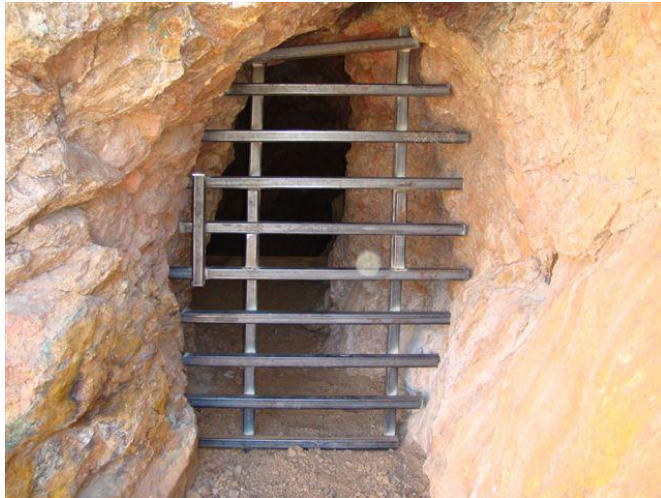


## Protecting both bats and people



A mine adits closed off with a bat-friendly metal gate, photo supplied by NDOW

Nevada has around 200,000 historic mining features, of which 50,000 present dangers to people entering them. Many of these are abandoned mine shafts and adits. Land and wildlife agencies, along with private landowners, are working to close off these features. The problem is some adits and shafts are important for wildlife, specifically bats, requiring extra care in protecting the public while also protecting bats.

At one time Spruce Mountain had four major mining areas, which left behind 63 openings in the earth. The BLM wanted to inventory and close off these dangerous mine openings since this area has become an off-highway vehicle trail.

Rory Lake is a Supervisory Wildlife Biologist with the Nevada Department of Wildlife. He described to me the process of checking these openings and closing them off. First, each adit and shaft was inventoried to see if bats were using the openings for either summer roosting or winter hibernation sites. Infrared cameras were aimed at the openings and set to record the first hour after dusk. Later, these recordings were searched for emerging bats. Devices called anabats record bats' high pitched vocalizations. Later analysis can tell which bat species were present during the recording. Sixteen openings on Spruce Mountain showed signs of bat usage. Six species of bats were identified, including the Townsend's big-eared bat whose populations are in decline across the West.

Those openings without bats were the easiest to close off. If practical, equipment merely filled in the openings with dirt. Some openings, however, were too large for this method, in particular two 600-foot deep shafts. Other openings were located where large equipment could not go. In these cases, polyurethane foam was used. It is much like the spray can used by homeowners to seal off drafty openings in their walls. In vertical shafts, a false floor was constructed of metal, wire and plastic. Then foam was poured over this, which expanded ten-fold and quickly set up to fill the space. Earth was then shoveled over the foam so the shaft was hidden. In horizontal adits, a back wall was constructed before foam filled the space in front of it.

Metal gates closed off the 16 openings used by roosting bats. Horizontal spaces allow bats to easily fly through but keep out people. Closing off dangerous mine openings are costly undertakings but necessary to keep people from falling into open shafts or entering unstable adits. Some of the larger foam plugs cost up to \$8,000 each while the gates can cost \$5,000.

Bats are not the only wildlife to use mine adits and shafts. One shaft in White Pine County has contained 5,000 roosting Black Rosy Finches during winter nights. Pack rats often place their nests in mine openings, but are not protected when these openings are closed.

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