Eastern PA Coalition for Abandoned Mine Reclamation
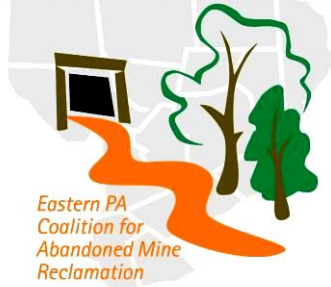
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April 2014 Progress Report

Highlights:
- Created a volunteer mailing list in MailChimp where subscribers can update their own information and preferences
- Participated in 2 bat sampling events with PGC, water quality at the Huber Shaft in Ashley, water quality and quantity at the Mocanaqua Tunnel, gathered OFBH transducer data and one cleanup at Avondale.
- Continued processing maps for the MSI Mine Map Processing Grant; Taught digitizing to GIS Specialist and interns.
- Updated/installed computer software and hardware to keep the office running efficiently
- Continued work toward a 3D Mine Pool Model in the **Wyoming Valley, Northern Coal Fields**
- Printed 2 sets of maps for EPCAMR Projects, spoke to Kings College GIS Class, and participated in an AMR Conference Call.
- Updated www.epcamr.org, www.treatminewater.com, and administered the EPCAMR facebook and Google Apps for Nonprofits accounts.

Education and Outreach:
- Created a Nescopeck Watershed Page on www.epcamr.org with information and photos collected over the years including the Watershed Restoration Action Strategy (WRAS) completed several years ago. Updated the Nescopeck Creek WRAS executive summary and distributed to the Friends of the Nescopeck, and Nescopeck State Park for their environmental education programs.
- Created an EPCAMR Volunteer emailing list in MailChimp last month and realized that I could easily modify a signup form that was automatically created for our website to add people to the MailChimp Mailing List. This could replace the Volunteer Registration Form PDF that is currently in use. People could also automatically sign up and update their information while EPCAMR staff just needs to monitor it and use it to send out updates. …MUCH EASIER than the current setup of taking hard copies of forms filled out and transferring them to Excel Spreadsheets. There are still kinks to be worked out, but this could possibly be used in many other places like maintaining a conference list.
- EPCAMR staff participated in a conference call with the AMR Conference Committee to coordinate efforts. Reviewed and selected presentations that were sent by abstract deadline. Updated pages on www.treatminewater.com website.
- Wished Bridgette Robinson a bright future as she left our EPCAMR staff. Bridgette will be moving on to a consulting agency near Cherry Hill, NJ.
- Sent an e-mail to gather volunteers for the Avondale Cleanup hosted by the Plymouth Historical Society. Used the new volunteer list in MailChimp. Chose volunteers who were interested in cleanups, landscaping, photographers, interns and other categories.

- Filled 2 Iron Oxide orders that were placed using the EPCAMR Store. Refilled and organized supplies related to the iron oxide processing station.
- Aided Huber Breaker Preservation Society (HBPS) volunteers in moving equipment and materials on their property to make room for relics being donated to them by Pasello Logistics, the owners and company responsible for demolition of the Huber Breaker.
- Gathered websites and contact information of artists that have worked with EPCAMR in the past for Leigh Anne Kemmerer, who is heading up a fundraising effort for the AMR Conference.
- Created EPCAMR Program Manager monthly report for the previous months, gathered other staff reports, posted them to www.epcamr.org and sent to PA Department of Environmental Protection (DEP) 319 Nonpoint source (NPS) program staff for reimbursement.
- Updated www.treatminewater.com with information from the draft program to Program and Presentations pages. Activated links on the Registration page that link to the EPCAMR store to purchase registrations, extra-activities and exhibitor space. Updated the Susquehanna River Basin Commission (SRBC) logo on the Sponsors page.
- Aided PA Game Commission staff twice in sampling the bat population at the "Glen Lyon Ice Caves." Followed up with specific questions about the hibernacula by georeferencing maps of the Glen Lyon mine OSM Folios of the Surface, Bottom Ross, Top Ross. Digitized openings, faults and boundaries of underground mine extents and displayed on maps with Abandoned Mine Land Inventory System (AMLIS) data. These maps better explain the possible extent of the bat habitat under the ground as related to surface features.
- Finalized edits to the EPCAMR ByLaws and sent via e-mail to the board to allow for a 30 day review period before voting on them at the board meeting next month. Sent a reminder e-mail regarding the board of the upcoming board meeting. Also completed the minutes from the last board meeting to send with the reminder and posted them to the Board Meeting page on www.epcamr.org.
- Printed a full OSM Folio Mine Map set from the surface to the Lower Red Ash vein for the Huber Colliery in Ashley related to Solomon Creek Dam Removal Project. The specific area was grouted several years ago to help keep water in the stream for public fishing, but re-evaluation of the underground mine layers is needed to identify specific loss points for grouting.
- Created an invoice for the Lewis Treatment System Rehabilitation grant and sent to the PA DEP. [LewisGG]
- Met with EPCAMR President to complete financial transactions. Stopped by the Old Forge Borehole discharge to download transducer data on the way back and changed the desiccant.
- Packed up my truck with supplies and participated in the Avondale Cleanup hosted by the PHS, which was a great success. Over 60 volunteers almost completely filled a 40 cubic yard dumpster with trash collected from the site. Dozens of tires were also pulled from the site and stacked for later recycling.
- Began responding to conference registrations as they begin slowly rolling in.
- Discovered an excellent website www.gingerb.com which hosts the Black Diamonds to Tidewater historical reference site. Copied the text and photos over to a word document for the HBPS. Printed several photos dealing with specific features on the Huber Colliery Property. Discovered that there was a slope entry directly in front of the rotary dump that may be on the HBPS property.
- Hosted a GIS Class from Kings College to show them how EPCAMR uses GIS on a daily basis. Showed how the wide format roll scanners processed hard copy maps into digital format. Digital maps are then brought into ArcGIS and lined up to aerial photos. Once georeferenced, features on the maps are outlined into digital points and polygons (digitized). A student also presented an app, Iform Builder, which allows the use of smart phones to gather data with coordinates in the field, possibly even underground with a mobile Wi-Fi hotspot.

Technical Assistance:

- Reconciled 698 scans and 301 georeferenced SID files for the previous month, recorded in the inventory control spreadsheet, prepared an invoice and sent the hard drive to the PA DEP California District Mining Office (DMO) for the Mine Subsidence Insurance Mine Map Processing Program. Reviewed 5 rescan requests from February in which were actually scans of the 52 Office of Surface Mining (OSM) National Mine Map Repository (NMMR) aperture card scans that were taped together into full maps, which sparked a discussion to remove them from the inventory regardless of saving in post processing work. Directly georeferenced more than 2 dozen maps that were difficult for EPCAMR GIS Specialist to place. Aided in scanning maps that were causing streaks and lines on scans. Picked up and dropped off maps 2 times this month and aided with scanning and georeferencing [MSI].
- Sampled water quality and quantity at the Mocanaqua Tunnel for the Earth Conservancy. Compiled results and photos into an e-mail and sent the Mike Dziak. [EC]
- Dropped off modems for phone and internet at the Service Electric Cablevision Office in Wilkes-Barre now that both utilities were switched over to Verizon.
- Gathered water samples from the Huber Shaft with the permission of Pasello Logistics, the landowner, to determine the water quality at this point in the mine pool with a Kemmerer Bottle approximately 20' below the surface. Interestingly enough, the pH 6.5, iron 1.5 mg/L, acidity 147 mg/L, and alkalinity 51 mg/L was not very polluted.
- Printed cross sections and maps of the Centralia Tunnel and mine basin for a documentary regarding the Centralia Mine Fire.
- Copied OSM NMMR maps from the southern field for Pottsville DMO staff.
- Installed ArcGIS 10.2.1 on EPCAMR GIS Technician and Specialist computers. Attempted to install ArcGIS Server Workgroup and ArcSDE 10.2.1 on the EPCAMR Server, but this software is more difficult to setup and will require some time to research and setup. [MSI]
- May have figured out the reason why the Colortrac scanners kick maps out before completely scanned more often than they should. It seems that when either one of the scanners is hooked up to the Dell Precision M6500 computer, it kicks more often than when the Dell Precision M6700 is used. The specifics of the computers are very similar including the memory, graphics card, hard drive storage space. The differences are that the internal hard drive is a solid state drive, the processor is a quad core and the motherboard is newer on the M6700. One of these differences makes it more compatible with the scanners, therefore we will keep the M6700 units partnered with the scanner.
- Moved some maps that were incorrectly placed in the "other" folder to the "UMM" folder. Caught GIS Technician up on the concept of a georeferencable map with digitizable features. Also showed GIS Technician how to record maps in PHUMMIS that were scanned in 2 or more scenes and needed to be patched by DEP staff before georeferencing. [MSI]
- Taught interns to georeference and digitize several maps with mine pool boundaries on different coal vein levels in the Wyoming Valley. These boundaries will be used in defining mine pool extents in the 3D model and volume calculations. Scanned maps of water infiltration points in the Wyoming Valley as well. [SRBC]
- Began adding coal vein thickness values to the raw data recently digitized from the USGS I-Series maps for the Wyoming Valley. [SRBC]
- Taught GIS Specialist how to digitize mine openings, underground mine map extents, and spot elevations on underground mine maps. Since there are so many spot elevations on the maps, we decided to limit to 5 points per grid section in the map which would be more than adequate to build a 3D surface of a specific layer. Some underground mine boundaries needed to be represented by multipart polygons including the removal of inner areas known as "donut holes". [MSI]
- Reviewed the Huber Colliery maps with film crews that were documenting the demolition of the Huber Breaker.

- Completed coal vein thicknesses, built a stratigraphic sequence of coal veins and created a draft 3D Wyoming Valley mine model in the fork flow manager of EathVision. The model was riddled with holes and mine veins drawn in obviously incorrect areas, but allowed determination of where data gaps were. Began matching synclinal folds from cross section to cross section and averaging data in-between to close holes in the model. [SRBC]
- Created a data file from a surface digital elevation model (DEM) from the U. S. Geological Survey (USGS) using Global Mapper. This file was exported to Universal Transverse Mercator (UTM) Zone 18 North projection and National American Datum (NAD) 1983 with all units as meters, but the rest of the vein data has z datum in feet. Therefore the model needed to be exported to scattered datum and formula processed to convert the z datum. This created a scattered data file that was 1.4 GB. Then the scattered data needed to be reprocessed back into a grid, however the EarthVision gridding program has a limit of 2 million points. The dataset had more than 13 million points. Struggled with clipping the data to 800 MB, which took 2 hours to load each time the file was clipped in the graphic editor. Called Mike Dunn, OSM Pittsburgh, to see if there was an easier way. He suggested exporting the elevation data in a different grid format (BIL) which was more customizable and easily imported into EarthVision.
- Purchased supplies related to MSI Mine Map Processing Grant. [MSI]
- Received the Hard Drive on return from the DMO office in the mail and started to review the return files [MSI].

[ ] - Denotes funding source where applicable.