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STATE OF NEVADA
Sagebrush Ecosystem Program

SAGEBRUSH ECOSYSTEM COUNCIL
STAFF REPORT
MEETING DATE: January 8-9, 2014

DATE: January 3, 2014

TO: Sagebrush Ecosystem Council Members

FROM: Sagebrush Ecosystem Technical Team
Telephone: 775-684-8600

THROUGH: Tim Rubald, Program Manager
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SUBJECT: Withdrawal of Section 7.0 De Minimis Activities from the State Plan and the State Alternative.

SUMMARY

This item requests withdrawal of Section 7.0 De Minimis Activities from the State Plan and the State Alternative.

PREVIOUS ACTION

March 27, 2013. The Council directed the SETT to meet with USFWS and NDOW staffs to discuss the USFWS comments on the Nevada State Plan and report back to the Council.

April 22, 2013. The Council directed the SETT to further develop the Nevada State Plan and the EIS Alternative to incorporate the concerns expressed by the USFWS.

December 18, 2013. The Council directed the SETT to work with the Science Work Group in order to further develop sections within the State Plan and State Alternative on livestock grazing.

BACKGROUND

This item requests withdrawal of Section 7.0 De Minimis Activities from the State Plan (see Attachment 1) and the State Alternative. The following outlines justification to remove this section from these documents.

- This section, adopted by the Nevada Sage Grouse Advisory Committee for inclusion in the 2012 State Plan, is verbatim from the State of Wyoming plan. As the De Minimis section in the Wyoming Plan, it identifies activities that are "de minimis" (exempt) from inclusion in Wyoming's Density Disturbance Calculation Tool. It is not clear within the 2012 State Plan what these activities

are de minimis from/to since Nevada does not have anything similar to the DDCT.

- Following on the previous bullet, de minimis could have possibly been in relation to what activities would trigger SETT consultation. However, revisions to Section 3.0 within the Nevada State Plan, as adopted by the Council on December 18, 2013, now adequately identify what activities will trigger the consultation process and potential mitigation. The activities that are listed in Section 7.0 are addressed in the revised section 3.1.1 (see Attachment 2). As well, the addition of Appendix A Site Specific Consultation Based Design Features (see Attachment 3) provides guidelines that minimize the potential impacts from these activities.
- Many of the items listed in Section 7.0 apply to livestock grazing. At the December 18 meeting, the Council further directed staff to review, through the Science Work Group, Section 6.5 Improper Livestock Grazing as well as the livestock grazing section of the State Alternative (E) within the BLM/USFS DEIS. The SETT will likely revise Section 6.5 of the State Plan for consideration of adoption by the SEC. The combination of these processes should adequately address the shortfalls of the Section 7.0 cited in the U.S. FWS September 14, 2012 comment letter (see Attachment 4) as well as eliminate the need for Section 7.0 within the State Plan.

FISCAL IMPACT

None

RECOMMENDATION

Staff recommends that Section 7.0 De Minimis Activities of the State Plan and the State Alternative be withdrawn from the updated version of these documents for the reasons identified in the background section of this staff report. If there are items in Section 7.0 that the Council believes are not adequately addressed in Section 3.0, in Appendix A, or to be addressed with the Science Work Group, the Council might choose to make a motion to withdraw Section 7.0 but provide direction to the SETT to address any outstanding items within the continued revision of the State Plan.

POSSIBLE MOTION

Should the Council agree with the staff recommendation, a possible motion would be, "Motion to withdraw section 7.0 De Minimis Activities within the State Plan for Conservation of Greater Sage-Grouse in Nevada and references in the State Alternaive".

Attachments:

1. Section 7.0 De Minimis Activities
2. Revised Section 3.0 Goals and Objectives, adopted by Council December 18, 2013.
3. Appendix A: Site Specific Consultation Based Design Features
4. USFWS Informal Draft Comments on Nevada Strategic Plan for Conservation of Greater Sage-Grouse, September 14, 2012

Attachment 1

2012 State Plan Section 7.0

De Minimis Activities

7.0 DE MINIMIS ACTIVITIES

Existing land uses and landowner activities in greater sage-grouse occupied, suitable, and potential habitat that do not require state agency review for consistency with this Strategic Plan include the following:

1. Existing animal husbandry practices including branding, docking, herding, trailing, etc.

2. Existing farming practices excluding conversion of sagebrush/grassland to agricultural lands.

3. Existing grazing operations that utilize recognized rangeland management practices included in allotment management plans, NRCS grazing plans, prescribed grazing plans, etc.

4. Construction of agricultural reservoirs and aquatic habitat improvements of less than ten surface acres and drilling of agriculture and residential water wells including installation of tanks, water windmills and solar water pumps more than 0.6 miles from the perimeter of the lek. Within 0.6 miles from leks, no review is required if construction does not occur from March 15 to June 30 and construction does not occur on the lek. All water tanks shall have escape ramps.

5. Agricultural and residential electrical distribution lines and substations more than 0.6 miles from leks. Within 0.6 miles from leks no review is required if construction does not occur from March 15 to June 30 and construction does not occur on the lek. Raptor perching deterrents should be installed on all poles within 0.6 miles from leks.

6. Agricultural water pipelines if construction activities are more than 0.6 miles from leks. Within 0.6 miles from leks no review is required if construction does not occur March 15 to June 30 and construction is reclaimed.

7. New fencing greater than 1.25 miles from leks and maintenance of existing fencing. For new fencing within 1.25 miles of leks, fences with documented high potential for strikes should be marked.

8. Irrigation (excluding the conversion of sagebrush-grassland to new irrigated lands).

9. Spring development if the spring is protected with fencing and enough water remains at the site to provide mesic (wet) vegetation.

10. Herbicide use within existing road, pipeline and power line rights-of-way. Herbicides application using spot treatment. Grasshopper/Mormon cricket control following Reduced Agent-Area Treatments (RAATs) protocol.

11. State and county road maintenance.

12. Cultural resource pedestrian surveys.

13. Emergency response.

Attachment 2

Nevada State Plan Section 3.0 Revision-FINAL

As Approved by SEC on 12-18-2013

3.0 CONSERVATION GOALS AND OBJECTIVES

The State's goal for the conservation of sage-grouse in the state of Nevada is to provide for the long-term conservation of sage-grouse by protecting the sagebrush ecosystem upon which the species depends. Redundant, representative, and resilient populations of sage-grouse will be maintained through amelioration of threats; enhancement and/ or protection of key habitats; mitigation for loss of habitat due to anthropogenic disturbances; and restoration or rehabilitation of habitat degraded or lost due to Acts of Nature.

The State's goal for the conservation of sage-grouse will provide benefits for the sagebrush ecosystem and for many other sagebrush obligate species. Sage-grouse are known to be an "umbrella species" for many sagebrush obligate and associated species. The enhancement and restoration measures that bring resiliency and restore ecological functions to sagebrush ecosystems will also serve to ensure quality habitat for sage thrasher, sage sparrow, Brewer's sparrow, sagebrush vole, pygmy rabbit, pronghorn antelope, mule deer, and many other species.

The State's goal will be met through conservation objectives for anthropogenic disturbances and Acts of Nature, principally large acreage wildland fires and subsequent invasion by non-natives species. This combined strategy creates the regulatory framework through which sage-grouse habitat can be conserved and the decline of sage-grouse populations can be stopped in the state of Nevada. This section of the Plan details related polices and an adaptive management approach that will provide guidance to achieve these objectives.

The guiding principles that create the balanced foundation and vision for a coordinated, management approach for conservation of sage-grouse and the sagebrush ecosystem in Nevada are as follows:

- Conserve sage-grouse and their habitat in Nevada while maintaining the economic vitality of the State.
- Due to the broad reach of sage-grouse habitat, effective management and implementation of sage-grouse conservation actions must be conducted through a collaborative, interagency approach that engages private, non-governmental, local, state, Tribal and federal stakeholders to achieve sufficient conservation of the sage-grouse and their habitat.
- Adaptive management will be employed at all levels of management in order to acknowledge potential uncertainty upfront and establish a sequential framework in which decision making will occur in order to learn from previous management actions.

3.1 Anthropogenic Disturbances

3.1.1 <u>Conservation Objective</u> – No net unmitigated loss due to anthropogenic disturbances

The overarching objective of Nevada's plan is to achieve conservation through no net unmitigated loss of sage-grouse habitat due to anthropogenic disturbances within Sage-Grouse Management Areas (SGMAs) in order to stop the decline of sage-grouse populations. No net unmitigated loss is defined as the State's objective to maintain the current quantity of quality of sage-grouse habitat within SGMAs at the state-wide level by protecting existing sage-grouse habitat or by mitigating for loss due to

anthropogenic disturbances. Mitigation requirements are determined by the Conservation Credit System. This objective will be measured by the credit to debit ratio.

Anthropogenic disturbance is defined here as any human-caused activity or action and/ or human-created physical structures that may have adverse impacts on sage-grouse and/ or their habitat. The term anthropogenic disturbance and its associated conservation policies will include, but not limited to the following project categories: mineral development and exploration and its associated infrastructure; renewable and non-renewable energy production, transmission, and distribution and its associated infrastructure; paved and unpaved roads and highways; cell phone towers; landfills; pipelines; residential and commercial subdivisions; special use permits; right-of-way applications; and other large-scale infrastructure development. Livestock operations and agricultural activities and infrastructure related to small-scale ranch and farm businesses (e.g. water troughs, fences, etc.) are not included in this definition, though Section 6.5 and Appendix A address how to minimize impacts to sage-grouse and their habitat from these activities.

3.1.2 Conservation Policies – "Avoid, Minimize, Mitigate"

The state of Nevada's overriding policy for all management actions in SGMAs is to "avoid, minimize, and mitigate" impacts to sage-grouse habitat.

This is a fundamental hierarchical decision process that seeks to:

Avoid – Eliminate conflicts by relocating disturbance activities outside of sage-grouse habitat in order to conserve sage-grouse and their habitat. Avoidance of a disturbance within sage-grouse habitat is the preferred option.

Minimize –If impacts are not avoided, the adverse effects will need to be both minimized and mitigated. Impacts will be minimized by modifying proposed actions and/ or developing permit conditions to include measures that lessen the adverse effects to sage-grouse and their habitat. This will be accomplished through Site Specific Consultation-Based Design Features, such as reducing the disturbance footprint, seasonal use limitations, co-location of structures, etc. Minimization does not preclude the need for mitigation of a disturbance. Any disturbance in habitat within a SGMA will require both minimization and mitigation.

Mitigate – If impacts are not avoided, after required minimization measures are specified, residual adverse effects on designated sage-grouse habitat are required to be offset by implementing mitigation actions that will result in replacement or enhancement of the sage-grouse habitat to balance the loss of habitat from the disturbance activity. This will be accomplished through the Conservation Credit System.

Proposed anthropogenic disturbances within a SGMA will trigger consultation with the SETT for assessment of impacts to sage-grouse and their habitat and compliance with SEC and other relevant agency policies. Project proponents considering projects in sage-grouse habitat not located within SGMAs are encouraged to contact the SETT for voluntary project planning guidance to avoid, minimize, and mitigate potential disturbances. Specifics of the SETT consultation are detailed in a Memorandum of Understanding (MOU) in Appendix XX. SETT consultation is designed to provide a regulatory

mechanism to ensure that sage-grouse conservation policies are applied consistently throughout the State and streamline the federal permitting process.

Determination of sage-grouse habitat will be based on the USGS Habitat Suitability Map (Figure XX). At the onset of a proposed project, habitat evaluations or "ground-truthing" of the project site and its surrounding areas shall be conducted by a qualified biologist with sage-grouse experience using methods as defined in Stiver et al (2010) to confirm habitat type. Evaluations can be conducted by the SETT or NDOW at the request of the project proponent.

The specific steps for the implementation of the "avoid, minimize, mitigate" policy are as follows:

Avoid

Project proponents must first seek to avoid disturbance in sage-grouse habitat within SGMAs. If the project is located entirely outside of habitat, but within a SGMA it will still be analyzed for indirect effects, such as noise and visual impacts. A project will only be considered to have avoided impacts if it is physically located in non-habitat and it is determined to have no indirect impacts effecting designated habitat within SGMAs. If this is determined, no further consultation with the SETT is required.

It is important to note that the avoid step is not an "all or nothing" concept. If the entirety of a project cannot be relocated to non-habitat, alternatives will be explored to relocate portions of the project to non-habitat. (For example, if a mine cannot be relocated into non-habitat, power distribution lines associated with the project may be relocated to non-habitat.) This may reduce minimization and mitigation requirements for the project proponent.

Anthropogenic disturbances should be avoided within SGMAs. If avoidance is not possible, the project proponent must demonstrate why it is not possible in order for the SETT to consider minimization and mitigation alternatives. The process to demonstrate that avoidance is not possible (the "avoid process") is determined by four management categories, which consider both sage-grouse breeding population density and habitat suitability within SGMAs. This approach was taken in order to conserve large and functioning sage-grouse populations, as well as the habitat needed to support sage-grouse survival.

The burden of proof to demonstrate that avoidance is not possible within SGMAs will be on the project proponent and will require the project proponent to demonstrate the specified criteria listed in Table 3-1 as determined by the management categories the proposed project is located in. Exemptions to the avoid policy will be granted if all the criteria in Table 3-1 is met. A higher burden of proof is set for project proponents to demonstrate that avoidance is not possible in areas that have higher densities of sage-grouse populations and highly suitable habitat.

"High Population Density" Management Areas[1]

The "High Population Density" Management Areas support the highest breeding densities of sage-grouse in the State of Nevada. These areas include approximately X% of the breeding male sage-grouse counted during lek surveys and encompass approximately X% of the known leks in the State of Nevada. These areas represent the strongholds (or "the best of the best") for sage-grouse populations in the State of Nevada and support the highest density of breeding populations. Thus, the management

[1] Exact terminology to be defined with input from USGS and NDOW.

strategy is to conserve these areas by avoidance of anthropogenic disturbances in order to maintain or improve current sage-grouse population levels.

Project proponents must seek to avoid disturbances within SGMAs. If the project proponent wishes to demonstrate that avoidance is not possible within these areas, exemptions will be granted to this restriction as part of the SETT consultation. The project proponent must demonstrate that all of the following criteria listed below (also see Table 3-1) are met as part of the SETT consultation process in order to be granted an exemption:

- Demonstrate that the project cannot be reasonably accomplished elsewhere – the purpose and need of the project could not be accomplished in an alternative location;
- Demonstrate that the individual and cumulative impacts of the project would not result in habitat fragmentation or other impacts that would cause sage-grouse populations to decline through consultation with the SETT;
- Demonstrate that sage-grouse population trends within the SGMA are stable or increasing over a 10-year rolling average;
- Demonstrate that project infrastructure will be co-located with existing disturbances to the greatest extent possible;
- Develop Site Specific Consultation-Based Design Features to minimize impacts through consultation with the SETT; and
- Mitigate unavoidable impacts through compensatory mitigation via the Conservation Credit System. Mitigation rates will be higher for disturbances within this category.

"Habitat Suitability Category A" Management Areas[1]

"Habitat Suitability Category A" Management Areas are areas that are determined to be highly suitable habitat for sage-grouse by the USGS Habitat Suitability Model, but are not contained within the "High Population Density" Management Areas.

Management in these areas provide more flexibility to project proponents, though avoidance in these areas is still the preferred option and project proponents are encouraged to develop outside of these areas whenever possible. Anthropogenic disturbances will be permitted in these areas if the criteria listed below (also see Table 3-1) are met as part of the SETT consultation process:

- Demonstrate that the project cannot be reasonably or feasibly accomplished elsewhere – the purpose and need of the project could not be accomplished in an alternative location;
- Demonstrate that project infrastructure will be co-located with existing disturbances to the greatest extent possible. If co-location is not possible, siting should reduce individual and cumulative impacts to sage-grouse and their habitat;
- Demonstrate that the project should not result in unnecessary and undue habitat fragmentation that may cause declines in sage-grouse populations within the SGMA through consultation with the SETT;
- Develop Site Specific Consultation-Based Design Features to minimize impacts through consultation with the SETT; and

[1] Exact terminology to be defined with input from USGS and NDOW.

- Mitigate for unavoidable impacts through compensatory mitigation via the Conservation Credit System.

"Habitat Suitability Category B" Management Areas[1]
"Habitat Suitability Category B" Management Areas are areas determined to be suitable habitat for sage-grouse, though less suitable than "Habitat Suitability Category A" Management Areas and are not contained within the "High Population Density" Management Areas. Management of these areas provides the greatest flexibility to project proponents. Anthropogenic disturbances will be permitted in these areas if the criteria listed below (also see Table 3-1) are met as part of the SETT consultation process:

- Demonstrate that the project cannot be reasonably or feasibly accomplished elsewhere – the purpose and need of the project could not be accomplished in an alternative location;
- Demonstrate that project infrastructure will be co-located with existing disturbances to the greatest extent possible;
- Develop Site Specific Consultation-Based Design Features to minimize impacts through consultation with the SETT; and
- Mitigate for unavoidable impacts through compensatory mitigation via the Conservation Credit System.

Non-Habitat Management Areas
Non-Habitat Management Areas are areas determined to be unsuitable for sage-grouse by the USGS Habitat Suitability Model. As specified above, all proposed projects within SGMAs, including in non-habitat within SGMAs must conduct habitat evaluation or ground-truthing to confirm presence or absence of sage-grouse habitat. If areas are confirmed by habitat evaluations to be non-habitat, an analysis for indirect impacts on sage-grouse within their habitat in SGMAs will be required to determine if Site Specific Consultation-Based Design Features to minimize impacts and compensatory mitigation are necessary as part of the SETT consultation process (also see Table 3-1).

Minimize
If a project cannot avoid adverse effects (direct or indirect) to sage-grouse habitat within SGMAs, the project proponent will be required to implement Site Specific Consultation-Based Design Features that minimize the project's adverse effects to sage-grouse habitat.

Minimization will include consultation with the SETT to determine which Site Specific Consultation-Based Design Features would be most applicable to the project when considering site conditions, types of disturbance, etc. Some general examples could include: reducing the footprint of the project, siting infrastructure in previously disturbed locations with low habitat values, noise restrictions near leks during breeding season, and washing vehicles and equipment to reduce the spread of invasive species. Land use specific Site Specific Consultation-Based Design Features are included in Appendix A.

[1] Exact terminology to be defined with input from USGS and NDOW.

A list of Site Specific Consultation-Based Design Features for the project must be specified and agreed upon by the SETT and project proponent prior to the start of the project and will become part of the permit/ contract requirements issued for the project. The project proponent will be required to implement, maintain, and monitor the required DFs in good working order throughout the duration of the project.

Mitigate

Mitigation involves the successful restoration or enhancement of sage-grouse habitat and is designed to offset the negative impacts caused by an anthropogenic disturbance. Mitigation will be required for all anthropogenic disturbances impacting sage-grouse habitat within SGMAs. Mitigation requirements will be determined by the State's Conservation Credit System (Section 8.0).

Options for mitigation will be identified in the State's Strategic Action Plan for Mitigation. The State's Strategic Action Plan for Mitigation will identify prioritized areas on public and private lands to implement a landscape scale restoration effort. This will spatially identify where the primary threats to sage-grouse habitat are located throughout the State and provide management guidance for how to ameliorate these based on local area conditions and ecological site descriptions. The prioritization includes efforts to use mitigation funding in areas where sage-grouse will derive the most benefit, even if those areas are not adjacent to or in the vicinity of impacted populations. This Strategic Action Plan for Mitigation will be updated at least every five years to reflect improvements in understanding and technology for mitigation activities.

3.1.3 Adaptive Management

The SETT, in close coordination with applicable federal and state agencies will evaluate and assess the effectiveness of these policies at achieving the objective of no net unmitigated loss and will provide a report to the SEC annually. The objective will be considered to have been met if there is a positive credit to debit ratio within the Conservation Credit System on an annual basis. The State acknowledges that this may be difficult to achieve within the first five years of the Conservation Credit System due to an initial lag in the start of the program, but by leveraging funds, credits should outweigh debits over time. If the State falls short of its objective, the SEC will reassess and update polices and management actions based on recommendations from the SETT using the best available science to adaptively manage sage-grouse habitat.

3.2 Acts of Nature – Fire and Invasive Species

3.2.1 Conservation Objectives –

The overarching objectives of Nevada's plan is to achieve conservation through the following short and long term objectives for Acts of Nature in order to stop the decline of sage-grouse populations and restore and maintain a functioning sagebrush ecosystem:

Short Term:

- *Reduce the amount of sage-grouse habitat loss due to large acreage wildfires and invasion by non-native species.*

Long Term:

- *Maintain an ecologically healthy and intact sagebrush ecosystem that is resistant to the invasion of non-native species and resilient after disturbances, such as wildfire.*

- *Restore wildfire return intervals to within a spatial and temporal range of variability that supports sustainable populations of sage-grouse and other sagebrush obligate species.*

The Greater Sage-grouse Advisory Committee, using the best available science, identified fire and invasive species, principally cheatgrass, as the primary threat to sage-grouse and their habitat in the state of Nevada. The State acknowledges these threats must be adequately addressed in order to achieve the conservation goal for sage-grouse within the state of Nevada; however, it is not economically or ecologically feasible to restore all fire damaged or invasive species dominated landscapes at this point, nor is it possible to prevent all fires. The State will put forth a best faith effort to reduce the rate of sage-grouse habitat loss due to fire and invasive species. This objective will be measured by evaluating the amount of habitat lost due to fire and subsequently invaded by non-native species over a five year period.

3.2.2a Conservation Policies – Fire Management: Paradigm Shift

In order to address the threat of fire and invasive species, which has long challenged land managers throughout the western United States, the State proposes a paradigm shift. This would entail a more proactive, rather than reactive approach, to stop the dominance of invasive species and restore fire to within a range of variability to support sustainable populations of sage-grouse. These policies include:

1. A shift in focus and funding from wildland fire suppression to pre-suppression.
    a. Dedicate federal, state, and local funding for pre-suppression activities separate from funding for suppression and post-fire rehabilitation activities. Post fire rehabilitation/restoration funding should be available for up to three years following each incident in order to monitor effectiveness and to accommodate for poor initial success.
    b. "Hold the line" against fire and invasive species near priority sage-grouse habitat. Develop a prioritized pre-suppression plan that focuses on priority sage-grouse habitat, similar to the Wildland Urban Interface planning analysis.
    c. Emphasize "Strategic Fuels Management". Location of fuels management projects should be identified at the broad landscape level to provide protections to areas of sage-grouse habitat that have compromised resilience, resistance, and heterogeneity. They should also be implemented to protect against catastrophically large wildfires and allow for repeated attempts to suppress active fires. Provide consistent funding for maintenance of fuels management projects. Establish effective monitoring plans to learn from implementation of these tools and subsequent effectiveness during suppression. Fuels management tools may include: fuels reduction treatments, including proper livestock grazing; greenstripping; brownstripping; and maintaining riparian areas as natural fuels breaks by managing for Proper Functioning Condition (PFC).
2. Support robust, coordinated, and rapid fire suppression management using a diversity of agencies, including federal, state and local government, as well as empowering local landowners, such as through Rural Fire Protection Districts and Wildfire Support Groups.

3. Wildland fire should be used strategically and should not be suppressed in all instances. Allow fires to burn naturally if located in areas that may benefit sage-grouse habitat and would not risk the spread of invasive species, but only if human lives and property are not at risk. Continue to suppress wildland fires that may cause the spread of invasive species into sage-grouse habitat. Use ecological site descriptions and associated state and transition models to identify such areas.
4. Manage wildland fires in sage-grouse habitat to retain as much habitat as possible. Interior islands of vegetation in areas of habitat should be protected through follow-up mop-up of the island's perimeter and interior, when fire crew safety and welfare are not at risk.
5. Post-fire rehabilitation efforts should be collaborative and strategic in approach. A wide variety of agencies, representing multiple disciplines should be involved in order to leverage funding opportunities and provide knowledge on appropriate site-specific treatments. Rehabilitation efforts should focus on preventing the spread of invasive species, particularly in or near sage-grouse habitat.
6. Emphasize continued research and provide funding to enhance knowledge and understanding of how to prevent catastrophic wildfire, the invasion of cheatgrass, and reclamation/ restoration techniques.

3.2.2b Conservation Policies – Invasive Species: Prevent, Control, Restore, and Monitor

While wildfire is commonly the vector for the spread of invasive species, such as cheatgrass, invasive species are currently widespread throughout the Great Basin and can spread without the aid of wildfire. In order to address the general threat of invasive species, the State proposes a policy of Prevent, Control, Restore, and Monitor. These policies include:

1. ***Prevent*** the establishment of invasive species into uninvaded sage-grouse habitat. This will be achieved by conducting systematic and strategic detection surveys, data collection, and mapping of these areas and engaging in early response efforts if invasion occurs. This will be achieved by further developing federal and state partnerships and working with local groups, such as Weed Control Districts, Cooperative Weed Management Areas, and Conservation Districts. This is the highest priority for the state of Nevada.
2. ***Control*** invasive species infestations in sage-grouse habitat already compromised by invasion. Control techniques may include: biomass removal by means such as strategic and targeted grazing, mowing, or using herbicides. In addition, the State will continue to support research in the development of biological control agents and deploy emerging technologies in Nevada as they become available.
3. ***Restore*** ecologically functioning sagebrush ecosystems in sage-grouse habitat already compromised by invasion. Restoration may include revegetating sites with native plants cultivated locally or locally adapted, non-native plant species where appropriate. Control of invasives must be accompanied by ecosystem restoration.
    a. Ecological site descriptions and associated state and transition models will be used to identify target areas for resiliency enhancement and/ or restoration. Maintaining and/or enhancing resilience should be given top priority. In the Great Basin sagebrush-bunchgrass communities, invasion resistance and successional resilience following disturbance are functions of a healthy perennial bunchgrass component. Therefore a combination of active and passive management will be required to ensure this functionality. Areas that are in an invaded state that will likely transition to an annual

grass monoculture if a disturbance occurs and are located within or near sage-grouse habitat should be prioritized for restoration efforts to increase resistance and resilience.

4. ***Monitor*** and adaptively manage to ensure effectiveness of efforts to prevent, control and restore.

3.2.3 Adaptive Management

Fire and the subsequent reestablishment of plant species (native or not) is a natural process, and consequently this threat is extremely challenging across the western United States as humans are still limited in our ability to directly control this cycle. However, scientific understanding of ecological processes and resource management techniques continue to improve. A commitment by the State to address this issue through adaptive management will lead to a greater understanding of the ecological mechanisms that drive these processes and will subsequently lead to improvements in resource management practices that prevent catastrophic wildfire and the subsequent invasion of cheatgrass.

The SETT will evaluate and assess the effectiveness of these policies at achieving the stated short and long term objectives and will provide a report to the SEC annually. The objectives will be met if there is a decrease or leveling off of the amount of habitat loss due to fire and subsequent invasion by annual grasses over a five year period. If the State and federal agencies fall short of this objective, the SEC will reassess and update polices and management actions based on recommendations from the SETT using the best available science to adaptively manage sage-grouse habitat.

Citations

Stiver, S.J., E.T Rinkes, and D.E. Naugle. 2010. Sage-grouse Habitat Assessment Framework. U.S. Bureau of Land Management. Unpublished Report. U.S. Bureau of Land Management, Idaho State Office, Boise, Idaho.

Attachment 3

Appendix A Design Features

As Approved by SEC on 12-18-2013

Appendix A: Site Specific Consultation Based Design Features

Site Specific Consultation Based Design Features (here after Design Features) are used to minimize impacts to GRSG and its habitat due to disturbances on a project by project and site by site basis. Design Features in the state of Nevada's plan apply to all newly proposed projects and modifications to existing projects. Existing projects within SGMAs are not currently subject to Design Features; however all Design Features listed below, according to program area, are required to be considered as part of the SETT Consultation process. The state of Nevada recognizes that all Design Features may not be practical, feasible, or appropriate in all instances considering site conditions and project specifications, nor is this list completely exhaustive. Therefore, the SETT in coordination with the project proponent, will consider all of the listed Design Features on a site-specific basis. If certain Design Features are determined to not be practical, feasible, or appropriate for the specific project site, the SETT will document the reasons the Design Features were not selected. The SETT may also consider additional Design Features that may minimize impacts to GRSG and its habitat that are not specifically listed here and document the reasons for selecting the additional Design Features.

Mineral Resources

Fluid Minerals

Roads

• Do not construct new roads where roads already in existence, could be used or upgraded to meet the needs of the project or operation.

• Design roads to an appropriate standard, no higher than necessary, to accommodate their intended purpose and level of use.

• Locate roads outside of key GRSG seasonal habitat, such as leks and late brood rearing habitat areas.

• Coordinate road construction and use among ROW or SUA holders, when the option is available.

• Avoid constructing roads within riparian areas and ephemeral drainages (note that such construction may require permitting under section 401 and 404 of the Clean Water Act).

• Construct road crossings at right angles to ephemeral drainages and stream crossings.

• Work with local governments to enforce speed limits and design roads to be driven at speeds appropriate to minimize vehicle/wildlife collisions.

• Establish trip restrictions (Lyon and Anderson 2003) or minimization through use of remote access technology, such as telemetry and remote well control (e.g., Supervisory Control and Data Acquisition).

• Do not issue ROWs or SUAs to counties on newly constructed energy development roads, unless for a temporary use consistent with all other terms and conditions included in this document.

• Restrict vehicle traffic to authorized users on newly constructed routes by employing traffic control devices such as signage, gates, fencing etc.

• Dust abatement on roads and pads will be based on road use, road condition, season, and other pertinent considerations.

• Close and rehabilitate duplicate roads by restoring original landform and establishing desired vegetation, in cooperation with landholders and where appropriate authority exists to do so.

Operations

• Cluster disturbances associated with operations and facilities as close as possible, unless site specific conditions indicate that disturbances to sagebrush habitat would be reduced if operations and facilities locations would best fit a unique special arrangement.

• Use directional and horizontal drilling to reduce surface disturbance.

• Place infrastructure in already disturbed locations.

• Apply a phased development approach with concurrent reclamation through a coordination process among relevant parties.

• Place liquid gathering facilities outside of priority areas. Have no tanks at well locations within priority habitat areas to minimize truck traffic, and perching and nesting sites for ravens and raptors.

• Pipelines should be under or immediately adjacent to the road.

• Reduce motor vehicle travel during field operations through development and implementation of remote monitoring and control systems plans.

To reduce predator perching, limit the construction of vertical facilities and fences to the minimum number and amount needed.

• Site and/or minimize linear ROWs or SUAs to reduce disturbance to GRSG habitats.

•Co-locate new utility developments (power lines, pipelines, etc.) and transportation routes with existing utility or transportation corridors where adequate spacing separation can be achieved in order to preserve grid reliability and ongoing maintenance capability.

• Bury distribution power lines of up to 35kV where ground disturbance can be minimized. Where technology and economic factors allow, bury higher kV power lines.

• Power lines, flow lines, and small pipelines should be co-located under or immediately adjacent to existing roads.

• Permanent structures, which create movement (e.g., pump jack) should be designed or sited to minimize impacts to GRSG.

Preclude GRSG access to pits and tanks through use of practical techniques (e.g. covers, netting, birdballs, location, etc.).• Equip tanks and other above-ground facilities with structures or devices that discourage nesting and/ or perching of raptors, corvids, and other predators.

• Control the spread and effects of non-native, invasive plant species (Evangelista et al. 2011) (e.g., by washing vehicles and equipment, minimize unnecessary surface disturbance). All projects within SGMAs should have a noxious weed management plan in place prior to construction and operations.

• Use only closed-loop systems for drilling operations and no reserve pits.

• Reduce the potential for creating excessive or unintended mosquito habitat and associated risk of West Nile Virus impacts to GRSG. This can be implemented through minimizing pit and pond construction and, where necessary, size of pits and ponds (Doherty 2007). • Remove or re-inject produced water to reduce habitat for mosquitoes that vector West Nile virus. If surface disposal of produced water continues and West Nile virus has been identified as a concern in the project area, use the following steps for reservoir design to limit favorable mosquito habitat (Dohery 2007):

– Overbuild size of ponds for muddy and non-vegetated shorelines.

– Build steep shorelines to decrease vegetation and increase wave actions. Ponds with steep shorelines will be equipped with NDOW approved wildlife escape ramps.

– Avoid flooding terrestrial vegetation in flat terrain or low lying areas.

– Construct dams or impoundments that restrict down slope seepage or overflow.

– Line the channel where discharge water flows into the pond with crushed rock.

– Construct spillway with steep sides and line it with crushed rock.

– Treat waters with larvicides to reduce mosquito production where water occurs on the surface if necessary.

• Limit noise to less than 10 decibels above ambient measures at sunrise at the perimeter of a lek during active lek season (Patricelli et al. 2010, Blickley et al. 2012).

• Require noise shields when drilling during the lek, nesting, brood-rearing, or wintering season.

• Fit new transmission towers with anti-perch devices (Lammers and Collopy 2007).

• Design and construct fences consistent with NRCS fence standards and specifications Code 382 and, where appropriate, use fence markers (Sage Grouse Initiative 2013).• Locate new compressor stations outside priority habitats. Otherwise design them to reduce noise that may be directed towards priority habitat.

• Implement site keeping practices to preclude the accumulation of debris, solid waste, putrescible wastes, and other potential anthropogenic subsidies for predators of GRSG (Bui et al 2010).• Locate man camps outside of priority habitats.

Reclamation

• Include objectives for ensuring habitat rehabilitation to meet GRSG habitat needs in reclamation practices/sites (Pyke 2011). Address post reclamation management in reclamation plans such that goals and objectives are to protect and improve GRSG habitat needs.

•Reseed all areas requiring reclamation with a seed mixture appropriate for the soils, climate, and landform of the area to ensure recovery of the ecological processes and habitat features of the potential natural vegetation, and to prevent the invasion of noxious weeds or other exotic invasive species. Long-term monitoring is required to determine success.

• Maximize the area of interim and concurrent reclamation on long-term access roads and well pads, including reshaping, topsoiling and revegetating cut-and-fill slopes.

•Restore disturbed areas at final reclamation to the near pre-disturbance landforms and the desired plant community.

• Irrigate interim reclamation if necessary for establishing seedlings more quickly and if water rights are available.

• Utilize mulching techniques to expedite reclamation and to protect soils.

• Ensure that all authorized ground disturbing projects have vegetation reclamation standards suitable for the site type prior to construction and ensure that reclamation to appropriate GRSG standards are budgeted for in the reclamation bond.

Locatable Minerals

For consistency, GRSG Site Specific Consultation Based Design Features for locatable minerals shall be considered in association with state and federal permitting requirements including bonding, if applicable.

Roads

• Design roads to an appropriate standard no higher than necessary to accommodate their intended purpose and level of use.

• Locate roads outside of key GRSG seasonal habitat, such as leks and late brood rearing habitat areas.

• Coordinate road construction and use among ROW or SUA holders when the option is available.

• Avoid constructing roads within riparian areas and ephemeral drainages

• Construct road crossing at right angles to ephemeral drainages and stream crossings.

• Work with local governments to enforce speed limits and design roads to be driven at speeds appropriate to minimize vehicle/wildlife collisions.

• Do not issue ROWs or SUAs to counties on newly constructed mining development roads, unless for a temporary use consistent with all other terms and conditions included in this document.

• Restrict vehicle traffic to authorized users on newly constructed routes by employing traffic control devices such as signage, gates, fencing etc.

• Dust abatement on roads will be based on road use, road condition, season, and other pertinent considerations

• Close and rehabilitate duplicate roads, by restoring original landform and establishing desired vegetation, in cooperation with landholders and where appropriate authority exists to do so.• Do not construct new roads when there are existing roads that could be used or upgraded to meet the needs of the project or operations.

• Avoid constructing roads within riparian areas and ephemeral drainages

Operations

• Cluster disturbances associated with operations and facilities as close as possible unless site specific conditions indicate that disturbances to sagebrush habitat would be reduced if operations and facilities locations would best fit a unique special arrangement.

• Minimize site disturbance though site analysis and facility planning.

• Place infrastructure in already disturbed locations where the habitat has not been restored.

• To reduce predator perching, limit the construction of vertical facilities and fences to the minimum number and amount needed.

• Site and/or minimize linear ROWs or SUAs to reduce disturbance to GRSG habitats.

• Co-locate new utility developments (power lines, pipelines, etc.) and transportation routes with existing utility or transportation corridors where adequate separation can be achieved in order to preserve grid reliability and ongoing maintenance.

• Bury distributive power lines of up to 35 kV where ground disturbance can be minimized. Where technology and economic factors allow, bury higher kV power lines.

• Preclude GRSG access to pits and tanks through use of practical techniques (e.g. covers, netting, birdballs, location, etc.).

• Equip tanks and other above ground facilities with structures or devices that discourage nesting and/or perching of raptors, corvids, and other predators.

• Control the spread and effects of Nevada Department of Agriculture listed noxious weeds (NAC 555.010, classes A through C, inclusive) and undesirable non-native plant species (Gelbard and Belnap 2003, Bergquist et al. 2007)..

• Where West Nile virus has been identified as a concern, restrict pond and impoundment construction to reduce or eliminate threats from West Nile virus (Doherty 2007).

• Design and construct fences consistent with NRCS fence standards and specifications Code 382 and, where appropriate, use fence markers (Sage Grouse Initiative 2013)around sumps. Implement site keeping practices to preclude the accumulation of debris, solid waste, putrescible wastes, and other potential anthropogenic subsidies for predators of GRSG (Bui et al 2010).• Locate man camps outside of priority GRSG habitats.

Reclamation

• Include objectives for ensuring habitat rehabilitation to meet GRSG habitat needs in reclamation practices/sites (Pyke 2011). Address post reclamation management in reclamation plans such that goals and objective are to protect and improve GRSG habitat needs.

•Reseed all areas requiring reclamation with a seed mixture appropriate for the soils, climate, and landform of the area to ensure recovery of the ecological processes and habitat features of the potential natural vegetation, and to prevent the invasion of noxious weeds or other exotic invasive species. Long-term monitoring is required to determine success.

• Reclamation In coordination with appropriate agencies, consider development of fuel breaks in reclamation design.

• Maximize the area of interim and concurrent reclamation on infrastructure related disturbances through reshaping/regrading, topsoiling and revegetating cut and fill slopes. In coordination with appropriate agencies, consider development of fuel breaks in reclamation design.

• Ensure that all authorized ground disturbing projects have vegetation reclamation standards suitable for the site type prior to construction and ensure that reclamation to appropriate GRSG standards are budgeted for in the reclamation bond.

• Reseed all areas requiring reclamation with a seed mixture appropriate for the soils, climate, and landform of the area to ensure recovery of the ecological processes and habitat features of the potential natural vegetation, and to prevent the invasion of noxious weeds or other exotic invasive species. Long-term monitoring is required to determine success.

• Restore disturbed areas at final reclamation to near pre-disturbance landform and the desired plant community.

• Irrigate interim reclamation as necessary during dry periods when valid water rights exist.

• Utilize mulching techniques to expedite reclamation.

Fuels and Fire Management and Post-Fire Rehabilitation

• Fire and fuels operations should focus on protecting and enhancing occupied GRSG habitats. This includes taking into account the feasibility and cost of future rehabilitation efforts during Wildland Fire Decision Support Tree planning and general fire operations in all occupied GRSG habitats

Fuels Management

• Design fuels treatment objective to protect existing sagebrush ecosystems, modify fire behavior, restore ecological function, and create landscape patterns which most benefit GRSG habitat.

• Provide training to fuels treatment personnel on GRSG biology, habitat requirements, and identification of areas used locally.

• Use burning prescriptions that minimize undesirable effects on vegetation or soils (e.g., minimize mortality of desirable perennial plant species and reduce risk of annual grass invasion).

• Ensure proposed sagebrush treatments are planned with full interdisciplinary input pursuant to NEPA and coordination with NDOW and SETT, and that treatment acreage is conservative in the context of surrounding GRSG seasonal habitats and landscape.

• Ensure that treatments are configured in a manner that promotes use by GRSG.

• Incorporate roads and natural fuel breaks into fuel break design

• Utilize supervised livestock grazing as a tool to reduce fuels and control non-native species.

• Power-wash all vehicles and equipment involved in fuels management activities prior to entering the area to minimize the introduction of undesirable and/or invasive plant species.

• Design vegetation treatments in areas of high fire frequency, which facilitate firefighter safety, reduce the potential acres burned, and reduce the fire risk to GRSG habitat. Additionally, develop maps for GRSG habitat, which spatially display existing fuels treatments that can be used to assist suppression activities.

• For implementing specific GRSG habitat rehabilitation projects in annual grasslands, first give priority to sites which are adjacent to or surrounded by PPMA or that reestablish continuity between priority habitats. Annual grasslands are a second priority for rehabilitation when the sites are not adjacent to PPMA, but within two miles of PPMA. The third priority for annual grassland habitat restoration projects are sites beyond two miles of PPMA. The intent is to focus restoration outward from existing, intact habitat. Within these criteria, projects should be prioritized based on probability of success based on current condition, ecological site and state-and-transition modeling if available.

• As funding and logistics permit, rehabilitate annual grasslands to a species composition characterized by perennial grasses, forbs, and shrubs with the goal of establishing a functional ecological site based on state-and-transition modeling and ecological site descriptions..

• Emphasize the use of native plant species, recognizing that non-native species may be necessary depending on the availability of native seed and prevailing site conditions

• Based on ecological site descriptions, remove encroaching pinyon and juniper trees from areas within at least 3 kilometers (1.86 miles) of occupied GRSG leks (Connelly et al. 2000) and from other limiting habitats at least 850 meters (e.g., nesting, wintering and brood rearing) to reduce the availability of perch sites for avian predators, as resources permit (Connelly et al 2000, Casazza et al. 2011).

• Protect wildland areas from wildfire originating on private lands, infrastructure corridors, and recreational areas.

• Reduce the risk of vehicle- or human-caused wildfires and the spread of invasive species by installing and maintaining fuel breaks and/or planting perennial vegetation (e.g., green-strips) paralleling road rights-of-way. Strategically place and maintain pre-treated strips/areas (e.g., mowing, herbicide application, targeted grazing, etc.) to aid in controlling wildfire, should wildfire occur near SGMA or important restoration areas (such as where investments in restoration have already been made).

• All fuels management projects should include short and long term monitoring to ensure success and provide for adaptive management. Multiple revegetation entries may be required to ensure success.

Fire Management

• Compile state and local government/District/Forest level information into state-wide GRSG tool boxes. Tool boxes will contain maps, listing of state and local resource advisors, contact information, local guidance, and other relevant information for each state and local government/District/Forest, which will be aggregated into a state-wide document.

• Provide localized maps to dispatch offices and extended attack incident commanders for use in prioritizing wildfire suppression resources and designing suppression tactics.

• Assign a state and/or local resource advisor with GRSG expertise, or who has access to GRSG expertise, to all extended attack fires in or near GRSG habitat. Prior to the fire season, provide training to GRSG resource advisors on wildfire suppression organization, objectives, tactics, and procedures to develop a cadre of qualified individuals. Involve state wildlife agency expertise in fire operations through:

– instructing resource advisors during preseason trainings;

– qualification as resource advisors;

– coordination with resource advisors during fire incidents;

– contributing to incident planning with information such as habitat features or other key data useful in fire decision making.

• On critical fire weather days, pre-position additional local, state, and federal fire suppression resources to optimize a quick and efficient response in GRSG habitat areas.

• Encourage local resources (volunteer fire departments and country equipment) to respond to initial attack efforts and further encourage these agencies to obtain required ICS training to be able to run incidents for longer periods when needed during critical fire periods.

• During periods of multiple fires, ensure line officers, in consultation with state and local resource advisors are involved in setting priorities.

• To the extent possible, locate wildfire suppression facilities (i.e., base camps, spike camps, drop points, staging areas, heli-bases, etc.) in areas where physical disturbance to GRSG habitat can be minimized. These include disturbed areas, grasslands, near roads/trails or in other areas where there is existing disturbance or minimal sagebrush cover.

• Power-wash all firefighting vehicles, to the extent possible, including engines, water tenders, personnel vehicles, and all-terrain vehicles (ATV) prior to deploying in or near GRSG habitat areas to minimize noxious weed spread. Minimize unnecessary cross-country vehicle travel during fire operations in GRSG habitat.

• Minimize burnout operations in key GRSG habitat areas by constructing direct fire line whenever safe and practical to do so.

• Utilize retardant, mechanized equipment, and other available resources to minimize burned acreage during initial attack.

• As safety allows, conduct mop-up where the black adjoins unburned islands, dog legs, or other habitat features to minimize sagebrush loss.

• Adequately document fire operation activities in GRSG habitat for potential follow-up coordination activities.

• Coordinate and utilize local fire suppression resources to the maximum extent possible.

• Eliminate “burning out” islands and fingers of unburned GRSG habitat, unless lives and property are at risk.

Post-Fire Rehabilitation

• Emphasis should be on fall revegetation to ensure greatest likelihood of success.

• All post-fire rehabilitation projects should include short- and long-term monitoring to ensure success and provide for adaptive management. Multiple revegetation entries may be required to ensure

success. Emphasize the use of native plant species in post-fire rehabilitation, recognizing that non-native species may be necessary depending on the availability of native seed and prevailing site conditions. Selected species maintain site ecological function based on pre-burn conditions and anticipated threat of invasive and noxious weed establishment. Use ecological site descriptions and state-and-transition models if available.

- Reseed all burned areas requiring rehabilitation with a seed mixture appropriate for the soils, climate, and landform of the area to ensure recovery of the ecological processes and habitat features of the potential natural vegetation, and to prevent the invasion of noxious weeds or other exotic invasive species. Long-term monitoring is required to determine success.

- Power-wash all vehicles and equipment prior to entering GRSG habitat rehabilitation areas to minimize noxious weed spread. Minimize unnecessary cross-country vehicle travel during rehabilitation operations in GRSG habitat.

- Consider Integrated Pest Management (IPM) practices to ensure greater initial control of invasive and noxious plant species.

- GRSG seasonal habitat requirements must be considered when selecting revegetation materials in all burned potential and current GRSG habitat.

- Prioritize shrub island plantings in large burn areas which may lack sufficient shrub seed sources, in order to ensure the reestablishment of the shrub component.

Lands and Realty

Leases and Permits

• Permits and leases must include stipulations to minimize impacts to GRSG and GRSG habitat based upon the specific activity and ensure no net loss of GRSG habitat.

Right-of-Ways (ROWs)

• Work with existing rights-of-way holders to encourage installation of perch guards on all poles where existing utility poles are located within 5 km (3.2 miles) of known leks (Coates et al. 2013).

• Use existing utility corridors and consolidate rights-of-way to reduce habitat loss, degradation, and fragmentation. Install new power lines within existing utility corridors.

• Where GRSG conservation opportunities exist, BLM field offices and Forests should work in cooperation with rights-of-way holders to conduct maintenance and operation activities, authorized under an approved ROW grant, to avoid and minimize effect on GRSG habitat.

• When renewing or amending ROWs, assess the impacts of ongoing use of the ROW to GRSG habitat and incorporate stipulations, which minimize such impacts to the extent allowed by law.

• Conduct pre-application meetings with the BLM or Forest Service and SETT for all new ROW proposals consistent with the ROW regulations (43 CFR 2804.10) and consistent with current renewable energy ROW policy guidance (WO-IM-2011-061, issued February, 2011). Assess the impact of the proposed ROW on GRSG and its habitat, and implement the following: Ensure that reasonable alternatives for siting the ROW outside of GRSG habitat or within a BLM designated utility corridor are considered and analyzed in the NEPA document; and identify technically feasible best management practices, conditions, (e.g., siting, burying power lines) that may be implemented in order to eliminate or minimize impacts.

• Maximize the area of interim reclamation on long-term access roads and well pads including reshaping, topsoiling and revegetating cut and fill slopes.

• Authorize ROWs for wind energy development projects by applying appropriate Design Features(BLM Wind Energy Development EIS, June 2005), land use restrictions, stipulations, and mitigation measures.

• Bury distribution power lines of up to 35kV where ground disturbance can be minimized. Where technology and economic factors allow, bury higher kV power lines.

• Where existing leases or rights-of-way (ROWs) have had some level of development (road, fence, well, etc.) and are no longer in use, reclaim the site by removing these features, without interfering with valid pre-existing rights, and restoring the habitat.

• Within designated ROW corridors encumbered by existing ROW authorizations: new ROWs should be co-located to the extent practical and feasible with the entire footprint of the proposed project adjacent to or within the existing disturbance associated with the authorized ROWs taking into account operational requirements and safety.

• Subject to valid, existing rights, where new ROWs associated with valid existing rights are required, co-locate new ROWs within existing ROWs or where it best minimizes sage-grouse impacts. Use existing roads, or realignments as described above, to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then build any new road constructed to the minimum standard necessary.

• Upon project completion, roads used for commercial access on public lands would be reclaimed, unless, based on site-specific analysis, the route provides specific benefits for public access and does not contribute to resource conflicts.

• Construct new power lines outside of sage-grouse habitat wherever possible. If power lines cannot be sited outside of sage-grouse habitat, site power lines in the least suitable habitat possible or bury power lines,

• Remove power lines that traverse important sage-grouse habitats when facilities being serviced are no longer in use or when projects are completed.

• Install anti-perching and anti-nesting measures on new tall structures, such as power lines, commensurate with the design of the structures.

Travel and Transportation

• Work with local government to enforce speed limits and design roads to be driven at speeds appropriate to minimize vehicle/wildlife collisions.

• Conduct rehabilitation of roads, primitive roads, and trails not designated in travel management plans where such plans exist and have been approved for implementation. This also includes primitive route/roads that were not designated in wilderness study areas and within lands managed for wilderness characteristics that have been selected for protection, with due consideration given to any historical significance of existing trails.

• When reseeding roads, primitive roads, and trails, use appropriate seed mixes and consider the use of transplanted sagebrush in order to meet sage-grouse habitat restoration objectives. Where invasive annual grasses are present, herbicides may be used to enhance the effectiveness of any seeding and to also establish islands of desirable species for dispersion.

• Use existing roads, or realignments to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then any new roads would be constructed to the minimum standard necessary to support the intended use.

• Work with local governments to minimize upgrading of existing routes that would change route category (road, primitive road, or trail) or capacity unless the upgrading would have minimal impact on sage-grouse habitat, is necessary for motorist safety, or eliminates the need to construct a new road, while providing for the intended use.

• Manage on-road travel and OHV use in key grouse areas to avoid disturbance during critical times such as winter and nesting periods.

• Consider road removal, realignment, or seasonal closures where appropriate to avoid degradation of habitat and /or to avoid disturbance during critical periods of the sage-grouse life cycle

Recreation

• Special recreation permits must have stipulations to minimize impacts to GRSG and GRSG habitat based upon the specific activity and ensures no net unmitigated loss of GRSG habitat.

• Issue special recreation permits with appropriate distance and timing restrictions to minimize impacts to seasonal sage-grouse habitat.

• Develop trail mapping, and educational campaigns to reduce recreational impacts on GRSG, including effects of cross country travel.

Energy Development and Infrastructure

• Adopt standards outlined in *Nevada Energy and Infrastructure Development Standards to Conserve Greater Sage-grouse Populations and Their Habitats,* April 2010, pgs. 25-29.

Wild Horses and Burros

• Prioritize gathers in sage-grouse habitat, unless removals are necessary in other areas to prevent catastrophic environmental issues.

• As soon as the population is estimated to exceed high AML, gather to low AML and implement fertility control.

• Within sage-grouse habitat, develop or amend herd management area (HMAs) plans to incorporate sage-grouse habitat objectives and management considerations for all HMAs. For all HMAs within sage-grouse habitat, prioritize the evaluation of all appropriate management levels based on indicators that address structure/condition/composition of vegetation and measurements specific to achieving sage-grouse habitat objectives.

• When conducting NEPA analysis for wild horse and burro management activities, water developments or other rangeland improvements for wild horses in sage-grouse habitat, address the direct and indirect effects to sage-grouse populations and habitat. Implement any water developments or rangeland improvements using the criteria for wild horses and burros year around use and consistent with necessary rights and right of ways in sage-grouse habitats.

Livestock Grazing and Range Management

• Where applicable and as part of a ranch management plan, use the Natural Resource Conservation Service (NRCS) Conservation Practice Standards and Specification listed below. In addition, use the recommendations additions to the standards developed by NRCS and NDOW as part of NRCS' Sage-grouse Initiative and further expanded by the state of Nevada in this document:

- Code 645: Upland Wildlife Habitat Management
- Code 528: Prescribed Grazing
    - Emphasize rest periods and/ or seasonal deferment when appropriate as part of the grazing management plan and restoration.
- Code 614: Water Facilities
    - Avoid placement where existing sagebrush cover will be reduced near a lek, in nesting habitat, or winter habitat whenever possible. NDOW recommends structures be at least 1 mile from a lek.
- Code 574: Spring Development
    - Springs may be developed as long as valid water claims or rights exist and development shows a net benefit to overall habitat management within a SGMA.

- Code 533: Pumping Plant
    - NDOW recommends the structure should not be placed within 3 miles of a lek to avoid disturbance to nesting sage-grouse.
- Code 642: Water Well
    - Well placement should encourage dispersion of livestock and provide for a neutral or no net negative impact to habitat within a SGMA. Further water developments will decrease concentrated livestock and wildlife use and further protect sagebrush habitats.
- Code 516: Livestock Pipeline
    - Pipelines shall be replaced as needed to provide for better dispersion of livestock.
    - Pipelines shall be replaced along existing pipelines, roadways, or fences.
    - Replacement and maintenance of pipelines shall use the least invasive techniques and extensive work requiring heavy equipment shall be done in a manner consistent with season of use by the GRSG (i.e. replacing improvements in GRSG winter habitat during the summer and replacing improvements in breeding and nesting habitat during the fall)
    - Replacement of improvements shall be allowed in order to not jeopardize existing and valid claims and rights.
- Code 410: Grade Stabilization Structure
    - If possible, avoid the installation of these structures during the late summer brood rearing period. NDOW recommends structure placement in mid-September through late November.
- Code 382: Fence
    - If possible, fencing should not be constructed near a lek and should be avoided in winter habitats near ridges. To make a fence more visible, use white tipped metal fence posts, securing flagging or reflectors to the top fence wires, or slide sections of PVC pipe over the top wire (Stevenson and Reece 2012).

• Relocate or modify existing water developments (including locating troughs to further disperse livestock) that are having a net negative impact on GRSG habitats. Any changes to existing water developments must be conducted in accordance with State Water Law and in close consultation with the water right owner in order to avoid a "taking" of private property water rights.

• All troughs should be outfitted with the appropriate type and number of wildlife escape ramps.

• All field and district offices should apply BLM IM 2013-094 or similar methodology until superseded related to drought management planning.

Surface Disturbing Activities - General

• During the period specified, manage discretionary surface disturbing activities and uses to prevent disturbance to GRSG during life cycle periods. Seasonal protection is identified for the following:

-Seasonal protection within three (3) miles of active GRSG leks from March 1 through June 15 during lekking hours of 1-hour before sunrise until 10:00 am

-Seasonal protection of GRSG suitable wintering areas from November 1 through March 31;
-Seasonal protection of GRSG suitable brood-rearing habitat from May 15 to August 15.

• Implement appropriate time-of-day and/or time-of year restrictions for future construction and/or maintenance activities in known GRSG habitat • Reseed all areas requiring reclamation with a seed mixture appropriate for the soils, climate, and landform of the area to ensure recovery of the ecological processes and habitat features of the potential natural vegetation, and to prevent the invasion of noxious weeds or other exotic invasive species. Long-term monitoring is required to determine success.

• Maximize the area of interim reclamation on long-term surface disturbing activities to including reshaping, topsoiling and revegetating areas no longer being disturbed within the overall project foot print.

Miscellaneous

• On BLM and Forest Service-administered Wilderness and Wilderness Study Areas (WSAs), mechanized equipment may be used to protect or rehabilitate areas of high resource concerns or values; however, the use of mechanized equipment will be evaluated against potential long-term resource damage.

• Work with federal, state, and local governments and project proponents to minimize anthropogenic subsidies for predators, including ravens.

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Acronym List:

GRSG: Greater Sage-grouse

PPMA: Preliminary Priority Management Area

NAC: Nevada Administrative Code

ROW: Right-of-way

SGMA: Sage-Grouse Management Area

SUA: Special Use Authorization

Attachment 4

USFWS Comments on 2012 State Plan,

September 14, 2012

U.S. Fish and Wildlife Service Informal Draft Comments on Nevada Strategic Plan for Conservation of Greater Sage-Grouse
September 14, 2012

General Comments

- We encourage greater deference be afforded to the Nevada Department of Wildlife's (NDOW) Habitat Categorization Map. We consider this approach scientifically defensible and it affords great utility at understanding current bird distribution. Also, this product and its associated components help target areas of restoration.
- We request quantification on the amount of acreage identified through the NDOW mapping process (Categories 1-4) that was captured/excluded from the Nevada Plan mapping effort in order to better understand our baseline or starting place.
- It will be impossible for the Service to consider this Plan an adequate regulatory mechanism without identification of specifics with regard to the 'how' and 'when' an action is denied or altered (thresholds, triggers).
- The concept of No Net Loss needs additional clarification as it pertains to 5% per 640 acre disturbance discussion and 20% Potential Habitat disturbance discussion.
- The avoid, minimize, and mitigate approach is generally the structure adhered to on federal lands under the National Environmental Policy Act (NEPA). The Service determined in 2010 this was inadequate.
- Habitat loss due to Acts of God (Fire and Invasive species) will occur. This loss needs to be taken into consideration and adaptive management principles need to be built into the regulatory process to deal with these events.
- Funding and mechanism for implementation needs to be identified.

Specific Comments

1.0 Introduction – p.1, 3rd paragraph

The standard or rationale for developing the Nevada Plan was to address the Service determination of inadequate regulatory mechanisms in our 2010 12-month Finding.

Mapping – p.2

We would submit that the final mapping product appears generally reasonable but we would appreciate clarification. Specifically, we would be interested in a comparison with NDOWs Habitat Categorization Map to ascertain how much Habitat Category 1, 2, and 3 is captured within the SGMA and how much is excluded. Further, we consider the NDOW mapping effort to be a defensible product and consider deviation based on rationale other than sage-grouse ecology to be challenging in light of our 2010 Finding.

2.0 Definitions – p.4

- **Sage-grouse Management Areas** – *"Delineation of the SGMA does not imply any degree of regulatory control or impose land-use restrictions for land-use management decisions for these lands."* This statement is contrary to the rationale for developing this plan (see Introduction) and certainly affords the Service no reason for changing our 2010 opinion on the inadequacy of regulatory mechanisms.
- **Occupied Habitat** – There needs to be clarification on the burden of proof, scale, and rationale associated with the phrase "*last five years*". Important corridors connecting basins with ridge-tops are likely used briefly and as such will have limited documentable sign of use. On a number of occasions, the Service has engaged in conversations with stakeholders that dismiss bird occurrence in some specific locale, when ultimately more intensive study demonstrates occurrence.
- **Suitable Habitat** – Definition needs clarification. This seems to be the same as Occupied Habitat.
- **Potential Habitat** – Definition needs clarification. We believe the intent is to identify habitat that is not suitable but could be if logistically reasonable restoration action is undertaken (i.e., PJ thinning). However, as worded it appears some Potential Habitat could be Occupied Habitat.
- **Last paragraph** – Our comments on this statement links to mapping and rationale for utilizing 85% Core, as defined by Doherty (2010). Policies outlined in Nevada Plan are not applicable to sage-grouse and suitable habitat outside the SGMA's. Our concern is that, if we start with 85% and this is further segregated in to various habitat classification (Occupied, Suitable, etc.), which presumably influences degree of concern by future Committee/Technical Team, the map extent appears to move in one direction – toward less. Further, there may be indirect or direct effect to populations within SGMA's due to activity immediately outside SGMA's, especially if these habitats are occupied by sage-grouse.

3.0 NV Conservation Goals and Strategies – p. 5

1. The plan appears to aspire to "no net loss" of sage grouse habitat from development - this is good. The sentence as written, however, is slightly confusing. We interpret it mean no net loss of sage-grouse/habitat but the use of "for" instead of "from" in front of the word "activities" could be interpreted to mean no net loss of activities. Thus, we would appreciate clarification of this statement.

2. The plan states that Nevada should be "held harmless" for habitat loss due to fire and invasive species. Assuming this, it is difficult to credit the State Plan with addressing the biggest threat to sage grouse - fire and invasive species - even though there are several pages of the plan dedicated to this topic. We agree that federal lands fire issues are difficult for the state to control, but we would encourage articulating a clear vision for addressing this threat that federal agencies could evaluate. Specifically, disturbance by fire should be considered when evaluating the appropriateness of additional disturbance created through authorized activities.

"Avoid, Minimize Mitigate" - p. 5.

This approach is current policy under NEPA and Service determined this was inadequate. There needs to be identified specific thresholds and or triggers for the determination and application of each of these.

3. **Avoid** – "*Where ever possible*" – This definition needs further refinement with associated thresholds or Service is challenged to alter from 2010 Finding determination.

4. **Minimize** – "*Furthest extent practical*" – This definition needs further refinement with associated thresholds or Service is challenged to alter from 2010 Finding determination. These are Best Management Practices that are typically applied today. Some may have utility (although there is uncertainty here), but there are generally not silver bullets to these complex problems.

5. **Mitigate** – "*After all appropriate and practicable*" – This definition needs further refinement with associated thresholds or Service is challenged to alter from 2010 Finding determination.

There are fundamental challenges to AMM approach.

- Nevada has a substantial stewardship responsibility for sage-grouse across the West.
- Loss habitat will occur due to factors outside of our control – Acts of God.
- Habitat restoration in the southern Great Basin is difficult.
- Reestablishment of sage-grouse, either actively or passively, into locations following extirpations is not easily accomplished.
- Measuring and accounting for the cumulative effect of this approach will be essential.
- If the AMM approach, without associated thresholds, is adopted, we will continue to reduce extant habitat and sage-grouse populations will be mitigated in a negative direction.

Three general conservation policies – p. 5.

1. "*Conserve greater sage-grouse ...consistent with economic vitality...*" – We request clarification of this statement. What will be the economic and conservation thresholds that determine vitality?
2. We request additional clarification of this statement. Namely, "*all means*" but additionally do you foresee instances where activities will be incompatible with sag-grouse conservation. Further, this ties back to mapping effort - While avoid, minimize, and mitigate will proceed within SGMA, will known sage-grouse habitats outside of SGMA receive this same "degree" of protection. If not, this will actually diminish the current standard on federally managed lands under NEPA, which the Service determined inadequate.
3. A broad coalition – This is great.

p. 5, last paragraph – We are unsure what is meant for sage grouse by, "best possible outcome," here.

3.1 Management Strategy in Occupied Habitat – p. 6

Suitable Habitat should be included under this category.

1. P. 5 of Plan states a goal of "no net loss" and this bullet seems to contradict this goal. While the Service will temporarily defer our opinion on the adequacy of a 5% disturbance standard per 640 acres, we contend that simply triggering an evaluation is not adequate and needs additional clarification. We submit that if a specific percent standard were to be adopted, the regulatory process would need to be able to enforce this cap. To be clear, we anticipate all activities that would disturb sage grouse and their habitat (including from invasive species encroachment) would be included in this cap.
2. While we recognize that a significant amount of winter habitat has been impacted by wildfire, we are unclear as to why winter range alone was identified specifically? You could also include nesting habitat in this sentence as quality is influenced significantly by shrub cover and, additionally, you could add a bullet that restricts treatments in brood-rearing habitat to those that maintain or expand current extent or quality of mesic or meadow habitat available in the summer.
3. Great
4. Great

3.2 Management Strategy in Potential Habitat – p. 6

1. Great
2. Not entirely clear on this bullet. As written, it states that habitat disturbance (from any number of human activities?) could occur in potential habitat but not exceed 20% per year per SGMA. If potential habitat represents those sites that are unoccupied but logistically feasible to bring back to suitable habitat – 20 percent seems excessively high as you are dismissing areas that can offer future "lift". This implies that in 5 years, all potential habitats could be converted to non habitat (mine, wind, geothermal, etc.). On the other hand, it is not clear why we would limit the amount of restoration activities that could occur per year in potential habitat, unless potential habitat was actually occupied habitat. I believe you are misusing Connelly *et. al.* 2000. He is referring to occupied habitat and additionally his time frame is not annually but 2-3 decades, depending on habitat?
3. Great

3.3 Management Strategy in Non-Habitat – p. 6

1. Need to remain cognizant of potential impacts caused by indirect effects of activities occurring outside of suitable habitat (such as noise or predator subsidy) and scale at which non-habitat is mapped. Also can these activities be encouraged to be sighted outside SGMA's? This, of course, would further depend on the rationale underlying the adopted map.

3.4 Interim Strategy - p. 7

Until such time the regulatory process (criteria, thresholds, triggers, etc) of this Plan are established, we submit that adoption of this Plan (#s 1, 5, 7) would undermine current BLM and

USFS direction and would run counter to the determination made by the Service in our 2010 Finding with respect to inadequate regulatory mechanisms. Further, we contend the "grandfathering" clause (#2) (as of July 31, 2012) runs counter to over a decade of efforts towards recognizing the need and working toward sage-grouse conservation. While it is reasonable that ongoing, non-expanding, projects should have no additional obligations, activities that have yet to receive a decision under NEPA should be evaluated.

4.0 Implementation Responsibilities

We are unclear what impacts of listing the sage grouse would include that are "well documented," – please document – or what, "significant negative impacts" would occur. We understand the perceptions here, and if we specifically can say what it is we'd like to avoid, we may be more successful in doing so in the event sage grouse are listed. Also, we believe that if this state plan is to be effective, then the effects of a decision to list sage grouse should not be much different than the effects of this plan.

4.1 Sage-grouse Advisory Council – p. 8

The individual topics addressed in this section are each important. The Service offers comments on selected topics, identified by bulleted number contained within the Plan. We have no comments on the topics not identified.

3. This topic is incredibly important and will establish the ground work from which the Service can assess the regulatory adequacy of this Plan.
5. Again, funding is a critical topic, which will facilitate the Service in forecasting potential for conservation.
10. We submit that the Council's activities should be adaptive. Thus, some degree or form of latitude should be granted.

5.0 Sage-Grouse Management Area Map Recommendations – p. 11

- We would submit the best available science initiated the mapping efforts but after refinements based on an unclarified rational, the SGMA Map was derived. While we appreciate the Committee's effort toward mapping, we would encourage the adoption of the NDOW's Habitat Categorization map and then pursuing refinements as new data are collected.
- Can the SGMAs be altered to include additional habitat or do these areas only get smaller?
- #5 – We are not clear as to what "exempt from additional regulations" implies?
- Last Paragraph – I am not sure what is implied by this statement. How will areas of known development be considered going forward. If these activities are to be "grandfathered in", the area should not be excluded from the map and this existing disturbance should be considered when evaluating new developments.

6.0 Threat Assessment and Recommended Actions

Our comments on individual threats contained in this section are generally captured under the Avoid, Minimize, and Mitigate section above. As worded, several sections lead us to believe the

adopted standard for burden of proof is 'demonstrate harm' and not 'demonstrate no harm.' This may be important in the perception or reality of perpetuating 'business as usual.' We anticipate thresholds, standards and actions would need to be identified and established.

7.0 De Minimis Activities

In general, the Service considers ranching operations and many ranching practices, when conducted in a sustainable manner, to generally be not incompatible with sage-grouse conservation. However, we encourage the review of individual practices and adoption of alternative approaches when they afford a positive influence on the species. There may be straightforward, practical, proven ideas that have not caught on within the agricultural and ranching communities.

We are recently becoming aware of concerns over a potential relationship between livestock grazing and the spread of invasive species such as cheatgrass. If such a relationship exists, then we would perceive livestock grazing to be of significantly greater concern to sagebrush ecosystem conservation. We encourage further exploration of this topic.

1. Timing of husbandry practices should be taken into consideration. We have witnessed sheep bands bedded down on leks sites during the leking season.
2. We are not sure what all is covered under "existing farming practices" but there may be practices that could be altered to afford a little more deference for the species without being overly burdensome on the producer. For example, cutting alfalfa or other pasture grass, starting from the inside of the field and working out, outfitting equipment with "flushing bars" when feasible, or altering livestock access to riparian areas in order to maintain stream and associated meadow integrity.
3. We assume all allotments have an associated Federal management plan. Thus, we infer from this bullet that all operations with allotments would be immune from any regulation adopted through this Plan. We contend that while an allotment plan may be appropriate, meaning it represents a sustainable prescription, implementation is a separate issue and one that requires follow-through. Some allotments remain degraded regardless of prescription or language contained in the management plan. Thus, we do not consider all operations that have existing management plans to be a de minimus activity but only those that actively and effectively implement prescriptive grazing plans, which are compatible with sage-grouse habitat requirements.
4. We would encourage as little infrastructure development as possible within four miles of a lek regardless of construction timing. Most hens nest in proximity to lek sites (this is what informs Doherty's model). Concentrating cattle through tank development or installing windmill structures, which are often used as nesting substrates by ravens within this four mile lek buffer would not be ideal.
5. We would strongly encourage limiting new aboveground transmission lines within four miles of lek sites.
6. No comment
7. We would discourage new fences within 1.25 miles of a lek or other sites where seasonal congregations of sage-grouse occur. Also, we would encourage exploring other fencing

options such as electric or let down in lieu of traditional, three or four strand wire designs.

8. No comment
9. Mesic sites are incredible important to sage-grouse in Nevada. When considering how much is "enough water", we would encourage deference be afforded to sage-grouse.
10. We are not familiar with the RAAT protocol. Grasshopper's do, however, represent an important dietary item for developing chicks. Thus, we would encourage limiting herbicide application intended to reduce insect numbers.
11. No comment
12. No comment
13. No comment