



NEWSLETTER

Spring 2011 Vol. 33 No. 1

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UPCOMING MEETINGS

2011 Annual Conference
 Lake Tahoe, CA Oct. 9 - 12

IMCC Mid-Year Meeting
 Point Clear, AL Oct. 18 - 19

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 NAAMLPLP Membership,

Congress recently passed the FY 2011 Budget after several continuing resolutions. The Office of Surface Mining's budget was essentially left uncut by the appropriation process, which is very good news to the State and Tribal AML programs. But now it's time to focus our thoughts and efforts on the FY 2012 Budget. Unfortunately, the President's FY 2012 budget once again proposes to eliminate funding for certified states. The proposed budget would also eliminate the Federal Emergency Program and create a competitive grant process in which an AML Advisory Council would review and approve non-emergency AML projects. The NAAMLPLP and the IMCC submitted written statements to the appropriate House and Senate budget committees opposing the President's budget proposals. Also, thanks to our former President and former delegate from Colorado, Loretta Pineda, the NAAMLPLP was very well represented at the House Energy and Mineral Resources Subcommittee hearing on the President's budget. And as always, Greg Conrad, Executive Director of the Interstate Mining Compact Commission, has done a great job getting our message out and helping us prepare for our work on Capitol Hill.

As you know, the NAAMLPLP adamantly opposes the changes to the AML program proposed in the President's Budget and for good reason. The proposed budget will not achieve the stated goal of addressing high priority sites and will likely have the opposite impact by adding layers of bureaucracy to the process of eliminating emergencies and approving non-emergency AML grants. Progress in the AML program will be made, not by dictating change, but by working together to solve real problems associated with abandoned mines, like Good Samaritan protection for AML programs and

by supporting the use of formerly unappropriated state/tribal share funds for hardrock AML and acid mine drainage treatment. Unfortunately, from all indications, the Office of Surface Mining continues to work on a legislative proposal that would implement the proposed changes. Thus far OSM has not shared details of their legislative proposal, but I fear the ultimate result will be federal mandates supplanting cooperative federalism and state primacy.

We were very fortunate to have our winter meeting in Alabama. The weather was wonderful and I hope everyone found some time to enjoy it. The executive session held on Monday was very productive and helped to prepare and unify our positions. I am pleased that OSM Director Pizarchik was able to attend our business meeting on Tuesday, and I hope he gained a greater understanding of why we oppose the President's proposals. I further hope that he will use what he learned to persuade his superiors to abandon the budget proposal and return to the State/OSM cooperation that has proven so successful in the past.

I would like to thank Chuck Williams, Larry Barwick, and Michael Skates of the Alabama Mining and Reclamation Division for their hospitality and hard work organizing the 2011 NAAMLPLP winter meeting. I look forward to our Fall Conference being hosted by our friends in Nevada and California and hope to see everyone there. Have a great summer and safe travels.

**Mike Garner,
 President**



33rd Annual NAAML P Conference



The California and Nevada Abandoned Mine Lands Programs proudly announce their joint sponsorship of the 33rd Annual National Association of Abandoned Mine Land Programs (NAAML P) Conference on October 9-12 at the Squaw Creek Conference Center. The 2011 Annual Conference provides a tremendous opportunity to show the unique issues associated with abandoned mines in California, Nevada and other western states. The theme for the conference is “The Gold and Silver States: The Legacy of Mines that Built the West”. The gold and silver rushes were of great importance to the growth and development of our nation, and we are excited about sharing our western mining heritage and legacy with interested people from around the country.

Call For Papers

The National Association of Abandoned Mine Land Programs (NAAML P) is a non-profit organization whose members include 31 states and Indian Tribes conducting abandoned mine reclamation programs under the federal Surface Mining Control and Reclamation Act of 1977. NAAML P is issuing this Call for Papers to be presented at the 2011 NAAML P Annual Conference scheduled for October 9-12, 2011 at the hotel and conference center located at 400 Squaw Creek Rd., Squaw Valley, CA (Lake Tahoe area). The conference theme, “The Gold and Silver States: The Legacy of Mines that Built the West” was chosen to highlight the significant impact mining in California and Nevada had in spurring exploration and settlement of the west and shaping the nation as a whole. The NAAML P looks forward to an informative and memorable conference.

Prospective presenters are asked to submit abstracts for papers or proposals for workshops or panel discussions on or before June 3, 2011. Abstracts and workshop or panel discussion proposals should be submitted in Microsoft Word format, should be 300 words or less, and should include the presentation title, along with the presenters name, title, organization or company, business address, phone number and email address. Abstracts should be emailed to: Presentations2011@conservation.ca.gov.

Selected presenters will be notified by July 1, 2011, and final PowerPoint presentations will be due on or before September 16, 2011. For information or questions concerning conference presentations, please contact Alan Coyner at (775) 684-7047 or acoynr@govmail.state.nv.us. Details pertaining to the final PowerPoint format, speaker guidelines and other presentation information will be provided to authors and/or presenters at the time of abstract acceptance.



Pre-Conference Tours

Yosemite and the Best of the Sierra Nevada (California tour)

This is a fabulous opportunity to see some of the most beautiful scenery in the nation and to visit historic mining areas that helped settle the west. The tour is bookended by stops where James Marshall discovered gold in California in 1848 and at the world famous ghost town of Bodie. In between is a day in the gorgeous Yosemite National Park.

Day One departs from Reno, Nevada and begins with a scenic drive into the eastern slope of the Sierra Nevada, over Donner Summit and down the west side of the Sierra Nevadas to Auburn. The tour continues down historic Highway 49 to Coloma and stops at Marshall Gold Discovery State Park, the site where James Marshall discovered gold in 1848, leading to the settling of California. At the Gold Hill Vineyard and Brewery, a buffet style lunch will be enjoyed in their patio area and wine tasting will be available. The day continues down Highway 49 across the Mother Lode to Murphys, site of the Heritage Museum at the Ironstone Winery. Established as a tribute to the Gold Rush, the Heritage Museum displays artifacts from the 19th century gold mining era and from the Miwoks, early Native American inhabitants of this area. The focal point of Ironstone's Heritage Museum, however, is the largest crystalline gold leaf specimen in the world, weighing in at an astonishing 44 pounds. Participants will rest overnight in the historic mining town of Sonora.

Day Two allows participants to enjoy Yosemite National Park, known for its granite cliffs, waterfalls, clear streams, giant sequoia groves, and biological diversity. At this stop, one can take the open-air tram tour (tickets will be provided) to see spots such as Yosemite Falls, Half Dome, El Capitan, or Bridalveil Falls, providing a fuller knowledge and enjoyment of the park. There is still time to enjoy an afternoon shopping sojourn in the historic valley floor shops, lunch at the historic Ahawahnee Hotel, and

much more. Departing Yosemite via the Tioga Pass, participants will rest overnight in the town of Lee Vining, adjacent to Mono Lake.

Bodie State Historic Park



Day Three departs for Mono Lake, one of the oldest lakes in the western hemisphere, hauntingly beautiful, with its shimmering blue waters. An immense inland sea, the 45,000 acre shallow lake formed at least 760,000 years ago as a terminal lake in a basin that has no outlet to the ocean. Because it lacks an outlet, dissolved salts make the lake very alkaline and salty. This desert lake is known for its unique tufa towers and has an unusually productive ecosystem. The next stop is Bodie State Historic Park, a world famous gold mining ghost town rich in mining history. Visitors will receive a tour of Bodie and can walk down the deserted streets of a town that once had a population of nearly 10,000 people. The tour will conclude with lunch at Bodie before heading back to Squaw Valley in time for a leisurely night at the conference hotel.



Departs

Thursday, October 6, at 8 a.m. from Reno, NV

Returns

Saturday, October 8, at 6 p.m. to the Squaw Creek Conference Center

Cost

\$490 per person (or \$310 for guests sharing a room)

Gold Mines of Northeastern Nevada (Nevada Tour)

Nevada is known as the “Silver State” but today accounts for 75% of U.S. gold production and 7% of world production. If Nevada was a country, it would be the fifth largest producer of gold in the world. This three day field trip to northeastern Nevada will tour two of Nevada’s largest gold mines: Newmont’s Twin Creeks mine and Barrick Gold’s Goldstrike mine. Also included will be a nature hike in beautiful Lamoille Canyon high in the scenic Ruby Mountains.

Nevada continues to be in the midst of the biggest gold boom in U.S. history. The recent surge in production in the U.S. is largely the result of discoveries of Carlin-type gold deposits and other deposits in which gold occurs primarily in grains that are too small to be visible to the naked eye. These deposits are mostly in Nevada.

Day One departs from Reno, Nevada and travels eastward along the route of the historic Emigrant Trail through the Truckee River canyon. Near Fernley the river heads north, but our route takes us east across the formidable 40-mile desert, where emigrant wagon trails struggled towards the Sierra Nevada. We continue east along the Humboldt River, passing through Winnemucca, until we reach the small mining town of Golconda. Turning north, we travel along the famous Battle Mountain Gold Trend to the Twin Creeks mine. The Twin Creeks mine produced nearly a half a million ounces of gold in 2009. At the mine we will tour both the open pit and mill facilities, view a mine blast from the edge of the pit, and see modern post-mining reclamation. That evening we will stay in Elko, Nevada and enjoy a western BBQ complete with Cowboy Poetry at the Western Folklife Center.

Ruby Mountains, Nevada



Lamoille Canyon, Ruby Mountains, Nevada

Day Two begins with tours of two local Elko attractions: the Northeastern Nevada Museum and the California Emigrant Trail Interpretive Center. Following the tours we board our bus and travel to beautiful Lamoille Canyon in the picturesque Ruby Mountains, a short drive out of Elko. After lunch a geologist and biologist will join us for a nature hike in this unique alpine environment. That evening we will again stay in Elko and enjoy a traditional Basque dinner and Picon Punch beverages at the infamous Star Hotel (it’s family style, but everyone orders off the menu and pays their own bill!).

Day Three includes a tour of Barrick Gold’s Goldstrike gold mine on the world famous Carlin Trend. By the end of 2009, cumulative production from the Carlin Trend reached 2,306 metric tons of gold (74.1 million ounces), assuring its place as one of the most productive gold-mining districts in the world. The Goldstrike mine is Nevada’s largest gold mine and produced nearly one million ounces of gold in 2009 and over 30 million ounces since 1989. At the mine we will tour the open pit and heap leach operations, the mill facility, and post-mining reclamation activities. That afternoon we will return to Reno, Nevada and continue on to the Squaw Creek Conference Center in California.

Departs

Thursday, October 6, at 8 a.m. from Reno, NV

Returns

Saturday, October 8, at 6 p.m. to Reno, NV then on to the Squaw Creek Conference Center in Olympic Valley, California

Cost

\$425 per person (or \$225 for guests sharing a room)

Montana AML To Restore Public Water Supply

The Montana town of Sand Coulee is in immediate need of a new water system and source. “The community doesn’t have sufficient drinking water in quality or quantity,” said John Koerth, Montana Abandoned Mine Program Manager. So, the state’s Abandoned Mine Program is evaluating options to replace the water supply and build a new distribution system.

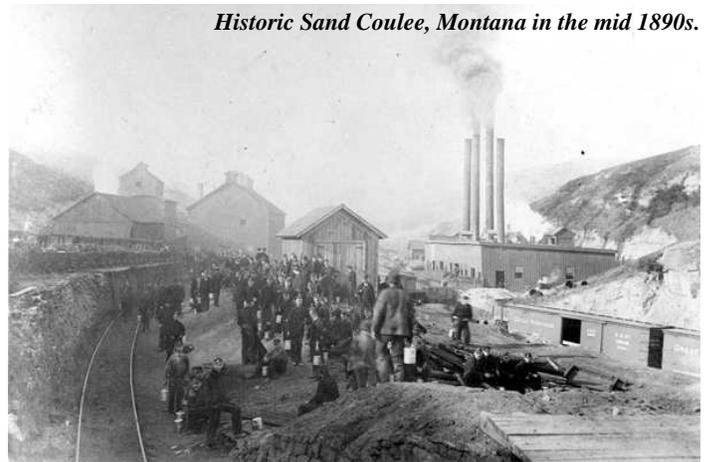
Sand Coulee is located within the Great Falls Coal Field, the leading coal producing area in Montana in the late 1800s. Extensive underground coal mines were developed in the hillsides surrounding Sand Coulee. As a result, acid mine drainage impacted local creeks and shallow groundwater supplies. In addition, subsiding mine workings have dewatered the aquifer overlying the coal formation that the community historically relied on for potable water.

The Sand Coulee water system services 73 single family residences year round. The system does not produce the quantity of water specified by the Montana Department of Environmental Quality regulations. Water shortages have resulted in water rationing and the need to haul water from an off-site source. The water is distributed to the community using thin-walled plastic water main lines that were placed in areas filled with coal waste. Granular coal and coal waste materials have accumulated in the water lines. These materials provide a substrate supporting bacteria growth in the distribution system. Routine water quality monitoring has identified total coliform bacteria in approximately 20 sampling events since 1995.

Proposed Reclamation

The work will focus on the identification and development of a reliable source of potable water for the Sand

Acid mine drainage near Sand Coulee



Historic Sand Coulee, Montana in the mid 1890s.

Coulee Water District that has not been impacted by historic coal mining activities. The project incorporates numerous technical and regulatory challenges. Sand Coulee lies in a basin closed to surface water appropriations. “The presence of the contaminated surface water and groundwater in the vicinity of Sand Coulee has limited the options available for the supply of potable water required by the residents,” said Koerth. “It’s complicated to go through the process of getting water rights and the water rights the town has are for the dewatered aquifer.”

Following the development of the water supply, water quality concerns associated with the coal wastes in the existing water distribution system will be mitigated by replacing the existing distribution system using DEQ-compliant construction, and removing coal wastes as necessary to ensure that the distribution system does not contact coal wastes. In this fashion, an adequate quantity of water of acceptable quality will be provided to the community.

Benefits of Reclamation

The project will provide the community with a long-term source of potable water and eliminate the exposure to coal waste in the water distribution system. This work will eliminate water shortages, which have historically impacted Sand Coulee. The development of a reliable water source will assist the community in fire suppression activities and support future growth of the community. The project may also result in significant mitigation of health-related consequences to the community. Reclamation activities will also benefit Montana’s economy by providing engineering and construction jobs.

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Carswell Refuse Site - West Virginia

Helical screw soil nails with mesh are an abandoned mine reclamation solution for slope stability mitigation in coal mine refuse piles where coal processing waste material is deposited along the sides of hill slopes or into hollows. Typically prior to the 1977 Surface Mining Act, this coal refuse was dumped without compaction or providing for drainage or erosion control.

During 2002 and 2003, the coal mining town of Carswell, West Virginia, experienced consecutive 100-year frequency storms resulting in flooding and consequential property damage. Along Laurel Creek, a 15 to 24 foot high cut stone retaining wall failed at two locations. Remaining portions of the creek bank consisted of highly eroded coal refuse fill, smaller sections of cut stone retaining wall, dumped rock fill, railroad tie crib and other makeshift retaining structures.

The creek banks were steep, ranging from 38 to 46 degrees. Atop the creek banks were roadways, parking areas, buildings and utilities. The West Virginia Department of Environmental Protection, Office of Abandoned Mine Lands and Reclamation contracted Ackenheil Engineers and Geologists, Inc. to design remedial measures to repair and stabilize the cut stone wall and the remainder of the creek bank at risk—over 900 LF. Due to the steepness of the creek banks, the possibility of creating black water pollution during construction, and test boring data, Geobrigg TECCO® mesh and helical screw soil nails were determined to be the best remediation measure.

Laboratory direct shear tests performed by Ackenheil on minus No. 4 sieve size material yielded a friction angle of $\phi = 41^\circ$ and $\phi = 47^\circ$. Fourteen test borings were drilled by Ackenheil to explore subsurface conditions along the creek banks. Standard penetration resistance varied from 3 blows/foot to 50 blows/inch.

Site condition prior to stabilization mitigation.



Refurbished stone retaining wall along Laurel Creek, West Virginia.

Pre-construction soil nail installations and pull-out capacity tests were performed. The majority of the nails were installed to the specified 35 LF and 18 LF embedment depths.

A portion of the helical screw soil nails installed through the 2 to 3 foot thick cut stone retaining wall could not penetrate to the specified embedment depth of 35 LF due to boulders. For these, the design was modified with additional coring through the boulders to a specified minimum depth, installing a shortened length of helical screw soil nail, then performing pressure grouting to bond the nail and boulders. This design modification was determined jointly by Avon Corporation, the soil nail installation contractor, and Ackenheil.

Two failed cut stone retaining wall areas were reconstructed using manufactured cut stone prepared by Redi-Rock. The reconstructed wall and the existing cut stone wall were first cored, then the helical screw soil nails were installed. The soil nail spacing was determined by the Geobrigg RUVOLUM® Dimensioning Method. The TECCO® mesh was installed by Green Mountain Company, the primary contractor. Finally, hydroseeding the non-wall installation areas completed the project.

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Midlothian Mines Park - Chesterfield County, Virginia

Since the discovery of coal circa 1701 in the counties west of Richmond, Virginia, coal mining has played a significant role in the area's history. The first commercial production of coal in the United States came from the Richmond Coalfield in 1748 and coal exports became a major contributor to the Richmond economy from 1794 to the mid-1830s. Coal mining ceased in the Richmond area about 85 years ago, but the influence of the mines is being felt today in Richmond in another way.

Due to significant suburban growth since the mid 20th Century, mine shafts that were once miles from residential or commercial areas are now in backyards or neighborhood woods and pose a serious threat to citizens. For the Virginia Department of Mines, Minerals and Energy (DMME), this has necessitated a special focus of the Abandoned Mine Land (AML) program in the Richmond area. Although there are hundreds to thousands of features in the Richmond coalfield that need to be inventoried and in some cases reclaimed, one project in particular has garnered a great deal of attention and effort. The Midlothian Mines Park, a 42-acre wooded recreational park in Chesterfield County, has attracted particular attention from DMME, not only for its

Reclamation and improvements to the wingwall, one of the hazardous facilities in the park



Boiler house ruins

abundance of AML hazards, but also for its distinct historical features and its potential to attract local and, perhaps, even national interest.

Located within the park are the Grove Shaft and the Murphy Slope, coal mine workings dating from the 1830s to the 1920s. To date, 12 AML features associated with the Murphy-Grove mining complex have been inventoried in this park, five of which are classified as priority 1 and three of which are priority 2. These features consist of two vertical openings, four large spoil piles, three subsidence features, and three hazardous facilities, including a stone boiler house which may be the oldest standing coal mining structure in the country. The entrance to the Murphy Slope and a ventilation shaft were previously reclaimed.

The ultimate goal of this project is to preserve and highlight these features and transform this residential park into a viable historic destination. In order to achieve this goal, the mining features must be made safe for public viewing and DMME is working in conjunction with Chesterfield County to create a park that will satisfy both parties. In September 2010, DMME and the County signed a memorandum of understanding that formalized a phased plan for study, reclamation, and construction of the park. The initial phase will involve exploration activities, including an archeological study and subsurface drilling exploration around the abandoned mine features. A second phase will include reclamation work for shaft closures and stabilization of structures and subsidence features. A third phase will involve expanding the trail system and constructing viewing platforms, benches, and educational signs throughout the park. DMME will use AML funds to support the subsurface drilling and the reclamation construction activities. The outcome of this collaboration between DMME and Chesterfield County will be a park of reclaimed AML features that offers a rare, and safe, glimpse of the past.

Melissa Rodriguez melissa.rodriguez@dmme.virginia.gov

Pennsylvania's Second Major AMD Treatment Plant Is Underway

Construction of the Hollywood AMD Treatment Plant, AMD 17(1416)202.1, located in Huston Township, Clearfield County, is underway. The plant is located along the Bennett Branch Sinnemahoning Creek in an area known as PA Wilds. This area was identified as a prime area for increased tourism due to its undeveloped nature, extensive public lands and for being the center of the habitat range for Pennsylvania's growing elk herd. Bennett Branch is degraded by mine drainage from numerous abandoned deep and surface mine discharges. An extensive evaluation by PA Bureau of Abandoned Mine Reclamation (BAMR) staff determined that the sources of AMD pollution were focused in three areas: the Tyler/Hollywood area, the Caledonia Run tributary, and the Dents Run tributary. Staff determined that a combination of AMD treatment and surface reclamation was needed to restore the watershed. A centralized active treatment plant is being constructed to treat the 21 most significant discharges in the Hollywood/Tyler area. The discharges will be routed to the plant via installation of a pipeline conveyance system.

BAMR initiated construction of the Hollywood Mine Drainage Treatment facility in June 2010. Construction is anticipated to be completed in July 2012. The project was awarded to Kukurin Contracting, Inc. of Export, PA, at the low-bid cost of \$14.2 million. Funding for the project was provided from three sources: \$12,125,000 from PA Capital Budget funds, \$2,000,000 from PA Growing Greener, and \$98,422 from BAMR's AMD Set-Aside funds. Once constructed, the plant will help restore the lower 33 miles of the Bennett Branch Sinnemahoning Creek, which is impaired due to mine drainage impacts. Much of the site work has been completed, including sludge holding ponds and the final polishing pond. Pipelines and pump stations are being installed and the reactor tank and control building construction is starting. The annual O&M cost is anticipated to be approximately \$400,000.

In addition to the treatment plant construction, BAMR has completed, or is currently reclaiming, 15 surface reclamation projects in the watershed. Much of this reclamation occurred on State Forest Lands or State Game Lands and included revegetation plans designed to create additional rangeland for the growing elk herd in the area, as well as alkaline addition to assist in neutralizing the highly acidic mine spoils.

Dents Run is a tributary that enters Bennett Branch in the lower part of the watershed. Unreclaimed mine sites and deep mine discharges contributed approximately 40 percent of the pollution load to the Bennett Branch Sinnemahoning Creek. In addition to the surface mine reclamation completed by BAMR in this sub-watershed, two lime dosing silos were installed and four passive treatment systems were constructed. The combined expenditures to date are \$11,687,630 with \$1,788,140 from the USACOE Section 206 Program, \$5,632,553 of SMCRA Title IV funds, \$1,632,077 of Pennsylvania Growing Greener funds, and \$2,634,860 industry match through reclamation and limestone mining.

The impacts from Caledonia Run, the third major source of impairment on Bennett Branch, located between Hollywood and Dents Run, will be evaluated further once the Hollywood plant is on-line to determine if additional work is needed to fully restore Bennett Branch to a recreational fishery.

**Pam Milavec, PA DEP
Bureau of Abandoned Mine Reclamation**

Hollywood treatment plant with Bennett Branch and polishing pond in foreground and sludge holding ponds in background



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 Fall Edition is November 15, 2011.

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

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