

EPCAMR



Eastern PA Coalition for Abandoned Mine Reclamation Program April 2009 Progress Report

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Highlights:

- Converted 2 GIS datasets to AutoCAD and produced 1 GIS map for EPCAMR partners.
- EPCAMR staff participated in an ARIPPA Co Generation sites tour, an Earth Day event at Nesbit Park, the Envirothon, a Hazle Creek AMD site tour and 2 Mine Pool Mapping Mtgs.; Lead 2 AMR Conference calls and 4 work days Wilkes-Barre Vo Tech students
- Updated www.orangewaternetwork.org and <http://www.treatminewater.com>

Education and Outreach:

- EPCAMR staff participated in the ARIPPA bus tour of a Co-Generation Power Plant and Beneficial Ash Placement sites in Western PA at the request of ARIPPA Inc.
- EPCAMR staff hosted 2 AMR Conference calls with the AMR Conference committee to coordinate the Abandoned Mine Reclamation (AMR) & Coal Mining Heritage (CMH) Conference. Created minutes for each of the calls and updated several documents such as the speaker lists, subcommittee lists, budget, and program schedule. Also continued to update www.treatminewater.com with preliminary information as it is approved by the committee. Currently there are 10 pages worth of information on the conference. A draft registration page has been posted, but is in testing and will not be ready to accept registrants until May 15th.
- EPCAMR staff hosted a total of 4 Avondale Mine Disaster Site work days in the month of April with the help of the Wilkes-Barre Vo-Tech Horticultural Class. The students installed raised garden beds, dug post holes for a fence, capped a concrete structure to place benches and general cleaned up and grubbed the area in preparation for creating a memorial garden in Plymouth Township.
- Created EPCAMR Watershed Outreach Coordinator Monthly report for the month of March, gathered other staff reports, posted them to www.orangewaternetwork.org and sent to PA DEP 319 program.
- EPCAMR staff participated in Earth Day at Nesbit Park. School students from various school districts in Luzerne County visited the EPCAMR booth to learn about AMD and make chalk from recovered iron oxide.
- EPCAMR staff participated in the Luzerne County Envirothon with the other Luzerne Conservation District staff. EPCAMR staff created an excel matrix and graded tests on site to aid the score keepers. Scores were projected from a laptop on a screen for teams and mentors to see.
- Worked with Kat Krulack, Jeddo Nescopeck Partnership VISTA, on separating iron oxide chalk from molds which had dried since the Earth Day event. We also cut and folded chalk boxes and stuffed them with chalk in preparation for handing it out to school classes who participated in the event.

- Added articles to the EC Express NewsFlash and photos to the Photo Gallery on www.orangewaternetwork.org.

Technical Assistance:

- Met with the Earth Conservancy and PACD Engineer to talk about upgrading the Espy Run (Phase 1) AMD Treatment Wetlands. The treatment system was working well for several years as an experimental study and lots of data was generated by Wilkes University in the process. Recently the treatment system was clogged and receives only a small portion of the flow that it should be accepting. PACD Engineer, John Coleman, plans to design the system based off the 2ft PAMAP LiDAR contours. EPCAMR converted the files to AutoCAD and provided them to the Earth Conservancy.
- EPCAMR Staff held a day long AMD Field Monitoring Training for the Anthracite Heritage Alliance (AHA) VISTAS. A total of 7 VISTAS learned field stream sampling techniques and received certificates of completion for the short course.
- Answered a survey from PA Spatial Data Access (PASDA) asking for participation in forming a PA GIS Council. Nothing is formal yet, but the survey was to gauge interest from several GIS service providers and users across PA. My comments revolved around learning from the several other attempts that have been made from various organizations which never produced much. If any organization was to take the lead on such an effort, PASDA would be the best.
- Responded to an e-mail from a Temple University Undergrad Student who wanted to work with GIS data on Abandoned Mine Lands to prove a hypothesis. Chuck Cravotta, USGS, supplied her with 3 ideas and I suggested possible ways to use the GIS data available for each of the ideas.
- Created a map for the PA DEP 319 program showing SMCRA Priority 1 and 2 subsheds within county boundaries overlain by the 319 Watershed Implementation Plan (WIP) boundaries. To complete this work, first the subsheds (DEP smallsheds) layer was modified to include the name of the larger watershed it was a part of (DEP majorsheds). Next, the individual SMCRA Priority 1 & 2 features were analyzed spatially (with ArcGIS Spatial Analyst) to place them within the subshed boundaries, creating "SMCRA 1 & 2 priorities in sub-watersheds". These layers are different from the official PA DEP Bureau of Abandoned Mine Reclamation's (BAMR) Hydrologic Unit Plans (HUP) for the SMCRA program, and could be considered the watersheds that will need HUPs & WIPs developed.
- Met with Penn State University Professor and Grad Student, David Thompson, who wanted to work with GIS data on underground Abandoned Mine Lands to find areas where Geothermal Technologies could take advantage of mine pools. Although his specific area of concern was not well defined, he is also working with the PA Historic and Museum Commission (PHMC) and the several sites throughout Pennsylvania. Particular areas of interest revolved around the ones in the anthracite region. EPCAMR provided him with some of the published data (not draft) data which was available for the area.
- EPCAMR staff toured several Hazle Creek AMD Sites in the eastern middle coal field with Weatherly Borough officials, Alder Run Engineering staff and PA DEP BAMR staff to investigate treatment scenarios. The discharges visited were, Hazlebrook and Stockton discharges, and the Quakeake Tunnel.
- Answered several questions via e-mail spurred by EPCAMR's Article in ArcNews.
- Interviewed by Joel Dunn, Conservation Fund, for an article that will be titled "Better Models for Conservation". The interview focused on the use of GIS for the Manure and Minelands Project with the PA Environmental Council and EPCAMR's RAMLIS GIS Tool.
- Attended a Mine Pool Mapping meeting at the Pottsville District Mining office to update coal mine colliery boundaries and suggest alternate names to collieries. This is the first step in creating multi collier hydrologic units for the southern anthracite coal field.
- Created snapshots of some of the 3D Mine Pool data that has been developed as a part of the Mine Pool Mapping Project and sent them to the Foundation for PA Watersheds as requested.

- Completed lining up all 27 2nd Geologic Survey maps for the Southern Anthracite Coal Field. These maps contain colliery names, extents of collieries as of 1890, anticlinal axis, locations of tunnels, streams, roads and other information of interest in the minepool mapping program. In the Panther Valley, there are even contours of the Mammoth Seam which may help in creating a similar model to what is being developed in the Western Middle Anthracite Field.
- Finished tracing the anticlinal axis from the georeferenced 2nd Geological Survey Maps into a shapefile. This shapefile will help answer questions about separation of collieries. For example, the Wadesville and Pottsville Mine Pools are shown as separate in the Ash study, one would think they are connected since one overlaps the other, but the basins are separated by at least 2 anticlinal axis. Finished modifying the colliery boundaries based on the meeting with Roger Hornberger and the PA DEP Pottsville District Mining Office staff.
- Received an error message on the WPCAMR WOC Desktop computer saying that it had run out of storage area for e-mail messages in Outlook. Found that in Office 2003 there had been a new data format created to tackle this problem. A work around was described in a “whitepaper” in the Microsoft Website. Created a new datafile in Outlook 2007 and imported the old datafile using the import tool as instructed. This may need to be done on Robert’s computer as well.
- Continued to add altitude of effectiveness values to the Barrier Pillar layer from Southern Anthracite Field Barrier Pillars Bureau of Mines Report 526.
- Attended a second Mine Pool Mapping meeting at the Pottsville District Mining office to meet with USGS staff and find out the status of the groundwater model. Dan Goode and Chuck Cravotta reported that they were close, but were in need of more data to feed into the model: updated mine pools (beach lines) for the western middle field and fix overlapping contours of the Buck Mountain Vein layer. The group also discussed how to calculate mine pool volumes based on a formula that would take into account the area (wetted perimeter), and the thickness of each coal seam (with an estimated void space coefficient). This method is similar to the method used by S. H. Ash in the Bureau of Mines Reports, but our areas will be updated and we also plan to calculate a better coefficient to estimate void space based on the groundwater model for the Western Middle Field (Ash took an educated guess with 40%).
- Updated the “overhead mess” budget to reflect new values associated with EPCAMR’s expected overhead in relation to moving to the Earth Conservancy office building.