2010 Year in Review
for the
Eastern Pennsylvania Coalition
for Abandoned Mine Reclamation

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. *(Make note of the hyperlinks underlined in blue throughout this document, which will take you to more information).*

EPCAMR administers the multi-year, base-level grant funding from the PA DEP Section 319 Clean Water Act Program (approximately 80% of funding for staff) and provides an office that is centrally located in the EPCAMR region (just a mile from the Nanticoke Exit off Route 81) at 101 South Main Street in Ashley, PA. The office is within "spitting distance" of the monolithic Huber Breaker structure and its fading logo that still reads "Home of Blue Coal.. America's Finest Anthracite". We are proud to announce that EPCAMR was awarded the *2010 Friend of the Lehigh River Award* for our continuing partnership with the Wildlands Conservancy.

View of the Huber Breaker from Executive Director's Office Window

EPCAMR staffs two full time employees: Executive Director, Robert E. Hughes, with over 18 years experience in abandoned mine reclamation, who this year was awarded two 40 Under 40 Awards from separate organizations (Times Leader and PA Environmental Council). Program Manager, Michael A. Hewitt, with over 9 years experience, started with EPCAMR as an OSM intern for two summers before coming on full-time. EPCAMR also hosted an OSM VISTA Volunteer position occupied by Wren Dugan. Wren comes to us from Northwestern PA and has a background in art, fundraising, event planning, teaching, and database management.

Interns Leigh Ann Kemmerer and Shawn Jones, both Wilkes-Barre natives, also joined the staff to help out and earn on-the-job experience throughout the year. 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.

A robbery took place on June 19th where over $3000 worth of computer and office equipment was stolen. Vandals gained access by smashing through a rear window to our office with a 5 pound piece of culm. A police report was immediately filed, pictures were taken, an inventory of our missing equipment was reported, and our insurance carrier was contacted. A Good Samaritan found our checkbook along railroad tracks behind the office and brought it back. Nothing else was recovered. We were able to recover much of the computer equipment through an insurance claim. A valuable

lesson was learned and EPCAMR has taken steps to enhance our security and protect our business personal property.

2010 Initiatives:

Datashed

Pennsylvania has invested heavily in passive technologies to treat the largest water pollution problem in the Commonwealth: AMD. Regular water sampling and testing is crucial in diagnosing a treatment system's wellbeing and success. Datashed is a fully-featured, GIS enabled, Internet database that will store the complete history of a passive treatment system, helping to diagnose problems and allowing researchers to study and evaluate various AMD treatment technologies administered by Stream Restoration Inc. (SRI). Datashed also serves as a repository for operation, maintenance & repair (O,M&R) manuals, treatment system designs / specifications and a place to ask and answer questions about treatment systems through the "community wiki" online help forum. EPCAMR, WPCAMR The Foundation for Pennsylvania Watersheds and PA DEP have become partners in the development of Datashed. One of the last expenditures of the FACTS program was to provide snapshot sampling events of treatment systems in PA. All passive treatments systems were sampled twice, once under low and then once at high flow. Stream Restoration Inc. has been able to upload all the results and other information into Datashed. The next step will be will to obtain data from PA DEP SIS water quality database. SRI has applied for a Growing Greener grant to help upgrade and manage this online database in the near future.

Anthracite AMD Remediation Strategy

SRBC is compiling historical water quality data from the anthracite region. There are around 700 sites with over 12,000 water quality sampling events. A GIS layer has been developed to be able to take a broad look analysis of the water quality of the streams and mine pools in the anthracite region. SRBC has also partnered with EPCAMR so that all water quality will be on new update of RAMLIS. SRBC is also assisting EPCAMR to find funding to continue the mapping of the pools and surface water. This will help SRBC trying to pinpoint mine pools that could be used for low flow conditions.

Before and after design of the Avondale Mine Disaster Community Gardens.

Illegal Dump Site Cleanup and Beautification

Horticultural students at the Wilkes-Barre Career Technology Center came back in 2010 to continue their community service development of the Avondale Mine Disaster Community Gardens Project along the Susquehanna Warrior Trail, Plymouth Township. With a $4,000 grant from Future Farmers of America (FFA), raised bed and ground level gardens were planted with native trees, shrubs, groundcover and flowers, weeds and invasive species were eradicated, paths were created with gravel and culm, a fence was constructed to limit motor vehicle access, and more garbage was removed from the site. The park was dedicated in August and Representative Yudichak gave an American flag to fly at the site.

EPCAMR was awarded a $16,000 grant to coordinate, organize, and conduct 4-5 cleanup projects throughout the Wyoming Valley, nicknamed *Wyoming Valley PRIDE* (People Reaching Into Dumps Everyday). Cleanups that were targeted are as follows: Canal Street Tire Pile, Plymouth Township; Avondale AML Mine Site, Plymouth Township; Curry Hill, Plymouth Township, Pennsylvania Ave/High

Street Hill Cleanup, City of Wilkes-Barre; Hicks Creek Streamside Cleanup, Exeter Borough; and the location of the future Anthracite Miners Memorial Park located on a 3 acre parcel of abandoned mine lands leased to the Huber Breaker Preservation Society, Ashley. 7.7 Tons of municipal waste was disposed of, approximately 1 ton was recycled, 813 tires were collected, 13.28 acres of land was restored and approximately $40,000 was generated by volunteers to match the project funding.

RAMLIS GIS Tool Development: Reclaimed Abandoned Mine Land Inventory System

EPCAMR continues to update and distributed the RAMLIS GIS Tool CDs currently at Version 10 to watershed groups, community non-profits, and local governments. The RAMLIS 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 locations statewide, with information on PA DEP BAMR's plans for reclamation. 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. Updated datasets are produced yearly and EPCAMR is in discussions with the OSM to develop an online ARC IMS System. 21 RAMLIS 10 GIS Tool CDs were distributed in 2010 along with a KML file for use with Google Earth version of the tool on our website. EPCAMR staff conducted approximately 40 RAMLIS statistical investigations for partners.

Wren Dugan showing Chalk Fest attendees how to make chalk with Iron Oxide collected locally from AMD streams.

Iron Oxide Resource Recovery Initiative for NE PA:

EPCAMR has been the leader in Northeastern Pennsylvania to promote the idea of economical recovery of iron oxide from AMD discharges, and/or AMD Passive Treatment Systems in Eastern PA. Armed with a baseline analysis of 25 large mine discharge metallurgical analysis and loading calculations with the help of Hedin Environmental, EPCAMR Staff continue to collect iron oxides from several discharges and innovatively create a reusable green pigment. With our newly remodeled processing station, the samples are dried, ground into a flour-like powder consistency, heated to varying temperatures for color gradient changes, and then distributed to local artists, watershed groups, and school art programs for use in paints, stains, pottery glazes, tie dying, and the creation of EPCAMR's very own Iron Oxide Chalk. AMD Chalk Talk and Tie-Dye Programs are offered as well. Please see our Iron Oxide Recovery Pamphlet for more info.

Old Forge Borehole & Scranton Metropolitan Mine Pool Sampling and Definition

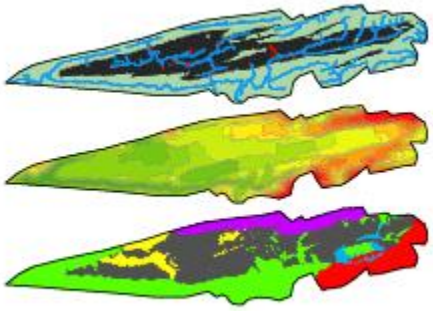
EPCAMR began working with the Lackawanna River Corridor Association, Susquehanna River Basin Commission, Lackawanna County Commissioners, The Willary Foundation, and the PA DEP Growing Greener Program this year to come up with an appropriate design to accurately monitor the flow and chemistry of the discharge. The project will require drilling into a foot thick concrete cap and lowering monitoring device into the borehole. The most difficult task is to find a device that will work in flows that can exceed 50 million gallons per minute out of the 42" bore. The

View of the Old Forge Borehole from a rock in the middle of the Lackawanna River.

site remains as a stop on many AMD tours that EPCAMR leads. EPCAMR has begun monitoring the water levels in 14 boreholes in the Scranton Metropolitan Mine Pool to gain knowledge of the mine pool dynamic and possible future manipulation.

Hicks Creek Natural Stream Channel Restoration Project:
Skelly & Loy and Borton Lawson Engineering have been working with EPCAMR, Luzerne Conservation District, other State agencies that are a part of the review permitting review process, and the PA DEP Bureau of Abandoned Mine Reclamation in 2010 to complete and submit the Joint Permit Application for final review and administrative completeness. All landowners are on board with the current project plans and scope of work. EPCAMR has asked for an extension to complete the project until June 30, 2011. Bids for construction will be developed over the course of the next few months and will be advertised. Construction and placement of 61 fluvial geomorphologic (FGM) structures called step-pools along the almost 2,000 linear foot stretch. The Joint Permit Application process alone can take anywhere from 3-6 months. Our major goal is to stabilize bank erosion from a highly erodible abandoned mine problem feature, provide a low flow channel and slow high flow surges through the area to mitigate flooding downstream.

Mine Pool Mapping Initiative:
EPCAMR with the help of the PA DEP BAMR Wilkes-Barre Office, PA DEP Pottsville DMO, the USGS PA Field Office, the OSM Pittsburg Field Office and other partners continue to compile, update and fill in data gaps on location of mine pools in the Anthracite Region's Western Middle and Southern Coal Fields, with an emphasis on studying the economic benefits of reusing mine pool water and possibly reducing or eliminating discharges. Western Middle Field analysis complete and EPCAMR continues to build a report of those findings. A portion of that study that provides mine pool quantities is available on the USGS Website. EPCAMR plans to continue these efforts in the near future to complete this work in the Southern, Eastern Middle and Northern Fields as well.



Figures from the Groundwater Model in the Western Middle Anthracite Coalfield Report

EPCAMR has been meeting with industrial and commercial businesses to encourage and share some preliminary findings related to mine pool water availability. SRBC promotes AMD use with financial incentives in water withdrawal permits when AMD is used, or treated first then used. DEP and other organizations are studying the possibility of using mine water for fracking for drilling for gas in the Marcellus Shale.

Technical Assistance Summary:
The EPCAMR Staff continue to provide mapping assistance and gather statistics for various partners using GIS technologies through a Memorandum of Understanding with the Office of Surface Mining's Appalachian Region Technology Transfer Team. EPCAMR aided the PA DEP and EPA 319 Program plan maps and compared to other DEP watershed based plans including TMDLs, BAMR HUPs and QHUs to find gaps or duplication of coverage. EPCAMR staff have been preparing to help groups produce QHU (Qualified Hydrologic Unit) Plans, now required to use the SMCRA Title 4 money.

EPCAMR continues to conduct AMD Sampling Certification for watershed groups and non-profits alike as needed. The training program is similar to EPA's standards, but personalized for the Anthracite Region. EPCAMR has created a standard form and manual for data collection as a part of the AMD sampling protocols certification training that provides for ease of upload to Datashed and other water quality sampling databases.

Wyoming Valley Watershed: The Hicks Creek and Abrahams Creek Watershed Associations teamed up to for a Technical Advisory Committee to deal with ongoing feasibility study proposed by the Luzerne County Flood Protection Authority. This area is constantly battling to keep storm waters in control to prevent it from turning into flood water which has been plaguing the community all too often. There are several factors that compound to cause these floods even though they are protected from the Susquehanna River behind a levee. After some extensive research, EPCAMR staff believe that many of these problems are due to the mining that took place and the mine pool that lies under the town of Exeter, PA. Some solutions dealt with reconnecting the original pre-mining hydrology to Abrahams Creek and sealing up mine pool infiltration points, which would reduce water that flows into the mine pool that rises and multiplies flood effects.

Catawissa Creek Watershed: EPCAMR aided in the completion of the Catawissa Creek Rivers Conservation Plan by gathering statistics and producing 15 maps with the help of our ArcGIS license. The watershed is affected by mining and mine drainage in the headwaters. Now that most of the discharges are treated and there are plans to continue removing unsightly "moonscape" mine lands, the sparsely developed watershed can begin its recovery.

Hazle Creek Watershed: EPCAMR helped a group in Weatherly, Carbon County begin a monitoring plan for the Hazle Creek and Quakeake Tunnel discharges. Weatherly Borough applied for a Trout Unlimited AMD Technical Assistance Grant to have Alder Run Engineering set up a monitoring plan and sampling locations. EPCAMR was there to help remove debris from a railroad culvert and setup weirs to help obtain more accurate flow measurements on the discharges.

EPCAMR produced approximately 52 maps or datasets from GIS layers for partners in 2010. In addition, EPCAMR staff provides technical grant writing assistance to our regional partners; **16** grants were submitted with EPCAMR assistance totaling approximately **$259,000** for projects in the EPCAMR Region. Submitted several "fee for service" proposals to industry and nonprofit partners alike to begin diversifying our funding rather than relying strictly on grants.

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

Operation and Maintenance of existing systems is an ongoing concern with watershed groups and development of maintenance manuals are key to smooth operation and continual funding. EPCAMR is continuing to aide in the development of Datashed.org as an online OM&R resource for groups. WPCAMR continues to maintain an OM&R Quick Response fund through a Growing Greener grant where groups statewide can apply to quickly repair a treatment system. EPCAMR promotes this funding mechanism to all of the watershed groups with treatment systems in northeastern and north central PA.

Catawissa Creek Watershed: Energy harvest grant transferred from development on the Jeddo Tunnel to the Audenreid Treatment System. 3.5 kW units taking the flow off the each of the 3 limestone tanks to help automate the flushing system. The cantilever design draft tube turbines need about 2,600 gpm to run, but only getting 2,000 gpm. ARIPPA grant awarded to modify the intake system, which will pull more water directly into the tanks. The Oneida # 1 Treatment System is working fine after repairs.

Micro-hydro turbines installed at the Audenreid Treatment System

Schuylkill Headwaters Assoc.: Some people at the conservation district are spending 8 hours a week dealing with OM&R of treatment systems in the Schuylkill County. Engineers think solar power automated aeration and baffles to direct the flow of the Otto Discharge near Branchdale may help.

Loyalsock Creek Watershed: Using 2 donated aluminum carport sheds to shade the treatment system and inhibit algae growth. System seems to clog less and therefore less maintenance, call it a success.

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

OSM no longer maintains a Treatment System Inventory therefore SRI, EPCAMR and WPCAMR collaborated to maintain Datashed.org and build upon it as an inventory of PA passive systems. The inventory provides vital statistics and O,M&R information on 289 systems in Pennsylvania costing over $77 Million to construct with an additional $3 Million in rehabilitation costs spent since 1994. EPCAMR, WPCAMR and the PA DEP Bureau of Abandoned Mine Reclamation continue to submit updates and corrections as they are discovered and constructed.

BRADFORD COUNTY - Schrader Creek Watershed Association – Awarded $291,000 in Growing Greener funding to design and build a passive mine drainage treatment system on Long Valley Run, a tributary to Schrader Creek. The discharge, known as the "#4 Discharge" is the last untreated discharge on Long Valley Run and is ranked as the third largest contributor of mine drainage to Schrader Creek. The project will be constructed on game commission land near a previously reclaimed surface mine. This project has the potential to improve 6 miles of Schrader Creek below where Long Valley Run enters.

LUZERNE COUNTY - Earth Conservancy – Awarded $400,000 in Growing Greener funding to design a mine drainage treatment system for the Askam Borehole mine discharge. The system will include an oxidizer, settling pond and relocation of 2000 feet of Nanticoke Creek. Also, the Earth Conservancy was awarded EPA Brownfields Funding to increase the capacity of the Espy Run Treatment System, currently under construction designed through a Technical Assistance Grant by PACD.

Partners watch as the Silver Creek AMD Treatment System fills up for the first time.

SCHUYLKILL COUNTY - Schuylkill Headwaters Association – The Silver Creek AMD treatment system was completed in July, 2010. It treats approximately 1,200 gallons/minute, removing metals and raises the pH of the mine drainage before it flows into Silver Creek. The SHA was also awarded $664,500 in Growing Greener funding to design and construct a system to treat the 1.7 million gallon per day discharge of mine drainage from the Mary D Borehole into the Schuylkill River.

EMARR inc.: Received $360,000 from the Appalachian Regional Commission to design and engineer a potable water treatment plant on Audenreid and supply to Humboldt Industrial Park and power a hydroelectric plant to operate the treatment system. This will be combined with $235,000 in Growing Greener funding and an EPA $50K TAG grant to study the energy potential on the Jeddo Tunnel. NREL from Boulder, CO will aide in the study.

Shamokin Creek Watershed Association: It isn't often these days that our partners can say that they have discovered a new discharge, having several extensive reports of discharges and watershed reports, but the SCRA can. Members recently discovered a discharge that may be emanating from the Franklin Pool (Mahanoy Creek Watershed). The AMD flows into several wetland on the surface where a good amount of treatment occurs before it makes its way to a cropfall, which sends the water back underground into the mine pool. The water most likely becomes re-polluted and adds more flow to discharges in the Bear Valley. The group is investigating ways to redirect water to keep it on the surface.

On a national level, mine drainage treatment systems are coming under scrutiny based on lawsuits that originated in West Virginia courts. The Keeley Decision, as it has been known, required NPDES

permits on 14 bond forfeiture sites, which was never a requirement for systems installed by nonprofit community based groups or the state. Also connected with this issue is the lack of a nation-wide Good Samaritan Act. Even though PA does have one, it does not cover this NPDES issue. PA DEP Section 105 Program plans to develop a permit for passive treatment systems that are built and run by volunteer groups which may treat these types of systems differently from a regulatory standpoint.

Reclamation to repair AML and reduce AMD:

Deep mine drainage is produced when clean water, either ground water or surface water, infiltrates voids in underground mines and meets up with pollution producing materials. Not much can be done to stop ground water from entering underground mines, but surface water can often be diverted from known infiltration points on abandoned mine lands and reconnected to headwater streams. Several abandoned mine reclamation / active re-mining projects are not only reducing health and safety problems, but also keeping clean water on the surface in the EPCAMR Region.

Three (**3**) AML reclamation projects were completed in 2010 in the EPCAMR Region by the PA DEP Bureau of Abandoned Mine Reclamation (BAMR) totaling **$11,333,392**: The TAYLOR SOUTH MAIN project in Lackawanna County near Taylor reclaimed 82.9 acres for $1,429,953. 2 projects were in Schuylkill County: The BLACKWOOD SHAFT project in Reilly Twp. reclaimed 2.0 acres for $240,094. LITTLE WOLF CREEK project in East Norwegian Twp. reclaimed 268.2 acres for $10,950,345 total. $3,511,303 was from SMCRA Title 4 and $7,439,042 was Growing Greener funded.

Forty-Nine (**49**) projects were in process or being planned in the EPCAMR Region by the PA DEP Bureau of Abandoned Mine Reclamation (BAMR) using a mix of Title IV, Appalachian Clean Streams Initiative and Growing Greener Funding: 23 projects in Schuylkill County (MINERSVILLE near Minersville 0.5 acres for $102,951, ST CLAIR EAST- NORTH PORT CARBON in Blythe at 170.0 acres, HECKSCHERVILLE in Cass Twp. at 0.1 acre, DUNCOTT NORTH in Cass Twp., PINE HILL NORTH in Cass Twp. at 250.0 acres, DELANO near Delano at 10.0 acres, NORTH SHEPPTON in East Union Twp. at 120.0 acres, DONALDSON in Frailey Twp. at 26.0 acres, NORTH DONALDSON in Frailey Twp. at 25.0 acres, COAL RUN NORTHWEST in Frailey Twp. at 44.9 acres, COAL RUN NORTH in Frailey Twp. at 28.8 acres, EAST GIRARDVILLE near Girardville at 45.0 acres, BOWMANS WEST near Mahanoy City at 50.0 acres, NEW CASTLE in New Castle Twp., ONEIDA WEST in North Union Twp. at 351.0 acres, NEWTOWN SOUTH 2 in Reilly Twp. at 51.4 acres, MARY D OPENINGS in Schuylkill Twp. at 0.6 acres, EAST SHENANDOAH near Shenandoah at 300.0 acres, TAMAQUA NORTH - MINE WATER PROBLEM near Tamaqua at 4.0 acres, PISGAH RIDGE WEST near Tamaqua at 110.0 acres, PISGAH RIDGE WEST near Tamaqua at 40.0 acres, LORBERRY JCT. NORTH, POPLAR RUN near Tremont at 170.0 acres, and STUMP RUN near Tremont at 44.0 acres), 12 in Luzerne County (CRANBERRY WEST near Hazleton at 167.6 acres for $1,697,185, CURRYHILL-AVONDALE in Plymouth Twp. at 136.8 acres for $3,954,100, GREEN MOUNTAIN in Foster Twp. at 68.0 acres, HANOVER BACK ROAD in Hanover Twp. at 100.0 acres, HANOVER RESERVOIR in Hanover Twp. at 200.0 acres, HOLLARS HILL SOUTH in Hazle Twp. at 239.8 acres, WANAMIE SE AND WANAMIE S.BRANCH in Newport Twp., ALDEN MOUNTAIN in Newport Twp., ALDEN MOUNTAIN EAST in Newport Twp. at 52.1 acres, HILLDALE in Plains at 32.0 acres, HIGHLAND PARK in Wilkes-Barre, and SWOYERSVILLE NORTH near Swoyersville), 5 in Lackawanna County (RIVERSIDE EAST near Archbald at 19.5 acres for $423,426, DOLPH COLLIERY MINE FIRE(GA) near Olyphant at 40.0 acres for $5,600,000, NORTH GOLF COURSE Taylor at 64.0 acres for $1,122,978, SOUTH CARBONDALE near Carbondale, COLLIERY ROAD near Dickson City at 0.1 acre, and JESSUP CEMETERY CHANNEL REPAIR near Jessup at 2.0 acres), 5 in Bradford County (FALLS CREEK in Franklin Twp. at 0.2 acres and 4 others associated with SCHRADER CREEK in Franklin Twp. at 0.5 acres each), 2 in Northumberland (WEST SPRING SLOPE in East Cameron Twp and MAHANOY MOUNTAIN in Zerbe Twp. at 0.2 acres), 2 in Carbon County (BEAVER BROOK in Banks Twp. 10.0 acres and LANSFORD NORTH 3 near Lansford 114.0 acres),

Miller Bros. Construction Inc., Schuylkill Haven, uses a dump truck to unload soil on the berm of the switchback road on Sharp Mountain in Pottsville. Photo: Nick Meyer, Republican Herald

1 in Tioga County (ARNOT #2 in Bloss Twp.) and 1 in Columbia County (ARISTES EAST in Conyngham Twp. 70.0 acres)

SCHUYLKILL COUNTY - City of Pottsville – Awarded $504,000 in Growing Greener funds for Phase VI of the reclamation of the cropfall mine subsidence features on Sharp Mountain in the City of Pottsville. The mine subsidences pose a major health and safety hazard and there is little on-site material available to use as backfill. This phase builds on the previous successful phases which beneficially reuse discarded materials to construct a structural plug to fill the cropfall holes on the surface. The project will address some of the most severe subsidences within the overall project area. By reclaiming the subsidence there will be a reduction in surface water infiltration which will reduce mine drainage pollution to the Schuylkill River.

Sullivan County – "Last big strip pit" being filled to reduce a dangerous highwall started in December. Moving lots of dirt in the winter.

Schuylkill Headwaters Association - Glendower Breech project was completed with money from ARIPPA and other sources to keep a West West Branch of the Schuylkill River away from a coal sediment and refuse filled AML feature. Also, the Wheeler Run project removed an old wooden flume and reconstructed a stream bed to keep clean water out of the Pine Knot mine pool.

Luzerne County - Earth Conservancy continues its efforts to reclaim AML to productive mixed use (industrial, commercial, residential and recreational) in Luzerne Co. Recently completed projects are Huber 3 (87 acres industrial), Franklin Bank (13.82 acre residential) and EC Silt Pond (36 acre recreational). Funding sources vary per project between their own funding, EPA and PA DEP or DCED.

Schuylkill and Northumberland Counties – Habitat for Wildlife Inc. has continues to clean up AML for hunting uses; New ATV park in development by Northumberland County Commissioners near Trevorton.

Luzerne County – A controversial R&D project near Hazleton, PA is still in progress to reclaim about 220 acres of abandoned mine lands with more than 10 million cubic yards of river dredge & fly ash. Since 2006, approximately 1 million cu. yds. of material from Ft. Mifflin has been used on site. Supplier and independent tests were performed before shipment of the dredge materials and after they arrived on the site in Hazleton. A few batches were rejected with substances over permitted levels.

ARIPPA member plants continue to burn coal waste and reclaim lands with coal ash. A flier was released for their 20th Anniversary that showed statistics from the industry. Approximately 4,500 acres of mine-scarred lands have been reclaimed in 20 years at no cost to taxpayers. To celebrate this milestone, ARIPPA teamed up with EPCAMR and WPCAMR to provide a 20th Anniversary grant. $20,000 was given to groups statewide for AML/AMD projects: $10,000 was split between 3 projects in the EPCAMR Region given to these organizations: Earth Conservancy, Schuylkill Headwaters Association and EMARR, Inc. ARIPPA hopes to continue to provide grant money annually for similar AML related projects of merit.

U.S. coal production decreased 8.3 percent as demand decreased mostly due to slumping economic conditions as well as the milder winter and cooler summer weather experienced in many parts of the U.S. in 2009 according to the U.S. Dept of Energy's Annual Coal Report. More than 6,400 coal mining sites were active in Pennsylvania statewide managed by 737 companies in 2010. 246 active mining companies renewed permits or started mining coal in the EPCAMR Region according to the PA DEP eFACTS and the Bureau of Mining and Reclamation. Also there is concern at a regional level with the way EPA is looking at instream conductivity levels. A study is being completed on valley fills in WV and the data is being extrapolated to cover PA. A conductivity reading above 500 would now impair a stream. These new strict regulations would have a drastic effect on remining and AMD treatment.

Removing Miles of Streams from the List of Impaired Waters:

EPCAMR and WPCAMR staff has been charged with the mission to assist the PA DEP Bureau of Watershed Management Section 319 Program with reassessing streams and removing improved stream segments from the Non-Attaining Streams category on the Integrated List of Waters (formerly the 303(d) list of impaired waters). 63 formerly AMD Impaired stream segments have been reclassified in the EPCAMR Region from 1998 – 2004. EPCAMR has been utilizing the RAMLIS tool and data from DEP and watershed groups to aide in identification. EPCAMR and WPCAMR provide web forms on their respective websites, in addition to their efforts, to allow watershed groups to Suggest a Candidate Stream for Reassessment

As a continuation of this work in 2010, EPCAMR submitted Catawissa Creek in Schuylkill County, REACHCODE(S): 02050107000031 through 02050107000051 to the PA DEP Improved Streams for Reconnaissance Survey list. The 38 segments in question entail approximately 20.67 miles in length. The reason these sections were submitted because 3 treatment systems are currently operating and removing AMD in the headwaters of the creek: Oneida # 1, Audenreid and Oneida #3.

A part of the process to remove a stretch of stream from "the list" is to prepare a Total Maximum Daily Load Study to show the amount of pollution that needs to be removed to put that stream back attaining its use. No streams were added to the list of TMDL Plans involving Mine Drainage that are approved or close to completion in the EPCAMR Region by the PA DEP in 2010. TMDL and Watershed Implementation Plan were under Public Comment this year. Approximately 50 people showed up at an EPA hosted meeting but the opportunities to make and verbal comment was very limited. Very little of the plan and public comment dealt with tributary strategies or AMD remediation. EPCAMR put a comments document together for EPA. A final narrative has been given to EPA although final modeling is not complete. The current focus of the TMDL and WIP appear to be on nitrogen, phosphorus and sediment.

Outreach Summary:

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 and WPCAMR's www.AMRClearinghouse.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. EPCAMR also maintains a "cause" on Facebook with over 200 subscribers to discuss important topics.

A few AMD Avengers and Pollution Posse pose for a candid photo after an epic battle.

EPCAMR and WPCAMR staff completed the "Abandoned Mine Drainage: an Epic Tale" video and publication. EPCAMR, Clearfield County Conservation District, PA DEP 319 Program and PA DCNR State Park staff played starring roles as producer Anne Daymut, WPCAMR, filmed and directed the video that explains the Formation of AMD with an entertaining spin. This was one of 3 collaborative educational projects requested by the PA DEP 319 Program over the next few years.

The Joint Mining Reclamation Conference of the 27th Annual Meeting of the American Society of Mining and Reclamation, the 12th Annual

Pennsylvania Abandoned Mine Reclamation Conference, and the 4th Annual Appalachian Regional Reforestation Initiative Mined Land Reforestation Conference was held in Pittsburgh June 5-11, 2010. This combined Conference provided a forum for the dissemination of information and discussions that may lead to change and innovations in public policy, mining, landscape restoration, and land management issues through research, Field Tours and Technical Workshops. A majority of the 325 attendees were from Pennsylvania, but those other states and countries were amazed at what we do in PA. Scholarships were provided and there was also some money leftover for 2011 conference. Visit http://www.pghminingreclamationconf.com for more.

Aside from the annual AMR conference, Pennsylvania played to host the National Assoc. AML Programs Conf. in Scranton in September, the West Branch Symposium V in Williamsport, and the first Watershed Summit in State College.

The 5th West Branch Susquehanna Restoration Symposium was held May 6th and 7th at the Genetti Hotel in Williamsport, PA. The purpose of the West Branch Susquehanna Restoration Symposium is to promote the West Branch Susquehanna Restoration Initiative, which is aimed at the cleanup of abandoned mine drainage throughout the West Branch Susquehanna watershed. This event serves as a forum for the exchange of ideas regarding abandoned mine drainage abatement in the region and provides an excellent opportunity for networking among volunteers, technical experts, students, and others interested in restoring land and water impacted by abandoned mine drainage. A field tour to the Bennett Branch AMD Projects was also available to attendees.

The Foundation for Pennsylvania Watersheds hosted the first Watershed Summit on May 1 at the Ramada Inn Conference Center in State College for watershed associations and their allies. The theme of the conference is, "What's Next? Building A Stronger Organization, Technical Advice for Improving Your Watershed."

EPCAMR continued its education programs including AMD tours, Community Connections to Our Watershed Forums, PA Environmental Professionals Conference, 2 Appalachian Coal Country Watershed Team Trainings, workdays with Wilkes-Barre Vo Tech students, cleanups and Tie Dye/Chalk Workshops. Several Environmental Education grants were awarded to EPCAMR to support education youth and adults on AMD/AML issues. Sources include the PA Fish & Boat Commission, Bear Creek Charter Foundation, Western PA Conservancy / Dominion, Foundation for PA Watersheds and Orion Grassroots Network. In 2010, EPCAMR generated approximately $700 in iron oxide sales, t-shirt sales, chalk sales, education programs, good search and network for good donations for the EPCAMR Environmental Education Fund (not including the petty cash that was taken in the robbery).

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