



NATIONAL ASSOCIATION OF ABANDONED MINE LAND PROGRAMS

NEWSLETTER

Spring 2008

Vol. 30 No. 1

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UPCOMING MEETINGS

2008 Annual Conference
Durango, CO Oct. 26 - 29

MISSION STATEMENT

1. To provide a forum to address current issues, discuss common problems and share new technologies regarding abandoned mine land reclamation;
2. To foster positive and productive relationships between the states and tribes represented by the Association and the federal government;
3. To serve as an effective, unified voice when presenting the states'/tribes' common viewpoints; and
4. To coordinate, cooperate and communicate with the Interstate Compact Commission, Western Interstate Energy Board and all other organizations dedicated to wise use and restoration of our natural resources.

Navajo Host 2008 Winter Meeting

The Association held its Winter Meeting in Chandler, AZ, from February 26-29 at the San Marcos Resort. The Navajo AML program hosted the three day event.

Main topics discussed at the business meeting included the 2006 AML amendments, OSM's timetable for a proposed AML rule, and the OSM 2009-10 proposed budget and its impact on emergency AML reclamation funding. The Association passed a resolution introduced by Oklahoma that urges Congress to continue funding the emergency program in OSM's budget. (See related article later in this issue.)

On Friday of the meeting the Navajo organized a field trip to the Resolution Mine located east of Phoenix in Superior, AZ. Mine company officials guided the participants on a tour of historic mine features as well as newly developing mine ventures.

L-R Joe Hart, Laurie Swartzbaugh, Sam Layne of the Arizona Mine Inspector's Office



The group was joined by personnel from the Office of the Arizona State Mine Inspector. Joe Hart, the State Mine Inspector, and his staff explained the role of the agency, the prevalence of old, abandoned mines and shafts in Arizona, and showed participants a shaft that was soon to be reclaimed.

The field trip successfully showcased abandoned and current mining in Arizona and revealed strategies for reclamation. The Association is grateful to the Navajo AML program for assembling and hosting the 2008 Winter Meeting.



Old headframe at Resolution Mine.



Field Trip - abandoned mine opening.

Guest Editorial

Funding For AML Emergencies Is Critical

The policy of the Office of Surface Mining (OSM) to eliminate funding for AML emergencies will put unnecessary funding pressure on State/Tribe AML Program budgets. Minimum Program States (critically underfunded states) will take the biggest "hit" because their annual AML grants are much lower. Even the states like Kentucky and

Pennsylvania, where OSM has been responsible for AML emergencies, will be negatively impacted when an emergency such as a large landslide or expensive grouting job must be paid from their annual AML grants. What happens if a state has obligated its grant funding and a multimillion dollar emergency occurs? Who takes care of the emergency?

OSM should rethink its present position of passing the costs of AML emergencies on to States and Tribes through the annual AML grants. As AML emergencies increase over time, it only makes sense to maintain an OSM AML emergency program that States and Tribes can utilize to address immediate AML public health and safety problems. This would help relieve the funding pressure on the States and Tribes and allow more work to be done on high Priority 1 and 2 AML hazards.

In the past Oklahoma has had five to six emergencies a year with emergency costs as high as \$359,470 for one year. In the last year, Oklahoma has had seven AML emergencies that will have a total cost of between \$115,000 and \$130,000. This seems to be the trend as old underground mine timbers are becoming more unstable resulting in subsidence of the old mine roofs.

Mike Kastl - OK

Oklahoma Reclamation Projects

Arno Street Sinkhole

Twenty feet of a 10-inch clay tile sewer main and a 3/4-inch water line broke in a residential area of Coalgate, Oklahoma (population - 2,005). When the city maintenance crew investigated the problem, the underground utility pipes had literally disappeared. The backup of raw sewage on the surface created a health hazard as well as the hazard of the subsidence hole. The emergency was a joint project between the state and the city of Coalgate. The total cost of the project was \$3,750.79.

Arno Street Sinkhole



Marvin Dunn Sinkhole

Old underground mine maps proved to be valuable when verifying that the sinkhole in the backyard of the Dunn residence in McAlester (population - 17,783), was definitely coal related. A sinkhole, nine feet in diameter and eight feet deep, suddenly opened creating an immediate hazard to the residents in the area. As the contractor was clearing the area his equipment caved-in a second sinkhole located about 30 feet from the first. The average thickness of the mine roof in the area was about 16 to 17 feet. The holes were excavated and filled with rock and clay. The total project cost was \$13,552.64.

McDougal Gob Fire

An old gob pile caught fire in a pasture approximately one mile north of the town of Alderson (population - 260). There are 13 houses within a half mile of the fire as well as several barns, round bales of hay, and other outbuildings. The gob was 60 feet long by 50 feet wide by 21 feet high. At the time the fire started, there had not been much rain and the area around the gob had tall grass and timber. An area was cleared to spread the burning gob to allow it to burn itself out. The total cost of the project was \$1,604.60.

Yellow Brick Sinkhole

No, this is not the Yellow Brick Road in the Land of Oz. It was, however, a sinkhole in a drainage ditch adjacent to Yellow Brick Road in the town of Hartshorne (population - 2,102). The Wilburton street crew was cleaning out the ditch when they discovered an “unusually shaped” water-filled hole. The bucket of a backhoe was lowered into the hole about 22 feet and never reached the bottom. The hole was within 30 feet of the nearest resident’s front yard. The sink hole was 8 feet wide and approximately 28 feet deep. Off-site rock was put in the hole then “topped-off” with small gravel. Clay was used to seal the hole and on-site topsoil was placed over the clay. The total project cost was \$13,165.27.

McAlester Expo Subsidence

Workers at the Southeast Expo Center 21/2 miles west of McAlester discovered a large “sag” subsidence that was filled with water. The subsidence measured 114 feet long, 86 feet wide, and 14 inches deep. In addition, a section of the asphalt road leading into the main entrance of the Expo Center from U.S. Highway 270 had dropped about 12 inches with large cracks in the asphalt. The Expo Center is a massive structure used for many events in southeast Oklahoma such as basketball tournaments, trade shows, fairs, concerts, etc. Needless to say, the area is highly visible and highly utilized by the public. The subsidence was about 452 feet from the Expo building. With the section of the asphalt leading onto U.S. Highway 270, eleven exploratory drill holes were drilled. The mine roof was about 47 to 51 feet thick with a 2 to 4 foot void. Each drill hole was plugged/filled with flowable grout. Wet weather has slowed the completion of the work. Final cost will be in the range of \$65,000 to \$80,000.

Vinson Gob Fire

A gob fire was discovered approximately 11/2 miles southwest of the community of Panola, Oklahoma. The gob is about 70 feet long by 40 feet wide by 2 feet deep. There are a few hundred residents within one mile of the gob fire. The gob is located on a steep bluff. Heavy rains in the area have failed to extinguish the fire. A contractor has been hired eliminate the gob fire. The estimated total cost will be between \$4,000 to \$5,000.

McCurtain Park Sinkhole

A sinkhole opened in the parking area of the McCurtain City Park a quarter mile west of the town of McCurtain (population - 466). The park is on State Highway 31 and is heavily used by the public because there is a water-filled strip pit that is a part of the park. Underground mining preceded the strip mining many years ago. The sinkhole was 4 feet in diameter and 11 feet deep. The sinkhole was reclaimed at a total cost of \$7,919.20.



McCurtain Park Sinkhole

PFPP Partnership Efforts For The Bread Springs Day School Project

While there are many benefits and advantages to partnership development, the response to why one seeks to establish partnerships is relatively simple. There is added value in working with organizations including the sharing of staff and financial resources. Partnership development is not a new concept, as the Bread Springs and surrounding communities, with other organizations have been working together in partnerships to improve the quality of life at the grassroots level for a number of years. There are a number of multi-agency “stakeholder” partnerships both locally and at the national level that manage and deliver a wide range of community development programs, as well as service development and strategic planning. This includes the Bureau of Indian Affairs, Navajo Abandoned Mine Lands Department, Navajo Department of Transportation, and the County of McKinley. Partnerships essentially adopt a long-term and a flexible approach, where we are often evolving as we learn more about effective management, building capacity and gaining valuable experiences toward a better future.



A real time project, with a concerted approach, the Department of the Interior, Bureau of Indian Affairs, Navajo Regional Office, Branch of Facilities Management will be constructing a new school with related infrastructure, teacher’s quarters, access road and development of a new water supply well. The project is located approximately 11 miles south of Gallup, New Mexico on State Highway 602. Like most modern schools, this new Day School will provide specialized and innovative classrooms with computer labs, contemporary library with a media center, progressive technology and communication systems, efficient dining kitchenette facility, and an essential gymnasium. Exterior improvements will include the athletic fields, playgrounds, paved roadways, parking lot and walkways. All new utility infrastructure entails sewage lagoons, water well, electric line and communication extensions.

In its inception, the Bread Springs School Board initially requested for a new water well to be installed as it was not a part of the Navajo Tribal Utility Authority’s prorated calculation for future



growth. These communities have come to polarize issues over the present water system and have historically been overwhelmed with an inability to keep up with the water demands. Without further compromising the required water supply, the Board of Education sought funding for a new well to provide an independent water supply for the school.

At the onset, drilling of 2 pilot test holes were performed to ensure sufficient water flow, water was encountered, and a pump test was completed determining a sufficient flow for the needs of the school. With a successful pump test, samples of the water were tested verifying the quality and treatments to reach the quality levels required. While all tests are successful, the well is approximately 1,200 feet deep and the pilot test hole was reamed out, and constructed with an 8-inch casing installed. The project took approximately 16 weeks to complete.

Having access to a water well will allow the construction of the three quarter mile access road to the new school site and the well will provide water to the new school complex without affecting the current water supply to the community. It will ensure that the new school will be able to operate and provide the initial, basic educational foundation for the children of the community so that they can attain a higher standard of living for themselves and their families in the future. This will benefit the community in the long run.

In 2004, the Navajo AML Program, after project proposal review and acceptance of the Bread Springs Day School Water Well Project, \$300,000.00 was awarded in January 2005. BIA secured \$700,000.00 from the Facility Management Program. BIA through professional contractual agreement, worked with PAIKI, an architectural and engineering firm of Albuquerque, NM to perform all planning, engineering and design. The funds from Navajo AML are matched with BIA to construct a new water well, chlorinator building and elevated water storage tank. Pittsburg Tank and Tower of Kentucky will deliver, fabricate and erect one new 75,000 gallon elevated water storage tank, four legged with complete concrete footings. Construction is expected to be completed by September 2008.



In addition, the School Board further applied for funding thru the Navajo Department of Transportation and was awarded the amount of \$722,922.00 for construction of the new School Access Road and New Mexico State Highway 602 intersection improvement. The school and housing project is advertised, a pre-bid meeting is scheduled April 24th and 30th at the Gallup BIA Offices. The bid opening is scheduled for May 16th, 2008.

Due to this collaborative relationship between the following entities in working toward shared objectives through mutual agreed efforts the following made this project a reality: the Bread Springs School Board, Bureau of Indian Affairs, PAIKI, Navajo AML, Navajo Department of Transportation, BIA-Construction Heavy Equipment Unit, New Mexico Department of Transportation, Navajo Archaeology Department, Navajo Forestry Department and utilities companies Continental Divide Electrical Co. and Century Tel, Contractor Deerfield Corporation and the Army Corps of Engineers.

Partnership leveraged resources between the Navajo Nation and the Bureau of Indian Affairs created a spirited advantage, leverage existing and new strategic alliances for long-term construction growth for Navajo projects. Gaining a solid understanding between our offices allows for innovation, viable advantages that gave an empowerment opportunity that help promote team building. In that sense, partnerships act as a learning mechanism that teaches us to be better at what we do and enables us to achieve our goals and objectives as one.

Most public facility project tasks have been challenging, however, through adequate coordination efforts with respective entities, projects can be successfully completed within schedule and budget. It has been our experience that with most communities there is lack of infrastructure development and project funding. Nonetheless, with continued efforts to work together for the communities, we will be proud to say we are providing quality services to our people.

**Marietta Jensen, Project Specialist
Navajo AMLR/UMTRA Department**



Pennsylvania Installs First Swedish Tipping Bucket Lime Dosers

Dents Run, Benezette Township, Elk County - Bennett Branch Watershed

In late March, the first automatic tipping bucket-type Lime Dosers were installed in Pennsylvania within the Dents Run Watershed in Benezette Township, Elk County. The design of the system was first developed in Sweden to combat acid precipitation. The “Swedish Tipping Buckets” operate by using the water power and require no electric or other external power supply. The State of Maryland has employed this technology successfully for many years in the North Branch of the Potomac River. The tandem of dosers was installed on the discharge known as ‘Discharge 17’ which contributes approximately 40% of the total acid load and is the largest source of AMD pollution in the Dents Run Watershed. The discharge, which has a typical flow rate of 110 gpm, is located on State Game Lands No. 211, and both the Pennsylvania Game Commission (PGC) and the PA Fish and Boat Commission (PFBC) are supportive of the project.

The dosers are feeding pulverized limestone from Graymont of Pleasant Gap, PA to the discharge allowing for the neutralization of the highly acidic mine water. Within only a few days of operation, the Dents Run showed a significant increase in



approximately one-third of the pollution that is degrading the lower 33 miles of the Bennett Branch. BAMR is also working to address other mine drainage and abandoned mine land problems within the Bennett Branch as an integral part of the PA Wilds initiative.

Capital construction of the project (\$239,100) was funded by BAMR through a pass-through grant to the BBWA using federal AML monies. The project was designed by Lime Doser Consultants, LLC of Clarksburg, WV and the project was built by Coleman Construction Co. of Renovo, PA with portions sub-contracted to Brookville Tanks, Inc. of Brookville, PA and M& M Construction, out of Johnsonburg, PA. The BBWA has established a trust fund of approximately \$600k for the continued operation and maintenance of the dosers. Similar installations may be considered at other locations within the Bennett Branch or other watersheds once additional monitoring of the impacts and benefits are completed.

Eric Cavazza, P.E., Design Section Chief
Jon Smoyer, P.G., Hydrogeologist, Cambria District Office,
Pennsylvania DEP, Bureau of Abandoned Mine Reclamation



alkalinity at its mouth for the first time in over 75 years. The pH, which has historically been around 4.0, has been consistently 6.0 at the mouth. This reduction in acidity should have a dramatic impact on the lower reaches of Dents Run (4.75 miles); the lower reaches of the Bennett Branch from Dents Run to Driftwood (9 miles); and the Sinnemahoning Creek immediately below Driftwood down to its confluence with the First Fork (3.75 miles) for a total of 17.5 miles of stream improvements.

The Bureau of Abandoned Mine Reclamation (BAMR), in cooperation with the Bennett Branch Watershed Association (BBWA), will be working to optimize the treatment performance and will be conducting chemical and biological monitoring to document the recovery of the streams.

BAMR has been working with the US Army Corps of Engineers, Baltimore District, the BBWA, the PGC, the PFBC, and several other partners to implement a restoration plan for the Dents Run Watershed. AMD within the watershed contributes



Virginia's Arbor Day Celebration



Torrential rains failed to dampen the enthusiasm for Virginia's 4th annual Arbor Day celebration on April 4, 2008. The Virginia Department of Mines, Minerals and Energy (DMME), the Office of Surface Mining (OSM), and the Virginia Department of Forestry (DOF) hosted the event for secondary school students from Dickenson County in Virginia. Other Arbor Day partners included The Nature Conservancy, The American Chestnut Foundation, and Take Pride in America.

DMME and its partners held the event at a previously mined site in Russell County, Virginia where The Nature Conservancy has accomplished a pilot carbon sequestration project. Although the surface mining was post-SMCRA, the reclamation was typical of many pre-SMCRA sites with highly compacted soils, competitive ground cover, and numerous invasive shrubs. The Conservancy had contracted to rework the site to make it compliant with the forestry reclamation approach, under the Appalachian Regional Reforestation Initiative. The work included shearing the existing woody vegetation, liming and fertilizing, ripping, and planting native hardwood species. The Conservancy's planting contractor excluded a two-acre area specifically for the Arbor Day event.

The event highlighted efforts to restore the American chestnut to eastern forests. Beginning in the early 1900s, a blight largely decimated this species. By the 1950s, the blight reduced the once dominant and ecologically critical nut producer to ghostly snags throughout most of its range. With a mission to restore the American chestnut tree to its native range, the American Chestnut Foundation has implemented scientific research and breeding programs by crossing American chestnuts with blight resistant Chinese chestnuts. Further backcrossing the offspring with American parents produces offspring that have the desirable characteristics of the American tree and the blight resistance of the Chinese species. The Foundation has implemented Operation Springboard to use surface mined lands as an avenue to introduce a blight resistant American chestnut to the eastern forest. This process can also be used on AML reclamation projects.

During the Arbor Day event, Lynn Scarlett, Deputy Secretary of the Interior, recognized Marshal Case, president and CEO of the American Chestnut Foundation, for his volunteer efforts to reestablish chestnut trees. Deputy Secretary Scarlett also joined Case, OSM Director Brent Wahlquist, and a number of students to plant five backcross American chestnuts seedlings on the site. Scarlett noted the students were planting for the future, which needs science, conservation and partnerships to make things happen.

"The support and enthusiasm for Arbor Day is tremendous," said Butch Lambert, director of Virginia's Division of Mined Land Reclamation. "In addition to being a fun experience for the students, Arbor Day activities also emphasize Virginia Standards of Learning (SOLs). Arbor Day sponsors gave presentations that directly related to secondary SOLs for biology and earth science."

DMME's AML program continues to implement the forestry reclamation approach whenever practical on its projects. DMME's tree planting contractor recently planted over 18,000 hardwood seedlings on AML enhancement projects. DMME personnel also planted over 100 American chestnut on AML sites this spring. For further information on Virginia's Arbor Day event or reforestation efforts, please contact Richard Davis at 276-523-8216 or at Richard.Davis@dmme.virginia.gov.

Richard Davis - VA Dept. of Mines, Minerals and Energy

Indiana AML Program Increasing Reforestation

Professional reclamation started in Indiana with the Coal Lands Forester. Much of his work is still seen and enjoyed in the southwestern coal region. Towering pines and hardwoods offer countless recreational opportunities for residents and valuable timber for the economy. In more recent years though, there has been less interest in returning mined land to forest. This lack of interest had mostly been due to economic restraints, post 1977 reclamation laws, and landowner wishes. There has been a change in interest among landowners and restoration staff however, that has brought the spirit of the coal lands forester back to the Indiana AML Program.

In 1999 meetings were arranged between Sycamore Trails Resource Conservation and Development Council, the Indiana Division of Forestry, forestry professionals, and Restoration Section staff. These meetings brought new ideas, better tree planting techniques, and increased available planting areas. Soon, good tree planting contracts were in place and plantings were looking much better. By 2001 the number of trees planted by the AML program had nearly doubled and in 2002 the potential for even more plantings increased with the inception of the Reclamation Re-Leaf Program. This is a state funded program administered through the Divisions of Reclamation and Forestry. Re-Leaf encourages owners

of land that was mined after 1977 to be forest stewards. It does this through a cost-share that returns the landowners investment after they complete prescribed care to planted trees over a three year period.

The increase in tree plantings brought a need for an area to test new ideas and increase understanding of growing trees on reclaimed land. Out of this need Site 1700 was born. This site, also known as the Dugger Unit of Greene-Sullivan State Forest, consists of about 300 acres of post 1977 mined land. The Dugger Unit has been set aside as a demonstration area for studying successful reforestation of reclaimed land. Since its formation there have been 10 test plantings and 2 university studies performed on the site. Techniques for the control of exotic invasive species, to the benefits of nutrient loading tree seedlings in the nursery, have been tested at the site. A field day is held at the site each year to promote an



information exchange between Federal, State, and local officials as well as citizens. Site 1700 has been a great success and has provided government organizations, schools, and private landowners valuable information.

Since 1999 the new tree planting program has planted over 1.2 million trees on Indiana's reclaimed coal fields and grows this figure by about 140,000 trees a year. These trees provide wildlife habitat, protect soil and water resources, and will contribute to Indiana's economy in the future. The success of the program can be attributed to cooperation between the committed staffs of the Indiana Division of Forestry, Indiana Division of Reclamation, and the enthusiastic residents of the Hoosier state.

Christopher Turpin - IN

Kentucky AML Tackles Panther

The rolling land changes from green to brown and black leading up at the former coal mine and site for Green Coal Co. in the community of Panther on Kentucky 554 in Daviess County, south west of Owensboro.



Aerial view of the Panther Tipple site.

East of the mostly barren 121-acre coal waste plot, the water in nearby Brush Creek runs orange from acidic runoff from the site where coal mining and processing began in the 1950s.

But Glenard Leet, who now owns the property, looks out on the land and sees a green pasture for cattle, thanks in part to state grant money delivered by Gov. Steve Beshear on Thursday.

"It's going to mean a lot to me," said Leet, who with his son runs G.A. Leet & Sons Dairy.

Beshear, along with officials from the state Environmental and Public Protection Cabinet, visited the site Thursday to deliver a \$1.6 million ceremonial check for work to clean up the site.

The Kentucky Division of Abandoned Mine Lands has awarded a contract to the firm Rust of Kentucky to make the land safe and available landowner use again.

Over the next 18 months, Rust of Kentucky will begin grading the coal waste on 121 acres of the property and covering that waste with “borrow” material and soil from a 60-acre plot adjacent to the property.

The site will be re-vegetated with grasses and limestone-armored ditches that will help treat runoff that flows into Brush Creek.

“We are and we will always be a coal-burning state,” Beshear said. “But there’s a balance to be struck here. ... Along with the need to mine coal safely and cost-effectively is the obligation to do what we can to protect the environment.”

Beshear said the site was home to a mine and a coal wash plant until 1998, but since then the property has been abandoned, reclamation bonds have been forfeited, portions of the coal waste caught fire in 2004 and the site had been subjected to illegal dumping.

The money for the cleanup will come in part from the forfeited reclamation bond Green Coal Co. had to post to mine coal at the site as well as money from the state’s reclamation fund and acid mine drainage abatement account.



Kentucky Governor Steve Beshear (podium) with Environmental and Public Protection Cabinet Secretary Bob Vance at Panther Tipple Reclamation Ceremony.

“It is past time to clean up this site,” Beshear said.

*-Reprinted from the Owensboro Messenger Inquirer
April 18, 2008.*

An Old AML Recipe From Oklahoma English Toffee

1/2 lb. butter (not oleo)	3 - Hershey bars (7-8 ounce plain)
1 cup sugar	1 teaspoon vanilla
3 tablespoons water	1/2 to 1 cup pecans (finely chopped)
Pinch of salt	

Boil (on electric stove, I cook between medium high and high), stirring constantly, until light caramel color, and cracks when tested in cold water. If you put a lid on the pan the first 2-3 minutes when it starts to boil, it will keep the sugar from separating. Cooking to slow will cause the sugar to separate and obviously cooking to fast (high) will cause it to burn.

Add vanilla, mixing well. Immediately, pour into cookie sheet (use an unbuttered cookie sheet) and spread as thin as possible, as fast as possible (1/4 inch, (inch is better). Immediately, lay the 3 Hershey bars (broken in half) over the top. As soon as they are melted, spread with spoon, over the top. Then, sprinkle with nuts. Note: roll the nuts into the top lightly, using a glass. Harden, and break out of pan, cracking into pieces with handle of dinner knife.

Note: If you are in a hurry to harden, as we usually are, put into freezer for a few minutes.

Thanks To Mike Kastl

NEWSLETTER ARTICLE SPECIFICATIONS

400 - 500 words. Articles subject to editing. Submit in e-mail or hard copy. 2 photo limit. Include author’s name, title of article, captions for photos. Submit photos in TIF(preferred) or JPG format, 300 DPI, and original photo size. E-mail photos as individual files, not embedded.

Deadline for the Fall edition is November 15, 2008.

Email articles to steve.hohmann@ky.gov or mail articles to:

Steve Hohmann, Director
Division of Abandoned Mine Lands
Department for Surface Mining and Enforcement
2521 Lawrenceburg Road
Frankfort, KY 40601

For more information, call Steve Hohmann, Mark Meade or Ben Enzweiler at 502-564-2141.