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STATE OF NEVADA
Sagebrush Ecosystem Program

SAGEBRUSH ECOSYSTEM COUNCIL
STAFF REPORT
MEETING DATE: November 18, 2013

DATE: November 12, 2013

TO: Sagebrush Ecosystem Council Members

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

THROUGH: Tim Rubald, Program Manager
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SUBJECT: Discussion and possible consideration of proposed revisions to Section 3.0: Goals and Objectives of the 2012 State Plan.

SUMMARY

This item presents revisions to Section 3.0: Goals and Objectives of the 2012 State Plan. This item was originally presented at the July 30, 2013 SEC meeting. The SEC provided direction to the SETT on how to proceed with this item at the September 12 and October 10, 2013 SEC meetings, which has been incorporated into this document. The purpose of this item is to update the 2012 State Plan in order to address concerns expressed by the USFWS and provide sufficient detail for BLM to analyze it as an alternative in their EIS.

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.

July 30, 2013. The Council adopted the Sagebrush Ecosystem Strategic Detailed Timeline, which included revision of the State Plan/ EIS Alternative.

July 30, 2013. The SETT presented proposed revisions to the 2012 State Plan. The Council assigned the SETT to address Council comments, questions, and concerns on the revisions for the following Council meeting.

September 12, 2013. The Council approved a definition for "avoid", to include no new mandatory set-aside areas or exclusion zones and directed the SETT to develop a proposal for the "avoid process."

October 10, 2013. The Council approved the following items related to the proposed revisions to the 2012 State Plan: any proposed anthropogenic disturbance within SGMAs will trigger SETT consultation; the proposed "avoid process"; revisions to the "Acts on Nature" objectives section; and indirect impacts should be evaluated for all disturbances within SGMAs.

October 10, 2013. The Council directed the SETT to work with the Science Work Group on questions related to maximum allowable disturbance (MAD) and directed the SETT to develop Best Management Practices (BMPs) for the "minimize" policy for Council consideration.

DISCUSSION

At the direction of the SEC, the SETT first presented proposed revisions to the 2012 State Plan at the July 30, 2013 SEC meeting to address USFWS' concerns and provide sufficient detail for the BLM to analyze as an alternative in their EIS. The SEC continued to discuss and consider the proposed revisions at their successive September and October meetings and provided direction to the SETT on how to proceed with the revisions.

The SETT is presenting further revisions to the document that was originally presented at the July 30, 2012 SEC meeting to include direction provided by the SEC. The following additional revisions were made by the SETT and are being presented for SEC consideration and possible approval:

- A definition of "anthropogenic disturbances" is proposed, as well as a list of "projects" that will trigger SETT consultation.
- In order to address USFWS concerns regarding how sage-grouse habitat outside of SGMAs will be managed, a voluntary SETT consultation is proposed.
- Incorporation of the SEC approved "avoid process". The SETT, with Council direction, still anticipates developing more specific details or "sidebars" as to how project proponents will "demonstrate" the listed criteria. Additional detail will help provide assurance for the USFWS. As well, definitions for management categories still need to be developed. The SETT anticipates bringing these to the Council at the December 2013 meeting.
- The SETT proposal for the Maximum Allowable Disturbance (MAD) policy with input provided by the Science Work Group is presented and will be discussed in greater detail during Agenda Item 9b.
- Inclusion of the revisions to the "Acts of Nature" section approved by the SEC at the October 10, 2013 SEC meeting. In addition, edits provided by Council Member McAdoo are also included.

FISCAL IMPACT

There is no fiscal impact at this time.

RECOMMENDATION

Staff recommends the SEC approves the proposed revisions to Section 3.0 of the 2012 State Plan or provides direction to staff on how to revise it further.

POSSIBLE MOTION

Should the Council agree with the staff recommendations, possible motions would be:

- "Motion to approve the proposed revisions to Section 3.0 of the 2012 State Plan."
- "Motion to approve the proposed revisions to Section 3.0 of the 2012 State Plan on condition of specific revisions."

Attachments:

1. Proposed Revisions to Section 3.0 of the 2012 State Plan

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Attachment 1: Proposed Revisions to Section 3.0 of the 2012 State Plan

3.0 CONSERVATION GOALS AND *OBJECTIVES*~~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; *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 ~~the~~ conservation objectives *for anthropogenic disturbances and Acts of Nature* ~~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~~ *Mitigation requirements are* ~~of sage-grouse habitat is~~ 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 specific Design Features (DFs) *or Best Management Practices (BMPs)*, 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~~ *P*~~p~~roposed ~~action~~ *anthropogenic disturbances* within a~~n~~ 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 SETT or its designee shall ground-truth~~ 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 ~~should~~ *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 areas, 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 ~~for this~~*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 areas 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.*~~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.~~

"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

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

Nevada and support the highest density of breeding populations. Thus, the management 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 BMPs 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 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 impact 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 BMPs 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 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 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 BMPs 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 on their habitat within SGMAs will be required to determine if BMPs 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 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*.

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

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 *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*~~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 *mapped sage-grouse habitat within* a *Population Management Unit (PMU) (Figure XX)* ~~"project area of influence"~~. *Mapped habitat will be determined by the USGS habitat suitability map.* 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~~ *sage-grouse habitat in a PMU* 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~~*PMU*, 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 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 –

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 ~~naturally occurring~~ wildfire return intervals to within a ~~healthy~~ 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 rate of habitat lost due to fire and subsequently invaded by non-native species over a five year period.

3.2.2 Conservation~~s~~ 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 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, 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 ~~they occur~~*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.
3. 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.
4. 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.
5. Subsequent shrub seeding or live plantings may need to occur once native or locally adapted grasses and forbs species are established initially. This will encourage more significant and timely recruitment and transition into a grass-shrub community.
6. 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 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 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.
7. 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.

3.2.3 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 ~~rate~~ *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.

Table 3-1. The "Avoid Process" for Proposed Anthropogenic Disturbances within SGMAs

Anthropogenic disturbances should be avoided within SGMAs. If project proponents wish to demonstrate that a disturbance cannot be avoided, exemptions will be granted if the criteria listed in the table can be met for the applicable management category.

Management Category*	**High Population Density ("best of the best")**	**Habitat Suitability Category A**	**Habitat Suitability Category B**	**Non-habitat (within SGMAs)**
Required Avoid Criteria	• Demonstrate that the project cannot be reasonably accomplished elsewhere – the purpose and need of the project could not be accomplished ~~and/ or it would not be economically feasible to complete~~ 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 ~~five-year period~~ ***ten-year rolling average*** ***;*** • ***Demontstrate that project infrastructure will be*** ~~C~~***c*** o-locate***d*** with existing disturbances to the greatest extent possible; • Develop BMPs 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.	• Demonstrate that the project cannot be reasonably accomplished elsewhere – the purpose and need of the project could not be accomplished ~~and/ or it would not be economically feasible to complete~~ in an alternative location; • ***Demontstrate that project infrastructure will be*** ~~C~~***c*** o-locate***d*** ~~the project~~ with existing disturbances to the greatest extent possible. If co-location is not possible, siting should reduce individual and cumulative impact 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 BMPs to minimize impacts ***through consultation with the SETT*** ; and • Mitigate for unavoidable impacts through compensatory mitigation via the Conservation Credit System.	•Demonstrate that the project cannot be reasonably accomplished elsewhere – the purpose and need of the project could not be accomplished ~~and/ or it would not be economically feasible to complete~~ in an alternative location; ***• Demontstrate that project infrastructure will be*** ~~C~~***co-located with existing disturbances to the greatest extent possible;*** • Develop BMPs to minimize impacts ***through consultation with the SETT*** ***;*** and • Mitigate for unavoidable impacts through compensatory mitigation via the Conservation Credit System.	• ***Demonstrate that the project will not have*** ~~An analysis for~~ indirect impacts to sage-grouse and their habitat within SGMAs. ***If it cannot be demonstrated, the project proponent*** will be required to ~~determine if~~ ***develop*** BMPs to minimize impacts and compensatory mitigation will be required.

* Exact terminology to be defined with input from USGS and NDOW upon Council direction