

MINING OVERSIGHT & ACCOUNTABILITY COMMISSION

MARCH 13, 2015

MEETING

10:00 A.M.



Place of Meeting:

Gaming Control Board
Meeting Room
1919 College Parkway
Carson City, Nevada

Video Conference To:

Gaming Control Board
Grant Sawyer Building
555 East Washington Avenue, Suite 2450
Las Vegas, Nevada

MEETING NOTICE AND AGENDA

1st Quarter Meeting of the NEVADA MINING OVERSIGHT & ACCOUNTABILITY COMMISSION

Date and Time of Meeting: **March 13, 2015** **10:00 a.m.**

Place of Meeting: **Gaming Control Board
Meeting Room
1919 College Parkway
Carson City, Nevada**

Video Conference To: **Gaming Control Board
Grant Sawyer Building
555 East Washington Avenue, Suite 2450
Las Vegas, Nevada**

Action may be taken on the items indicated in **BOLD**:

1. **ROLL CALL, ESTABLISHMENT OF QUORUM AND OPENING REMARKS**
2. Public Comment (See Note 2 below)
In consideration of others, who may also wish to provide public comment, please avoid repetition and limit your comments to no more than three (3) minutes.
3. **AGENCY REPORTS; CONSIDERATION AND POSSIBLE ADOPTION OF RECOMMENDATIONS AND ORDERS**

 For Possible Action: Mine Safety and Training Section – informational presentation
 Jeff Bixler, Chief Administrative Officer
 Division of Industrial Relations, Department of Business and Industry
 Mine Safety and Training Section
4. **AGENCY BRIEFINGS**

 For Possible Action: Pursuant to NRS 514.035(1), Bureau of Mines and Geology briefing on exploration and production activities in the metals, industrial minerals, geothermal, and oil and gas industries

 Dr. John Muntean, Chief Economic Geologist
 Nevada Bureau of Mines and Geology and
 Director of the Ralph J. Roberts Center for Research in Economic Geology
5. **For Possible Action: Review and Approval of Minutes:**
 ♦ December 2, 2014

6. **For Possible Action: Meeting Schedule**

7. Briefing to and from Staff; Information received for requests from prior meetings; Suggestions for Future Agenda Topics

8. Commission Comments

9. Public Comment (See Note 2)

In consideration of others, who may also wish to provide public comment, please avoid repetition and limit your comments to no more than three (3) minutes.

10. **For Possible Action: Adjournment**

NOTE 1: Items on this agenda may be taken in a different order than listed. Items may be combined for consideration by the Commission. Items may be pulled or removed from the agenda at any time.

NOTE 2: Public comment may be made on any issue and any discussion of those items; provided that comment will be limited to areas relevant to and within the authority of the Commission. No action will be taken on any items raised in the public comment period. At the discretion of the Chairman, public comment may be received prior to action on individual agenda items. Public Comment may not be limited based on viewpoint. Prior to the commencement and conclusion of a contested case or a quasi judicial proceeding that may affect the due process rights of an individual the committee may refuse to consider public comment. See NRS 233B.126.

NOTE 3: We are pleased to make accommodations for members of the public who are disabled. Please notify the Department of Taxation in writing, at 1550 College Parkway, Carson City Nevada, 89706 or call (775) 684-2180 prior to the meeting.

NOTE 4: Materials and files for items on this agenda are maintained in the offices of the Department of Taxation located in Carson City, Nevada. Requests for copies of materials and files for items on this agenda may be made to:
Anita Moore, (775) 684-2160, Department of Taxation, 1550 College Parkway, Carson City, NV 89706

Notice of this meeting was posted to the following Carson City location: Department of Taxation, 1550 College Parkway.

Notice of this meeting was faxed for posting to the following locations: Nevada State Library & Archives, 100 Stewart Street, Carson City; Legislative Building, 401 South Carson Street; Las Vegas Library, 833 Las Vegas Blvd, Las Vegas.

Notice of this meeting was emailed for posting to the following locations: Department of Taxation, 4600 Kietzke Lane, Building L, Suite 235, Reno; Department of Taxation, 2550 Paseo Verde, Suite 180, Henderson; Department of Taxation, 555 E. Washington Street; Las Vegas; Clark County Government Center, 500 South Grand Central Parkway, Las Vegas.

Notice of this meeting was also posted on the Internet through the Department of Taxation website at <http://tax.nv.gov/> and on the Department of Administration website at <https://notice.nv.gov/>.

**Item 3. AGENCY REPORTS; CONSIDERATION AND POSSIBLE
ADOPTION OF RECOMMENDATIONS AND ORDERS**

**For Possible Action: Mine Safety and Training Section –
informational presentation**

Jeff Bixler, Chief Administrative Officer
Division of Industrial Relations, Department of Business and
Industry
Mine Safety and Training Section

Mine Safety and Training Section Established in 1909

- Purpose – To ensure the safety and health of Nevada’s miners.
- Accomplished through compliance inspections, training and technical assistance/consultations.
- Accomplished with a complete staff of 14 employees.
- Offices in Carson City, Elko, Winnemucca and Henderson.

MSATS Staffing

- MSATS is currently 93% staffed!
- Down 2 inspector positions over the last year (currently down one)
- Ongoing training for the new inspectors
- With the average annual wage in the Nevada mining industry being about \$89,000, wage inequity is a constant problem. The annual wage of a State of Nevada Mine Inspector begins at \$44,035/\$49,694.

Safety and Health Inspections

- Conducted 437 mine inspections: underground, surface, exploration drilling operations and sand and gravel.
- An increase of about 100 inspections from 2013

Work Site Hazards Eliminated

- Combined total of Orders, Notices and Conditions Corrected – 909 mining hazards eliminated.
- Statutory criteria allows MSATS to focus on effectively abating identified hazards.

Technical Assistance and Consultations

- Technical Assistance - 1,899
- Consultations – 1,890
- Total of 3,789 technical assistance and consultation requests – down slightly from last year where we had more than any other year in our 106 year history!
- MSATS has the expertise in areas where some mine operators may not have the knowledge or resources to perform health and safety evaluations.

Miners Trained

- New Miners (surface)- 695
- Annual Refreshers (surface) – 1,454
- Underground New Miners – 16
- Underground Annual Refresher – 41
- Mine Instructor Course – 41
- FA/CPR Classes – 51
- Abandoned Mines – 10
- US Marines - 29
- Total Miners trained - 2,337

MSHA – State Grant

- State grants are to be used for MSATS training purposes only.
- MSHA attempted to eliminate the grants over a 2 year period.
- Congress recently mandated the State Grants to be reinstated.
- Nevada's 2015 State Grants should match 2014.

New Mining Activity

- Midway Gold – Three new operations – First is in the Eureka area (Pan Project) – currently employs about 260 people!
- Pumpkin Hollow Operation outside of Yerington (Copper). Underground shaft is underway with over 1,900 ft. of the 2,000 ft. goal completed. Permits are in to begin working on a 830 ft. developmental drift. Cementation, the contractor, currently employs about 56 people and Nevada Copper employs another 17. Overall goal of 200 people to be employed in the pit, mill and underground operation.

New Mining Operations

- AU Gold – Manhattan area (placer mine). Potential to employ up to 60 people.
- Ludwig Mine – Yerington area (Gypsum). Will employ about 10 people.
- Gypsum Mountain Mine – Pershing County. Currently employing about 10 people.
- Thacker Pass – Humboldt County (Lithium). Currently employing about 10 people. Plan is to eventually supply Lithium to the Tesla Plant.

Conclusion

- The Mine Safety and Training Section accomplishes its goals through effective compliance inspections, training and technical assistance/consultations.
- Mining activity is on the increase in Nevada.
- Potential for many well paying jobs in rural Nevada is very realistic.
- MSATS supports and encourages safe and responsible mining operations in Nevada.

Item 5. For Possible Action: Review and Approval of Minutes:

- ♦ December 2, 2014

Minutes of the Meeting
MINING OVERSIGHT & ACCOUNTABILITY COMMISSION
December 2, 2014, 10:00 a.m.

The meeting was held at the Nevada Division of Public and Behavioral Health, located at 4150 Technology Way, Room 303, Carson City, Nevada, and by video conference to Health Care Quality and Compliance Building D, Suite 810, 4220 S. Maryland Pkwy, Las Vegas, Nevada.

MINING OVERSIGHT & ACCOUNTABILITY

MEMBERS PRESENT:

John Restrepo, Chairman
Attending from Las Vegas location
Kyle Davis, Vice Chairman
Douglas "Roger" Bremner
Dennis Neilander, Member

MEMBERS ABSENT:

Senator Greg Brower, Member

COUNSEL TO THE COMMISSION PRESENT:

Henna Rasul, Senior Deputy Attorney General

DEPT OF TAXATION STAFF PRESENT:

Terry Rubald, Deputy Executive Director,
Department of Taxation
Jeffrey Mitchell, Coordinator,
Department of Taxation
Anita Moore, Program Officer
Boards & Commissions,
Division of Local Government Services,
Department of Taxation

MEMBERS OF THE PUBLIC PRESENT:

Carson City:
Jeff Bixler, State of NV
Rod Neils, State of NV
Jan Kelley, State of NV
Dawn Harris, Frack Free Nevada
Stacey Shinn, PLAN
Megan Queval, PLAN
Debbie Lane, Sierra Club
Susan Juetten, GBRW
Dylan Suaver, NVMA
Allen Biaggi, NVMA
David Zahri, Sierra Club

1. Roll Call and Opening Remarks

Chairman Restrepo called the meeting to order and asked for the roll call. Terry Rubald, Deputy Executive Director, Department of Taxation, called roll. All members were present except for Senator Greg Brower.

2. Public Comment

Chairman Restrepo then asked for public comment.

Dawn Harris introduced herself. She stated she was there to make a few comments about hydraulic fracturing in Nevada. She represents about 6,000 individuals, public, concerned citizens. She felt the public is not being heard on this issue. She said that even though there was a public workshop, they felt it was very biased from the start. At the workshop an industry video was shown but there wasn't the other side. She asked that the Commission consider putting hydraulic fracturing on an upcoming agenda and they hold the Mineral Commission accountable. She asked that the Commission do their task of oversight and accountability. Ms. Harris said they would like to have more accountability from an unbiased party and make sure that what is going on is actually in the interest of the public.

Chairman Restrepo thanked Ms. Harris. Member Bremner asked who Ms. Harris represented. Ms. Harris replied that she is a concerned citizen and also represents Frack Free Nevada and Nevadans Against Fracking.

Susan Juetten also offered public comment. She was speaking on behalf of Great Basin Resource Watch in Reno. She read from John Hadder's written comments because he could not be in attendance. Ms. Juetten said that Great Basin Resource Watch had cc'd the Commission on the matter of pit lake regulations and are currently waiting for a response from the Nevada Department of Environmental Protection. She said depending upon the response from NDEP this may be a matter for a discussion and action at a Commission meeting. GBRW will keep in touch with the staff and Mr. Hadder said he appreciates and looks forward to the presentation by BLM on reclamation status of pit lakes in Nevada. She thanked the Commission for putting it on the agenda today.

Ms. Juetten said Mr. Hadder had additional comments in a letter he sent the members regarding another issue that he hoped the Commission would bring up in a future meeting particularly about Bald Mountain Mine expansion in Elko County and specifically about wildlife. She stated that everyone has been aware of the impact on Sage-Grouse and that disturbance of any kind prevents them from breeding. There are concerns that have not been met in regard to Sage-Grouse impact in the Bald Mountain Mine expansion. In his letter, Mr. Hadder also brought up the Mule Deer herd which is historically the largest in Nevada and may number 12,000 or more animals and migrate in that area between 45 and 125 miles, crossing lands administered by the federal government and private lands. There has been a recent analysis in May by the NDOW on the effect of these mines in this area below the Rubies on the mule Deer migration and Mr. Hadder goes into some facts that end with him pointing out that there needs to be more state law that covers situations such as the one at Bald Mountain Mine.

Ms. Juetten proceeded to say that to Mr. Hadder's knowledge, there is no general wildlife protection permit for this mine, and it is in fact unclear to him the nature of NDOW's permitting relative to mining operations other than that the mine needs an industrial pond permit. GBRW requests that the situation regarding wildlife impacts be a topic for a meeting, inviting NDOW to present the topic of wildlife permits for this mine and for mines in particular as to how the situation affects both the Sage-Grouse and these essential Mule Deer migration routes.

Chairman Restrepo thanked Ms. Juetten and asked if there were any questions from the Commissioners. Vice-Chairman Davis asked if the Bald Mountain Mine and the expansion they are looking at is on public lands. Ms. Juetten said it is on BLM land and also private. It is an expansion of an existing footprint. She said Mr. Hadder feels that the level of protection is not sufficient for either type of wildlife. Vice-Chairman Davis thanked her and said he would go back and review the minutes because he knew that they had NDOW at a previous meeting and he was not able to attend. He said that he is concerned about this issue as well and would request that if he look at it and if it makes sense for the Commission, they consider this at a future meeting. Ms. Juetten responded that this significant NDOW report came out in May specific to Mule Deer migration in that area. Vice-Chairman Davis asked Ms. Juetten if she could forward that report, if she had access to it, to the Commission.

3. PRESENTATION BY BUREAU OF LAND MANAGEMENT REGARDING PIT LAKES ISSUES

Amy Lueders, Nevada State Office Director

Ms. Lueders prepared her PowerPoint presentation while she thanked the Commission for the opportunity to address them regarding pit lakes. She expressed that she would look forward to other opportunities if there are areas of interest to the Commission that intersect with the BLM permitting processes or other topics of public land interest.

Ms. Lueders wanted to go through the pit lakes consultation process. She talked about the process the BLM used to address the legislation. They did within BLM Nevada develop a process to ensure they were consistently addressing the pit lake legislation across all of the affected districts so they have a process to ensure they are consistent in how they look at pit lakes. They reached out to the operators to help arrange the consultations and they completed those consultations early in 2014 to ensure that they could meet the State's deadline of July 2014.

Ms. Lueders stated there are six affected pit lakes that have a BLM management component. Lone Tree, which the pit lake is currently filling, Round Mountain, Gold Quarry, Gold Strike Betze-Post, and Cortez Pipeline (all currently actively being mined), and Sleeper which is an existing pit lake. These were the six that were greater than 200 acres as defined by the state legislation. She pointed out that they are across the state, generally in the central part of Nevada. Red dots on the PowerPoint slide indicated the locations.

Lone Tree has an access road down to the lake. There was a slope failure and collapse of the access road. This pit lake is acidic and requires treatment which may preclude public access. The lake is still filling. They expect it to reach 90 percent capacity in about 20 years.

Sleeper has reached 90 percent capacity. It does have an access road to the lake surface but is still under an active plan of operations. Public access, in their determination, will not be allowed until the mine is fully reclaimed and closed. The pit lake is not acidic, but does have elevated constituents such as arsenic and sulfate. Ms. Lueders said they did prepare a checklist for each pit lake identifying water quality, what year they expected it to reach capacity, what the surface area would be at capacity and the safety considerations such as vertical distance to lake surface, the type of pit wall structure, particularly looking at stability of pit walls and the land ownership for shoreline access.

Ms. Lueders said that safety concerns were the major issue in terms of ensuring that they could provide safe access. They found in most cases, as they looked at four of the six currently mining, very difficult to predict that far into the future final pit configuration. They also found that they had limited access to the shoreline from public land for pit lakes. Only two of the six pit lakes are all on public lands and those are Cortez Pipeline and Sleeper. The other pit lakes have mixed private and public ownership which could make access more problematic if operators did not agree to grant access. Also, in terms of their projections, they found great distances – variation from minimum depth to pit lake for ground surface with some, such as Gold Quarry, 300 feet, Round Mountain, 800 feet, and those would be the repelling access to pit lakes.

At this point, Ms Lueders said when they did the snapshot look for the July timeframe, they are not recommending access to any of these six at this time, but that they do not see this as a 'one-and-done' exercise process. They do have a number of opportunities to, and have the ability to use the NEPA process to continue to look at this as they get more information and more clarity and certainty in terms of what final pits look like, the ability to provide access safely to the public and really have a better sense. She continued to say that at this point in time, they do not recommend access but as they get closer to closure, they will have the NEPA process which allows interested publics to provide comments on where and how they are addressing access in those final closure plans and she thinks that provides a good opportunity for BLM.

Ms. Leuders said Cortez Pipeline is 25 years out to reach capacity, Betze-Post, 200 years. Some of these are very long timeframes and it is important that they look at this as an iterative process as they continue to get closer to final closure.

Chairman Restrepo thanked Ms. Leuders and asked the Commissioners if there were any questions. Vice-Chairman Davis said his concern would be that these reclamation plans are plans that are being put into place right now. He wondered whether access will even be feasible in the future. Ms. Leuders said that as they go through a plan of operations and they want to ensure the operations can be done safely. She thought they had lots of opportunities into the future to look at how they can accommodate access. These are long-term operations. They have planned amendments that have final closure plans. She felt there were a lot of opportunities to address post-mining use. They just don't know enough at this point, looking 200 years out, of what that final pit configuration will even look like because it will change over time based on the economics, based on what is actually discovered versus the exploration. They cannot say with certainty that access could be provided at this point. Because there are so many other kinds of check-in points in time, it allows them to continue to check and recheck what might be valid post-mining uses.

Vice-Chairman Davis asked if before the legislation was in place how would the BLM have gone about dealing with a pit that has been formed and that has been turned into a lake. Ms. Leuders said that first would be safety issues, environmental issues to ensure that they were not creating undue unnecessary degradation and what could be done for water quality control. Focus would be in terms of those environmental issues. She stated the first and foremost on their mind has been to address environmental concerns in that closure document.

Vice-Chairman Davis asked about a situation that these pits would have split ownership between public and private. What if the portions of the pit that are BLM owned don't necessarily lend themselves to access for the public? He asked how would the BLM contemplate that that's dealt with. Ms. Leuders said she thought that would be through the negotiation process, but certainly one that they could not drive in terms of providing the access. From their perspective they don't have the portions that provide feasible access they could then through the consultation process see if access could be provided through the private. It depends on the situation but that would clearly be one of the consultations. If it could not be provided on public lands, it would then fall to the landowner to provide that consent.

Chairman Restrepo then asked what efforts the BLM gone to securing these six pit lakes from improper or illegal access so no one gets hurt. He asked what security measures the BLM has taken. Ms. Leuders responded that it is upon the mine operator to provide site security to ensure that access is secured during the mining operations. It becomes the BLM responsibility at closure.

Mr. Doug Siple with the BLM replied that the BLM makes sure that the public is protected by constructing safety berms around the pit so people can't drive into the pits. That is actually in their reclamation bond to do that. Fences are the other option. It would be fenced or bermed off from the public.

Member Neilander said that he has not seen one of these permits and how the conditions are laid out on the permits, he would actually like to see one of those at some point if BLM would provide that for the Commission's view. Ms. Leuders stated they would be happy to do that.

Vice-Chairman Davis asked about the two pits right now that are completely on public lands, Sleeper and Cortez. He asked what plan was in place before the legislation was passed, and if that would have allowed for public access. Mr. Siple answered that was actually designed for public access through efforts with NDOW so the ramp actually does exist at the surface of the lake. That was a special case mainly because the water level was so close to the surface of the ground that you wouldn't have the really high walls and conditions like some of the other pits. Ms. Leuders then said it was for Sleeper.

Member Bremner then said he has concerns that no one is requiring enough of a bond or enough upfront money, either BLM or the State, to really do the job of reclamation in the case of some serious needs. He asked how they calculated how much money is required to re-bond it. How much bond requirement is there for reclamation purposes? Ms. Leuders replied that it varies by the site. BLM currently holds over one billion dollars in bonds. Mr. Siple said two billion. Ms. Leuders then agreed. She said the BLM works closely with the State. They use a standardized reclamation cost estimate model they believe has helped them in terms of consistency and predictability of those costs and to ensure they are addressing the full cost of reclamation. They also review those bonds to ensure they are up to date and reflect the current mine plan of operations.

Member Bremner asked if BLM still has recourse against mine operators even if they ceased operations and no longer operate in the State of Nevada. Ms. Leuders said the best approach is to ensure you are fully bonded upfront and the approach is to be proactive. Certainly liability remains with anyone who has been in the chain of operation. Ms. Leuders continued to say the best approach is to ensure that they fully bond upfront for all of those future costs. And they use both bonds, and they use long-term trusts in terms of kind of any ongoing costs into the future. BLM uses both to address those long-term liabilities. Those are surety bonds and cash bonds. Long term trusts are actually held by a trustee.

4. **AGENCY BRIEFINGS**

For Possible Action: Pursuant to NRS 513.093(3)(a) and (b), Division of Minerals briefing on the activities of the Division, to include the current condition of mining and of exploration for and production of oil and gas.

Richard M. Perry, Administrator, Nevada Division of Minerals

Mr. Perry brought a presentation on the status of the state of mining for the state, something they report on by statute and he had three topics he wanted to talk about.

First is the production statistics for the State of Nevada and those are contained in the handout Mr. Perry supplied to the Commission and the public at the meeting. He said he was going to report on NDOW revenues by statute and also activities in mining, geothermal, and oil in the State of Nevada. He began his slide show by showing the gross revenues by commodity for the State of Nevada by year since 1978. He pointed out steady growth in commodity production in the state and it is broken down by the type of commodity that is actually produced here in the state. The majority of that production is in gold. In 2013 that was 7 and a half billion dollars in gross revenues of gold production. Gold is the State of Nevada's largest export and about one billion dollars in non-gold commodities. In the list of that, there is copper, silver aggregates, geothermal energy, barite, petroleum production, gypsum. Nevada is the number one hard-rock mining state in the union and Nevada is number two in gross revenues from all mining products in the state.

On his next slide, Mr. Perry showed gold production. Peak production in the state occurred in 1998 and despite an increase in gold price the actual gold production for the state has been relatively flat, between five million and five and a half million ounces. More metallurgically complex ores and operating costs are going up despite the fact there have been some new deposits found.

Mr. Perry showed on his next slide that the second largest commodity produced in the state is copper. This production is from two mines in the state, the Robinson Mine near Ely and Newmont's Phoenix Mine near Battle Mountain where copper is produced as a byproduct. Copper production is poised to increase in Nevada over the next several years.

Mr. Perry continued to say silver production in Nevada is predominately a by-product of gold mining. There is only one primary silver mine in the state and that is the Coeur Rochester Mine in Pershing County. Silver production has been relatively flat for the last four or five years despite the fact that silver prices went up. The major decline in the price of gold and silver occurred between 2012 and 2013. Mr. Perry stated there are really two types of companies that stake claims. There are juniors and those are referred to as companies that don't produce anything. They are exploration companies. They raise capital on the market, go and explore, stake claims and they drill looking for commodities. Many times they then market those deposits if they are lucky enough to find one to a major. A major is considered to be one that actually produces claims. The split of claims in the state is about 50/50. Half of them are staked by majors and half by juniors. BLM and the NDOM collect a fee off of each one of those claims that are staked and held onto each year as a major source of revenue.

On Mr. Perry's next slide was a report on the revenues which they are required to do at least once a year. The work program is our annual funding for revenues to operate the DOM and they keep track of the year to date numbers there. Over half of the revenue comes in the first half of the year from mining claim fees and the second half is geothermal and oil fees that come in. Mr. Perry stated that the Division is 100% fee funded from all of these. There is no general fund money. He stated NRS 513 which is the abandoned mine lands that are orphans that are 100 year old shafts that are out there in the state that create hazards for the public and they do a lot of work and have closed 14,000 of those in the time this has been an active program. The Mines Registry is the statistics kept at their office and they also participate in education and public outreach in schools and to teachers teaching them about minerals, mineral commodities and geology.

Mr. Perry continued to say they operate a reclamation bond pool for exploration companies which in coordination with the BLM and the Bureau of Mining Regulation and Reclamation, they hold the surety for small exploration projects to ensure those are adequately funded for reclamation. Those are done at 100%, and those are in cash.

Regarding Chapter 522 NDOM is the permitting agency that oversees the drilling and completion and operation of oil and gas wells for the State of Nevada. That also includes conservation of the resources and all of those things in the world of oil that deal with pooling and unitization which are areas that they haven't had a lot of activity in the past but may see in the future that deal with who owns what with regards to the unit pool and how royalties are distributed to land owners. Regarding geothermal resources, the same applies. There is similar technology to oil and gas. It is drilling and completion of wells; some different nuances with regards to the conservation of the resource. The last two years NDOM provided \$282,000 of funding to the Sagebrush Ecosystem Council.

Chairman Restrepo asked a question regarding the slides Mr. Perry was showing. He said "... for example the silver slide, there was 8.6 million ounces, 17 operating mines. Is that an annual number or the latest number?" Mr. Perry replied that was the actual number for 2013.

Mr. Perry then showed several slides showing late exploration and development projects and new mines that have gone into production. He then discussed lithium in Nevada. Lithium is used in batteries but of the majority of lithium that is actually mined throughout the world, Nevada has one mine and the other active mines are in China, Bolivia and Chile. Lithium is used for the making of ceramics, glazes for ovenware. Lithium is used in the glass that is on the front of the microwave oven. There are many uses in the ceramic industry but also uses in the production of various types of batteries and lithium-aluminum alloys which are used on aircraft parts. The first lithium in Nevada was produced in 1967 by a company called Foote Minerals which was part of Newmont Mining. It is a brine deposit, so the way this is mined is with wells.

Mr. Perry then discussed oil and geothermal and showed a map where there has been drilling in the state in the last calendar year 2014. Most of geothermal production comes from the western part of the state and the oil we have is from the east part of the state.

There have been seven wells drilled in the last year. Two recorded some production from an oil perspective. That is a little more activity than we have seen in the past. Four of those wells were drilled by Noble Energy. Three of them have been hydraulically fractured. One of them has recorded some production. There were a couple of conventional wells drilled.

Five geothermal exploration and production wells were drilled. Production was flat for a number of years and in 2009, mainly due to incentives by the government, there was a lot of activity. Mr. Perry said that he did a calculation on the 2013 production numbers which are in excess of two and a half million megawatts of net produced power. That is the second largest of any state behind only California from 22 different plants in 14 geothermal fields located across the state and that is enough power to power 229,725 households. He said as we see the power companies in-fill the power grid, put power lines around the state, connect things that will open up more exploration areas - that is one of the biggest challenges for geothermal. To put major power lines in is a million dollars a mile, if the hot springs system is not close to a power grid it could be too expensive to try and develop a field. The only active field that is being drilled right now is Ormat's McGinness Hills Field, which is north of the town of Austin, Grass Valley, and several years ago they completed a 30 megawatt plant. 60 megawatts is a good-sized geothermal field. Each of the two power plants, coal plants, in Central Nevada, each one of those is 250 megawatts of rated power. Geothermal plants tend to be smaller and associated with hot springs systems because they are pumping out hot water.

Regarding oil production for the State of Nevada, Mr. Perry said oil was first discovered in Nevada in 1954 by Shell Oil Company in Railroad Valley. They peaked in production about 1990 at about four million barrels. Since then, the oil production has declined steadily as there has been no new exploration mines so there are about 74 producing wells at this point. About half of those are what you call stripper wells. A stripper well produces less than ten barrels a day. A barrel is 42 gallons. Last year's production was 335,000 barrels so Nevada is not a big producer if you compare that to North Dakota where they produce over a million barrels a day. Noble Energy has drilled four exploration wells. They have hydraulically fractured three of them. One of them has had some recorded oil production on it earlier this year although that pump is currently capped off right now. They have finished their fourth well.

Mr. Perry said there is a deposit of zeolites that is on the border of Inyo County and Nye County. Zeolite is a naturally occurring mineral that is used often in environmental cleanups. They are also used in various types of cattle feeds and industrial applications. There is a pit quarry operation in Nevada which has been producing commercial zeolites and shipping them overseas to a company that is using them in Fukushima Daiichi Nuclear Cleanup because they are very effective at absorbing Caesium-137. Zeolites are also used in kitty litter.

Chairman Restrepo thanked Mr. Perry. Vice Chairman Davis asked about the Mt. Hope project and what method they were using for extraction. Mr. Perry said it was an open pit mine. Vice Chairman Davis then asked if the NDOM tracks projects when they come forward and say they are going to create 200 jobs. Mr. Perry replied that there is an estimate that is done through the permitting stage; it is just an estimate of how many jobs might be created.

Vice Chairman Davis then asked if Well 962, which is the highest producing oil well in the state, is on public or private land. Mr. Perry said he thought it was on public land but he would need to check as there are some checkerboard areas in there just south of Carlin. Mr. Perry said some component of Well 962 is on private land because he knows they derive some royalty from it.

Chairman Restrepo commented that Commissioner Davis' question of the jobs issue is pretty interesting and kind of important and he thought it would be a good question for the Governor's Office of Economic Development. They track this kind of information from an economic development standpoint. Mr. Restrepo said he could get some information on how they are tracking proposed jobs, anticipated jobs versus actuals. That is part of their economic development process, but it may be some good information to get to the Commission and he would see what he could do to get some of

that information from the agency. Vice Chairman Davis said he was more familiar with the renewable energy portion of that and he wanted to make sure they are doing it across all technologies. Chairman Restrepo said he would look into it and get the information to Terry (Rubald) so she could get it to the Commissioners.

Member Neilander then asked Mr. Perry about his presentation regarding oil and gas. Mr. Perry said Nevada doesn't produce any gas and never has.

Chairman Restrepo thanked Mr. Perry again for his time.

5. For Possible Action: Review and Approval of Minutes: September 24, 2014

Chairman Restrepo called for a motion on the minutes of the September 24, 2014 meeting. Vice Chairman Davis moved to approve the minutes with a second from Member Neilander. The motion carried unanimously.

6. For Possible Action: Meeting Schedule

Member Bremner stated he was not available in late March, and Vice Chairman Davis stated Fridays would work best for him during the Legislative Session. The date of Friday, March 13, 2015 was decided upon.

7. Briefing to and from Staff; Suggestions for Future Agenda Topics

Terry Rubald stated the next meeting was when we have the report from industrial training. Someone present suggested mine safety training.

Vice Chairman Davis stated he would like to look at the issues surrounding Bald Mountain Mine that were brought up during public comment today.

Chairman Restrepo added that he would like to discuss the standard reports that we usually have.

8. Public Comment

Megan Queval came forward for public comment. She stated that she is a social work intern with the Progressive Leadership Alliance of Nevada. She is here to give comment that they are opposed to hydraulic fracturing. With Nevada being such a drought-ridden state, it does not seem like a reasonable industry to start hydraulic fracturing. She does not feel it can be regulated into safety. There are too many concerns surrounding possible water pollution and pollution through spillage. Right now, in the regulations, there is a mandate that there be baseline testing and testing for five years. Research shows that it can take ten to fifteen years or longer for those chemicals to drift and pollute underground aquifers. When testing ends in five years, it seems there would be no recourse regarding the polluted water in ten to fifteen or twenty years. With Nevada having no water, if we need the aquifer water, we are left with nothing but toxic water. She also found in research that the disclosed casing failure rate averages six to ten percent. Without monitoring, the failure of those casings carrying fracturing fluid underground and the produced water coming up from the ground when those fail will continue to pollute our groundwater. The Governor stated at the Western States Committee on Droughts that he has had farmers approaching him, and he is concerned with their need for water. These companies are going to deplete the water supply very quickly. While the water supply is being depleted and possibly polluted, we have people in Nevada who are in desperate need of water. Nevada has been in a drought for years now. The rivers and Lake Tahoe are at the lowest level in years. She does not feel we can afford to lose millions of gallons of water per well that is being

hydraulically fractured. She believes it is appropriate to implement a ban before it really takes off and gets going, causing irreparable damage to the state.

Chairman Restrepo thanked Ms. Queval for her testimony.

9. For Possible Action: Adjournment

The meeting was adjourned at 11:28 a.m.

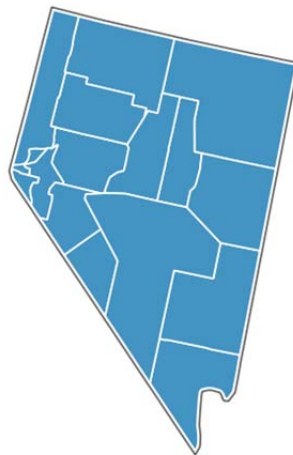
DRAFT

Item 7. Briefing to and from Staff; Information received for requests
from prior meetings; Suggestions for Future Agenda Topics

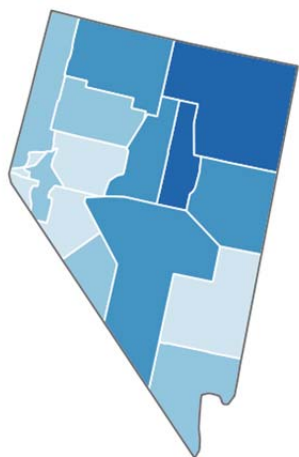
Nevada Governor's Office of
ECONOMIC DEVELOPMENT

Empowering Success

Nevada's Mining Sector



Sector Job Distribution



Sector Overview

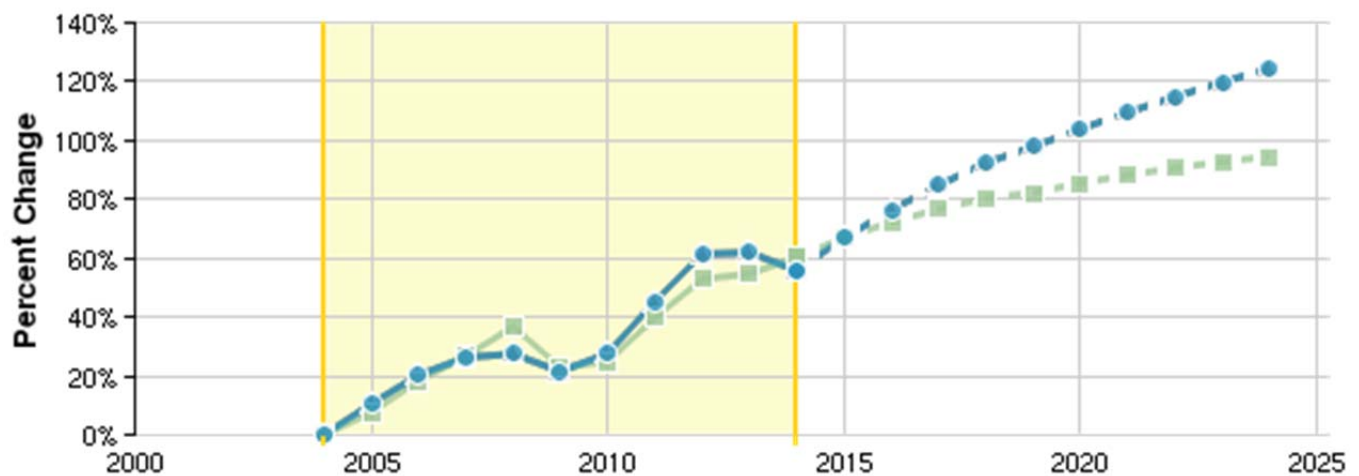
Establishments (2013)	299
Jobs Multiplier	2.47

Gender		
Male	86%	<div style="width: 86%;"></div>
Female	14%	<div style="width: 14%;"></div>

Age		
14-18	0%	<div style="width: 0%;"></div>
19-24	10%	<div style="width: 10%;"></div>
25-44	45%	<div style="width: 45%;"></div>
45-64	42%	<div style="width: 42%;"></div>
65+	2%	<div style="width: 2%;"></div>

14,911 Jobs (2014) National Location Quotient: 2.05	55.8% % Change (2004-2014) Nation: 60.3%	\$103,174 Average Earnings Per Job (2014) Nation: \$114,596
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Regional Trends



	Region	2004 Jobs	2014 Jobs	% Change
●	Nevada	9,572	14,911	55.8%
●	Nation	526,519	844,031	60.3%

Regional Breakdown of Nevada's Mining Sector

County Name	2004 Jobs	2014 Jobs	% Change	2014 Avg. Earnings Per Job	2014 National Location Quotient
Eureka	3,207	4,144	29%	\$108,952	147.73
Elko	1,285	2,690	109%	\$108,381	19.17
Humboldt	1,573	2,091	33%	\$107,328	39.01
Lander	508	2,005	295%	\$103,267	87.52
White Pine	273	1,095	301%	\$97,932	41.89
Nye	976	1,036	6%	\$95,913	15.53
Pershing	374	576	54%	\$88,751	51.14
Clark	397	289	(27%)	\$68,063	0.06
Lyon	171	255	49%	\$78,872	3.54
Washoe	343	183	(47%)	\$112,875	0.15
Esmeralda	59	176	198%	\$81,597	75.76
[Nevada, county not reported]	95	149	57%	\$94,923	4.26
Mineral	145	117	(19%)	\$91,071	14.82
Storey	78	56	(28%)	\$66,233	2.24
Douglas	49	24	(51%)	\$54,190	0.22
Churchill	17	13	(24%)	\$74,072	0.24
Lincoln	19	11	(42%)	\$43,123	1.44
Carson City	<10	<10	--	--	--
Total	9,572	14,911	56%	\$103,174	

Industry Breakdown of the Nevada's Mining Sector

NAICS	Description	2004 Jobs	2014 Jobs	% Change	2014 Avg. Earnings Per Job	2014 National Location Quotient
212221	Gold Ore Mining	6,720	10,987	63%	\$108,018	88.23
213114	Support Activities for Metal Mining	921	1,671	81%	\$101,955	42.55
212234	Copper Ore and Nickel Ore Mining	121	621	413%	\$94,254	4.93
212393	Other Chemical and Fertilizer Mineral Mining	124	367	196%	\$77,106	16.28
212321	Construction Sand and Gravel Mining	576	253	(56%)	\$58,805	1.21
212222	Silver Ore Mining	268	253	(6%)	\$87,124	18.27
212399	All Other Nonmetallic Mineral Mining	276	244	(12%)	\$62,124	8.02
212322	Industrial Sand Mining	47	116	147%	\$56,919	2.81
212312	Crushed and Broken Limestone Mining and Quarrying	63	86	37%	\$77,022	0.50
213112	Support Activities for Oil and Gas Operations	46	66	43%	\$82,293	0.02
213111	Drilling Oil and Gas Wells	21	50	138%	\$111,499	0.06
212325	Clay and Ceramic and Refractory Minerals Mining	113	47	(58%)	\$100,606	1.77
213115	Support Activities for Nonmetallic Minerals (except Fuels) Mining	<10	23	--	\$116,223	0.79
211111	Crude Petroleum and Natural Gas Extraction	22	21	(5%)	\$86,823	0.01
212299	All Other Metal Ore Mining	0	20	--	\$133,959	0.66
212319	Other Crushed and Broken Stone Mining and Quarrying	40	18	(55%)	\$56,962	0.29
212291	Uranium-Radium-Vanadium Ore Mining	0	18	--	\$124,458	2.44
333131	Mining Machinery and Equipment Manufacturing	13	17	31%	\$62,211	0.15
212391	Potash, Soda, and Borate Mineral Mining	41	15	(63%)	\$67,892	0.42
212311	Dimension Stone Mining and Quarrying	28	10	(64%)	\$74,699	--
212313	Crushed and Broken Granite Mining and Quarrying	0	<10	--	--	--
212112	Bituminous Coal Underground Mining	0	0	0%	\$0	0.00
212111	Bituminous Coal and Lignite Surface Mining	0	0	0%	\$0	0.00
212231	Lead Ore and Zinc Ore Mining	0	0	0%	\$0	0.00
213113	Support Activities for Coal Mining	0	0	0%	\$0	0.00
212113	Anthracite Mining	0	0	0%	\$0	0.00
212210	Iron Ore Mining	125	0	(100%)	\$0	0.00
212392	Phosphate Rock Mining	0	0	0%	\$0	0.00
212324	Kaolin and Ball Clay Mining	0	0	0%	\$0	0.00
	Total	9,572	14,911	56%	\$103,174	

Staffing Patterns (Largest Occupation Groups)

Occupation	Employed in Industry Group (2014)	% of the Total Jobs in Industry Group (2014)
Continuous Mining Machine Operators (47-5041)	1,792	12.0%
Mobile Heavy Equipment Mechanics, Except Engines (49-3042)	1,113	7.5%
Heavy and Tractor-Trailer Truck Drivers (53-3032)	906	6.1%
Earth Drillers, Except Oil and Gas (47-5021)	744	5.0%
Industrial Machinery Mechanics (49-9041)	559	3.7%

Industry Requirements (Largest Supply Chain Industries)

Industry	Amount	In-Region	Out of Region
Engineering Services (541330)	\$387,355,254	17%	83%
Iron and Steel Mills (331111)	\$289,176,326	0%	100%
Corporate, Subsidiary, and Regional Managing Offices (551114)	\$282,051,198	14%	86%
Gold Ore Mining (212221)	\$201,877,260	100%	0%
Petroleum Refineries (324110)	\$133,136,332	1%	99%

Data Sources and Calculations

State Data Sources

This report uses state data from the following agencies: Nevada Department of Employment, Training and Rehabilitation, Information Development and Processing Division, Research and Analysis Bureau

Industry Data

EMSI industry data have various sources depending on the class of worker. (1) For QCEW Employees, EMSI primarily uses the QCEW (Quarterly Census of Employment and Wages), with supplemental estimates from County Business Patterns and Current Employment Statistics. (2) Non-QCEW employees data are based on a number of sources including QCEW, Current Employment Statistics, County Business Patterns, BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM), the American Community Survey, and Railroad Retirement Board statistics. (3) Self-Employed and Extended Proprietor classes of worker data are primarily based on the American Community Survey, Nonemployer Statistics, and BEA State and Local Personal Income Reports. Projections for QCEW and Non-QCEW Employees are informed by NIOEM and long-term industry projections published by individual states.

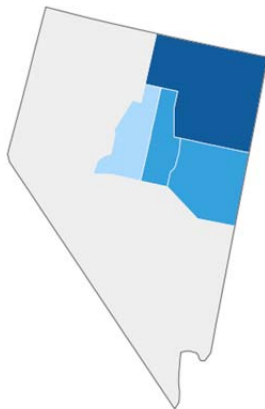
Input-Output Data

The input-output model in this report is EMSI's gravitational flows multi-regional social account matrix model (MR-SAM). It is based on data from the Census Bureau's Current Population Survey and American Community Survey; as well as the Bureau of Economic Analysis' National Income and Product Accounts, Input-Output Make and Use Tables, and Gross State Product data. In addition, several EMSI in-house data sets are used, as well as data from Oak Ridge National Labs on the cost of transportation between counties.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.



















NNRDA Aggregate Area Economic Overview



Population (2014)	70,824
Jobs (2014)	43,091
Average Earnings (2014)	\$62,392
Unemployed (11/2014)	1,814
Completions (2013)	423
GRP (2013)	\$7,409,574,354
Exports (2013)	\$10,129,147,869
Imports (2013)	\$6,924,589,902

Population

70,824 2014 Population 2.5% of State	7.4% Population Growth for the Last 5 Years State Growth 5.8%
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Age Group	2014 Population	% of Population	
Under 5 years	5,247	7.4%	
5 to 9 years	5,460	7.7%	
10 to 14 years	5,200	7.3%	
15 to 19 years	4,457	6.3%	
20 to 24 years	5,012	7.1%	
25 to 29 years	5,142	7.3%	
30 to 34 years	5,012	7.1%	
35 to 39 years	4,213	5.9%	
40 to 44 years	4,388	6.2%	
45 to 49 years	4,843	6.8%	
50 to 54 years	5,060	7.1%	
55 to 59 years	4,941	7.0%	
60 to 64 years	4,014	5.7%	
65 to 69 years	2,922	4.1%	
70 to 74 years	2,083	2.9%	
75 to 79 years	1,303	1.8%	
80 to 84 years	828	1.2%	
85 years and over	700	1.0%	

Jobs by Industry

43,091 Total Jobs (2014)	60.6% Male (National: 51.0%)	39.4% Female (National: 49.0%)
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NAICS	Industry	2014 Jobs	
11	Crop and Animal Production	1,170	
21	Mining, Quarrying, and Oil and Gas Extraction	10,573	
22	Utilities	258	
23	Construction	2,615	
31	Manufacturing	446	
42	Wholesale Trade	1,239	
44	Retail Trade	3,645	
48	Transportation and Warehousing	1,044	
51	Information	242	
52	Finance and Insurance	789	
53	Real Estate and Rental and Leasing	1,597	
54	Professional, Scientific, and Technical Services	1,002	
55	Management of Companies and Enterprises	375	
56	Administrative and Support and Waste Management and Remediation Services	1,090	
61	Educational Services	134	
62	Health Care and Social Assistance	1,874	
71	Arts, Entertainment, and Recreation	861	
72	Accommodation and Food Services	6,624	
81	Other Services (except Public Administration)	1,466	
90	Government	6,039	
99	Unclassified Industry	9	

Average Earnings by Industry

\$62,392

Avg. Earnings (2014)






















116% of Nation Avg.

\$51,215

Wages (2014)

\$11,177

Supplements (2014)

NAICS	Industry	Avg. Earnings (2014)	
11	Crop and Animal Production	\$19,513	
21	Mining, Quarrying, and Oil and Gas Extraction	\$105,520	
22	Utilities	\$122,318	
23	Construction	\$63,650	
31	Manufacturing	\$76,615	
42	Wholesale Trade	\$88,955	
44	Retail Trade	\$31,240	
48	Transportation and Warehousing	\$65,093	
51	Information	\$79,513	
52	Finance and Insurance	\$78,573	
53	Real Estate and Rental and Leasing	\$29,035	
54	Professional, Scientific, and Technical Services	\$42,839	
55	Management of Companies and Enterprises	\$161,508	
56	Administrative and Support and Waste Management and Remediation Services	\$29,018	
61	Educational Services	\$22,262	
62	Health Care and Social Assistance	\$49,094	
71	Arts, Entertainment, and Recreation	\$21,507	
72	Accommodation and Food Services	\$26,124	
81	Other Services (except Public Administration)	\$38,877	
90	Government	\$69,305	
99	Unclassified Industry	\$109,887	

Unemployment by Industry

1,814

Total Unemployment (11/2014)






















NAICS	Industry	Unemployed (11/2014)	% of Regional Unemployment	
11	Crop and Animal Production	6	0%	
21	Mining, Quarrying, and Oil and Gas Extraction	279	15%	<div></div>
22	Utilities	6	0%	
23	Construction	172	9%	<div></div>
31	Manufacturing	19	1%	<div></div>
42	Wholesale Trade	36	2%	<div></div>
44	Retail Trade	180	10%	<div></div>
48	Transportation and Warehousing	35	2%	<div></div>
51	Information	10	1%	<div></div>
52	Finance and Insurance	20	1%	<div></div>
53	Real Estate and Rental and Leasing	18	1%	<div></div>
54	Professional, Scientific, and Technical Services	23	1%	<div></div>
55	Management of Companies and Enterprises	5	0%	
56	Administrative and Support and Waste Management and Remediation Services	46	3%	<div></div>
61	Educational Services	5	0%	
62	Health Care and Social Assistance	60	3%	<div></div>
71	Arts, Entertainment, and Recreation	38	2%	<div></div>
72	Accommodation and Food Services	375	21%	<div></div>
81	Other Services (except Public Administration)	54	3%	<div></div>
90	Government	176	10%	<div></div>
99	No Previous Work Experience/Unspecified	251	14%	<div></div>

Top Program Completions

CIP	Program	Completions (2013)	
24	Liberal arts and sciences, general studies and humanities	90	
15	Engineering technologies and engineering-related fields	69	
52	Business, management, marketing, and related support services	62	
47	Mechanic and repair technologies/technicians	44	
51	Health professions and related programs	34	
46	Construction trades	32	
41	Science technologies/technicians	30	
13	Education	17	
48	Precision production	15	
43	Homeland security, law enforcement, firefighting and related protective services	15	

Gross Regional Product (GRP)

\$2,678,547,999	\$4,265,792,868	\$465,233,487	\$7,409,574,354
Earnings (2013)	Property Income (2013)	Taxes on Production (2013)	Total GRP (2013)

NAICS	Industry	GRP (2013)	% of Total	
11	Crop and Animal Production	\$47,868,080	1%	
21	Mining, Quarrying, and Oil and Gas Extraction	\$4,726,378,401	64%	
22	Utilities	\$112,195,801	2%	
23	Construction	\$193,445,399	3%	
31	Manufacturing	\$68,376,843	1%	
42	Wholesale Trade	\$224,113,368	3%	
44	Retail Trade	\$172,072,952	2%	
48	Transportation and Warehousing	\$92,491,261	1%	
51	Information	\$63,587,873	1%	
52	Finance and Insurance	\$91,043,962	1%	
53	Real Estate and Rental and Leasing	\$182,483,407	2%	
54	Professional, Scientific, and Technical Services	\$53,931,665	1%	
55	Management of Companies and Enterprises	\$79,226,664	1%	
56	Administrative and Support and Waste Management and Remediation Services	\$40,024,994	1%	
61	Educational Services	\$3,124,791	0%	
62	Health Care and Social Assistance	\$99,577,274	1%	
71	Arts, Entertainment, and Recreation	\$40,822,100	1%	
72	Accommodation and Food Services	\$311,028,962	4%	
81	Other Services (except Public Administration)	\$63,024,187	1%	
90	Government	\$509,805,513	7%	
	Other Non-Industries	\$234,950,856	3%	

Region Exports

\$10,129,147,869

Exports (2013)

89% of Supply

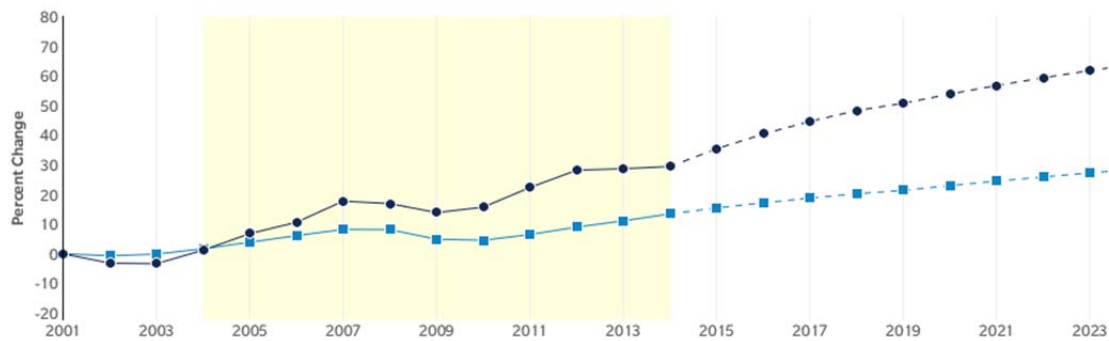
NAICS	Industry	Exports (2013)	
11	Crop and Animal Production	\$105,981,199	
21	Mining, Quarrying, and Oil and Gas Extraction	\$5,991,150,635	<div></div>
22	Utilities	\$126,998,018	
23	Construction	\$249,710,330	<div></div>
31	Manufacturing	\$138,939,835	
42	Wholesale Trade	\$291,854,560	<div></div>
44	Retail Trade	\$195,304,005	
48	Transportation and Warehousing	\$162,844,260	<div></div>
51	Information	\$78,908,725	
52	Finance and Insurance	\$121,005,232	
53	Real Estate and Rental and Leasing	\$172,164,404	<div></div>
54	Professional, Scientific, and Technical Services	\$55,959,059	
55	Management of Companies and Enterprises	\$126,631,918	
56	Administrative and Support and Waste Management and Remediation Services	\$37,169,180	
61	Educational Services	\$2,873,882	
62	Health Care and Social Assistance	\$105,241,359	
71	Arts, Entertainment, and Recreation	\$68,113,549	
72	Accommodation and Food Services	\$454,681,622	<div></div>
81	Other Services (except Public Administration)	\$79,025,986	
90	Government	\$1,564,590,111	<div></div>

Region Imports

\$6,924,589,902 Imports (2013) 84% of Demand	\$1,311,568,564 Locally Produced & Consumed (2013) 16% of Demand
--	--

NAICS	Industry	Imports (2013)	
11	Crop and Animal Production	\$38,075,467	
21	Mining, Quarrying, and Oil and Gas Extraction	\$175,972,912	
22	Utilities	\$119,282,452	
23	Construction	\$273,998,700	
31	Manufacturing	\$1,581,393,955	
42	Wholesale Trade	\$355,658,166	
44	Retail Trade	\$256,166,512	
48	Transportation and Warehousing	\$203,468,568	
51	Information	\$243,724,274	
52	Finance and Insurance	\$402,710,236	
53	Real Estate and Rental and Leasing	\$307,580,732	
54	Professional, Scientific, and Technical Services	\$396,583,661	
55	Management of Companies and Enterprises	\$125,118,251	
56	Administrative and Support and Waste Management and Remediation Services	\$118,763,546	
61	Educational Services	\$74,592,576	
62	Health Care and Social Assistance	\$405,713,309	
71	Arts, Entertainment, and Recreation	\$52,225,968	
72	Accommodation and Food Services	\$127,152,397	
81	Other Services (except Public Administration)	\$93,231,021	
90	Government	\$1,573,177,199	

Regional Trends



	Region	2004 Jobs	2014 Jobs	% Change
●	Region	33,698	43,091	27.9%
●	Nation	168,246,929	187,737,037	11.6%

Growing & Declining Occupations








Occupation	Change in Jobs (2004-2014)	
Continuous Mining Machine Operators	718	■
Mobile Heavy Equipment Mechanics, Except Engines	520	■
Heavy and Tractor-Trailer Truck Drivers	516	■
Farmers, Ranchers, and Other Agricultural Managers	-44	■
Childcare Workers	-62	■
Gaming Dealers	-65	■

Growing & Declining Industries

Industry	Change in Jobs (2004-2014)	
Gold Ore Mining	3,714	■
Copper Ore and Nickel Ore Mining	511	■
Warehouse Clubs and Supercenters	381	■
Discount Department Stores	-179	■
Site Preparation Contractors	-226	■
Casino Hotels	-997	■






2014 Educational Attainment



	Education Level	2014 Population	2014 Percent
●	Less Than 9th Grade	3,037	6.7% 
●	9th Grade to 12th Grade	4,465	9.8% 
●	High School Diploma	13,667	30.1% 
●	Some College	13,292	29.2% 
●	Associate's Degree	3,975	8.7% 
●	Bachelor's Degree	5,099	11.2% 
●	Graduate Degree and Higher	1,914	4.2% 

2014 Age Demographics



	Age	2014 Population	2014 Percent
●	Under 20 years	20,363	28.8% 
●	20 to 39 years	19,379	27.4% 
●	40 to 59 years	19,232	27.2% 
●	60 to 79 years	10,321	14.6% 
●	80 years and over	1,528	2.2% 

2014 Race Demographics



	Race	2014 Population	2014 Percent
●	All Other Races	3,556	5.0% ■
●	Two or More Races, Non-Hispanic	1,177	1.7% ■
●	American Indian or Alaskan Native, Non-Hispanic	3,057	4.3% ■
●	White, Hispanic	14,011	19.8% ■
●	White, Non-Hispanic	49,022	69.2% ■

Data Sources and Calculations

Input-Output Data

The input-output model in this report is EMSI's gravitational flows multi-regional social account matrix model (MR-SAM). It is based on data from the Census Bureau's Current Population Survey and American Community Survey; as well as the Bureau of Economic Analysis' National Income and Product Accounts, Input-Output Make and Use Tables, and Gross State Product data. In addition, several EMSI in-house data sets are used, as well as data from Oak Ridge National Labs on the cost of transportation between counties.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Completers Data

The completers data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Demographic Data

The demographic data in this report is compiled from several sources using a specialized process. Sources include annual population estimates and population projections from the US Census Bureau, birth and mortality rates from the US Health Department, and projected regional job growth.

Industry Data

EMSI industry data have various sources depending on the class of worker. (1) For QCEW Employees, EMSI primarily uses the QCEW (Quarterly Census of Employment and Wages), with supplemental estimates from County Business Patterns and Current Employment Statistics. (2) Non-QCEW employees data are based on a number of sources including QCEW, Current Employment Statistics, County Business Patterns, BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM), the American Community Survey, and Railroad Retirement Board statistics. (3) Self-Employed and Extended Proprietor classes of worker data are primarily based on the American Community Survey, Nonemployer Statistics, and BEA State and Local Personal Income Reports. Projections for QCEW and Non-QCEW Employees are informed by NIOEM and long-term industry projections published by individual states.

Unemployment Data

The unemployment data in this report comes from the Bureau of Labor Statistics' Local Area Unemployment Statistics and is updated every two months.

State Data Sources

This report uses state data from the following agencies: Nevada Department of Employment, Training and Rehabilitation, Information Development and Processing Division, Research and Analysis Bureau

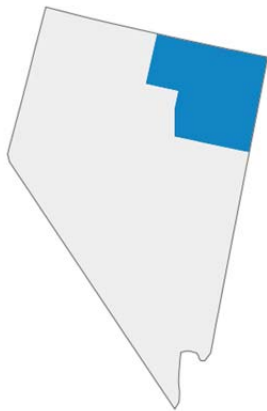
Occupation Data

EMSI occupation employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry.

Educational Attainment Data

EMSI's educational attainment numbers are based on EMSI's demographic data and the American Community Survey. By combining these sources, EMSI interpolates for missing years and projects data at the county level. Educational attainment data cover only those aged 25 years or more and indicate the highest level achieved.



















Elko County Economic Overview



Population (2014)	52,470
Jobs (2014)	27,554
Average Earnings (2014)	\$53,124
Unemployed (5/2014)	1,525
Completions (2013)	423
GRP (2013)	\$2,633,492,757
Exports (2013)	\$4,232,683,100
Imports (2013)	\$4,194,153,601






















Population

52,470 2014 Population 1.8% of State	8.3% Population Growth for the Last 5 Years State Growth 5.8%
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Age Group	2014 Population	% of Population	
Under 5 years	4,013	7.6%	
5 to 9 years	4,268	8.1%	
10 to 14 years	4,106	7.8%	
15 to 19 years	3,469	6.6%	
20 to 24 years	3,815	7.3%	
25 to 29 years	3,959	7.5%	
30 to 34 years	3,749	7.1%	
35 to 39 years	3,163	6.0%	
40 to 44 years	3,259	6.2%	
45 to 49 years	3,538	6.7%	
50 to 54 years	3,668	7.0%	
55 to 59 years	3,603	6.9%	
60 to 64 years	2,793	5.3%	
65 to 69 years	1,952	3.7%	
70 to 74 years	1,359	2.6%	
75 to 79 years	806	1.5%	
80 to 84 years	499	1.0%	
85 years and over	450	0.9%	

Jobs by Industry

27,554 Total Jobs (2014)	55.7% Male (National: 50.8%)	44.3% Female (National: 49.2%)
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NAICS	Industry	2014 Jobs	
11	Crop and Animal Production	691	
21	Mining, Quarrying, and Oil and Gas Extraction	2,937	
22	Utilities	120	
23	Construction	2,034	
31	Manufacturing	359	
42	Wholesale Trade	1,154	
44	Retail Trade	2,734	
48	Transportation and Warehousing	797	
51	Information	181	
52	Finance and Insurance	516	
53	Real Estate and Rental and Leasing	962	
54	Professional, Scientific, and Technical Services	734	
55	Management of Companies and Enterprises	398	
56	Administrative and Support and Waste Management and Remediation Services	802	
61	Educational Services	101	
62	Health Care and Social Assistance	1,653	
71	Arts, Entertainment, and Recreation	675	
72	Accommodation and Food Services	5,697	
81	Other Services (except Public Administration)	1,124	
90	Government	3,881	
99	Unclassified Industry	4	

Average Earnings by Industry

\$53,124

Avg. Earnings (2014)






















101% of Nation Avg.

\$43,482

Wages (2014)

\$9,642






















Supplements (2014)

NAICS	Industry	Avg. Earnings (2014)	
11	Crop and Animal Production	\$19,232	
21	Mining, Quarrying, and Oil and Gas Extraction	\$99,275	
22	Utilities	\$114,689	
23	Construction	\$65,159	
31	Manufacturing	\$60,893	
42	Wholesale Trade	\$87,119	
44	Retail Trade	\$31,913	
48	Transportation and Warehousing	\$58,405	
51	Information	\$50,418	
52	Finance and Insurance	\$55,176	
53	Real Estate and Rental and Leasing	\$34,133	
54	Professional, Scientific, and Technical Services	\$49,475	
55	Management of Companies and Enterprises	\$158,608	
56	Administrative and Support and Waste Management and Remediation Services	\$30,502	
61	Educational Services	\$19,331	
62	Health Care and Social Assistance	\$51,210	
71	Arts, Entertainment, and Recreation	\$23,312	
72	Accommodation and Food Services	\$27,113	
81	Other Services (except Public Administration)	\$41,041	
90	Government	\$66,722	
99	Unclassified Industry	\$59,204	

Unemployment by Industry

1,525

Total Unemployment (5/2014)






















NAICS	Industry	Unemployed (5/2014)	% of Regional Unemployment	
11	Crop and Animal Production	8	1%	
21	Mining, Quarrying, and Oil and Gas Extraction	226	15%	
22	Utilities	7	0%	
23	Construction	181	12%	
31	Manufacturing	19	1%	
42	Wholesale Trade	39	3%	
44	Retail Trade	157	10%	
48	Transportation and Warehousing	33	2%	
51	Information	10	1%	
52	Finance and Insurance	20	1%	
53	Real Estate and Rental and Leasing	17	1%	
54	Professional, Scientific, and Technical Services	25	2%	
55	Management of Companies and Enterprises	5	0%	
56	Administrative and Support and Waste Management and Remediation Services	46	3%	
61	Educational Services	4	0%	
62	Health Care and Social Assistance	57	4%	
71	Arts, Entertainment, and Recreation	34	2%	
72	Accommodation and Food Services	306	20%	
81	Other Services (except Public Administration)	49	3%	
90	Government	90	6%	
99	No Previous Work Experience/Unspecified	191	13%	

Top Program Completions

CIP	Program	Completions (2013)	
24	Liberal arts and sciences, general studies and humanities	90	
15	Engineering technologies and engineering-related fields	69	
52	Business, management, marketing, and related support services	62	
47	Mechanic and repair technologies/technicians	44	
51	Health professions and related programs	34	
46	Construction trades	32	
41	Science technologies/technicians	30	
13	Education	17	
48	Precision production	15	
43	Homeland security, law enforcement, firefighting and related protective services	15	

Gross Regional Product (GRP)

\$1,449,598,920	\$951,031,683	\$232,862,154	\$2,633,492,757
Earnings (2013)	Property Income (2013)	Taxes on Production (2013)	Total GRP (2013)












NAICS	Industry	GRP (2013)	% of Total	
11	Crop and Animal Production	\$23,479,405	1%	
21	Mining, Quarrying, and Oil and Gas Extraction	\$897,618,940	34%	
22	Utilities	\$43,766,273	2%	
23	Construction	\$137,854,160	5%	
31	Manufacturing	\$25,527,425	1%	
42	Wholesale Trade	\$175,333,307	7%	
44	Retail Trade	\$124,637,927	5%	
48	Transportation and Warehousing	\$57,196,804	2%	
51	Information	\$20,617,022	1%	
52	Finance and Insurance	\$39,896,056	2%	
53	Real Estate and Rental and Leasing	\$112,085,561	4%	
54	Professional, Scientific, and Technical Services	\$39,398,931	1%	
55	Management of Companies and Enterprises	\$71,255,284	3%	
56	Administrative and Support and Waste Management and Remediation Services	\$28,651,762	1%	
61	Educational Services	\$2,079,658	0%	
62	Health Care and Social Assistance	\$86,551,410	3%	
71	Arts, Entertainment, and Recreation	\$27,773,562	1%	
72	Accommodation and Food Services	\$246,387,728	9%	
81	Other Services (except Public Administration)	\$47,620,973	2%	
90	Government	\$285,981,944	11%	
	Other Non-Industries	\$139,778,627	5%	

Region Exports

\$4,232,683,100

Exports (2013)

83% of Supply

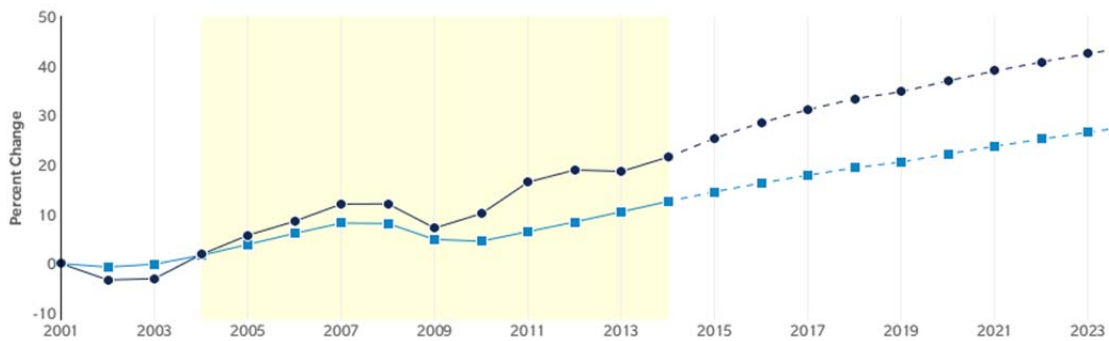
NAICS	Industry	Exports (2013)	
11	Crop and Animal Production	\$66,998,006	
21	Mining, Quarrying, and Oil and Gas Extraction	\$1,368,756,975	
22	Utilities	\$62,380,469	
23	Construction	\$213,468,321	
31	Manufacturing	\$68,357,176	
42	Wholesale Trade	\$257,281,970	
44	Retail Trade	\$154,833,097	
48	Transportation and Warehousing	\$109,916,310	
51	Information	\$32,285,481	
52	Finance and Insurance	\$58,915,773	
53	Real Estate and Rental and Leasing	\$127,147,920	
54	Professional, Scientific, and Technical Services	\$45,925,646	
55	Management of Companies and Enterprises	\$124,487,305	
56	Administrative and Support and Waste Management and Remediation Services	\$30,313,462	
61	Educational Services	\$1,909,143	
62	Health Care and Social Assistance	\$98,823,901	
71	Arts, Entertainment, and Recreation	\$56,329,182	
72	Accommodation and Food Services	\$415,520,632	
81	Other Services (except Public Administration)	\$64,839,209	
90	Government	\$874,193,121	

Region Imports

\$4,194,153,601 Imports (2013) 83% of Demand	\$846,949,956 Locally Produced & Consumed (2013) 17% of Demand
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NAICS	Industry	Imports (2013)	
11	Crop and Animal Production	\$26,742,211	
21	Mining, Quarrying, and Oil and Gas Extraction	\$79,687,945	
22	Utilities	\$66,381,058	
23	Construction	\$137,715,885	
31	Manufacturing	\$810,977,430	
42	Wholesale Trade	\$190,624,181	
44	Retail Trade	\$187,385,644	
48	Transportation and Warehousing	\$108,826,686	
51	Information	\$160,881,536	
52	Finance and Insurance	\$267,274,598	
53	Real Estate and Rental and Leasing	\$213,571,346	
54	Professional, Scientific, and Technical Services	\$227,920,779	
55	Management of Companies and Enterprises	\$74,492,087	
56	Administrative and Support and Waste Management and Remediation Services	\$79,592,939	
61	Educational Services	\$54,481,605	
62	Health Care and Social Assistance	\$287,694,535	
71	Arts, Entertainment, and Recreation	\$36,992,984	
72	Accommodation and Food Services	\$93,024,337	
81	Other Services (except Public Administration)	\$67,841,964	
90	Government	\$1,022,043,852	

Regional Trends



Region	2004 Jobs	2014 Jobs	% Change
● Elko County	23,085	27,554	19.4%
● Nation	168,247,330	186,308,882	10.7%

Growing & Declining Occupations








Occupation	Change in Jobs (2004-2014)
Mobile Heavy Equipment Mechanics, Except Engines	189
Heavy and Tractor-Trailer Truck Drivers	171
Continuous Mining Machine Operators	164
Bus Drivers, Transit and Intercity	-40
Gaming Dealers	-58
Managers, All Other	-65

Growing & Declining Industries

Industry	Change in Jobs (2004-2014)
Gold Ore Mining	916
Warehouse Clubs and Supercenters	406
Corporate, Subsidiary, and Regional Managing Offices	361
Discount Department Stores	-195
Site Preparation Contractors	-217
Casino Hotels	-966






2014 Educational Attainment



	Education Level	2014 Population	2014 Percent
●	Less Than 9th Grade	1,747	5.4% 
●	9th Grade to 12th Grade	4,149	12.9% 
●	High School Diploma	10,429	32.4% 
●	Some College	8,183	25.4% 
●	Associate's Degree	2,922	9.1% 
●	Bachelor's Degree	2,975	9.3% 
●	Graduate Degree and Higher	1,749	5.4% 

2014 Age Demographics



	Age	2014 Population	2014 Percent
●	Under 20 years	15,857	30.2% 
●	20 to 39 years	14,686	28.0% 
●	40 to 59 years	14,068	26.8% 
●	60 to 79 years	6,910	13.2% 
●	80 years and over	948	1.8% 

2014 Race Demographics



	Race	2014 Population	2014 Percent
●	All Other Races	2,536	4.8% ■
●	Two or More Races, Non-Hispanic	897	1.7% ■
●	American Indian or Alaskan Native, Non-Hispanic	2,375	4.5% ■
●	White, Hispanic	11,200	21.3% ■
●	White, Non-Hispanic	35,462	67.6% ■

Data Sources and Calculations

Input-Output Data

The input-output model in this report is EMSI's gravitational flows multi-regional social account matrix model (MR-SAM). It is based on data from the Census Bureau's Current Population Survey and American Community Survey; as well as the Bureau of Economic Analysis' National Income and Product Accounts, Input-Output Make and Use Tables, and Gross State Product data. In addition, several EMSI in-house data sets are used, as well as data from Oak Ridge National Labs on the cost of transportation between counties.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Completers Data

The completers data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Demographic Data

The demographic data in this report is compiled from several sources using a specialized process. Sources include annual population estimates and population projections from the US Census Bureau, birth and mortality rates from the US Health Department, and projected regional job growth.

Industry Data

EMSI industry data have various sources depending on the class of worker. (1) For QCEW Employees, EMSI primarily uses the QCEW (Quarterly Census of Employment and Wages), with supplemental estimates from County Business Patterns and Current Employment Statistics. (2) Non-QCEW employees data are based on a number of sources including QCEW, Current Employment Statistics, County Business Patterns, BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM), the American Community Survey, and Railroad Retirement Board statistics. (3) Self-Employed and Extended Proprietor classes of worker data are primarily based on the American Community Survey, Nonemployer Statistics, and BEA State and Local Personal Income Reports. Projections for QCEW and Non-QCEW Employees are informed by NIOEM and long-term industry projections published by individual states.

Unemployment Data

The unemployment data in this report comes from the Bureau of Labor Statistics' Local Area Unemployment Statistics and is updated every two months.

State Data Sources

This report uses state data from the following agencies: Nevada Department of Employment, Training and Rehabilitation, Information Development and Processing Division, Research and Analysis Bureau

Occupation Data

EMSI occupation employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry.

Educational Attainment Data

EMSI's educational attainment numbers are based on EMSI's demographic data and the American Community Survey. By combining these sources, EMSI interpolates for missing years and projects data at the county level. Educational attainment data cover only those aged 25 years or more a