



2017

Nevada Abandoned Mine Lands Report



Commission on Mineral Resources

Division of Minerals

May 2018

State of Nevada

Commission on Mineral Resources

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This report may also be downloaded from the Division website at <http://minerals.nv.gov>

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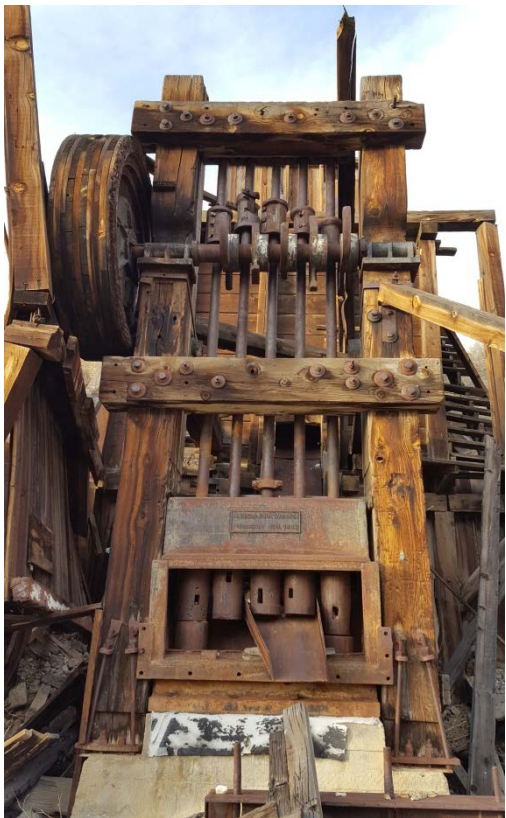
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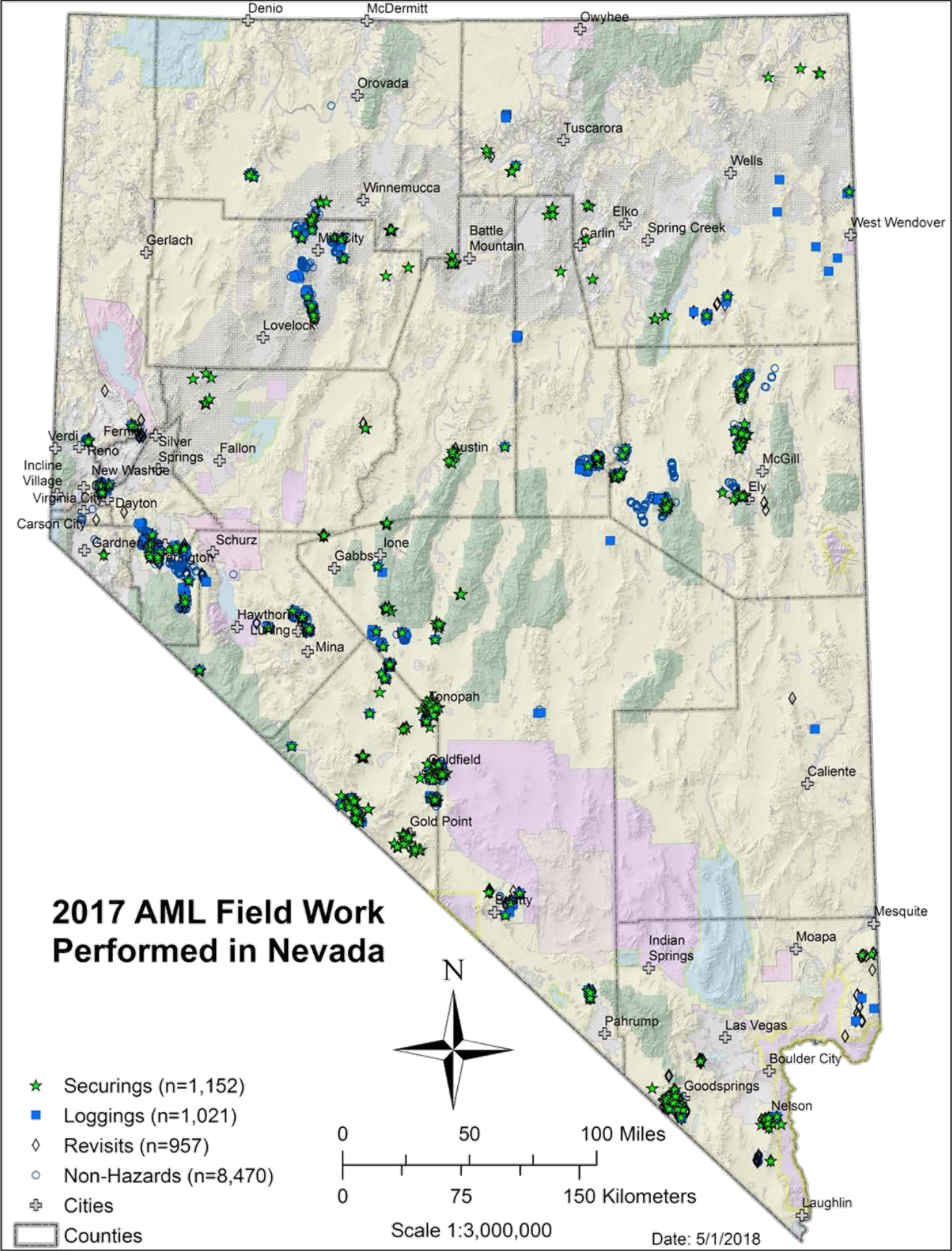
1. Executive Summary

The State of Nevada's Abandoned Mine Lands (AML) program finished its 31st year in 2017. Details and milestones of the program in 2017 include:

- There were NO reported abandoned mine accidents or fatalities making 2017 the fourth consecutive year without an incident.
- 1,021 hazards were discovered and 1,152 hazards were secured.
- Of the 1,152 hazards that were secured in 2017, mining claimants and private property owners secured 354 hazards. Division staff, contractors and volunteers secured 641 hazards, the most in program history for a calendar year.
- 957 known hazards were revisited to confirm securing status and make repairs as needed.
- 21,632 hazards have been discovered and ranked since the beginning of the program, and the total number recorded as secured is 17,456.
- 329 permanent closures took place in 13 of the 17 Nevada counties.
- Interns secured 490 hazards, a new record for a single year.
- Three Eagle Scout projects secured nine and repaired one hazard for a total of 781 securings and 178 repairs by Eagle Scouts since 1992.
- The Division and its contractor Environmental Protection Services built a demonstration bat-compatible grate with informational kiosk at the Tonopah Historic Mining Park (cover photo).
- The Division surpassed both performance indicators required by the State Legislature. 80.7% of discovered hazards were secured, and total public awareness presentations averaged 31 per staff member for the year.
- The Division reached over 40,000 citizens through education presentations and the annual brochure mail-out campaign to all Nevada public and private schools.
- The Division worked closely with the Bureau of Land Management (BLM), Nevada Department of Wildlife (NDOW), and the US Forest Service (USFS) to secure abandoned mine land hazards.



Figure 1:





2. The Commission on Mineral Resources

The Nevada Division of Minerals (the Division), a part of the Commission on Mineral Resources (CMR), is charged by statute to encourage and assist in the responsible exploration for and the production of minerals, oil, gas, and geothermal energy, which are economically beneficial to the State. The seven-member CMR is a public body appointed by the Governor to adopt regulations, formulates administrative policies for the Division, and advises the Governor and Legislature on policy relating to mineral resources. The Division focuses its efforts on four main areas: industry relations and public affairs, abandoned mine lands, regulation of oil, gas, and geothermal drilling activities and well operations, dissolved mineral resource exploration, and minerals education.

The Division's Abandoned Mine Lands (AML) program addresses public safety by identifying and ranking dangerous conditions at mines that are no longer operating and by securing dangerous mine openings. The Division is focused on the physical safety while the Nevada Division of Environmental Protection is focused on the environmental concerns. Both programs continually urge the public to recognize and avoid hazardous abandoned mines.

3. Background

Nevada's geology provides ideal conditions for a large variety of valuable and useful minerals, and has attracted the attention of miners and prospectors for over 150 years. The prospectors who traveled across the state exploring for this vast mineral wealth left behind a legacy of shafts, adits, glory holes, stopes, mill sites and other features that are potentially dangerous to people and animals. It is estimated that over 300,000 of these mining-related features exist in the state. Of these, the Division estimates that 50,000 are significant hazards that require some type of securing.

The Division's AML program was created by the Nevada Legislature in 1987 in response to incidents, both fatal and nonfatal, that had occurred at abandoned mines. The number of hazards discovered and secured each year since the program's inception is shown in Figure 2. The legislation placed the program with the Division and mandated two primary functions:

- 1) Establish a program to discover dangerous conditions that result from mining practices that took place at a mine that is now no longer operating, identify the owner or other person responsible for the condition, if feasible, and apply a hazard ranking based on the location and type of feature.
- 2) Develop a public awareness campaign to educate the public about dangerous conditions that exist as a

result of historic mining activities. The statutes governing the program can be found in Appendix C.

In 1989, the Nevada Legislature expanded the program to include the responsibility of securing hazardous conditions on open public lands where no claimant or property owner could be identified. These are “orphan” mine openings. The Legislature also provided an opportunity for companies, individuals, and civic groups to voluntarily assist the program in the construction of a fence or other safeguard around a dangerous condition at an abandoned mine opening under a designated good Samaritan law under NRS 41.0331 (Appendix C).

The program is administered under Nevada Administrative Code chapter 513, found in Appendix D. Sections 513.320 through 513.360 provide for the openings or structures to be given a hazard ranking based on the location and type of feature. The Division notifies claimants and property owners of hazardous conditions on their claims or property and their responsibility to secure the hazards. The Division also notifies the county board of commissioners of hazardous conditions discovered within their respective counties at least once a year. The appropriate county is notified if a claimant fails to notify the Division of completion, or of their intention to secure hazards within the timeframe specified. The county is authorized to take appropriate enforcement action, which may include warnings issued by the county sheriff, securing work performed under direction of the county at

the owner’s expense, and possible fines of up to \$250 per violation.

No State general funds are used to operate this program. It is funded from the following three sources:

1. For every unpatented mining claim filed on Federal land, a \$4 fee is collected by county recorders and remitted to the Division (NAC 513.315).
2. The Division collects a one-time fee of \$20 per acre for every acre of permitted disturbance associated with new or amended mining or exploration plans of operation on public lands (NRS 519A.250).
3. The Division has cooperative agreements in place with both the Bureau of Land Management (BLM) and the United States Forest Service (USFS) which provide financial assistance to enhance and accelerate both field investigation activities and work performed by staff, contractors, and volunteers to secure hazards.

Revenues are used to pay salaries, travel and vehicle expenses, required office supplies and software, summer interns, contracts, closure projects, and field supplies such as fence posts, signs and barbed wire. The revenue is also used to support the AML public awareness program through school presentations, videos, brochures, buttons, pencils, bumper and hard hat stickers, and other means of outreach. Table 1 shows the historical revenues received by the Division from the three funding sources.

Figure 2: Hazards Discovered and Secured from 1987-2017

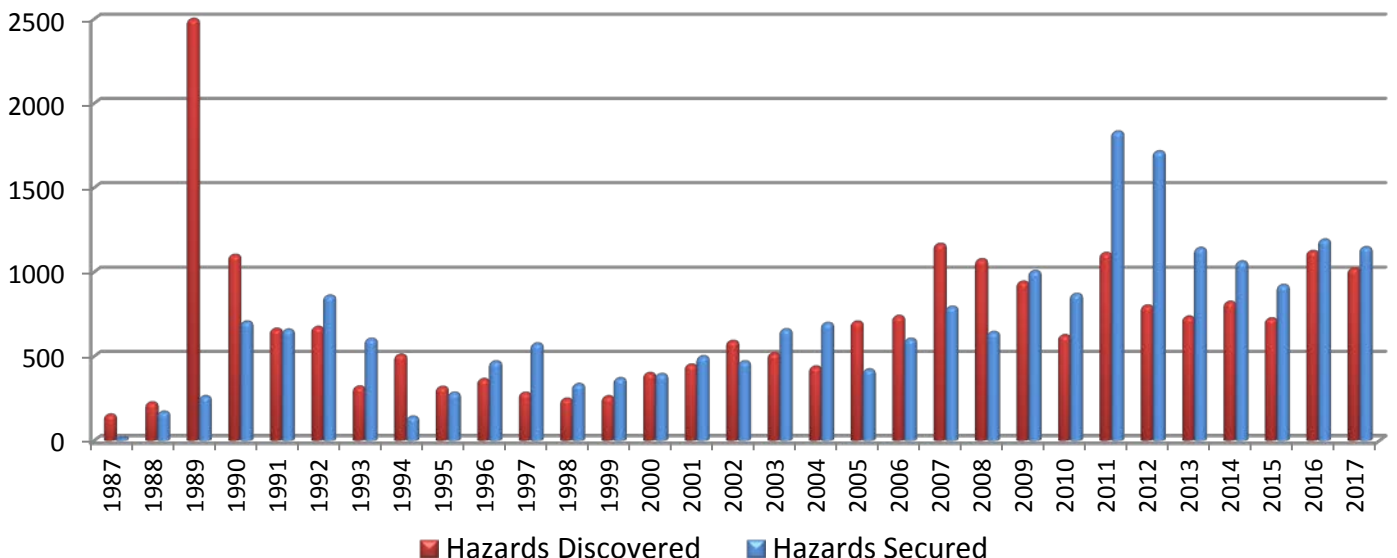


Table 1: Dedicated Revenue to the AML program for the calendar years 2007 through 2017

| Year | BLM/USFS Assistance Agreements | Mining Claim Fees | Disturbance Fees | Total |
|------|--------------------------------|-------------------|------------------|-------------|
| 2017 | \$137,198 | \$802,372 | \$84,640 | \$1,024,210 |
| 2016 | \$110,448 | \$725,257 | \$5,280 | \$840,985 |
| 2015 | \$60,000 | \$432,242 | \$64,300 | \$556,542 |
| 2014 | \$84,008 | \$466,835 | \$164,740 | \$715,583 |
| 2013 | \$69,031 | \$494,967 | \$228,220 | \$792,218 |
| 2012 | \$31,670 | \$561,930 | \$9,800 | \$603,400 |
| 2011 | \$0 | \$481,584 | \$139,360 | \$620,944 |
| 2010 | \$75,000 | \$463,236 | \$41,008 | \$579,244 |
| 2009 | \$110,000 | \$455,223 | \$148,180 | \$713,403 |
| 2008 | \$50,000 | \$317,625 | \$4,080 | \$371,705 |
| 2007 | \$10,000 | \$278,493 | \$34,126 | \$322,619 |



Summer and Winter Interns finishing enclosure fences in Esmeralda and Mineral Counties

3.a Abandoned Mine Incidents in 2017

There were NO reported abandoned mine injuries or fatalities in 2017. This was the fourth consecutive year without a reported injury or death in Nevada. Appendix A lists a 55-year history of reported incidents related to abandoned or idle mines.

Table 2: Hazards Discovered and Hazards Secured as of December 31st, 2017 by County

| County | Sites Discovered | Sites Secured | % Secured |
|-------------------------|------------------|---------------|--------------|
| Carson | 76 | 76 | 100.0% |
| Churchill | 820 | 652 | 79.5% |
| Clark | 2,242 | 1,892 | 84.4% |
| Douglas | 209 | 201 | 96.2% |
| Elko | 908 | 727 | 80.1% |
| Esmeralda | 3,143 | 2,641 | 84.0% |
| Eureka | 1074 | 838 | 78.0% |
| Humboldt | 942 | 795 | 84.4% |
| Lander | 639 | 555 | 86.9% |
| Lincoln | 993 | 847 | 85.3% |
| Lyon | 1,167 | 1035 | 88.7% |
| Mineral | 1,865 | 1,530 | 82.0% |
| Nye | 2,951 | 2,307 | 78.2% |
| Pershing | 1,830 | 1,467 | 80.2% |
| Storey | 216 | 200 | 92.6% |
| Washoe | 457 | 409 | 89.5% |
| White Pine | 2,100 | 1292 | 61.5% |
| TOTAL Since 1987 | 21,632 | 17,440 | 80.7% |

4. Inventory and Securings

Since the beginning of the program, 21,632 hazards have been discovered and ranked and 17,456 hazards have been secured. Table 2 lists hazards by County, Figure 3 by rank, and Figure 4 and by securing method.

3,130 hazardous sites were visited for the purpose of conducting loggings, securings and revisits. Total hazards secured during 2017 numbered 1,152. Of the 1,152 hazards secured, 784 hazards were secured by fencing, 255 by backfill or sealed, 74 by bat compatible closures (BCC), and 39 were found to be caved by nature.

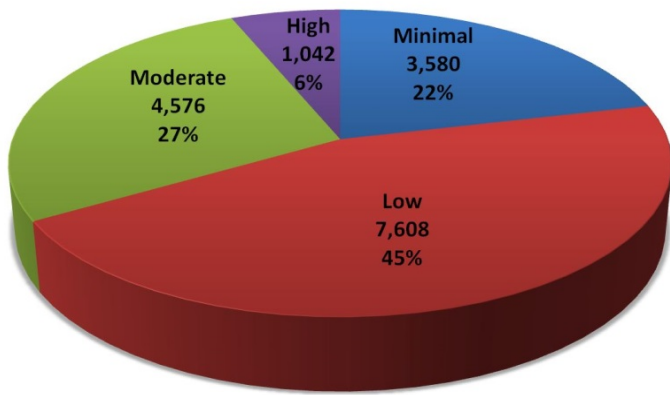


Figure 3: 1987-2017 Hazards secured by rank

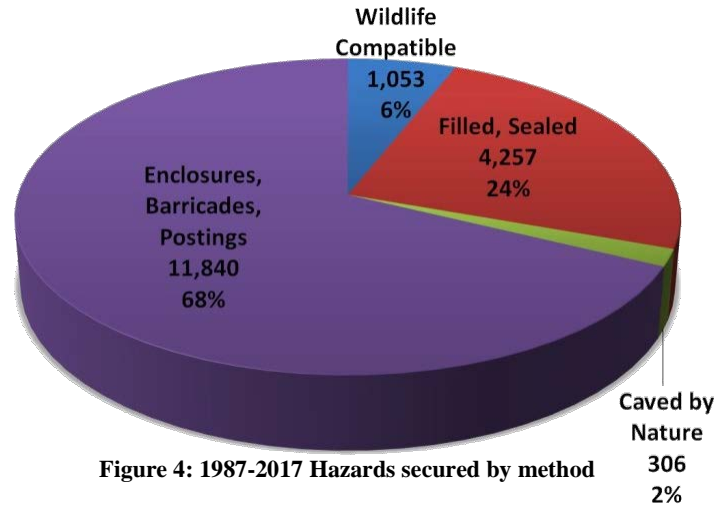
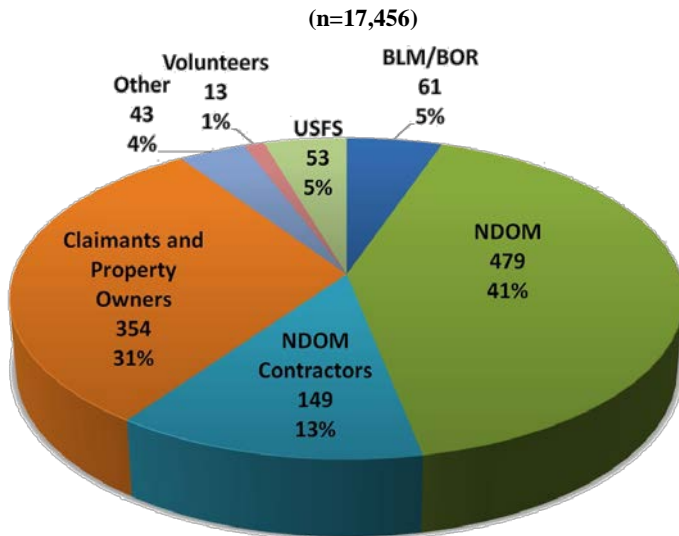


Figure 4: 1987-2017 Hazards secured by method

Figure 5: 2017 Hazards secured by Agency or Group
(n=1,152)

Many agencies contribute to the inventory and securing efforts of mine hazards, with the Division or its contractors accounting for more than half of all securings in the state (Figure 5). The use of field tablets for collecting digital data has increased the efficiency of the field staff. The tablets have also greatly reduced time needed for data entry and increased data integrity. The Division purchased an Unmanned Aerial Vehicle (UAV) to help with inventory efforts. The UAV proved to be a valuable resource and three Division staff are certified UAV pilots.

5. Contracted AML Work

Environmental Protection Services (EPS) worked as the contractor for the Division performing general inventory and securing work throughout Nevada. EPS is also Nevada's statewide contractor for wildlife



A bat compatible cupola constructed by NDOM contractor in Esmeralda County

compatible and other permanent closures. During 2017, EPS, revisited 55 previously secured hazards and secured 149 hazards, 87 permanent and 62 fencings.

6. Permanent Closure Projects

In 2017, 329 hazards were permanently secured in Nevada, including 58 by the BLM, 50 by the USFS, 87 by the Division, and 134 by owners or claimants (Figure 6). Prioritization for permanent closures is based on a risk assessment. This may include a recorded incident, a high ranking hazard, proximity to public or recreation sites, or when exclusionary fencing or barricading are determined to not be a suitable securing method. Permanent closures may employ methods such as backfilling, bat-compatible structures, polyurethane expansive foam (PUF) plugs, or a combination of these methods. Unlike fence or barricade securings, permanent closure of an abandoned mine opening may result in alteration of the landscape and

character of the site. Under the guidelines of the National Environmental Policy Act (NEPA), all mine openings proposed for permanent closure on Federal lands must be evaluated for cultural and biological resource impacts. Closure methods are determined based on the outcome of the biological and cultural resource surveys as well as the safety hazard potential.

Prior to any permanent closure, pre-closure

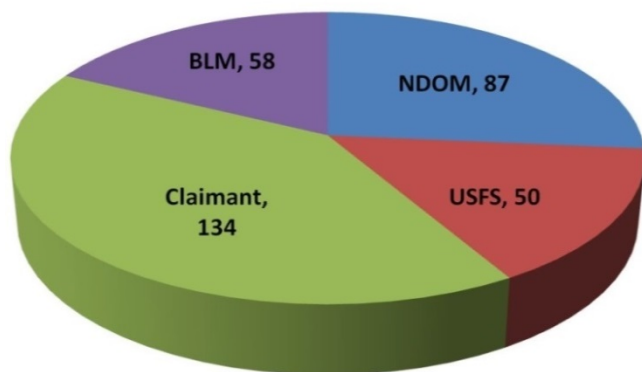


Figure 6: 2017 Permanent securings by agency or group (n=329)

biological and cultural surveys are performed to confirm that the closure will not negatively impact significant wildlife habitat or cultural resources. The biological surveys are conducted by biologists working for NDOW, BLM, or the United States Forest Service. A total of 74 bat compatible closures were constructed. In 2017, either NDOW or its contractor surveyed and provided closure recommendations for 378 mines across the state. These included:

- 58 hazards at Sand Springs Pass, Churchill County
- 48 hazards at the Gold Butte National Monument, Clark County

- 19 hazards near Searchlight, Clark County
- 16 hazards near Goodsprings, Clark County
- 15 hazards at the Carnation complex, Clark County
- 31 hazards near Nelson, Clark County
- 68 hazards near Pioche, Lincoln County
- 38 hazards at the Double O complex, Pershing County
- Seven hazards at the Broken Hills complex, Mineral County
- 78 hazards near Ely, White Pine County

Seventy-five sites (19.8%) of the 378 mines surveyed in 2017 were found to support significant bat habitat and therefore recommended for bat gates or to maintain airflow for roosting conditions. The 19.8% is on par with what NDOW identified in 2016, when 86 (17.2%) of 500 mines surveyed were recommended for bat gates or to maintain airflow. Figure 7 shows wildlife compatible closures by agency.

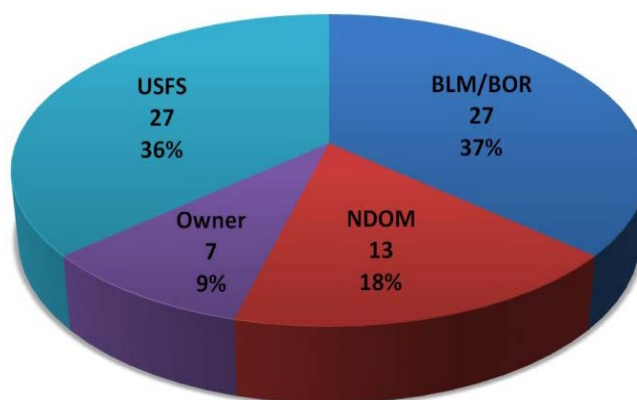
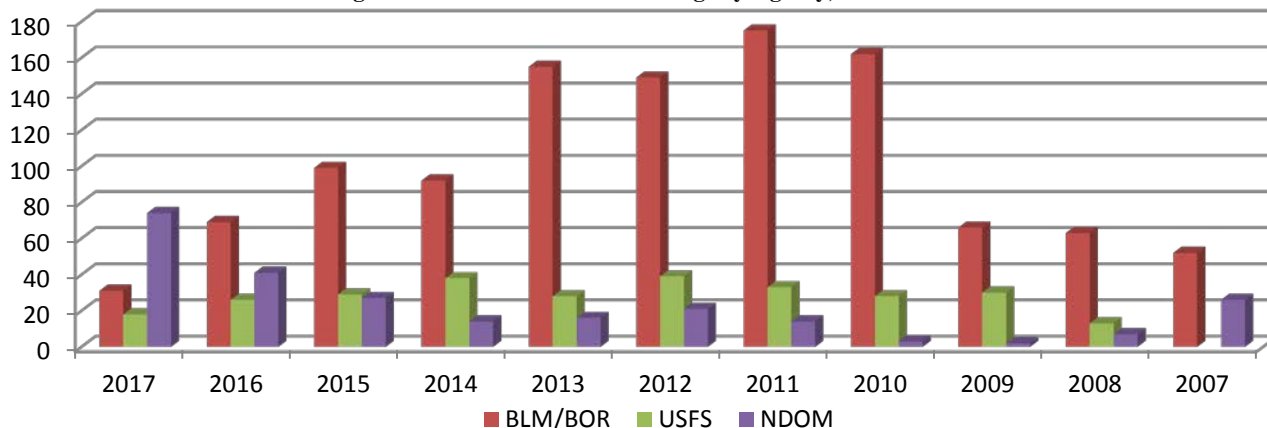


Figure 7: Wildlife compatible closures completed in 2017 by agency (n=74)

Figure 8: Backfill and PUF Securings by Agency, 2017-2007





A before and after of a bat compatible closure in Lander County

For hazards determined to have no significant wildlife habitat potential, backfill or PUF plug closures are employed. In 2017, a total of 255 hazards were secured using backfill or PUF plugs. Figure 8 summarizes backfill and PUF closure projects from 2007 through 2017.

6.a Tonopah Historic Mining Park

The Division coordinated the construction of a bat compatible grate at the Tonopah Historic Mining Park (the Park). The Division worked with the Park and town of Tonopah to receive approval for the work while working with NDOW to identify the hazard site. The steel was donated by the BLM and Environmental Protection Services (EPS) volunteered their time to build the grate. The Division then designed and had an informational kiosk printed and placed in front of the shaft to educate the public about bat compatible closures. The cover photo of this report is the completed gate.

6.b Emergency Closures

Emergency closures are initiated directly following incidents or near-miss incidents at an AML site. There were had two separate emergency closure projects in 2017.

The first project was the ground collapse on the Monte Cristo claim just east of Virginia City. In March 2017, a local resident was riding their dirt bike and came

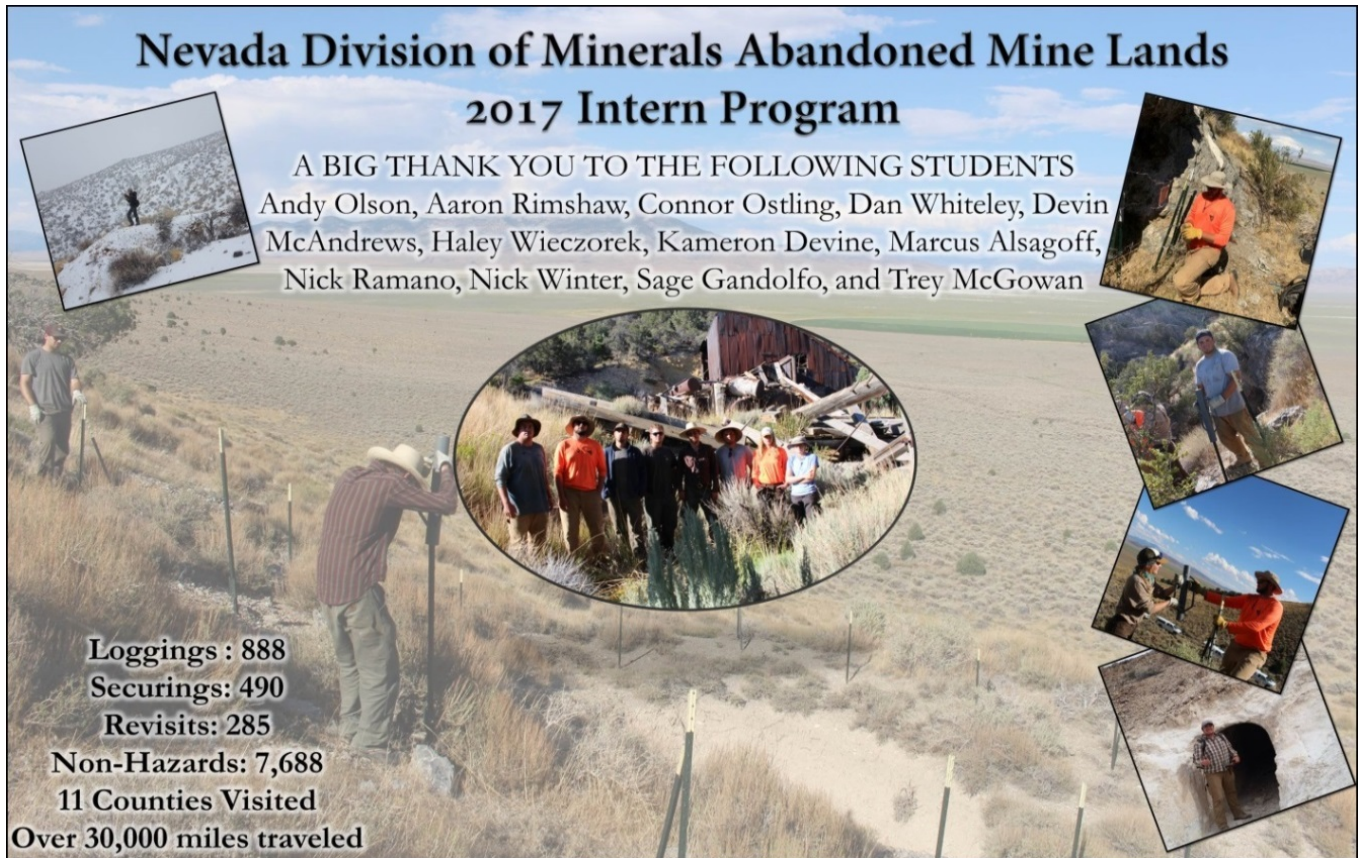


Before and after photos of the Monte Cristo Project

across what was described as a “sinkhole” in middle of the road. The “sinkhole” was actually a collapsed stope from the abandoned mine. The collapse was 40’ across by 25’ wide and 30’ deep, located on a two-track road that is part of the Virginia City Grand Prix race route. Division



Before and after photos of the Carnation Project



staff responded the day of the report, building a fence and starting the hard closure permitting process. The collapsed slope was then by backfilled the Division's contractor in May 2017.

The second emergency closure was at the Carnation mine near Nelson, NV. A Jeep was parked on the road when the back right tire suddenly was consumed by another reported "sinkhole". This "sinkhole" was another slope. Luckily, the Jeep's owner was with other people who were able to pull the vehicle out with no damage or injuries sustained. The party reported the incident and the Division fenced the mine the following day while the BLM closed down road access. The Division and BLM worked together and developed a project that included securing the new hazard and 13 additional hazards in the immediate area. A total of five bat compatible closures and nine backfills or PUF closures were completed.

7. Intern Program

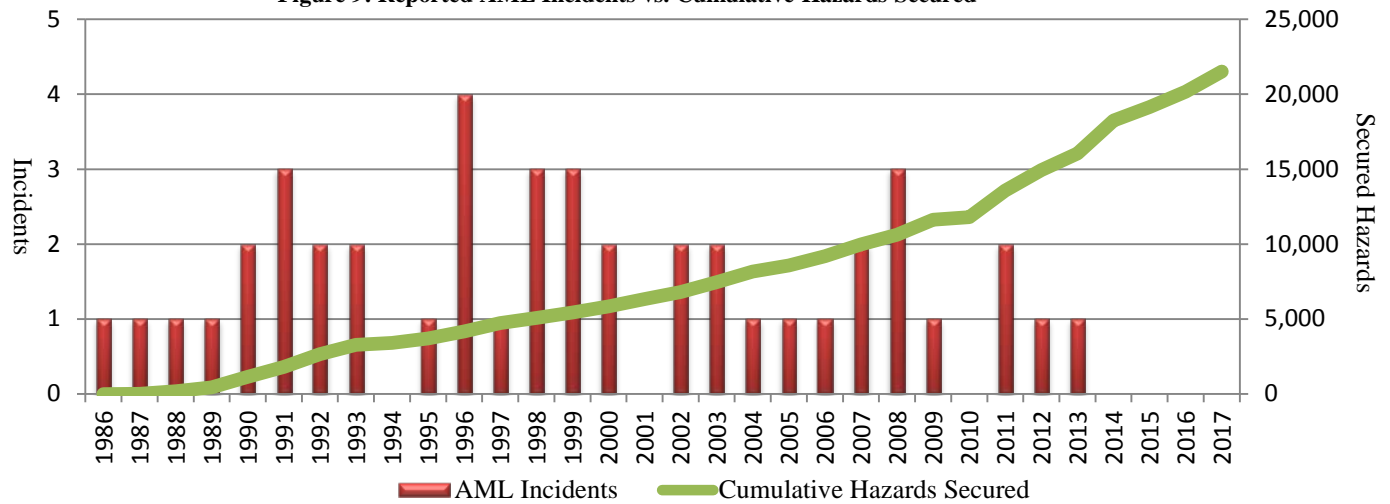
The Division employs college interns majoring in geology, geological or mining engineering to assist with logging, revisits, and securings of AML features. These interns are trained and supervised by Division staff.

The interns worked 13 weeks of the summer and 3 weeks of the winter. The intern program advances the AML program in a cost-effective manner, as well as provides the students with field experience in map reading, data collection, GPS skills, and valuable teamwork and leadership experience. In 2017, the winter and summer interns worked in 11 counties.

8. Public Awareness

In the area of public awareness, the Division's theme is "Stay Out and Stay Alive." This message is carried to the public through several mediums, including an 11-minute "Stay Out, Stay Alive" video, informational brochures, and curriculum guides targeting fourth-grade students. These guides have been distributed to every school and library in Nevada. At presentations, conferences and other statewide events "Stay Out, Stay Alive" handouts, bumper stickers, hard hat stickers, buttons, pencils, and other items are distributed. These materials also reach thousands of Nevada school children and adults each year through educational presentations by Division Staff.

In 2017 the Division staff gave 345 presentations in Carson City, Clark, Douglas, Elko, Lyon, Nye, Storey and Washoe counties to more than 13,466 students,

Figure 9: Reported AML Incidents vs. Cumulative Hazards Secured

teachers

and members of the public. The presentations target K-12 student science nights, classrooms, student career fairs, prospector club meetings, professional association meetings, outdoor recreation events and the annual Earth Science Education workshops for teachers, co-sponsored by the Nevada Mining Association. The Division also mailed an AML Mini Unit detailing Nevada's historic mining legacy to every 4th grade class in Nevada. This project-based learning Mini-Unit was developed in cooperation with Alice Maxwell Elementary school in Sparks and includes applicable Core Standards to every 4th Grade class in Nevada.

9. Performance Indicators

Figure 9 shows the reported incidents by year and cumulative securings in Nevada since the inception of the program. The Legislature requires state agencies to have performance indicators in place for major programs. For the abandoned mine lands public safety program, the indicators consist of the following:

1. Maintain the percentage of secured hazardous mine openings relative to the number of hazardous mine openings investigated and ranked at a minimum of 70%. The Division finished 2017 at 80.7% secured.
2. Maintain the number of public awareness and education presentations concerning the Nevada mineral industry and abandoned mines at a minimum of 12 per year per staff member. The Division staff averaged 31 presentations per staff member.

10. Summary

2017 was one of the most productive years in the history of the Division's program. The introduction of the winter intern program and the field accessible AML database that allows for on-site digital data collection has greatly increased productivity. Maintaining strong relationships with federal land management agencies, the Nevada mining industry, and numerous volunteers proved vital in the advancement of the program. Despite the growing population of citizens that recreate on public lands in Nevada, there has been a decrease in the number of reported safety incidents from abandoned mine hazards in the state. The efforts of Nevada's AML public safety program has clearly helped save lives and decrease incidents in Nevada. The Division encourages the public to report hazards using the Report of an Abandoned Mine Hazard form, found in Appendix B, or available on the Division's website minerals.nv.gov

11. Acknowledgements

We would like to recognize: John Callan and the entire Nevada BLM AML staff for their commitment and assistance; Ken Maas, Humboldt-Toiyabe National Forest, for all of his inventory and closure work on USFS land; the AML closure crew of the Bureau of Reclamation for their work throughout the state; Jason Williams and the entire Nevada Department of Wildlife AML survey crews for their statewide efforts. I would also like to bring attention to and thank all of the claimants and land holders who work with the Division to secure AML sites statewide. Thank you to everyone who contributed to another successful year.

Appendix A

Table 1: History of Nevada AML Incidents Since 1961

| Date | Incident | County |
|----------|---|------------|
| Sep. '13 | 17 year old male received minor injuries in fall down 60-foot deep mine shaft (rider on motorcycle) | Lyon |
| Nov. '12 | Adult male (33) received moderate injuries after falling 35' down a winze | Clark |
| Jul. '11 | Dog fell down shaft, rescued 8 days later | White Pine |
| Mar. '11 | Adult male (28) suffered fatal injuries after falling 190 feet down a shaft | Pershing |
| May. '09 | Dog fell down inclined shaft, rescued 10 days later | Esmeralda |
| Oct. '08 | Adult male (62) suffered fatal injuries after falling 60' down a winze | Lyon |
| Sep. '08 | Dog reportedly fell down 100' shaft, not recovered | Washoe |
| Aug. '08 | Adult male (58) injured in 50' fall down inclined winze | Esmeralda |
| May. '07 | Adult male (mid-20's) injured in fall down ~200' inclined winze | Clark |
| May. '07 | Adult male (63) suffered fatal injuries after rolling his jeep ~450' into the Loring Pit in Virginia City | Storey |
| May. '06 | Dog rescued from 22 foot-deep mine shaft | Washoe |
| May. '05 | Woman of unknown age, received cuts and bruises from fall down a 35 ft. winze | Carson |
| Apr. '04 | 30 year-old man received moderate injuries from fall down 25 ft. winze near Las Vegas | Clark |
| Jan. '03 | Dog fell down shaft | Humboldt |
| Jan. '03 | 62 year-old man received minor injuries from fall down 25 ft. winze (same as 10/2002) | Clark |
| Oct. '02 | 37 year-old CA male received severe injuries from fall down 25 ft. winze | Clark |
| Jul. '02 | 41 year-old male drowned swimming in open pit lake | Storey |
| Dec. '00 | Dog rescued from fall down 60 ft. winze. Minor injury to hip | Pershing |
| Nov. '00 | Dog rescued from fall down 40 ft. mine shaft. Moderate injury to hip | Storey |
| Oct. '99 | Adult male (62) killed in mine cave-in | Lyon |
| Oct. '99 | Female juvenile (11) killed in fall down 130 ft. deep mine shaft near Beatty | Nye |
| Jun. '99 | Male juvenile (15) drowned swimming in open pit lake | Lander |
| Oct. '98 | Two male adults seriously injured in fall down 50 ft. winze near Las Vegas | Clark |
| Sep. '98 | Dog rescued from 20 ft. deep mine shaft | Douglas |
| Jul. '98 | Male adult (20's) slightly injured in fall down mine winze in Brougner Divide Mine near Tonopah, | Esmeralda |
| Apr. '97 | Two male adults (50's) injured in fall down hand dug well in town of Luning | Mineral |
| Oct. '96 | Male juvenile (16) injured in fall down 19 ft. deep hole in concrete at American Flats millsite | Storey |
| Sep. '96 | Two male adults (35) killed in mine adit near Virginia City by suffocation | Storey |
| May. '96 | Male adult (44) fatally injured in fall off ATV at American Flats millsite | Storey |
| Mar. '96 | Male adult (31) injured in fall down mine winze on west side of Las Vegas | Clark |
| Jun. '95 | Male adult (30) killed scuba diving in mine shaft filled with water at the old Crown Copper Under | Humboldt |
| Nov. '93 | Dog rescued from 30 ft. deep mine shaft near Iron Mtn. Estates | Storey |
| Jan. '93 | Dog rescued from 25 ft. deep shaft | Humboldt |
| Oct. '92 | Male adult (27) news reporter injured in dynamite blast at Happy Creek in the Jackson Mountains | Humboldt |
| Sep. '92 | Female adult (28) injured (cuts and bruises) in fall down mine shaft Hot Springs Mtn. | Douglas |
| Dec. '91 | Male adult (44) killed in fall down a mine winze at an abandoned copper mine in the Malachite | Lyon |
| May. '91 | Male juvenile (13) injured (minor) in fall down 20 ft. deep mine shaft | Washoe |
| Feb. '91 | Male adult (40) killed in fall down mine winze | Douglas |
| May. '90 | Dog killed in mine shaft at the MGL Mine near Winnemucca Dry Lake | Pershing |
| Mar. '90 | Male juvenile lost for 19 hours in mine shaft at Mizpah mine in Tonopah | Nye |
| Sep. '89 | Male adult seriously injured in fall down a mine winze near Henderson | Clark |
| Sep. '88 | Body of elderly male found at bottom of mine shaft | Lyon |
| May. '87 | Female child (5) injured in fall down 35 ft. deep mine shaft | Washoe |
| Feb. '86 | Young adult male (20) killed in fall down a mine winze | Lyon |
| Apr. '79 | Two teenagers killed in fall down mine shaft at the Oest Mine | Lyon |
| Dec. '78 | Juvenile killed in fall down mine shaft (Ninety-Nine Mine), body never recovered | Clark |
| Apr. '75 | Two male juveniles killed when motorcycles fell into mine shaft near Searchlight | Clark |
| May. '71 | Male juvenile (15) injured in fall down 200 ft. deep mine shaft on Duck Hill | Carson |
| Nov. '70 | Male juvenile (12) injured in fall down 110 ft. deep mine shaft | Washoe |
| Jan. '61 | Male juvenile (15) injured in 50 ft. fall down mine ventilation shaft | Storey |

Appendix B

State of Nevada
Abandoned Mine Lands
Report of Abandoned Mine Land Hazard

Person Reporting the Hazard:

Name: _____

Please keep my name confidential: ☐

Phone #: _____

E-mail: _____

Date Found: _____

County Hazard is Located In: _____

Hazard Location _____ UTM E/Long. _____ UTM N/Lat.

(Coordinate Type - Select One): ☐ UTM NAD27 ☐ UTM NAD83 (WGS84)

☐ Longitude/Latitude ☐ Do Not Know

☐ Photo or Image of Hazard is Enclosed/Attached

Additional Comments or Information (if desired):

Please send this form along with any photos (If available) to:

Attention: Abandon Mine Lands

Nevada Division of Minerals

400 W. King St. #106

Carson City, NV 89703

Phone: 775-684-7040

Fax: 775-684-7052

Email: ndom@minerals.nv.gov

or

or

or

2030 E. Flamingo Rd. #220

Las Vegas, NV 89119

702-486-4343

702-486-4345

ndomlv@minerals.nv.gov

Appendix C

Nevada Revised Statutes (NRS) pertinent to the AML Program

NRS 455.010 Erection of fence or other safeguard around excavation, hole or shaft required. Any person or persons, company or corporation, who shall dig, sink or excavate, or cause the same to be done, or being the owner or owners, or in the possession under any lease or contract, of any shaft, excavation or hole, whether used for mining or otherwise, or whether dug, sunk or excavated for the purpose of mining, to obtain water, or for any other purpose, within this State, shall, during the time they may be employed in digging, sinking or excavating, or after they may have ceased work upon or abandoned the same, erect, or cause to be erected, good and substantial fences or other safeguards, and keep the same in good repair, around such works or shafts, sufficient to guard securely against danger to persons and animals from falling into such shafts or excavations.

NRS 41.510 Limitation of liability; exceptions for malicious acts if consideration is given or other duty exists.

1. Except as otherwise provided in subsection 3, an owner of any estate or interest in any premises, or a lessee or an occupant of any premises, owes no duty to keep the premises safe for entry or use by others for participating in any recreational activity, or to give warning of any hazardous condition, activity or use of any structure on the premises to persons entering for those purposes.

2. Except as otherwise provided in subsection 3, if an owner, lessee or occupant of premises gives permission to another person to participate in recreational activities upon those premises:

(a) The owner, lessee or occupant does not thereby extend any assurance that the premises are safe for that purpose or assume responsibility for or incur liability for any injury to person or property caused by any act of persons to whom the permission is granted.

b) That person does not thereby acquire any property rights in or rights of easement to the premises.

3. This section does not:

(a) Limit the liability which would otherwise exist for:

(1) Willful or malicious failure to guard, or to warn against, a dangerous condition, use, structure or activity.

(2) Injury suffered in any case where permission to participate in recreational activities was granted for a consideration other than the consideration, if any, paid to the landowner by the State or any subdivision thereof. For the purposes of this subparagraph, the price paid for a game tag sold pursuant to [NRS 502.145](#) by an owner, lessee or manager of the premises shall not be deemed consideration given for permission to hunt on the premises.

(3) Injury caused by acts of persons to whom permission to participate in recreational activities was granted, to other persons as to whom the person granting permission, or the owner, lessee or occupant of the premises, owed a duty to keep the premises safe or to warn of danger.

(b) Create a duty of care or ground of liability for injury to person or property.

4. As used in this section, "recreational activity" includes, but is not limited to:

(a) Hunting, fishing or trapping;

(b) Camping, hiking or picnicking;

(c) Sightseeing or viewing or enjoying archaeological, scenic, natural or scientific sites;

(d) Hang gliding or paragliding;

(e) Spelunking;

(f) Collecting rocks;

(g) Participation in winter sports, including cross-country skiing, snowshoeing or riding a snowmobile, or water sports;

(h) Riding animals, riding in vehicles or riding a road or mountain bicycle;

(i) Studying nature;

(j) Gleaning;

(k) Recreational gardening; and

(l) Crossing over to public land or land dedicated for public use.

NRS 455.030 Board of county commissioners to transmit information concerning dangerous condition at mine no longer operating to sheriff or constable; service of notice upon owner or responsible person.

1. If a board of county commissioners receives information from the division of minerals of the commission on mineral resources that there is in the county a dangerous condition that results from mining practices which took place at a mine that is no longer operating, if the information identifies a person responsible for the condition, the board shall transmit this information to the sheriff or the constable of the township where the condition exists.

2. Upon receipt of information pursuant to subsection 1 or upon the filing of the notice, as provided for in NRS 455.020, the sheriff or constable shall serve a notice, in the same manner and form as a summons, upon each person identified as owner or otherwise responsible.

[3:16:1866; B §§ 111; BH §§ 292; C §§ 273; RL §§ 3235; NCL §§ 5632]—(NRS A 1983, 905; 1987, 1869; 1993, 1625; 1999, 3624)

NRS 455.040 Contents of notice; judgment; criminal penalty.

1. The notice served pursuant to subsection 2 of NRS 455.030 must require the person or persons to appear before the justice of the peace of the township where the hole, excavation, shaft or other condition exists, or any municipal judge who may be acting in his place, at a time to be stated therein, not less than 3 days nor more than 10 days from the service of the notice, and show, to the satisfaction of the court, that the provisions of NRS 455.010 to 455.180, inclusive, or the standards established by the commission on mineral resources for the abatement of dangerous conditions have been complied with, or if he or they fail to appear, judgment will be entered against him or them for double the amount required to abate the condition.

2. All proceedings had therein must be as prescribed by law in civil cases.

3. Such persons, in addition to any judgment that may be rendered against them, are liable and subject to a fine not exceeding the sum of \$250 for each violation of the provisions of NRS 455.010 to 455.180, inclusive, which judgments and fines must be adjudged and collected as provided for by law.

[4:16:1866; B § 112; BH § 293; C § 274; RL § 3236; NCL § 5633]—(NRS A 1979, 1476; 1987, 1869; 1993, 881)

NRS 513.094 Additional fee; administrator to establish program to discover dangerous conditions of nonoperating mines; employment of qualified assistant; regulations.

1. An additional fee, in an amount established pursuant to subsection 4, is imposed upon all filings to which NRS 517.185 applies.

Each county recorder shall collect and pay over the additional fee, and the additional fee must be deposited in the same manner as provided in that section.

2. The administrator shall, within the limits of the money provided by this fee, establish a program to discover dangerous conditions that result from mining practices which took place at a mine that is no longer operating, identify if feasible the owner or other person responsible for the condition, and rank the conditions found in descending order of danger. The administrator shall annually during the month of January, or more often if the danger discovered warrants, inform each board of county commissioners concerning the dangerous conditions found in the respective counties, including their degree of danger relative to one another and to those conditions found in the state as a whole. In addition, the administrator shall work to educate the public to recognize and avoid those hazards resulting from mining practices which took place at a mine that is no longer operating.

3. To carry out this program and these duties, the administrator shall employ a qualified assistant, who must be in the unclassified service of the state and whose position is in addition to the unclassified positions otherwise authorized in the division by statute.

4. The commission shall establish by regulation:

(a) The fee required pursuant to subsection 1, in an amount not to exceed \$4 per claim.

(b) Standards for determining the conditions created by the abandonment of a former mine or its associated works that constitute a danger to persons or animals and for determining the relative degree of danger. A condition whose existence violates a federal or state statute or regulation intended to protect public health or safety is a danger because of that violation.

(c) Standards for abating the kinds of dangers usually found, including, but not limited to, standards for excluding persons and animals from dangerous open excavations.

(Added to NRS by 1987, 1867; A 1993, 298, 1683; 1995, 579; 1999, 890, 3627; 2001, 66)

NRS 513.103 Account for the Division of Minerals: Creation; sources, lapse and use of money in Account.

1. The Account for the Division of Minerals is hereby created in the State General Fund.

2. The following special fees and money must be deposited in the Account:

(a) All fees collected pursuant to [NRS 513.094](#), [517.185](#) and [chapter 522](#) of NRS.

(b) All money collected pursuant to [NRS 235.016](#).

(c) Any money received by the Division from a county pursuant to [NRS 513.108](#).

(d) All fees collected pursuant to [NRS 534A.080](#).

(e) Any money appropriated to the Division from the State General Fund.

3. No money except that appropriated from the State General Fund lapses to the State General Fund.

4. The money in the Account is appropriated to the Division. The money deposited in the Account pursuant to paragraph (a) of subsection 2, and the interest earned thereon, must be expended for the purposes of administering [chapter 522](#) of NRS and the provisions of this chapter, except for [NRS 513.108](#). The money deposited pursuant to paragraphs (b) and (c) of subsection 2, and the interest earned thereon, must be distributed to the counties pursuant to [NRS 513.108](#), except that portion required to pay the cost of administering the provisions of that section. All interest earned on the Account must remain in the Account.

(Added to NRS by 1983, 2070; A 1985, 303; 1987, 1868; 1989, 141; 1991, 1779; 1993, 111, 1684; 1995, 509)

NRS 513.108 Abatement of dangerous condition of non-operating mines; reimbursement of Division.

1. The board of county commissioners in each county may apply to the Division for money to abate a dangerous condition resulting from mining practices which took place at a mine that is no longer operating.

2. The Division shall, within the limits of the money available pursuant to paragraphs (b) and (c) of subsection 2 of [NRS 513.103](#), provide counties with money to abate such dangerous conditions based on the relative degree of danger of those conditions.

3. If a county which receives money from the Division subsequently receives monetary compensation from the mine owner or other person responsible for the existence of the dangerous condition, it shall reimburse the Division to the extent of the compensation received. Any money received by the Division pursuant to this subsection must be deposited in the Account for the Division of Minerals created pursuant to [NRS 513.103](#). (Added to NRS by 1989, 141; A 1991, 1780; 1993, 1684)

FEE FOR FILING PLAN OF OPERATION

NAC 519A.634 Amount of fee. (NRS 519A.250) The amount of the fee that an operator must pay pursuant to subsection 1 of NRS 519A.250 is \$20 per acre or part of an acre.

(Added to NAC by Commission on Mineral Resources by R069 -99, eff. 8-19-99)

Appendix D

Nevada Administrative Code (NAC) pertinent to the AML Program

DANGEROUS CONDITIONS CREATED BY ABANDONMENT OF MINES

NAC 513.200 Definitions. (NRS 513.094) As used in NAC 513.200 to 513.390, inclusive, unless the context otherwise requires, the words and terms defined in NAC 513.205 to 513.290, inclusive, have the meanings ascribed to them in those sections. (Added to NAC by Commission on Mineral Resources, eff. 12-21-88; A by R069 -99, 8-19-99)

NAC 513.205 “Administrator” defined. “Administrator” means the administrator of the division.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88) (Substituted in revision for NAC 513.250)

NAC 513.210 “Animal” defined. “Animal” means any member of the bovine, equine, porcine or caprine species as well as dogs, cats or other animals under the restraint or control of a person.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.220 “Commission” defined. “Commission” means the commission on mineral resources.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.230 “Dangerous condition” defined. “Dangerous condition” means a condition resulting from mining practices which took place at a mine that is no longer operating or its associated works that could reasonably be expected to cause substantial physical harm to persons or animals.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.240 “Division” defined. “Division” means the division of minerals of the commission on mineral resources.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.270 “Owner” defined. “Owner” means the owner of real property who is shown to be the owner on records located in the courthouse of the county in which the real property is located.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.280 “Person” defined. “Person” means a natural person.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.290 “Responsible person” defined. “Responsible person” means the owner of a patented claim or the claimant of an unpatented claim.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.300 Scope. The provisions of NAC 513.200 to 513.390, inclusive, apply to all owners or other responsible persons for dangerous conditions on private or public land.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.310 Waiver of provisions. Upon the approval of the administrator, the division may grant a waiver from any provision of NAC 513.200 to 513.390, inclusive, if the waiver does not defeat the purpose of NRS 513.094.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.315 Additional fee. (NRS 513.094) The amount of the additional fee that is imposed on filings pursuant to subsection 1 of NRS 513.094 is \$4 per claim.
(Added to NAC by Commission on Mineral Resources by R069 -99, eff. 8-19-99; A by R199-08, eff. 8-14-2008)

NAC 513.320 Assignment of points to dangerous condition. The administrator or his representative shall assign a dangerous condition one to five points for the location of the condition and an additional one to five points for the degree of danger associated with the condition. The condition must then be ranked according to the total number of points for location and degree of danger.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.330 Rating of location. The location of a dangerous condition must be rated in the following manner:

1. One point must be assigned to a dangerous condition located at least 5 miles from an occupied structure or a public road maintained by some governmental entity.
2. Two points must be assigned to a dangerous condition located between 1 and 5 miles from an occupied structure or a public road maintained by some governmental entity.
3. Three points must be assigned to a dangerous condition located ½ to 1 mile, inclusive, from a town.
4. Four points must be assigned to a dangerous condition located not more than ½ mile from a town or not more than 1 mile from an occupied structure or a public road maintained by some governmental entity.
5. Five points must be assigned to a dangerous condition located within a town or within 100 feet of an occupied structure or a public road maintained by some governmental entity.

The Administrator or his or her representative may assign a different rating to a dangerous condition in a location if other factors affecting accessibility warrant the modification, but the rating for a dangerous condition in a single location may not be scored higher than five points.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88; A by R127-15, 6-28-2016)

NAC 513.340 Rating of degree of danger. The degree of danger for a dangerous condition must be rated in the following manner:

1. One point must be assigned to a dangerous condition consisting of:

- (a) A vertical or near vertical hole 8 to 20 feet, inclusive, in depth and highly visible upon approach;
 - (b) An inclined hole less than 50 feet deep from which a person could climb out;
 - (c) A horizontal hole with no associated stopes, winzes or raises; or
 - (d) A high wall of an open pit.
2. Two points must be assigned to a dangerous condition consisting of:
- (a) A vertical or near vertical hole 8 to 20 feet, inclusive, in depth which is not visible upon approach;
 - (b) Any vertical or near vertical hole 20 to 50 feet, inclusive, in depth; or
 - (c) Any inclined hole greater than 50 feet deep from which a person could climb out with no associated stopes, winzes or raises.
3. Three points must be assigned to a dangerous condition consisting of:
- (a) Any vertical or near vertical hole 50 to 100 feet, inclusive, in depth; or
 - (b) Any horizontal or inclined hole with associated stopes, winzes or raises with less than a 20 -foot vertical opening.
4. Four points must be assigned to a dangerous condition consisting of:
- (a) Any vertical or near vertical hole which is at least 100 feet deep and visible upon approach; or
 - (b) Any horizontal or inclined hole with associated stopes, winzes or raises with a vertical opening greater than 20 feet.
5. Five points must be assigned to a dangerous condition consisting of any vertical or near vertical hole which is at least 100 feet deep and not visible upon approach.
- The administrator or his representative may assign a higher degree of danger to a dangerous condition if other factors such as loose ground or the presence of water increase the danger, but the degree of danger for a single dangerous condition may not be scored higher than five points.
- (Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.350 Dangerous condition causing fatality or injury. Any dangerous condition that has been the cause of a documented fatality or injury must be ranked as a high hazard, regardless of its numerical score.

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.360 Ranking of dangerous condition. Dangerous conditions must be rated as follows:

- 1. A dangerous condition with a total number of 2 or 3 points is a minimal hazard;
 - 2. A dangerous condition with a total number of 4 or 5 points is a low hazard;
 - 3. A dangerous condition with a total number of 6 or 7 points is a moderate hazard; and
 - 4. A dangerous condition with a total number of at least 8 points is a high hazard.
- (Added to NAC by Commission on Mineral Resources, eff. 12-21-88; A by R127-15, 6-28-2016)

NAC 513.380 Period after notification to secure dangerous condition. If notified by the Commission of the existence of a dangerous condition, the owner or responsible person shall:

- 1. Post within 180 days a warning sign in a prominent location near a dangerous condition ranked as a minimal hazard; and
- 2. In the manner prescribed in NAC 513.390:
 - (a) Secure within 180 days a dangerous condition ranked as a low hazard;
 - (b) Secure within 120 days a dangerous condition ranked as a moderate hazard; and
 - (c) Secure within 60 days a dangerous condition ranked as a high hazard .

(Added to NAC by Commission on Mineral Resources, eff. 12-21-88; A by R127-15, 6-28-2016)

NAC 513.390 Methods for securing dangerous condition; approval by Administrator to modification of method.

- 1. Except as otherwise provided in subsection 4, a dangerous condition ranked as a low, moderate or high hazard must be secured by one or more of the following:
 - (a) A barricade or other structure, including, without limitation, a structure consisting of metal posts and four strands of barbed wire, or other durable materials, constructed to prevent a person or animal from accidentally exposing himself or herself to the dangerous condition.
 - (b) Permanently anchored seals constructed of material not subject to rapid decomposition and, if used to secure a vertical opening, strong enough to support the weight of any person or animal.
 - (c) Backfilling so that no void spaces remain.
- 2. In addition to securing a dangerous condition pursuant to subsection 1, if the dangerous condition ranked as a low, moderate or high hazard is secured only by the method set forth in paragraph (a) of subsection 1, the owner or responsible person must post a warning sign in a prominent location near the dangerous condition. The warning sign must be posted within the period set forth in subsection 2 of [NAC 513.380](#) for securing the dangerous condition.
- 3. Regardless of the method used pursuant to subsection 1 to secure a dangerous condition, the owner or responsible person shall maintain the integrity of that structure.
- 4. The Administrator or his or her representative may approve the modification of a method of securing a dangerous condition to accommodate features or characteristics that are specific to the location of the dangerous condition.

(Added to NAC by Comm'n on Mineral Resources, eff. 12-21-88; A by R127-15; 6-28-2016)