Eastern PA Coalition for Abandoned Mine Reclamation

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July 2015 Progress Report

Highlights:

- EPCAMR staff applied for *2 Growing Greener grants @ ~$263K* for work in 2016 and beyond. Prepared reimbursement/invoice for the MSI program and EC.
- EPCAMR staff participated in an AML / Mining History Tour of the **Wyoming** and **Lackawanna**, a wrap-up AMR Conference Call, an EPCAMR staff meeting, Gypsy Moth Info meeting, an AML Trust Fund Campaign meeting and a field meeting at **Rausch Creek in Schuylkill County**.
- Continued server recovery and storage space upgrades; Upgraded a computer to Windows 10
- Provided 12 sets of maps and statistics to EPCAMR partners
- EPCAMR staff took daily gauge readings and sampled flow/chemistry at **Askam** Boreholes Updated profiles of 3 treatment systems in www.datashed.org
- Updated www.epcamr.org and www.treatminewater.com; Administered the EPCAMR Facebook and Google Apps for Nonprofits accounts.

Education and Outreach:

- EPCAMR staff lead a tour to several abandoned mine lands (AML), mine drainage (AMD) and mining history sites up in the Lackawanna and Wyoming Valleys with professors and students from University of Oregon.
- Updated presentations page on www.treatminewater.com to include access to the actual power point presentations on slideshare.com. Created an article to notify visitors.
- EPCAMR interns collated the paper surveys from the AMR Conference into one spreadsheet. I shared this information with the AMR Conference Planning Committee via the pyritebad list serve along with my own "20/20 hindsight" views on the conference. A discussion started and I was requested to provide statistics on the number of attendees per year since 2002 compared to the number that participated on the tours for the respective years.
- Caught up on time sheets and time allocation to grants for the quarter. Started invoicing time spent on projects for the Earth Conservancy (EC) and Stream Restoration Inc. (SRI).
- Completed an application to the PA Department of Environmental Protection (DEP) Growing Greener Program for ~$237K for 4 years to monitor 10 abandoned mine drainage discharges and evaluate their source mine pools. Collected 14 letters of support and sent them along with the application.
- Aided Executive Director in preparing a ~$25K DEP Growing Greener application for Sulfur Run Culvert Flood Protection Project in Ashley Borough. Ashley Borough will be the applicant while EPCAMR will be fiduciary responsible party.
- Received word from a colleague, whom EPCAMR is contracted to do work for an Act 13 grant, that it cannot include benefits as a part of the salary of staff. This is a shocking notion to a non-profit organization who lives and dies by the grants that are funded. Apparently it is a new stipulation in the Commonwealth Finance Authority (CFA) grants that equates to a loss of $5 to

$11 per hour worked. It is contradictory to the 2015 application and EPCAMR has to make up all of a sudden from another source. It doesn't seem right that a state agency could switch the application requirements after the application was submitted, but they have. Luckily, our colleague has committed to holding up his part of the contract and pay our full billable rate.

- EPCAMR staff held a staff meeting to coordinate efforts for the month.
- EPCAMR staff participated in a Gypsy Moth Informational Public Meeting at the Luzerne County Community College Conference Center to learn about the extent of damage, suppression techniques, and ways that Luzerne County and PA Department of Conservation and Natural Resources (DCNR) are collaborating to coordinate spray programs for residents in 2016. Two security officers were also present and we understood why when it came to the question and answer session. Residents were irate that "the government" isn't doing enough to save their trees on their properties. I think they expected that "the government" was going to fight the gypsy moth swarms for free? The government representatives explained that they would accept applications from landowners that wanted their properties sprayed, plan out flight blocks and divvy up expenses between residents. It's probably a good idea and most cost effective. We left before discussion got too violent. Passed on the information to the Earth Conservancy who are large landowners in the county.
- EPCAMR staff participated in an AMR Conference Committee Call to reflect on the successes and things to work on for next year.
- Worked collaboratively with EPCAMR staff to update 2 grant lists that were created on the M: drive. These current grants and grants applied for lists are to be "living documents" that are to be updated frequently (at least monthly at staff meetings) to represent current workloads and potential work staff time needs.
- Purchased another upgrade to the WordPress theme that controls the EPCAMR store at www.epcamr.org/store. ShopperPress, one of their "version 7 basic framework" themes, was no longer being supported by PremiumPress (the makers of the WordPress theme). Over the years, the website was becoming more and more troublesome to upkeep with changing internet browsers and new security measures. The new "responsive framework" shop theme was suggested as the next step (with a minimal upgrade fee) and is currently supported by Premium Press. The upgrade process was relatively painless. A few recent customizations to the old theme were lost, but are no longer needed because of the new framework.
- Worked with Dave Williams from the Pottsville DMO and his Intern, Nick, to acquire the maps that needed to be rescanned. They brought the maps to us as a part of a site visit / orientation for the intern [MSI].
- Responded to a question from a colleague regarding the availability of pump and treat type systems. Passed along information for Keystone Pure Water and Twin Oaks Consulting, both of which may have mobile AMD treatment systems.
- Sent a reminder to EPCAMR Board and Associate Members that the Annual Board Meeting will be next month.
- EPCAMR staff traveled to Huntington, PA to participate in an AML Trust Fund Campaign Meeting at John Dawes' Cabin in Alexandria, PA. The meeting was very informational as to the strategy that is being developed to reauthorize the Surface Mining Control and Reclamation Act (SMCRA) with the development of POWER+ legislation which will require an amendment to SMCRA. With the new estimated numbers from the Office of Surface Mining (OSM) as to how much more time and funding it will take to clean up AML in the US, it might be a good vehicle to have SMCRA extended to 2036 and exempted from sequestration. Followed up with Branden Diehl, Foundation for PA Watersheds (FPW), to close out the grant to gather AML statistics and create maps per legislative district as well as reimbursement for travel costs.
- Gathered several pieces of proposed legislation together and forwarded to the EPCAMR Board as discussion topics for the upcoming board meeting.
- EPCAMR staff met with Susquehanna River Basin Commission (SRBC), DEP, Schuylkill Conservation District, Skelly and Loy and Rausch Creek Lands staff to tour several discharges

to the Rausch Creek and lay out a monitoring regime in preparation for work on a Growing Greener Grant that was funded to deal with optimizing flow to the Rausch Creek Treatment Plant. EPCAMR will be contracted to create more detailed mine pool maps and models starting later this year.

- Participated on a conference call and webex presentation regarding updates to the National Hydrography Dataset survey that I filled out online. The U. S. Geologic Survey liaison wanted to further clarify and submit my comments as a "heavy" GIS data user in PA.

Technical Assistance:

- Attempted to organize "orphaned" files on the X: drive and built a protocol for MSI Program staff to follow. Many of the files, however, were corrupt and we finally by the end of the month gave up hope that we would get the files back from February, March and April. Made preparations to get the 331 maps back from Pottsville DMO to rescan and staff began regeoreferencing 236 files. Luckily the digitizing work was on the M: drive, which was not affected by the data loss. Prepared the travel drive with files that were completed (and still existing) during February, March and April and completed a multi-month reimbursement for the MSI program once damages were assessed as to not charge the state for our losses [MSI].
- Georeferenced the W-6D folio related to the Pioneer Tunnel for Ed Wytovich, EPCAMR Immediate Past President. Ed also serves on the board of the Pioneer Tunnel Mine Tour and they had been having some subsidence problems on their property. The mining maps we provided showed that the subsidence problems were likely due to underground mine voids. There was also a tunnel that ran parallel to the Pioneer Tunnel that looked like it outlet to the surface. After closer examination, very faint writing said it was proposed. Often times we see these tunnels that are drawn lighter than the rest. We have started to call the "ghost workings" in that they may or may not actually be there. In this case the tunnel was not actually there, but it was hard to tell with the 200dpi resolution.
- Received several follow up e-mails from University of Oregon students thanking us for our time and asking us for additional information. One student in particular wanted the Land Use Raster for Lackawanna County. Found the file on our servers and sent it to her via downloadbigfiles.com.
- Spoke with Kim Snyder, DEP Wilkes-Barre Bureau of Abandoned Mine Reclamation (BAMR) Office, to ascertain their logic as they listed Operation SCARLIFT maps in their mine map inventory card catalog. Unfortunately, their card catalog does not match the actual maps on the shelves. We were authorized to take blank cards and fill them out to match what was on the shelves. The catalogs were scanned and the DEP staff have a PDF file of them. So, we took a trip to the office to pick up the two card catalog boxes back to our office and update them [MSI].
- Troubleshot issues with the server and synchronizing files from M: to D: drive using SyncBackSE. There was a cyclic redundancy on some files that could not be moved. Initially I ascertained that these were compressed or archived files, but the files were corrupted in some manner. Those files could not be moved, but were accessible (in readable format) in other locations, so I jotted down the file names and deleted them to side step the error and allow the transfer to continue.
- Collated stream gauge and flow readings into a graph to show the flow of the Askam Boreholes since the treatment system was installed. The graph helped to put in perspective the water quality readings when it comes to the amount of water that the system was theoretically able to treat and how much it actually treats. When the flow is below 1,500 gallons per minute (gpm) the system is able to retain all the iron (total readings) and nothing flows out over the dam. When the flow rises above 1,500 gpm the amount of iron (both total and dissolved) rise as a function as the amount of water that flows in. Residency times related to metals settling are well documented in wetlands based treatment systems throughout the state. The makers of the maelstrom oxidizer claim that you can reduce the size of settling ponds by 10 times by using their device. In reality, this the pond size reduction might be 4 times less. While the oxidizer

boosts the dissolved oxygen from near 0% to 80-90%, the time it takes to settle the precipitated iron was not taken into account. This supports the recommendation by Hedin Environmental to add another pond and/or modify the maelstrom oxidizer to flow in parallel instead of series especially for flows over 3,000 gpm (which now flows around the oxidizer units).

- Uploaded schematics for 3 treatment systems recently sampled to www.datashed.org. These treatment systems had not been sampled in other snapshot events. The schematics are used to show where sampling sites are located in relation to the name of the site in the monitoring database.
- Sampled chemistry and flow at Askam Treatment System for Earth Conservancy, and read the flow gauge 8 times this month. Received feedback from EC that our Iron Tests are not exact enough. Typically we would direct metals analysis to lab sampling, but I researched field photometers. The YSI 9500 Photomoeter is approximately $1K and tests many parameters including Iron and Alkalinity using light wavelength absorbance and transitivity. This equipment removes many steps in which human error could be introduced in using a colorimeter in the HACH field test kit. Dilutions are more exact with a specialized dilution tube and auto calculated on the device and the supplies are relatively inexpensive. Researched possible automation of the stream gauge readings as well. Called Insitu, the company that made the Level TROLL 500 vented pressure transducer that is installed at the Old Forge Borehole, and they suggested a Level TROLL 400 (non-vented) pressure transducer hooked up to a Tube 300S which would transmit readings at set interval via a built in cell device. The Tube 300S has a barometer for pressure adjusted readings and solar panel to recharge itself and the Level Troll 400. The whole setup would cost $2,220 with a reoccurring $35 monthly fee to run Hydro VU Data Service. The other option is to go with the Level TROLL 500 ($1,400) and download readings manually with a computer [EC].
- Received word from Patrick Jaquay, California DMO, that 32 files that we scanned and submitted to reimbursement were corrupt. These were files that were recovered using ReclaiMe. While the files were intact, they were rendered unreadable in several image processing programs. These 32 additional files from the Pottsville DMO collection will need to be rescanned. Also, the report that was scanned and submitted as a MINI does not need to be recorded on PHUMMIS nor should we scan any more reports without prior authorization. The scanning of the MINI files does not need to be at 400 DPI resolution like the maps and can be done on a regular document scanner.
- As Windows 10 is slowly being rolled out this year as a free upgrade we find ourselves curious as to the impact it will have on productivity here in the office. Hayley, EPCAMR intern, downloaded the upgrade and installed it on the EPCAMR intern computer as a trial. EPCAMR staff then took turns performing some common office tasks. Windows 10 seemed to update programs by itself. ArcGIS and map scanning programs were unaffected.
- Worked in QuickBooks to allocate income properly from the AMR Conference and other programs in preparation for the EPCAMR Annual Board Meeting Treasurer's Report and 2016 Organizational Budget.

[ ] - Denotes funding source where applicable.