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Office of the Governor

January 15, 2016

Neil Kornze, Director
Bureau of Land Management
U.S. Department of Interior
1849 C Street NW (WO-200)
Washington, D.C. 20240

Submitted electronically to:
sagebrush_withdrawals@blm.gov

Re: Federal Register Notice September 24, 2015: BLM and U.S. Forest Service Proposed Withdrawal and Segregation of 2.7 million acres within Sagebrush Focal Areas acres in Nevada from location and entry under the 1872 Mining Law

Dear Director Kornze:

This letter formally transmits the State of Nevada's scoping comments for the proposed mineral withdrawal Environmental Impact Statement (EIS) published in the Federal Register on September 24, 2015.

Let me start by saying excluding any lands from mining and exploration, or from any other authorized multiple use, is inconsistent with the Nevada Greater Sage-Grouse Conservation Plan (Plan) and the Conservation Credit System (CCS), which I believe is the best conservation plan for Nevada. Nevada's Plan and CCS create meaningful disincentives for mining and exploration in priority sage-grouse management areas through compensatory mitigation requirements that achieve and quantify a *net conservation gain* for greater sage-grouse. The CCS is also consistent with President Obama's recent Mitigation Policy. I believe the proposed land withdrawal will not be able to show any measurable results except for the demise of the mineral exploration industry in Nevada. The urgency to implement the withdrawal proposal prior to conducting the proper analysis needed to evaluate the efficacy of the action and the socio-economic impact of the action is unclear.

The attachments to this transmittal letter provide details of Nevada's comments on the proposed withdrawal application as well as our scoping comments on the Environmental Impact Statement. A summary of our comments follow.

1. As I stated before, Nevada proposes a No Action Alternative and prefers our state Plan and CCS as the proper management and conservation plan for Nevada.

2. We disagree with the urgency of the mineral withdrawal when there are other threats to greater sage-grouse and habitat that have not been adequately addressed. For instance, the out-of-control wild horse population in Nevada has resulted in significant loss of habitat and will continue until the horses are managed at the appropriate management levels. The loss of habitat in Nevada from wildfire is staggering and there are thousands of acres in need of rehabilitation, which directly affects greater sage-grouse habitat. Devoting time and resources to these two management issues would be of greater benefit to the habitat than mineral withdrawal when it is known that disturbance from mining operations and exploration has a minimal effect on habitat. I also propose that if there is a withdrawal, it should only be for a five year period during which time the greater sage-grouse populations are intensively monitored to evaluate the efficacy of the withdrawal treatment on habitat and population threats.

3. If the withdrawal application is approved, Nevada has developed maps that propose better boundaries that take into account existing mining operations and exploration activities that are crucial to the economy of Nevada and the nation. I directed the Department of Wildlife, Department of Conservation and Natural Resources and the Nevada Division of Minerals to work cooperatively to analyze the Sagebrush Focal Area (SFA) for its mineral potential and activity and to identify high value, priority greater sage-grouse habitat to better inform the BLM as decisions are made. As a result of this exercise by my state agencies, attached are maps whose boundaries achieve the stated goal of protecting priority habitat for the greater sage-grouse.

4. There is much confusion and there has been considerable discussion about protecting existing rights in the SFA. It is essential that all valid existing rights, plans of operation, notices of intent, and all claims where claim maintenance fees have been paid pursuant to the General Mining Law and the Federal Land Policy and Management Act be considered valid existing rights and excluded from mineral withdrawal. My staff and state resource departments stand ready to work with the BLM to properly define and identify these rights and claims.

5. There is an area in the SFA identified for withdrawal that has outstanding greater sage-grouse habitat and is also a world class lithium deposit, where there are hundreds of claims and a robust exploration operation underway. This area needs to be able to provide the lithium needed to continue our goal of clean energy as well as protect some of the best sagebrush habitat for the greater sage-grouse. It is also an area that was badly burned by the Holloway Fire and is in desperate need of rehabilitation. We propose using this area as a pilot project in order to demonstrate an alternative, adaptive management approach that constrains mineral exploration while avoiding the loss of critical sage-grouse habitat and rehabilitating a wildfire burn area. We believe this can be done with cooperation between agencies, state and federal, and the private company working to develop a management plan that achieves all the stated goals.

6. We propose a thorough, comprehensive socio-economic analysis of the direct, indirect and cumulative impacts to geology, mining and exploration from mineral withdrawal in the SFA. We do not believe these complex impacts were adequately analyzed in the Land Use Planning

Amendment, the Final Environmental Impact Statement or the Record of Decision and that they will have far reaching consequences to the local and state economies. In consultation with Dr. Thomas R. Harris, University of Nevada, Reno, College of Business, Center for Economic Development, several components were developed that must be included in such an analysis.

Again, I believe the final decision of the proposed withdrawal should be a **No Action Alternative** and that the Nevada Plan and CCS be fully implemented. If you choose not to accept the recommendations proposed by the State of Nevada, which are the best for managing and enhancing habitat, I ask that serious consideration be given to the attached scoping comments, maps and details attached to this letter.

Sincere regards,

BRIAN SANDOVAL
Governor

Scoping Comments to the Federal Register Notice of September 24, 2015: Bureau of Land Management and the U.S. Forest Service Proposed Withdrawal and Segregation of 2.7 Million Acres within Sagebrush Focal Areas in Nevada from Location and Entry Under the 1872 General Mining Law Submitted by Governor Brian Sandoval on Behalf of the State of Nevada

Governor Brian Sandoval, on behalf of the State of Nevada is responding to the public scoping process by providing specific information on six key elements that must be analyzed in detail and disclosed in the Environmental Impact Statement to meet compliance with the National Environmental Policy Act (NEPA) and assure that a thorough evaluation is conducted of the relevant issues and impacts associated with the proposed mineral withdrawal from the General Mining Act of 1872.

1. No Action Alternative

Nevada believes that areas with high mineral potential should absolutely not be withdrawn from mining and mineral exploration. In that regard, the No Action Alternative is the preferred alternative for the State of Nevada. The No Action Alternative is consistent with the Nevada Sage-Grouse Conservation Plan (the Nevada Plan) which incentivizes avoidance of habitat disturbance in priority sage-grouse management areas, minimizes direct impacts of habitat disturbance based on applied Required Design Features (RDFs), and requires mitigation for direct and indirect impacts through the Conservation Credit System (CCS) that assures and quantifies net benefits to greater sage-grouse (GRSG).

- The No Action Alternative must include an accurate description of the existing sage-grouse populations, habitat conditions, and threats and must quantify these existing baseline conditions for comparison with the proposed action alternative(s) and their resulting net benefit for GRSG.

The Bureau of Land Management/U.S. Forest Service (BLM/FS) Land Use Planning Amendment (LUPA) Final Environmental Impact Statement (FEIS) provided no science or analysis at any level to support the rationale that exclusion of mining and mineral exploration will maintain the key attributes of GRSG habitat that are needed to realize a net benefit for GRSG.

- The Mineral Withdrawal Environmental Impact Statement (EIS) must *include quantitative analysis and comparisons* of key habitat attributes (sagebrush cover, sagebrush height, and perennial grass and forb cover and composition) between the No Action Alternative and the proposed action alternatives and disclose how mineral withdrawal will result in changes to these key attributes that are needed to realize a net benefit for the GRSG populations in the Sagebrush Focal Areas (SFA).

- The No Action Alternative must be analyzed for the positive impacts that the mineral industry provides such as participation in landscape scale efforts that require a broad range of partnerships and opportunities for reclamation and to further reclamation technology through restoration research.

2. Timeframe

The State of Nevada adamantly rejects the premise that mineral withdrawal should be the initial conservation action implemented under the Approved Resource Management Plan Amendment (ARMPA) when other existing threats to habitat have a far greater urgency and detrimental impact on GRSG in terms of habitat loss. The need for wild horses to be managed at appropriate management levels and the occurrence of thousands of acres in need of wildfire rehabilitation have resulted in thousands of acres of habitat loss that could be restored through proper management and treatment if resources and time were directed to these objectives as opposed to preparing an EIS for the mining and exploration withdrawal action.

The mining withdrawal on more than 2.7 million acres in Nevada is grossly disproportionate to the mining risks in Nevada identified in the *Greater Sage-Grouse Conservation Objectives Final Report* (2013) (COT Report):

> **Northern Great Basin.** Threats to this population were identified as wildfire and invasive species. At least part of this large population was described as stable to increasing from 2007-2010 and was predicted to have virtually no chance of declining below 50 birds in 30-100 years. Portions of this population are well connected with Idaho, Oregon, and Utah.
>
> **Western Great Basin.** The threats to these population management units are variable and site-specific, however, continuous, year-round use by wild horses, wildfires, and invasive species are prevalent. Resiliency needs to be improved with increased habitat suitability in terms of shrub densities and native grasses and forbs.

- The EIS must analyze the anticipated results from mineral withdrawal in terms of ameliorating the <u>specific and most pervasive threats</u> to GRSG in the SFA -- wildfire, invasive species, and wild horses -- and demonstrate how mineral withdrawal improves landscape resiliency.

- The ARMPA requires that conservation actions be implemented in accordance with the principles of <u>adaptive management</u>. The EIS must analyze a shorter withdrawal interval to allow for adaptive management processes to occur. If the BLM is compelled to follow through with mineral withdrawal at any level, Nevada recommends a five-year withdrawal period, during which time the GRSG populations are intensively monitored, at the expense of the Department of Interior, to evaluate the efficacy of the withdrawal treatment in terms of ameliorating population and habitat threats. Management actions can subsequently be modified if needed to achieve desired results, and the adaptive management process continued.

3. Withdrawal Area Boundary

Neither the BLM, the U.S. Fish and Wildlife Service, the U.S. Forest Service, nor any of our State agencies can provide a description or definition of the process used to delineate the SFA. There is no information regarding the data or analyses that justifies promoting these particular designated acres of priority habitat to a higher level of management infringement than the remainder of the priority habitat throughout the State.

The direct, indirect, economic, and cumulative impacts of SFA designation and the associated management actions were inadequately analyzed in the LUPA NEPA process and ROD. What we do know about the genesis of the SFA is that the State was not consulted for its expertise and input prior to the area delineation.

At Governor Sandoval's direction, the Nevada Department of Wildlife (NDOW), Nevada Department of Conservation and Natural Resources (DCNR), and the Nevada Division of Minerals (NDOM) worked cooperatively to analyze the SFA region with regard to existing, active exploration claims/mineral potential and priority GRSG habitat to evaluate an Alternative Mineral Withdrawal Area that achieves greater benefits for GRSG by exchanging high value habitat for areas with high mineral potential and existing claims.

Areas with high mineral potential were assessed and mapped by the Nevada Bureau of Mines and Geology (NBMG). Assessments were based on the evaluation of existing data sources including known mining districts, Plans of Operation, Notices of Intent, information from the BLM LR2000, and permitting data from NBMG Annual Nevada Mineral Industry reports. Areas with high mineral potential were further evaluated for proximity to active GRSG leks and habitat and fitted to avoid and minimize impacts to GRSG and avoid or minimize potential for habitat fragmentation. Areas within the SFA characterized as high mineral potential are shown in Attachment A.

Existing GRSG populations and habitat quality within and adjacent to the SFA were reviewed by NDOW to identify areas of lower quality habitat and importance to GRSG where mineral withdrawal would not significantly benefit existing populations. NDOW also identified GRSG populations adjacent to the SFA that would greatly benefit multiple populations of GRSG if they were exchanged for areas that had existing mining claims in the SFA. . Areas proposed to be exchanged from the SFA because of lack of habitat and areas proposed to be included in the mineral withdrawal area based on the benefit to GRSG are shown in Attachment B

Collaborative analysis of these two assessments results in an Alternative Mineral Withdrawal Area that must be analyzed as an EIS alternative. The alternative area does not change the SFA boundaries, only the mineral withdrawal area for purposes of minimizing conflict, protecting mineral exploration of known mineral importance, and providing enhanced benefits to GRSG by protecting more leks. Some of the effects the Alternative Mineral Withdrawal Area are described in Table 1.

Table 1. A comparison of the effects of the BLM Mineral Withdrawal Area and the Alternative Withdrawal Area in Nevada.

Area proposed for exclusion from the BLM Mineral Withdrawal Area based on limited quality habitat for GRSG	245,389 acres (approximately 9% of 2,730,045 acre BLM Withdrawal Area)
Area proposed for exclusion from the BLM Mineral Withdrawal Area based on conflicts with existing mining claims	310,003 acres (approximately 10% of 2,730,045 acre BLM Withdrawal Area)
Area proposed in exchange for mineral potential exclusion to the BLM Mineral Withdrawal Area based on high quality habitat, high population importance, and avoidance of conflict with mineral claims	394,082 acres (393,812 acres of which is priority habitat)
Net change in area between the BLM Mineral Withdrawal Area and the Alternative Mineral Withdrawal Area	-161,310 acres
Number of claims in the BLM Mineral Withdrawal Area excluded from conflict with GRSG	3,726 claims (99 percent of the 3,778 total claims in the BLM Mineral Withdrawal Area)
Number of leks excluded in the Alternative Mineral Withdrawal Area for habitat quality and mining claim criteria	5 active leks
Number of leks added in the Alternative Mineral Withdrawal Area	49 active leks
Net change in number of leks included in the Alternative Mineral Withdrawal Area	44 active leks

- The Mineral Withdrawal EIS must analyze the Alternative Mineral Withdrawal Area prepared jointly by NDOW and NDOM that minimizes conflicts with existing claims and results in measurable net benefit to GRSG by protecting more important habitat, leks, and populations.

4. Valid Existing Rights

The purpose of the proposed mineral withdrawal is protection of GRSG and its habitat from adverse effects of locatable mineral exploration and mining "subject to valid existing rights" (VER).

The BLM's Federal Register Notices do not define VER which has led to much confusion, particularly for exploration projects. The BLM and USFS ARMPA are the basis for the proposed withdrawal broadly defined VER as follows:

> Documented legal rights or interests in the land that allow a person or entity to use said land for a specific purpose and that are still in effect. Such rights include fee title ownership, mineral rights, rights-of-way, easements, permits, and licenses.[1]

While unpatented mining claims, mill sites and tunnel sites that are properly maintained by annual maintenance fee payments or annual assessment work under the U.S. mining laws would fall within this definition, BLM and USFS state and district offices are in need of additional guidance on the scope of VER to ensure a uniform application of this definition that preserves the substantial capital investments that have been made in reliance on the rights granted by the U.S. mining laws, and protects local economies that are dependent on a sound mineral exploration and mining economy.

Since 1992, pursuant to the General Mining Law, a claimant may hold and maintain an unpatented mining claim, mill site or tunnel site by paying the appropriate annual maintenance fee to the United States, or by conducting the requisite annual assessment work and making an appropriate annual filing with BLM. The holder of a properly maintained mining claim has the exclusive right to use lands within the claim for mineral exploration and mining . In enacting the requirement for annual claim maintenance fees, Congress sought to eliminate uncertainties associated with the historic annual assessment work requirements, and establish a clear line by which claimants can be assured that they have a valid right without the need for lengthy or complex administrative determinations.

Several thousand unpatented mining claims and mill sites have been located by numerous individuals and entities within the proposed Mineral Withdrawal Area. In Nevada alone, more than 3,700 claims exist in the proposed withdrawal area for which significantly more than a half million dollars are paid to the United States yearly in annual maintenance fees. See Attachment A. Many of these areas are highly prospective for economic mineralization and tens of millions of dollars have been expended by the claim owners in conducting exploration activities related to those claims in reliance on the rights granted by the U.S. mining laws. While only a small fraction of those claims might ultimately be mined resulting in limited and localized disturbance, preserving the current rights of those claimants, including reasonable access rights, will promote several sound national policies, including:

- Promoting Congress' intent to establish a clear line by which mining claims can be maintained through payment of annual maintenance fees.
- Recognizing the substantial investment of resources that have been made in reliance on the current claim maintenance requirements.

[1] *See, e.g.,* USFS, Greater Sage-grouse Record of Decision, Idaho and Southwestern Montana, Nevada, Utah, p. 137 (Sept. 2015); BLM, Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment, p. 5-24 (Sept. 2015).

- Avoiding the high costs, administrative burdens and permitting delays that would be associated with a requirement to conduct claim-by-claim validity determinations.
- Supporting local communities and regional economies that rely substantially on a sound mineral exploration and mining economy.

An unpatented mining claim, mill site or tunnel site that has been maintained in accordance with the annual filing and fee requirements of the General Mining Law and Federal Land Policy and Management Act meets the definition of VER as set forth in the BLM and USFS sage-grouse plan amendment documents. The following language is a suggestion for clarifying the definition of VER for mineral exploration projects to provide clear national guidance to agency field personnel that maintains consistency with existing laws and policies:

> Documented legal rights or interests in the land that allow a person or entity to use said land for a specific purpose and that are still in effect. Such rights include fee title ownership, mineral rights and associated access rights, rights-of-way, easements, permits, and licenses. For mineral exploration projects, valid existing rights include unpatented mining claims, mill sites and tunnel sites that were located prior to the effective date of the final withdrawal notice and that have been maintained by the timely payment of an annual maintenance fee or the satisfaction of applicable annual assessment work and annual filing requirements pursuant to the U.S. mining laws and the Federal Land Policy and Management Act.

5. Pilot project to Demonstrate Alternative Management Approach to Constrain Mineral Exploration and Avoid Loss of Critical Sage-Grouse Habitat

The SFA area in Humboldt County known as the Lone Willow Population Management Unit (PMU) and also known as the Opalite District-McDermitt and Kings Valley Lithium claim blocks has well documented, vital importance to both the mineral and wildlife resources in Nevada. The Geological Society of America has identified lithium as a critical mineral resource (GSA 2013). Lithium has also been acknowledged by the Department of Interior as a mineral of national importance. The economic importance of the lithium deposits in Humboldt County was analyzed by Applied Analysis (2016) who wrote the following:

> The [Western Lithium] project is expected to have a material economic impact on the state of Nevada and the communities in which it operates. Economic impacts sourced directly to the Company's investment are estimated to reach approximately $2.5 billion over the life of the project. When secondary impacts (indirect and induced) are considered, total economic output is estimated to reach nearly $3.4 billion. In addition to substantial economic output, the project is estimated to support nearly 9,000 person-years of employment and $0.5 billion in salaries in wages over the life of the project. Fiscal impacts (public revenues) to state and local governments during the same timeframe are estimated to exceed $100 million over the life of the project, or approximately $4.3 million annually over the course of the 24-year life cycle.

The Lone Willow GRSG PMU is among highest priority PMUs within the State of Nevada and harbors one of the most dense sage-grouse populations in Nevada. Lone Willow PMU includes the Bilk Creek, Montana, and Double H Mountain ranges. The bulk of the sage-grouse population resides in the Montana Mountains. Mark-recapture efforts conducted from 2001 through 2005, mainly within the Montana Mountains, calculated population estimates for each of these years using a Lincoln Index model. The population estimates ranged from a low of 7,264 grouse in 2001 to a high of 13,625 grouse in 2004 (NDOW 2006, unpublished report). There are 65 active and pending active leks located within this PMU ranging in size from 2 to 46 males in attendance in 2015. Approximately 50 of these leks are within the Montana Mountains portion of the PMU. This PMU is not only important within the State of Nevada, but is also important to a larger population of sage-grouse that extends into Oregon and occupies the Trout Creek and Oregon Canyon Mountain ranges.

The Holloway Fire, which occurred in 2012, burned 460,842 acres, much of which was in priority habitat in both Nevada and Oregon. The fire burned significant portions of the Bilk Creek Mountains in Nevada and the Trout Creek Mountains in Oregon. Much of the more highly suitable sage-grouse habitat in the Montana Mountains was spared from the fire. In turn, the Montana Mountains likely now serves as a source population that will help repatriate the Trout Creek and Bilk Creek Mountain ranges as they recover from the Holloway Fire.

The dual importance of these resources to the State of Nevada and to the nation has led to consensus opinion that the area should be carefully managed in a collaborative manner between the Federal and State governments. Nevada strongly recommends that approximately 82,250 acres be designated as the Lone Willow Pilot Project which will be excluded from the BLM Mineral Withdrawal Area and managed as a special experimental stewardship project as allowed under the Public Rangelands Improvement Act or similar existing authority. The purpose of the pilot project is to cooperatively manage the mineral and wildlife resources on a case-by-case, site-scale basis that will incorporate valuable mitigation strategies and requirements using the State Conservation Credit System and incorporating a strong local rehabilitation/reclamation component with research opportunities. The Lone Willow Pilot Project will be managed by a collaborative management group of professional geologists, wildlife biologists, range ecologists, and reclamation specialists based on local scientific findings. The Management Group will define and operate under a suite of guidelines which will be approved by the BLM, NDOW, and NDOM, such as:

- Advanced planning, data collection and analyses, and mitigation will occur prior to ground disturbance in the pilot project area to fully incorporate the principles of avoid, minimize, and mitigate the direct and indirect impacts of the proposed exploration and mine projects.

- Mitigation alternatives will prioritize on-the-ground habitat restoration in the Lone Willow PMU.

- Mineral exploration activity within the pilot project area will be limited to existing active claims at the time of the final federal register notice of proposed withdrawal.

- All exploration projects will be permitted in accordance with existing BLM Plan of Operation procedures, including projects less than 5-acres in size.

6. Socio-Economic Analysis

The direct, indirect, and cumulative impacts to geology, mining, and exploration from mineral withdrawal in the SFA were not analyzed in the LUPA FEIS or ROD. These impacts are complex and far reaching to the local and state economies.

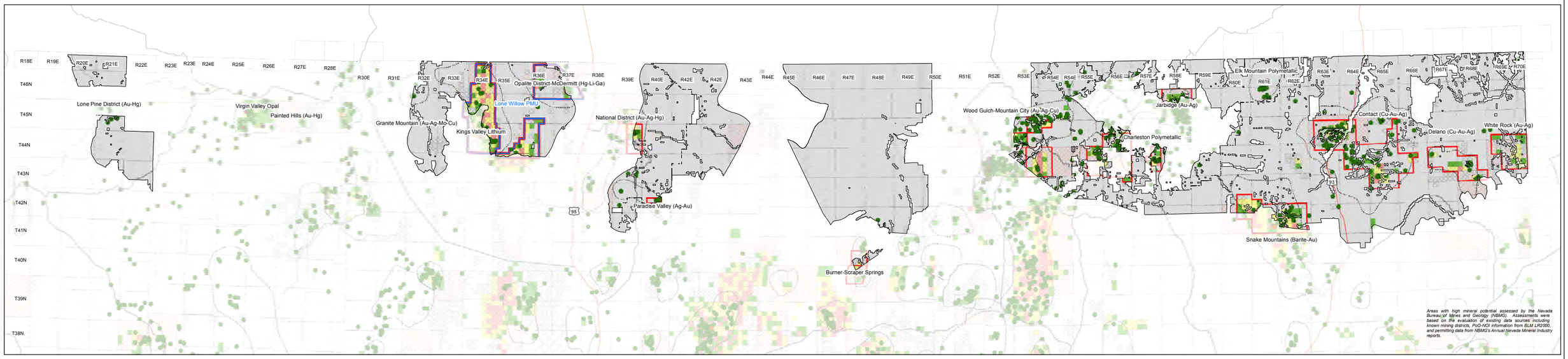
- Socio-economic impact analyses are critical for compliance with NEPA and must be thoroughly analyzed and disclosed in the Mineral Withdrawal EIS following academically approved methods and scope recommended by Dr. Thomas R. Harris, UNR College of Business Center for Economic Development (2015) (detailed in Attachment B) that at a minimum includes the following:

    1. A study area should be developed that is agreed upon by the BLM and the State.
    2. The IMPLAN model data should be validated and verified.
    3. The production function for different mining sectors should be developed to be sure they reflect the mining industry.
    4. A Social Accounting Matrix should be developed and verified and validated.
    5. A computable General Equilibrium model should be developed and scenarios as to land withdrawal for GRSG should be developed and applied.

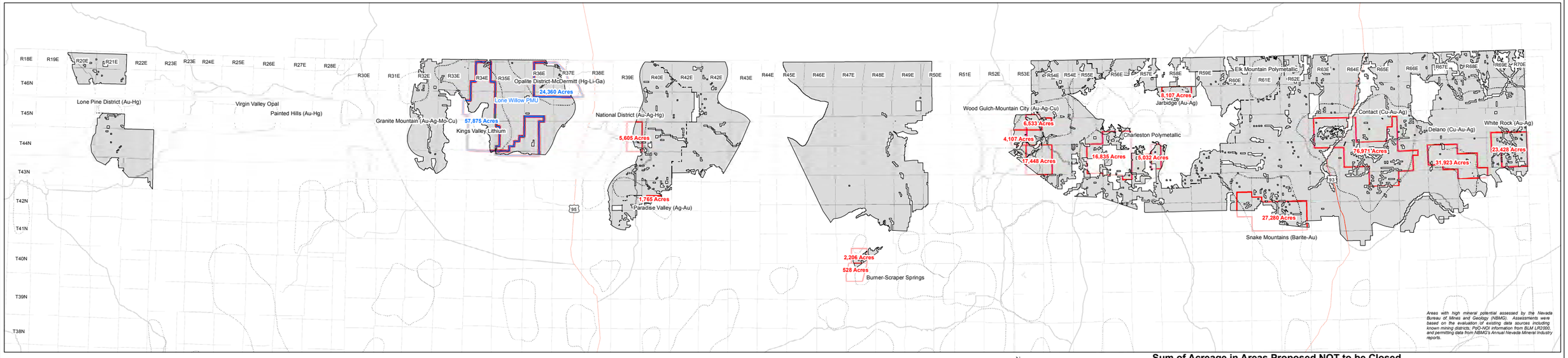
ATTACHMENT A

Areas of High Mineral Importance Within the Proposed BLM Mineral Withdrawal Area

Areas of High Mineral Potential in Nevada's Sage Brush Focal Areas with Outlined Areas Proposed NOT to be Closed to Mineral Entry



Areas of High Mineral Potential in Nevada's Sage Brush Focal Areas with Acreage of Areas Proposed NOT to be Closed to Mineral Entry



NEVADA DIVISION OF MINERALS

Active Mines
- Metal
- Industrial Minerals
- Gemstones

Mineral Deposits
- Metallic, Nonmetallic, & Industrial

BLM Permits, Plans, & Drill Projects (1978-2014)
- Plans of Operation & Notices of Inent *Data from BLM LR2000*
- Townships with Drill Projects for Metals (2005-2014)

Data from NBMG's Nevada Mineral Industry Reports

Active Mining Claims as of 10/16/2015
- 1 - 10 Claims
- 11 - 30 Claims
- >30 Claims

Data from BLM LR2000 Database

Areas with High Mineral Potential Proposed NOT to be closd to Mineral Entry
- Mineral Potential
- Lone Willow PMU *Pilot Project Area*

- Mining District Boundary
- Areas of Proposed Mineral Withdrawal
- Township & Range
- Major Highway
- Major Road

N W E S

0 5 10 20 Miles

0 10 20 40 Kilometers

Map Prepared by:
Lucia M. Patterson
Nevada Division of Minerals
NAD 1983 UTM Zone 11
Date: 1/13/2016

Sum of Acreage in Areas Proposed NOT to be Closed to Mineral Entry

All Areas Excluding Lone Willow PMU

	2,734 Acres	Burner -Scraper Springs
	23,428 Acres	White Rock
	31,923 Acres	Delano
	76,971 Acres	Contact
	27,280 Acres	Snake Mountains
	8,107 Acres	Jarbidge
	21,867 Acres	Charleston
	28,088 Acres	Wood Gulch-Mountain City
	5,604 Acres	National
+	1,766 Acres	Paradise Valley

227,768 Acres

Lone Willow PMU Pilot Project Area

	24,360 Acres	Opalite District-McDermitt
+	57,875 Acres	Kings Valley Lithium

82,235 Acres

Total Acreage for All Areas= 310,003 Acres

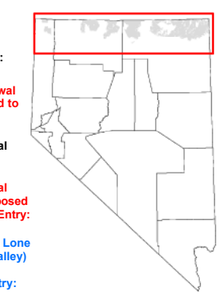
Calculated Acres in Mineral Withdrawal Area: 2,730,045 Acres

Percent of Mineral Withdrawal Proposed NOT to be Closed to Mineral Entry: 11.3%

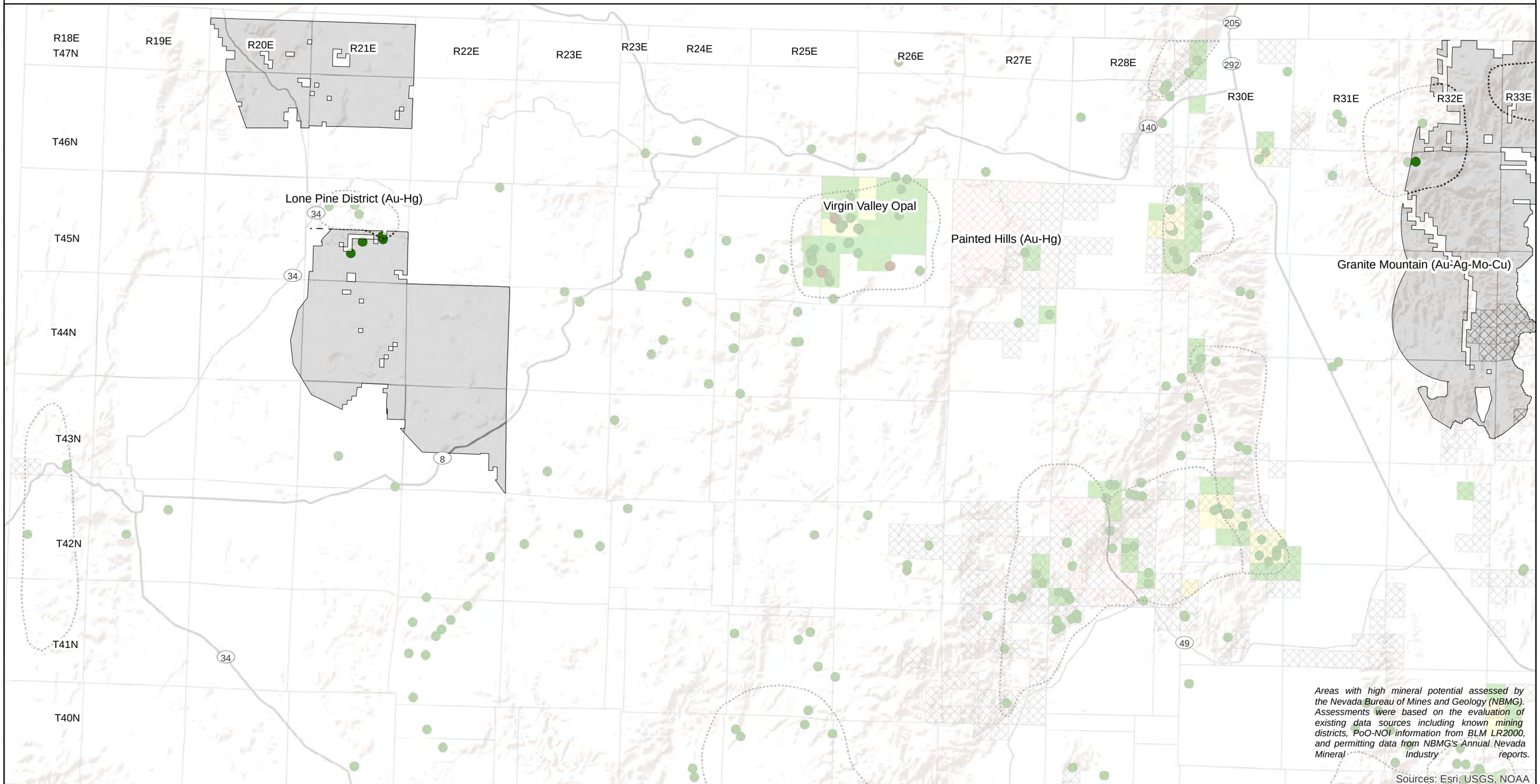
Total Claims within Mineral Withdrawal Area: 3,778

Total Claims within Mineral Withdrawal in ALL areas Proposed NOT to be Closed to Mineral Entry: 3,726 (99%)

Claims Contained Only in the Lone Willow PMU (Opalite/Kings Valley) Area Proposed NOT to be Closed to Mineral Entry: 1,629 (43%)



Area 1: Areas of High Mineral Potential in Nevada's Sage Brush Focal Areas with Outlined Areas Proposed NOT to be Closed to Mineral Entry



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Data from BLM LR2000 Database

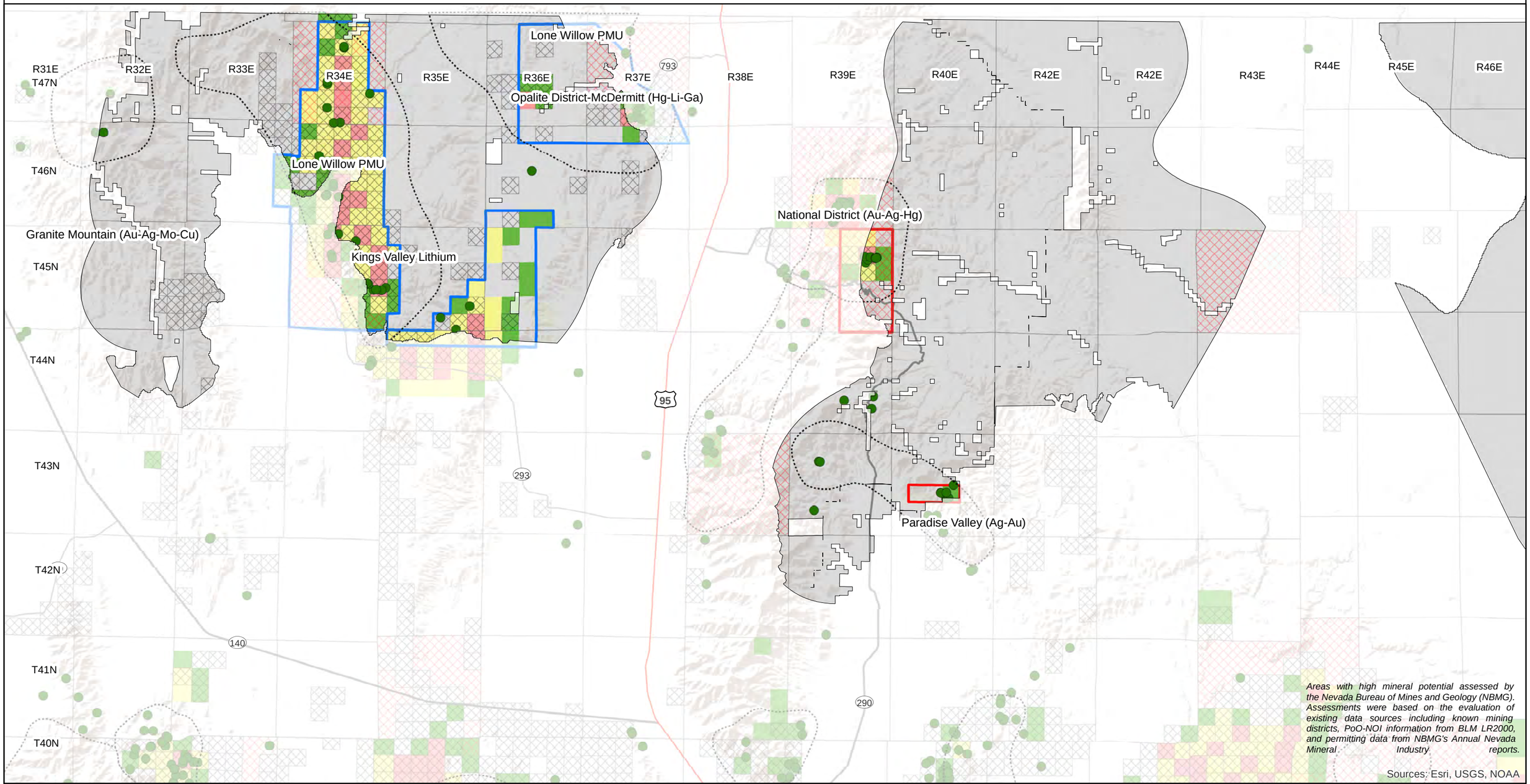
Areas of High Mineral Potential Proposed NOT to be Closed to Mineral Entry
- Mineral Potential
- Lone Willow PMU

- Mining District Boundary
- Areas of Proposed Mineral Withdrawal
- Township & Range
- Major Highway
- Major Road

0 2.5 5 10 Miles
0 5 10 20 Kilometers

Map Prepared by:
Lucia M. Patterson
Nevada Division of Minerals
NAD 1983 UTM Zone 11
Date: 1/13/2016

Area 2: Areas of High Mineral Potential in Nevada's Sage Brush Focal Areas with Outlined Areas Proposed NOT to be Closed to Mineral Entry



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- >30 Claims

Data from BLM LR2000 Database

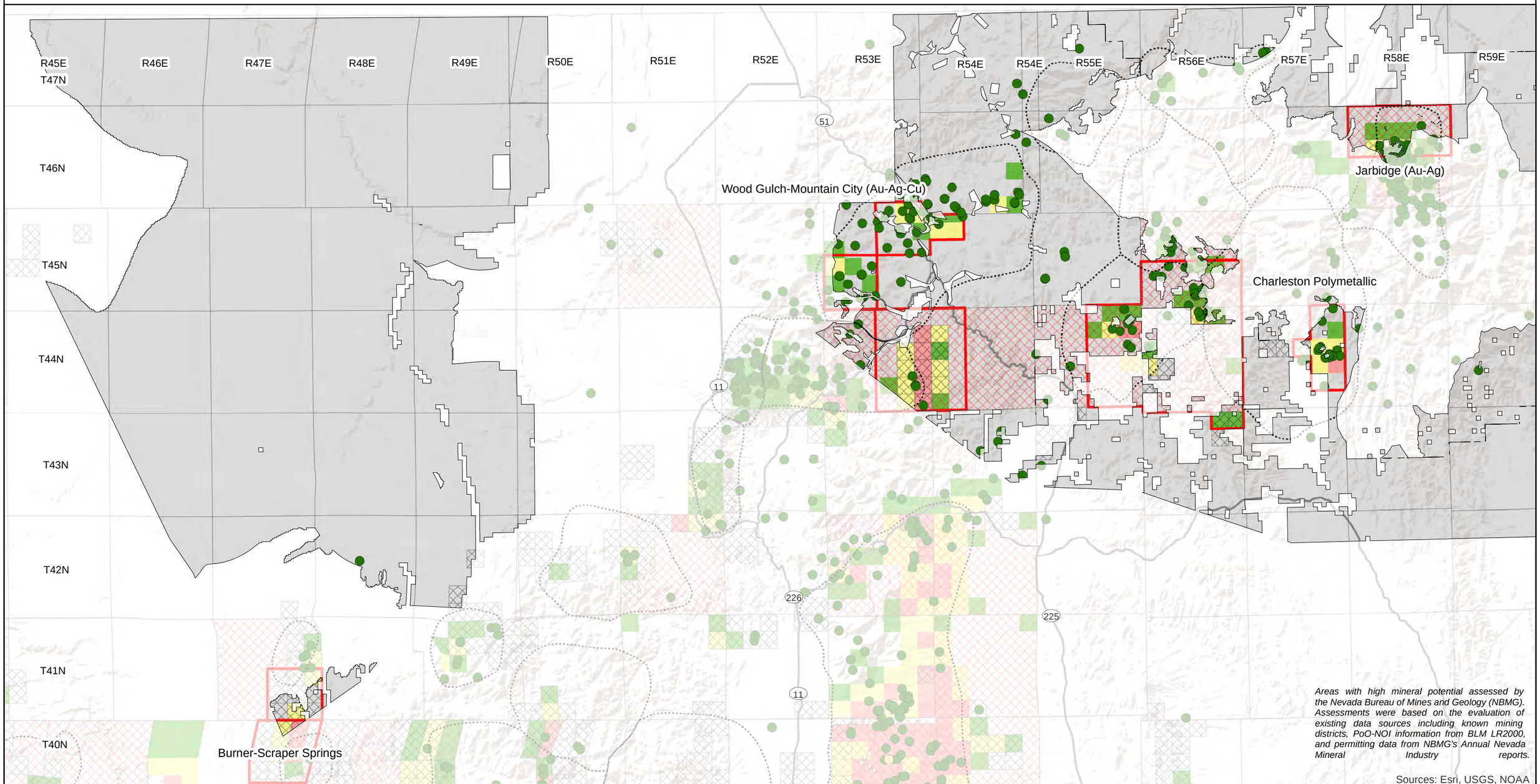
Areas of High Mineral Potential Proposed NOT to be Closed to Mineral Entry
- Mineral Potential
- Lone Willow PMU

- Mining District Boundary
- Areas of Proposed Mineral Withdrawal
- Township & Range
- Major Highway
- Major Road

0 2.5 5 10 Miles
0 5 10 20 Kilometers

Map Prepared by:
Lucia M. Patterson
Nevada Division of Minerals
NAD 1983 UTM Zone 11
Date: 1/13/2016

Area 3: Areas of High Mineral Potential in Nevada's Sage Brush Focal Areas with Outlined Areas Proposed NOT to be Closed to Mineral Entry



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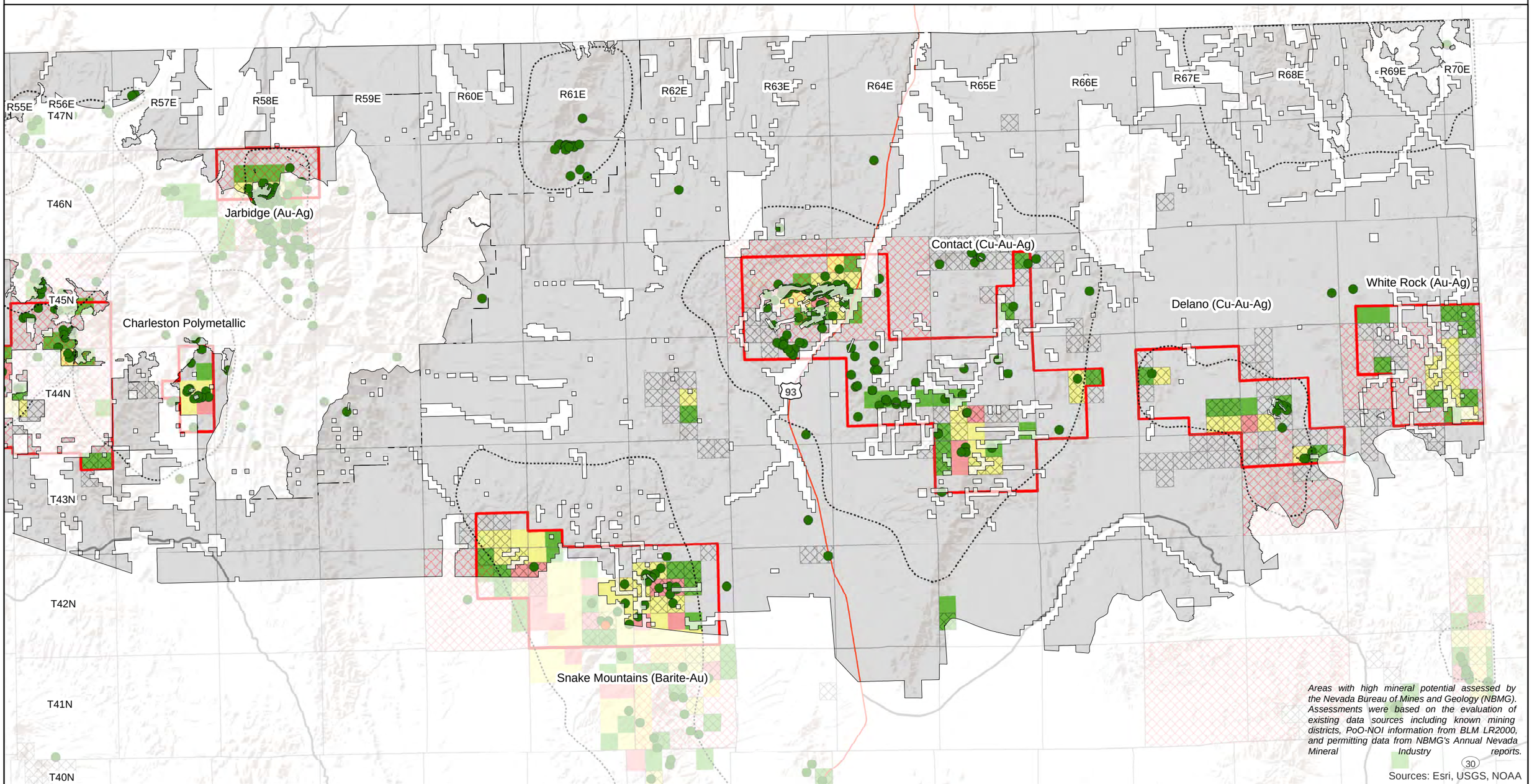
- Major Road

0 2.5 5 10 Miles

0 5 10 20 Kilometers

Map Prepared by:
Lucia M. Patterson
Nevada Division of Minerals
NAD 1983 UTM Zone 11
Date: 1/13/2016

Area 4: Areas of High Mineral Potential in Nevada's Sage Brush Focal Areas with Outlined Areas Proposed NOT to be Closed to Mineral Entry



Active Mines
- Metal
- Industrial Minerals
- Gemstones

Mineral Deposits
- Metallic, Nonmetallic, & Industrial

BLM Permits, Plans, & Drill Projects (1978-2014)
- Plans of Operation & Notices of Intent *Data from BLM LR2000*
- Townships with Drill Projects for Metals (2005-2014) *Data from NBMG's Nevada Mineral Industry Reports*

Active Mining Claims as of 10/16/2015
- 1 - 10 Claims
- 11 - 30 Claims
- >30 Claims

Data from BLM LR2000 Database

Areas of High Mineral Potential Proposed NOT to be Closed to Mineral Entry
- Mineral Potential
- Lone Willow PMU

- Mining District Boundary
- Areas of Proposed Mineral Withdrawal
- Township & Range
- Major Highway
- Major Road

0 2.5 5 10 Miles

0 5 10 20 Kilometers

Map Prepared by:
Lucia M. Patterson
Nevada Division of Minerals
NAD 1983 UTM Zone 11
Date: 1/13/2016

AREAS OF HIGH MINERAL RESOURCE POTENTIAL WITHIN THE AREAS PROPOSED FOR LOCATABLE MINERAL WITHDRAWAL

Areas with high mineral potential in proposed withdrawal. Description corresponds to map dated 1-13-2016.

1. T44NR35E Sections 1-6
    a. Kings Valley Lithium Resource
    b. Western Lithium has outlined a resource and has demonstrated lithium can be extracted from the clay
    c. Lithium is critical material for batteries
    d. moat sediment of McDermitt caldera
    e. epithermal Au-Hg-U potential
2. T45NR34E Sections 1-4, 10-14, 23-26, 35-36
    a. Kings Valley Lithium Resource
    b. Western Lithium has outlined a resource and has demonstrated lithium can be extracted from the clay
    c. Lithium is critical material for batteries
    d. moat sediment of McDermitt caldera
    e. epithermal Au-Hg-U potential
3. T46NR34E Sections 1-5, 8-27, 34-36
    a. Kings Valley Lithium Resource
    b. Western Lithium has outlined a resource and has demonstrated lithium can be extracted from the clay
    c. Lithium is critical material for batteries
    d. moat sediment of McDermitt caldera
    e. epithermal Au-Hg-U potential
4. T47NR34E Sections 2-4, 9-11, 14-16, 21-23, 25-29, 32-36
    a. Kings Valley Lithium Resource
    b. Western Lithium has outlined a resource and has demonstrated lithium can be extracted from the clay
    c. Lithium is critical material for batteries
    d. moat sediment of McDermitt caldera
    e. epithermal Au-Hg-U potential
5. T45NR63E Sections 8-17, 20-29, 32-36
    a. Contact-Delano Copper-Gold-Silver
    b. Area of Contact deposit – large recently drilled and delineated copper oxide reserve
6. T45NR64E Sections 7-10, 15-22, 27-34
    a. Contact-Delano Copper-Gold-Silver
    b. Area of Contact deposit – known large recently drilled and delineated copper oxide reserve
7. T44NR53E Sections 1-4, 9-16, 21-27, 35-36
    a. Wood Gulch-Mountain City District with gold-silver-copper
    b. Wood Gulch gold deposit (Carlin-type deposit mined in 1980's)
    c. New Discovery: Gravel Creek high grade epithermal vein deposit (intercepts of 30' of 1.2 opt Au)

    d. Abundant active claim blocks with recent drilling
8. T44NR54E Sections 5-8, 17-20, 29-32
    a. Wood Gulch-Mountain City District with gold-silver-copper
    b. New Discovery: Gravel Creek high grade epithermal gold deposit
    c. Abundant active claim blocks with recent drilling
9. T47NR37E Sections 5-8, 17-20, 28-33
    a. Opalite District McDermitt
    b. Major Hg district, past producer of Hg
    c. lithium, gold, and gallium potential
    d. moat sediments of McDermitt caldera
10. T46N R37E Sections 3-6
    a. Opalite District McDermitt
    b. Major Hg district, past producer of Hg
    c. lithium, gold, and gallium potential
    d. moat sediments of McDermitt caldera
11. T45NR39E Sections 1-2, 11-14, 23-26, 35-36
    a. National District with much historic gold-silver production
    b. Belle vein
    c. Abundant claims with recent drilling
    d. High potential for high-grade underground gold mine
12. T42NR62E Sections 2-11, 14-23, 26-30, 33-35
    a. Snake Mountains Barite and Gold
    b. Location of major claim block recently staked by Newmont as a Carlin gold play
13. T42NR61E Sections 1-7, 11-14, 23-25
    a. Snake Mountains Barite and Gold
    b. Location of major claim block recently staked by Newmont as a Carlin gold play
    c. SFA is very close to active Big Ledge barite mine
    d. Recently drilled for barite
14. T43NR61E Sections 31,32
    a. Snake Mountains Barite and Gold
    b. Location of major claim block recently staked by Newmont as a Carlin gold play
    c. Area of active claims
15. T44NR69E Sections 1-5, 8-17,22-27,34-36
    a. Contact-Delano Copper-Gold-Silver
    b. White rock epithermal deposit – no resource, but very prospective
    c. Drilled extensively in past and recently
16. T45NR69E Sections 32-36
    a. Contact-Delano Copper-Gold-Silver
    b. White rock epithermal deposit – no resource, but very prospective
    c. Drilled extensively in past and recently
17. T46NR58E North half
    a. Jarbidge District with gold-silver
    b. Potential for high-grade epithermal gold-silver veins that would likely be mined underground
    c. Area of active claims and recent drilling
18. T45NR70E Sections 31-33
    a. Contact-Delano Copper-Gold-Silver
    b. White rock epithermal deposit – no resource, but very prospective

    c. Drilled extensively in past and recently
19. T44NR70E
    a. Contact-Delano Copper-Gold-Silver
    b. White rock epithermal deposit – no resource, but very prospective
    c. Drilled extensively in past and recently
20. T45NR36E West half
    a. Kings Valley Lithium Resource
    b. Western Lithium has outlined a resource and has demonstrated lithium can be extracted from the clay
    c. Lithium is critical material for batteries
    d. moat sediment of McDermitt caldera
    e. epithermal Au-Hg-U potential
21. T45NR35E Sections 7, 18-19, 24-26, 30, 34-36
    a. Kings Valley Lithium Resource
    b. Western Lithium has outlined a resource and has demonstrated lithium can be extracted from the clay
    c. Lithium is critical material for batteries
    d. moat sediment of McDermitt caldera
    e. epithermal Au-Hg-U potential
22. T47NR36E Sections 1-4, 9-16, 21-28, 33-36
    a. Opalite District McDermitt
    b. Major Hg district, past producer of Hg
    c. lithium, gold, and gallium potential
    d. moat sediments of McDermitt caldera
23. T46NR36E Sections 1-4, 31-34
    a. Kings Valley Lithium Resource
    b. Western Lithium has outlined a resource and has demonstrated lithium can be extracted from the clay
    c. Lithium is critical material for batteries
    d. moat sediment of McDermitt caldera
    e. epithermal Au-Hg-U potential
24. T44NR36E Sections 4-6
    a. Kings Valley Lithium Resource
    b. Western Lithium has outlined a resource and has demonstrated lithium can be extracted from the clay
    c. Lithium is critical material for batteries
    d. moat sediment of McDermitt caldera
    e. epithermal Au-Hg-U potential
25. T46NR33E Sections 13, 24-25
    a. Kings Valley Lithium Resource
    b. Western Lithium has outlined a resource and has demonstrated lithium can be extracted from the clay
    c. Lithium is critical material for batteries
    d. moat sediment of McDermitt caldera
    e. epithermal Au-Hg-U potential
26. T44NR55E East half
    a. Charleston polymetallic district

    b. Area of drilling over last 20 years on Island Mtn/St. Elmo prospect, potential Carlin-type gold deposit
    c. Adjacent to know geothermal system
27. T44NR56E
    a. Charleston Polymetallic district
    b. Area of drilling over last 20 years on Island Mtn./St. Elmo prospects– potential Carlin-gold deposits
    c. Has been drilled in last 10 years
    d. Lots of active claims in SFA
28. T43N R56E Sec 1-2
    a. Charleston Polymetallic district
    b. Area of drilling over last 20 years on Island Mtn./St. Elmo prospects– potential Carlin-gold deposits
    c. Has been drilled in last 10 years
    d. Lots of active claims in SFA
29. T45NR56E South half
    a. Charleston Polymetallic district
    b. Area of drilling over last 20 years on Island Mtn./St. Elmo prospects– potential Carlin-gold deposits
    c. Has been drilled in last 10 years,
    d. Diamond Jim mine – past polymetallic producer (1954-1985)
30. T44NR57E Sections 1-2, 11-15, 23-25
    a. Charleston Polymetallic district
    b. Areas of drilling since 1978
    c. Numerous active claims
31. T42NR60E Sections 1-3, 10-12
    a. Snake Mountains Barite and Gold
    b. Location of major claim block recently staked by Newmont as a Carlin gold play
    c. Recently drilled for gold
32. T43NR60E Sections 25-27, 34-36
    a. Snake Mountains Barite and Gold
    b. Location of major claim block recently staked by Newmont as a Carlin gold play
33. T44NR63E Sections 1-5
    a. Contact-Delano Copper-Gold-Silver
    b. Located south, adjacent to area of Contact copper deposit
    c. Area of numerous copper prospects
34. T44NR68E Sections 19-22, 27-34
    a. Contact-Delano Copper-Gold-Silver
    b. Delano polymetallic resource
    c. Numerous active claims
35. T43NR65E North half
    a. Contact-Delano Copper-Gold-Silver
    b. Area of numerous polymetallic prospects
    c. Numerous active claims
36. T45NR53E Sections 1-3, 10-15, 19-21, 28-33
    a. Wood Gulch-Mountain City District with gold-silver-copper
    b. Area of former Rio Tinto mine, Cu-Ag-Au

    c. Polymetallic mineralization, likely same belt of mineralization that contains the Rio Tinto deposit
    d. Area of active claims
37. T45NR54E Sections 5-8
    a. Wood Gulch-Mountain City District with gold-silver-copper
    b. Area of former Rio Tinto mine, Cu-Ag-Au
    c. Polymetallic mineralization, likely same belt of mineralization that contains the Rio Tinto deposit
    d. Area of active claims
38. T44NR64E Sections 1-6, 8-17, 20-29
    a. Contact-Delano Copper-Gold-Silver
    b. Area of numerous copper prospects
39. T43NR68E Sections 1-12
    a. Contact-Delano Copper-Gold-Silver
    b. Area of Indian Springs Tungsten resource
    c. Numerous active claims
40. T45NR65E Sections 12-13, 23-26, 35-36
    a. Contact-Delano Copper-Gold-Silver
    b. Area of Trout Creek Epithermal prospect
    c. Active claims
41. T44NR65E
    a. Contact-Delano Copper-Gold-Silver
    b. Area of numerous copper prospects
    c. Abundant active claims
    d. Plans in the past
42. T44NR66E Sections 15-21, 28-33
    a. Contact-Delano District with Copper-Gold-Silver
    b. Area of numerous copper prospects
    c. Abundant active claims
    d. Plans in the past
43. T44NR67E Sections 7-30, 34-36
    a. Contact-Delano Copper-Gold-Silver
    b. Active claims
    c. polymetallic prospects
44. T43NR40E Sections 20-22
    a. Paradise Valley silver-gold
    b. Some active claims in area
    c. Likely Mesozoic intrusion-related polymetallic mineralization
45. T40NR47E Sections 4-5
    a. Abundant active claims
    b. Recently drilled by Teck
    c. Carlin gold play through upper plate cover
46. T41NR47E Sections 24-27, 34-36
    a. Abundant active claims
    b. Recently drilled by Teck
    c. Carlin gold play through upper plate cover

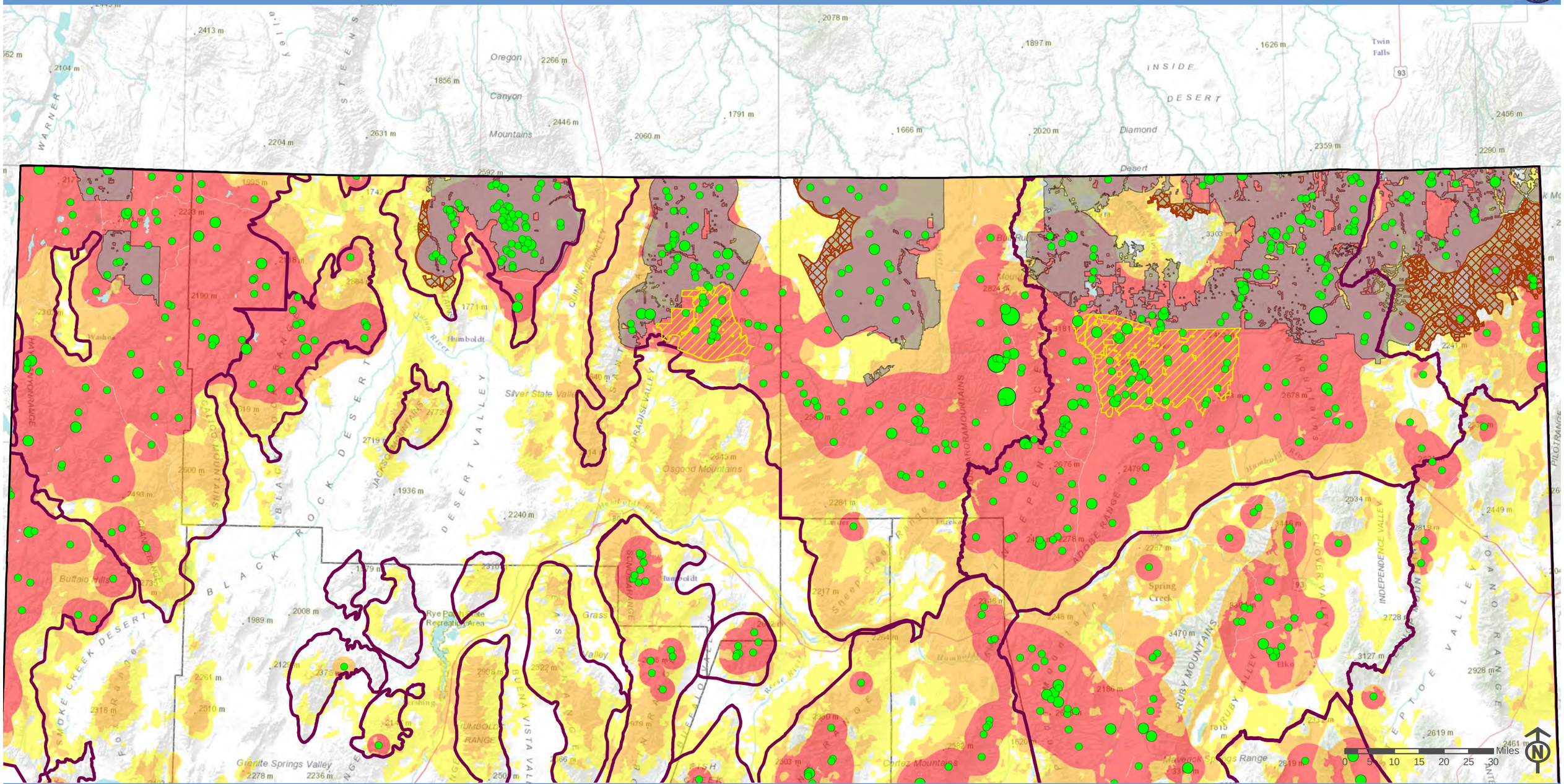
ATTACHMENT B

Areas of Limited Habitat Value for Greater Sage-grouse Within the Proposed BLM Mineral Withdrawal Area

And

Additional Priority Habitat for Greater Sage-grouse Adjacent to the Proposed BLM Mineral Withdrawal Area

Area 1: Proposed Greater Sage-Grouse Mineral Withdrawal Areas



NEVADA DEPARTMENT OF WILDLIFE

Sage-Grouse Focal Areas (Sept. 2015)

Biologically Significant Units

Mineral Withdrawal Revisions (Jan. 2016)

Addition (Core Habitat)

Removal (Limited Habitat)

Management Areas (Dec. 2015)

Priority

General

Other

Active Greater Sage-Grouse Lek Sites

Peak males at last count

<35

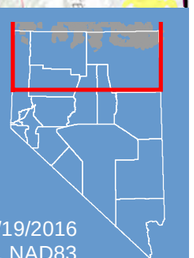
35 - 100

100 - 200

Focal Area Revisions:

Core Habitat Additions (49 active leks)
393,812 acres in Priority Managment Area
270 acres in Non-Habitat
394,082 acres total

Limited Habitat Removal (5 active leks)
49,750 acres in Priority Management Area
86,688 acres in General Management Area
116,571 acres in Other Managment Area
63,041 acres in Non-Habitat
316,050 acres total



1/19/2016

Projection: UTM Zone 11 North, NAD83

No warranty is made by the State of Nevada as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

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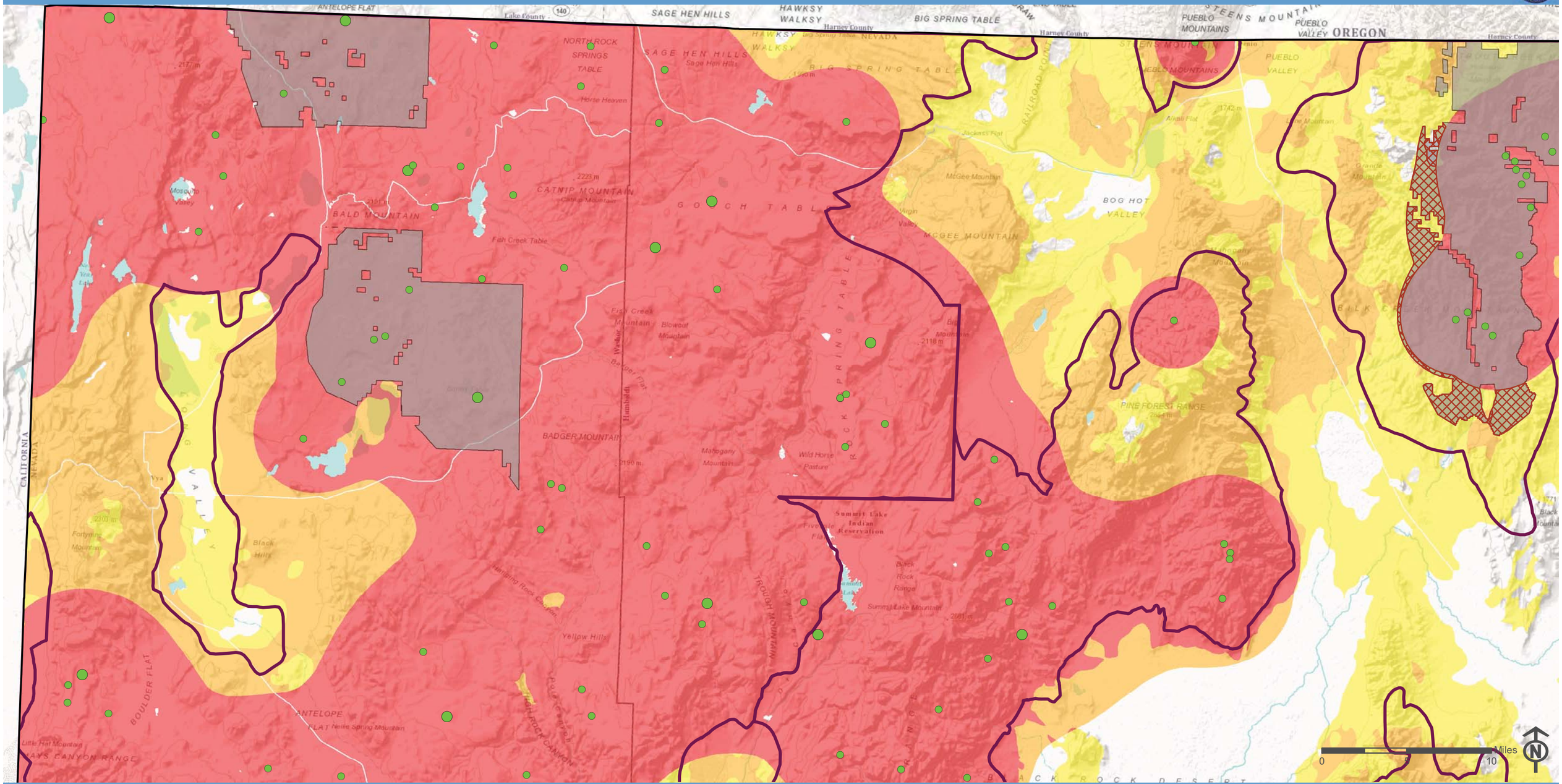

Sage-Grouse Focal Areas (Sept. 2015)

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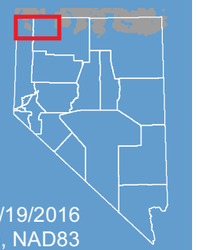

1/19/2016

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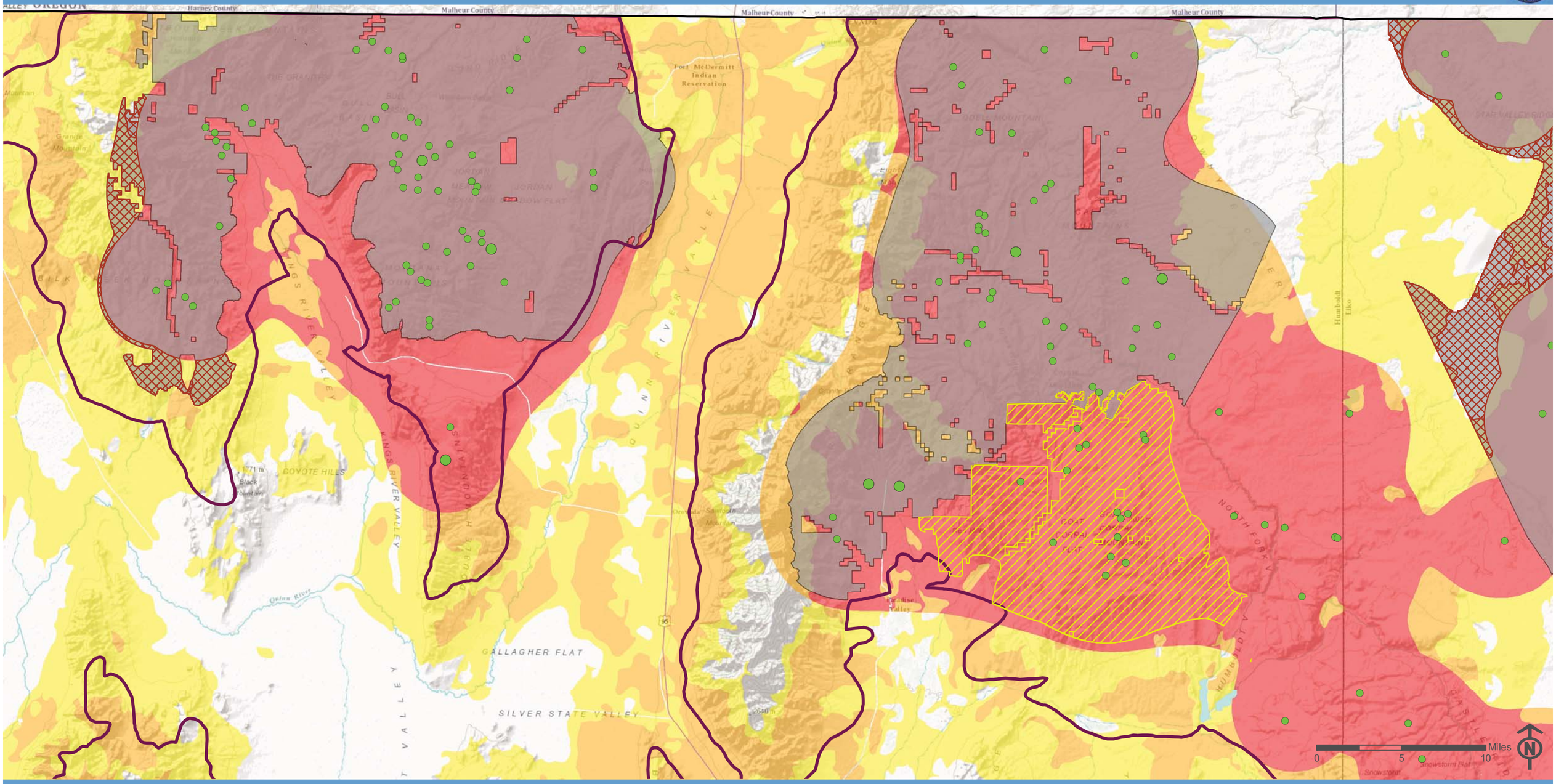
Area 2: Proposed Greater Sage-Grouse Mineral Withdrawal Areas



Sage-Grouse Focal Areas (Sept. 2015)

Biologically Significant Units

Mineral Withdrawal Revisions (Jan. 2016)

Addition (Core Habitat)

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Management Areas (Dec. 2015)

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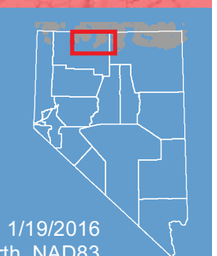

1/19/2016

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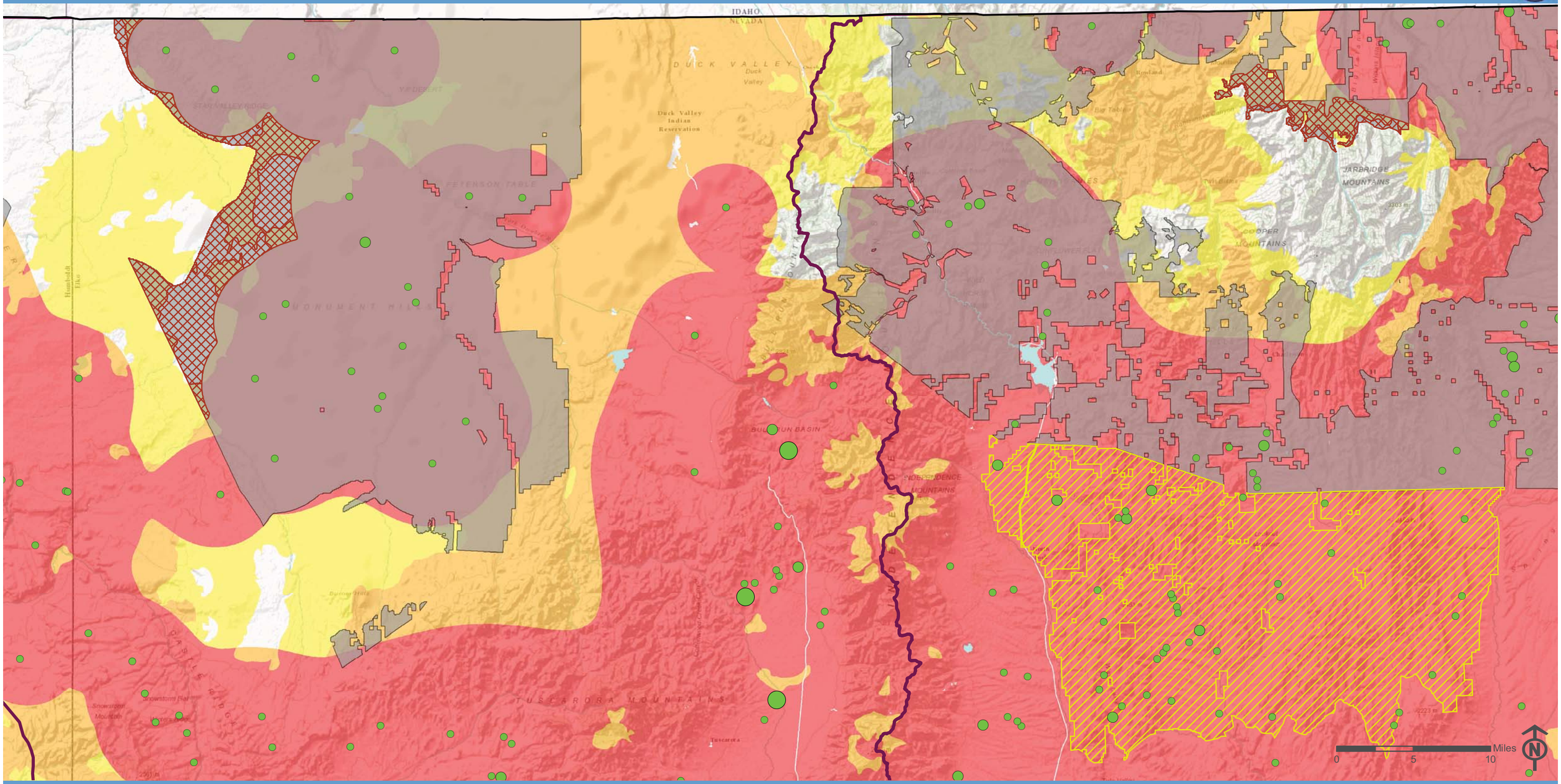
Area 3: Proposed Greater Sage-Grouse Mineral Withdrawal Areas



NEVADA DEPARTMENT OF WILDLIFE

Sage-Grouse Focal Areas (Sept. 2015)

Biologically Significant Units

Mineral Withdrawal Revisions (Jan. 2016)

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Removal (Limited Habitat)

Management Areas (Dec. 2015)

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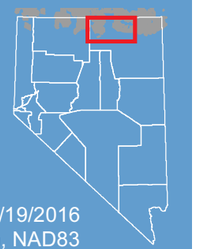

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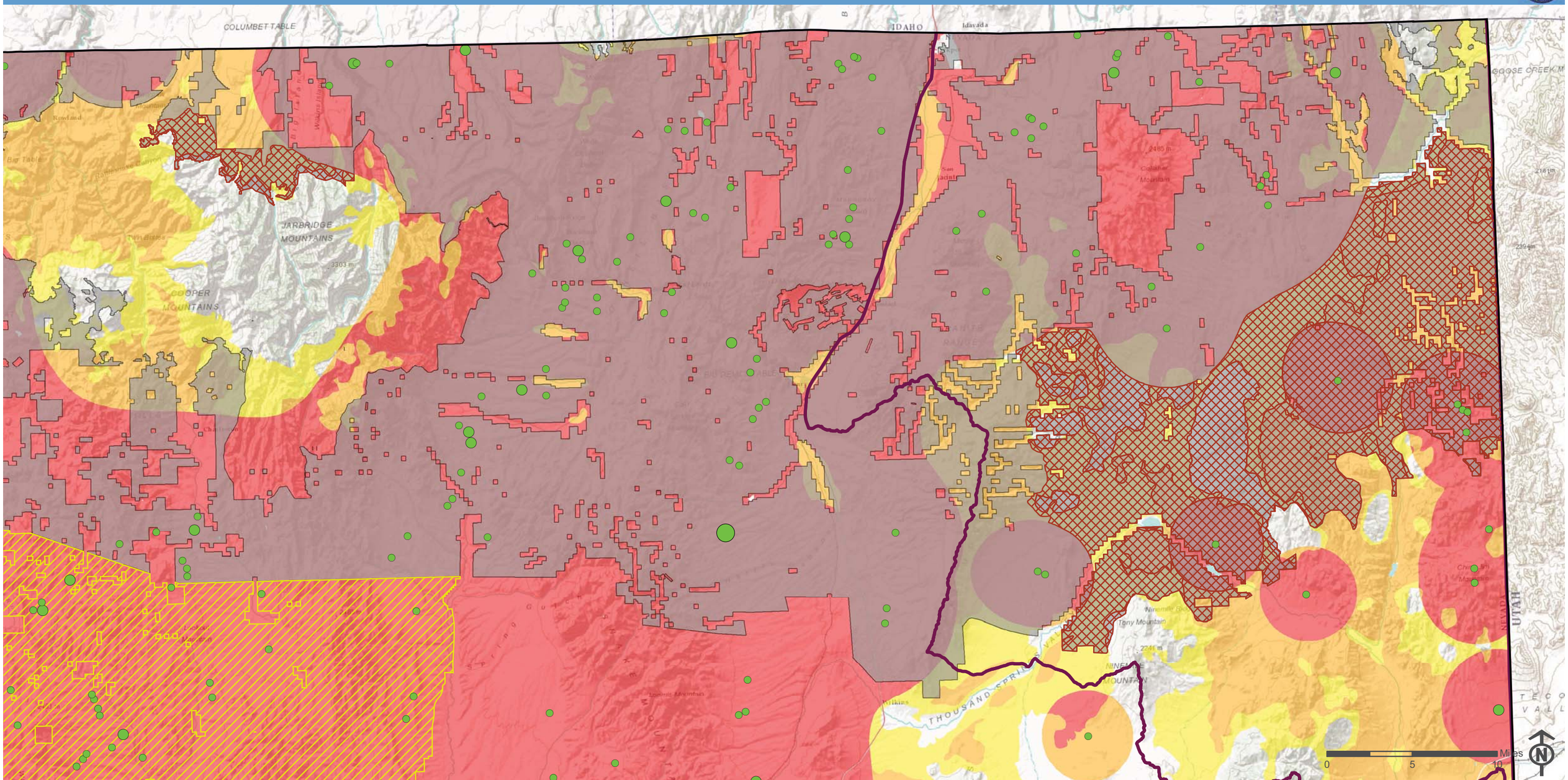
Area 4: Proposed Greater Sage-Grouse Mineral Withdrawal Areas



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Sage-Grouse Focal Areas (Sept. 2015)

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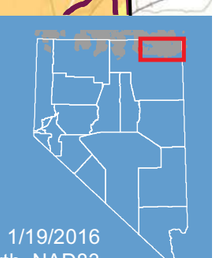

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