

Selected AMLU Abandoned Mine Remediation Projects (2007)

(Click on pictures below or scroll down for more information)



Partner(s): U.S. Forest Service
Closure type: Bat gates
Location: San Bernardino National Forest, San Bernardino County
Completed: December 2007



Partner(s): California State Lands Commission
Closure type: Backfills
Location: Calico Mining District and other areas in San Bernardino County
Completed: October 2007



Partner(s): Solano Land Trust, City of Vallejo
Closure type: Culvert gate and backfill
Location: Solano County
Completed: October 2007



Partner(s): Bureau of Land Management (BLM), California State Parks, U.S. Forest Service
Closure type: Backfills
Location: Nevada County
Completed: September 2007



Partner(s): BLM
Closure type: Fences
Location: Red Mountain area, San Bernardino and Kern Counties
Completed: September 2007



Partner(s): BLM
Closure type: Bat gates, polyurethane foam (PUF), backfills
Location: Quartz Mountain Complex, Madera County
Completed: June 2007



Partner(s): U.S. Forest Service
Closure type: Culvert gates
Location: Eldorado National Forest, El Dorado County
Completed: May 2007



Partner(s): U.S. Forest Service
Closure type: Backfills
Location: Sequoia National Forest, Kern County
Completed: April 2007

Bat Gates, San Bernardino National Forest, San Bernardino County, December 2007

In December 2007, the AMLU partnered with the San Bernardino National Forest to close three adits in San Bernardino County. U.S. Forest Service (USFS) staff installed bat gates at the entrances to the heavily visited features, which included a former powder magazine (a structure once used to store explosives). One adit had motorcycle tracks leading into the portal, and another contained abundant rodent droppings, some of which had developed a fungus that if touched could become airborne, posing the risk of transmitting the potentially deadly hantavirus. Fallen boulders in front of several adits were an indication that the adit portals were subject to collapse. The USFS also closed the road to the site to further keep the public out of this hazardous area.



↑
BEFORE
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↑
AFTER
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The Forest Service works to increase the agency's effectiveness in partnership and collaboration with citizens, communities, governmental agencies and non-governmental organizations and others. The funding for Abandoned Mine Lands has been diminishing on a steady basis and we are glad that the Department of Conservation stepped in to help protect the public from entering these dangerous mine openings and protect bat habitat. - Raj H. Daniel, Forest Minerals Program Manager, San Bernardino National Forest

Calico District Closures, San Bernardino County, October 2007

In October 2007, the AMLU and the California State Lands Commission backfilled 13 abandoned mine features in San Bernardino County that ranged from 20 to more than 100 feet deep. Six features were located near the Calico Ghost Town outside Barstow. The Calico District contains extensive abandoned mine workings, including numerous small shafts, collapses, and underground voids waiting to collapse. In 2006, on private property in the same general area, a man was killed after a 50-foot fall down a hidden vertical opening located inside an adit. A week later, a second man was paralyzed after falling into the same opening.

The site below highlights how some AMLU remediation projects evolve from the initial discovery of the hazard, to temporary fencing, to permanent closure by backfilling.



BEFORE



DURING



DISCOVERY (2002)



**FENCE (2003
& VIEW IN 2007)**



BACKFILLING (2007)

"We are pleased with our progress since beginning our partnership in 2002 with the Office of Mine Reclamation's Abandoned Mine Lands Unit to safeguard the public and wildlife from mine hazards located on state lands. Help from OMR has allowed us to double the amount of work we would have been able to achieve, and our efficiency has increased every year."

-- Greg Pelka, Senior Mineral Resources Engineer, CSLC

Culvert Gate and Backfill, Solano County, October 2007



BEFORE

In October 2007, the AMLU assisted the Solano Land Trust by closing two adits that provided an attractive nuisance and a safety hazard to the public on property that is designated for public access. The city of Vallejo conducted the environmental review for the project pursuant to the California Environmental Quality Act.

The AMLU contracted with Sweetwater Construction, Inc. to close both adits. One adit was closed using a steel culvert with a bat gate built inside. This method was designed to allow for use by bats and to preserve the interior of the feature for public viewing as an interpretive historic site. The culvert limits sunlight penetration into this shallow adit, potentially making it more attractive to bats to use as a day roost. The second adit, which was extremely unsafe due to unstable rock overhead, was plugged using a combination of local rock, polyurethane foam, and grout to retain a natural look.



DURING



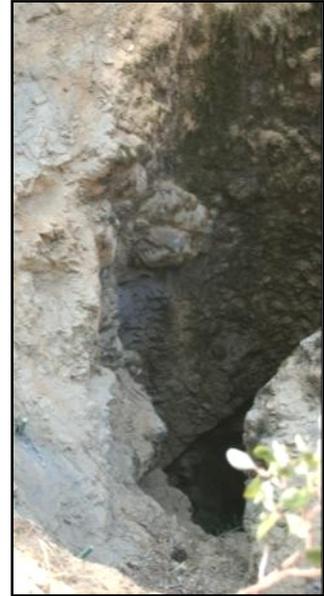
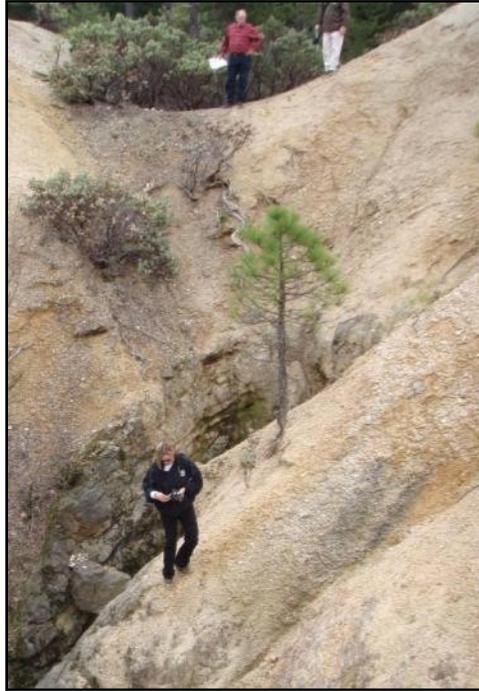
AFTER

"The expertise provided by the Office of Mine Reclamation's Abandoned Mine Lands Unit was invaluable in closing these unsafe adits and adding bat habitat to the site. We appreciate that the contractors were able to get in and out of the site with minimal disturbance. Thank you for this opportunity to partner with this great group of people." – Sue Wickham, Solano Land Trust

High Tensile Steel Mesh Closures, Nevada County, September 2007

In September 2007, the AMLU helped to close an extremely hazardous feeder shaft and inlet to a drain tunnel for the Le Du hydraulic mine near Malakoff Diggings in Nevada County.

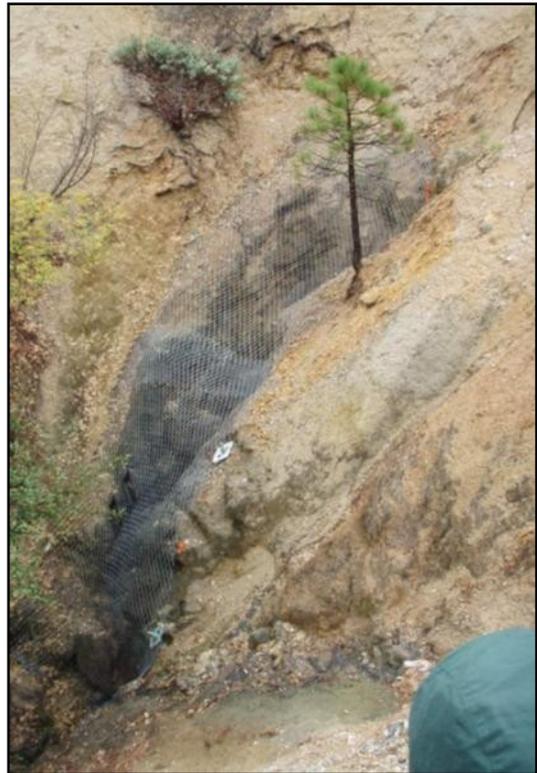
The project had numerous challenges, including mixed ownership, the need to maintain drainage through the features, and the unusually shaped openings. The AMLU worked with the Bureau of Land Management (BLM), and U.S. Forest Service to install high tensile steel mesh over the feeder shaft, which is located on State Parks land, and a similar closure modified with a bat gate on the inlet, which is located on BLM land.



BEFORE



DURING



AFTER

Red Mountain Closures, San Bernardino and Kern Counties, September 2007

In September 2007, the AMLU partnered with the Ridgecrest Field Office of the Bureau of Land Management (BLM) to fence 42 hazardous features in the Red Mountain Area. Forty of the shafts were located in San Bernardino County and the other two shafts were in Kern County.

The Red Mountain and Randsburg areas contain hundreds of dangerous open mine shafts that pose a serious risk to the general public, including off highway vehicle (OHV) users who recreate on the public land in the area. On December 24, 2006, the Kern County Fire Department responded to a report that a 9-year-old fell down a mine shaft. Fortunately for the family, the boy only suffered minor injuries from the incident. Then in January 2007, another incident at an open mine shaft was reported to the BLM. In this incident, a rider drove onto a tailings pile and nearly fell into the shaft. In 2005, another rider was killed when he drove his motorcycle into a mine shaft located on private land and fell nearly 700 feet. After the December 24, 2006 and January 2007 incidents, the BLM fenced the two shafts. This project enabled the BLM to fence many more shafts in the area that pose a serious threat to the health and safety of the general public.



"I would like to thank you and your agency for cooperating with the BLM on this project. Without your agency's assistance in furnishing the labor costs for this project, these forty-two features may not have been fenced, thus leaving many potential hazards of the public land users in the area. Overall, this project went smoothly. The work completed under this contract shows what can be accomplished when the Federal government, the state government, the local community and the contractor all work together to accomplish a task." – Hector Villalobos, Field Manager, BLM Ridgecrest Field Office

Quartz Mountain Closures, Madera County, June 2007

In June 2007, the AMLU partnered with the Bakersfield Field Office of the Bureau of Land Management (BLM) to permanently close two abandoned mine shafts and three abandoned mine adits, as well as fill several pits in Madera County.

The need for this project was first identified when the BLM, Yosemite High School District, and the Coarsegold Elementary School District entered into a Recreation or Public Purpose lease agreement to develop federal lands at Quartz Mountain as a school site. State Parks Off-Highway Motor Vehicle Recreation Division "Green Sticker" fees helped fund the bat surveys for this project.

"I write to thank you and your staff for the excellent work that was done for completion of abandoned mine closures at Quartz Mountain.... As a result public safety has been improved at Quartz Mountain, and the area is much better suited for development of a public school there. Your staff was extremely helpful, knowledgeable and timely in the entire execution of this project and displayed exemplary dedication and professionalism. The contractor you selected for the project did excellent work. I look forward to working with you and your excellent staff to close other mine features on BLM lands in the future." – Tim Smith, Manager, BLM Bakersfield Field Office



SHAFT BEFORE AND DURING PUF CLOSURE (before PUF covered with soil)



ADIT (before and after bat gate installed)

Adit and Tunnel Closed, Eldorado National Forest, El Dorado County, May 2007



BEFORE

On May 3, 2007, the AMLU partnered with the U.S. Forest Service (USFS) to install three culvert gates at two abandoned mines near Georgetown in the Eldorado National Forest. The collaborative work closed two openings of a sluice tunnel at Bug City and an adit at Mormon Hill, both in the Bottle Hill area.



DURING AND AFTER



The sluice tunnel was located directly under an Off-Highway Vehicle (OHV) trail, making both sides easily accessible. The adit was located within a few hundred feet of a residence. All three culvert gates were constructed by a locally contracted welder in Georgetown and installed by USFS and AMLU staff.

Adits Closed near Lake Isabella, Sequoia National Forest, Kern County, April 2007



BEFORE



AFTER

In the first week of April 2007, the AMLU and U.S. Forest Service (USFS) teamed up to close eight abandoned mine adits located next to a campground near the shores of Lake Isabella in Kern County. The remediations represented the first of many potential collaboration efforts between the AMLU and Sequoia National Forest, with more projects scheduled in 2008.

The adits, which were visible from U.S. Highway 155, were backfilled and recontoured by both AMLU and USFS staff. Cinderblock and mortar barriers were buried under fill to close some of the adits, while others were filled with polyurethane foam and backfilled to ensure that the openings would remain sealed.

"Your crew was awesome in the help they provided for the closures. In these shrinking budget times the financial assistance gives us "more bang for the buck". I look forward to working with you on our next project." – Donna Duncan, Lands and Minerals Assistant, Kern River Ranger District, Sequoia National Forest