Eastern PA Coalition for Abandoned Mine Reclamation

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September 2013 Progress Report

Highlights:

- EPCAMR staff attended and presented at the NAAMLP Conference in WV, a PA Mining Geologists Summit at Kings Gap and met with PA DEP staff 2x to discuss specifics on the MSI Mine Map Processing Initiative.
- Completed mine pool models for the **Heckscherville Valley** and calculated mine pool volumes for the SRBC.
- Continued purchasing equipment, troubleshooting and setting up office in preparation for MSI Grant.
- Updated www.treatminewater.com and administered the EPCAMR facebook and Google Apps for Nonprofits accounts.

Education and Outreach:

- Attempted to update the EPCAMR Volunteer Registration Form, but it was easier to forward the volunteer@epcamr.org e-mail to EPCAMR Executive Director's e-mail.
- Went shopping at local stores to pickup supplies for the MSI Mine Map Processing grant and cleanup supplies for the upcoming Nockley's Tributary cleanup.
- Met Mahantango Tire Recyclers in Wilkes-Barre to pick up about 50 tires at Nockley's Tributary that were stacked and organized by volunteers over the weekend.
- Collected Iron Oxide Sludge from the old Askam Borehole Treatment Wetlands with EPCAMR Intern. Collected 6 buckets of wet sludge to dry and process into pigment.
- EPCAMR staff attended and presented at the National Association of Abandoned Mine Land Programs (NAAMLP) in Daniels, WV. The presentation on the Lower Lackawanna Watershed Restoration Plan and Mine Pool Modeling using EarthVision went over well and staff picked up many more contacts for services like horizontal drilling. Also met PA DEP MSI program staff and sat in on their presentation to learn more about their effort and how we can help better. EPCAMR staff participated in part of the tour on the second day before heading off to Carlisle, PA for a presentation on the third day of this trip around the Appalachian Coal Region to speak to Mining Geologists gathered at Kings Gap Environmental Center [SRBC].
- Added several PowerPoint presentations from the AMR conference to www.treatminewater.com via SlideShare. SlideShare is a free account that hosts PowerPoint Presentations and formats them to be embedded and viewable on a webpage.
- Prepared an invoice for the first quarter of work completed for the MSI Mine Map Processing Grant. Received a call from DEP BMR staffer, to send the first 21 maps on hard drive to him to complete the approval of the invoice. EPCAMR staff worked up job descriptions and titles for incoming employees related to the MSI grant work [MSI].

Technical Assistance:

- Met with PA DEP Bureau of Mineral Resources (BMR) staff member to discuss the Mine Subsidence Insurance (MSI) Mine Map Processing Grant. Discussed the "no return policy" through GEI Wideformat and what should be done to get a larger scanner to accommodate larger maps that were found in PA DEP Bureau of Abandoned Mine Reclamation (BAMR) Wilkes-Barre Office maps [MSI].
- Worked with GEI Tech Support over the phone to troubleshoot connecting the scanner through the network. All minimum specifications were met, but still the scanner and Pro Scan software would only scan a few maps in a row before giving an error and both had to be restarted [MSI].
- Troubleshooting georeferencing in ArcGIS 10.1 with EPCAMR Intern, Justyna. The program will work fine for about an hour before crashing with the georeferencing toolbar open on the Dell Precision M6700, as opposed to ½ hour on the Dell Precision M6500. This must be due to a quicker processor, because the memory and hard drive storage is less. Contacted an Office of Surface Mining (OSM) Technical Innovative and Professional Services (TIPS) software manager to order a version of ArcGIS 10.2 which has this bug fixed [SRBC].
- At the request of the Earth Conservancy, created charts showing Loading vs. Flow and Iron In Vs. Iron Out for the Espy Run Treatment System based on the past years worth of sampling data [EC].
- Created a shapefile in ArcGIS then exported to earthVision to clip out data south of Mine Hill and West West Falls Anticlines to single out only the Heckscherville Valley. Also converted the outcrop of coal and colliery boundary shapefiles to earthVision format for display in the 3D model. Finding and adding vein thickness to scattered data from U.S. Geological Survey (USGS) Professional Paper 602 maps and borehole logs. Also found thickness data from U.S. Bureau of Mines (USBM) Barrier Pillar Study. Discovered that data digitized using the Skips Scripts method was 500-1000 feet too low [SRBC].
- Started Under Juggular Fault Basin Model (1 out of 3). Added all vein data and attempted to add fault data, but errors were causing a stop at the fault tree building process. Removed fault data that was not in the model basin area and this fixed the problem. Perfected the model by setting smoothing factor to .05 and extrapolation factor to 0 [SRBC].
- Started Above Juggular Model (2 out of 3). Added all vein and fault data within the area of the basin. Adjusted model with the best trials of smoothing and extrapolation factors. Also added a "fudged" cross section between cross sections A and B to close a data gap. This data gap was causing the software to draw the veins at a sharp angle to the surface. The cross section was created by taking the average x, y and z values from each vein [SRBC].
- Trial run of the Wanamie Mines map through the new Colortrac SmartLF Gx+ T42C scanner. This map is approximately 3' wide by 18' long and full color. The purpose of the test was to find out how well the scanner performed with a large map. It produced a file over 2 gigabytes in size. The map was scanned a second time and a bluish-purple line showed up. After discussion with a technician, this was corrected by cleaning the glass on the scanner and running a normalization scan on the scanner. The line disappeared after this cleaning and normalization. Still having problems with the scanner performance over the network. After about 2-3 scans in a row the scanner and software will go unresponsive and have to be restarted [MSI].
- Started above Mine Hill Fault Basin (3 out of 3). Used the Mine Hill Fault polygon as the boundary and found optimal smoothing and extrapolation factors [SRBC].
- Picked up maps at the PA DEP BAMR Wilkes-Barre Office and brought them back to the office. Scanned several maps and developed a procedure for scanning and cataloging the maps to teach technicians [MSI].
- Met with PA DEP BMR staffer to accept the grant award paperwork and adjust budget based on amendments [MSI].

- Calculated mine pool volumes totaling 6.2 billion gallons by basin and by colliery and reported them to Susquehanna River Basin Commission (SRBC) staffer, Tom Clark. Updated Calculated Mine Pool Volumes document to add these mine pools. Also worked on a PowerPoint Presentation for the NAAMLP Conference and PA Mining Geologists Summit later this month [SRBC].
- Attempted to repair the "Z Drive", a 1.5 terabyte external hard drive that was used to store and transport GIS data. The USB 2.0 connection was loose and finally broke. Used Gorilla Glue to glue it back in place and a temporary fix before getting a new external drive casing. Transferred Z Drive data to the T Drive, a new smaller USB 3.0 external drive (but same hard drive space) that will be used to transport GIS data [MSI].

[ ] - Denotes funding source where applicable.