STATE OF NEVADA
COMMISSION ON MINERAL RESOURCES
DIVISION OF MINERALS
400 W. King Street, Suite 106
Carson City, Nevada 89703
(775) 684-7040 • Fax (775) 684-7052
http://minerals.state.nv.us/

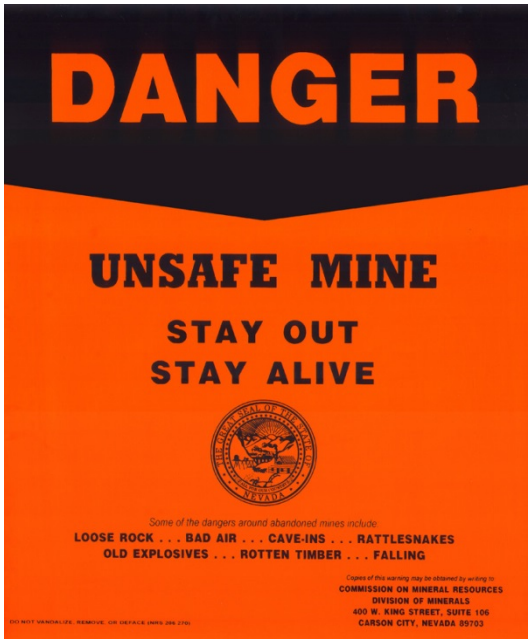
Las Vegas Branch:
2030 E. Flamingo Rd.
Suite 220
Las Vegas, Nevada 89119
(702) 486-4343
Fax (702) 486-4345

BRIAN SANDOVAL
Governor

RICHARD PERRY
Administrator

COMMISSION ON MINERAL RESOURCES
DIVISION OF MINERALS

NEVADA ABANDONED MINE LANDS REPORT 2013



By
Robert Ghiglieri - Chief, Abandoned Mine Lands Program
Bill Durbin - Chief, Southern Nevada Operations
Richard Perry - Administrator

June 2014

Dennis Bryan; *Small-Scale Mining and Prospecting*
Richard DeLong; *Large-Scale Mining*
Arthur Henderson; *Oil and Gas*

Commission on Mineral Resources
Fred D. Gibson, Jr., Chairman; General Public

John Mudge; *Large-Scale Mining*
David Parker; *Exploration and Development*
John H. Snow; *Geothermal Resources*

NEVADA COMMISSION ON MINERAL RESOURCES
Division of Minerals

The Nevada Division of Minerals, a part of the Commission on Mineral Resources, 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 Commission on Mineral Resources is a public body appointed by the Governor and directs mineral-related policy for the Division and advises the Governor and Legislature on matters relating to mineral resources. The Division focuses its efforts on three main areas: Industry relations and public affairs; minerals education; abandoned mine lands; and regulation of oil, gas, and geothermal drilling activities and well operations.

The agency is involved in a wide array of activities relating to mineral development. Staff compiles annual data on all active mines in Nevada and maintains the State's mine registry. Information concerning mining operations and production is made available to the public through this yearly publication. Educational documents and materials concerning many aspects of the minerals industry are also produced. The Division administers the State's reclamation bond pool. The Administrator is the Governor's Official Representative to the Interstate Mining Compact Commission.

The Division's abandoned mine lands program provides for public safety by identifying and ranking dangerous conditions at mines that are no longer operating, and by securing dangerous orphaned mine openings. The program continually urges the public to recognize and avoid hazardous abandoned mines.

The Division is responsible for permitting, inspecting, and monitoring all oil, gas, and geothermal drilling activities on both public and private lands in Nevada. Staff also monitors production of oil, gas, and geothermal resources to insure proper management and conservation. The Administrator is the Governor's Official Representative to the Interstate Oil and Gas Compact Commission.

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Division of Minerals Staff
Richard Perry, Administrator, Division of Minerals
Mike Visher, Deputy Administrator
Robert Ghiglieri, Chief, Abandoned Mine Lands Program
George Bishop, Field Specialist, Abandoned Mine Lands
Bill Durbin, Chief, Southern Nevada Operations
Lowell Price, Program Manager, Oil, Gas, and Geothermal
Valerie Kneefel, Administrative Assistant IV
Erik Langenfeld, Abandoned Mines/Oil Gas Geothermal Field Specialist
Deborah Selig, Administrative Assistant IV, Las Vegas Office
Rachel Wearne, GIS/Field Specialist, Abandoned Mine Lands
Linda Wells-Carrion, Program Officer II, Oil, Gas, and Geothermal

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Executive Summary

The State of Nevada's Abandoned Mine Lands (AML) program entered its 28th year in 2013. Key points for the program in 2013 include the following:

- 1,108 hazards were secured in 2013. Mining claimants and private property owners secured 422 hazards. In 2013, 332 orphan hazards were recorded as secured and 214 of the 332 were secured by Nevada Division of Minerals (NDOM) staff, contractors and volunteers.

- There was one AML-related incident in 2013. A teenage male drove his dirt bike down a 60' shaft in Lyon County and received a broken ankle.

- 719 hazards were discovered and ranked in 2013.

- 986 hazards were revisited in 2013.

- Permanent AML closure projects took place in 15 of the 17 Nevada counties in 2013.

- Eight summer interns secured 233 hazards in 2013.

- 27 hazards were secured and 11 previously secured hazards were repaired by eight Eagle Scout candidates in 2013. Since 1992, 141 Scout projects have been completed resulting in 647 secured orphan hazards.

- The Division surpassed both of the AML performance indicators approved by the State Legislature. Total secured hazards divided by total discovered hazards was 80.2% (70% required) and total public awareness presentations averaged 18.5 per staff member (12 required).

- Dedicated funding for the AML program includes: mining claim filing fees, fees on permitted surface disturbance associated with new mining operations on public lands, and Bureau of Land Management (BLM) and United States Forest Service (USFS) Assistance Agreements. No state general funds are used in the program.

- The total number of AML hazards discovered and ranked since the beginning of the program reached 17,865 hazards. The total number of hazards currently recorded as secured reached 14,321.

- The Division reached over 93,000 citizens in 2013, either through one of the 203 AML or minerals education presentations or the annual brochure mail out campaign.

Program Background

Nevada's geology provides ideal conditions for the deposition of a large variety of valuable and useful minerals. These mineral deposits have attracted the attention of miners and prospectors for over 150 years. The hearty souls who searched 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 to wild and domestic animals. Over time, most of the mine openings have become unstable due to inadequate construction methods and exposure to the elements and decay of support timbers. It is estimated that 200,000 to 300,000 of these mining-related features exist in the state. Of these, the Nevada Division of Minerals (NDOM) estimates that 50,000 are significant hazards that require some type of securing. [Appendix A, lists the hazards discovered and the hazards secured by the Abandoned Mine Lands (AML) program from 1987 through 2013.] It includes a map showing the location of hazards discovered, revisited, and secured in 2013. The Division also conducts an extensive public awareness and education campaign called "Stay Out, Stay Alive" focused on the dangers associated abandoned mines.

The State of Nevada AML program was created by the Nevada Legislature in 1987 in response to incidents, both fatal and nonfatal, that had occurred in abandoned mine openings. Table 1 shows the 53-year history of reported incidents related to abandoned or idle mines. In 1987 the legislation placed the AML program with NDOM and mandated two primary functions: 1) 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 apply a hazard ranking based on the location and type of feature; and 2) Development and maintenance of an aggressive public awareness campaign to educate the public about dangerous conditions that exist as a result of historic mining activities. The primary Nevada Revised Statutes (NRS) governing the AML 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 legislation 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 (NRS 41.0331); see Appendix C.

The AML program is administered under Nevada Administrative Code (NAC) 513. The pertinent regulations can be 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 AML program is primarily funded by fees on mining claim filings. County recorders collect the fees at the time the claims are filed and when annual claims maintenance fees are paid. The program is also funded by a one-time fee paid by mining companies or individuals for approved surface disturbance at new mining operations or expansions occurring on public lands. The Division has cooperative agreements in place with both the Bureau of Land Management (BLM) and the United States Forest Service (USFS). Under these agreements, the BLM and USFS may provide financial assistance to enhance and accelerate both field investigation activities and work performed by staff and volunteers to secure orphan hazards.

In compliance with NRS 513.094.2, 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 county commissions of hazardous conditions discovered in their counties at least once a year. The appropriate county commission is notified if a claimant fails to notify the Division of completion or of their intention to secure hazards within the timeframe specified in NAC 513.380. The county is authorized per NRS 455.030 and 455.040 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.

Abandoned Mine Incidents in 2013

There was one reported incident related to abandoned mines in Nevada in 2013. A 17-year old male suffered a broken ankle after riding his dirt bike down a 60-foot deep shaft north of Smith Valley in Lyon County (see Table 1).

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 Brougher Divide Mine near Tonopah, another adult male lost for 7 hours, total of 6 adult males in mine	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 Ground Mine.	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 mine winze Abandoned copper mine in the Malachite Mason Valley Mines west of Yerington.	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/ Esmeralda
Sep-89	Male adult seriously injured in fall down winze in mine 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 winze in mine	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 City
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

Discovery and Securing

From the beginning of the AML program in 1987 through December 31, 2013, 17,865 hazards have been discovered and ranked and 14,321 hazards (claimed, owned, and orphans combined) have been recorded as secured. Figure 1 is a graph of hazards discovered and ranked and hazards secured for 1987 through 2013. Table 2 is a county-by-county listing of hazards discovered and secured since the beginning of the program. The number of hazards listed as secured at the end of 2013 represents 80.2% of all hazards discovered to date.

Table 2: Hazards Discovered and Hazards Secured as of December 31st, 2013 by County			
COUNTY	**SITES DISCOVERED**	**SITES SECURED**	**% SECURED**
Carson	76	76	100.0%
Churchill	667	549	82.3%
Clark	2,144	1,663	77.6%
Douglas	199	186	93.5%
Elko	705	541	76.7%
Esmeralda	2,651	2,309	87.1%
Eureka	775	706	91.1%
Humboldt	797	700	87.8%
Lander	575	474	82.4%
Lincoln	686	545	79.4%
Lyon	1,020	864	84.7%
Mineral	1,540	1,314	85.3%
Nye	2,526	1,888	74.7%
Pershing	1,460	1,035	70.9%
Storey	193	167	86.5%
Washoe	428	394	92.1%
White Pine	1,423	910	63.9%
TOTAL (Since 1987)	**17,865**	**14,321**	80.2%

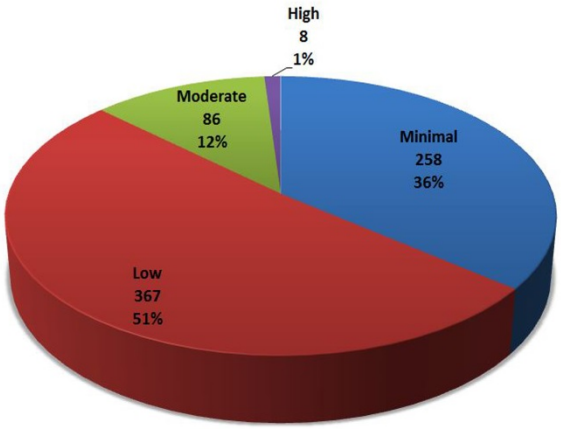
The total number of hazards discovered and ranked during 2013 was 719. Of the 719 hazards discovered, 155 were determined to be orphans, 512 were determined to be on Federal claims or private property, and 52 require additional ownership research. Of the 719 hazards discovered in 2013, 8 were ranked high, 86 moderate, 367 low, and 2458 minimal (see Figure 1a).

The total number of hazards secured during 2013 was 1,108, the third highest amount of securing since the start of the program. The substantial increase of hazards secured in the past three years is due to the positive response to a new notification campaign instituted in 2011. Bulk mailings occurred twice a year, notifying claimants and property owners of existing unsecured hazards on their property.

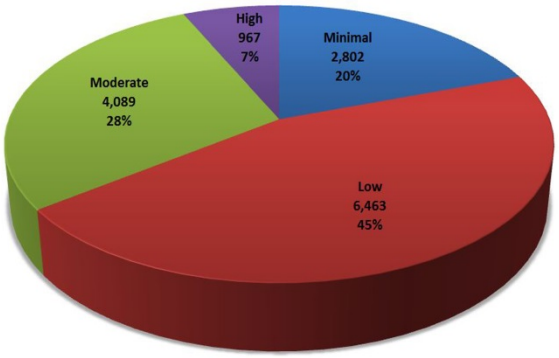
Of the 1,108 hazards secured in 2013, 266 were secured by NDOM staff, 422 were secured by claimants and owners of patented claims and private land, 22 were secured by volunteers and other Good Samaritans, 101 were secured by a contractor for NDOM, 189 were secured by the Bureau of Land Management/Bureau of Reclamation, 74 were secured by U. S. Forest Service personnel, 11 were secured by the Nevada Department of Wildlife, and 24 were found to be secured by natural effects. Figure 1e shows the distribution of securing work by group, as recorded by NDOM for 2013. A total of 332 of the hazards secured in 2013 were orphans. Figure 1d. shows the methods used for securing.

Revisits continue to be a high percentage of the work load due to the damage of fences by weather or vandalism. Figure 3 shows the number of revisits annually.

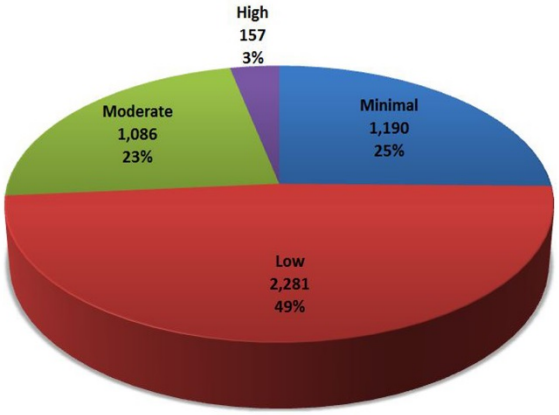
Figure 1: AML Inventory and Securing Statistics



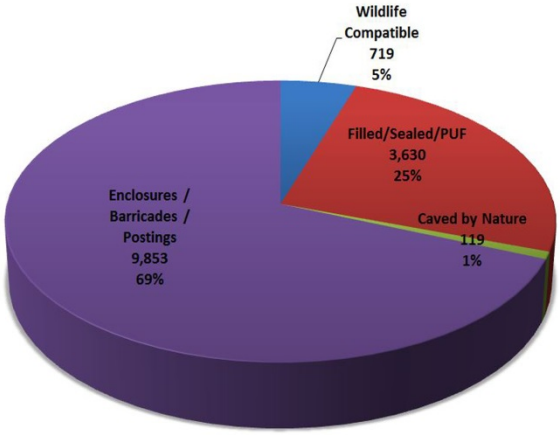
a: 2013 Hazards Inventory by Rank (n=719)



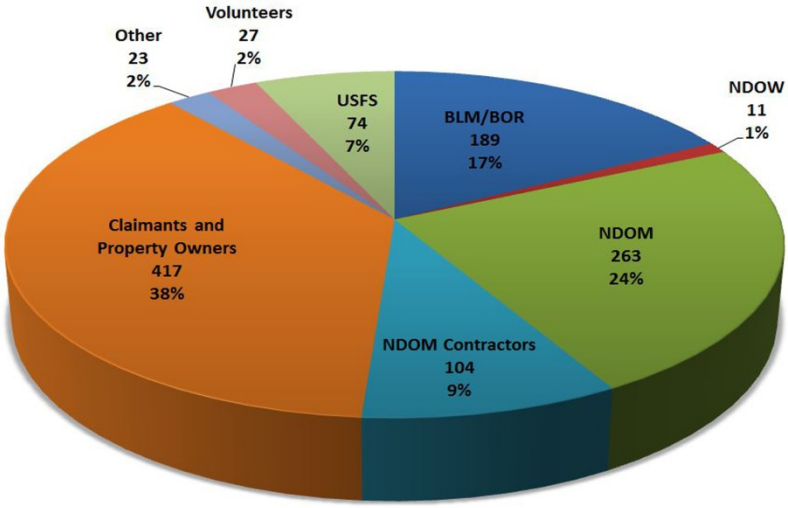
b: Current Hazards Securings by Rank (n=14,321)



c: Current Orphan Securings by Rank (n=4,714)



d: Current Hazard Securing Methods (n=14,321)



e: 2013 Securings by Agency or Group (n=1,108)

Figure 2: Hazards Discovered and Hazards Secured from 1987-2013

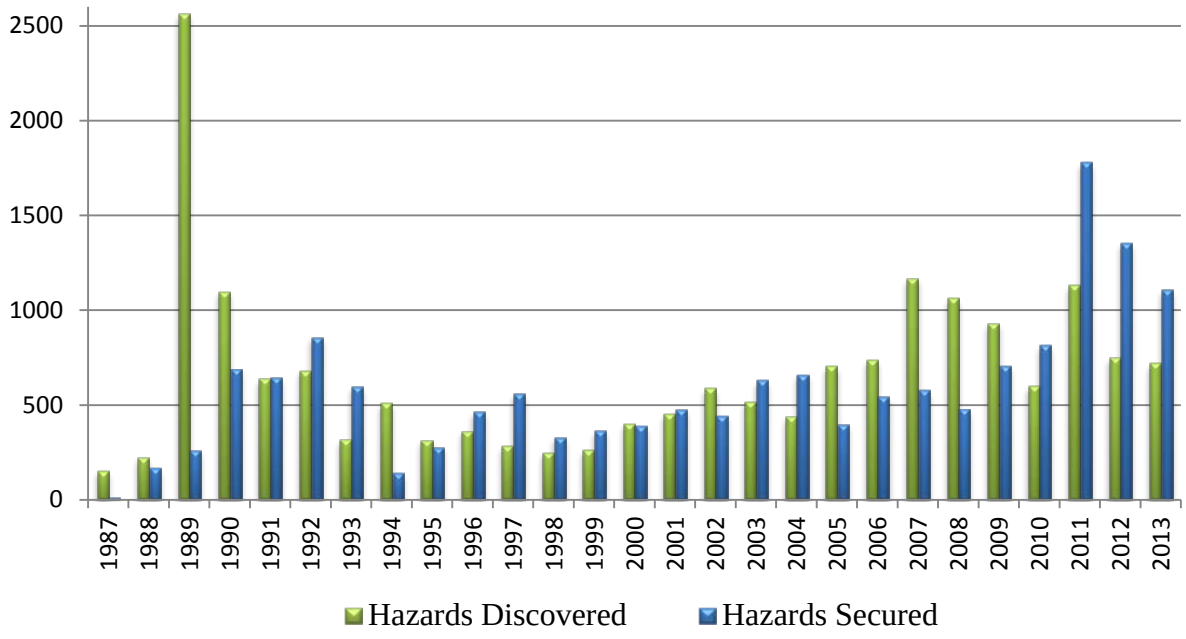
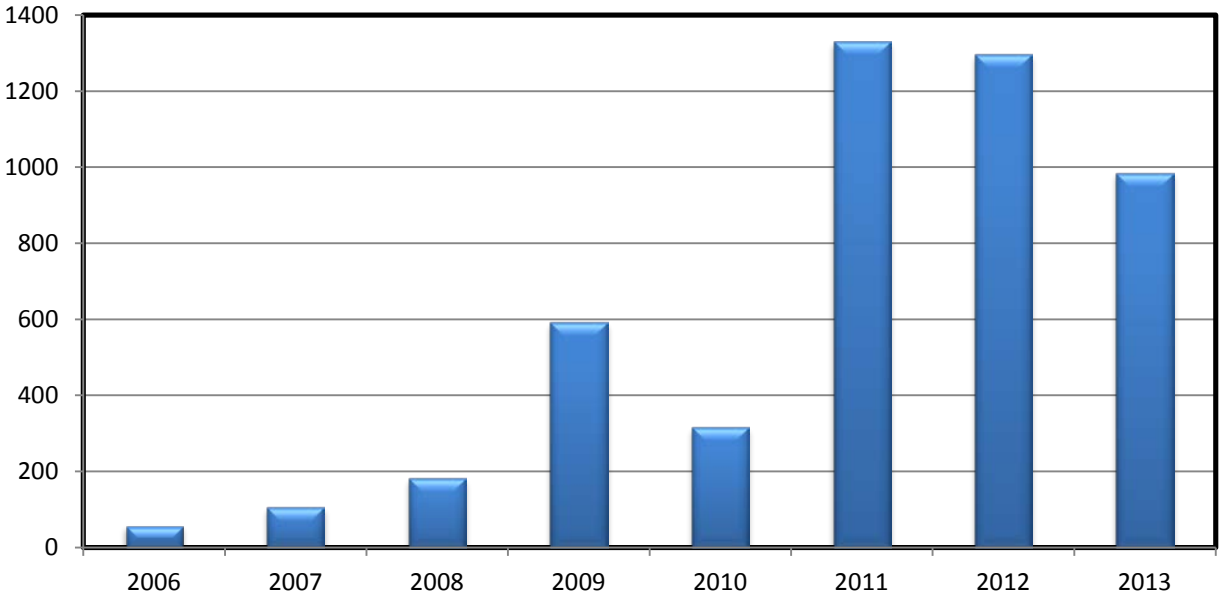


Figure 3: Number of Revisits by Year



Public Awareness

In the area of public awareness, the theme is "Stay Out and Stay Alive." This message is carried to the public through several mediums. An 11-minute video of the same name which has been distributed to every school and library in Nevada, informational brochures, mini-unit curriculum guides targeting 4th and 7th grade students, and handouts that include bumper stickers, hard hat stickers, squeeze bats, magnets, pencils, temporary tattoos and coffee mugs. These materials reach thousands of Nevada school children and adults each year.

In 2013, NDOM staff conducted 203 presentations in Carson, Clark, Douglas, Elko, Lyon, Nye and Washoe counties to more than 17,400 students, teachers and members of the public. The presentations target elementary, "Science Nights", student career fairs and Nevada Day events, prospector club meetings, professional association meetings, outdoor recreation events, and the NDOM and Nevada Mining Association co-sponsored Earth Science Education workshops for teachers. In 2013, 76,728 brochures were mailed out to 4th and 7th grade public and private schools. "Stay Out and Stay Alive" videos (DVD format) are made available to all public and private schools and public libraries across Nevada. Figure 4 highlights a selection of the Outreach and Education events from 2013.

Figure 4: 2013 Earth Science Workshops (clockwise from top left): a tour of Barrick's Western 102 Solar Plant (Northern Nevada); a teacher utilizing the hand lenses provided to identify a mineral (Southern Nevada); Instructors leading a classroom of teachers through the "How do we get metals?" exercise (Southern Nevada); a view of the processing ball mill from the field trip to Mineral Park Copper Mine in Kingston AZ (Southern Nevada).

The Nevada Division of Minerals staff presented the “Stay Out and Stay Alive” to the following:

Location	Number of Presentations
Las Vegas Schools	43
Southern Nevada Groups	7
Rural Nevada Groups	15
Northern Nevada Schools	22
Northern Nevada Groups	115
Out of State Presentations	1

Permanent Closure Projects

The permanent closure of abandoned mine hazards may employ methods such as backfilling with suitable fill material, the construction of bat-compatible closures including gates, culvert gates, cupolas, bat grates, and the use of polyurethane expansive foam (PUF) plugs, or a combination of these methods. Unlike fence or barricade construction, 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 must be evaluated for cultural and biological (habitat) resource potential. Closure methods are determined based on the outcome of the resource surveys and the public safety hazard potential.

In 2013, 380 hazards were recorded as permanently secured on public lands in Nevada, including 189 by the BLM, 74 by the USFS, and 43 by State contractors. This is a continued increase in overall permanent closure numbers reflecting the continued strong working relationship by state and federal agencies to more permanently eliminate the physical safety risks these features present to the public.

Wildlife Friendly Closure Projects

NDOM works with several State and Federal agencies to identify adits and shafts suitable for bat habitat that would benefit from bat-compatible closures. Prior to any permanent closure, such as a backfill, pre-closure surveys are performed to confirm that the closure will not negatively impact significant biological habitat. These surveys are conducted by appropriately trained biologists working for the Nevada Department of Wildlife, Bureau of Land Management, or US Forest Service. During 2013, a total of 126 bat gates, grates, culverts, or cupolas were constructed, 87 by state and federal agencies, 27 by NDOM and NDOW, and 12 by property owners.

Backfill and Polyurethane Foam Plug Closures

For those hazards determined to have no significant wildlife habitat potential, backfill or PUF plug closures were employed. In 2013, a total of 178 hazards were recorded as backfilled and 70 were closed with PUF plugs. Table 3 summarizes backfill projects from 1999 through 2013.

Figure 6: Environmental Protection Services Backfilling Hazards in Douglas County

Clark County Closure Project

The Clark County AML closure project was completed in August of 2011 with funding from the Southern Nevada Public Land Management Act (SNPLMA). BLM and NDOM collaborated on a list of additional closure sites in 2011 and 2013. The preliminary list of 145 hazards included a high-priority selection of 30 in the Searchlight area. Cultural and biological resource surveys were in-progress through much of 2013. Closure work was conducted in Clark County by the BOR and a total of 70 hazards were permanently closed. 42 hazards were backfilled, 17 were plugged with PUF covered with soil and rock and 11 were closed with culvert bat gates. 46 of the 70 hazards were closed in the Searchlight area including 4 ranked HIGH, 17 ranked MODERATE, 20 ranked LOW and 5 ranked MINIMAL. Closure work will continue in 2014.

Table 3. Summary of Completed Backfill/PUF Projects – 1999-2013		
Yr	**#**	**Location (Lead Agency and Partner)**
2013	16	Douglas and Pershing counties (NDOM)
	28	Nye and White Pine counties (USFS)
	148	Clark, Elko, Nye, Pershing, and White Pine counties (BLM/BOR)
2012	21	Clark, Esmeralda, Humboldt, Nye, and Washoe counties (NDOM)
	39	Elko, Humboldt, Nye, White Pine (USFS)
	132	Esmeralda, Humboldt, Lander, Lincoln, Pershing, White Pine (BLM)
2011	33	Clark, Elko, Humboldt, Nye, and White Pine counties (USFS)
	124	Clark, Elko, Humboldt, Lander, Lincoln, Washoe, and White Pine counties (BLM)
2010	28	Clark, Nye and White Pine counties (USFS)
	160	Clark, Elko, Esmeralda, Eureka, Lincoln and Nye counties (BLM)
2009	30	Clark, Lander and Nye counties (USFS)
	49	Clark, Elko, Eureka and White Pine counties (BLM)
2008	13	Humboldt, Washoe and White Pine counties (USFS)
	89	Clark and Washoe counties (BLM)
2007	108	Douglas, Esmeralda and Washoe counties (BLM)
2006	53	Nye County (BLM and NVMA)
2005	55	Nye and Washoe counties (BLM and NVMA)
2004	45	Esmeralda and Nye counties near Tonopah (BLM and NVMA)
2003	41	Searchlight and Nelson areas of Clark County (BLM and NVMA)
2002	7	Peavine Mountain, Washoe County (USFS and Q&D Construction)
	21	Near Goodsprings, Clark County (BLM and NVMA)
2001	22	Near Goodsprings, Clark County (BLM and NVMA)
2000	13	Near Henderson, Clark County (BLM and Nevada Mining Association (NVMA))
1999	6	Near Henderson, Clark County (BLM and Cashman Equipment Company)
TOTAL	**1,087**	**GRAND TOTAL BLM THROUGH 2013**
	178	**GRAND TOTAL USFS THROUGH 2013**
	37	**GRAND TOTAL NDOM 2012-2013**

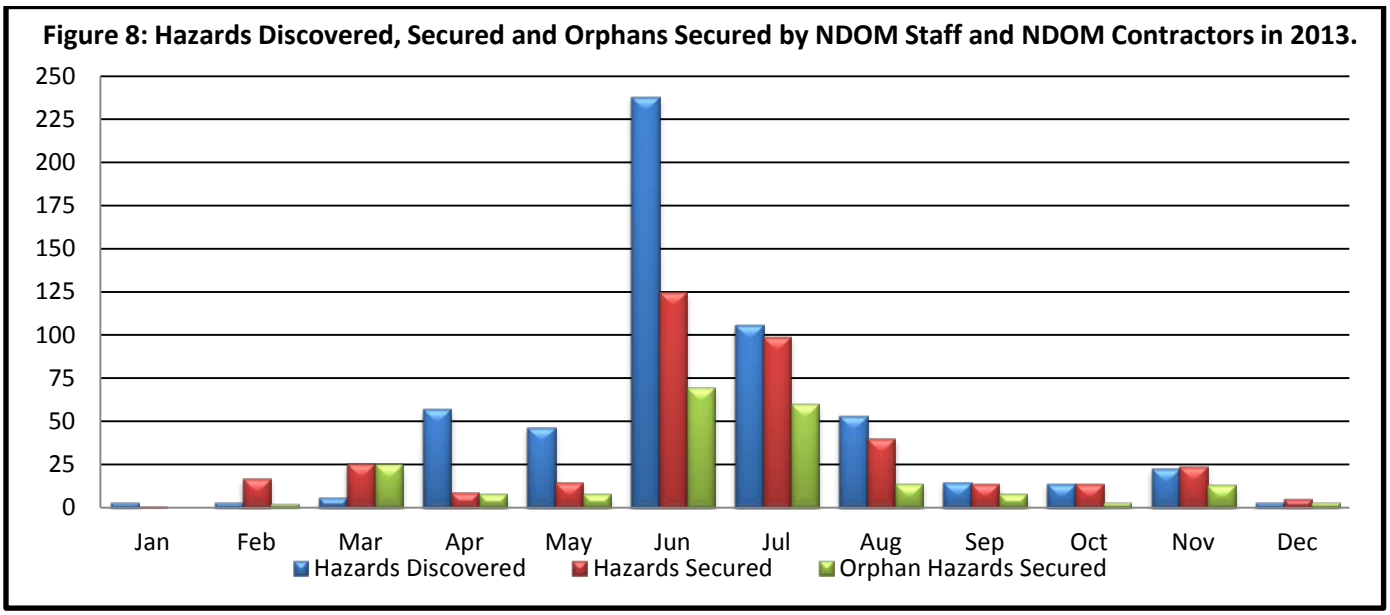
White Pine County Closure Project

During November, 2012, BOR completed 3 bat-compatible closures and 19 PUF closures before winter storms closed down operations. Cultural and biological resource surveys were conducted from June 2008 through the end of 2011 for 207 mine hazards recommended for permanent closure by BLM, NDOM and NDOW. In May and June 2013 closure work commenced resulting in 7 PUF/rock closures, 9 bat compatible closures and 15 backfills with additional closure work planned for 2014 and 2015.

Summer Intern Program

The Division completed its 14th summer intern program in 2013. The program is intended to continue inventory and closures during summer months and provide field training for students intending to pursue degrees in natural resources. The Division appreciates the great work they performed during the 13 weeks of the program (see Figure 7). This program helps to advance the AML program, as well as provides the students with valuable field experience in map reading, data collection, and valuable group and leadership experience. Figure 8 is a chart illustrating the monthly hazard discovery, securing and orphan securing efforts made during 2013. Working in 13 counties, the interns visited 3,839 mine features.

Figure 7: 2013 Summer Interns Performing Inventory and Securing Work Throughout Nevada.



Contracted AML Work

Environmental Protection Services (EPS) continued working as a contractor for NDOM performing general inventory and securing work throughout Nevada. During 2013, EPS inventoried 66 new AML hazards, revisited 252 and secured 115 (104 for NDOM and 11 for NDOW) in Douglas, Esmeralda, Mineral, Pershing, Humboldt, Lyon, Nye, Storey, and Washoe counties. EPS is also the primary bat gate, backfill, and PUF plug contractor for State of Nevada agencies. EPS built 27 bat-compatible and backfilled or PUF plugged 14 closures in 2013.

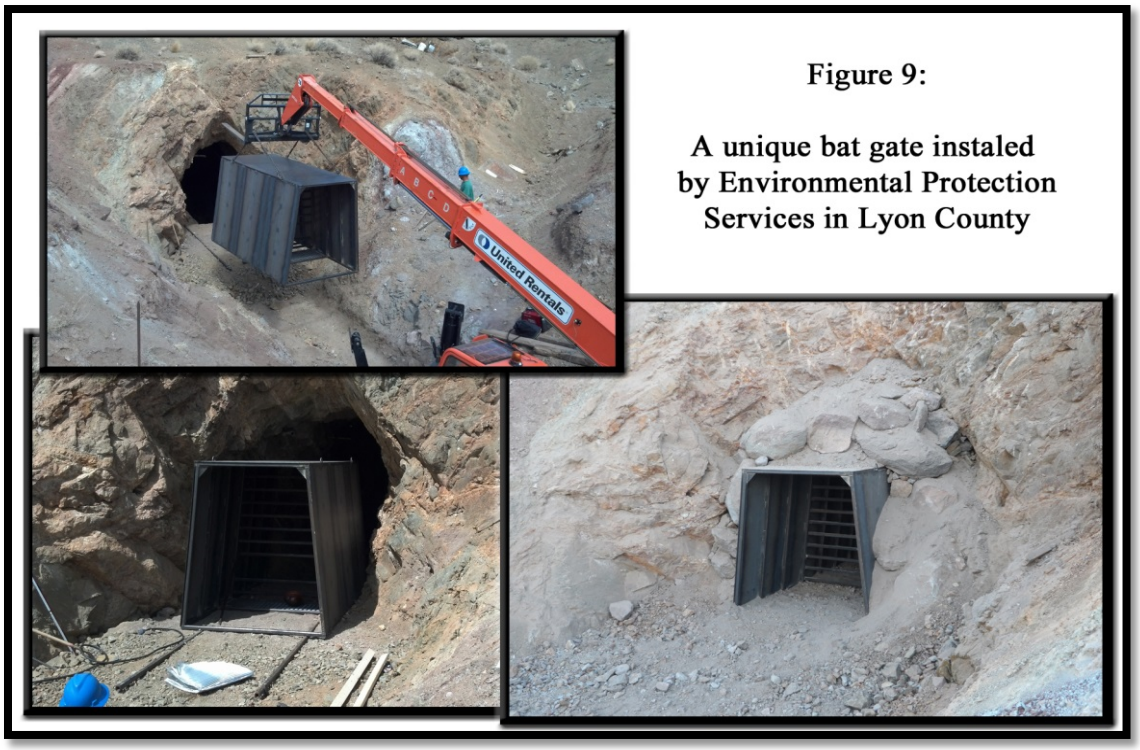


Figure 9:

A unique bat gate instaled by Environmental Protection Services in Lyon County

Figure 10:

Steel mesh with a bat flyway covering large stopes in Pershing County by Environmental Protection Services

Performance Indicators

The Legislature requires state agencies to have performance indicators in place for all of their major programs. For the AML program, the Division has two performance indicators:

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%.
2) Maintain the number of public awareness and education presentations concerning the Nevada mineral industry and abandoned mines per staff member at a minimum of 12 per year.

The Division surpassed these goals in 2013 with 80.2% securing rate and 18.5 presentations per staff member.

Scout Projects

In 1992, a young Eagle Scout candidate presented NDOM with a proposal to secure mine openings for his Eagle Scout Service Project in Washoe County. In 2013, eight Eagle projects were completed in Clark and Washoe counties resulting in 27 mine openings secured and 11 repairs made to previously existing fences. Through 2013, 141 Eagle Scout projects have been completed resulting in 647 orphan hazards secured and 129 previously secured hazards re-built or restored. Figure 11 shows several Eagle Scout projects in Nevada. Appendix E lists the accomplishments of Scouts in the Nevada AML program.

Figure 11: Eagle Scout Service Projects (clockwise from top left): Jonathan Rolle installing fence posts, Mason Reid supervising fence construction, Rheuben Trotter is congratulated by Bill Durbin, James Reed's crew completing shaft fence.

Funding

The AML program is funded from these three sources:

1) $2.50 of every mining claim filing collected by the county is dedicated to the NDOM AML program (NAC 513.315).
2) NDOM collects a one-time fee of $20 per acre for every acre of permitted disturbance associated with new or amended mining operations on public lands.
3) NDOM has assistance agreements with the Bureau of Land Management and US Forest Service,

Table 4 shows the revenues received by the Division from these three revenue sources for the State of Nevada fiscal years 2007 through 2013.

AML revenue is used to pay salaries, travel expenses, the summer intern program, vehicle expenses, 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, video distributions, brochures, magnets, pencils, bumper and hard hat stickers, and other means of outreach.

Table 4. Dedicated Revenue to the AML program for the fiscal years 2007 through 2013.				
Year	BLM/USFS Assistance Agreements	Mining Claim Fees	Disturbance Fees	Total
2013	$69,031	$546,018	$228,220	$843,269
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

Summary

The Nevada Division of Minerals' Abandoned Mine Lands program continues to have success in the discovery and securing of abandoned mine hazards due to the combined efforts of the federal land management agencies, the summer intern program, NDOM contractors, the Nevada mining industry, and many volunteers.

The public awareness program reached over 93,000 people in 2013, including 76,000 through NDOM's annual brochure mail out campaign and over 17,000 directly through personal interaction with students, teachers, parents, members of civic groups, professional organizations, and the media. NDOM provides the public the ability to report of an AML hazard with the form in Appendix B.

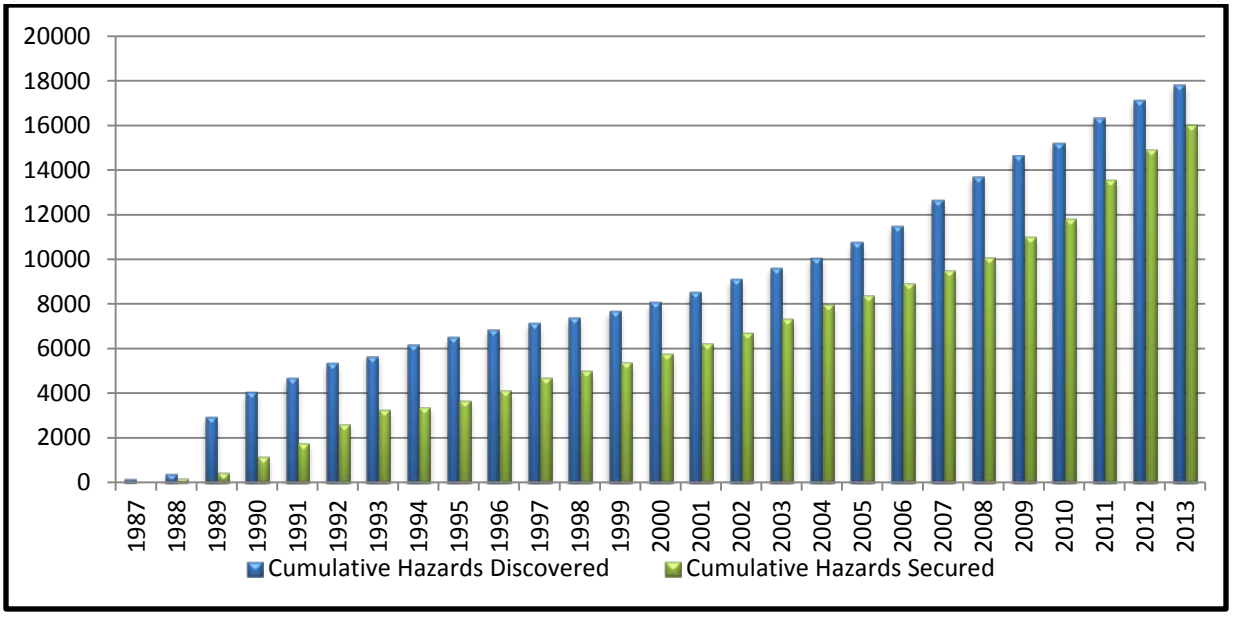
Despite the large and growing number of visitors that recreate in Nevada, there has been no significant increase in the number of injuries or fatalities related to abandoned mine hazards in Nevada. Appendix A shows a comparison table of AML Incidents vs. Population growth in Nevada. It is the sincere hope of the NDOM staff that the fences, barricades, signs, permanent closure efforts, and the awareness brought to people through the "Stay Out and Stay Alive" message campaign are all significant factors that contribute to keeping the incident rate at abandoned mines as low as possible.

The Commission on Mineral Resources and the Nevada Division of Minerals will continue to aggressively support the AML program through fieldwork and public awareness because the only satisfactory number of abandoned mine injuries or fatalities is **ZERO**!

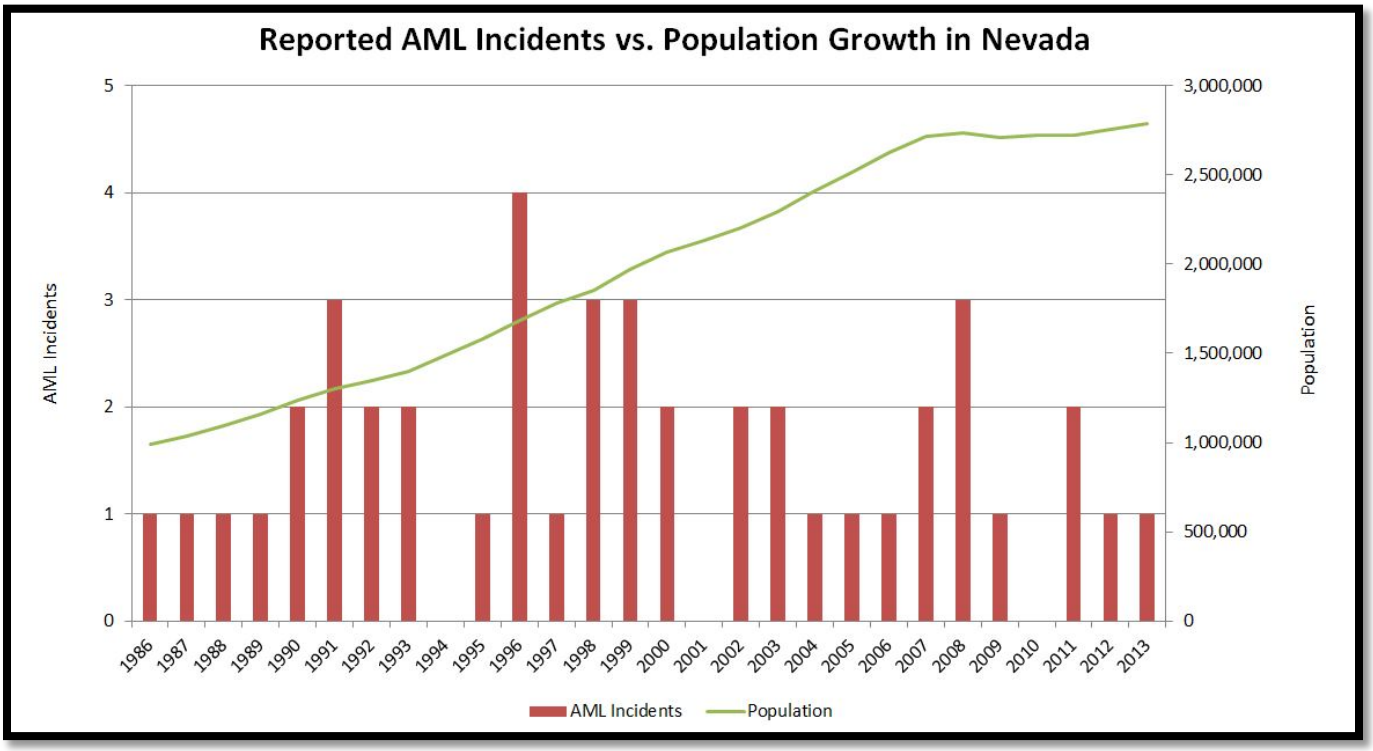
Acknowledgements

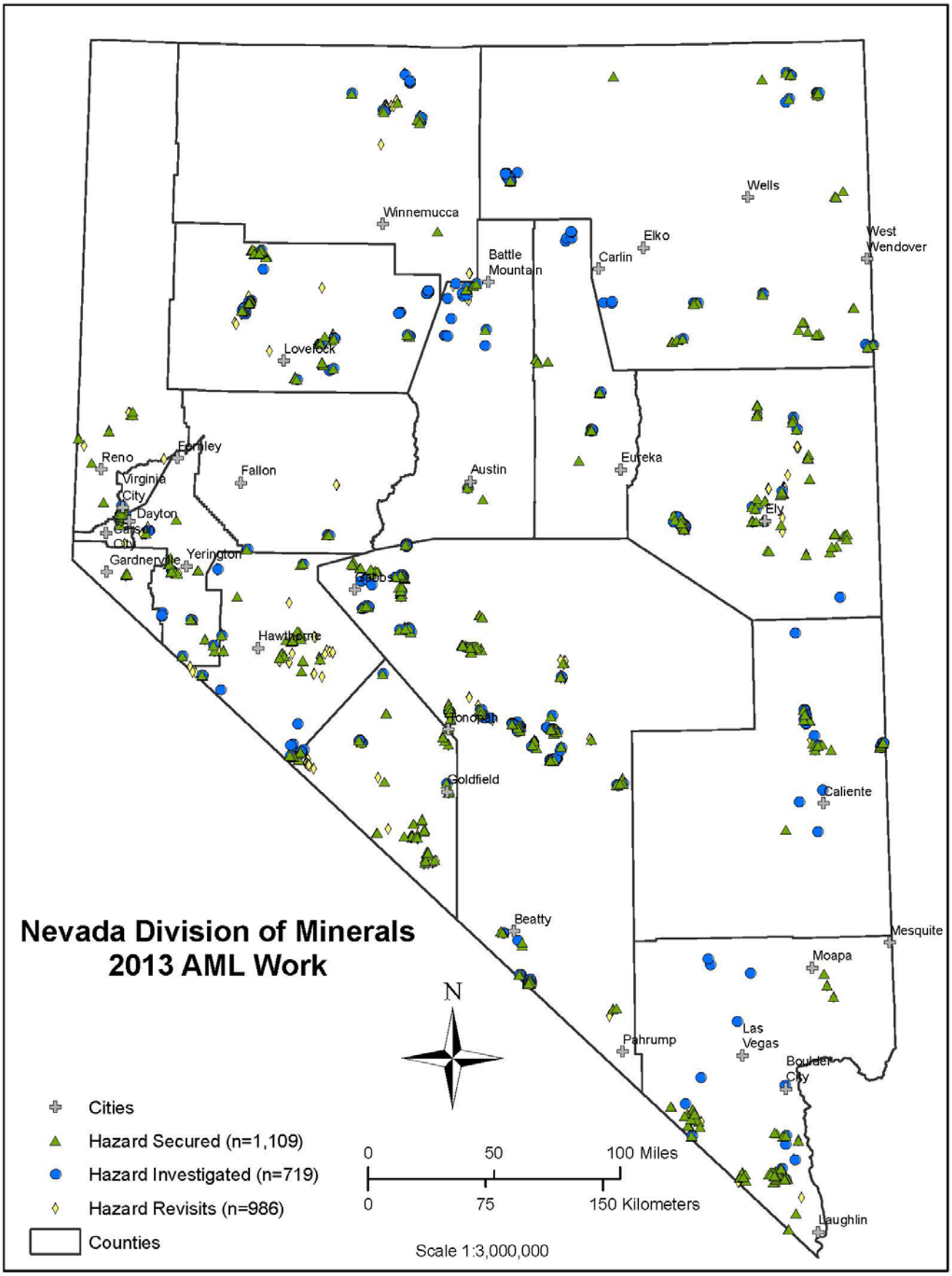
The authors would like to draw attention to, and gratefully acknowledge, the many efforts of those at the Nevada Division of Minerals who provide integral support to the AML Program. Field Specialist **George Bishop** manages all communication and equipment. Administrative Assistant **Valerie Kneefel** facilitates the many employment requirements that arise. Program Officer **Linda Wells-Carrion** manages all budget and accounting activity. Administrative Assistant **Debbie Selig** who optimizes our database and computer hardware and software support. Field/GIS Specialist **Rachel Wearne** to maximize our field efficiency by integrating our AML efforts with geographic information systems (GIS). Deputy Administrator **Mike Visher** for the irreplaceable volume of AML information. The last and most important message of all, **STAY OUT and STAY ALIVE**!

Appendix A



Cumulative Hazards Discovered and Secured on an Annual Basis 1987 through 2013




Nevada Division of Minerals
2013 AML Work
Winnemucca
Wells
Elko
West Wendover
Battle Mountain
Carlin
Lovelock
Reno
Fallon
Austin
Eureka
Virginia City
Dayton
Carson City
Gardnerville
Yerington
Ely
Hawthorne
Tonopah
Goldfield
Caliente
Beatty
Mesquite
Moapa
Pahrump
Las Vegas
Boulder City
Laughlin
N
Cities
Hazard Secured (n=1,109)
Hazard Investigated (n=719)
Hazard Revisits (n=986)
Counties
0
50
100 Miles
0
75
150 Kilometers
Scale 1:3,000,000

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		2030 E. Flamingo Rd. #220
Carson City, NV 89703		Las Vegas, NV 89119
Phone: 775-684-7040	or	702-486-4343
Fax: 775-684-7052	or	702-486-4345
Email: ndom@govmail.state.nv.us	or	ndomlv@govmail.state.nv.us

Appendix C

Nevada Revised Statutes (NRS) pertinent to the AML Program

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)

NRS 235.016 Royalties for medallions and bars; reports by Director; deposit of money collected.

1. The Director shall set and collect a royalty for the use of The Great Seal of the State of Nevada from the mint which produces the medallions or bars. The amount of the royalty must be:
(a) Based on the usual and customary fee charged as a commission by dealers of similar medallions or bars; and
(b) Adjusted at least once each year to ensure it is competitive with the usual and customary fee.
2. The Director shall report every 6 months to the Legislature, if it is in session, or to the Interim Finance Committee, if the Legislature is not in session. The report must contain:
(a) The amount of the royalties being charged; and
(b) The information used to determine the usual and customary fee charged by dealers.
3. The money collected pursuant to this section must be deposited in the Account for the Division of Minerals created pursuant to NRS 513.103.

(Added to NRS by 1989, 140; A 1991, 1758; 1993, 1537; 1999, 3620)

NRS 519A.250 Operator to provide division of minerals copy of filing of plan of operation or amended plan of operation; fee; refunds; use of money collected; division to file report with governor and legislature.

1. An operator who is required by federal law to file a plan of operation or an amended plan of operation with the United States Bureau of Land Management or the United States Forest Service for operations relating to mining or exploration on public land administered by a federal agency, shall, not later than 30 days after the approval of the plan or amended plan, provide the division of minerals of the commission on mineral resources with a copy of the filing and pay to the division of minerals a fee in an amount established pursuant to subsection 5 for each acre or part of an acre of land to be disturbed by mining included in the plan or incremental acres to be disturbed pursuant to an amended plan.
2. The division of minerals shall adopt by regulation a method of refunding a portion of the fee required by this section if a plan of operation is amended to reduce the number of acres or part of an acre to be disturbed pursuant to the amended plan. The refund must be based on the reduced number of acres or part of an acre to be disturbed.
3. All money received by the division of minerals pursuant to subsection 1 must be accounted for separately and used by the division of minerals to create and administer programs for:
(a) The abatement of hazardous conditions existing at abandoned mine sites which have been identified and ranked pursuant

to the degree of hazard established by regulations adopted by the division of minerals; and
(b) The education of the members of the general public concerning the dangers of the hazardous conditions described in paragraph (a).
All interest and income earned on the money in the account, after deducting applicable charges, must be deposited in the account for the division of minerals created pursuant to NRS 513.103.
4. On or before February 1 of each odd-numbered year, the division of minerals shall file a report with the governor and the legislature describing its activities, total revenues and expenditures pursuant to this section.
5. The commission on mineral resources shall, by regulation, establish the fee required pursuant to subsection 1 in an amount not to exceed $30 per acre.
(Added to NRS by 1989, 1286; A 1989, 2063; 1991, 1780; 1993, 210, 211, 1687; 1995, 511; 1999, 891, 3631; 2001, 66)

NRS 41.0331 Construction of fence or other safeguard around dangerous condition at abandoned mine. A person, the State of Nevada, any political subdivision of the state, any agency of the state or any agency of its political subdivisions is immune from civil liability for damages sustained as a result of any act or omission by him or it in constructing, or causing to be constructed, pursuant to standards prescribed by the commission on mineral resources, a fence or other safeguard around an excavation, shaft, hole or other dangerous condition at an abandoned mine for which the person, state, political subdivision or agency is not otherwise responsible.
(Added to NRS by 1989, 1556)

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 513.260 "Fence" defined. "Fence" has the meaning ascribed to it in subsection 5 of NRS 207.200.
(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 $2.50 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.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

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 Rating 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)
NAC 513.370 Posting warning sign. A dangerous condition regardless of its ranking must be posted with an orange warning sign mounted on a post. The sign must be posted within 30 days after the responsible person is notified by the county sheriff of the existence of the condition.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.380 Period after notification to secure dangerous condition. Upon notification of the existence of a dangerous condition, the responsible person shall:
1. Secure within 180 days a dangerous condition rated as a low hazard;

2. Secure within 120 days a dangerous condition rated as a moderate hazard; and
3. Secure within 60 days a dangerous condition rated as a high hazard,
in the manner prescribed in NAC 513.390.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

NAC 513.390 Methods for securing dangerous condition. A dangerous condition must be secured by one or more of the following:
1. A barricade made of wood, metal or plastic, set in place in a solid manner with an orange warning sign attached.
2. A fence constructed to prevent a person or animal from accidentally exposing himself to the dangerous condition.
3. 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.
4. Backfilling so that no void spaces remain.
(Added to NAC by Commission on Mineral Resources, eff. 12-21-88)

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)

NAC 519A.635 Refund of portion of fees.
1. The division will refund to an operator a portion of the fees required by NRS 519A.250 according to the following schedule:
(a) For an amended plan:
(1) That reduces the number of acres or part of an acre to be disturbed from the original number of acres or part of an acre to be disturbed; and
(2) For which a fee has been paid to the division pursuant to NRS 519A.250,
the refund is $15 for each acre or part of an acre removed from planned disturbance by the amendment.
(b) For a plan, there is no refund.
(c) For a notice, there is no refund.
2. An operator who wishes to receive a refund must send to the administrator a written request and a copy of the approved amended plan showing the reduction in acreage. Within 20 business days after receiving a valid written request for a refund and a copy of the amended plan, the administrator or his designee will request that the state controller issue a check to the operator in an amount calculated pursuant to paragraph (a) of subsection 1.
3. As used in this section:
(a) “Notice” means a notice of intent to conduct activities that disturb the surface which is filed with the United States Bureau of Land Management or the United States Forest Service.
(b) “Operator” includes a person who is required by federal law to file a plan, an amended plan or a notice with the United States Bureau of Land Management or the United States Forest Service.
(Added to NAC by Department of Minerals, eff. 10-9-90; A by Comm’n on Mineral Resources by R080-1, 1-16-2002, R066-02, 8-23-2002)

Appendix E
Scout Projects

NEVADA SCOUT AML SECURING PROGRAM						3/1/2014
ORDER COMPLETED	NAME OF SCOUT	PROJECT DATE	# SITES SECURED	# SITES REPAIRED	COUNTY	
1	David Loring	Sept. 12 & 26, 1992	8	0	WASHOE	WA-10, 31, 32, 82, 109, 110, 112, 113
2	Tom Hawke	Oct. 24, 1992	5	0	WASHOE	WA-103, 143, 144, 145, 146
			13	0		
3	Chris Johnson	Sept. 4 & 11, 1993	5	0	WASHOE	WA-114, 116, 117, 118, 119
4	Eric Bowman	Oct. 3, 23 & 24 1993	7	0	CARSON CITY	CC-13, 14, 27, 28, 31, 65, 69
			12	0		
5	Josh Johnson	Nov. 12, 1994	4	0	CLARK	CL-1407, 1408, 1409, 1425
			4	0		
6	Nate Burnett	Aug. 10, 1996	7	0	WASHOE	WA-210, 211, 220, 221, 227, 228, 232
7	Cory Miller	Dec. 14, 1996	6	0	WASHOE	WA-212, 222, 223, 224, 225, 226
			13	0		
8	Tony Kopp	Jan. 31, 1998	9	0	CLARK	CL-567, 940, 1338, 1339, 1340, 1341, 1342, 1343, 1386
9	Nathen Berger	July 18, 1998	4	0	CARSON CITY	CC-39, 40, 48, 49
10	Jason Smith	Aug. 22, 1998	6	0	DOUGLAS	DO-46, 47, 48, 50, 99, 100
11	Danny Miller	Oct. 24, 1998	3	0	WASHOE	WA-241, 253, 254
12	Logan Nordyke	Nov. 7 & Dec. 12, 1998	3	0	CARSON CITY	CC-52, 54, 61
			25	0		
13	James Smith	Jan. 17 & May 15, 1999	2	2	WASHOE	WA-49, 256 + repairs to 57, 58
14	Daniel Murrell	April 10, 1999	7	0	CLARK	CL-46, 47, 48, 49, 50, 51, 1434
15	Steven Scheetz	Sept. 25, 1999	6	0	DOUGLAS	DO-51, 52, 53, 54, 55, 131
			15	2		
16	Jason Hayes/Peter Peterson	Oct. 20 & 21, 2000	7	0	CLARK	CL-688, 689, 690, 691, 692, 693, 694
17	Glen Farnsworth	Dec. 1 & 2, 2000	7	0	WASHOE	WA-280, 281, 287, 288, 289, 295, 296
			14	0		
18	Richard Dwyer	Jan. 13 & 14, 2001	10	2	CLARK	CL-38, 39, 41, 42, 43, 58, 59, 708, 709, 1471 + repairs to 35, 36
19	Colby Cole	February 24, 2001	6	6	CLARK	CL-543, 544, 546, 547, 551, 1479 + repairs to 545, 548, 549, 550, 552, 553
20	Blake Kalmes	April 7, 2001	7	1	CLARK	CL-1464, 1465, 1466, 1467, 1469, 1470, 1480 + repairs to 1416
23	William Bunch	December 8, 2001	5	0	CLARK	CL-1331, 1332, 1333, 1334, 1335 - sites previously secured very poorly
21	Shawn Holloman	July 14, 2001	6	0	LYON	LY- 322, 323, 324, 325, 326, 327
22	Travis Jarland	Aug. 11, 2001	5	0	LYON	LY-373, 592, 593, 594, 597
			39	9		
25	Beau Kalmes	Feb. 9, 2002	7	0	CLARK	CL-1161, 1162, 1163, 1164, 1505, 1506, 1507
24	Travis Cummins	Jan. 21, 2002	9	0	LYON	LY-279, 280, 299, 300, 301, 302, 679, 680, 681
26	Thomas Schwedhelm	June 29, 2002	8	0	LYON	LY-234, 235, 236, 239, 240, 645, 659, 660
27	Ben Stanphill	Nov. 2, 2002	11	0	LYON	LY-227, 229, 230, 231, 232, 233, 707, 708, 709, 710, 711
			35	0		
32	Daniel Miles	July 12, 2003	12	1	LYON	LY-687, 688, 689, 690, 691, 692, 693, 695, 696 (repair), 698, 699, 700, 701
28	Chris Mullins	Mar. 29, 2003	6	0	CLARK	CL-412, 413, 414, 415, 416, 417
29	Nathan Mayes	May 31, 2003	13	0	MINERAL	MI-396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 917
30	C.J. Gent	June 22, 2003	11	0	CHURCHILL	CH-409, 411, 412, 413, 414, 415, 416, 417, 418, 421, 422
31	Kye Stoker	June 28, 2003	5	0	CLARK	CL-1016, 1017, 1018, 1560, 1561
33	Chris Rice	August 9, 2003	8	0	CHURCHILL	CH-280, 281, 282, 283, 284, 285, 286, 287
34	Chris Sipma	Sept. 6, 2003	6	2	LYON	LY-221, 222, 223, 224, 225, 226, repairs to LY-217, 218
			61	3		
35	Duncan Rickford	Jan. 10, 2004	5	0	CLARK	CL-866, 867, 868, 869, 870
36	Corey Sobrio	Mar. 20, 2004	10	0	LYON	LY-702, 703, 704, 705, 706, 751, 752, 753, 754, 769
37	Sean Hayes	Apr. 24, 2004	7	0	CLARK	CL-846, 847, 848, 849, 850, 851, 852 (USFS)
38	Chase Bodhaine	May 22, 2004	6	0	CLARK	CL-558, 559, 560, 562, 563, 564
39	John Hefner	Sept. 18, 2004	6	1	DOUGLAS	DO-130, 134, 135, 136, 150, 160, repairs to DO-132
40	Shane Donelson	Oct. 23. 2004	8	0	NYE	NY- 352, 353, 354, 355, 357, 358, 359, 360
41	Randy Sgamma	Nov. 12-13, 2004	5	3	CLARK	CL-908, 909, 912, 913, 915, repairs to CL-910, 911, 914
			47	4		
42	Kenny Booth	Jan. 2, 2005	7	0	NYE	NY-362, 363, 364, 365, 366, 367, 1020
43	John Gardner	April 30, 2005	5	0	CLARK	CL-242, 243, 244, 245, CL-1594

44	Isaiah Haywood	May 7, 2005	5	0	CLARK	CL-1235, 1236, 1237, 1238, 1239
45	Chip Holton	May 21, 2005	3	0	LYON	LY-731, 732, 735
46	McKay Miles	May 28, 2005	5	0	CLARK	CL-253, 254, 255, 256, 1595
47	Jennifer Giraudo	September 24, 2005	4	0	ELKO	EL-249, 251, 252, 253
48	John Crepeau	October 29, 2005	4	0	CLARK	CL-257, 1597, 1598, 1599
49	Luke Smith	November 5, 2005	5	0	CLARK	CL-1603, 1604, 1610, 1614, 1615
50	Brad Peterson	November 19, 2005	7	0	LYON	LY-757, 758, 759, 760, 762, 763, 764
51	Steven Archer	November 19, 2005	5	1	CLARK	CL-983, 984, 985, 986, 1596, replaced old fence at CL-1454
52	Cameron Legere	Dec. 3, 2005	0	7	CLARK	repairs to CL-576, 577, 578, 580, 757, 758, 759 (USFS)
			50	**8**		
53	Weston Milne	January 7, 2006	5	0	CLARK	CL-1605, 1606, 1607, 1608, 1609
54	Tyson Parker	January 28, 2006	6	0	CLARK	CL-1492, 1493, 1494, 1623, 1624, 1625
55	Jacob Gibson	March 4, 2006	5	0	CLARK	CL-1495, 1496, 1497, 1498, 1626
56	Kyle LeFevre	April 22, 2006	5	0	CLARK	CL-1616, 1617, 1618, 1619, 1634
57	Stephen Erickson	May 6, 2006	4	1	CLARK	CL-596, 597, 598, 599, repairs to CL-1394
58	Mitch Benning	May 13, 2006	6	0	WASHOE	WA-104, 105, 106, 111, 112, 113
59	Jordan Wall	May 20, 2006	4	0	NYE	NY-372, 373, 374, 375 (USFS)
60	Derek Gibson	June 3, 2006	4	0	CLARK	CL-1629, 1630, 1631, 1632
61	Shane Sobrio	June 24, 2006	5	1	LYON	LY-379, 380, 381, 382, 383 (repair), 385
62	Matt Robinson	June 24, 2006	7	0	DOUGLAS	DO-153, 154, 155, 156, 157, 158, 159
63	Mitchell Walton	August 5, 2006	4	2	WASHOE	WA-96, 211, 259, 323, repairs to 212 and 258
64	Robbie Ayres	August 20, 2006	4	0	WASHOE	WA-74, 76, 77, 78
65	Andy Haskin	September 9, 2006	6	0	WASHOE	WA-79, 80, 82, 84, 85, 109
66	Paul Pearson	November 19, 2006	4	1	WASHOE	WA-6, 8, 61, 64, 65(repair)
67	Joshua O'Barr	December 2, 2006	4	0	CLARK	CL-106, 200, 930, 937
68	Kai Fisher	December 2, 2006	5	0	WASHOE	WA-325, 326, 327, 328, 330
			78	**5**		
69	Chris Chubb	April 21, 2007	0	4	CLARK	repairs to CL-1421, 1422, 1424, 1425
70	Taylor Smith	April 28, 2007	0	4	CLARK	repairs to CL-568, 569, 570, 571 (USFS)
71	Shane Palmer	May 12, 2007	5	0	CLARK	CL- 1555, 1556, 1557, 1558, 1559
72	Jared Cooper	May 19, 2007	0	5	CLARK	repairs to CL-765, 766, 1407, 1408, 1409
73	Jessica Shalita	May 20, 2007	0	3	CLARK	repairs to CL-866, 867, 1419
74	DJ Stanger	June 2, 2007	0	6	CLARK	repairs to CL-1464, 1465, 1466, 1469, 1470, 1480
75	Chris Eliason	June 16, 2007	5	0	NYE	NY-368, 369, 370, 371, 1022 (USFS)
76	Paul Herget	July 28, 2007	5	0	WASHOE	WA-355, 357, 358, 359, 360
77	Daniel Baird	Sept. 30, 2007	3	0	CLARK	CL-840, 841, 842
78	Austin Echler	December 16, 2007	3	2	CLARK	CL-946 and 947 re-secured, 1668, 1727, 1729
		2007 TO DATE	**21**	**24**		
79	Jacob Trotter	January 5, 2008	4	0	CLARK	CL-800, 1652, 1653, 1654
80	Travis Peterson	January 26, 2008	4	0	WASHOE	WA-346, 347, 348, 349
81	Justin Graf	February 2, 2008	6	0	CLARK	CL-385, 386, 387, 388, 1635, 1636
82	Brian Cooper	February 16, 2008	2	0	CLARK	CL-1659, SE and E highwall portion of CL-1660 open pit fenced & posted
83	Zach Nielsen	February 23, 2008	4	0	CLARK	CL-1587, 1588, 1673, 1674
84	Jeff Mohlman	March 29, 2008	3	0	CLARK	CL-843, 844, 845
85	Casey Sylvester	March 29, 2008	10	0	PERSHING	PE-791, 793, 794, 795, 797, 797, 798, 799, 931, 941
86	Michael Erickson	April 12, 2008	3	0	CLARK	CL-1677, 1678, 1679
87	Michael Hartley	April 19, 2008	4	0	DOUGLAS	DO-166, 167, 168, 169
88	Kody Brian	April 26, 2008	4	0	CLARK	CL- 1621, 1689, 1691, 1756
89	Robert Marder	April 27, 2008	4	0	CLARK	CL-1628, 1681, 1685, 1687
90	Justin Wall	May 3, 2008	2	0	CLARK	CL-1658, portion of CL-1660
91	Dean Wilhite	May 4, 2008	4	0	WASHOE	WA-343, 344, 345, 350
92	Brennen Marshall	November 21, 2008	1	0	CLARK	CL-1721 (7 openings - room and pillar mine)
93	Doug Harris	December 13, 2008	1	5	CLARK	CL-1954, repairs to CL-53, 54, 55, 56, 57
94	Eli Bagley	December 13, 2008	5	0	WASHOE	WA-351, 352, 353, 368, 371
		2008 TO DATE	**61**	**5**		
95	Myles Putnam	January 24, 2009	3	0	CLARK	CL-1988, 1990, 1992
96	Mark Boggess	January 31, 2009	3	0	CLARK	CL-1680, 1682, 1684
97	Daniel Herrera	February 7, 2009	1	1	CLARK	CL-1565, replaced CL-532 fence
98	Jacob Allum	February 28, 2009	6	0	CLARK	CL-1850, 1852, 1856, 1866, 1868, 2061
99	Bread Iverson	March 21, 2009	3	1	CLARK	CL-2056, 2058, 2060, new ID sign on CL-355 fence
100	Grant Zampirro	March 28, 2009	7	0	WASHOE	WA-4, 366, 367, 369, 372, 377, 378
101	Trevin Jarrett	April 13, 2009	8	0	HUMBOLDT	HU-487, HU-489, HU-491, HU-493, HU-510, HU-511, HU-512, HU-513
102	Matt Ireland	May 9, 2009	3	0	CLARK	CL-1933, 1949, 1951
103	Justin Myhre	May 23, 2009	0	2	CLARK	re-closure of CL-671, 672 using PUF
104	Taylor Jenkins	June 13, 2009	0	4	CLARK	repairs to CL-500, 501, 502, 503
105	Evan Pearson	July 25, 2009	8	0	LYON	LY-870, 871, 873, 874, 875, 877, 878, 882
106	Lance	August 8, 2009	5	0	HUMBOLDT	HU-581, 583, 587, 536, 557

	Thompson					
107	Jacob Carver	August 8, 2009	5	0	HUMBOLDT	HU-603, 601, 539, 555, 588
108	Ricardo Milan	October 17, 2009	5	0	CLARK	CL-2032, 2034, 2036, 2038, 2040
		2009 TO DATE	**57**	**8**		
109	Cody Echler	February 20, 2010	3	3	CLARK	CL-2073, 2079, 2080, repairs to CL-1520, 1521, 2074, posted 2 borderline non-hazards
110	Stefano Retis	March 27, 2010	0	3	CLARK	CL-212, 213, 214 - new fences
111	Joey Rozich	April 17, 2010	6	0	CLARK	CL-1472, 1473, 1474, 1475, 1476, 1477
112	Carter Crompton	April 24, 2010	3	0	CLARK	CL-1740, 1742, 1744
113	Dillon Bryan	May 1, 2010	5	TBD	HUMBOLDT	HU-639, HU-641, HU-643, HU-644, HU-645
114	Tony Simpson	May 8, 2010	3	0	CLARK	CL-1000, 1007, 1008
115	Matthew Popp	October 23, 2010	4	0	CLARK	CL-2087, 2088, 2089, 2090
116	Houston Mitchell	November 6, 2010	10	0	ELKO	EL-269, 270, 271, 272, 273, 274, 306, 461, 462, 500
		2010 TO DATE	**34**	**6**		
117	Dylan Wallace	February 21, 2011	2	0	NYE	NY-2033, 2034
118	Brendan Villhardt	March 12,2011	0	6	CLARK	repairs to CL-1387, 1388, 1389, 1390, 1391, 1392, 1393, 1394
119	Cameron Rose	May 7, 2011	1	5	CLARK	CL-2095 and repairs (all new barricades) to CL-625, 626, 627, 628, 629
120	Dustin Marshall	May 14, 2011	2	2	CLARK	CL-2093, 2094 and repairs to CL-35, 36
121	Ian McBryde	June 18, 2011	6	0	WASHOE	WA-383 thru 388
122	Carson Mullins	July 16, 2011	4	0	MINERAL	MI-1129, 1130, 1337, 1338
123	Zach Cordisco	July 16, 2011	6	0	MINERAL	MI-1127, 1339, 1340, 1341, 1342, 1343
124	Harrison Kelly	December 10, 2011	0	6	CLARK	total re-securing of CL-11134, 1135, 1136, 1139, 1140, 1142
		2011 TO DATE	**21**	**13**		
125	Corey Davis	Jan. 14. 2012	0	7	CLARK	total re-securing of CL-1124, 1125, 1127, 1128, 1129, 1130,1131
126	Trevor Boehme	Feb. 25, 2012	4	0	CLARK	CL- 1860, 1862, 2101, 2102
127	Morgan Thompson	March 24, 2012	0	7	CLARK	total re-securing of CL- 1020, 1021, 1022,1023, 1024, 1025, 1026
128	Ross Tate	April 21, 2012	0	7	CLARK	re-securing of CL-1250, 1251, 1260, 1261, 1262; repairs to CL-2114-2115
129	Eric Wilson	May 12, 2012	4	0	CLARK	CL-1804, 1806, 1808, 2123
130	Anthony Hartley	May 19, 2012	0	4	CLARK	repairs to CL-235, total re-securing of CL-2007. 2039 and 2068
131	Nathan Bashaw	June 2, 2012	5	0	CLARK	CL-1633, 1950, 1952, 2028, 2030
132	Zac Newman	July 6, 2012	2	0	WASHOE	WA-426 and 427
133	Tyrone Davis	July 7, 2012	5	0	WASHOE	WA-380, 390, 394, 395, 396
		2012 TO DATE	**20**	**25**		
134	Tyler Reed	February 2, 2013	4	0	CLARK	CL-1979 (open cut - posted, 2 adits - barricades, 1983 (adit - barricade)
135	James Reed	February 2, 2013	7	0	CLARK	CL-1975 (shaft-fence), CL-1977 (4adits-barricades), CL-1981 (2 adits -barricades)
136	Alexander Barlow	February 9, 2013	5	0	CLARK	CL-1969 (adit-barricade), CL-1973 (adits 1 thru 4-barricades)
137	Seth Stewart	February 9, 2013	5	0	CLARK	CL- 1973 (adits 5 thru 9-barricades) - room & pillar gypsum mines
138	Caden Roberts	November 9, 2013	0	7	CLARK	repairs to CL-475, 476, 479, 495, 498, 504, 517
139	Rheuben Trotter	November 23, 2013	1	4	CLARK	CL-330, repairs to CL-354, 355, 356, 357
140	Mason Reid	December 7, 2013	3	0	CLARK	CL-1693, 1695, 1697
141	Jonathan Rolle	December 15, 2013	2	0	CLARK	CL-1502, 1503
		2013 TO DATE	**27**	**11**		
		CURRENT GRAND TOTAL	**647**	**123**		
			SECURED	REPAIRED		