



## Eastern PA Coalition for Abandoned Mine Reclamation

**Michael A. Hewitt, GISP**  
**Program Manager**  
101 South Main Street  
Ashley, PA 18706  
Main Line: (570) 371-3522  
E-mail: [hardcoal@epcamr.org](mailto:hardcoal@epcamr.org)

### September 2022 Progress Report

#### Highlights:

- EPCAMR staff scanned, georeferenced, mosaicked & digitized mine maps for the **PA DEP MSI MMG** program. QA/QC checked work.
- EPCAMR staff participated in a weekly **PA AML Campaign** call, filming for Brookie Saves a Stream EE video & evaluated 2 wetlands in the **Newport Creek Watershed** for **NFWF**
- Sampled AMD Treatment System on **Nanticoke Cr.** & started collecting transducer data for **EC**; sampled 3 AMD TS on **Loyalsock Cr.** for **LCWA & Sullivan CD.**
- Updated [www.treatminewater.com](http://www.treatminewater.com) and [www.epcamr.org](http://www.epcamr.org); administered G Suite for Nonprofits and social media sites; maintained GobbaDaPile in-house domain server

#### Education, Outreach and Admin.:

- Added an adapter to the drill, a metal auger, a screen to the intake and new bolts on legs of Iron Oxide Processor. Tested and found that it would screen out bigger clumps/rocks that broke the plastic auger over the summer. The bolts on the legs should allow us to take them off for easier transportation.
- Completed edits on ARIPPA Award Application as suggested by Cristy at ARIPPA and Andy at WPCAMR. Cristy decided to give the application and instructions a new fresh look to hopefully get more groups to apply (plus \$2K in additional funding from an anonymous donor). I was happy to oblige as she was offering to take over updates.
- Updated a proposal to sample Askam Treatment System for the Earth Conservancy (EC). Also was asked to draft a proposal to collect and chart transducer data from 5 sites in the Nanticoke Watershed for EC. Both were quickly approved. [EC]
- Ordered more 0.45um nylon syringe filters to create filtered samples to test dissolved iron, phosphate and turbidity in the field.
- Contacted TechSoup on behalf of SHA to apply for free Google Workspace for Nonprofit account. They had Google Apps for Nonprofits but recently Google restructured the system and required verification of nonprofit status for the new workspace apps. Google automatically converted their account to a business account and to a 2-week trial. They lost access to their emails at schuylkillheadwaters.org. I filled out the online forms to verify their status again and reported back that it should only take a few days to restore their email accounts.
- EPCAMR staff met with Terracon and Skelly and Loy to learn they merged in 2020. Caught up on potential projects for the AMLER, SMCRA and BIL funding. Focused on stream resurfacing in the Wyoming Valley, but also potentially solar on AML sites.
- EPCAMR Management staff met with BlueWave Solar to review report on Solar Suitability of a site in Humboldt Industrial Park. They asked for parcel boundaries on the mine maps and RAMLIS map that were provided in the report. Also digitized several elevation points and calculated their distance from the surface to display "traffic light" color-coding for subsidence potential. Sent these revised files back for review. [BlueWave]

- Reviewed and commented on an Askam Treatment Recommendations report by Tetra Tech as requested by EC.
- EPCAMR staff participated in an improv class for educational video later in the week. [ISI]
- EPCAMR staff participated in filming Day 1 Brookie Saves a Stream at Solomons Creek. [ISI]
- EPCAMR staff participated in filming Day 2 Brookie Saves a Stream at Office. Aided in the background and picked up food for staff and film crew over the 2 days when I wasn't being filmed. [ISI]

### **Technical Assistance:**

- EPCAMR Staff evaluated 2 wetland sites in Newport Creek Watershed using ATV. [NFWF]
- Cut plywood designed to hold a weir in place at the Nanticoke Headwaters flow monitoring station near Witinski Villa. Ordered longer stainless-steel bolts for the weir revamp. [NANCR]
- Worked on an issue where Shawnese was having problem with maps not showing in a Carbondale Quad Vein Mosaic. Suggested several fixes including verifying the MinPS and MaxPS value were good. She tried upgrading to ArcGIS Pro 3.1, but that did not fix the issue. Asked her save footprint as a shapefile, then make a new geodatabase and mosaic. Add the maps to the new mosaic and import the footprint. The last fix worked. [MSI]
- Worked on QA/QC verifying digitizing of the A Vein, Abbott and Bottom Baltimore mosaics of the Nanticoke Quadrangle. I initially had issues editing the data. Researched the issue and discovered I needed to mark the layers for editing in the table of contents in ArcGIS Pro 3X. Also experienced issues with ArcGIS moving really slow. Researched display options that would speed up the program. Discovered that my computer has 2 graphics cards: Intel HD P630 and Radeon Pro WX 4130. Set ArcGIS Pro to work with the Radeon card in Windows settings which has more capacity and threading capabilities, but the Intel card was rated higher in research. [MSI]
- Worked on QA/QC verifying digitizing of the Bottom Baltimore, Bottom Hillman, and Bottom Red Ash veins of the Nanticoke Quadrangle. The new settings seemed to make ArcGIS Pro function a little faster. [MSI]
- Search for boreholes into the mines in the vicinity of the Bear Creek Project. Sent a report with a cross-section and snapshot of a mine map to Tom Clark at the Susquehanna River Basin Commission (SRBC) suggesting we look nearby the landowner, Kerry Teter's, house for a shaft or airshaft. Edited the Lykens Valley Bear Gap Tunnel to extend it past the Coal Mountain Fault as shown on some other maps I had discovered. [BEAR]
- EPCAMR staff working on the Mine Mapping Grant mentioned that the PA Mine Map Atlas was down for a time and they were unable to download georeferenced SID images. Discovered that there were 2 folders in the National Mine Map Repository (NMMR) for Jermyn Colliery. I downloaded and sent the "Jermyn" folder for processing to SID images. Needed the "Jermyn2" for the Carbondale Quadrangle. [MSI]
- Started looking at Bottom and Top Ross Veins mosaics for Nanticoke Quad and noticed some discrepancies especially in the Glen Lyon Colliery. The same map (different versions) were used in both mosaics and then digitized. Potentially found WBDO\_059-06-0S-02 and WBDO\_059-14 for Top Ross. Need to sort it out.
- Sampled Loyalsock Upstream, Downstream, & in/out of 3 treatment systems (Connell B Vein, Connell C Vein and Gutten Drift). Recorded data in a database for reporting to the Sullivan Conservation District (SCD) & Loyalsock Creek Watershed Association. [LCWA]
- Switched and moved Top Ross points and UMA in the northern portion of the Glen Lyon Colliery to Bottom Ross in the Nanticoke Quad digitizing. Digitized CEP and UMW off WBDO\_059-06-0S-02 for Priscilla Lee Basin (southern portion) and WBDO\_095-14 (several hard to distinguish veins) for the northern portion of the Glen Lyon colliery. [MSI]
- Added WBDO\_059-06-0S-02, then regeo and added WBDO\_095-14 to the Top Ross Mosaic in the Nanticoke Quad. Digitized elevation points in Glen Nan Colliery Bottom Ross map WBDO\_109-05 & 04. Drew Underground Mine Area boundaries for the southern portion of Susquehanna Colliery from NMMR maps in the Bottom Ross Mosaic. Added Coal Elevation Points for the Susquehanna colliery which were missed. [MSI]

- ArcGIS version 3.1 was still moving really slow. Began to research a fix. Determined that I did not have the recommended RAM installed in my computer. Also, the windows settings applied earlier did not work because the authentic graphics card drivers were not installed. We use Driver Booster to help keep our drivers up-to-date, but sometimes it will substitute a generic driver. Installed older authentic drivers and added 16 GB RAM recycled from an older computer. Started digitizing elevation points in Stearns Colliery from Bottom Ross mosaic in the Nanticoke Quad. The changes made a noticeable speed improvement. Started to poll other staff working on the MMG program about their experience and specific computer settings. [MSI]
- Started digitizing Alden Colliery and noticed the northern most section has numbers in the negatives that did not make sense. Was this because of an offset (ex 500 or 1000 above mean sea level)? No. I downloaded and checked the cross sections BLUE\_WAN-0A-XS-01 to 03 and images in the 40s to find out that 2 faults actually drive the upper veins below the lower veins. Between the faults the veins are vertical. Continued digitizing Susquehanna Colliery Coal Elevation Points from the Bottom Ross Mosaic in the Nanticoke Quad. [MSI]
- Downloaded 14 Colliery folders of NMMR maps converted to SID and placed them on the X drive. Notified staff so they can use them in mosaics. Continued digitizing Susquehanna Colliery Coal Elevation Points from Bottom Ross Mosaic in the Nanticoke Quad. [MSI]
- Finished digitizing Susquehanna Colliery coal elevation points from Bottom Ross Mosaic in the Nanticoke Quad. Met with Frank to discuss progress on digitizing the Wilkes-Barre West Quad mosaics. He was ready for Ross Vein and above mosaics to process. [MSI]
- Ordered memory for Frank and Steve's laptops. ESRI recommends 32GB RAM for ArcGIS Pro 3.x. They each had 16GB or less. Had to remove the existing RAM from the computer to see the specifications and test out combinations of memory re-purposed from decommissioned laptops. Steve's laptop is a twin to mine, so that was easy to determine without needing to open up his laptop.
- Adjusted the Nanticoke Quad Top Ross Mosaic to show more of EPCAMR\_010913-01 which had more UMA to show. Also extended EPCAMR\_010910-01 and added EPCAMR\_010910-02 which were older maps showing more mining than EPCAMR\_010909-01 and 02 in the Lower Baltimore Mosaic. Added Coal Elevation Points and Underground Mined Areas and finished QA/QC with his mosaic and digitizing. Will need to resubmit these Mosaic to DEP. [MSI]
- QA/QC Nanticoke Quad Top Red Ash, Chauncy, Forge, Cooper, Mills & George Mosaics digitizing. Added some Coal Elevation Points and Underground Mined Areas that were missed. The Forge map used in Glen Lyon Colliery was really dark, adjusted the contrast and brightness on the mosaic to add a few more Coal Elevation Points. [MSI]
- QA/QC Nanticoke Quad Top Split George, No. 3 & No. 4 Mosaics digitizing. Added some Coal Elevation Points and Underground Mined Areas that were missed. Sent the digitizing geodatabase and the Up Ross Mosaic for the Nanticoke Quad to DEP. [MSI]
- Added 32 GB memory to Steve's laptop totaling 48 GB. Georeferenced EPCAMR\_011531-01 and EPCAMR\_011532-01 Inman NMMRs and added to the Wilkes-Barre West Quad No. 5 vein mosaic. Used the "blue maps" trick to set them to grayscale. Georeferenced EPCAMR\_011533-01 and EPCAMR\_011534-01 Inman NMMRs for the Wilkes-Barre West Quad No. 6 vein mosaic. [MSI]
- Sampled Askam Boreholes, Treatment System, upstream and downstream on Nanticoke Creek, and 2 flow sites for August. Recorded data into sampling spreadsheet and delivered to Earth Conservancy. [EC]
- Troubleshoot Levellogger App interface with Solinst Technical Support. They explained there is a known issue that android app does not function properly on Samsung Galaxy phones. Solinst was unable to replicate the issues and asked if we would be willing to help. Traveled to the Mocanoqua Tunnel AMD Discharge to download data with Bobby (who has an Apple iPhone) to test out and take snapshots of the messages that come up in the Solinst apps. Were surprised to discover that the probes at the Mocanoqua Tunnel were still functioning although both the transducer and barometer indicated they needed a software update. Sent a report with photos to Solinst.

[ ] - Denotes funding source where applicable.