

# EPCAMR



## 2011 Year in Review for the Eastern Pennsylvania Coalition for Abandoned Mine Reclamation

### Join us to celebrate our 15th Anniversary **EPCAMR: PARTNERSHIPS, PLACES, & PRIDE** 1st Annual Dinner & Fundraiser

*"On behalf of EPCAMR, I would like to extend a personal invitation to our partners throughout the coal regions that have played a vital role in assisting us with reclaiming PA's abandoned mine lands, restoring streams and rivers impacted by abandoned mine drainage, educating our youth on becoming active environmental community leaders, and building local capacity to improve our Commonwealth's watersheds through acts of volunteerism."*  
—Robert E. Hughes, Executive Director

#### *The Evening of Celebration will include:*

- Digital Photography Exhibition of EPCAMR's 15 years
- Silent Auction of "Anthrascapes," Original Art created with Abandoned Mine Drainage
  - Unveiling of two EPCAMR Publicity Collages
    - Honoring Past and Present Partners
- Recognition of the County Conservation Districts, Regional Organizations, State and Federal Partners
  - Letters of Appreciation and Testimonials
- Tales from EPCAMR's Greatest Storyteller, Bruno Najaka

Photo by Miguel Angel de la Cuerva, ILCP

#### *EPCAMR 15<sup>th</sup> Anniversary Dinner Flier*

The EPCAMR organization is an extensive network of volunteers, non-profits and supporting agencies at the county, state, local, and federal levels versed in reclaiming abandoned mine lands (AML) and restoring our watersheds impacted by abandoned mine drainage (AMD). We have also developed an exhaustive set of technical, educational, and financial tools and resources that are continually updated on our website, [www.EPCAMR.org](http://www.EPCAMR.org). (Make note of the hyperlinks underlined in blue throughout this document, which will take you to more information).

EPCAMR administers a multi-year, base-level grant funded cooperative from the PA Department of Environmental Protection's (DEP) Section 319 Clean Water Act Program (approximately 80% of funding for staff) to support the needs of coalfield communities that are underserved and often underrepresented. EPCAMR also provides an office that is centrally located in northeastern PA (just a mile from the Nanticoke Exit off Route 81) at 101 South Main Street in Ashley, PA, where we lease space from our long-term partner on many reclamation projects, the [Earth Conservancy](http://www.earthconservancy.org). The EPCAMR organization celebrated its 15<sup>th</sup> Anniversary this year.

EPCAMR staffs two full time employees: Robert E. Hughes, with over 21 years experience in abandoned mine reclamation and EPCAMR's original founding Executive Director. Michael A. Hewitt, Program Manager, with over 10 years experience, started with EPCAMR as an Office of

Surface Mining (OSM) Summer Watershed Intern for two summers, starting back in 2000, before coming on full-time in 2002. [Staff bios](#) are available on our website.

EPCAMR hosted an OSM VISTA Watershed Development Coordinator volunteer position occupied by *Wren Dugan* for one year of community service work. Wren came to us from Meadville, in Northwestern PA, and had a background in art, fundraising, event planning, teaching, and database management. Wren assisted with putting together our AMD Anthrascapes Silent Art Auction and 15<sup>th</sup> Anniversary Dinner Program. She also coordinated the 2011 Annual ChalkFest in Wilkes-Barre, and assisted the Huber Breaker Preservation Society in developing a fundraising brochure. *Shawn Jones*, from Wilkes-Barre, a part-time, OSM/VISTA Summer Associate, assisted EPCAMR Staff with monitoring borehole water elevations of regional mine pools in the Lackawanna and Wyoming Valleys, collected iron oxide from local treatment systems for EPCAMR to harvest and process. He also georeferenced and digitized mine maps of historical relevance to our Anthracite Mine Pool Mapping Initiative.



*Mike Hewitt & Shawn Jones showing the river rock steps hand-built to gain access to the Old Forge Borehole*

EPCAMR Community Service Volunteers *Pascalle Banaszek*, from Wilkes-Barre, and *Kevin Jacobs*, from Nanticoke, assisted EPCAMR with processing and packaging our iron oxide for sale to generate additional income to support our environmental education and outreach programs. Kevin also aided staff in labeling hundreds of photos taken during our watershed field and stream assessments of the Solomon Creek. *Maria Shmakov*, from Bear Creek, also joined us for a few months as a volunteer who scanned in all of EPCAMR's last 3 years of receipts into a digital file format. *Shaquane McLendon* and *John Karpjen*, both from Wilkes-Barre, joined the EPCAMR Staff as Clerical Assistants, through an agreement and partnership with the [Luzerne/Schuylkill WorkForce Investment Board, Inc.](#) and EDSI, Inc. to help unemployed parents earn on-the-job experience and gainful employment. Lastly, *Jessica Wolf*, a graduate student from Harvard University, worked as an EPCAMR volunteer, while working on her master's thesis, that dealt with the Potential Industrial Reuse and Redevelopment of the Huber Breaker. Her completed thesis, "[Energetic/Extractive](#)" is available in the Harvard Graduate School department publication.

The EPCAMR staff is always available to answer any questions and concerns or to provide ideas and technical assistance on issues related to AMD / AML in northeastern and north central PA.

## **EPCAMR Initiatives**

### **Mine Pool Mapping**

EPCAMR Staff served as the lead investigators and authors, along with PA DEP BAMR Wilkes-Barre Office, PA DEP Pottsville DMO, USGS Field Office and OSM Pittsburgh Field Office completed a report titled "[Water Quantity, Quality, and Potential Usage from Underground Mines in the Anthracite Region-Western Middle and Southern Fields, Eastern, Pennsylvania](#)".

Deitz and Gourley Consulting, LLC completed a report in 2011 regarding Investigation of AMD Treatment, Water/Solids Reuse and Industrial Development: Feasibility Study for the Scotts Tunnel, Colbert Breach, Excelsior Overflow, and Maysville Borehole Discharges near Shamokin. Implementation of projects in this report may be seen as early as summer 2012.

### Anthracite Remediation Strategy

The Susquehanna River Basin Commission (SRBC) and EPCAMR completed an [Anthracite Remediation Strategy for the Susquehanna River Basin](#) in December 2011. The plan recommends 10 active treatment plants throughout the anthracite region which will incorporate only 6% of the 320 total discharges but treat 57.6% of the total discharge flow, 70.0% of the total iron loading, 72.0% of the total manganese loading, 80.8% of the total aluminum loading and 63% of the total acidity loading entering the river. If all the projects in the plan are completed, the Nescopeck, Solomon and Nanticoke Creeks and the Lackawanna River would be virtually restored. The Susquehanna River, Catawissa, Wiconisco, Newport and Mahanoy Creeks would be significantly improved taking a big chunk out of the 534 total stream miles impacted by AMD.

### A Holistic Look at Watershed Planning: QHUPs, WIPs, and TMDLs

In order to qualify for BAMR funding through SMCRA, watersheds must be approved as qualified hydrologic units (QHU) by DEP. In response, several groups have begun finding funding and working on these plans. The Upper Schuylkill QHUP was completed and submitted to DEP BAMR in Winter 2011.

### Abandoned Mine Drainage Pollutant Load Reduction Estimates in Pennsylvania

Units reported	Iron		Aluminum		Manganese		Acidity	
	FFY2010	FFY2011	FFY2010	FFY2011	FFY2010	FFY2011	FFY2010	FFY2011
lbs/day	342	216	25	40	8	5	466	323
lbs/year	124,830	78,840	9,125	14,600	2,920	1,825	170,090	117,895

Source: [Pennsylvania Nonpoint Source Management Program FFY2011 Annual Report](#)

There are dozens of Watershed Implementation Plans (WIP) completed and being implemented in AMD Impacted watersheds statewide. In addition, Watershed Implementation Plans are in development for 5 Abandoned Mine Drainage impacted streams statewide and will provide detailed Best Management Practice implementation progress and estimated load reduction data including: Anderson Creek; Blacks Creek; Jacobs Creek; South Sandy Creek; and Upper Schuylkill River

### In the anthracite region-

The Lackawanna River Corridor Association has taken the initiative to develop a QHUP for the Lackawanna, in partnership with EPCAMR. One issue in that quest was the lack of reliable flow data for discharges in the watershed. In August 2011, with the help of the SRBC and EPCAMR, the LRCA Installed 2 transducers staggered approximately 10 feet apart on a pipe lowered into the Old Forge Borehole (OFBH) in an attempt to measure pressure, water depth and calculate a flow of the mammoth discharge. This “first try” to measure flow at the borehole was met with many tough



*Zip tying & duct taping pressure transducer cables to the pipes before placing down the Old Forge Borehole*

situations such as a 500 year flood and too much vibration in rigging to distinguish a pressure difference. The September flooding was caught, however and comparisons to the Lackawanna River levels caught by the USGS Gauge just upstream rendered clues to the holding capacity of the flooded underground mine workings. Past and estimated flows can exceed 50 million gallons per day (35,000 gallons per minute (gpm)) out of the 42" bore. In October 25, 2011, SRBC and EPCAMR staff estimated a flow of 40,394 gpm using a timed float method and calculated a flow of 38,038 gpm by subtracting an upstream gauge and a downstream field flow measurement with SRBC's FlowTracker Meter. This one time flow sampling was to aide in calibration of the complex equation to calculate flow using the transducers. The site remains as a stop on many AMD tours that EPCAMR leads. The Duryea Discharge downstream on the Lackawanna River was also monitored for flow with an average of about 16,000 gpm. The Duryea Discharge may be partially connected to the OFBH and when treatment occurs, both discharges will most likely be combined.

The Upper Schuylkill River TMDL was developed and approved in April 2007. Several other AMD related TMDLs have been developed and approved for tributaries to the Upper Schuylkill River, including the Little Schuylkill River. The Upper Schuylkill River TMDL Watershed Implementation Plan was completed in May 2005. The upper reaches of the Schuylkill River watershed are largely impacted by pollutants from abandoned mine drainage problems attributable to metals (iron, aluminum and manganese) and low pH. Several Section 319-funded projects have either been completed or are continuing. Initial projects focused on assessments, leading to the development of a WIP in 2005. Successive projects have been implementing WIP-identified priority project sites. Some of these were previously addressed using DEP-BAMR and other funding sources. *To date, 82 lbs/day of Acidity, 809 lbs/day of Iron, 65 lbs/day of Aluminum, and 164 lbs/day of Manganese are being removed from the stream by treatment systems.*

The Bear Creek watershed is impacted by AMD discharges which contribute metals, low pH and siltation from a variety of old mining sources. A TMDL for the Bear Creek watershed was developed by the Susquehanna River Basin Commission (SRBC) in March 2001 and approved by the EPA in April 2001. The Bear Creek TMDL includes pollutant reduction targets for metals, pH and siltation. The Bear Creek Watershed TMDL Implementation Plan was completed by the Dauphin County Conservation District and finalized in 2005. The Plan addresses known AMD pollutant sources in the watershed including those from the Lykens Water Level Tunnel. Section 319-funded projects are addressing this discharge site, one of the largest AMD discharges in the watershed. *To date, 326 lbs/day of Iron are being removed from the stream by treatment systems.*

The TMDL for Catawissa Creek developed by the Susquehanna River Basin Commission (SRBC) was approved by the EPA in May 2003. The Addendum to the Catawissa Creek Watershed Restoration Plan (the WIP) was completed in 2005. Prior to this date, some work had been done in the watershed to address the primary sources of AMD pollution. Several projects have been initiated since the completion of the WIP, including those listed above. The Catawissa Creek TMDL identified load reduction goals for acidity, iron and aluminum in order to meet water quality objectives. These goals are being addressed by implementing the Section 319 NPS projects identified and other projects. *To date, ~3,600 lbs/day of Acidity, 16.8 lbs/day of Iron, 240.9 lbs/day of Aluminum, and 33.1 lbs/day of Manganese are being removed from the stream by treatment systems.*

Johnson Creek is tributary to the Tioga River watershed. Johnson Creek is impaired by AMD discharges contributing metals and acidity to the creek. The Tioga River Watershed TMDL was

completed in 2003 and includes load reduction goals for Johnson Creek. The Johnson Creek Implementation Plan was completed in February 2007. The Plan includes priority AMD discharge sites in the watershed. Recent remediation work has been completed at the Arnot No. 2 Mine AMD discharge. Continued work may help to meet TMDL load reduction goals. *To date, 83 lbs/day of Acidity, 3.5 lbs/day of Aluminum, and 3 lbs/day of Manganese are being removed from the stream by treatment systems.*

The Upper Swatara Creek watershed is largely impacted by AMD discharges from surface and deep mining operations. Many tributaries to the Upper Swatara Creek are AMD impaired. A TMDL for the Upper Swatara Creek watershed was developed by the DEP in the late 1990s. It focused primarily on the AMD-impacted tributaries in the upper part of the watershed and addresses impairments noted on the State's impaired waters list including high levels of iron, aluminum and manganese and runoff from abandoned coal mines. The Upper Swatara Creek TMDL Watershed Implementation Plan was completed by the Schuylkill County Conservation District and finalized in May 2006. One of the three projects using Section 319 funding has produced metals reductions. Additional projects have been completed using DEP-BAMR and federal OSM funding. Most treatment systems are installed on tributaries including Lorberry Creek and Good Hope Springs Creek, which have been documented as having significant adverse impacts on water quality in the Swatara Creek main stem. Fish studies have been completed the last few years in the watershed. Swatara Creek National Monitoring Program project has collected ten years' worth of water quality monitoring data to evaluate AMD treatment system effectiveness in the upper watershed. Water quality improvements have been documented in the upper parts of the watershed. *To date, 231 lbs/day of Iron, and 14.5 lbs/day of Manganese are being removed from the stream by treatment systems.*

### **Resource Recovery**

EPCAMR and SRI continue to collect small amounts of AMD oxides and create products such as pigment, chalk, and pottery glazes. EPCAMR created a brochure promoting the use of iron oxide. EPCAMR Staff attended an Art Show and Open House in Kingston, PA hosted by one of our regional partners, PennFuture and met with local artists who might want to collaborate with EPCAMR and utilize our iron oxide pigment.

### **Mining Impacted Stream and Treatment System Monitoring with Datashed**

- SRI, EPCAMR and WPCAMR collaborated on [www.Datashed.org](http://www.Datashed.org) to maintain and build upon it for Operation Maintenance & eventual Replacement (OM&R) of the aging 300+ inventory of PA passive treatment systems. Stream Restoration Inc., with a Growing Greener grant, has recently released Datashed 2.0 which is an upgraded and more user friendly user interface. Each treatment system has a page on the site where visitors can find background information, water quality, performance statistics links to designs, OM&R Plans and more. Secure connections allow watershed groups to upload water sampling, inspection results and update information about the treatment systems they oversee. The next step will be will to obtain snapshots of data from DEP's SIS Water Sampling Database, link it to the individual projects and display state data along with the watershed data. OSM no longer maintains the AMD Treatment System Inventory for the Appalachian Region.
- Connected a volunteer sampler with a group in need of some monthly AMD sampling in the Weatherly Area.
- EPCAMR has continued AMD sampling handbook updates and dissemination via the web. EPCAMR encourages sampling data upload to Datashed.org. EPCAMR continues to seek funding for and build a sampling equipment inventory to aide in water sampling throughout the region. EPCAMR conducts an AMD sampling protocol certification training for watershed groups members, volunteers and interns as needed.

## **Funding for AMD/AML**

- EPCAMR staff submitted 1 letter of intent to a foundation for \$15K. Prepared 2 reimbursements and 2 proposals for professional services for EPCAMR partners. Completed a draft 2011-2012 EPCAMR Operational Budget for review and approval by board
- EPCAMR staff submitted 4 grant proposals for \$167K total, aided 2 partner groups write grants for \$9K total and 5 letters of support for partners. Prepared 3 professional service quotes for EPCAMR partners. Spoke with 1 industry rep about potential for mine water reuse. Received word that 1 anonymous donation was approved for \$10K and 3 partner grants were approved with EPCAMR as a subcontractor for \$14K total. Also received a \$10,000 Anonymous Gift donation (no strings attached) from Bank of America for EPCAMR.
- Began working on an EITC Application through the PA DCED to become an approved Educational Improvement Organization.
- EPCAMR was awarded a \$6000 Coldwater Heritage Partnership grant to conduct a Coldwater Conservation Plan for the Solomon Creek Watershed in Luzerne County, PA
- Informed of grant awards EPCAMR Staff helped write pertaining to the Huber Breaker Miner's Memorial Project: \$1500 HBPS's Live Well, Luzerne County Healthy Community Connections grant \$4000 Wilkes-Barre Career & Technology Center's FFA Grant.
- Completed the Educational Improvement Tax Credit (EITC) application and were recently approved to receive funding through the PA Department of Community & Economic Development to support our environmental education programs.
- Obtained \$1,000 from SRBC and \$5,000 from the PA DEP Bureau of Abandoned Mine Reclamation to support the 13th Annual AMR Conference.
- SRBC funded additional Mine Pool Mapping work that is in line with our development of the Anthracite AMD Remediation Strategy to complete the Southern Anthracite Coal Fields and to begin the Northern Anthracite Coal Fields in the amount of \$75,000 through June 30, 2012.
- EPCAMR Staff worked on, completed, & submitted a \$66,070 Growing Greener construction grant that be used to remove check dams and a Trout Unlimited AMD Technical Assistance application for Solomon Creek, Luzerne County
- Created an EPCAMR Press Release on the ARIPPA EPCAMR Awards to the three grant recipients: Schuylkill Headwaters (\$3000), EMARR (\$1000), and the HBPS (\$1000) that leveraged over \$160,000 in matching funds
- EPCAMR Staff worked on, completed, & submitted our FY2012-2013 Scope of Work & Detailed \$125,000.00 and submitted with expediency to PA DEP 319 Program Staff.
- Submitted a PEC RCAP Grant for \$3000 on behalf of the CCRA for QHUP development.
- Established a PayPal Business Merchant Account for EPCAMR to be able to accept payments online through our [EPCAMR Store](#).
- EPCAMR and WPCAMR assisted the Anthracite Region Independent Power Producers Association in their efforts to award reclamation projects in the Anthracite and Bituminous regions of PA.

## **Technical Assistance Summary:**

- EPCAMR provided technical support by updating GIS layers, converting GIS datasets to AutoCAD format, and creating maps for partners.
- EPCAMR continues to update the Reclaimed Abandoned Mine Lands Inventory (RAMLIS) GIS Tool CDs, now in version 11. The Reclaimed Abandoned Mine Lands Inventory GIS Tool is a conglomeration of statewide and regional GIS Data related to mining, abandoned mines, land use and water quality which aides in gathering statistics and producing maps of

mine scarred lands throughout Pennsylvania. Specifically this database shows AML Priority 1, 2 and 3 statewide with information on PA DEP BAMR's plans for reclamation. AMD Treatment Systems from Datashed.org are also included in this tool. The project was made possible with funding from the Foundation for PA Watersheds, PA DEP's 319 Program and the use of OSM's ArcGIS License. Updates are produced yearly with updated datasets and future development may lead to an online ARC IMS System.

- Distributed 45 RAMLIS 11 CDs, 3 RAMLIS investigations, Completed 2 sets of AML statistics for a US Congressional District. Revised 24 maps, 8 databases, and 2 tour maps for EPCAMR partners. Tested hardware for the OSM TIPS Program.
- Coordinated a roadside cleanup effort on Dundee Road, Hanover Twp., between the Nanticoke Creek and the Dundee AMD outfall with 4 Wilkes University student volunteers.
- EPCAMR Staff continued to work on the Solomon Creek Cold Water Heritage Plan.
- Informed by OSM that the W-B Office will be closing soon; EPCAMR has requested that some office equipment and supplies be donated or acquired by EPCAMR to utilize in our region
- Investigated a flooding issue that remained months after the Fall 2011 flood. Several mine drainage discharges and boreholes continued to flow after the river levels subsided, causing iron staining along streets in Kingston and Nanticoke.



*Woodward Colliery borehole (near Kirby Park) discharges into the storm drains when the river level is high.*

### **Keeping Track of the Numbers – New Mine Drainage Treatment Projects:**



Nanticoke Creek Watershed: Espy Run Treatment System expansion was completed in the Spring of 2011 to now treat the entire 600 gallon per minute discharge. The new design incorporated 2 additional settling ponds before the existing wetland system and the discharge. During construction a second seasonal discharge was unearthed and incorporated into the system as well.

### **Treatment System Operation, Maintenance and Replacement (OM&R) Matters:**

An Energy Harvest Grant project was under way by EMARR on the Audenreid Treatment System in the Catawissa Creek Watershed to add 3.5 kW micro hydro units to help automate the flushing system. Another micro hydro power project, to produce approximately 7 kW of power, was also under way in the Babb Creek Watershed to help power the Arnot Active AMD Treatment System.

Any construction projects for AMD treatment systems are required to have an OM&R plan as one of the deliverables. The plan needs to address basic maintenance issues along with a replacement schedule for the future, and who the responsible party is for each section of the plan. Also possible funding sources to implement the plan must be identified.

**Reclamation to repair AML, reduce AMD and revitalize the economy:**

Schuylkill River Headwaters: In 2011, the Schuylkill Headwaters Association diverted the path of the stormwater runoff along Valley Road with a 1,200 foot rock lined swale and culvert under the road directly to the West Branch of the Schuylkill River. This project diverted surface water away from the cropfalls preventing the water from seeping into the mines below to reduce recharge of the mine pool and discharge out the Pine Knot Mine. Abandoned Mine Drainage from the Pine Knot Discharge contributes elevated levels of aluminum, iron, manganese, and acidity to the West Branch of the Schuylkill River.

With the completion of Huber IV (87 Acres) in 2011, Earth Conservancy has reclaimed more than 400 acres of mine scarred lands at Exits 1 and 2 of State Route 29, which will restore environmental health and economic development potential for the region. The lands also provide for recreational areas and residential development. Earth Conservancy has been able to pursue the reclamation of Huber IV with funding assistance from the Pennsylvania Department of Community and Economic Development (DCED).

Sullivan County –After reclaiming 500 acres of AML and treating 3 discharges the state reports in January 2011 that over 90% of the AML problems in the Loyalsock Creek Watershed are remediated. 87% of the streams are designated at least High Quality and their next struggle is to maintain a balance between environmental assets and potential degradation by the ever growing Shale Gas Industry.

ARIPPA member plants continue to burn coal waste and reclaim lands with coal ash. EPCAMR uses RAMLIS to produce custom mapping of mine waste piles for Anthracite Region Independent Power Producers Association (ARIPPA) member plants.

Statewide, 8 Growing Greener grants and 7 Section 319 NPS grants were awarded for AMD related projects. BAMR completed 37 projects, 15 of which were surface reclamation, one passive treatment system, and 21 other reclamation projects such as mine subsidence control and deep mine reclamation. BAMR reclaimed 755 acres. DEP's Bureau of Oil and Gas plugged 180 abandoned wells. The District Mining Offices continue to facilitate the reclamation of AML including places of subsidence and elimination of dangerous highwalls.

Under the new Full Cost Bonding system, the DEP District Mining Offices have required mine operators to post a separate bond or trust which will insure sufficient funds to continue annual operational, maintenance and replacement activities on AMD treatment facilities in perpetuity even if the operator should abandoned the facility. Under this system District Mining Offices have completed 4 land reclamation projects, 16 treatment systems are in design; 7 treatment systems are completed or under construction. DEP staff conducted O&M activities on 11 sites, contracted another 13 sites and 3 are under grant agreements.

**Removing Miles of Streams from the List of Impaired Waters:**

To date the PA DEP has been able to document the removal of 105 miles of streams from the Integrated List as well as 1,859 lake acres. Within the past 5 years 10 streams, formerly impacted by AMD, ***were fully restored and removed*** from the Impaired Waters List (former 303d list) statewide. In the Anthracite-- Babb Creek (Tioga) in 2009 & Lehigh River (Carbon) in 2011.

EPCAMR has been aiding in the search for streams to “de-list” and has been tasked with providing current water quality data to the state which shows improvement. In turn, the state will go back to reassess the stream and make the determination. If you know of an improving stream, please let us know.

## **Outreach Summary:**

### **Policy and Legislative:**

- DEP and other organizations continue to study the possibility of using mine water for “fracking” and drilling for gas in the Marcellus Shale. A draft “white paper” was produced and the state continues to take comments on the potential policy guidance that could support this initiative. SRBC continues to promote “lesser quality waters” use with financial incentives in water withdrawal permits when AMD is used or treated and used.
- Followed up and commented on the “The Keeley Decision.” The outcome could require that anyone who installs and/or operates an AMD treatment system (passive or active) and creates a point source discharge to obtain a NPDES permit. On January 9, 2009, the federal court in Clarksburg, WV ruled in the case of WV Highlands Conservancy and WV Rivers Coalition vs. Randy Huffman.
- Prepared written testimony as it relates to the Chesapeake Bay TMDL and Abandoned Mine Impacts within its Tributaries and submitted to the US EPA Region III
- EPCAMR staff held informational meetings with Senator Yudichak, Senator Blake, and Congressman Barletta’s Office to update them on our Mine Pool Mapping and Borehole Awareness Monitoring Campaign, to regain monitoring access to mine pool water levels, throughout Lackawanna and Luzerne County.
- Prepared and submitted a letter of concern to Senator Pat Toomey sharing EPCAMR’s concerns about the federal merger of the OSM and Bureau of Land Management and its impacts on abandoned mine reclamation projects in PA
- Provided a letter of support for the HB 1813 to the PA Anthracite Council on the future of bonding assistance legislation in PA

### **Marketing**

- EPCAMR staff continued to work with university students from Marywood to complete Ad Campaign posters and from Wilkes to design a solar kiln to dry AMD. Meghan Calderone, another graduate student from Marywood University’s Graphics Design Program completed a Macro Mayhem Bug Identification Chart for use in our environmental education programs; A 5’ X 6’ Banner was printed by Coal Creative.
- Worked with Laurie Popeck with Clean Creek Products & Stream Restoration Inc., to donate 150 iron and manganese oxide glazed fish magnets for our 15th Anniversary Dinner
- cds Creative and John Dawe, LLC through the NEPA Create-A-Thon, selected EPCAMR as a recipient of a professional donated services Marketing Application submission provide us with free professional services and technical assistance to help us market our work. Sonnia Hove, a freelance graphics designer and marketing entrepreneur from Florida has also offered to provide EPCAMR with free marketing technical services.

### **Meetings and Events**

EPCAMR and WPCAMR both have developed and continue to maintain very informative and up-to-date websites to disseminate information to the World Wide Web. EPCAMR’s [www.EPCAMR.org](http://www.EPCAMR.org) and WPCAMR’s [www.WPCAMR.org](http://www.WPCAMR.org) are excellent conduits for distributing information and news in a cost effective, paperless way. As a part of these websites, AMD/AML related news is distributed through EPCAMR’s “EC Express” and WPCAMR’s “AML Posts” and “Video Diaries” to readers statewide and beyond. In addition the organizations maintain [www.treatminewater.com](http://www.treatminewater.com) and [www.AMRClearinghouse.org](http://www.AMRClearinghouse.org) as additional resource sites and

social media fan pages on Facebook, Twitter and YouTube to continue outreach to a new generation.



The PA Abandoned Mine Reclamation (AMR) Conference was hosted August 4-6th 2011 at the Genetti Best Western in Hazleton (the heart of the Anthracite Coal Region). 112 people attended the 1 ½ day conference to attend 22 presentations on a range of Abandoned Mine Land (AML) Related issues. Attendees also gained insight from keynote speaker DEP Secretary Michael Krancer and guest speakers OSM Director Joe Pizarchik and Renew Growing Greener Coalition

Executive Director – Andrew Heath. A mix of 18 for-profit and non-profit exhibitors setup in the halls and the outdoor Friday night mixer included a theatrical performance of “Mother Jones” by the Eckley Players. 38 attended a Thursday “pre-conference” tour to several AMR, AMD Treatment, and AMD sites, including a hike to the mouth of the Jeddo Tunnel – a 40 Million gallon per day AMD discharge that drains 23 square miles of underground mines. This was followed by the EPCAMR 15th Anniversary Dinner Fundraiser. Scholarships were provided and there was also some money left over for 2012 conference. Visit [www.treatminewater.com](http://www.treatminewater.com) for more.

EPCAMR continued its education programs including AMD tours, stream sampling events with hundreds of middle school students, cleanups and workdays with Vo. Tech. students and volunteers, Tie Dye/Chalk and Teacher Training Workshops; Several Environmental Education grants were awarded to EPCAMR to support education youth and adults on AMD/AML issues.

- EPCAMR staff hosted monthly AMR Conference Calls, quarterly EPCAMR Board Meeting, and EPCAMR 15th Anniversary Dinner / Fundraiser Committee Meeting. Attended a SAN Meetings, “The Inquest” theatrical performance, the Philanthropy Forum, a MRAB Mtg. and a meeting with CCRA and PA DEP BAMR reps.. Participated in an Earth Day event at Nesbit Park and a conference call with Weatherly Borough and PA DEP BAMR reps. and an ARRI tree planting. Presented at the Watershed Specialist Annual meeting, corresponded with Luzerne County Commissioner to help with an AMD problem and attended a Catawissa Creek QHUP meeting, and released the 2010 EPCAMR Year in Review.
- EPCAMR staff attended and setup at the Wild and Scenic Film Festival, an EPCAMR Board Meeting, an Anthracite Remediation Strategy meeting, NPS Liaison Committee Resource Extraction Sub-Committee conference call, and hosted a Huber Breaker tour and a Renewable Energy on AML Mtg.
- EPCAMR Staff completed the website development for the 13th Annual AMR Conference and our 15th Anniversary Fundraiser/Dinner along with brochures and Save the Date Cards
- EPCAMR staff worked on a 3,000+ Insight.ly contact database (Google Apps donated premium service). Sent 235 hard copy invitations to dinner and registered 80+. Registered 105 for the conference.
- EPCAMR staff became certified to train teachers and students in the nationally acclaimed, "PROJECT LEARNING TREE", the environmental education program sponsored by the PA DCNR Bureau of State Parks, Nescopeck State Park
- Hosted a meeting of 22 Environmental and Non-Traditional Educators at the EPCAMR Office with the PCEE and PAEE. Attended a SRBC WQAC conference call, an Anthracite Remediation Meeting, an OFBH Monitoring Project Partners on site.
- EPCAMR staff conducted 5 Tree Trout Field Trips for Wilkes-Barre Area, met with 3 Wilkes U professors, HBPS rep., OSM staff, EC staff and exhibited at Chalk Fest.

- EPCAMR Staff also conducted an AMD Tie-Dye T-shirt Education and Outreach Program for over 60 youth at the Newport Township Community Organization's FUN DAY at the Wanamie Recreational Park, 7 field tours and 3 indoor educational events to educate approximately 425 students total from both the Wyoming Valley and Homeschoolers from New Jersey. Coordinated 2 watershed tours: for approximately 12 teachers with the Chesapeake Bay Foundation in the Shamokin Creek Watershed and a pre-conference tour related to outreach/education.

### Education

- Began testing and released the new EPCAMR website built by BRF Designs. Helped 2 member orgs with webhosting issues.
- EPCAMR staff continued to assist a Harvard graduate student, Jessica Wolf, on her thesis project tying renewable energy to abandoned mine sites.
- Completed an ACCT AmeriCorps National Program Application that will place members in direct service positions with community/watershed improvement organizations (Separate from the VISTA program). Participated in a phone survey on the OSM/VISTA ACCWT Program.
- Prepared 3 Letters of Invitation to local area school districts to participate in EPCAMR's "Tree Trout & AMD" Aquatic Resources Outdoor Education Program funded by the PA FBC. Applied for a collectors permit. Developed materials and a schedule for the program in late Spring.
- Provided Stephanie DeBalko and her photographer from THE WEEKENDER Magazine with an AMD Tour of the Wyoming Valley and provided Erin Miles, a independent filmmaker from Hazleton, PA with a tour of the perimeter property of the Huber Breaker for a short-film she is producing similar to the movie "Contagion" and "I Am Legend"
- Committed EPCAMR to being a member of the Environmental Education Working Group for PAEE who is working with the NAEE to certify PA Non-Formal Educators
- Set up our EPCAMR Display and Exhibit at Boscov's Department Store as a part of their "Friends Helping Friends" Community Support Program
- Submitted EPCAMR's ideas for a grant proposal to PPL in partnership with the Wilkes-Barre Area School District to build a few scalable mobile solar kiln units.

### OSM Closes Its Doors and EPCAMR Receives Surplus Equipment and Supplies

In the Fall of 2011, EPCAMR Staff moved OSM Office supplies to the EPCAMR Office after being approved to receive the Federal surplus from the Department of the Interior. It allowed EPCAMR to reorganize our Office, make use of some new bookshelves, tables, chairs, conference chairs, television, DVD player, display cases, binders, cabinets, storage lockers, and a large-scale black & white copier. In total, several thousand dollars of surplus materials were provided to EPCAMR since the closure of the OSM Office in Wilkes-Barre, PA and we appreciated and acknowledged their contributions to our non-profit, since we are a long-term member and partner on the OSM [Technical Innovation and Professional Services \(TIPS\)](#) team.

