

## Safety at Old Mines: Stay Out – Stay Alive!

Every year someone is injured or killed on abandoned mine lands in the United States. Many abandoned mines in California date back to the Gold Rush and are an irresistible, and deadly, draw for children, teenagers, and adults.



### Abandoned Mine Safety Frequently Asked Questions

1. What should I do in an emergency involving an abandoned mine?

**Call 911 or contact your local sheriff's office.** If someone falls into or is trapped in an abandoned mine, do not try to rescue the victim yourself. Rescue attempts should only be made by professionals with proper training and equipment.

To report an abandoned mine, email the Division of Mine Reclamation (DMR) at [DMR@conservation.ca.gov](mailto:DMR@conservation.ca.gov) or call the Abandoned Mine Lands Unit (AMLU) toll-free hotline at **877-OLD-MINE (877-653-6463)**. Please provide the mine location (e.g., latitude-longitude, name of nearest road, Assessor's Parcel Number) and a description of the mine. And remember to **Stay Out – Stay Alive!**

2. Are abandoned mines dangerous?

Yes! The [U.S. Mine Safety and Health Administration \(MSHA\)](https://www.msha.gov/) and newspaper archives document stories of people who fell into mine shafts, drowned, or were otherwise hurt or killed in abandoned mines near their home or that they came across while hiking on public lands, riding off-highway vehicles, driving their cars, or walking their dogs. Homes above old mine workings and animals (pets, farm animals, wildlife) are also at risk. Many incidents put trained rescue personnel in danger. The data below are compiled from news stories and other records of deaths and near misses in California's abandoned mines and abandoned quarries (some records go back more than 100 years [e.g., in 1895, a man was rescued after he fell into a flooded 135-foot-deep abandoned mine shaft near Stockton]). Ages of reported victims range from 2½ to 70+. As people may choose not to report an incident, the numbers of accidents and accident victims are likely lower than documented.

<u>Years</u>	<u>Fatalities</u>	<u>Injuries/Near Misses</u>	<u>Pets/Other Animals</u>
1950-1959	18	86	7
1960-1969	14	64	6
1970-1979	22	67	7
1980-1989	16	39	4
1990-1999	12	54	2
2000-2009	18	37	14
2010-2021	7	22	10

Abandoned mines hazards are not always apparent.

- Mines from the Gold Rush era were temporary by their nature. Miners added support inside mines as needed to compensate for the loss of structural integrity caused by removing rock; however, rotting timbers and unstable rock formations make cave-ins a danger even where abandoned mine openings look sturdy.

- Vertical shafts can be hundreds of feet deep. At the surface, they may be unprotected, hidden by vegetation, or covered by rotting boards.
- Other hazards at abandoned mine sites include the following.
  - Darkness and debris can disorient visitors, leaving them lost underground.
  - Internal workings such as winzes, drifts, and stopes present falling hazards.
  - Unstable dynamite or blasting caps can detonate at any time.
  - Rattlesnakes, mountain lions, bears, and other wildlife may use abandoned mines for shelter or habitat.
  - Pockets of oxygen-depleted air or lethal gas (such as carbon monoxide) can cause asphyxiation.
  - Dust particles at mine sites may cause diseases such as hantavirus or valley fever or other health problems due to naturally occurring elements such as asbestos, arsenic, or chromium.
- Mining-related environmental hazards can also affect watersheds. For example, a site may contain toxic waste generated during historic ore processing that can be washed downstream or become windborne. Water in a mine can react with sulfide-bearing rock to produce acid-generating conditions and leach heavy metals from rock. Bacteria can transform mercury into methylmercury, which bioaccumulates in the aquatic food chain; fish and seafood consumption is a major pathway by which humans are exposed to methylmercury.

3. What role does DMR have in making abandoned mine sites less hazardous?

DMR inventories abandoned mines statewide and partners with state, federal, and local landowning agencies to remediate hazardous abandoned mine features. Mine remediations make public lands safer for residents and recreationists by targeting hazardous sites near homes and high visitation areas such as trails, campgrounds, and off-highway vehicle parks.

Sources of funding to remediate abandoned mines include state fees collected on gold and silver mined in California and federal and other special funds. DMR [projects](#), which are typically contracted to small businesses, include fences, backfills, polyurethane foam closures, and gates and other structures that allow access for bats that use abandoned mines for habitat or shelter while keeping humans safely out. DMR also promotes safety at abandoned mine sites by encouraging the public to **Stay Out – Stay Alive!**

4. What is Stay Out – Stay Alive?

**Stay Out – Stay Alive** is a national public awareness campaign, started by [MSHA](#), to warn children and adults about the dangers of exploring and playing on abandoned mine sites



DMR staff conducting outreach on abandoned mines. Photo: DMR

### Accident Summaries

Below are summaries of reports of a few fatal and non-fatal incidents at California abandoned mines in the past 20 years. This representative sample illustrates potential dangers of abandoned mines. Incidents often involved more than one person, and some fatalities occurred during attempted rescues. Remember: **Stay Out – Stay Alive!**

#### Representative sample of abandoned mine accidents in California from 2001-2020

(Source: DMR data obtained from media articles and partner agencies)

(F = Female, M = Male, n/a = not applicable, unk = unknown)

Date	County	Summary	#/Sex	Age
3/20/2020	Inyo	The San Bernardino Mine/Cave Rescue Team and rescuers from Inyo County and Nevada rescued a man who fell 80 feet down a 100-foot-deep shaft in Death Valley. The man suffered head injuries.	1 M	60
3/7/2020	San Bernardino	County Fire and search and rescue teams rescued a man 15 hours after he was stuck 900 feet while exploring an abandoned mine.	1 M	unk
11/3/2018	San Bernardino	A man exploring with friends was injured after falling about 100 feet into a shaft. County Sheriff volunteers rescued him.	1 M	24
6/6/2018	El Dorado	County firefighters rescued a lost dog, which was found in a 50-foot-deep shaft.	n/a	n/a
3/27/2017	Tuolumne	The County Sheriff Search and Rescue Team rescued a dog from a 40-foot-deep shaft located on a college campus.	n/a	n/a
12/24/2016	Tuolumne	The Mount Dimas Mountain Rescue team recovered the body of a man from a mine shaft. Foul play was ruled out.	1 M	58
4/3/2016	Nevada	A County firefighter rescued a dog that fell into a 30-foot airshaft near the owner's home.	n/a	n/a
1/1/2016	San Bernardino	The County Fire Department rescued a boy who fell down a shaft.	1 M	14
10/25/2015	El Dorado	A man died when he fell from a 150-foot highwall at an abandoned placer mine.	1 M	19
10/9/2015	Riverside	Two men rescued a dog from a mine shaft	n/a	n/a
9/29/2015	Placer	A County sheriff dive team recovered the body of a man from an old quarry.	1 M	26
5/11/2015	Kern	A man and a woman (early 20s) were rescued after falling into a 40-foot-deep vertical mine shaft	1M 1F	20s

Date	County	Summary	#/Sex	Age
1/26/2015	Tuolumne	A U.C. Davis veterinary crew rescued a 1,200-pound cow from a 35-foot-deep shaft.	n/a	n/a
9/26/2014	Nevada	A man on his ATV fell about 30 feet into a shaft. He was rescued and treated for moderate injuries.	1 M	70
2/26/2014	Placer	A teenager died after falling from a 250-foot highwall at an abandoned placer mine.	1 M	17
11/5/2013	Mariposa	One of two men exploring an abandoned mine was pinned when the shaft collapsed around him.	1 M	61
10/23/2013	San Bernardino	The County Fire Department rescued a lost dog found 25 feet down a shaft.	n/a	n/a
11/21/2012	Alameda	A man looking for his cat fell into an old water-filled quarry surrounded by cliffs and drowned.	1 M	59
4/9/2012	Kern	County firefighters rescued a man who was trapped while gold mining at an abandoned mine.	1 M	67
11/22/2011	Tuolumne	A volunteer firefighter checking a recently extinguished fire in a recreation area fell through brush hiding a mine shaft. He was rescued with ankle, hip, and back injuries.	1 M	unk
6/6/2011	Amador	A mother contacted DMR after her son fell into an abandoned mine shaft on her property. Her son was playing in a shed built over the 20-foot-deep, 7-foot-wide shaft when the floorboards broke.	1 M	unk
4/11/2011	Riverside	A hiker reported a vehicle that was stuck 60 feet down a shaft.	unk	unk
4/9/2011	Tuolumne	Two of four men SCUBA diving in a flooded abandoned quarry died, one who first returned to the surface with help and another who drowned.	2 M	34 37
1/29/2011	San Bernardino	A man fell 50 feet into a 100-foot-deep shaft after climbing over a fence, breaching a locked hatch, and climbing down a 40-year-old wooden ladder that broke. He had head, rib, and knee injuries.	1 M	34
11/27/2010	Kern	A teen fell into a 30-foot-deep shaft and fractured his spine.	1 M	17
10/30/2010	San Bernardino	A dirt bike rider was thrown clear when rode into a mine shaft opening and his bike hit the opposite side of the shaft. He was transported by air to a nearby hospital with serious injuries.	1M	unk

Date	County	Summary	#/Sex	Age
11/7/2009	Kern	One of four friends riding bikes fell 12 feet into a shaft. He was rescued complaining of back, neck, shoulder, and ankle pains.	1 M	unk
11/1/2009	Kern	A woman died after falling 100 feet into a winze. She reportedly visited the abandoned mine with 3 adults and 2 children and was looking down the winze when the ground gave way, and she fell.	1 F	30
7/19/2009	Inyo	A man died after falling off a highwall of a large abandoned mine pit.	1 M	22
3/2009	Kern	A man fell into a shaft and rescued himself.	1 M	20
1/21/2009	Tuolumne	Rescuers helped a dog out a 40-foot-deep shaft.	n/a	n/a
1/17/2009	San Bernardino	A boy out with a group rode his trail bike into a 20-foot-deep shaft and injured his left arm.	1 M	15
12/22/2008	Calaveras	Rescuers pulled a sheep from an old mine pit.	n/a	n/a
11/23/2008	Ventura	A man fell 50 feet while exploring an abandoned mine. He died later from his injuries.	1 M	79
11/22/2008	Placer	Park rangers found a deer in a shaft.	n/a	n/a
8/16/2008	Tuolumne	A man walked 20 feet into an old mine and fell 100 feet down a series of winzes into a pool of water. After one rescue attempt failed, the Los Angeles Sheriff's Mine Rescue team extracted him 42 hours later. He had back and leg injuries.	1 M	34
6/2008	San Bernardino	A man was injured while exploring abandoned mines when he fell about 15 feet into a shaft.	1M	unk
5/17/2008	Madera	Three men died from carbon monoxide poisoning in an abandoned gold mine they had dewatered and were exploring.	3 M	23, 25, 26
1/21/2008	Placer	Auburn Fire Department firefighters rescued a dog from a 40-foot-deep shaft hidden in undergrowth near a popular trail.	n/a	n/a
12/31/2007	Kern	A boy taking pictures inside an abandoned mine fell 30 to 50 feet down a winze breaking several bones. About 20 rescuers responded.	1 M	11
10/2007	Kern	An abandoned SUV was found lodged in the collar of a 30-foot-deep shaft.	unk	unk
6/16/2007	Plumas	A man died after he was thrown from his motorcycle on a trail at an abandoned quarry.	1 M	41

Date	County	Summary	#/Sex	Age
12/24/2006	Kern	A boy who fell with his motorcycle 40 feet into a shaft was hospitalized after County firefighters and the County Sheriff's Department rescued him.	1 M	9
7/25/2006	El Dorado	Two workers pumping water from an abandoned mine to a water tanker and their two dogs died after becoming overcome by the pump's fumes.	1 M 1 F	49, 32
7/23/2006	Calaveras	Foothill Fire Protection District volunteers rescued a calf from a 65-foot-deep shaft.	n/a	n/a
4/30/2006	Riverside	A man on an off-road vehicle fell 40 feet down a shaft; 18 firefighters worked nearly 7 hours to rescue him. The man had arm, leg, and possible internal injuries.	1 M	27
4/21/2006	Placer	A man was killed when a sinkhole that opened under his basement apartment snapped the building foundation and buried him with debris.	1 M	32
4/14/2006	San Bernardino	A man fell into the same shaft that a man died in 1 week earlier. About 60 emergency workers rescued him. He broke both ankles, a leg, and vertebrae, and was paralyzed below the waist.	1 M	34
4/7/2006	San Bernardino	A man died after walking into an adit and falling 50 feet down an internal shaft. He and his son (6) were riding OHVs a campground.	1 M	41
3/22/2006	Los Angeles	A teenager was rescued after tumbling 30 feet down the side of a former rock quarry.	1 F	15
3/12/2006	Imperial	The Yuma Fire Department and other agencies rescued two men 40 hours after they drove an SUV into a shaft and fell 25 to 30 feet. The driver broke an arm; his passenger had nicks and cuts.	2 M	62, 67
3/1/2006	Kern	A cattle rancher riding his horse nearly fell into a collapsed abandoned mine tunnel that was 2 feet below ground. Rains had weakened the tunnel roof causing a 6-foot-deep, 6-foot-across hole.	1 M	unk
2/7/2006	San Bernardino	Trona Fire Department firefighters rescued a dog from a shaft.	n/a	n/a
1/11/2016 & 12/29/2015	Alameda	Two weeks after a pickup truck driver slid off the edge of an old quarry, another driver crashed in the same quarry. No injuries were reported.	2 M	23, unk
3/25/2005	Kern	The Indian Wells Valley Search and Rescue team and other local agencies rescued two men from a 40-foot-deep shaft.	2 M	28, 26

Date	County	Summary	#/Sex	Age
12/2004	Kern	A family driving on a dirt road while on a GPS scavenger hunt nearly backed their car into a 53-foot-deep shaft on the roadside (a tire was hanging over the shaft edge).	1 M 2 F	36, unk, unk
11/14/2004	San Bernardino	A man riding a motorcycle died after he rode up a steep mine dump and fell 700+ feet down an open shaft. The rider behind him stopped his bike, grabbed a bush, and was able to pull himself out.	2 M	21
4/19/2004	Riverside	A teenager suffered head injuries after falling 50 feet into an abandoned rock quarry.	1 F	16
4/18/2004	Inyo	A dog walking with a family got lost and fell into a 4-foot-wide/30-foot-deep shaft. Five weeks later, two men heard the dog in the shaft and rescued it.	n/a	n/a
2/14/2004	Kern	A boy on his dirt bike fell into a 40-foot-deep shaft. The boy's father and other riders rescued him. He was shaken and bruised.	1 M	11
11/28/2003	Kern	A boy out with his family fell 30 feet down a winze inside an adit. County and California City firefighters rescued him. He was uninjured.	1 M	13
10/11/2003	Del Norte	A man died and his son was injured after their off-road vehicle drove into an air shaft.	2 M	45, 19
4/15/2003	Butte	A dog was rescued about 8 weeks after it fell into a 50-foot-deep shaft.	n/a	n/a
3/17/2003	Kern	A man and his motorcycle fell 50 feet into an abandoned mine shaft. County and California City firefighters rescued him. He had minor injuries.	1 M	32
1/7/2003	San Bernardino	A boy fell on his motorcycle 25 feet into a shaft His father rescued him. He had minor injuries.	1 M	14
6/24/2002	Orange	Two brothers died after they swam through water while exploring a mine. The air where the bodies were found contained 4% oxygen.	2 M	18, 23
5/26/2002	Kern	A boy riding a motorcycle fell 200 feet after breaking through planks covering an abandoned mine shaft. He was rescued by County firefighters.	1 M	10
8/4/2001	El Dorado	Two elderly men were in their senior's complex when an unknown historic mine under the home caved in. The men were uninjured.	2 M	unk
6/2/2001	San Diego	A boy drowned in an old quarry swimming hole that was cordoned off due to its dangers.	1 M	16