



NEWSLETTER

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UPCOMING MEETINGS

2011 Winter Meeting
Orange Beach, AL Feb. 21-22

2011 Annual Conference
Olympic Valley, CA Oct. 9-12

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 Mining Compact Commission, Western Interstate Energy Board and all other organizations dedicated to wise use and restoration of our natural resources.

Dear NAAML P Membership,

What a great conference in Scranton. Our Association definitely put its best foot forward thanks to the hard work of the Pennsylvania Bureau of Abandoned Mine Reclamation. Every detail was well attended and planned and I truly believe that our Association has greatly benefited due to Pennsylvania's effort. Several attendees and exhibitors told me that they were very impressed with the conference and planned on attending in the future. On behalf of the NAAML P, I would like to personally thank Rod Fletcher, Mike Korb, Ron Ryczak, Brian Bradley, Eric Cavazza, Christine Docherty, Bill Richards, Jane Smith, Bernie Walko, and Dean Baker.

The 2006 amendments to SMCRA along with the corresponding regulation changes should have initiated a period of stability for the AML programs. This would have allowed us to focus on our primary mission of eliminating health and safety hazards. Unfortunately, as of October 1st, the Office of Surface Mining will no longer fulfill their responsibility for the AML emergency program. It is my opinion, that OSM has taken their "eye off the ball" in this regard and has made it more difficult, time consuming and ultimately more expensive for us to accomplish our AML goals. OSM should fulfill their AML Emergency responsibilities as authorized in SMCRA and help the states and tribes achieve their ultimate goal of eliminating all high priority abandoned mines so that we can certify completion.

What can we say about eAMLIS that hasn't been said already? It has undergone a set back due to problems that occurred while migrating the data from "legacy" AMLIS into

the new system. Hopefully these issues will be resolved in the short term and we will have a functioning inventory system so that we can report our accomplishments to OSM and Congress. And just when you thought legacy AMLIS was dead and buried, it rises from the ashes to save the day. It reminds me of the Terminator 2 movie when the old outdated Terminator (Legacy AMLIS) came back to save the day from the new state-of-the-art Terminator (eAMLIS). That may be a bit of a stretch but the whole thing feels a bit like a "B" rated horror movie. Fortunately, I am a diehard optimist and have confidence in the OSM staff assigned to AMLIS and really do think that eAMLIS will rise again and successfully kill Sarah Conner (or at least track AML accomplishments).

Participation in the NAAML P Scholarship Program is increasing thanks to the efforts of Murray Balk and the Scholarship Committee. It is always a pleasure to meet the scholarship recipients at the Annual Conference and this year's recipients, Casey Clark and Angela Moyer, were no exception.

Lastly, I would like to congratulate Mike Kastl for achieving the Stan Barnard Award and Pat Park for achieving Dave Bucknam Award. These are two well-deserved and long overdue acknowledgments.

I am honored to serve another year as the Association President and would like to thank Vice President Madeline Roanhorse and Secretary/Treasurer Todd Coffelt for also volunteering to serve for an additional year.

Mike Garner, President.

2010 NAAML P Conference Scranton, PA



"The Breaker Boys" at the conference reception and Miss Pennsylvania, Courtney Thomas



Scholarship Winners



2010 Abandoned Mine Land Reclamation Awards

OSM Press Release

Abandoned Mine Land programs in Maryland, Oklahoma, Pennsylvania, Utah, and Virginia received OSM's 2010 Abandoned Mine Land Reclamation Awards at a banquet hosted by the National Association of Abandoned Mine Land Programs in Scranton, Pennsylvania, during the Association's annual conference. The award recipients were determined by a panel of judges who selected one winning reclamation project in each of OSM's three regions, one small project award winner, and one project as representing the best reclamation project nationwide.

"These winners are to be commended for their remarkable success in eliminating the dangers these abandoned mine sites posed to the public and the environment," OSM Director Joe Pizarchik said. "The benefits that high-quality abandoned mine reclamation provides to surrounding communities are many: minimizing safety hazards, eliminating hazardous runoffs into streams, and turning eyesores into attractive landscapes. The AML Program demonstrates what state and federal partnerships can achieve for communities," he added.



L to R: Tom Shope(OSM), Connie Loucks(MD), Mike Garner(MD), Glenda Owens(OSM)

National Award: The project judged to be the best in the country is the Crellin Elementary School Environmental Remediation and Education Project located in Garrett County, Maryland. This project was submitted by the State of Maryland's Department of the Environment, Abandoned Mine Lands Division. The project team installed a treatment system that stopped acid mine drainage from continuing to contaminate a stream that flows next to an elementary school. The project enhanced 280 feet of stream bank and returned the five-acre site to more natural conditions. The reclamation team also provided an educational opportunity for students by building a walkway and vernal pool at the reclaimed site to allow students to access and observe wetland processes.

Small Project Award: This award is given annually to an exceptional reclamation project that costs less than \$1 million to complete. This year's award-winning project is the Cranes Nest Gob Pile project located in Wise County, Virginia. Submitted by the Division of Mine Land Reclamation, Virginia Department of Mines, Minerals and Energy, the project involved remediating a gob pile, or coal waste, at an abandoned mine site that was damaging the quality of Clinch River watershed. To help address this environmental hazard, the project removed the entire gob pile. The project also eliminated a 200-foot-long highwall on the site and restored the Land's natural appearance. To further conform to the surrounding natural environment, 3,600 native hardwood seedlings were planted throughout the site.

Western Regional Award: The Western Regional Award is the Temple Mountain Project located in Emery County, Utah. This project was submitted by the Utah Division of Oil, Gas and Mining's Abandoned Mine Land Reclamation Program. The project safeguarded more than 140 hazardous mine openings left by a century of uranium mining activity. Steel gates, masonry walls, earthen backfills, and foam plugs were used to block entry to the abandoned mine openings. The project emphasized the area's historic mining heritage by causing the least possible disturbance to the existing look of the mine sites.

Mid-Continent Regional Award: The Mid-Continent Regional Award-winning project is the 61st Street North S.W. AML Reclamation Project in Wagoner County, Oklahoma. This project was submitted by the Oklahoma Conservation Commission's Abandoned Mine Land Program. The abandoned mine site contained features that endangered visitors, including a 20-foot-tall highwall and a 20-foot-deep body of water. The reclamation project also created four acres of new wetlands to the site, adding to an existing, six-acre wetland. In addition, 2,000 bare-root trees specifically selected to correlate with the soil conditions were planted at the site, improving the habitat for wildlife.

Appalachian Regional Award: The Appalachian Regional Award is the Barnes-Watkins Refuse Pile Reclamation Project located in Cambria County, Pennsylvania. Submitted by the Pennsylvania Department of Environmental Protection's Bureau of Abandoned Mine Reclamation, the Barnes-Watkins refuse pile contained 1.3 million tons of coal refuse and covered 18 acres of land. Situated on the bank of and, in some locations, directly in the West Branch of the Susquehanna River, the refuse pile was causing significant water quality damage. In addition to dramatically improving the water chemistry of the West Branch Susquehanna River, this project also removed material burning within the refuse pile that posed air quality concerns for nearby residents.

Begun in 1992, OSM's Abandoned Mine Land Reclamation Awards showcase exemplary reclamation techniques. AML projects funded wholly or in part and completed by approved state or tribal programs are eligible for the awards, which cover coal, non-coal, and emergency reclamation programs and OSM managers, voted to determine the winners.

Southwest AML Partnership Meeting

The Southwest AML Partnership is a coalition representing AML programs from the southwestern part of the country. Programs represented in the Partnership include Colorado, Navajo Nation, Utah, New Mexico, OSM, and the Hopi Tribe. The purpose of the Partnership, which most recently met near Durango on August 31 and September 1, is to provide a forum for these regional AML programs to exchange information regarding successes, issues and challenges that the agencies face when accomplishing reclamation in the arid southwest.

This year, the Partnership meeting was jointly hosted by the Navajo Nation and Colorado. The Southern Ute Indian Tribe, a reclamation partner with Colorado, graciously offered the use of a meeting room at their tribal offices in Ignacio, about twenty miles east of Durango in southwestern Colorado.

Meeting attendees included the Partnership agencies as well as the Southern Ute Indian Tribe, US Army Corps of Engineers, Bureau of Land Management and the US Forest Service, Animas River Stakeholders Group, representatives of the OSM / State sponsored VISTA program –Western Hardrock Watershed Team, and the Southwest Conservation Corps.

Partnership agencies spent a portion of the business meeting updating each other about the successes and challenges each faced over the past year. Funding issues for non-coal reclamation, a critical component of abandoned mine land reclamation in the southwest, was a recurring theme as each agency described their on-going transition from primarily coal oriented reclamation to non-coal mine safeguarding and remedial work.

The Western Hardrock Watershed Team is a VISTA program jointly sponsored by OSM and Colorado IMRP. Members of the Team are placed in communities impacted by past mining

operations. The Team, in conjunction with their host communities and sponsoring organizations, help quantify watershed based impacts of abandoned mining operations. The Team made a presentation to the partnership describing their activities in Colorado, and their on-going transition into other western States. The Southwest Conservation Corps, co-located in Colorado and Arizona, but available to perform work throughout the Southwest, described their organization. The SCC is a community based organization that provides crews capable of completing hand-labor intensive aspects of mined land reclamation projects. The SCC provides young people with the opportunity to work outdoors in order to perform environmental restoration and environmental remediation projects. The SCC capabilities include provision of crews to complete erosion control services, weed and noxious plant removal, tree and shrub planting, and trail construction. Hand and small tool labor that the SCC can provide are ideally suited to many reclamation projects undertaken throughout the southwest at remote mine reclamation project sites.

Field trips to abandoned mine land projects are an important part of Partnership meetings. The focus of the field trips is to encourage interaction between the meeting participants to discuss technical, environmental, logistical and economic aspects of various projects.

The Southern Ute Tribe and Colorado Inactive Mines Reclamation Program (CIMRP) hosted a field trip to the abandoned Soda Springs Mine fire and a nearby coal outcrop fire. The CIMRP and the Southern Ute Indian Tribe (SUIT) recently entered into a partnering agreement that provides for the abatement of the Soda Springs Mine fire located on tribal lands. Colorado will provide abatement design and construction services with the SUIT accomplishing NEPA compliance investigations, reclamation of the project area once fire abatement is completed and long term monitoring and maintenance of the site.

The second part of the field trip consisted of a visit to the historic mining town of Silverton, Colorado. The field trip showcased Colorado AML's varied types of projects, multitudes of funding sources, and reclamation challenges at high elevation.

Colorado AML highlighted their partnerships with the Animas River Stakeholders Group (ARSG) and other watershed groups by visiting non-point source, ARSG, and Colorado AML Mineral Severance Tax funded projects at the Silver Ledge mine waste removal project and the Koehler drilling and grouting underground source controls project. The tour illustrated Colorado AML's commitment to historical preservation by touring the Mayflower Mill



Southwest Partnership meeting attendees inspected a number of mine safety closures and visited an historic gold and silver mill reconstruction and historic interpretative site during their early September field trip to Silverton, Colorado.

Building, which is a San Juan County Historical Society, State Historic Preservation fund, and Colorado AML Mineral Severance Tax funded restoration project of a mill that operated from 1930 through 1991, and by pointing out the Old Hundred Boarding House restoration, partially funded by Colorado AML Mineral Severance Tax. Many mine closures were viewed along the tour route and the challenges of high elevation and remote access were discussed, as well as Colorado AML's partnerships with the Bureau of Land Management and United States Forest Service in prioritizing mine sites for closures. The tour provided meeting participants with a chance to see on the ground projects that demonstrated the need to work in partnerships and collaborate

with other government agencies and local interest groups to leverage larger scale abandoned mine projects.

Southwest Partnership meetings provide an important forum for the regional AML programs to discuss and review their goals, accomplishments and common issues, as well as provide the opportunity for friends with common interests to renew old ties. The Utah AML program is tentatively scheduled to host the next meeting in 2011.

Steve Renner and Kirstin Brown
Colorado Inactive Mines Reclamation Program

Fostering Partnerships For Summer and Fall Navajo AML Projects

The mission of Navajo AML / UMTRA Department is to "Protect, Restore, Enhance and Reclaim Abandoned Mines, Develop Infrastructure and Facilities through AML Public Facility Projects, ensure the Long-Term stability of all UMTRA sites, and provide exceptional public relations for the benefit of the Navajo people and the environment."

Navajo AML Department - On October 26 a community dedication was held for the new Dennehotso Multi-Purpose Building. The dedication was attended by both tribal and state representatives. Madeline Roanhorse, Department Manager III, Navajo Abandoned Mine Lands (Navajo AML) Reclamation / Uranium Mill Tailings Remedial Action (UMTRA) Department, and Ray Tsingine, Program Manager II, Tuba City Navajo AML / UMTRA Field Office, received special acknowledgement from the chapter officials for their financial contributions towards the construction development of the building. Navajo AML / UMTRA Department contributed \$300,000 to the construction of the Dennehotso Multi-purpose Building under the fiscal year 2008 Public Facility Projects (PFP) partnership assistance. The building contains a Senior Center, a corner wall of post office boxes, a decorative fireplace and several offices with a conference and a resource room. The Public Facility Projects (PFP) apply to the construction of specific public facilities related to the coal or minerals industry on the Navajo Nation lands impacted by coal or mineral development. Funding request may include the construction, renovation(s), repair or expansion of public facilities, such as chapter houses, senior citizen centers, preschools, and multipurpose buildings.

In the Summer 2010, staff members from the two Navajo AML/UMTRA sub-offices were invited to attend the dedication of the Leupp Community Chapter house held in Leupp, Arizona. The community residents and officials of the Leupp Chapter held the dedication to bless the new addition to their recent renovated chapter house. The AML / UMTRA Public Facility Projects contributed construction funds to the new development of the Leupp chapter house.

Ray Tsingine, Program Manager II, with the Tuba City AML sub-office thanked the community members for attending and showed his appreciation for the individuals involved with the project since its inception in FY'2007. Tsingine said 70% of the total funding came from AML / UMTRA in the amount of \$300,000. "The chapter was impacted by past mining activities, thus was eligible for PFP funds," said Tsingine. The dilapidated and deteriorated condition cited by Office of Environmental Health (OEH) for several deficiencies was the prime objective to renovate the existing chapter house (3,300 sq. ft.) and construct a new 800 sq. ft. addition. Tsingine said it was good to see the chapter benefit from the Navajo AML funds for its' renovation and addition project.

Two more New Mexico projects are scheduled for completion by the end of this year. One is the chapter renovation addition to the existing chapter house structure in Coyote Canyon, New Mexico. The other project is the new Indian Health Services (I.H.S.) Dental Clinic for the community of Thoreau, New Mexico. The AML / UMTRA Department must continue the on-going efforts to establish effective partnerships that will help us achieve our goals and improve the quality of life for our people.

The Program and Projects Specialists for the PFP Section are proactive in this area and will continue to improve their working relationships with other Navajo Nation Divisions, State agencies, Federal agencies and corporate and business entities in performing the results oriented project management for AML Reclamation and Public Facility Projects. Through our leadership, we will develop new innovative options to resolve challenging issues facing us today in a manner that allows for positive solutions. The Navajo AML / UMTRA commitment to the "on-the-ground" reclamation activities have restored the abandoned mine lands to a natural state and beauty for the future use by all the Diné (Navajo) people.

Audie Greybear, Senior Public Information Officer
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Geomorphic Stream Reclamation at Yankee Canyon, New Mexico

Yankee Canyon is located along the eastern edge of the Raton Coal Field in northeastern New Mexico. Decades of coal mining left the canyon landscape dotted with gob piles and an ephemeral stream that had an unstable channel with nearly vertical side slopes and advancing headcuts.

The New Mexico Abandoned Mine Land Program (NMAMLP) completed a construction project in October 2005 to reclaim the gob piles and restore the stream. The restoration of the destabilized stream channel was based on a geomorphic design that utilized the Rosgen stream classification system. The Rosgen "B" channel design parameters of the reconstructed stream were based on measurements of the stable downstream portions of the stream and on regional stream channel morphology curves.

Twenty full meanders were constructed in the stream, increasing sinuosity from about 1.07 to 1.22. Increases in sinuosity and meander length added 150 feet in channel length to the 1200 feet of reclaimed stream. Being an upland stream system, finished channel slopes were quite steep, varying from 4.5% near the lower end to 8.5% near the upper. Because the native soils were silty, highly erodible, and lacked rock fragments, wicker weirs were

constructed at the riffle points along the reconstructed channel to aid in stabilization of the channel base and for grade control. Coir rolls were also placed along the outside of meanders to control lateral movement of the channel until vegetation could establish a more erosion-resistant bank. Tree and shrub seedlings were planted along the coir rolls.

By fall 2007, erosion and headcutting at 33 of the 40 wicker weirs were observed. Headcuts ranged in height from less than six inches to over 18 inches. A significant design error by NMAMLP was the use of 12-inch diameter coir rolls along the channel, which is greater than the 8-inch design bank-full depth. The 12-inch high coir rolls restricted access of flows to the floodplain and concentrated flows in the channel, which led to the erosion and down-cutting.

NMAMLP decided to stabilize the stream restoration work under a professional services contract with Rangeland Hands Inc. of Santa Fe. Steve Carson, owner of the company, is trained and experienced in natural methods of stream restoration in arid and semi-arid environments. He determined that the problems with the original restoration included the constriction of flow caused

Restoration of the stream channel was completed in fall 2005. NMAMLP received the 2008 Office of Surface Mining's Category II National Award for Excellence in Abandoned Mine Reclamation for the project.

By fall 2008, high flows during spring run-off and summer rains had created headcuts at most of the constructed riffle points.



by the coir rolls and the need for more rock plating at the riffle locations. Remedial construction work to remove selected portions of the coir roll installations, rebuild and widen the wicker weirs and to add rock at each of the headcut locations was completed in the fall of 2008.

Rangeland Hands monitored the remedial work for two years, inspecting the project site in the spring after snowmelt and in the fall after summer rains. To date, the remedial construction is working well to stabilize the channel bottom. The system is being fortified with small deposits of sediment between the rocks in the riffles, which act as a cement to create a more monolithic structure and which provide a growth medium for vegetation to take root. The robust growth of woody and grass vegetation is well anchored on the stream banks as well as in the active, now stable channel bed.

John A. Kretzmann, P.E., AML Program Manager
Susan A. Lucas Kamat, Geologist
New Mexico Mining and Minerals Division

Vegetation has moved into a reinforced riffle point on the restored stream in August 2010, two years after the completion of the maintenance project.



Green Mountain South - Schuylkill County, Pennsylvania

The Green Mountain South site is located within the Eastern Middle Anthracite Coal Field in East Union Township, Schuylkill County, Pennsylvania. The site had been mined by the Oneida Colliery in the early 1900s and continuing up until the 1940s, using both surface and deep mining techniques.

The project is located 7,500 feet west of the town of Shepton on Green Mountain (hence the name of the project) at an elevation of about 1740 feet above sea level and is an example of ridge top mining. The adjacent Ringtown Valley is at an elevation of about 1100 feet above sea level and a portion of the reclaimed site can be seen from the valley floor. Prior to reclamation the site was trespassed by party goers, illegal dumpers, curious local youth, hikers and ATV riders. This site was also being leased by a local hunting club. Unblocked access roads traversed the area making it easily accessed for most people.

During the design phase of the project by the PADEP's Wilkes-Barre District Office of the Bureau of Abandoned Mine Reclamation (BAMR), it was determined that an endangered species (timber rattlesnake) could be impacted by this project. The Pennsylvania Game Commission suggested mitigating any impact through the construction of snake habitats. Research about timber rattlesnakes resulted in a design of a snake habitat that would mimic the den area typically used by this species of snake. Timber rattlesnakes are known to return to ancestral dens each season and



so the effectiveness of the constructed habitats has yet to be determined. Six, south-facing snake habitats were incorporated into the project, along with the installation of 10 bluebird, 10 wood duck and 2 bat boxes. In addition, 36 stone piles and 29 root wads with bole (tree trunk) were placed throughout the 9 created wetlands. Near the end of the design phase, the property owner contacted BAMR about timbering the property prior to construction. BAMR worked with the property owner to ensure that the timbering was completed before the start of the reclamation project.

Bids for the project were opened June 7, 2007 with work starting August 20, 2007. This project was made possible using federal funds from Pennsylvania's 2006 AML Grant and from Pennsylvania's Growing Greener Program. The project reclaimed 104.5 acres of abandoned mine lands consisting of a vertical opening, a hazardous water body and six striping pits containing three dangerous highwalls totaling 4,000 feet in length. Reclamation was accomplished by utilizing 1,281,922 cubic yards of on site material and a Category 2 exclusion waiver that allowed the filling of the water filled pits and the creation of 9 wetlands that contain a

total of 5 acres of water. In addition approximately 4,000 feet of perennial stream channel was recreated. The one-year warranty inspection of the site was held November 4, 2010 with no remedial action required on the part of the contractor. Vegetative growth throughout the site was characterized as good to great. The created wetlands are developing with volunteer cattails noted in several. Wildlife identified at the site during various visits included black bear, white tail deer, turkey, coyote, ducks, geese and on at least one occasion, a blue heron. The total cost of the project was \$1,624,317.15.

Montana Coal Fire Mitigation

The Montana Department of Environmental Quality has extinguished eleven underground coal fires in Eastern Montana since fall 2009 with coal fire mitigation planned for next spring.

The DEQs Abandoned Mine Program conducted the coal mine and coal seam mitigation projects in Montana's Custer, Yellowstone and Musselshell Counties. Three fires were located north of Billings. Another eight fires were in the Miles City area within four square miles of one another. The remaining fire to be excavated next spring is in nearby Prairie County.

"Some of these underground fires may be out of sight but they're not out of mind," said DEQ Director Richard Opper. "The smoldering coal seams threaten wildlife, destroy rangeland and risk starting wild land fires. They also emit polluting noxious gases and carbon-dioxide. So it was important to douse these coal fires and eliminate the safety and environmental risks they pose." Underground coal fires can be ignition sources for wildland and range fires. In August 2010, one of the Custer County seam fires sparked a large wildland fire that moved toward houses. "The wind shifted and blew the fire into nearby grass and before it was

controlled 500 acres of rangeland and pasture was on fire." said DEQ Reclamation Specialist Mike Glenn. "The fire was fast moving and a major safety concern."

To mitigate the fires, crews excavate the burning coal seam, spread the hot material into a quench pit and mix it with soil and water to cool. The area is then reclaimed by backfilling the seam and revegetating the disturbed area.

The DEQ identified the coal fires about a year ago with help from landowners, County Disaster and Emergency Services Coordinators, Montana Department of Natural Resources and Conservation, and other fire and emergency responders.

Funding for the project was provided through a grant from the Federal Office of Surface Mining Control, Reclamation and Enforcement at a cost of nearly \$892,000. Each coal fire mitigation costs between \$50,000 and \$150,000.

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or visit: <http://deq.mt.gov/AbandonedMines/default.mcp>.

The burning Tonn #4 Fire where surface temperature exceeded 900 degrees



Excavation at the Shepherd Coal Fire



Snowshoe Mine Reclamation Project - Libby, Montana

Historic mining operations at the Snowshoe Mine near Libby, Montana left behind approximately 65,000 cubic yards of heavy metal laden tailings and waste rock adjacent to Snowshoe Creek on approximately 13 acres in the creek's drainage area. This volume is equivalent to filling about 5,000 standard dump trucks. Arsenic, copper, iron, mercury, lead, antimony and zinc from the mine wastes contributed to the degradation of water quality in Snowshoe Creek.

In 2007, the Montana Department of Environmental Quality, in conjunction with the Kootenai National Forest, began removing the mine waste materials within the Snowshoe Creek drainage. The waste materials were hauled to a nearby repository location and sealed in place. The repository consisted of a multi-layered impermeable cap. Additionally, two mine adits were sealed with bat-friendly closures. Clean amended cover soil, which was fertilized, seeded and mulched, was placed within the footprints of the removed wastes. In addition, Snowshoe Creek was reconstructed through the disturbed footprint.

Snowshoe Project before



Snowshoe Project after

Reclamation of the Snowshoe Mine site was designed to reduce human, wildlife and environmental exposure to the contaminants, as well as reduce the mobility of the contaminants and limit the impacts to the local surface water and groundwater resources. The reclamation was funded by the Department of Interior, Office of Surface Mining, the United States Forest Service and the Montana Department of Natural Resources. The project was completed in July 2010 at a cost of approximately \$3.3 million and employed many people from the community over the three-year period.

“Completion of this project will improve water quality in Snowshoe Creek and reduce the overall risk to human health and the environment posed by heavy metals and acidic soils. This will also allow for the eventual recovery of riparian vegetation and associated habitats,” said Steve Opp, Reclamation Specialist and Snowshoe Mine Site Project Officer with the DEQ. “People will be able to enjoy the natural beauty of the area without the yellow and orange tailings, laden with heavy metals in Snowshoe Creek, and without the danger posed by mine openings.”

“This project was a good opportunity to work closely with the State of Montana to clean up a heavily impacted watershed in the most efficient way possible,” said Nancy Rusho, Abandoned Mined Lands Program Leader, Region 1, USFS. “Both the Forest Service and the State of Montana focused on the best way to clean up the watershed, rather than where private lands ended and Forest Service lands began. Our cooperation maximized resources, and was cost effective and protective of human health and the environment.”

For more information contact:
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visit <http://deq.mt.gov/AbandonedMines/default.mcp.x>

Cranes Nest Gob Pile Removal

Effectively implementing the innovative Abandoned Mine Land (AML) enhancement rule, the Virginia Department of Mines, Minerals and Energy (DMME) accomplished the complete reclamation of a gob pile and the stream it had buried over 60 years ago. The Cranes Nest Gob Pile project is located near the town of Coeburn in Wise County, Virginia. This site is in the Clinch River watershed, nationally recognized for its tremendous aquatic biodiversity, and critical habitat for many threatened and endangered species. DMME strives to eliminate all abandoned mined land impacts to water quality in this important watershed.

The pile was a result of early 1900s coal processing operations that processed coal by size. To control erosion and sedimentation problems at the site, DMME conducted a limited reclamation project in the 1980s that graded, covered, and established vegetation over the pile. Even on “reclaimed” gob piles, water quality impacts continue, potential for instability exists, and DMME has recorded combustion after reclamation. DMME’s experience shows that the best reclamation for gob piles is total removal to natural ground.

In July 2007, DMME contracted with GOBCO LLC to reclaim the Cranes Nest Gob Pile as an AML enhancement project by completely removing the pile to natural ground and using



unmarketable material to eliminate adjacent Priority 3 highwalls. Through enhancement, the company recovers all incidental coal from the pile without having to obtain any permits from DMME, and use proceeds from the coal sale to offset the cost of reclamation.

During the removal operation, GOBCO realized that the stream was atop 10 feet of gob. GOBCO obtained a permit from the Corps of Engineers and used Rosgen methods to re-establish a natural stream channel with pools and riffles in the pre-mining location.

After GOBCO completely removed the pile and established a new stream channel, the contractor used a Forestry Reclamation Approach mixture of low growing, non competitive grass and legumes. During the early spring of 2009, a DMME contractor and community volunteers planted 3,600 native hardwood seedlings over the site following the Appalachian Regional Reforestation Initiative (ARRI) guidelines. Species included red oak, white oak, sugar maple, willow, birch, sycamore, and red osier dogwood. The resulting landscape conforms to the natural environment.

DMME and Office of Surface Mining (OSM) personnel highlighted the success of this project as a tour stop for an April 2009 conference on Geomorphic Reclamation and Natural Stream Design. DMME awarded GOBCO the 2009 ARRI award for their work on this project.

DMME’s cost for this complete gob pile removal was \$3,600. Considering a cost for total pile reclamation, DMME realized an estimated savings of over \$300,000. The 1980s work on the pile met the intent of SMCRA. While the results were remarkable through complete pile removal, establishment of a new stream, and highwall elimination, the project also exceeded the spirit and intent of SMCRA. The volunteer tree planting and the OSM tour stop increased public awareness of SMCRA.

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Virginia’s Multifaceted AML Inventory Geographic Information System

The Virginia Department of Mines, Minerals, and Energy’s abandoned mine land (AML) inventory system uses an integrated approach that incorporates historical, tabular, Global Positioning System (GPS) field data, and AML project data into a Geographic Information System (GIS).

In 2009 DMME created a data model that utilizes Spatial Database Engine to house tabular and spatial data. This data model allows for Department-wide access to AML data as it is updated in near real time (every 24 hours). Data editing is controlled

through permissions, versions and privileges on the GIS and database sides to reduce the amount of data editors and ensure data standardization.

The GIS contains layers for AML feature data that is populated with information such as feature type, comments, priority level, data collection method, reclamation method, unique identifier, and feature photographs. Boundary layers representing problem areas, planning units, and project areas are also part of the GIS. The project area layer is linked with tabular AML data that

can be used to run spatial reports that are capable of showing project attributes all the way down to line item costs. This allows for advanced queries and mapping based on multiple attribute values. Project documentation, additional photographs, and engineering design information is also linked to the project area layers to give staff access to information on AML projects while maintaining a spatial component.

Field data is collected on Trimble Nomad GPS devices using ArcPAD mobile GIS software. The GPS units allow the field staff to view multiple GIS data layers while in the field which helps with data collection and reduces the need for paper maps and field notes. Data collection is streamlined with dropdown menu choices that include domains for feature type, reclamation type, presence of water, collection method, and priority level for field data collection. The user checks out a temporary version of the AML geodatabase, adds or edits data in the field, then checks

the temporary version into the geodatabase to be quality checked and reconciled to the default version of the database.

The inventory system benefits both DMME field staff and office staff. Field staff can easily access, view and query AML data in the field using their laptop GIS. Office staff can use the data to perform project tracking, cost analysis, project planning, AML feature tracking, and other types of spatial analysis.

Virginia's AML inventory system is a multifaceted GIS that allows users to perform advanced mapping, analysis, and tracking of AML features in the coalfields of the Commonwealth.

For more information contact:

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Midwestern Natural Stream Design Workshop

The Mid-Continent Region's Technology Transfer Team will be hosting a Midwestern Natural Stream Design Workshop in Mt. Vernon, Illinois May 17-19th, 2011.

Arguably more than anywhere else in the United States, streams within the Midwest are highly impacted by centuries of anthropogenic impacts predominately rooted from agriculture, drainage improvements, and navigational development. Riparian buffers were reduced or lost and stream beds were channelized resulting in increased nutrient load, increased sedimentation, channel incision, and aquatic habitat loss. Traditional mining and reclamation methods often replace these streams with rock lined ditches or removed them entirely. However, due to today's modern advances in technology it is now possible to design streams that mimic both the look and the functionality of nature. Steep rock lined ditches are replaced by meandering streams specifically designed to efficiently convey water without excessive erosion or sediment loading and provide a proper mix of habitat zones essential for sensitive aquatic life. Today mine reclamation may provide a unique opportunity to not just return a Midwestern stream to its pre-mined state but improve functionality and restore/create a more natural and ecologically sound system.

In recent years increasing pressure has been put on the mining industry to improve landform reclamation and mitigation of stream impacts. In response, OSM sponsored a forum entitled "Geomorphic Reclamation and Natural Stream Design at Coal Mines" in Bristol, Virginia which addressed many aspects of natural landform and stream design from a national scale. Since that forum, industry and state abandoned mine land (AML) and

regulatory personnel within the Mid Continent Region (MCR) have expressed a need for a more focused discussion and education on the design, construction, and post-reclamation monitoring of stream reconstruction unique to the Midwest. The MCR response was to create a workshop more accessible to personnel within MCR. The Workshop will focus attention on the unique challenges and ecological benefits of utilizing natural stream design methods and practices for AML and active coal mine reclamation in the Midwest. In addition, this workshop will provide valuable support to OSM's current charge of improving protection for streams impacted by surface coal mining.

Technical Session topical areas include: Midwestern Stream Characteristics, Design and Engineering, Regulatory Issues, Monitoring, and Stream Reclamation Case Studies. This Workshop will emphasize real world applications by including include two full-day field tours to AML and reclaimed regulatory stream projects of widely varying size and age within Southern Illinois and Southwestern Indiana.

This Workshop is targeted towards Reclamation Professionals, Regulators, Industry, and Academia involved in stream reclamation of surface mined lands within the Midwest. To register contact Nick Grant, OSM (MCR), (618) 463-6464 x 5148, ngrant@osmre.gov. This is a no cost event but space is limited. The deadline for registration is April 19th 2011.

For more information and future updates visit: <http://www.techtransfer.osmre.gov/NTTMainSite/Initiatives/Geomorph/geomorph.shtm>

Pat Park Wins Dave Bucknam Award

Patrick Park, of the West Virginia Department of Environmental Protection, was awarded the Dave Bucknam Award for his contributions to the OSM National Technical Training Program as an outstanding and long serving instructor. The award is named "The Instructor" and was founded in honor of Dave Bucknam, the former Colorado AML administrator. One of Dave's abandoned mine land (AML) passions was training. Dave always believed that one of the most essential facets of a successful AML program was a properly trained staff. He was instrumental in working with the Office of Surface Mining (OSM) and state/tribal AML staff to develop a training program for state, tribal, and federal employees. Dave, along with other state, tribal, and OSM staff, developed the first AML course focused on AML project inspection.



Pat Park in action

Pat Park has been involved with teaching AML courses as long as the National Technical Training program has been in existence. For almost 20 years Pat has instructed OSM AML classes. He has also been instrumental in developing and teaching the pilot technical courses including Mine Fires, Dangerous Highwalls, and Subsidence. He also has served on national AML committees to revise and develop new classes including the Master Instructor Forum.

Pat is genuinely interested in helping every one of his students become better and more efficient at performing their jobs. This is his focus every time he stands before a class. Pat's organizational skills are a tremendous asset in the classroom as he is always well prepared and can keep the class on track. His years of experience are invaluable to the program.

Pat retired from West Virginia state employment in October 2010, but still plans to continue to teach new AML program staff the right way to do things through NTTP teaching assignments. This shows his continued dedication to the NTTP and the Title IV program.

Mike Kastl Receives Stan Barnard Award

Longtime Oklahoma AML Chief Mike Kastl received the coveted Stan Barnard Memorial Award at the 2010 National Association of Abandoned Mine Lands Annual Conference in Scranton, PA. The award is given each year to a person who exhibits qualities of outstanding dedication, commitment, and hard work toward the enhancement of the National Association of Abandoned Mine Land Programs.

Mike began working with the Oklahoma Conservation Commission in 1975 as Planning Assistant and became the Assistant Director in 1978. He was active in establishing the Oklahoma AML Program and conducting the Oklahoma AML Inventory. He was appointed Oklahoma's first AML Director in 1982 and is still in that position.



Mike Kastl (middle) Receives the Stan Barnard Award

Mike pioneered the AML by-laws and led the Oklahoma staff in hosting the first AML conference. Mike has been a leader for the NAAML since the Association's inception. He was vice president of the Association from 1984-85. He was President from 1985-86 and served as Secretary Treasurer 1995-97 (two terms). In another notable achievement, Mike helped establish the Oklahoma State University Agricultural Education Scholarship fund.

Mike is an OSM veteran instructor teaching AML Reclamation Projects and the Dangerous Highwalls AML Design Course.

Mike's experience and insight have guided the Association throughout the years. His knowledge and defense of minimum program (critically underfunded) AML programs led to increased funding for those states in the 2006 SMCRA Amendments.

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 Spring Edition is April 15, 2011.

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

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