November 2012 Progress Report

Highlights:
- EPCAMR staff hosted the EPCAMR 4th Quarter Board Meeting and presented the Western Middle MPM and Solomon Creek CHP Reports at public meetings
- EPCAMR staff participated in a tour for conservation officials and an AMR Conference Call
- Continued to update mine pool GIS files in the Northern & Western Middle Anthracite Fields
- Created 1 published map file, 4 maps, 2 GIS and 5 statistical database for partners.
- EPCAMR staff sampled 16 boreholes in the Lackawanna Valley and 26 boreholes in the Wyoming Valley. Measured flow on 4 discharges.
- Measured flow and chemistry on 2 more discharge & treatment systems & upstream and downstream points on the Loyalsock Creek with Sullivan CCD.
- Updated www.epcamr.org. Administered the EPCAMR facebook page and Google Apps for Nonprofits account.

Education and Outreach:
- Participated in an AMR Conference Call in preparation for the 2013 PA AMR Conference which will be hosted by the PA AMR Conference Committee at the Ramada Inn and Conference Center in State College from August 8-10, 2013. This year will mark the 15th Anniversary of the Conference and planning will include activities to highlight this occasion.
- Completed a Staff Self Evaluation in preparation for the upcoming Personnel Committee Meeting and EPCAMR Board Meeting. Compiled a list of potential Merit Raise Amounts in .5% increments for both staff to aid the Personnel Committee.
- EPCAMR staff traveled to Shamokin to present the Western Middle Coal Field Mine Pool Mapping report findings to an audience invited by the Shamokin Creek Restoration Alliance (SCRA). Showed a live demonstration of the GIS files that were compiled and created for the report and had the ability to zoom around the map and look at specific places as specified by the audience. Followed up with a question as to why AMD Site 12 (aka the Excelsior Pit) discharge water changes color periodically. Ascertained that it was due to the mixing of different mine pool waters depending on input of storm water to the specific underground watersheds.
- Created EPCAMR Program Manager monthly report for the previous month, 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. EPCAMR Staff prepared monthly reimbursements to send along as well.
- EPCAMR staff prepared for and hosted the 4th Quarter EPCAMR Board of Trustees Meeting. Created an agenda, minutes from the last meeting, financial statements and materials for discussion.
- EPCAMR staff participated in a tour of AMD and AML sites in the Loyalsock Creek Watershed hosted by the Sullivan County Conservation District. Representatives from the PA Association...
of Conservation Districts (PACD), State Conservation Commission (SCC), and neighboring conservation districts attended. After the tour and lunch was a brief presentation by EPCAMR on the Mine Pools related to the Bernice Basin.

- EPCAMR staff hosted a public meeting to review the Solomon Creek Coldwater Heritage Plan. Several good questions and suggestions were provided by attendees [PA TU].

**Technical Assistance:**

- EPCAMR staff continued to work on editing and adding Solomon Creek Maps, Figures, and Tables to the Coldwater Heritage Plan Report. Organized the report with automatic updating document reference tables and sorted the Photo Essay so the reader could virtually walk from the mouth of the creek to the headwaters. Compiled field data, AML Statistics, created a layer of unlisted streams that were flowing but not found in Chapter 93 layer and a foldout pocket map of the sampling points. Scanned supporting documents for the Appendix. Almost 40 hours were spent on this project for the month to help prepare for the public meeting and complete the report [PA TU].

- Sugar Notch Run Stream miles calculated suggested for removal for Solomon Creek Coldwater Heritage Plan Report to send to PA DEP 319 NPS Program Staff.

- EPCAMR staff traveled to Sullivan County, on a snowy day, to meet up with Watershed Specialist, Corey Richmond, to field sample several mine drainage locations in the Loyalsock Creek Watershed in preparation for a tour of these sites later in the month. We collected pH, Iron, Alkalinity, and Acidity chemistry samples at White Ash Lands Association (WALA) Lake, Connells B Vein Tunnel (aka. Mine Acid A Treatment System) Inflow and outflow, Loyalsock Creek upstream of confluence with Mine Acid A and Loyalsock downstream of confluence with Mine Acid A. Additionally flow was calculated at Mine Acid A Treatment System to ascertain the percentage of flow being treated from Connells B Vein Tunnel.

- Reviewed the Lower Lackawanna Watershed Restoration Action Plan (LLWRAP) chapters 1-7 and sent comments to Bernie McGurl of the Lackawanna River Corridor Association [LRCA].

- Created a Published Map File (PMF) for ARIPPA related to waste coal piles in PA. Sent the file and associated GIS layers to Jeff McNelly and Jody Cooper and instructed them to download the free ArcReader program to view the interactive map. This tool can aide their organization in finding culm piles that are in the Abandoned Mine Land Inventory System (AMLIS) and collaborate with PA DEP Bureau of Abandoned Mine Reclamation (BAMR) for their removal.

- Received an approval to begin working with ARIPPA to calculate and record (in RAMLIS) culm piles reclaimed by ARIPPA. A pilot study will start with 3 plants before going full scale to develop a methodology [ARIPPA].

- Worked with EPCAMR Intern, Justyna, to name coal veins shown on Second Geologic Survey cross sections, created by Ashburner et. al., in the Lackawanna Basin for incorporation into the 3D earthVision stratigraphic model. The coal veins were not always named the same depending on the colliery that was mining in the area. Worked up a common naming scheme for the entire basin. Starting at the lowest mineable seam, they are: Red Ash (Bottom, Middle and Top Splits), Clark, Marcy, Baltimore, Rock, Diamond, Hillman and Kidney. At least 10 separate veins and splits were identified [LRCA].

- EPCAMR staff traveled around the Lackawanna Valley to conduct water level monitoring of 15 boreholes related to the Scranton Metropolitan Mine Pool. Monitored the Jermyn borehole as well which is connected to the Jermyn Mine Pool [LRCA].

- Monitored the flow of the Duryea Breach discharge and downloaded transducer data at the Old Forge Borehole [LRCA].

- Combated a problem with the EPCAMR Website, where the side bar “postage stamp” links were disappearing in the Google Chrome web browser. The links where being seen by the program as ads and the ad blocking plug-in was blocking them from displaying. Looked for a solution, aside from uninstalling the ad blocking plug-in, but none were available. The WordPress theme used on the site treats them as ads and special coding would be required to change that.
• Worked with EPCAMR Intern, Justyna, to name coal veins shown on Second Geologic Survey cross sections, created by Ashburner et. al., in the Wyoming Basin for incorporation into the 3D earthVision stratigraphic model. Worked up a common naming scheme for the entire basin. Starting at the lowest mineable seam, they are: Red Ash (Bottom, Middle and Top Splits), Clark (Bottom and Top Splits), Marcy (Bottom and Top Splits), Baltimore (Bottom, Middle and Top Splits), Rock (Bottom and Top Splits), Diamond, Hillman, Kidney, Abbott, Snake Island (Bottom and Top Splits), and No. 2. At Least 19 separate veins and splits were identified [SRBC].

• Re-lineup of Shamokin and Mahanoy Creek Operation SCARLIFT Report maps. Originally, the maps were lined up using an older version of ArcGIS. The georeferencing operations are different in the newer versions of ArcGIS and required a re-do if the work in preparation for a Shamokin Area Mine Pool Mapping Presentation for the SCRA.

• Attempted to update ArcGIS 10 with a service pack, but found out that the service pack was for a new version of ArcGIS 10.1. The new version had just come out this month and it already has a service pack…Typical. Contacted OSM Technical Innovation and Professional Services (TIPS) service manager and asked for a copy of the new software.

• EPCAMR and LRCA staff investigated the west side of the Lackawanna River downstream of the Stevenson Street bridge in Duryea to Coxton Road looking for an outlet of the water from the Duryea Swamps to the Lackawanna River. No such watercourse was evident, but follow up aerial photo and mine map investigations showed a new AMD discharge source into the swamps from the Marcy Shaft. The hypothesis is that the water soaks into the hyporheic sand and gravel that runs along the river (aka. the Buried Valley) and into the mine pools below. There are several other discharges near the Coxton Rail Yards and the confluence of the Lackawanna with the Susquehanna River. One of these discharges is mostly treated by a natural wetland before it enters the Susquehanna River just above the confluence. Another seeps out near the river bank closer to the Twin Shaft Disaster Area downstream of the confluence.

• Met with Bernie McGurl, LRCA, to discuss the LLWRAP Report and combine edits to get a draft edition of the report for review by SRBC staff [LRCA].

• Traveled around the Wyoming Valley to monitor water levels in 26 boreholes in the Wyoming Valley. Calculated flow for the Glen Lyon Discharge, Buttonwood Discharge, South Wilkes-Barre Boreholes and pipe full measurements on the Askam Borehole Discharge to calculate the amount of mine water flowing [SRBC].

[ ] - Denotes funding source where applicable.