

Nevada

Sagebrush Ecosystem Program

Adaptive Management Report
2025-2026

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Presented by
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NEVADA
**SAGEBRUSH ECOSYSTEM
PROGRAM**



Nevada Department of
**CONSERVATION &
NATURAL RESOURCES**



Nevada
Department
of Agriculture



NEVADA
DEPARTMENT OF
WILDLIFE

Adaptive Management Purpose

1. **Adapt** to changing conditions in greater sage grouse (GRSG) Populations and Habitat.
2. **Provide** opportunity for local involvement in GRSG Planning.
3. **Determine** potential reasons for population and habitat declines to prioritize restoration and management actions.

Greater Sage-grouse Adaptive Management Process – Population and Habitat

In addition to the annual monitoring report and database, The State has collaborated with the federal land management agencies (BLM and Forest Service) and incorporated guidance from Science Work Groups to develop adaptive management strategies pertaining to sage-grouse thresholds and responses relating to both population and habitat. The Sagebrush Ecosystem Council (SEC) requested that the Sagebrush Ecosystem Team (SETT) develop a strategy to address these thresholds and responses at their May 2018 meeting.

Introduction

Adaptive management is an intuitive, scientific, and social decision process that promotes flexible resource management decision making in the face of knowledge with uncertainty. A collaborative approach including a wide variety of knowledge from local participants and management agencies can pool ways of knowing and resources across multiple disciplines and perspectives. This approach can leverage efforts and resources into a framework that guides and targets management efficiently for optimum outcomes. This collaborative approach can enable problem solving from a wider viewpoint than is possible from an agency-specific analysis. Through monitoring management efforts, and evaluating results and strategies, subsequent decisions can be adjusted as results from actions become better understood. A true adaptive management process can result in iterative changes that become more targeted, focused, and effective through time. A team assembled of agency and local expertise can calibrate a plan with outcomes to improve conditions for the GRSG in impacted areas. Carefully monitoring outcomes advances scientific understanding for improved stewardship on intermixed public and private lands.

The focusing nature of the adaptive management process will hopefully enable forecasting management successes. Statewide and local teams will coordinate, prioritize, and implement specific habitat restoration efforts targeted at multiple spatial scales. This adaptive management strategy calls for a large, concentrated and collaborative effort that will result in recommended management responses and strategies for declining GRSG populations or identified areas of impacted habitat. These recommendations and strategies will be focused based on discussion of how threats impact the GRSG, and the relative importance of various conservation actions. Due to the importance of a functional sagebrush ecosystem to the State of Nevada it is important to put forth the best effort possible. The outcomes will be used to assist local efforts in identifying and prioritizing areas to enable efficiencies and pools resources. This will increase the likelihood that GRSG population and habitat decline can be addressed effectively in the spirit of teamwork, stewardship, and conservation. The principles of adaptive management will be incorporated into the conservation measures that lessen threats to GRSG and its habitat.

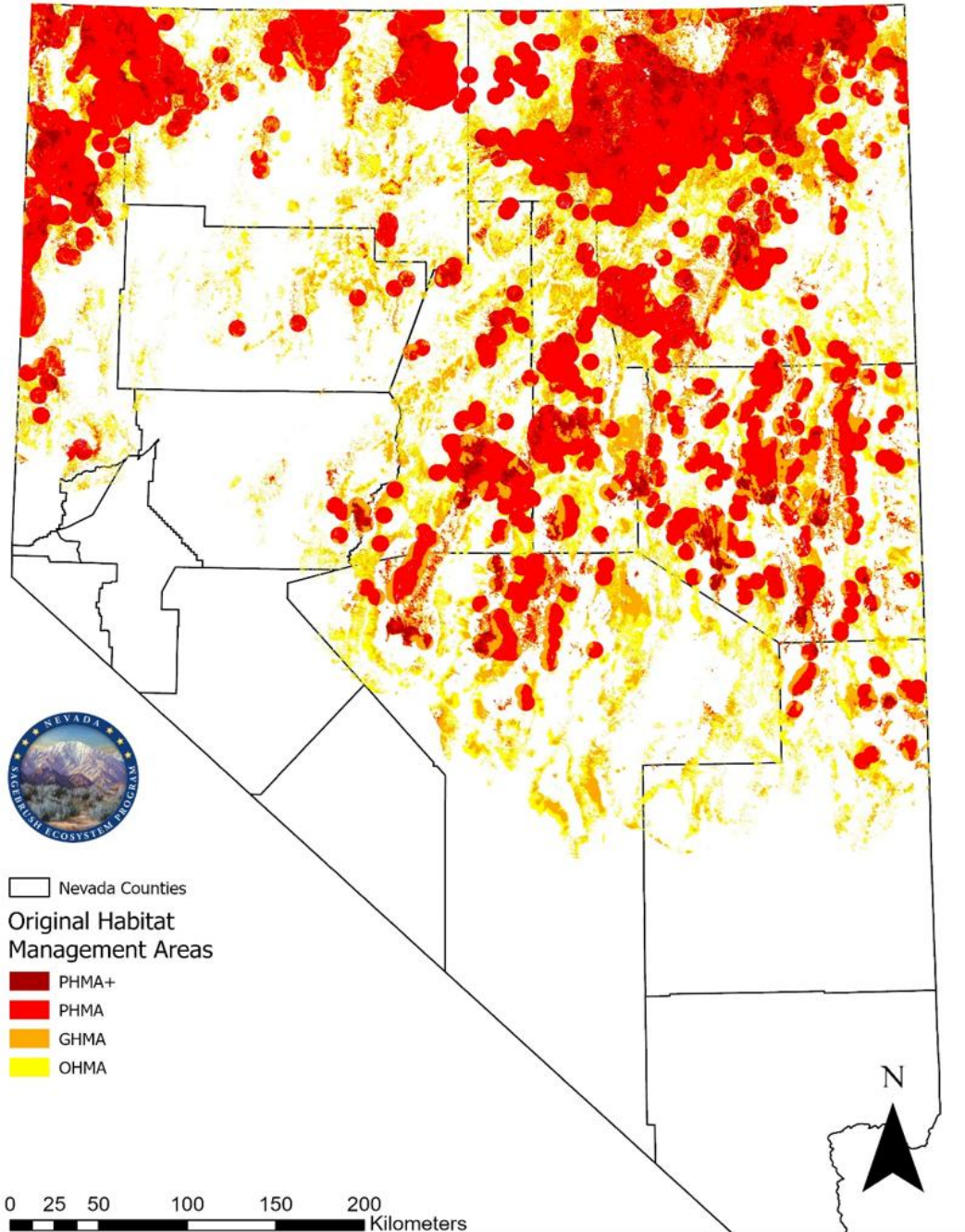
This adaptive management strategy includes warnings, soft and hard triggers and responses. Triggers are not specific to any particular project, but identify GRSG population and habitat thresholds outside of natural fluctuations or variations (with the exception of wildfires). Triggers are based on the two key metrics that are being monitored; population status and habitat loss. Adaptive management, with specific triggers, provides additional certainty that the management actions are robust and able to respond to a

Introduction

- **Statewide and local teams:** Coordinate, prioritize and implement specific habitat restoration efforts targeted at multiple special scales.
- **The Result:** Recommend management responses and strategies for declining GRSG populations or identified areas of impacted habitat.
- **The outcomes:** Used to assist local efforts in identifying and prioritizing areas to enable efficiencies and pools resources.

GRSG Habitat

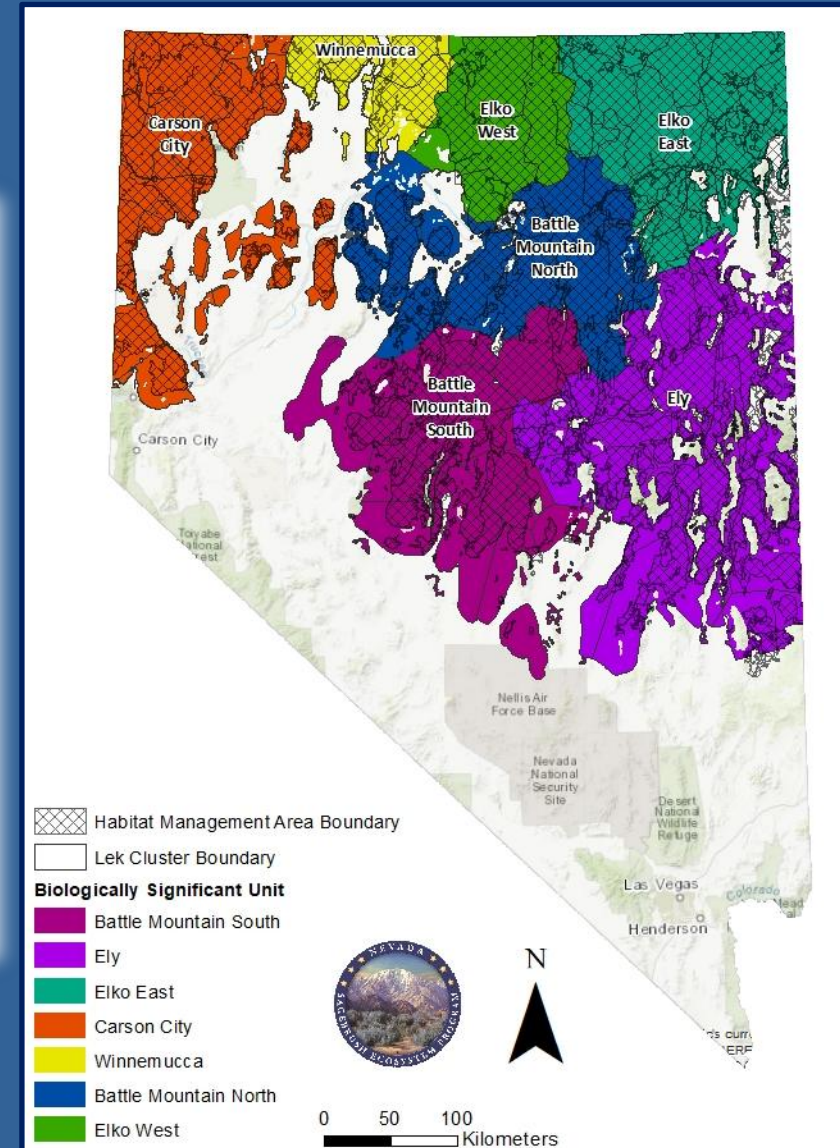
- Priority Habitat Management Area (PHMA; red)
- General Habitat Management Area (GHMA; orange)
- Other Habitat Management Area (OHMA; yellow)



Hierarchy of GRSG Population and Habitat Scales

- **Lek:** Individual breeding display site where male and female GRSG congregate
- **PMU (Lek cluster):** A group of leks in the same vicinity, among which GRSG may interchange over time and representing a group of closely related individuals.
- **Biologically Significant Units (BSUs):** Represents nested lek clusters with similar climate and vegetation conditions

For the purposes of this adaptive management strategy, the SETT will be using the NDOW PMU and BSU boundaries to identify causal factors and management responses.



Warnings, Soft Triggers, Hard Triggers, and Management Responses

Population

- Warnings: Represent pre-cursors to triggers that indicate a change to populations that could result in a trigger being reached.
- Soft Triggers: Represent a threshold that indicates that management actions should be considered at the project or implementation level to address GRSG population declines.
- Hard Triggers: Represent a threshold that indicates that immediate actions needs to be considered to address significant deviation from GRSG population declines.

Warnings, Soft Triggers, Hard Triggers, and Management Responses

Habitat

- Warnings: Habitat warnings include the occurrence of wildfire or natural disturbance larger than 1,000 acres, fire risk, or new anthropogenic disturbance that results in direct and indirect effects.
- Triggers: Warnings evaluated by a statewide technical team of specialists that are determined to warrant significant management responses to address GRSG habitat declines.

Causal Factor Analysis and Response Process

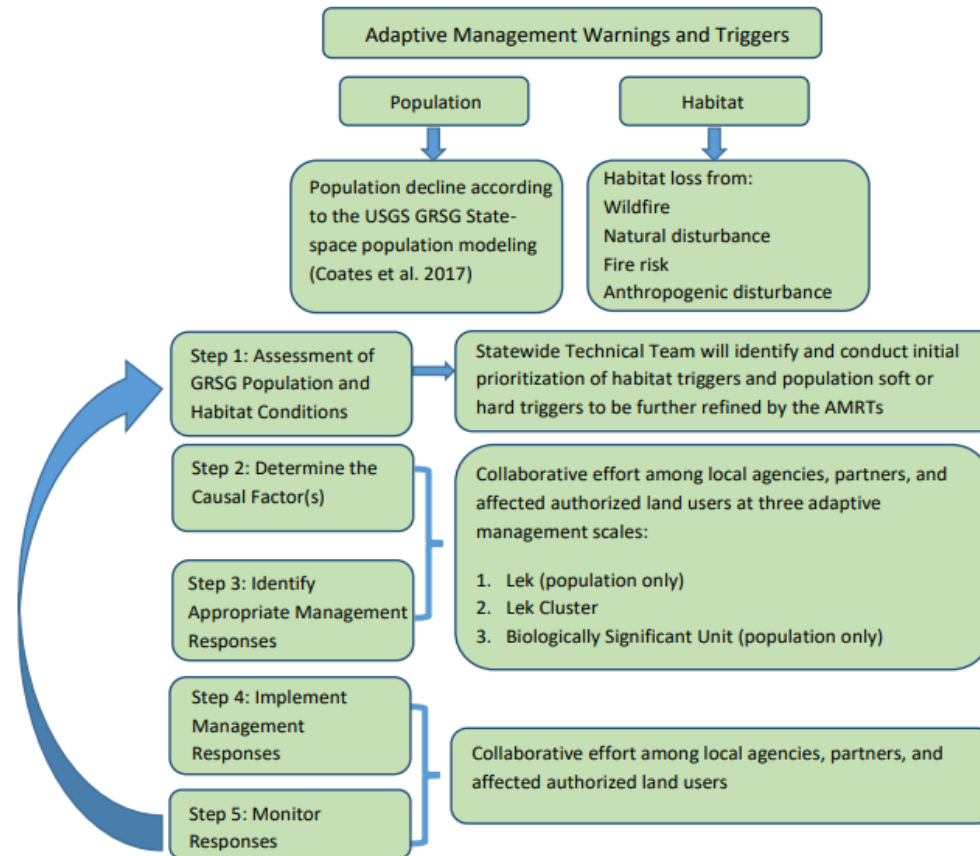


Figure 13. Flowchart of the adaptive management process.

Step 1. Assessment of GRSG Population & Habitat Conditions

- The statewide technical team and other appropriate state and federal agency partners will evaluate population and habitat data to identify population and habitat warnings and triggers that have been reached.
- Following the identification of habitat triggers, a list of criteria will be used to consistently prioritize and rank habitat triggers among lek clusters.

Step 2. Determine the Causal Factor(s)

- **After population and habitat triggers have been identified**, the SETT will initiate an interdisciplinary team to include the appropriate land management agency, the statewide technical team, and federal/state/local partners to participate, comment, and provide input during the causal factor analysis.
- This group will be referred to as the **Adaptive Management Response Team (AMRT)**

Causal Factor Analysis (CFA)

The CFA at each scale looks at:

- **Lek (population only):** GRSG seasonal habitats associated with the lek.
- **Lek Cluster:** GRSG seasonal habitats associated with the lek cluster.
- **BSU (Population Only):** GRSG seasonal habitats associated with the BSU.

Causal factor(s) for habitat triggers could be wildfire, natural causes, fire risk, or anthropogenic disturbances based on the analysis conducted in Step 1.

To identify the causal factor(s) of a population trigger, the AMRT would consider all available information and examine potential factors contributing to the trigger.

Step 3: Identify Appropriate Management Responses

- The **Adaptive Management Response Team** will identify and recommend appropriate management responses to be applied to the individual lek (population only), lek cluster, and/or BSU (population only) that reached a trigger and include them in the AMRT report.
- Management responses will only be applied within HMAs (PHMA, GHMA, and OHMA).

Step 4: Implement Management Responses

The appropriate land management agency in coordination with the AMRT may implement the recommended management responses (e.g., implementation of Service First Agreements) within the affected response area or at the scale in which the trigger was reached (e.g., lek (population only), lek cluster, and/or BSU (populations only)).

Step 5: Monitor Responses

- The appropriate land management agency in coordination AMRT may continue to monitor (e.g., monitoring guidance within the Nevada Rangeland Monitoring Handbook) the lek(s), lek cluster(s) and/or BSU(s) or affected area in which a recommended management response is being applied to determine if the responses are adequately addressing the reason for the population and/or habitat decline.
- This information would be used in Step 1 above, “Assessment of GRSG Population and Habitat Conditions” the following year.

Example: Cortez PMU Management Recommendations

PMU: Cortez	
Potential Causal Factors	Management Recommendations and Progress
Anthropogenic Features	• A green strip was created in the Dell flats area in 2022 • BEA was created and has gone into effect. Since then, there have been numerous projects to try and offset anthropogenic disturbances in the Cortez PMU and beyond. ◦ Horse Creek 1 Lek – NGM laydown yard, noise and traffic <mile, BEA is intended to offset these impacts and has been in effect. • Modarelli Mine 1 Lek – uncertainties of lek. 2-track road and fence. Gather more data on what is happening with GRSG at Modarelli lek – lek counts, collaring, etc. – SETT to follow up with NDOW and BLM • Flight diverters on fence at Modarelli Lek – Work may have been done, SETT to follow up with BLM
Predators (Ravens)	• Direct strategic focus of raven control around leks and critical habitats through NDOW Project 21. Develop other strategic corvid projects through a holistic view by pairing with habitat work (through BEA), fire rehabilitation, or other entity efforts. Synergize corvid control with habitat enhancement. – SETT to follow up with NDOW
Wild Horse and Burros	• Gather and remove estray horses
Wildfire	• Post-fire efforts on the Horse Fire have shown to be effective; non-natives (crested wheatgrass and Siberian wheat grass plantings) were establishing well at the time of monitoring. • BEA has completed • Horse Fire: ◦ Non-natives are establishing very well as seen during last monitoring (crested wheatgrass and Siberian wheatgrass were planted.) – Follow up is needed
Pinyon Juniper Encroachment	• Several areas were identified as priority for PJ cutting in 2026-2027. • Work needs to be done near Tonkin Road. • 5,000 acres of PJ have been cut, lopped and scattered and masticated through partnerships of several federal, state and local agencies.

Issues to Consider

- The Adaptive Management process, as currently designed, can create a time burden for agencies involved.
- Participation was much lower than initial efforts. In simplifying the process, we may have a better response.
- Management recommendations are good but usually tied to current projects and activities or are in areas that are already understood to be trending downwards.
- Currently, the adaptive management process is based on triggers, which can cause a lag in response time for leks that are trending downwards.

Thank You

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