

Selected AMLU Abandoned Mine Remediation Projects (2005 and earlier)

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

	<p>Partner(s): California State Lands Commission Closure type: Backfill Location: Kern County Completed: April 2005</p>
	<p>Partner(s): NPS Mohave National Preserve, U.S. Army Corps of Engineers, BCI Closure type: Bat cupola and bat gates Location: San Bernardino County Completed: November 2004</p>
	<p>Partner(s): BLM Folsom Field Office Closure type: Polyurethane foam Location: Amador County Completed: September 2004</p>
	<p>Partner(s): California Department of Transportation Closure type: Polyurethane foam Location: Nevada County Completed: February 2004</p>
	<p>Partner(s): BLM Ridgecrest Field Office Closure type: Backfill Location: Kern County Completed: January 2004</p>
	<p>Partner(s): Paradise Irrigation District, Lassen County Search and Rescue Team Closure type: Polyurethane foam Location: Butte County Completed: November 2003</p>
	<p>Partner(s): BLM Barstow Field Office, BCI Closure type: Bat gates Location: San Bernardino County Completed: November 2003</p>
	<p>Partner(s): California State Lands Commission Closure type: Bat cupola Location: San Bernardino County Completed: April 2003</p>
	<p>Partner(s): USFS Tahoe National Forest Closure type: Polyurethane foam, blasting, debris removal Location: Sierra and Nevada Counties Completed: February 2003</p>

Shaft near Rosamond Backfilled, Kern County, April 2005



BEFORE



AFTER

In December 2004, Paul Etner and his family discovered an unmarked mine shaft the hard way: they nearly backed their SUV into it. After gingerly pulling all four wheels back onto solid ground, Mr. Etner contacted the AMLU. The AMLU determined that the 53-foot mine shaft was located on property owned by the California State Lands Commission (CSLC). In April 2005, a backhoe pushed rock and soil from the mine dump back into the shaft. The project was accomplished pursuant to a Memorandum of Understanding established between the Department of Conservation and CSLC in April 2004 to assess and remediate health and safety hazards associated with abandoned mines on State School Lands.

“If I'd been over a few feet more, we'd have gone in.” -- Paul Etner, discoverer of the shaft

Bat Gate Building Workshop, San Bernardino County, November 2004



DURING (students and instructors building a bat cupola) AND AFTER

The AMLU, National Park Service, Army Corps of Engineers, and Bat Conservation International, Inc. collaborated in a bat gate building workshop with a classroom session held in Baker, CA, and hands-on training at the Paymaster Mine in the Mojave National Preserve. Students helped to construct one bat gate in a horizontal adit and two bat cupolas above hazardous vertical shafts, one of which was over 200 feet deep.

“In addition to protecting the public from extremely hazardous mine workings, these closures preserve habitat for at least two state-listed bat species.” -- Abby Miller, Deputy Associate Director for Natural Resource Stewardship & Science, National Park Service

Mokelumne River Adit Sealed, Amador County, September 2004



BEFORE



AFTER

The AMLU partnered with the Folsom Field Office of the Bureau of Land Management (BLM) to install a polyurethane foam plug to close a hazardous mine opening adjacent to the Mokelumne River. This adit was near a popular river access point and showed signs of regular visitation. Rocks were embedded in the foam to give it a natural look.

“Continued cooperation between the BLM and the Department of Conservation is helping to ensure a safer place for the public to recreate.” -- Deane Swickard, Field Manager, BLM Folsom Field Office

AMLU Closes Shaft along Highway, Nevada County, February 2004



California Department of Transportation (Caltrans) workers discovered a collapsed mine shaft on the embankment of Highway 49 in Grass Valley. The shaft was a potential fall hazard for Caltrans workers as well as highway cleanup crews. Because it was located below a group of trees and high up from the highway, backfilling the shaft would have been difficult and expensive. Caltrans instead enlisted the assistance of the Abandoned Mine Lands Unit. On the morning of February 5, 2004, the AMLU sealed the shaft using polyurethane foam mixed onsite. It then covered

the hardened foam plug with adjacent soil. Total project costs were less than one quarter of the amount previously estimated to backfill the shaft.

“We’re very satisfied with the whole operation. I would not hesitate to use your services again or to recommend them to other departments and agencies. I hope to work with you again.” -- Mike Monaghan, Caltrans

AMLU Assists in Tortoise Rescue, Kern County, January 2004



While preparing for an abandoned mine remediation project in the Western Rand Mountains Area of Critical Environmental Concern, the AMLU's Sarah Reeves and Jonathan Mistchenko found two desert tortoises (*Gopherus agassizi*) trapped in a shallow excavation. Unfortunately, one of the tortoises had already perished. With the assistance of staff from the Ridgecrest Field Office of the Bureau of Land Management (BLM), the live tortoise was removed to a safe location. The AMLU and Ridgecrest Field Office subsequently backfilled the excavation and two similar, nearby excavations. This incident points out that even small, shallow abandoned mine features can be deadly to native vertebrates.

"We are very thankful to the Department of Conservation for pointing out these sites so we could prevent other tortoises from getting trapped in them." -- Linn Gum, BLM Ridgecrest Field Office

Magalia Mine Shaft Sealed, Butte County, November 2003

In April, 2003, an Australian Shepherd mix named Molly fell down this 55-foot abandoned mine shaft in Magalia. Luckily, she survived for eight weeks before being rescued. The dog owner's home was only a few hundred feet from the shaft, and many nearby residents were unaware of the hazard. The Paradise Irrigation District, which owns the property, teamed up with the AMLU to close the shaft with polyurethane foam. The Lassen County Search and Rescue Team cleared the shaft prior to the closure.



BEFORE



AFTER

"It's a relief that no one else will suffer the fate Molly did. It's just great to have this done. I hope more people will hear about this and report other mine shafts."

-- Hildy Langewis, Molly's owner

AMLU Sponsors Bat Gating Workshop, San Bernardino County, November 2003

The AMLU, Bureau of Land Management, and Bat Conservation International, Inc. teamed up to hold a workshop on bat gate design and construction. Participants built bat-friendly gates at two abandoned mine adits at the Salt Creek Hills Area of Critical Environmental Concern. The gates safeguard curious visitors from abandoned mine hazards while protecting habitat for four bat species. State Parks Off-Highway Motor Vehicle Recreation Division "Green Sticker" fees helped to fund the bat surveys for this project.



"This is yet another example of how the Department is contributing to safeguarding the public while protecting bat habitat." -- Faith Watkins, Bat Conservation International

Pacific Fluorite Mine Bat Cupola, San Bernardino County, April 2003



The California State Lands Commission (CSLC) and the AMLU partnered on two significant physical hazard remediations, including this one in the Clark Mountains of San Bernardino County. In order to preserve sensitive wildlife habitat, a custom "bat cupola" was installed to allow passage by bats but not by humans.

"The challenge of permitting and completing this work in a relatively short time period was overcome by the dedicated effort of many State personnel and quality contractors."

-- Marina M. Voskanian, CSLC

Ten Hazardous Features Remediated in the Tahoe National Forest, Sierra and Nevada Counties, February 2003

The AMLU worked closely with the U.S. Forest Service's Tahoe National Forest to remediate ten hazardous features at six abandoned mine sites. Five features were closed using polyurethane foam (PUF), one was blasted shut with dynamite, and the remaining four were cleared of unstable structures and hazardous debris. At right, PUF is used to seal off a dangerous shaft that was within several hundred feet of a school bus stop.



"The Tahoe National Forest appreciates the opportunity to partner with the Department of Conservation in completing these important public safety projects." -- Steven T. Eubanks, Tahoe National Forest