



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

March 2015 Progress Report

Highlights:

- EPCAMR staff participated in 1 AMR Conference Call, an AML Campaign Meeting and conducted an AMD Site Tour
- Updated ARIPPA Award paperwork and posted to www.epcamr.org for colleagues to submit grant proposals.
- Continued processing 181 TIFF, georeferenced 121 SID files and digitized features from 62 maps for the MSI Mine Map Processing Grant in March.
- EPCAMR staff took daily gauge readings at **Askam Boreholes** and created a flow chart to equate gauge readings to flows; Conducted chemistry and flow sampling additionally at **Loomis** and **South Wilkes-Barre Boreholes** discharges.
- Created 3 shapefiles, then edited 4 shapefiles, and 1 dataset for EPCAMR partners
- Updated www.epcamr.org, www.datashed.org, and 2015.treatminewater.com; Administered the EPCAMR Facebook and Google Apps for Nonprofits accounts.

Education and Outreach:

- Shared Program Manager files with other staff through the M: drive, a network accessible company drive. The files are essentially backed up from my personal computer to the M: drive using a program called SyncBack.
- Started to fill out a Pittsburgh Penguins donation request form to obtain merchandise for the PA AMR Conference silent auction, but half way through the process I realized that we had to be from the Pittsburgh Area to get the donation. Forwarded what I had completed to Anne Daymut at WPCAMR, who would have a much better chance of being from the "Pittsburgh Area".
- Updated the ARIPPA Reclamation Award paperwork for the 2015 grant round. Posted to www.epcamr.org and forwarded off to Anne Daymut to publicize in the WPCAMR Region.
- Created a blurb for Executive Director and Program Manager tag-team presentation on "Mine Pool Mapping in the Anthracite Region" for the AMR Conference in June and forwarded to Anne Daymut. Anne is accepting and compiling information for the presentations for the website and printed programs.
- Updated www.treatminewater.com Presentations page with recent presentation approvals, updated presentation titles, and presenter changes. Addition of presentation blurbs will be later when Anne compiles them. Added 2 sponsor logos to the Sponsors page. Posted a request for presentation document as an article, put a 5th slider image on the homepage asking "Interested in being a Sponsor?" and added "Sponsor a Watershed Golfer" idea to the Sponsors page.
- Completed a survey at the request of PA Spatial Data Access (PASDA) staff regarding the NHD+ (National Hydrography Dataset) layers from the US Geological Survey (USGS). It looks

like they will be upgraded soon with 3D data. USGS was trying to acquire comments to see how they could make the data better for users. PA DEP Integrated lists are built on NHD layers.

- Updated Coal Info Page on www.epcamr.org. There were several broken links that had recently been found with a WordPress plugin that sends email notifications when broken links are detected. Found these images and saved them to our website instead of relying on URL links to remote websites. Also, reformatted the page with an "Image Borders" WordPress plugin which fixed broken formatting in recent updates to WordPress.
- Posted an informational video of the South Wilkes-Barre Boreholes sampling to Facebook.
- Brainstormed ideas for spending extra money in the Mine Subsidence Insurance Mine Map Processing Initiative. Due to the way the processing was calculated (piece by set time) in the grant and the way out time is billed (hourly reimbursement), the scope of work will be completed before the money is spent. EPCAMR staff were much more efficient in processing the maps, and the state will benefit by getting more maps processed for the same amount of money. Looked at our current piece by time rate and calculated number of estimated maps we can process before the money runs out [MSI].
- Investigated the subsidence potential for a resident of North Street in Plymouth, PA.
- Updated the Borehole Campaign spreadsheet for the Northern Field based on ones that were paved over and otherwise inaccessible.
- Researched and ordered a YSI Pro Plus meter to sample pH, dissolved oxygen (DO), oxidation reduction potential (ORP) and Temperature simultaneously. The probe should cut sampling time in the field and produce more accurate results than HACH field testing kits. Conductivity is also a desired parameter, but the cost to add the additional parameter to the setup was several more than 2x as opposed to ordering a separate conductivity probe. Also the Lackawanna River Corridor Association (LRCA) may have a conductivity meter that it does not use often and or may need some care. They are interested in loaning it to us.
- EPCAMR staff met with a representative from GiveGab, who instructed us in how to start our individual "asks" to begin seeking donations for the campaign to benefit EPCAMR. To sweeten the pot, GiveGab promised to match all the donations that came in by the end of the month.
- EPCAMR staff participated in an AMR Conference Committee Conference Call to coordinate efforts with the committee as they continue to iron out details and get speakers/sponsors for the conference in 2015.
- EPCAMR staff led a tour of high school students in the PA Department of Conservation and Natural Resources (DCNR) Community Connections to Our Watershed program. The tour group met at Kirby Park then on to Verve Vertue in Dallas to see Iron Oxide pigment being incorporated into art, then on to several abandoned mine discharges in the southern Wyoming Valley including one that is currently being treated.
- EPCAMR staff conducted some spring cleaning to rearrange the office and make more room for our Watershed Outreach Specialists, Gabby and Liz who share a desk. Found and cleaned up an antique desk. Moved the plotter into the Program Manager's office which required the purchase of network equipment to support that move.

Technical Assistance:

- Continued to attempt to make a De-listed Streams layer, but several factors were impeding progress. Last month I created a layer by spatially comparing the 2004 (303D list) and the 2014 Integrated List of Non Attaining Streams and deleting the ones in common in ArcGIS. Hypothetically, the segments left were the streams that had been removed within that 10 year span, but there were streams placed on the list in error as explained by DEP. This was one issue. Another key issue was that the 2004 303d list GIS layer was in a different format than the current day Integrated list. In about 2006, the DEP transferred their streams data to the National Hydrography Dataset (NHD). Prior to this the dataset was based on their own streams layer, which is now available as a Historic Streams Layer. To combat this issue, I selected streams in the 2015 Integrated List of Attaining Streams that corresponded with the "de-listed

streams” layer created last month. There were 4544 segments that matched up. This was the starting point for a new 2015 Integrated List De-listed Streams GIS Layer. Joined two tables supplied by the PA DEP 319 Program. All the tables had the Stream Reach ID in common. I went through county by county and deleted the streams that were added in error initially, then ones that were neighboring but not impacted (due to the ArcGIS selection process). This resulted in approximately 880 segments left or 432.5 miles of streams that were delisted due to cleanup of AMD. Created a map and posted it to EPCAMR’s facebook page for comments.

- Created an Anthracite Grid line layer in ArcSDE Geodatabase for the Mine Subsidence Insurance (MSI) mine map processing initiative. Grids are shown on many mine maps and help line up the surface maps to the underlying coal vein map. We have found that there is not one grid system for the entire anthracite region or coal field, but there are common grids to a mine or series of neighboring mines. Having this grid system in digital format should speed up the georeferencing process in that we can start off lining up the map image to the grid instead of trying to find street intersections (if available and/or often not labeled). Of course, actual control points will still be set using houses and roads lined up to aerial photos with these initial grid control points deleted before saving the georeferenced information.
- Fielded questions from ARIPPA about AMD Impaired Streams Maps and Statistics recently posted to our facebook page for comments. ARIPPA was interested in officially releasing the map and statistics that were posted, but unfortunately the de-listed stream data is still draft and was just sent to DEP for review. EPCAMR will release the data when it has properly been reviewed.
- Continued to work on current mine pool boundaries, underground mine boundaries, barrier pillars and flow direction lines for the Wyoming Valley for the Mine Pool Mapping Initiative with the Susquehanna River Basin Commission (SRBC). Found 3 new mine pools in the Wyoming Valley that have their own discharges at the Loomis Seep, the Doran’s Farm (Huber) Discharge and the Inman Collapsed Borehole. It seems that in the middle of the valley, numbered veins above the Snake Island hold their own mine pools due to the 100’+ rock formations between the veins. These veins were typically strip mined, but when underground mined they were almost never connected to the deeper veins. It is interesting to note that these veins have mild chemistry in regard to heavy metals, but pH is typically lower (very similar to discharges that come from the Red Ash veins exclusively), strengthening the idea that the net alkaline high iron mine drainage comes from water that resides in (or passes through) the Hillman through Snake Island coal veins where several alkaline rock formations exist.
- Sampled the Askam, Loomis and South Wilkes-Barre Discharges for flow and chemistry.
- Met with Hedin Environmental and Earth Conservancy (EC) to talk about getting their assistance with the Askam Treatment System. EC applied to Trout Unlimited for a Technical Assistance Grant (TAG). They suggested a dye test to find residency time. This was researched and SRBC can do it, but the flows are too high. The flow needs to be at or below 5,000 gpm. EC requested that we monitor flow daily by taking measurements at the stream gauge.
- Traveled to Huntingdon, PA with Mine Map Program Coordinator and Watershed Outreach Specialist to participate in an AML Campaign Meeting at Juniata College.
- Printed a list of EPCAMR assets to be revised by interns as they go through recent purchases. Once complete, the additions will be recorded in the EPCAMR Grant Tracker excel sheet.
- Taught EPCAMR volunteer to tag and scan mine maps from the Blue Coal Collection.
- Sampled flow and chemistry at the Askam Boreholes Treatment System, the Loomis Seep and the South Wilkes-Barre Boreholes. Reported the results to Earth Conservancy [EC].
- Created a flow rating curve based on several calculated flows and stream gauge height measurements for Nanticoke Creek / Askam Boreholes discharge channel and South Wilkes-Barre Boreholes discharge channel [EC].
- Updated several Schuylkill County AMD Treatment Systems on www.datashed.org. Several diversion wells, open limestone channels, anoxic limestone drains and vertical wetlands were

not functioning based on a discussion with PA DEP Pottsville District Mining Office (DMO) and Schuylkill Conservation District staff.

- Updated WordPress on the EPCAMR Store at www.epcamr.org/store.
- Continued to adjust mine pool boundaries for the Wyoming Valley in ArcGIS based on the 3D model, mine maps and current borehole water level readings. Discovered that the “boils” that were popping up in the levee during the 2011 flood near the Forty Fort Athletic Fields may have been related to backfilled underground mine features. Luckily, in 2011, quick response to reinforce that area resulted in a successful dismissal of a potential catastrophe.

[] - Denotes funding source where applicable.