



**NEWSLETTER**

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**UPCOMING MEETINGS**

**2010 Winter Meeting**  
 Lajitas, TX Feb. 21-23

**2010 Annual Conference**  
 Scranton, PA Sept. 19-22

**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.

**Dear NAAMLPLP Membership,**

I am privileged to serve as the President of the NAAMLPLP and look forward to working with all of you in our common goal to support the Abandoned Mine Land Program. The State and Tribal AML Programs are the finest example of government organizations that accomplish their mission and produce on the ground results. In this era of change, while people ponder the role, cost, and effectiveness of government, the State and Tribal AML programs continue to produce results and improve the quality of life for people throughout our country. With 32 years of reclamation success under our belts, we will continue to work hard, maintain a high level of dedication and accomplish our goals just as we have in the past.

Telling AML success stories is important for all of our Programs. AMLIS is the window through which the public and Congress view AML programs and can see the enormity of our accomplishments and the amount of work that remains to be done. Unfortunately, AMLIS (and the GPRM measures it provides) does not always present an accurate view. I look forward to continuing our work with the Office of Surface Mining so that a new and updated AMLIS is available. I am confident that OSM has the right people on the job and AMLIS will better serve our needs in the near future. In the meantime, it is important that we continue to keep AMLIS current by adding new problem sites as they are discovered and reporting results as accurately as we can.

There are some interesting and worrisome developments originating from the federal administration that could impact State and Tribal funding. The compromises of the 2006 SMCRA amendments produced meaningful changes to the Act that, among other things, provided stable funding through

2021. Unfortunately, there are potential changes to the law being discussed that could undo some of those compromises. We will maintain our resolve and work with our federal partners. If needed, we will work to strike new compromises so that our work to eliminate health and safety hazards and to restore land and water resources continues as intended by Congress.

I would like to extend my gratitude to Oklahoma, Kansas, Missouri, and Arkansas for hosting the 2009 conference and to Pennsylvania for taking on the upcoming 2010 conference. Also, I would like to congratulate all the State and Tribal winners of the Abandoned Mine Reclamation Awards, Danny Lytton on his retirement and Al Whitehouse in his new role within the AML program. The AML programs are only as good as the people that work for them and Steve Hohmann, the winner of the Stan Barnard Award exemplifies AML excellence.

I will do my best to continue the good work of Steve Herbert and all the other past NAAMLPLP presidents. See you in Texas!

**Mike Garner, President**



## 32nd Annual NAAML P Conference

The 32nd Annual NAAML P Conference will be in Scranton, Pennsylvania, September 19-22, 2010. It will be hosted by the Pennsylvania Bureau of Abandoned Mine Reclamation and will be held at the Hilton Scranton & Conference Center. This year's conference theme "Their Legacy, Our Heritage, Everyone's Future" was chosen to highlight the nation's rich mining heritage, the significant accomplishments in reclaiming the legacy of that mining, and to focus on the goals for the future. The rich mining heritage and unique AML problems of Pennsylvania's anthracite region provide an excellent backdrop as a meeting venue.

Scranton is the county seat of Lackawanna County, where there are 94 Priority 1 and 2 problem areas. Work has been done in 47 of those problem areas, and some \$78 million of AML reclamation has been done by SMCRA and state funding under the AML program since 1977.

Scranton is nicknamed "The Electric City" for having the nation's first electrified streetcar in 1886. Scranton is leveraging its rich history to attract new interest and investment, especially in the city's historic downtown. *Money Magazine* recently ranked Scranton as one of the ten fastest growing real estate markets in the country.

Scranton is the largest city located in a contiguous quilt-work of former anthracite coal mining communities including the smaller cities of Wilkes-Barre, Pittston, and Carbondale. This area of Pennsylvania's coal regions is known as the Northern Anthracite Field. Though anthracite coal was being mined in Scranton as in Carbondale to the north and Wilkes-Barre to the south, the industry that precipitated the city's growth was iron and steel. In 1840, the Scranton family founded what would become the Lackawanna Steel Company. Today Scranton is the home of Steamtown National Historical Site, Scranton Iron Furnaces, the Anthracite Heritage Museum, the Scranton Coal Mine Tour, and The Electric City Trolley Museum. And of course Scranton also hosts Dunder Mifflin, the fictional paper company from the hit NBC sitcom *The Office*, which has brought national attention to the city.



Cranberry Ridge AML Project, Hazelton PA



The meeting venue will be the Hilton Scranton & Conference Center, with arrangements made for overflow housing accommodations at the Radisson Lackawanna Station. The two hotels are a four-minute walk apart.

Scranton offers a diverse shopping menu that caters to all needs, styles and pocket books. A recent explosion of commercial growth has brought dozens of prominent national retailers to the Scranton area. Hundreds of millions of dollars have been spent by developers on shopping centers, stand-alone stores, boutiques, restaurants, and mall rehab. Shoppers can walk from the Hilton or Radisson Hotels to a multi-million dollar mall complex. The Mall at Steamtown, located in the heart of Scranton's downtown commercial district, is adjacent to the National Historic Site. The \$100 million mall is a 700,000 square foot retail complex with more than 88 specialty shops, three anchor department stores, restaurants, and an eight-screen theater. Scranton is also a diner's delight featuring numerous restaurant choices in every category and price range. The region's substantial culinary and ethnic diversity will satisfy any palate.

In addition to great historic, scenic, and outdoors sites locally, Scranton is an easy drive to New York shopping and shows, the Liberty Bell in Philadelphia, Chocolate World in Hershey, Dutch Country in Lancaster, and the Battlefield at Gettysburg. Take some time before or after the Conference to visit Pennsylvania in the fall.

Conference field trips will be offered to sites that will highlight Anthracite Region AML features, AML reclamation projects, AMD treatment facilities, active anthracite mines, and ventures using resources recovered from AML sources, in addition to heritage sites. Plans for pre-conference tours, Sunday's activities, Monday's banquet, and Tuesday's social are being finalized. A Call for Papers will be issued later this year, and sponsorships are being solicited.

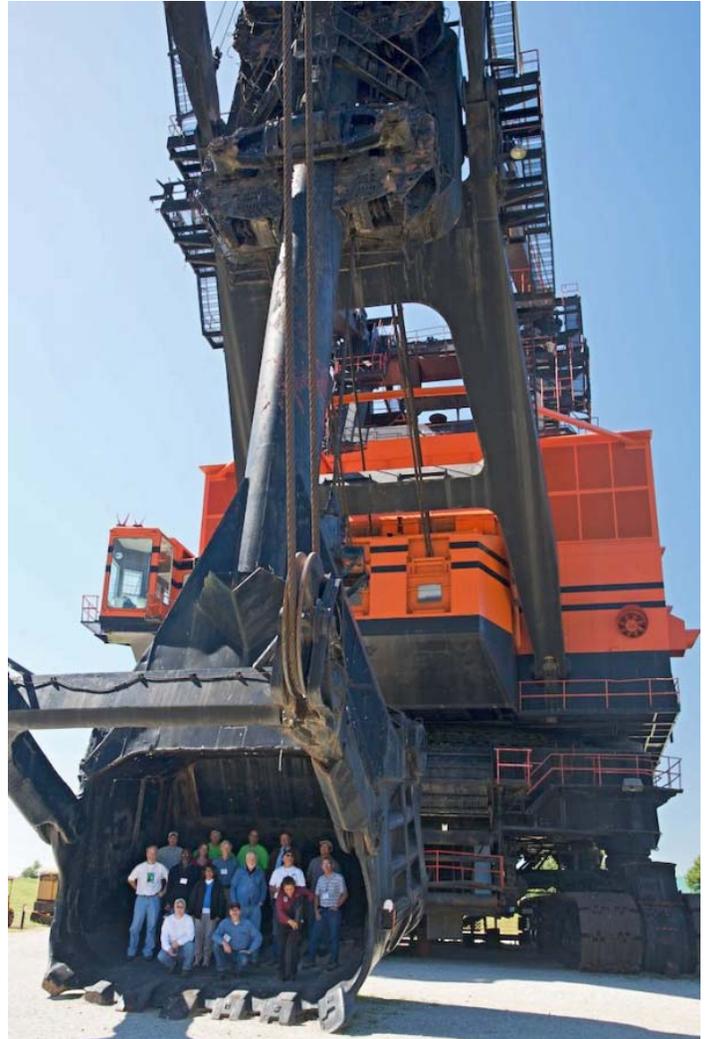
**Mike Korb, PA DEP BAMR**

## 2009 NAAML P Conference in Rogers, Arkansas

The AML programs from the states of Arkansas, Kansas, Missouri, and Oklahoma, co-hosted the 2009 NAAML P Conference from Sunday, September 27 through Wednesday, September 30, at the Embassy Suites Northwest Arkansas Hotel, Spa, and Convention Center in Rogers, Arkansas. Over 150 registrants, 12 exhibitors and eight sponsors, enjoyed the beautiful weather in the heartland of the United States.

Twenty-one pre-conference attendees experienced the wilds of Arkansas while visiting Blanchard Springs Cavern, touring a local underground sandstone mine known for producing silica used in automobile windshields, and observing abandoned mine closures while canoeing down the scenic Buffalo River.

With over 35 technical sessions presented, information covered a variety of topics including: investigative tools for mining and reclamation projects, digital technologies, acid mine drainage and metal treatment, reforestation issues, subsidence, geomorphic reclamation, AML projects advancements, uranium reclamation, and coal waste reclamation.



On Monday, Sept. 28, a workshop was conducted with many states voicing their concerns about the work needed to bring state reclamation plans into compliance with the new federal regulations promulgated under the 2006 amendment to the Surface Mining Control and Reclamation Act. Danny Lytton, in one of his final functions before retirement, facilitated the workshop. Danny was also recognized at the banquet for his years of service to OSM and support of AML programs.

On Tuesday, Sept. 29, tours were conducted for approximately 120 conference attendees by the host members and their staff. Tours included an Arkansas AML tour, an Oklahoma AML tour as well as a combined Kansas/Missouri AML tour. The day was topped off with a barbeque and bluegrass music at Prairie Creek Park on picturesque Beaver Lake.

The 2009 conference emphasized the cooperative effort of minimum program states as exhibited by the host states' coordination of the conference.

# OSMRE Gives Top Honors For Abandoned Mine Land Reclamation

Abandoned Mine Land programs in Alaska, Colorado, Iowa, Ohio, Pennsylvania, and Texas received the 2009 Abandoned Mine Land Reclamation Awards at a banquet hosted by the National Association of Abandoned Mine Land Programs in Rogers, Arkansas.

Glenda Owens, Acting Director of OSM, presented the awards to this year's winners. "The award-winning projects show what state programs can accomplish when reclamation of abandoned mines is done well."

"It's encouraging to see the high-quality work demonstrated by the winners of the 2009 Abandoned Mine Land Reclamation Awards," said Wilma Lewis, Assistant Interior

Secretary, Land and Minerals Management. "Reclaiming abandoned mines helps communities affected by past mining by improving local water quality and eliminating safety hazards, among other benefits," she added.

Begun in 1992, OSM's Abandoned Mine Land Reclamation Awards recognize outstanding abandoned mine land reclamation in the United States and showcase exemplary reclamation techniques. Abandoned Mine Land (AML) projects funded wholly or in part and completed by approved state or tribal programs are eligible. The awards encompass all types of reclamation, including coal, non-coal, and emergency projects. A panel of judges, composed of directors of state reclamation programs and certain OSM managers, vote to determine the winners.

## The Winners of the 2009 Abandoned Mine Land Reclamation Awards

### The National Award



**Pennsylvania Department of Environmental Protection  
Bureau of Abandoned Mine Reclamation  
West Suscon Abandoned Mine Reclamation  
Jenkins Township, Luzerne County, Pennsylvania**

Scarred with features such as dangerous highwalls, open mine shafts, and acid mine drainage that degraded local water quality, the West Suscon project was a typical example of an abandoned coal mine. Challenges at this site in northeastern Pennsylvania included eliminating health and safety problems associated with the highwalls, controlling drainage, and preventing access to the abandoned underground mine openings while protecting the area's bat population.

Operators graded the entire area so that it would blend in with the surrounding landscape and be developed in the future. The area is now the site of an office park with several commercial tenants.

### The Appalachian Regional Award

**Ohio Department of Natural Resources  
Division of Mineral Resources Management  
Belden AMD Reclamation Project  
Carroll County, Ohio**

Almost two centuries of coal mining have created acid mine drainage from several abandoned mines throughout the Huff Run watershed in southeastern Ohio.

The Belden site is one of eight stream reaches along Huff Run that the Ohio Department of Natural Resources has identified for eventual reclamation. Work on the Belden site has restored about 4,000 feet of surface waters affecting two streams in the Huff Run watershed. This restoration primarily benefits aquatic insects and native fish such as darters and catfish, which once occurred throughout the Huff Run watershed. Early results have been promising: quantities of iron and aluminum, as measured by discharges from the project's retention pond earlier this year, have decreased from seven pounds per day to less than a pound per day.



Restoration projects such as Belden will ultimately reduce the water treatment costs that local municipalities face each year.

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## The Mid-Continent Regional Award

### **Railroad Commission of Texas Surface Mining and Reclamation Division Mabel New-Superior AML Reclamation Project Live Oak County, Texas**

The Mabel New-Superior mine is an open-pit uranium mine site located in south Texas. Mined in the 1960s, the abandoned pit had over 11,000 linear feet of highwalls. Additionally, abandoned spoil and low-quality ore adjacent to the pits presented a radiation hazard.

Contractors eliminated the dangerous highwalls, graded the site to a stable topography, and buried the radioactive materials in the pit bottom. As a result, post-reclamation radiation readings are lower than estimated pre-clean-up readings in about 70 percent of the project area.



## The Western Regional Award

### **Colorado Division of Reclamation, Mining and Safety Inactive Reclamation Program Millsap Creek Tailings Reclamation Project Teller County, Colorado**

In the late 1990s, 45 acres of sandy refuse material from an abandoned gold mine were washing down Millsap Creek in central Colorado, causing severe sedimentation into a tributary of the Arkansas River. The State of Colorado developed partnerships with the Bureau of Land Management, local government, private landowners, as well as other industry and local government partners. Over a six-year period, The Reclamation Division was able to enlist the necessary assistance and financing to reclaim the Millsap Creek Tailings.

Reclamation work included excavating and re-grading 320,000 cubic yards of tailings, hauling and spreading 60,000 cubic yards of cover material to stabilize the reconfigured site, mulching, seeding, and revegetating the reclaimed area.

OSM carries out the requirements of the Surface Mining Control and Reclamation Act of 1977 in cooperation with states and Indian tribes. OSM's objectives are to ensure that coal mining activities are conducted in a manner that protects citizens and the

environment during mining, to ensure that the land is restored to beneficial use after mining, and to mitigate the effects of past mining by aggressively pursuing reclamation of abandoned mines, with a particular emphasis on those areas impacted by coal mining.



## Small Project Awards

In 2009, OSM is giving two Small Project Awards, which are reserved for states or tribes receiving fewer than \$6 million annually in AML funding and for projects receiving under \$1 million

### Iowa AML Program, Mines and Minerals Bureau Waal West Reclamation Project, Section II Mahaska County, Iowa

The Waal West Reclamation Project in Mahaska County, Iowa is an abandoned surface coal mine that was in operation in the 1950s. The site was left unreclaimed with severe erosion gullies, acidic soils, hazardous water bodies, and dangerous highwalls presenting a danger to the general public. The Iowa Abandoned Mine Land Program worked with numerous partners to fund reclamation activities on the site through 2008 and 2009. GM Engineering and Surveying, Inc. of East Moline, IL was the engineering consulting firm that worked with landowners and the Iowa AML program to satisfy environmental and engineering requirements. Robert Meyer, PE, has 25 years experience with the Iowa AML program. His experience helped to balance the technical requirements of the project and keep costs down during construction. S2 Construction, owned by Jake Scheckel of Bellevue, Iowa was

the contractor during construction. S2's experience with AML sites and capabilities with equipment were required to negotiate the wet weather experienced throughout the contract. This combination of contractor and engineer worked well with the multiple challenges presented by the weather, unknown in-field site conditions, and optimizing existing natural resources. The Mahaska County Chapter of the Izaak Walton League utilized in-kind services for the development of handicapped accessible fishing and bird watching platforms. The Mahaska County Pheasants Forever Chapter provided native seed material and guidance for continued establishment and management of the grasses. The Pathfinders RC&D helped to organize these efforts and secure a \$100,000 grant based on the partnership approach used in the reclamation project. Numerous individuals and their commitment of time and labor helped make the project successful. Without the combined effort of all partners, the project would have been delayed because of limited funding at the state level.



### Alaska Department of Natural Resources, AML Program Suntrana Tipple AML Project Healy Creek Valley, Alaska

By early 2000, the Suntrana Tipple project site was littered with power transformers, partially filled diesel storage tanks, and buildings containing trash and hazardous materials. Flash floods, high winds, and other factors created special risks and unknown expense factors for the contractors working at the site.

The project demolished all onsite buildings and mitigated the contaminants — hydrocarbons and polychlorinated biphenyls, a type of persistent organic pollutant — found on the site. The Alaska Department of Environmental Conservation subsequently issued a clearance for this site.



## Steve Hohmann Receives The Stan Barnard Memorial Award

Division of Abandoned Mine Lands (AML) Director Steve Hohmann is the recipient of the Stan Barnard Memorial Award, the highest honor of the National Association of Abandoned Mine Land Programs (NAAML). The award is presented in memory of Stan Barnard and is bestowed upon individuals who exhibit Barnard's qualities of outstanding dedication, commitment and hard work toward the enhancement of the association. Hohmann received the award at the 2009 NAAML Annual Conference held Sept. 27-30 in Rogers, Arkansas.

"It has been most gratifying and humbling to receive recognition from my peers. I am very proud of our Kentucky AML staff. This award belongs to all of us," said Hohmann. As the division's director for the past 14 years, Hohmann has led Kentucky's program to receive two national awards for reclamation excellence for Pleasant View Mine in Hopkins County and Spewing Camp Branch Refuse in Floyd County. He has worked diligently to promote various issues pertaining to AML, particularly having testified before the U.S. Senate Committee on Energy and Natural Resources and the U.S. House of Representatives Committee on Natural Resources in favor of reauthorizing the national AML program.

In 2006, he watched his vision become reality when amendments to the Surface Mining Control and Reclamation Act of 1977 were passed and program funding was renewed. Hohmann also recently received a Commonwealth of Kentucky legislative citation for his achievement.

"I have known Steve for many years and I know firsthand what a tireless worker he is on behalf of AML," said Kentucky

House of Representatives Majority Leader Rocky Adkins. "Steve runs his division like a true professional and treats legislators, contractors and my constituents with the utmost respect. It's gratifying to see his hard work and years of service to state government so richly rewarded by his own peers, and I congratulate him on this outstanding accomplishment."

Department of Natural Resources Commissioner Carl Campbell said, "The citizens of Kentucky are blessed to have an individual with such a caring attitude and strong vision for the program's future working on their behalf. Steve is a true leader."

**Corey Ann Howard, KY AML**



*Glenda Owens, Acting Director, OSM; Mary Stephens, Director, KY AML; Sarah Donnelly, Manager OSM Training.*

## Montana AML Program To Extinguish Coal Seam Fires

The Montana Department of Environmental Quality Abandoned Mine Lands Program is investigating and plans to extinguish ten coal seam fires that are currently burning in the eastern part of the state. The coal fires are located within the Fort Union coal formation. The DEQ AML has been identifying the coal fires with help from landowners, and fire and other disaster emergency responders.

"We are encouraging Montanans to let us know if they suspect a coal fire in their area," says Heather Luinstra, Mine Reclamation Technician with the DEQ AML. "Montana is a large state, there is a lot of ground out there, and it's difficult to survey the entire state even from an aircraft, so we're partnering with the public to address this problem."

The smoldering coal seams threaten wildlife, destroy rangeland and risk starting wild land fires. One coal fire, believed to have been burning for 20 years, sparked a wild fire in January 2008. Many of the fires are burning in ranchers grazing property and one fire is burning on the border of a wilderness study area.

Working with the Montana Department of Natural Resources and Conservation and the Federal Bureau of Land Management, the DEQ AML will conduct environmental assessments and engineer plans to douse the coal fires. In general, a burning coal seam is excavated, spread into a "quench" pit, and mixed with soil and water to be extinguished.

Federally funded abandoned mine reclamation grants pay for the project, saving money through prevention. "These are all potential wild fire ignition sources and wild land fire fighting costs could easily exceed the costs of controlling these ignition sources," says John Koerth, DEQ AML Program Manager.

"Coal seam fires are started primarily by lightning strikes or wild land fires, though some are started by careless activity such as using coal mine slack piles for trash burning," says Luinstra. "The burning coal seams are dangerous and the DEQ recommends people keep their distance from them."

Report information about coal seam fires to the Montana DEQ AML program at (406) 841-5083 or [hluinstra@mt.gov](mailto:hluinstra@mt.gov).

## Montana's Snowshoe Mine Reclamation Bonus For Recreationists

After three construction seasons at a cost of \$3.8 million, the Montana Department of Environmental Quality's (DEQ) Abandoned Mined Land Program is wrapping up reclamation of an historic precious metals mine in the state's northern Lincoln County.

Reclamation of the former Snowshoe Mine resumed in June for the final construction season and is all but complete, save for some seeding and revegetation activities planned for the spring and the closure of two adits.

"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," said Steve Opp, Reclamation Specialist and Snowshoe Mine Site Project Officer with the DEQ.

The Snowshoe Mine area is a popular recreation destination and during reclamation motorists faced limited access to the Snowshoe Trail and the Leigh Creek trailhead due to heavy truck traffic hauling mine waste.

"We appreciate the public cooperation and understanding and are confident the wait will have been worth it," says Opp.

Lead, gold and silver were mined at the site from the 1890s until 1964. The mining operation left behind approximately 100,000 cubic yards of tailings and waste rock adjacent to Snowshoe Creek on approximately 13 acres in the creek's drainage area. Contaminants include arsenic, copper, iron, mercury, lead, antimony and zinc. Some reclamation was done in the 1980s but proved unsuccessful, so reclamation began anew in 2007.

"Completion of this project should improve water quality in Snowshoe Creek and reduce the overall risk to human health and the environment posed by heavy metals," says Opp.



*Reclaimed Snowshoe Mine in Montana, late summer 2009.*

The Site ranks 9th on the State's Abandoned Mined Land priority list of hard rock mines. The project is a joint effort between the DEQ and U.S. Forest Service (USFS) Kootenai National Forest.

"While most of the site sits on private land and falls under the jurisdiction of the state, some of the tailings material was on Forest Service land so it made sense for the agencies to collaborate," says Nancy Rusho, Abandoned Mined Lands Program Leader, Region 1, USFS. "Our cooperation maximized resources, was cost effective and protective of human health and the environment."

Work included tailings removal and disposal at a waste repository on USFS land. During the first two years of construction, crews temporarily diverted the creek to remove moisture from the tailings. They then placed two-thirds of the dry tailings into the waste repository. Crews constructed the repository on Forest Service land about three miles away from the site. This past season, the remaining one-third of the tailings and waste rock went into the repository for containment. Crews capped the repository, replaced soil at the mine site and constructed a trailhead parking area in the upper reaches of Snowshoe Creek. Finally, crews will return in the spring 2010 to seed and revegetate the repository and mine site, as well as seal two adits with bat friendly closures.

If you have any questions about the project, contact Steve Opp at (406) 841-5030, [sopp@mt.gov](mailto:sopp@mt.gov).

**Mary Ann Dunwell**  
**Public Relations Specialist, MT DEQ Remediation Division**



## Revegetation Success Continues At Sugarite Canyon

Sugarite Canyon is located in northeastern New Mexico at elevations just above 7000 feet. From 1901 through 1941 coal was mined in the canyon for the domestic fuel market in New Mexico and Kansas. Waste rock from the underground mines was brought to the surface and dumped, creating steep mine dumps.

Today, the gob piles are located within Sugarite Canyon State Park, where the area's coal mining history is celebrated in a museum display and through hiking trails among the mining camp ruins and along the gob pile edges. Coal gob has impacted 22 acres in the park, and in several places reaches Chicorica Creek in the canyon floor. Slopes on the rapidly eroding gob piles were extremely steep and extensively gullied.

The New Mexico Abandoned Mine Land Program (NMAMLP) objectives for the Sugarite gob reclamation were three-fold: to improve water quality in Chicorica Creek; to preserve historic mining structures and reclaim the gob piles in-place; and to improve park visitor safety. Because of the labor-intensive nature of steep slope reclamation in areas inaccessible to construction equipment, the gob reclamation was completed in six phases. Phases I through V addressed the reclamation of the total 22 acres of gob. Lessons learned in one phase were used to refine the approach used in subsequent phases. The focus of Phase VI was to perform remedial reclamation at 5.9 acres of the previously reclaimed gob.

Over 65,000 native seedlings, provided by New Mexico State Forestry, have been planted at Sugarite. While a total of seventeen different species were planted, three-quarters of the seedlings were New Mexico locust, skunkbush sumac and four-wing saltbush. NAAMLP specifications require the contractor to guarantee, at minimum, 40% survival of seedlings after six months. An escalating bonus is given if a higher survival percentage achieved. In all six phases of construction, contractors have met this requirement. In general, the six-month survival rate has increased as the work has progressed. An average overall survival rate of over 70% has been achieved.

*Gob pile A1 in July 2000 prior to reclamation. Sugarite Canyon State Park administrative buildings are visible in the foreground.*



*One year after reclamation in 2006, the gob piles are barely discernable.*

Costs have been high, given the amount of hand labor involved and the difficulty of access for men, equipment and materials. Construction costs for the 22 acres treated to date total \$3.5 million. This is more than \$160,000 per acre of gob reclaimed.

A decade after initial reclamation construction began, the stage has been set for continued increases in vegetative cover. Trees and shrubs that were just a few inches high when planted are now visible from a distance on the gob piles. It may be another two or three decades for the gob piles to be indistinguishable on first glance from the surrounding hill slopes. Erosion has been reduced to a fraction of its original rate and sediment delivery to Chicorica Creek has been lessened. Prior to the start of reclamation work in 1999, areas of the creek were clogged with fine, black sediment deposits. Today the creek bottom is largely free of black deposits and a cobble bottom predominates. Increased vegetation has made the gob slopes somewhat safer for the park visitors who walk on them.

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

*The steep slopes required almost all of the work be done by hand.*



## Little Hocking Stream Capture

The Little Hocking Stream Capture is located in a stream valley that was impacted by a deep mine which was abandoned 1927 and again by surface mining operations in the early 1970s. During surface mining of the area below the stream capture, the mining operations spoiled above the final high wall across the valley creating an embankment to hold back water during stripping operations. Over time the area subsided into the abandoned deep mine complex. The dimension of this capture was 35-feet in diameter and 25-feet in depth.

The subsidence feature captured all discharging surface waters of the valley, which totals 256 acres. It is estimated that this subsidence received 94,000,000 gallons of surface water each year. The water captured at this site fed the abandoned mine complex and contributed to acid mine waters discharging down gradient. Water quality parameters above the site average 7.76 pH with net alkalinity of 38 mg/l.

Two incidental stream captures were also present from two tributaries. These two features received surface waters from a total of 30 acres of drainage area and equated to roughly 11,015,625 gallons of stream water per year. They are located downstream of the primary capture and blocked the drainage areas to prevent the tributaries from discharging into the abandoned surface mining area which mined the main valley below.

The goal of this project was to eliminate the capture of any stream waters within the project limits. Initial work consisted of creating a sediment basin at the base of the earthwork area. Then utilizing 8,000 cubic yards of spoil from the abandoned surface mine the main valley was elevated back to its pre-mining conditions. This work consisted of the placement of eight-inch lifts that were compacted with a sheepsfoot roller. The subsidence feature was



filled utilizing a base of dump rock fill, covered with filter fabric, and then spoil compacted with the identical method noted above. A twelve-foot wide rock lined channel was placed during this sequence along the work length.



The incidental stream captures were corrected by removal of the spoil across the tributaries and four-foot wide rock lined channels were installed. During this phase numerous small subsidence features along the slopes of one of the tributaries were abated utilizing rock dumped at the base of the features and then filling in lifts and compaction. A total of 964 linear feet of channels were created during work on all stream capture segments. Upon completion all areas were limed, fertilized, seeded, and mulched. The total disturbance was four acres.

General contractor Tucson, Inc. of New Philadelphia, Ohio performed the work at a cost of \$277,125.

## AML Enhancement Rule Projects



*Octavia Church Refuse pre-reclamation.*

Kentucky Division of Abandoned Mine Lands (AML) enhancement rule projects are a special type of reclamation project focused on reclaiming abandoned mine lands that, otherwise, have little likelihood of being reclaimed. These projects allow AML contractors to remove coal refuse and slurry from abandoned mine sites and to sell reprocessed coal in order to offset costs of projects. Usually, coal refuse is dry excavated and mixed with water into slurry, or dredged out wet, and hauled to coal processing facilities for recovery. Abandoned mine sites are then restored to their approximate original appearance by grading available topsoil and then planting grasses and ground covers. After projects are completed, hardwood tree seedlings are planted in the springtime on the reclaimed sites.

AML enhancement rule projects are distinguished as winning environmental projects on many fronts: potential fire hazards and sources of water pollution are removed; offending physical problems, often eye-sores to local communities throughout the Commonwealth, are eliminated; project areas are made suitable for outdoor activities and/or productive use; trees are planted on sites providing numerous land, air, and water quality improvements and recycled coal refuse provides a source of valuable energy that does not require mining in-situ coal. Further, since reclamation costs are borne by contractors reprocessing refuse, government money is saved and may be redirected towards reclamation of additional AML problems.

Kentucky's AML program has built an impressive coalition of partners dedicated to abandoned mine land reclamation and restoration. Through the collaborative effort of private land owners, industry representatives, watershed groups, and federal, state, and local agencies approximately 360 acres of abandoned coal mine sites in Hopkins, Muhlenberg, Letcher and Pike Counties, totaling \$5.6 million in state government financial savings. Project sites have been transformed into pasture, open space, wildlife habitat, recreational areas and even a military training ground!

In March 2009, AML announced the commencement of one of its larger enhancement rule projects, the River Queen Slurry

AML Enhancement Rule Reclamation Project at the Wendell H. Ford Regional Training Center, a military installation in Muhlenberg County. According to Kentucky National Guard Command Sergeant Major Gregory D. Armstrong, AML and the Kentucky Department of Military Affairs have worked together to help identify, cleanup and reclaim coal refuse on the military reservation since the early 1980s. "The Wendell Ford Training Center will now be capable of supporting two army battalions simultaneously with state of the art facilities utilizing over 11,500 acres of post-mined land," Armstrong said. "Projects such as these are another example of DNR's commitment in

solving environmental and energy problems plaguing our Commonwealth by creatively partnering with agencies who share our goals," added Commissioner Carl Campbell.

The Octavia Church Refuse Project, completed in 2006, is another example of AML's enhancement rule work. This project consisted of reclaiming a coal refuse pile area that, due to its steep nature and constant erosion, threatened motorists on Pinson Fork Road, near Octavia Church in Pike County. The refuse pile also contributed to the acidic water quality of a nearby stream. Merchantable refuse was excavated from the project area outside of the stream bank and adjacent refuse piles above, and was delivered to an off-site processing facility. Upon removal of refuse, the site was graded and revegetated to an approximate pre-mining condition. The project was successful. A total of 5.8 acres were reclaimed and substantial AML funding was spared. "AML worked diligently to eliminate the burdens of an old coal refuse pile negatively impacting the small community of McAndrews in eastern Kentucky. This project is one of several that demonstrate the positive results of AML's enhancement rule projects," said AML Director Steve Hohmann.

**Corey Ann Howard, KY DAML**



*Octavia Church Refuse post-reclamation.*

## Ed Carey Receives The Dave Bucknam Award

Ed Carey, of the OSM Pittsburgh Appalachian Region, is the recipient of the 2009 Dave Bucknam Outstanding Instructor Award. The award is presented in memory of Dave Bucknam and is bestowed upon individuals who exhibit Bucknam's qualities of dedication, leadership, compassion and commitment in promoting the training of state, tribal and federal employees. Any active or inactive state, tribal or federal employee designated as an instructor by the OSM National Technical Training Program (NTTP) is eligible for the award. Carey received the award at the 2009 NAAMLPA Annual Conference Awards Banquet.

Having served in various OSM instructor training capacities for the past 25 years, Carey has made many valuable contributions to the NTTP and the Technical Innovation and Professional Services (TIPS). To name a few, he has worked diligently to improve course material, expand the skills of trained instructors, as well as modernize the overall training process.

He has taught almost every trained instructor in the NTTP system, and has trained numerous Title IV and Title V SMCRA program personnel as well as the Indonesian Ministry of Mine and Energy staff. Carey's colleagues recognize him for his professionalism, scholarship, intelligence, humor and compassionate nature – saying he is joy to work with and an excellent teacher. OSM's Instructor Training Course (ITC) program success is a direct reflection of Carey's unwavering dedication and energy.

In recent years, Carey worked with a team of instructors to develop the Master Information Forum (MIF). This forum is an advanced refresher course for the seasoned OSM instructors. Carey's expertise in learning skills proved invaluable to the development of this forum. Although he is now retired from OSM, Carey continues to assist with the MIF.

**Corey Ann Howard, KY AML**



*Glenda Owens, Acting Director, OSM; Ed Carey, OSM Pittsburgh Appalachian Region; Sarah Donnelly, Manager OSM Training.*

## AMD Workshop In Indiana

The Mid-Continent Region's Technology Transfer Team will be hosting an Acid Mine Drainage (AMD) Workshop in Evansville, Indiana on April 13th and 14th, 2010. The workshop will have an emphasis on the use of bioreactors in the treatment of AMD, and covered topics will range from the evolution, construction, and modeling of bioreactors to other AMD remediation technologies. Speakers will be representing a wide range of organizations and programs that are actively involved in AMD remediation and research in the mid-continent region. The workshop will include field excursions to several of Indiana's AMD-affected sites. These sites will be in varying stages of reclamation

and will demonstrate practical applications of bioreactors and other AMD remediation techniques. Accommodations for the workshop will be at the Drury Inn & Suites, 100 Cross Pointe Boulevard, Evansville (East), Indiana, 47715. Attendees must make their reservations by March 29, 2010, and must specify they are part of the "Acid Mine Drainage Workshop" block in order to receive the government rate. Reservations can be made by calling (812) 471-3400. For further information and registration for the workshop, please contact Kim Vories at OSM's Alton Illinois office at (618) 463-6463 Ext. 5103. Indiana AML contacts are Laura Montgrain or Randy Hoffman (812) 665-2207.

### 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, 2010.**

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