



## Eastern PA Coalition for Abandoned Mine Reclamation

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### January 2020 Progress Report

#### Highlights:

- Managed EPCAMR staff as they scanned 142 mine maps into TIFF images, 28 georeferenced & digitized mosaic maps for the **PA DEP** MSI MMG program. QA/QC checked work.
- EPCAMR staff participated a weekly **PA AML Campaign** call, a press conference about the **Swyersville** waste coal removal project, a call and a tour with **PennFuture**, **EMARR**, **FON** and **PA DEP** related to the **Nescopeck Watershed**. Aided **EC** with an upcoming **EWT** training
- Continued the **Mocanaqua** Tunnel Mine Pool Consumptive Use Mitigation report for **SRBC**
- Maintained **TIC** tank for EPCAMR. Provided technical assistance to **GNASD**, **SHASD** and several more through a Facebook forum. Live streamed tank on [www.dailymotion.com/epcamr](http://www.dailymotion.com/epcamr)
- Updated [www.friendsofthenescopeck.org](http://www.friendsofthenescopeck.org), [www.epcamr.org](http://www.epcamr.org) and [www.treatminewater.com](http://www.treatminewater.com); tested out EPCAMR's **AGOL** account; administered the EPCAMR Facebook and G Suite for Nonprofit accounts (for NAAML as well); maintained GobbaDaPile in-house domain server and workstation.

#### Education, Outreach and Admin.:

- Participated in a call with PennFuture to coordinate a tour and presentation of the Nescopeck Watershed with the PA DEP. Started a PowerPoint presentation for the meeting to show the mine drainage and potential projects that could happen. Created a works cited list of 24 reports related to the Jeddo Tunnel/Nescopeck Watershed.
- Received comments from the Susquehanna River Basin Commission (SRBC) staff related to the Mocanaqua Tunnel Mine Pool Consumptive Use Report. More tables requested and corrections to the treatment section. Used Office of Surface Mining Reclamation and Enforcement's (OSMRE) AMDTreat to calculate \$2.7 million in costs to construct and operate a vertical flow wetland passive treatment system to compare to costs of active treatment proposals. Used U.S. Geological Survey's (USGS) StreamStats website to discover that Keilar Lake is technically part of the Black Creek Watershed when surface topography is considered. Confirmed this with a Second Pennsylvania Geologic Survey map from 1890, however post-mining the drainage does not make it across the road. It is most likely routed into the underground mines and becomes mine drainage that flows to the Glen Lyon borehole discharge. Created a 3<sup>rd</sup> draft of the report and sent it back for comments. [SRBC]
- Wrote the EPCAMR Program Manager report for September. Posted the report to [www.epcamr.org](http://www.epcamr.org) and submitted reimbursement paperwork to the DEP 319 program.
- EPCAMR staff participated in weekly PA AML Campaign calls. Updated the mining bills sponsorship rubric Google Sheet.
- Participated in a tour and presentation of the Nescopeck Watershed with the PA DEP, PennFuture, Eastern Middle Anthracite Region Recovery (EMARR) and the Friends of the Nescopeck (FON). Afterward the group convened to brainstorm actions that could be done to improve the watershed. A lot of good ideas came to light and a working group between FON, EMARR, EPCAMR and PennFuture was started to work on the recommendations.

- Spoke with Colin at S3 Stormwater Solutions about FABCO Filters which they have been testing to treat mine drainage. Looked over the materials he sent and setup a meeting for a tour of AMD sites in the valley.
- Created an ArcGIS Online (AGOL) Story Map primer for staff to start testing and creating their own maps. I am still learning the details as well, but it seems like it will be an interesting outreach tool.
- Received a call from a resident of Ashley Borough that was interested in underground mine maps below her house. She was on the PA Mine Map Atlas searching around but wanted to know more about how to use it. I helped her through the site and sent her a set of maps from the OSMRE Anthracite Mine Map Folios which are better organized. She ended up giving us a donation, which was not solicited.
- Formatted Abraham and Toby Creek CHP reports to [www.epcamr.org](http://www.epcamr.org).
- Met with Elizabeth Hughes to prepare for EPCAMR's role in the Environmental Workforce Training (EWT) next month. Gathered supplies, printed maps and updated the questions based on feedback from last year. EPCAMR staff did a trial run of the new questions, discussed and made adjustments again.
- EPCAMR staff participated in a field tour of the Harry E Waste Coal Pile reclamation and press conference with Congressman Cartwright, Congressman Meuser and State Senator Yudichak. They showed the bipartisan support for the project and touted several important bills currently going through legislation to continue this type of work.
- Researched manganese toxicity to find out what levels would be a concern to humans and aquatic organisms. Manganese is a macro nutrient essential for certain human bodily functions. A scholarly article says that "the water supply in Bangladesh is contaminated with Mn up to 2.0 mg/L, which is fourfold higher than the WHO standard for drinking water of 400 µg/L. Studies among school children suggest that increased levels of Mn in the drinking water in Bangladesh area are inversely associated with students' achievement scores in mathematics." Similar studies were done in Canada, US and Italy. High levels can result in a neurological disorder known as Manganism. While these studies are related to drinking water and air quality, I could not find a reliable scientific study to support detrimental effects of manganese on aquatic organisms. In fact, recent studies indicate that Mn oxide minerals in soils and stream sediments and as coatings on stream pebbles and boulders might serve as natural traps for heavy metals in contaminated waters from mines and other industrial operations.
- Spoke with FON about upgrading and teaching someone to maintain their website that EPCAMR hosts at [www.friendsofthenescopeck.org](http://www.friendsofthenescopeck.org). A simple update is not possible, because the current website was hand coded by college students. It served well as an informational website, but updating it would require knowledge of HTML language. I worked with them to transfer the information over to a WordPress format and attempted to keep the same feel of the old website. I reassured them that I have successfully taught several watershed group members how to maintain a WordPress site. I also setup a Gmail account for them to easily maintain a calendar displayed on the site.

### **Technical Assistance:**

- Helped Shawnese sort out maps for Nanticoke quadrangle mosaics. Several names including Chauncy, Rosey, and Top Split Red Ash all pointed toward the need for another mosaic between the Bottom Ross and the Top Red Ash in that quadrangle for the mine mapping grant (MMG). [MSI]
- Checked the Lower Red Ash mosaic in the Wilkes-Barre West quadrangle for quality assurance. Added 2 Susquehanna Coal Company maps from the National Mine Map Repository (NMMR) collection. [MSI]
- Processed several folders of NMMR map TIFF images from grayscale to 24bit RGB color. Sent the maps to PA DEP California District Mining Office for processing to SID files when we need them. Created 'how to' instructions for future reference.
- Printed maps for Toby Creek Coldwater Heritage Plan (CHP) meeting.

- Scanned maps from the KAGE collection that were in a bag of canvasback maps that we cannot scan without damaging. Discovered that there were original linen maps copies rolled inside. Made a note for future reference to check the canvasbacks for rolled up copies. [MSI]
- Attempted to troubleshoot ArcGIS Pro being slow again. Attempted all the usual suggested fixes with little results.
- Georeferenced NMMR maps from an older section of the Susquehanna No. 7 Colliery and added them to the Lower Red Ash mosaic Nanticoke quadrangle. This led to re-georeferencing several maps originally done by Harrisburg University to mesh better in the mosaic. [MSI]
- Quality controlled MMG work for August and September. Compared information recorded in the Pennsylvania Historic Underground Mine Map Information System (PHUMMIS) and what's on the drive. Prepared the travel drive and a reimbursement for work completed in July-August and sent it to the PA DEP California District Mining Office (DMO).

[ ] - Denotes funding source where applicable.