

### 3.0 CONSERVATION GOAL AND STRATEGIES

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; 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 the conservation objectives of 1) no net unmitigated loss of habitat due to anthropogenic disturbances and 2) reducing the rate of loss of habitat due to 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 two 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 Conservation Objective – 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. Quality of sage-grouse habitat is determined by the Conservation Credit System. This objective will be measured by the credit to debit ratio.

### 3.1.2 Conservation Policies – “Avoid, Minimize, Mitigate”

***The state of Nevada’s overriding policy for all management actions in SGMA 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 specific Design Features (DFs), 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.

Any proposed action within an 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. Determination of sage-grouse habitat will be based on the USGS Habitat Suitability Map (Figure XX). At the onset of a proposed project, the SETT or its designee shall ground-truth the project site and its surrounding areas using methods as defined in Stiver et al (2010) to confirm habitat type.

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 SGMA. If the project is located entirely outside of habitat 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. 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 should 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.

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 burden of proof for this will be on the project proponent and will require the project proponent to demonstrate both that the 1) purpose and need of the project could not be accomplished outside of an SGMA or within non-habitat in an SGMA and 2) that the project would not be economically feasible to complete in an alternate location.

**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 DFs that minimize the project's adverse effects to sage-grouse habitat.

Minimization will include consultation with the SETT to determine which specified DFs would be most applicable to the project when considering site conditions, types of disturbance, etc. Some general examples of DFs 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 DFs are included in **Appendix XX**.

A list of required DFs 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. The SETT or its designee will conduct unannounced site visits during the duration of the project to ensure that required DFs are being properly implemented and maintained.

**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).

Under the Conservation Credit System, specific mitigation will not be identified to offset a specific anthropogenic disturbance. Instead, once the cost of mitigation as determined by scientifically based metrics in the Conservation Credit System is paid, the project proponent will be permitted to proceed with their project, which will include minimization requirements. The State believes that this policy will achieve the objective of no *net* unmitigated loss because the State will be able to track the "debits" and "credits" accrued as a "common currency" as defined by the Conservation Credit System at a state-wide scale. The funds produced through the Conservation Credit System will be multiplied in value by leveraging funds from grants and partner agencies. Over time, the State believes this will lead to a positive credit to debit ratio.

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 include specific locations and actions to be completed. 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. While research will not be considered a mitigation option, the SETT will emphasize

collaboration with academic institutions around the Great Basin to conduct research on mitigation projects. This Strategic Action Plan for Mitigation will be updated at least every five years to reflect improvements in understanding and technology for mitigation activities.

*Maximum Allowable Disturbance*

While this plan does not identify maximum disturbance thresholds, thus allowing for greater land-use flexibility, it does require a higher mitigation rate, as determined by the Conservation Credit System, in areas with five percent or greater total disturbance within a “project area of influence”. The reason for higher mitigation rates in areas with five percent or greater total disturbance is to provide a regulatory mechanism to account for additive impacts to sage-grouse that result from cumulative habitat degradation and fragmentation from both anthropogenic disturbances and Acts of Nature at the landscape-scale.

The process for determining the project area of influence (hereafter referred to as “DDCT examination area”) and the percent of disturbance will use the Density/ Disturbance Calculation Tool (DDCT) developed by the state of Wyoming (<https://ddctwygisc.org>). The detailed DDCT process will be outlined in the State of Nevada’s DDCT Manual, still to be developed. The DDCT general process is as follows:

Determine all leks within a SGMA that may be affected by the project by placing a four-mile buffer around the project boundary, as defined by the proposed area of disturbance related to the project. All active, pending active and inactive leks located within the four-mile buffer and within a SGMA will be identified as “affected” by the project for the purpose of the tool.

A four-mile buffer will then be placed around the perimeter of each affected lek. The buffers surrounding identified leks will be added to the four-mile buffer around the project boundary, which creates the DDCT examination area for each individual project. Disturbance will be examined for the DDCT examination area as a whole and for each individual affected lek within the DDCT examination area. Any portion of the DDCT examination area occurring outside of SGMA will be removed from the examination area.

If there are no affected leks within the four-mile buffer around the project boundary, the DDCT examination area will be just that portion of the four-mile buffer around the project boundary within the SGMA.

Total disturbance acres within the DDCT examination area will be calculated through an evaluation of: existing disturbance; approved permits, which have approval for on the ground activity, but have not yet been implemented; and the proposed disturbance. Existing disturbance includes sage-grouse habitat that is disturbed due to anthropogenic activity and wildfire. Following wildfire, lands shall be considered "disturbed" pending an implemented management plan with trend data showing the area returning to functional sage grouse habitat.

If the total disturbance is determined to be five percent or greater of sage-grouse habitat within the DDCT examination area, then a higher mitigation rate will be assessed.

### *Exemption*

While the State Plan outlines “avoid” and “minimize” guidelines for livestock grazing, it is exempt for the “mitigate” policy. Proper livestock grazing guidelines provided will ensure that grazing permits maintain or enhance sage-grouse habitat within SGMAs.

### *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 policies 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 Objective – Reduce the rate of sage-grouse habitat loss due to large acreage wildland fires and subsequent invasion by non-native 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 truly 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 rate of habitat lost due to fire and subsequently invaded by non-native species over a five year period.

### *3.2.2 Conservations Policies – 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 its natural range of variability. 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 activities.
  - 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 and resistance. 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, greenstripping, brownstripping, and maintaining riparian areas as natural fuels breaks by managing for Proper Functioning Condition (PFC).

2. Wildland fire should be used strategically and should not be suppressed in all instances. Allow fires to burn naturally if it is in areas that may benefit sage-grouse habitat and would not risk the spread of invasive species, if 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.
3. 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.
4. Ecological site descriptions and associated state and transition models will be used to identify target areas for restoration. Areas that are in an invaded state that will likely transition to a cheatgrass 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.
5. Emphasize continued research to enhance knowledge and understanding of how to prevent catastrophic wildfire and the subsequent invasion of cheatgrass.

### 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 objective of reducing the rate of loss of sage-grouse habitat due to fire and invasive species and will provide a report to the SEC annually. The objective will be met if there is a decrease or leveling off of the habitat rate of loss due to fire and subsequent invasion by annual grasses over a five year period. If the State falls short of its objective, the SEC will reassess and update policies 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.