

EPCAMR



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

April 2012 Progress Report

Highlights:

- EPCAMR staff lead students on a tour of AMD sites, and participated in an AMR Conference preparations. Designed a car magnet to market EPCAMR during field work.
- EPCAMR staff sampled 16 boreholes in the Lackawanna Valley, 26 in the Wyoming Valley. Measured flow on 3 discharges, setup a transducer to continuously monitor water levels on 1. Updated 2 GIS datasets, completed a 3D mine pool model and calculated volumes for the western tip of the southern field related to the mine pool mapping initiative. Researched Water Quality probes for possible future purchase.
- Added an informational page to www.epcamr.org. Administered the EPCAMR facebook page and Google Apps for Nonprofits account.

Education and Outreach:

- 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. Aided executive director in preparing the reimbursement and sent to 319 program staff.
- Responded to a conversation on the pyritebad listserve related to a discussion on Field Sampling Precautions and finding a speaker that could cover this topic at the AMR Conference.
- Designed and ordered “Orange you glad we are cleaning up AMD?” car magnets. These magnets can attach to the door of a vehicle and may help in marketing EPCAMR or at least notify onlookers that the presence of our vehicles means sampling is being done in the area.
- EPCAMR staff participated in a conference call with Anthracite Region Independent Power Producers Association (ARIPPA) and WPCAMR staff to iron out details on the Technical Symposium and Fundraiser coming up in June at Toftrees Resort in State College.
- EPCAMR staff lead Wilkes-Barre Area school students from Plains Solomon 6th grade class on a tour of AMD sites in the southern Wyoming Valley 2 days in a row. Wilkes-Barre Area School District was awarded a PPL grant to construct and learn about solar power. EPCAMR will be constructing a “solar kiln” to dry iron oxide and the kids will use the dried pigment to tie dye t-shirts. [PPL]
- Compiled several documents into a 2011 EPCAMR Strategic Plan and sent to the EPCAMR Board for approval at the next meeting.
- Created a “Coal – Types, Formation and Methods of Mining” page on www.epcamr.org with illustrations and a video.
- Helped setup and directed traffic for the Misty Ridge Project Open House, a greenway project along the Lackawanna River. The site was formerly the site of the Old Forge Breaker and had some contaminants that were sectioned off. The site was recently acquired by the Lackawanna River Conservancy and storm water basins and a water trail were completed. Several legislators, media photographers and community members showed up to participate in a

ceremonial tree planting hosted by LRCA. A housing development will be placed on the hill above the greenway site with really nice views of the river. [LRCA]

- Announced the ARIPPA Reclamation Awards Request for Proposals (RFP) via an e-mail to EPCAMR region watershed groups and conservation districts and posted the article on www.epcamr.org.
- Transcribed minutes, created a tentative agenda and sent a reminder about the upcoming EPCAMR Board Meeting.

Technical Assistance:

- In an effort to speed up and make a more exact model where faults did not affect the surface, I calculated a grid of the surface for the area covered by the I-529 based off a Digital Elevation Model (DEM) with earthVision. Initially an error related to “null grid nodes” was prevalent, but Dynamic Graphics Inc (DGI) staff were able to trouble shoot that the “clipping” method was not actually clipping, but hiding portions of the grid and therefore causing the error. Clipping should be done with the graphic editor function in earthVision. [SRBC]
- Updated borehole water level charts for the Lackawanna basin. Added newly found / day-lighted borehole data, as well, to fill in data gaps. [LRCA]
- Installed Global Mapper on EPCAMR computer and viewed Wyoming Valley mine pool mapping data. The program is an alternate to the ESRI ArcGIS Mapping program, but has a lot of built in tools that ArcGIS does not (or makes available for a premium). For example, it can read GeoTIFF and GeoPDF files and export them and it also has a native 3D data viewer. I would really like to thank the Office of Surface Mining (OSM) Technical Innovation and Professional Services (TIPS) program for making this program available.
- Met with a concerned resident who has been experiencing water in her basement more frequently since the flooding last summer and wondered if it had anything to do with a change in the mine pool under her home in Kingston. We were able to use Global Mapper current borehole water elevations in the area to surmise that the problem was probably not related to a rise in the mine pool. The pool in that area was more than 30 feet below the surface.
- Received a quote on a HACH HQ30D water quality probe that can measure in-stream dissolved oxygen (DO), pH, conductivity, temperature and oxidation reduction potential (ORP) for just under \$3200. For comparison, a YSI 556 Multi-Probe System measures the same set of parameters and costs just under \$3100. A YSI Pro Plus Meter measures the same parameters for just under \$2800. A Hanna Instruments Multi-parameter Water Quality meter measures the same set of parameters and costs just under \$2200. The last 2 can measure all 5 parameters at once, while the others need the operator to switch out probes for different readings.
- EPCAMR staff traveled to the Old Forge Borehole and met with Lackawanna River Corridor Association (LRCA) and PA Tectonics staff to install a pressure transducer. The process took 2 days and required a lot of preparation work to secure an access slot in the cap over the culvert, secure a stilling well pipe and barrel to store the computer hookup cable. The transducer was then placed in the stilling well pipe and started to take continuous depth measurements. Also took flow readings at the Old Forge Borehole discharge. [LRCA]
- Installed mirrored security film on all 6 windows in the EPCAMR Office. The film allows filtered light to come in and allows staff to see out, but does not allow people on the outside to see in. This is a security step that was taken as there has been increased activity on the road behind the office that leads to the Huber Breaker.
- Aided EPCAMR interns at they added sampling locations to a map in ArcGIS for the Solomon Creek Coldwater Heritage Plan. [PA TU]
- EPCAMR staff traveled around the Lackawanna Valley to conduct water level monitoring of 15 boreholes related to the Scranton Metropolitan Mine Pool. Monitored the Jermyn borehole as well which is connected to the Jermyn Mine Pool. Also monitored flow at the Duryea Breach discharge. Added data to a spreadsheet created by SRBC and e-mailed to partners. [LRCA]

- Clipped files for a consulting firm from Virginia related to the mine pool features of approximately a 1/3 of the Western Middle Anthracite Coal Field.
- Used Global Mapper to convert several GeoPDF to GeoTIFF maps related to active mining permits and mine pools from the PA Department of Environmental Protection's (PA DEP) Pottsville District Mining Office (DMO). GeoTIFFs can be read by ArcGIS, but not GeoPDFs. Continued adjusting southern field mine pool boundaries based in these maps. [SRBC]
- Sent Kaska and Silver Creek Mine Pool boundaries to Jim Charowski, PA DEP BAMR, as requested at the last Mining Reclamation Advisory Board (MRAB) meeting.
- Created polygon files to show the geographic extent of the veins for later use in the 3D model of the western prong of the Southern Anthracite Coal Field from Tower City to Lykens (aka. the area covered by the I-529 report). The model would error when the clipping polygon was used, so DGI support staff recommended removing the "lollypop sticks", or thin areas that shoot off a larger underground mined out area. These features should be represented by a tunnel feature. Also, found out that earthVision cannot handle multi-part polygons and each part of the mine must be represented by a separate polygon with its own attributes (ie. Markson Lewellan Formation Veins vs. Markson Lykens Valley Veins). [SRBC]
- Calculated a volume of mine water in the Markson Mine Pool to be ~29.9 Million Gallons on the South Dip and ~104.6 Million Gallons on the North Dip. The Rausch Creek Scarlift, by the the Anthracite Research and Development Co., estimated the South Dip to contain 100 Million Gallons (an incorrect value at the discharge elevation of 861') and did not calculate the North Dip. Calculated the Brookside Mine Pool to be ~1.96 Billion Gallons of water, mostly residing in the Lykens Valley Veins. This number is only 200,000 gallons off the estimated 1.94 Billion Gallon estimate given by S. H. Ash in the US Bureau of Mines Report. Similar numbers were expected since the Brookside is gravity drained to an elevation of 906' through the Valley View Tunnel. [SRBC]
- Monitored flow at the Old Forge Borehole and Duryea Outfall for the 2nd time this month as planned (bi-weekly monitoring). Checked the desiccant to make sure it was still blue, meaning that the transducer cord was still dry and downloaded the data to a computer for analysis. [LRCA]
- Downloaded a trial version of Symantec Endpoint Protection, an antivirus/spyware/firewall protection program for commercial uses and is available through TechSoup.org. This is the successor to the Symantec Antivirus Client that EPCAMR used for many years but was no longer compatible with Windows 7. Currently, we have been using AVG Antivirus as a stopgap, but are looking for a more permanent program.
- Completed time sheets and grant time allocator sheets for future invoicing.
- Attended the 6th West Branch Symposium at the Ramada Inn and Conference Center in State College. Picked up approximately 400 AMD: an Epic Tale DVDs that were produced via the Clearfield Conservation District.
- Traveled around the Wyoming Valley to monitor water levels in 26 boreholes in the Wyoming Valley. The Glen Lyon Discharge was not flowing, but was able to take flow and pipe full measurements on the Askam Borehole Discharge to calculate the amount of mine water flowing [SRBC].

[] - Denotes funding source where applicable.