



Oregon Bureau of Land Management Greater Sage-grouse Causal Factor Analysis Annual Review

Background: Adaptive Management is a decision process that promotes flexible resource management decision making that can be adjusted in the face of uncertainties, as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes helps with adjusting resource management direction as part of a learning process. It is not a trial and error process, but rather emphasizes learning while doing. The Oregon Greater Sage-grouse Approved Resource Management Plan Amendment (ARMPA) (2015) requires the BLM to use adaptive management.

Adaptive management triggers are essential for identifying when changes are needed in order to continue meeting Greater Sage-grouse (GRSG) conservation objectives. BLM will use two types of triggers for specific populations and responses: soft triggers and hard triggers. These triggers are not specific to any particular project but identify **habitat** and **population** thresholds.

Soft triggers represent an intermediate threshold indicating that management changes are needed at the implementation level to address habitat or population losses. Hard triggers represent a threshold indicating that immediate and more restrictive action is necessary to stop a severe deviation from conservation objectives.

- **Habitat Triggers:** critical habitat thresholds have been defined based on GRSG response to the amount of sagebrush available in the landscape in relationship to the percent of tree cover.
- **Population Triggers:** the BLM based the population thresholds on both interannual changes and a 5-year running mean in the estimated minimum number of males. BLM used the state-provided data on lek counts and procedures, similar to what ODFW uses to fill in missing data and to estimate the minimum number of male birds each year.



Causal Factor Analysis (CFA)

Identifying the ultimate reason for crossing a threshold and appropriate responses requires answering a series of questions, usually about the cause, which may be more easily observed.

These questions help identify whether a portion of the plan failed and which part, and whether an adjustment is needed. For example, a large wildfire is a likely cause for tripping both a habitat and population trigger; however, the plan includes several design features in the vegetation and wildland fire sections intended to reduce or minimize a potential to trigger due to a wildfire.

Determining the appropriate adaptive response also requires asking a series of questions such as: What is the

magnitude of the impact? Is the impact temporary or permanent? Can the habitat or population recover on its own without intervention? What is the expected length of the recovery period? Can the management actions already included in the plan accelerate recovery or are different actions necessary?



Current Status of Triggers for the Brothers-Wagontire PAC

As of March 2020, the Brothers PAC had reached a **hard trigger based on a population decline** of 16.8% (annual change) and a 5-year average male bird count of 106. At the time of this CFA, the recommendations for the PAC are still valid because the threats haven't changed. If the population continues in a downward trend or if new information becomes available, then the district will evaluate additional measures to implement.

Surveys/monitoring in 2019 by the Prineville BLM and cooperators included the following:

- Establishing 10 new AIM plots (45 Total)
- Aerial surveys for leks were partially completed by the Oregon Dept of Fish and Wildlife (ODFW) and the US Fish and Wildlife Service (USFWS). No new leks were discovered within the PAC. One new lek was discovered in surrounding general habitat.
- Monitoring post-seeding in the Playa project area.
 - TrafX vehicle counters for route monitoring were used. TrafX counters are still deployed in the Brothers PHMA, with additional analysis needed.
 - Identifying and contracting out areas within Brothers/N. Wagontire for juniper cutting.
 - Completing the second year of raven surveys (54 surveys) by BLM and East Cascade Audubon Society volunteers. Surveys were conducted from roads using protocol developed by ODFW and Oregon State University. Nine ravens were observed.
 - ODFW continued to contact hunters in the N. Wagontire unit during GRSG season to help determine where the birds were being taken. ODFW also included a map on their hunter reporting form so hunters could identify where they hunted.



BLM uses the Assessment, Inventory, and Monitoring (AIM) Strategy to gather standardized data as a way of assessing the status and trend of greater sage-grouse habitat. Data collected using the AIM strategy can be used at multiple scales—from the landscape level all the way down to an allotment level to determine ecosystem conditions and how they change over time.

New Information

Since the last Causal Factor Report, the following new data and/or information is available, including any natural and human-caused events within the PAC:

4,544 acres of jackpot burns were completed (5 older units). Burning days were successfully selected where conditions allowed most of the tree bole to be consumed in place and not spread throughout the sagebrush.

BLM wildlife biologists have started to complete the Habitat Assessment Framework (HAF) for the project area. HAF analysis is a detailed examination of sage-grouse habitat at multiple scales: Broad (entire range of sage-grouse), Mid (population/sub-population), Fine (home range), and Site (seasonal habitats). A draft for both Mid and Fine scales has been completed, and Site scale analysis has been started. Once this is completed, potential issues like forb diversity and abundance (one of the nineteen habitat indicators) questions can be answered. Additionally, once site scale analysis is completed, other areas requiring restoration activities can be identified.



Trigger Responses

The following trigger response actions have been completed or are underway. These cover the mandatory Hard Trigger responses, which include several actions that can be found on pg. J-8 of the ARMPA and recommended actions from the CFA Report:

- Installing flight diverters, conducting West Nile Virus studies, prioritizing juniper thinning, and other projects within GRSG habitat.
- Continuing to capture route densities to help with future travel management planning.

New or revised management recommendations or planned activities to address triggers:

- Continue raven and West Nile Virus surveys to help inform and potentially remove potential causal factors.
- Other recommendation and activities from the 2017-2018 CFAs continue to be implemented and remain relevant moving forward.

