

N A A M L P

NATIONAL ASSOCIATION OF ABANDONED MINE LAND PROGRAMS

NEWSLETTER

Fall 2008 Vol. 30 No. 2

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UPCOMING MEETINGS

2009 Winter Meeting
Oklahoma City, OK Mar 17-18

2009 Annual Conference
Rogers, AR Sept 26-30

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.

WOW, this is a great time to be involved in the reclamation of abandoned mines. The recent conference in Durango, CO was an outstanding effort by four programs. The technical sessions, field trips and tours, and the overall camaraderie were exceptional. Arizona has joined the association, joining Nevada and California as recent new members. The increase in western state presence is an excellent step forward as we face new challenges in the hardrock mining arena. Thanks to Colorado, Utah, Navajo Nation and New Mexico for their hard work and hospitality.

The final rules implementing the 2006 AML Program Reauthorization were released and promise to give all of our members plenty to discuss and interpret over the coming months. While there are many aspects of these rules that many members disagree with, we all need to be glad that we have an opportunity to continue the great work that has been going on for many years by our members. If any member needs information on these new rules, give me a call.

Many state and tribal programs will begin seeing significant increases in the level of annual funding received from the Office of Surface Mining. Many programs will be recruiting new staff to handle the increased workload associated with this funding. I look forward to meeting new professionals that I am sure will bring an air of excitement and challenge to many programs.

Oklahoma will be hosting the upcoming 2009 winter meeting. I am looking forward to visiting Oklahoma City on March 16, 17 and 18. Mike Kastl has assured me that it will be a wonderful location for our annual business meeting. I

certainly hope that all members will meet in Oklahoma City in spite of the difficulties some are experiencing with state budgets.

A new administration will be taking over the reins in Washington D.C. This transition will impact the Office of Surface Mining as well as the member states and tribes. We can all expect changes as we move forward. As always, Greg Conrad continues his excellent service to the association. His knowledge and abilities seem to have no limits as he helps all of us move through these changing times. He has already arranged a meeting between the association and members of congressional committees to review funding issues related to the emergency program.

Speaking of a new administration, I want to thank all of you for the confidence you have in me to serve as president of the association for the next year. Mike Garner and Madeline Roanhorse have already provided input on a couple of issues that have arisen since our Durango meeting, and I expect that I will be asking them for guidance often in the coming months.

I hope everyone has an enjoyable holiday season and a prosperous and productive 2009.



Sarah Donnelly Receives Stan Barnard Award



Mike Kastl, Sarah Donnelly

The 2008 recipient of the Stan Barnard Award, the Association's highest individual honor, went to Sarah Donnelly of the Office of Surface Mining. Year after year the Technical Training

Program, under the leadership of Sarah Donnelly continues to be the division that sets the standard of excellence within the Office of Surface Mining. It would take volumes to describe all the courses, workshops, sessions, and other initiatives that have been developed and held under her direction. The state and tribal AML Programs have benefitted greatly through her efforts. Hundreds of hours of training have helped prepare new employees and have honed the skills of employees with much more experience.

The International Programs directed by Sarah have provided both AML and Regulatory staff the opportunity to teach and learn in an environment that is a professional enhancement of all those that have been privileged to participate.

Sarah has supported the National AML Association activities for many years. She initiated a Training Committee on which the National AML Association has a representative. Sarah was also instrumental in starting the Dave Bucknam Outstanding Instructor Award in memory of Dave Bucknam, Director of Colorado's Office of Active and Inactive Mines and she presents this award at the annual National AML Association Conference. Sarah has been recognized by the U.S. Department of Interior for meritorious service several times. Because of her distinguished career it is only fitting that the National AML Association honor Sarah with the Stan Barnard Award for her many years of untiring dedication and support of the Association's goals and objectives.

Dave Bucknam Award Given To Fred Sherfy

Fred Sherfy, longtime OSM employee and training instructor, was awarded the 2008 Dave Bucknam Award at the Durango conference. The Bucknam Award is presented each year to a National Technical Training Program instructor exhibiting the special qualities of leadership, dedication, compassion, and commitment as epitomized by Dave Bucknam (former AML program administrators for Colorado) in promoting the training of state, tribal, and federal employees.

Fred was instrumental in developing OSM's National Environmental Policy Act (NEPA) training course over 20 years ago. He continues to upgrade and instruct that class today. Fred is

widely known for adapting his teaching curriculum and class activities to the region where the class is held. For instance, if the class is held in the west, Fred prepares notes and exercises relevant to that region.

Sarah Donnelly, Chief of the National Technical Training Program, presented the award to Fred at the Conference Awards Banquet.

NEWSLETTER ARTICLE SPECIFICATIONS

400 - 500 words. Articles subject to editing. Submit in e-mail or hard copy. 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 Spring edition is April 15, 2009.

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

Steve Hohmann, Director
Division of Abandoned Mine Lands
Department for Natural Resources
2521 Lawrenceburg Road
Frankfort, KY 40601

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

Conference 2008

You could find whatever you wanted (except for maybe a warm spot) at the Multi-Cultural Night Celebration at the Durango Conference: colors, energy, great food, jewelry, fry bread, beverages and dancing!



Colorado Claims National Reclamation Award Peanut Mine Wins

The Peanut Mine located at elevation 9,000' in the Colorado Rockies near the town of Crested Butte presented many interesting and complex reclamation challenges. This abandoned coal mine contained both coal refuse and silver mill wastes. While the coal refuse had a propensity to spontaneously combust, the silver mill waste generated acid and mobilized metals into nearby waterways.

Prior to developing a reclamation plan, the Colorado Inactive Mine Reclamation Program (CIMRP) conducted many investigations to characterize the site. This information provided the basis for a reclamation plan that addressed the coal and non-coal problems at the Peanut.

The CIMRP made a concerted effort to involve the community in all steps of the reclamation planning and construction process. CIMRP sponsored a Reclamation Studies class at the local High School, hosted town meetings during development of the conceptual reclamation plan, and conducted weekly tours of the site during construction.

Reclamation entailed excavating the coal and silver mill waste materials, mixing them in a specific ratio, and placing them in a disposal facility. The waste material mixing ratio was based on geochemical testing which indicated coal buffers the acid production potential of the mill waste. Mixing of materials also diluted the coal so that spontaneous combustion potential was minimized.

The surface of the waste disposal facility and the areas from where waste material was excavated were constructed so that they are geomorphically compatible with surrounding topography. Dirt, donated prior to construction, was heavily amended with organic material, and was distributed over the contoured site.



Jon Hess - Town of Crested Butte, Loretta Pineda - CO AML, Steve Renner - CO AML, Jim Starr - Gunnison County Commissioner

Vegetation, including grasses, shrub islands and tree plantings, were established so that the natural growth patterns and characteristics evident on adjacent lands was recreated.

Following completion of all other reclamation activities, volunteers planted 4,500 trees at the site.

By any measure, reclamation was a success at the Peanut Mine. The citizens of Crested Butte are now more aware of the hazards caused by past mining practices, and have become aware of how abandoned mines can be restored to beneficial use. This once neglected eyesore is now an enjoyable open space.



West Side Peanut Mine Prior to Reclamation.



West Side Peanut Mine During Second Growing Season Post-Reclamation.



View of Lower Loop Trail as it Traverses Peanut Mine Site Less Than 2 Years Following Reclamation Construction.



View of Lower Loop Trail as it Traverses Peanut Mine Site Prior to Reclamation.

New Mexico Wins Category II Award Yankee-Vukonich Coal Reclamation Project

Coal mining within the Yankee area, along the eastern edge of the Raton Coal Field, began sometime in the early 1900s with the opening of the Lewellyn and Turner Mines and the Yankee Mines 1, 2, and 3. Three of the four project sites are on private land owned by the Buddy Vukonich family. The fourth project site, the Sonchar Mine, is located on a school section owned by the State of New Mexico, the coal rights of which were leased to several individuals who mined coal until 1971. These mines were important locally because they provided fuel for the local market and jobs as the larger mines were exporting the majority of their coal and becoming more mechanized.

Although comparatively small compared to the Dawson, Koehler, Blossberg, Brilliant and Swastika Mines, the Yankee Mines produced a substantial amount of coal waste, which was typically dumped down steep slopes. The coal waste was severely eroding and polluting both ephemeral and perennial waterways tributary to Chicorica Creek and eventually the Canadian River. These local waterways recharge wells and provide irrigation and drinking water for domestic animals and wildlife.

Knowing that a significant amount of coal refuse was being eroded into local waterways, degrading water quality and affecting off-site users of local streams and rivers, the NM Abandoned Mine Land Program (AMLPL) surveyed the coal waste piles located in Yankee Canyon. The program located ten waste piles, three adits and one shaft that were contributing sediments or were dangerous to the public (though only five waste piles and two adits

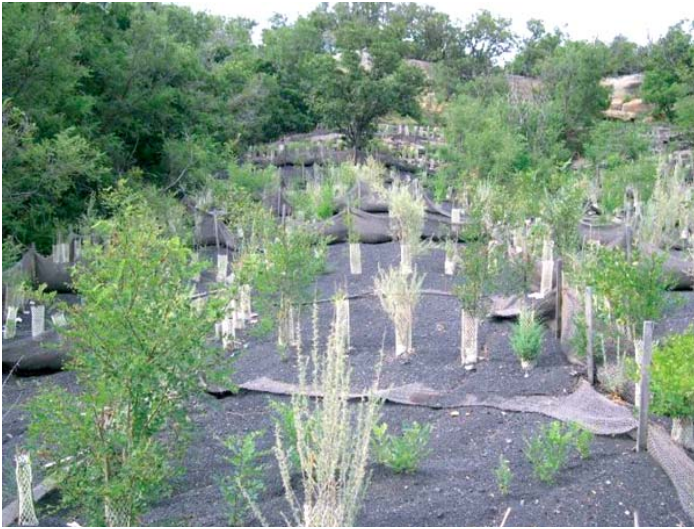
were included in this project because of problems in negotiating right-of-entry with a local landowner).

Southwest Archaeological Consultants recorded cultural resources at the mine sites, which included a load-out, mine building, coal carts, small rail lines, tools and other mining equipment. Historical data was compiled through interviews of local people, including the landowner who had worked in the mines as a young man. The goal of the reclamation was to geomorphically stabilize the waste piles and impacted streams while avoiding or minimally impacting the historical sites.

The project involved reshaping of waste piles, construction of straw bale terraces, coir roll terraces and coir roll terraces with live brush layers; installation of straw wattles, shade and stabilization fences, branch packing in gullies, and a rock rundown; restoration



Mike Thompson, Raymond Rodarte, Lloyd Moiola, John Kretzmann, Randall Amijo, Dina Vigil, James Smith, Daisy Levine



Native seedlings in the second season of growth in sandy gob at the Sunset Mine. (note root sprouting of New Mexico locust in the foreground)

of 1200 feet of an ephemeral stream, relocation of a road, incorporation of amendments, planting of native seedlings and hydroseeding with native species. The open coal adits, which were partially collapsed, showed no evidence of bat usage and were backfilled and marked with a permanent survey cap.

This project demonstrates the effective use of a geomorphic approach to stream channel stabilization and of the use of straw bale and coir roll terraces for erosion and sediment control on steep slopes. The straw bales and coir rolls also capture storm runoff for use by the seedlings planted along them, as the

Sonchar Mine site before construction.



77% plant survival rate demonstrates. The project also demonstrates two innovative approaches to direct reclamation of coal mine waste piles in the Southwestern United States: the use of amendments, including a few inches of native soil, incorporated directly into the surface of the material and the use of specialized planting techniques suitable in very sandy, droughty gob material.

By removing gob from active water courses, installing straw wattle dams for sediment control, increasing vegetative cover and stabilizing stream banks, downstream water users and wildlife are benefitting from cleaner water and improved watershed conditions.

Partnering with the New Mexico State Land Office and private landowners, the New Mexico Abandoned Mine Land Program has shown that reclamation can be a successful cooperative endeavor that benefits not only the private landowner but also farmers and ranchers downstream, wildlife and the general public who visit the Land of Enchantment.



Franks Mine site following construction. (with relocated road and restored stream to extreme left of photo)

Franks Mine site before construction. (note the degraded, incised stream at center left of photo)



Appalachian Regional Award - Pennsylvania

Fishing Run Restoration and Maude Mine Reclamation

The Fishing Run Restoration and Maude Mine Reclamation Project site is located in South Fayette Township, Allegheny County, Pennsylvania, within the lower section of the Chartiers Creek Watershed. The watershed lies southwest of the City of Pittsburgh in the western suburbs and discharges directly to the Ohio River approximately eight miles downstream from the confluence of the Allegheny and Monongahela Rivers at the point in downtown Pittsburgh. Significant community interest and support facilitated this project. A local watershed group, the South Fayette Conservation Group (SFCG), initiated the project through a grant application and ensuing partnership agreement with Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation (PA DEP BAMR). Previous watershed studies and abandoned mine land (AML) inventory work by PA DEP, SFCG and the Chartiers Nature Conservancy (CNC) identified this site as having significant adverse impacts to water quality and high-priority AML features that posed a significant threat to public health and safety.



35% and 30% respectively. The Gladden Discharge can now be passively treated in the space available, thus allowing for significant future water quality improvement in Millers Run and the Chartiers Creek Watershed.

Eric Cavazza, PE
Rich Beam, PG
Pennsylvania DEP, Bureau of Abandoned Mine Reclamation



The project reclaimed seven OSM priority 2 AML features including an open portal, a partially sealed mine opening, approximately 1,500 linear feet of dangerous highwall and numerous dilapidated coal preparation plant and coal load-out structures. In addition, the open mine portal was capturing all of the flow from the upper portion of a clean water stream called Fishing Run which is a tributary to Millers Run. The stream flow exceeded 2,500 gpm during the spring of the year. The stream entered the abandoned Pittsburgh Coal Company's Montour No. 2 underground mine complex and emerged several miles downstream as part of a large AMD discharge to Millers Run, known as the Gladden Discharge.

Beneficial impacts of the project, in addition to the elimination of the hazardous AML features, included: 1,100 linear feet of Fishing Run restored to its approximate pre-mining configuration using principles of fluvial geomorphology; the clean water inflow to the abandoned mine complex was eliminated; and at the Gladden Discharge flow rate and iron load were reduced by



Rod Fletcher, Eric Cavazza, Rich Beam

Mid-Continent Regional Award - Indiana Log Creek Church Project

The Log Creek Church is a small country church and cemetery located in Pike County, Indiana. The church is approximately 150 years old and was established by German and Irish immigrants. The primary intent of this project was to address two dangerous highwall features located immediately adjacent to the Log Creek Church property. The highwall features (the highwall areas are referred to as the north and south highwall areas) are located along a heavily traveled county road, Log Creek Church Road, and have little to no protection from fall. Also of concern at the site is a total of approximately 70 acres of acid producing material (gob) within the project area, producing millions of gallons of acid mine drainage (AMD), resulting in extremely poor water quality (exp: pH < 3, Sulfates 1,050 mg/l). Water leaving the site directly impacts the headwaters of the South Fork Patoka River that lies within the project area.

therefore became known as the squiggly ditch. The significance of this technology is that, as a result of the successful use of the geomorphic land design at the Log Creek Church Project site, Geo-Morphic land design may become the standard for IDoR's approach to reclamation.



Steve Herbert, Mark Stacy

Reclamation and abatement of AMD originating from the site was completed by installing an intricate series of wetland passive treatment systems at the site. Today, as a result of having installed approximately 20 acres of passive wetland treatment systems and having treated approximately 11 million gallons of acidic water, water quality has been significantly improved within the headwaters of the South Fork Patoka River. For instance, water quality that was consistently pH < 3 is now commonly between pH 6-7.

Reclamation of the north highwall area was completed using conventional highwall reclamation techniques (i.e. 4:1 slopes, rock lined ditches, etc.). However, reclamation of the south highwall area was completed by utilizing Geo-Morphic reclamation techniques: features designed to mimic those found in nature. The Indiana Division of Reclamation (IDoR) utilized Carlson Natural Regrade Software to aid in the reclamation design. After the initial field work was conducted to gather the necessary input data for the software, a ditch pattern reminiscent of a meandering stream occurring in nature was produced. The meandering stream pattern



Western Regional Award - Utah Cottonwood Wash Project

The Cottonwood Wash Abandoned Mine Reclamation Partnership Project exemplifies how several government agencies can work together to achieve a shared goal of reclaiming abandoned mine lands. The project won the OSM Western Regional Award for Excellence in Reclamation at the 2008 NAAMLPL Conference held in Durango. The size of the EPA defined project area, a 143,000-acre watershed in remote southeast Utah, lead to difficult management challenges. The surface area is managed by multiple Federal, State, and Tribal entities as well as several private landowners. Reclamation construction, which took place from 2001 – 2004, mitigated both environmental and physical hazards posed by abandoned uranium and vanadium mines active during the 20th century. As demonstrated during a pre-conference tour and on a one-day conference field trip, prehistoric dwellings and artifacts complicated the engineering and design. The field visits included a tour of the Edge of the Cedars Museum which featured pottery, baskets, clothing and tools found in the Cottonwood Wash project area.

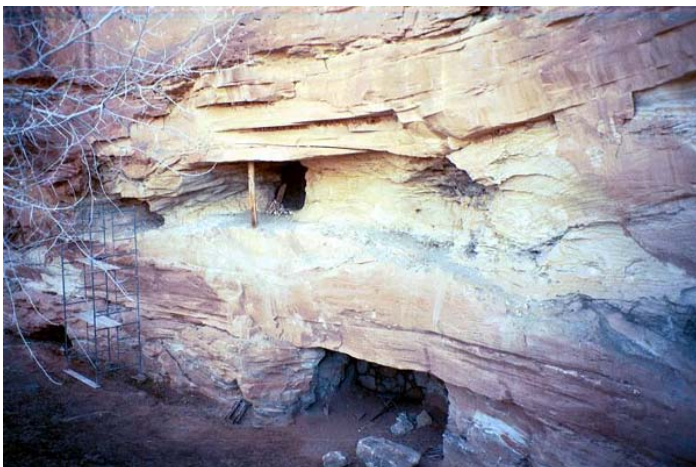
The Utah Abandoned Mine Reclamation Program (AMRP) partnered with the Utah Division of Drinking Water, the U.S. Forest Service (USFS), and the U.S. Bureau of Land Management (BLM) as a pilot project for the Interagency Watershed Cleanup Initiative administered by the federal Clean Water Act. Because the watershed was identified as impaired, a Total Maximum Daily Load (TMDL) analysis was conducted, resulting in long term water quality improvement goals.

The partnership maximized the funding and scope of the reclamation. The BLM had funding for environmental cleanup, the USFS's highest priority was reclaiming mining-



*Wayne Hedburg, Stacy Shifflet, Tony Gallegos, Louis Amodt,
Luci Malin, Chris Rohrer, Connie Jo Garcia*

exploration roads, and the AMRP used its funding to safeguard hazards mine openings. The partnership also required that the committee members from each partnering agency reach a consensus on the final reclamation design. Different agencies had different objectives and regulatory requirements, which complicated the process of achieving consensus. Compliance with the National Environmental Policy Act (NEPA) proved to be a major hurdle, as the project area had many sensitive cultural, environmental, and biological issues. In the end, however, the project, through active partnership and close coordination, closed hundreds of mine openings, removed thousands of cubic yards of radioactive mine dump debris from stream channels, reclaimed dozens of miles of abandoned roads, as well as preserve and document both pre-historic and historic cultural values.



Western Hardrock Watershed Team Volunteers Building Capacity in Colorado Hardrock Communities

Communities of the Hardrock Mining West exist in isolated geographic settings surrounded by the mineral-laden Rocky Mountains in a region that shares a common history and geology — and also environmental and public-health concerns. Communities have also faced a long history of poverty in a boom-bust economy and need assistance in building a sustainable economic model. Today these communities emphasize a watershed approach to self-governance, forging collaborative efforts across political boundaries. These Community Watershed Organizations (CWOs) ban together to remediate the factors endangering environmental quality in these rural historic mining towns facilitating collaboration and encouraging citizens to become more involved in restoring the health of their communities. But CWOs are only as strong as their most active volunteer and the recruitment of more volunteers has a very finite, if not already-exhausted, end. While CWOs constantly strive to become better stewards of the land in their watershed, to bring responsible economic development and remediation, and to educate the community, they face daunting challenges.

In 2006, the Western Hardrock Watershed Team formed to work with CWOs to fight poverty and build the capacity of grassroots, citizen-led watershed groups in historic Hardrock mining communities of the West. Partnerships make the WHWT work. Thanks to innovative partnerships with the Colorado Division of Reclamation, Mining and Safety, the Office of Surface Mining, and AmeriCorps*VISTA, the WHWT is building a network of OSM/VISTAs (Volunteers In Service to America, likened to a domestic Peace Corps) working in these rural communities. We are currently 12 members strong, living in the communities in which we work, and we are committed to placing 15 positions within Colorado by early 2009, with CO DRMS paying a \$3,000 match toward the cost of placing an OSM/VISTA in each site.

WHWT volunteers live in these rural mining communities, working with the local population and the local volunteers dedicated



School children learn and play with a “watershed trailer” sponsored by the Lake Fork Watershed Stakeholders in Lake City, Co.

to their community watershed group. We stress the importance of listening to the community needs, giving the OSM/VISTAs and their CWOs a broad set of core goals:

1. Fiscal capacity building (grant writing, fundraising, and event planning, etc.).
2. Water monitoring (volunteer recruitment and training, establishing a data system, and networking with state-wide organizations such as River Watch, etc.).
3. Community education and outreach (assisting to formulate a watershed education curriculum, coordinating the building of an outdoor classroom, or holding adult education classes, etc.).
4. Economic redevelopment (tourism projects, rails-to-trails projects along the river, or Brownfields redevelopment, etc.).
5. Professional development (making sure the OSM/VISTA also benefits from the year or two they commit to their VISTA term).

OSM/VISTAs have a long history of success with the communities in which they live and work, and this year (Oct. 2007-Sept. 2008) have generated 1145 hours of community volunteer service, \$74,361 in grants and other cash resources, and \$148,097 in documented in-kind donations— resources directly benefiting the organization and the community in which they work.



Volunteers monitoring water in 303d-listed Palmetto Gulch, which flows into the Lake Fork of the Gunnison and is monitored regularly by the Lake Fork Watershed Stakeholders, who were recently awarded the EPA’s 2008 Environmental Achievement Award for Region 8.



From L-R: WHWT Director Allan Comp and OSM/VISTAs Molly Smith, Grady Harper, and Abby Stangl prepare for their panel presentation at the 2008 National Summit of Mining Communities in Butte, MT.



Rafters ready themselves for the annual River Awareness Float on the North Fork of the Gunnison, sponsored by the North Fork River Improvement Association. This year NFRIA benefited from the planning and assistance of OSM/VISTA Grady Harper to make the event a success.

In the upcoming year we hope to expand the Team into other Hardrock mining states and look forward to talking with AML Directors in those states. For more information on how you might work with the WHWT and have OSM/VISTAs working in your

state, please contact Coordinator Torie Bowman at 970.872.3411 or support@hardrockteam.org or Director T Allan Comp, Office of Surface Mining at tcomp@osmre.gov. For more information on the WHWT, visit www.hardrockteam.org.

OSM/VISTAs Serving in Colorado:

- Blue River Watershed Group (Frisco, CO)
- Coal Creek Watershed Coalition (Crested Butte, CO)
- Coalition for the Upper South Platte (Lake George, CO)
- Colorado Watershed Assembly (Hotchkiss, CO)
- East Fork of the Dolores Watershed Restoration Project (Rico, CO)
- Kerber Creek Restoration Project (Villa Grove, CO)
- Lake Fork Watershed Working Group (Leadville, CO)
- Lake Fork Watershed Stakeholders (Lake City, CO)
- Lower Animas Watershed Project (Durango, CO)
- Mancos Valley Sustainability Initiative (Mancos, CO)
- North Fork Cultural Preservation Project (Paonia, CO)
- North Fork River Improvement Association (Hotchkiss, CO)
- Western Hardrock Watershed Team Support Office (Hotchkiss, CO)
- Willow Creek Reclamation Committee (Creede, CO)

2008: A Busy Year for AML Reclamation in North Dakota

In 2008, the North Dakota Public Service Commission's Abandoned Mine Lands (AML) Division had a great opportunity to help citizens of our state deal with coal mine-related hazards. This year, we conducted three emergency projects, two major construction projects, four projects to repair dangerous underground mine subsidence, two tree planting projects, and completed an exploratory drilling project begun in 2007.

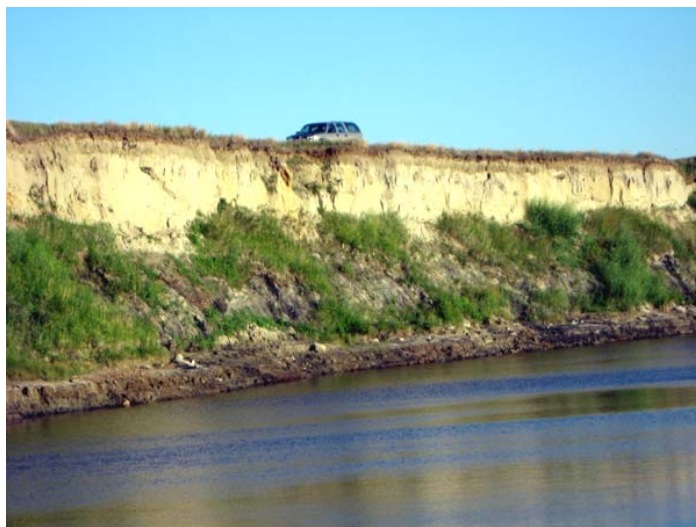
Exploratory drilling was conducted to locate and characterize underground mines beneath Highway 200 near Underwood and beneath the city of Beulah, ND. This project began in late 2007 but was postponed by winter weather and resumed in April and May 2008. Approximately 200 holes were drilled at the two sites for a total of over 16,000 feet. Although no mine voids were encountered near Underwood, several were detected beneath the city of Beulah. The approximate cost of this drilling project was \$75,500.

Major reclamation projects were conducted near the cities of Columbus and Williston. At the 2008 Columbus Project, 820,000 cubic yards of mine spoil were moved to backfill more than 5000 feet of steep and dangerous highwalls and water-filled pits at a cost of approximately \$1.2 million. This was the ninth phase of a project series to reclaim portions of this 1280 acre abandoned surface coal mine.

At the 2008 Williston Project, approximately 50,000 feet were drilled and 3900 cubic yards of cementitious grout injected into collapsing underground mines beneath public roads and residential areas. The approximate cost of this project was \$655,000. This was the third phase of an area-wide grouting project

series designed to stabilize "high-use" areas near Williston, such as roads and homes, from underground mine collapse. A fourth phase is scheduled for 2009.

Emergency projects were conducted near the cities of Williston, Wilton, and Parshall, ND. These projects were initiated in response to sudden and dangerous collapse of underground coal mines. At the 2008 Williston (Njos) Emergency Project site, a business owner noticed a five-foot void directly beneath the driveway and concrete floor of his building. Drilling confirmed that the building and driveway were undermined. Approximately 1040 cubic yards of grout were injected to fill mine voids beneath this property at a cost of about \$110,000.





The 2008 Wilton (Hwy. 36) Emergency was conducted to repair a 13-foot deep sinkhole in the north ditch of North Dakota Highway 36 near Wilton. This mine collapse sinkhole was excavated and filled with 60 cubic yards of spoil from a nearby surface mine at a cost of \$2,016.

The 2008 Parshall (Ruud) Emergency was initiated when a homeowner reported a dangerous sinkhole along the foundation wall and extending under the basement floor of his house. This sinkhole was filled with approximately 52 cubic yards of grout. A structural engineering firm was contracted to inspect the property.

Work was still being conducted at the time of this writing; however, the anticipated cost is about \$16,000.

Four projects were conducted to fill approximately 300 sinkholes near the cities of Noonan, Williston, Scranton, New Leipzig, Leith, Beulah, Sawyer, Garrison, Washburn and Wilton. These mine-collapse sinkholes were excavated, filled with dirt, regraded, topsoiled and seeded. Work was still being conducted at the time of this writing; however, combined costs for the four projects will be about \$107,000.

Projects were also conducted to plant trees on reclaimed surface mine sites near Columbus and Leith, North Dakota. At the Columbus site, 47 tree rows were planted, with a total length of about 23,000 feet, at a cost of \$15,600. At Leith, about 375 trees were hand-planted by AML staff to replace dead trees from previous plantings.

These projects helped protect public health, safety and property from adverse effects of past coal mining. They also helped people in North Dakota who were faced with serious problems from abandoned coal mines. Their completion is a testament to the hard work of a small but dedicated AML staff and support team, excellent contractors, public participation, and a longer than usual construction season.

Association Awards First-Ever AML Scholarships

Heather Luinstra from Oregon State University and Malene Hanabeck from California University (PA) were the recipients of the first-ever AML scholarship awards. The two women were recognized for their accomplishment at the Annual Conference in Durango. Murray Balk of the Kansas AML program and chairman of the AML Scholarship Committee introduced the recipients and presented the awards. In addition to the scholarship, the winners were given an expense paid trip to the conference.

Ms. Luinstra is a junior studying for a degree in natural resources. Ms. Hanabeck is majoring in geology with a minor in anthropology.

The \$1,500 NAAMLPScholarships are intended to assist in the education of students who intend to work as scientists or technicians in the field of mine land reclamation.

2009 Scholarships Now Advertised

Letters of application for the 2009 scholarships must be received by May 30, 2009.

Scholarship monies will be awarded in the form of a \$1,500 tuition check made out to the accredited educational institution of the recipient's choice to be received at the annual NAAMLPS conference. Two scholarships will be given: 1) to a student enrolled in a school in the Midwest or Eastern United States (generally east of the Mississippi); and 2) to a student enrolled in a school in the Western United States. The scholarship winners are expected to

attend the 2009 NAAMLPS Annual Conference in Rogers, Arkansas on September 25-28, 2009. Costs (travel, lodging, per diem up to a total of \$1000) and Conference registration fees will be covered by the AML Association. Scholarship recipients are expected to participate in all Conference activities. Tuition may be used at any accredited institution of higher education. The NAAMLPScholarship must be utilized during the 2009-2010 school year.



Murray Balk, Heather Luinstra, Malene Hanabeck