to begin quantifying the economic impacts that are both local, regional, and further downstream, in communities that eventually benefit from the cleanup and remediation projects, indirectly. SMCRA Reauthorization can become a major jobs generator in some of the hardest hit areas where coal mining is in current decline.

We believe that States or Tribal Governments should be eligible to receive reimbursement from the Secretary of the US Department of the Interior, upon approval, if they submit an AML Emergency Program as a part of an approved State or Tribal Reclamation Plan.

AMD Remediation, Infrastructure, and Economic Development

EPCAMR believes that we need to talk about remediation and the improvements to water quality from abandoned mine discharges (AMD) in a different light and opportunity, aside from land reclamation. AMD remediation is like comparing apples to oranges when it comes to calculating expenses. It is not determined the same way as abandoned mine land reclamation costs. Active treatment versus passive treatment cost scenarios for cleaning up polluted mine water are very different (See *AMDTreat software*).

We need to have the foresight to build into the development of water-related economic development projects, the operation, maintenance, rehabilitation, and repair costs over the life of the treatment system infrastructure. We have found this out the hard way in PA. There also needs to be funding made available to properly quantify both the flows of the mine discharges, the chemistry, and an assessment and feasibility study done of the available land for treatment and the overall size of the underground mine pool drainage areas when considering how to size the AMD treatment operations, whether they be passive treatment, semi-active, or active. Each AMD discharge is very site specific. I would like to see AMD Treatment Systems become public works and be seen infrastructure projects more often.
Alternative productive and profitable uses of AMD need to be a part of our discussions. We need to highlight what the alternative opportunities can be when the private sector funding can complement State, Federal, County, Corporate, Municipal, and or Foundation support.

AMD, Mine Pool Reuse, and Alternative Energy Projects

There are many innovative remediation ideas that further investment is needed that include: alternative energy projects that reuse AMD, consumptive use, low-flow augmentation, low-head hydroelectric generation, pump storage, geothermal systems, aquacultures, greenhouses, heating, ventilation, air conditioning, resource recovery of rare earth metals, resource recovery of trace metals (iron, aluminum, manganese, etc.), pigment manufacturing, pottery glaze additives, additives as a co-product in permeable pavers additives, concrete additives, and iron oxide uses in other markets with high-end commodity values.

The complex geologic setting and historical mining of the Anthracite mine pools creates a challenge to calculate the volume of water stored within the underground mines. EPCAMR's underground mine pool mapping efforts over the last decade has reasonably found that an estimated **9** Billion gallons reside in storage in **10** mines in the Southern Anthracite Coal Fields and approximately **435** Billion gallons in all the Northern Anthracite Coal Fields. These mine pool water volumes are for the most part untapped in PA and many other States and it's about time we start looking at them as resource and underground reservoirs of pollution that we continue to ignore to the detriment of our communities and our quality of life.[18]

[18] Mine Water Resources of the Anthracite Coal Fields of Eastern Pennsylvania, EPCAMR (2011); weblink

The mine pools are viewed as both a blessing and a curse. The blessing is the potential availability of the billions of gallons of water and high volumes of AMD in the pools as resources for present and future use. Metal precipitates, such as iron and aluminum oxides, have potential markets, when separated from AMD.

A cost/benefit analysis can be run on individual mines to determine feasibility and possible profit-potential for private sector investment. General framework concepts related to future economic redevelopment opportunities include mine pool re-use, underground storage, water withdrawal requests, AMD treatment, industrial water usage, hydroelectric potential, resource recovery of metals, and fisheries recovery. Extensive groundwater pollution and **5,567** miles of streams degraded by AMD are the curse of more than 250 years of coal mining. It is unknown how long it will take for all the pyritic material to leach and drop out from any given underground mine.

Solar Power Development on Abandoned Mine Lands

EPCAMR, through a grant from the Reclaiming Appalachia Coalition, was able to develop an innovative geographic information system (GIS) Solar Site Selection Criteria Tool for Abandoned Mine Lands (AML) in the Fall of 2020, that was conceptualized by my Staff and I that build a framework that would identified formerly reclaimed abandoned mine sites, unreclaimed mine sites, and has the potential to identify other large tract areas of land that would be most suitable for solar development either at the community scale or large scale solar arrays. We had enough funds to focus on the **4** Anthracite Coal Fields only. We know that we can expand the GIS Solar Site Selection Criteria Tool for AML state-wide, with additional funding, that would scale it up and then allow us to spend the time necessary to identify the landowners to facilitate discussions with solar project developers like AC Power, from New York, who helped us during the Phase I of the project and are interested in solar development in Pennsylvania. I have had calls in the last **6** months with **6** different solar development companies from around the country that are interested in further discussions on solar development on abandoned mine lands in Pennsylvania. The Reclaiming Appalachia Coalition produced a very good report entitled, *Restoration and Renewal: The New Appalachian Economy (2021)*[19] and links to several press and news articles[20, 21] that highlights our work and other mini-grant recipients that were funded during the pandemic.

Diverse Partnerships in the EPCAMR Region Lead to Successful Reclamation

EPCAMR works closely with the Earth Conservancy (EC) on their mission and accomplishments, another regional reclamation partner in Northeastern PA. They have processed waste culm materials from 1995-2016 in the amount of **8,053,000** Tons that were recovered for electricity usage that improved **570** acres on **7** projects alone. At a 40% recovery rate, **20** million Tons of culm and coal waste have been processed. Future work on the West End Bank, near Mocanaqua, PA, will reclaim another **3,500,000** Tons on **300** acres of abandoned mine lands, in the southern Wyoming Valley. EC has reclaimed over **2000** acres at an investment of over **$49.1** Million on lands that have been recently sold to private companies that have come into the area and sold the properties to major warehouse distribution companies like Chewy, Adidas, DHL Supply Chain Logistics to bring thousands of jobs to the area.

EC has promoted the redevelopment and reclamation of the Wyoming Valley in Northeastern PA where the existing infrastructure was already in place, such as sewer, water, gas, electric, telecommunications, wireless technology, fiber optics, and rail access. They have extended them into these former abandoned mine lands to create economic development and job opportunities. They have planted trees, riparian areas along stream corridors, created job opportunities, supported the incorporation of green infrastructure landscaping designs that controls stormwater runoff and incorporate them into on-site water conservation practices on the abandoned mines as a part of the reclamation process. EPCAMR supports EC grants and works with them to

[19] Restoration and Renewal: The New Appalachian Economy (2021)
[20] EPCAMR Recieves Grant to Explore Solar Energy on Coal Lands (August 30, 2020-Citizens' Voice, Paul Golias)
[21] Mine-scarred Land Could Serve as Sites for Solar Energy Projects (December 6, 2020-Citizens' Voice, Paul Golias)

introduce new businesses who come to the region to locate. We discuss opportunities to collaborate, sponsor, and fund local environmental stewardship, community outreach, and restoration projects.

ARIPPA Contribution to Reclamation

In PA's inventory of waste coal piles sites maintained by the PA DEP's Bureau of Abandoned Mine Reclamation (BAMR), approximately **820** waste coal banks covering **9,500** acres still remain unreclaimed. **50** of them are actively burning, like the well-known mine fire in Centralia, PA. The estimated volume of waste coal in these banks is over **224,000,000** cubic yards of material, suitable for burning in a co-generation plant, like those of the ARIPPA trade association. Over **5,000** acres of mine-scarred lands were reclaimed by the ARIPPA plants across PA, at no cost to PA taxpayers. To date several hundred million tons of coal refuse have been converted into alternative energy by member ARIPPA plants. Through ARIPPA's reclamation efforts, streams recover, property values increase, and the reclaimed land is available for higher uses and can often become taxable parcels, bringing in much needed revenue to municipalities with stagnant tax bases.

Circulating Fluidized Bed (CFB) technology allows ARIPPA member plants to convert low BTU coal refuse into electricity, thereby abating AMD from coal refuse stockpiles. By converting coal refuse into alternative energy, ARIPPA members are removing one of the principal sources of contamination to surface and groundwater in legacy coal mining regions. Further, an alkaline-rich by-product of CFB is used, as a soil amendment, as well as in concrete and asphalt, at no cost to taxpayers. Through soil amendments, trees, grasses, and wildflowers, are reestablished, reducing sediment and erosion into the local waterways. Circulating Fluidized Bed (CFB) technology, one of the cleanest methods available today, has been used to convert coal refuse into electricity and an alkaline-rich ash by-product utilized for decades in a highly regulated, safe, and beneficial manner to fill and reclaim unsafe, abandoned mine lands; to remediate streams damaged by AMD; and serve as an additive in concrete/asphalt for construction and roadways.

ARIPPA's member facilities constitute most of the coal refuse power production industry in the world generating approximately 10% of the total electricity in the PA/West Virginia region. The unique nature of ARIPPA's environmental efforts combined with the desire to coordinate these efforts with "hands on" environmentally oriented groups, like EPCAMR, and governmental agencies symbolizes its commitment to improving our Commonwealth's landscape and environment at no expense to the taxpayer.

ARIPPA's *2016 Economic and Environmental Analysis of PA's Coal Refuse Industry Final Report*[22], analyzed the economic and environmental benefits of the 14 plants comprising the PA coal refuse energy industry and showcases the value and public benefits of the waste coal industry. In June 2019, ARIPPA released an updated report prepared by Econsult Solutions, a Philadelphia-based economic consulting firm, analyzing the economic and environmental benefits of Pennsylvania's coal refuse reclamation to energy industry. According to the report, the industry contributes **$615** million per year to the Pennsylvania economy, supports at least **3,000** jobs, and provides **$37** million in annual environmental and public benefits on top of the up to **$267** million in annual avoided costs to the Commonwealth from the remediation performed by the industry.[23] Another **5.5 million tons** have been cleaned up by ARIPPA plants in 2020.

[22] Economic and Environmental Analysis of PA's Coal Refuse Industry Final Report, prepared by Econsult Solutions (2016)
[23] The Coal Refuse to Reclamation Energy Industry: A Public Benefit in Jeopardy (June 2019)

Progress on the W. Branch Susquehanna River: TU Eastern Abandoned Mine Program

I have referenced a 10-year report[24] (2004-2014) that Trout Unlimited's Eastern Abandoned Mine Program authored covering AMD remediation success for the West Branch Susquehanna River basin that includes multiple success stories from several different entities across the watershed. TU's Eastern Abandoned Mine Program also produced another valuable report entitled, *Cleaning Up Abandoned Mine Drainage in the West Branch Susquehanna Watershed Program Summary: Why It Makes Economic Sense*[25], in 2008.

Trout Unlimited recently released a *West Branch Susquehanna River Recovery Benchmark II Technical Report*[26] and *Summary Report*[27] in December 2020 that documented the changes in the river water quality and biological communities from 2009 through 2020.The upper **26 miles** have recently been designated as supporting naturally reproducing trout populations and the mainstem of the river has maintained a net alkaline condition along its entire length. Funding and monitoring for the operation and maintenance of existing AMD treatment systems is critical to maintaining and enhancing water quality conditions in the West Branch Susquehanna River watershed. Proper monitoring of these systems will ensure that they continue to function as intended, as failing systems would negatively impact biological communities and offset the recovery of the watershed that has been accomplished to date. This is yet another reason why Reauthorization is so important. The recreational value of the West Branch alone is important to note.

Support for the Community Reclamation Partnerships Act- HR 1146

EPCAMR and Trout Unlimited and its **300,000 members**, among others are in support of **HR 1146** that would authorize partnerships between States and non-governmental entities for the purpose of reclaiming and restoring land and water resources adversely affected by coal mining activities before August 3, 1977, and for other purposes under a memorandum of understanding (MOU). Community Reclaimer Partnerships will be beneficial to helping the States and Federal government agencies in completing reclamation and remediation plans when the State Liability for mine drainage projects are clarified and clearly laid out. It will also increase the ability of third-party groups, watershed organizations and other reclamation and remediation non-profits, counties and states, to use some of their own funds and organizational capacities to help clean up streams and watersheds affected by AMD.

Our momentum has grown. The urgent need to act is now. We cannot belabor these issues any longer. We have worked long and hard to come up with innovative solutions, creative partnerships, a better understanding of our land and water resource potential as resources and not seeing them as eyesores, blight, and pollution problems that are obvious. In President Biden's Executive Order signed in January 2021, he clearly recognized the opportunity to create jobs and spur economic development created by reclamation and took early action that could help revitalize the economies of communities that have relied on coal. I, along with many other grassroots community leaders would welcome the opportunity to have our voices heard by the Interagency Working Group so that they get the local input of communities and perspectives like I have presented here today to truly listen to the daunting economic and environmental challenges we face every day. I would invite any of them to see what we must live in the shadows of daily. I have been reaching out to local labor unions and the building trades and the feedback and discussions have been very positive and encouraging when it comes to the potential for the creation of jobs that pay well.

---

[24] A Decade of Progress for the West Branch Susquehanna River Initiative: TU's Eastern Abandoned Mine Program, prepared by Trout Unlimited's Eastern Abandoned Mine Program (2014)

[25] Cleaning Up Abandoned Mine Drainage in the West Branch Susquehanna Watershed Program Summary: Why It Makes Economic Sense, prepared by Trout Unlimited's Eastern Abandoned Mine Program (2008)

[26] West Branch Susquehanna Recovery Benchmark II, Technical Report, Trout Unlimited (December 2020)

[27] West Branch Susquehanna Recovery Benchmark II, Summary Report, Trout Unlimited (December 2020)

Now more than ever, we need to turn the potential of these abandoned mine lands and AMD discharges into possibilities and a reality by passing these vital bills. This is a bipartisan opportunity for communities that have historically depended on the coal industry to reimagine ourselves by creating new, diverse economies on our own terms. These bills can showcase the beginning point of a bipartisan victory for an economic recovery for the people and places that powered our United States of America for generations. The time is now.

Thank you for the opportunity to provide you with reasons why the reclamation of abandoned mine lands and the restoration of our watersheds are so important to EPCAMR, our national coalfield community partners, and our PA AML Campaign.

Respectfully submitted,

Robert E. Hughes

Robert E. Hughes- EPCAMR Executive Director

Documenting Abandoned Mines & Their Impact on Water, Chesapeake Bay Rapid Assessment Visual Expedition (R.A.V.E.)

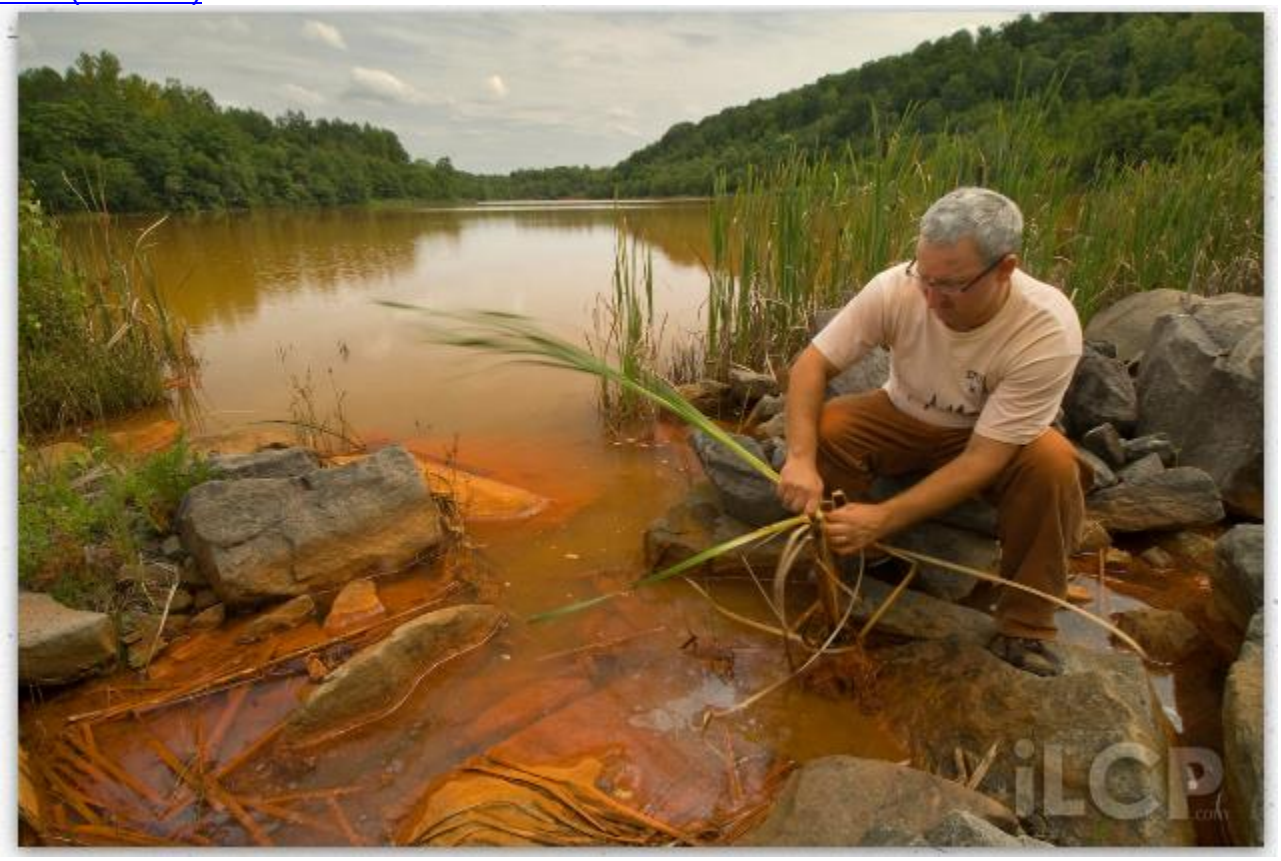

Photo 1. EPCAMR Executive Director pulling a cattail along a 20-acre water-filled stripping pit with a estimated depth of 80' in Newport Township, Luzerne County, surrounding by trash, iron hydroxide and abandoned mine drainage (AMD) that pollutes the entire Newport Creek, as he explains to Miguel de la Cueva, an Associate Fellow of the International League of Conservation Photographers, how the rhizome root system of the plant filters the iron. This site has become an educational stop for thousands of students who learn About AMD, abandoned mine land reclamation, and watershed restoration efforts from EPCAMR.