Eastern PA Coalition for Abandoned Mine Reclamation
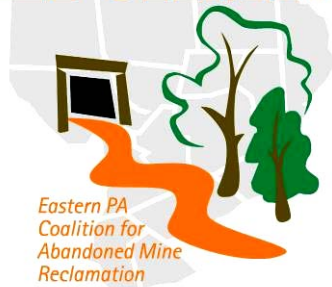
Michael A. Hewitt, *Program Manager*
101 South Main Street
Ashley, PA 18706
Fax & Main Line: (570) 371-3522
E-mail: hardcoal@epcamr.org
Website: www.epcamr.org

May 2013 Progress Report

Highlights:

- EPCAMR staff conducted a Tie Dye Workshop for 400 students at the PA Envirothon, participated in an AMR Conference Call, a Mine Pool Mapping Meeting with SRBC and a meeting about the Rausch Creek Treatment Plant in **Schuylkill County** with BAMR and SRBC.
- Downloaded transducer data 2x for the OFB discharge and continued to process cross section data for **Lower Lackawanna** Mine Pool Model. Learned a new method to digitize coal cross section data from DGI, makers of EarthVision and taught the method to EPCAMR intern.
- Sampled one treatment system in the **Wyoming Valley.**
- Completed RAMLIS Version 13 CD and sent out a notification to previous recipients of the CD. Created one map for EPCAMR partners.
- Upgraded 2 laptops to Windows 7 64-bit Operating Systems and updated programs to increase workplace efficiency in general.
- Updated www.epcamr.org, www.treatminewater.com and administered the EPCAMR facebook and Google Apps for Nonprofits accounts.

Education and Outreach:

- Added Iron Oxide Pigment back to the EPCAMR store at http://www.epcamr.org/store with a full description and different quantities available.
- As requested by EPCAMR Board Members, compiled "board packets" including staff reports, agenda, minutes from last meeting and treasurers report. These packets were sent to board members via e-mail a week prior to the board meeting. Also requested, the "new business" section of the agenda was modified to focus on future projects and strategies in an effort to be forward looking instead of dwelling on what was already completed. The new format could provide more of an opportunity to involve board member organizations in the future planning. The board meeting ended up being cancelled due to a lack of a quorum.
- Prepared for and conducted a Tie Dye Workshop at the Pennsylvania Envirothon at Juniata College in Huntingdon, PA. Approximately 400 competing high school students participated in the event. Volunteers helped EPCAMR staff setup about a dozen folding tables, more than 20 tubs of iron oxide pigment "dye" and baking soda rinse stations. The shirts were hung to dry on a nearby tennis court fence. The event was quite possibly EPCAMR's largest amount of t-shirts being tie dyed all-at-once.
- Created EPCAMR Program Manager monthly report for the previous month, gathered other staff reports, posted them to www.epcamr.org and sent to PA Department of Environmental Protection (DEP) 319 Nonpoint source (NPS) program staff. EPCAMR Staff prepared monthly reimbursement paperwork to send along as well.

- EPCAMR staff participated in an Abandoned Mine Reclamation (AMR) Conference Call in preparation for the 2013 PA AMR Conference which will be hosted by the PA AMR Conference Committee at the Ramada Inn and Conference Center in State College from August 8-10, 2013. Worked on 2013.treatminewater.com to add information to pages based on discussion by the committee.
- Met with PA DEP Bureau of Abandoned Mine Reclamation and SRBC staff to discuss possible future plans for the Rausch Creek Treatment Plant. BAMR would like to tap directly into the mine pools to eliminate added surface water that they currently treat. The plant has a finite amount of water it can treat and often times stormwater flows bypass the system. SRBC is interested in manipulating the Brookside and other mine pools that feed discharges to the creek to stabilize the flow seasonally to create storage and release capabilities. All of this was realized by EPCAMR's work to map the mine pools and calculate volumes of water in the manmade underground reservoirs. [SRBC]

Technical Assistance:
- Researched upgrade possibilities to the EPCAMR Store WordPress Plugin. Webmaster, Bill Frantz of BRF Designs, suggested Ecwid. The program seemed much easier to maintain than the existing ShopperPress Plugin, but only allowed 10 items to be maintained on the store for free. Anything over that required a premium account at $15/month. An upgrade to ShopperPress was required to fix the error being experienced currently in the store. This required a one time membership fee of $79.99 to http://www.PremiumPress.com for the upgrade, then all future upgrades would be free. I also found an online coupon to take $20 off the price, which reduced the final price to $59.99. The upgrade should have transferred all the information over automatically. Unfortunately, the upgrade did not work and the plugin had to be reinstalled and all the store items were lost and had to be added back one at a time.
- Sampled the Espy Run Treatment System in several locations to determine the effectiveness of the system for Earth Conservancy (EC). Samples were taken in 7 places in, out, and between components to determine a load reduction of Iron and Acidity to Espy Run. Cleaned out the half pipe distribution to the new ponds, which was completely plugging the system only a month after the previous cleaning. Rick and Nick from EC were also there to evaluate the system and to find a flush valve that should cleanout the intake pipe system. The valve was found and left open until it shut off all the flow to the new ponds, but it seems that this only diverts about 1/2 of the water as a flush right back into the intakes of the old system. The valve was left open to see if this changed with time. EC has been looking for a way to increase the efficiency of the system and may manipulate the berms between the new ponds to increase retention time of the water for maximum iron removal. Currently too much water may be flowing through the new ponds to allow ample settling time. Prepared a spreadsheet of the sampling data. [EC]
- Began to look at the Lower Lackawanna raw data for the 3D model that Justyna has been producing. Some of the data will error out during computation of the second script which merges the cross section data with the basemap. With further analysis, the number of points seemed to matter for the script to produce a full merged data product. The magic number turned out to be 41 points. This was never a problem in the past and had started being a problem since May 1st. Contacted the maker of the scripts, Skip Pack from DGI, to see if he could lend any insight to the issue. Justyna began redrawing the cross sections with 41 points as a minimum. There have been many technological setbacks with processing these datasets, which have been mostly been ESRI and DGI software related, and have caused EPCAMR to request several work time extensions from SRBC. [SRBC]
- Upgraded 2 Dell Precision Laptops to Windows 7 64-bit operating systems. Initially only 32-bit operating systems were installed which limited their memory capacity usage and some programs were built specifically to perform better on 64-bit machines. Programs were

reinstalled (including 64-bit versions if available) and documents and settings were transferred from external file storage backups.

- Downloaded and installed EarthVision 8.2 from Office of Surface Mining's (OSM) TIPS server on a Windows XP(32-bit) and 2 Windows 7 (64-bit) laptops, as requested by Mike Dunn, in an effort to report any potential errors that may come up in the installation. Only one error came up on the Windows XP machine and was reported back to Mike for instruction updates.
- Updated "Skips Scripts and other TIPS for EarthVision" document to record what has been learned recently with the errors and some clarification on some techniques that had been building up as side notes on older versions of printed copies.
- EPCAMR staff met with Tom Clark, SRBC, to discuss progress on the Mine Pool Mapping project, download Old Forge Borehole (OFB) transducer data and to look for a borehole to the Carbondale Mine Pool near Meredith Street in the Mayfield/Carbondale area. Once again the boreholes in the Carbondale Pool prove difficult to locate. It would be helpful to have to know a current day elevation of this perched pool which does not have its own discharge, but is connected to the Jermyn Pool. There is one more prospect to field verify described by Todd Wood. [SRBC]
- Completed RAMLIS Version 13 CD with new data from Pennsylvania Spatial Data Access (PASDA) Server from PA Department of Environmental Protection (PA DEP), PA Department of Transportation (PennDOT) and other agencies. Also updated the "Read Me" text file to show the updated layers and added a notification to some files with "[L]" to indicate that certain datasets are very large (over 20MB) and take significant system resources and time to load. Users should allow more time when working with these files, or un-check them (when not needed) to speed things up. Sent out a notification to the list of individuals that previously ordered versions of the RAMLIS CD.
- Created a map for Tim Ference, Friends of the Nescopeck, showing aerial imagery and 2 foot LiDAR Contours of the Jeddo Tunnel Discharge area. The Friends continue to work toward an partnering with the county to build an environmental educational center near the Jeddo Tunnel. Also, there is a unique opportunity to retrofit a decommissioned sewer treatment plant just downstream of the discharge to treat at least a portion of the flow. The Friends and EPCAMR would like to build support for this idea and possibly get some funding sources in line to treat one of the largest volume discharges in the Anthracite Region.
- Traveled to the Lackawanna River Watershed to download OFB transducer data and meet with EPCAMR President, Bernie McGurl. Lackawanna River Corridor Association (LRCA) staff wanted to transfer their ArcGIS license from one computer to another. In a previous visit, I aided staff in finding their existing license number, but the install CDs were missing. Prior to this trip, I dug through a box of out dated software to find ArcGIS version 9.0 install CDs to let them borrow for reinstallation purposes.
- Instructed EPCAMR volunteer on how to process digitized coal cross section data into scattered data for EarthVision to split up the work flow and possibly complete the work quicker. [SRBC]
- Downloaded census data from www.census.gov to attach to existing county and municipal GIS databases. The Foundation for PA Watersheds was interested in the data to see if there was a correlation to poverty and being near abandoned mine lands (AML). The specific datasets contained recent census data on median individual and household income, home worth and other economic statistics. Made several maps with the data and maps show a good correlation between AML and the economic factors.
- Created invoices for time spent on Mine Pool Mapping projects for SRBC and LRCA.
- Sat in on a Web Conference with DGI staff Skip Pack and Robert McFaul to learn a new way to "heads-up digitize" coal cross sections directly in EarthVision. The new method will replace the old 2 script process and involves setting up traverse curtains. The cross section image is then superimposed on the traverse curtain and veins are traced directly in the 3D viewer. The process seems promising, but TIPS servers went down severing access to the 3D viewer. Will

retry the process when the servers come back up. Added notes to "Skips Scripts and other TIPS for EarthVision" document in the mean time.

- Received a donation of some waders from an EPCAMR facebook friend and frequent visitor of headwater streams in the Wyoming Valley, Bob Kent. Bob is an avid wild trout fisherman and recognizes the work that EPCAMR is doing by making donations periodically when he comes back to discover new wild trout fishing areas. His newest discovery was Coal Creek in Plymouth. He sent along several photos and verified that wild trout exist in the headwaters even after the devastation that the creek experienced 2 months before the Infamous 2011 Flood.

[ ] - Denotes funding source where applicable.