

GREATER SAGE-GROUSE CONSERVATION





Meet the
GREATER SAGE-GROUSE
(*Centrocercus urophasianus*)

The greater sage-grouse is the largest grouse in North America. Its range is sagebrush country in the western United States & southern Canada.¹

¹en.wikipedia.org/wiki/Greater_sage-grouse. Cover photo & the photo above courtesy of Shutterstock.com

Why is Greater Sage-grouse Conservation Needed?

The greater sage-grouse, an iconic species of the sagebrush steppe ecosystem, currently occupies an estimated 56% of its historic range. Greater sage-grouse populations have been declining for more than 40 years. In 2010, the U.S. Fish and Wildlife Service determined that, due to loss of habitat and lack of adequate regulatory mechanisms, listing the greater sage-grouse under the Endangered Species Act was warranted but precluded by other priorities.

The Forest Service manages approximately 8% of the remaining greater sage-grouse habitat and is responsible for helping to ensure that greater sage-grouse populations persist. The conservation measures in five Forest Service land management plan amendments protect the greater sage-grouse by maintaining and restoring the sagebrush steppe ecosystem. The amendments demonstrate the agency's responsibility and commitment to its mission to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations.

The timeline on the right highlights pivotal efforts and decisions associated with the greater sage-grouse conservation strategy.

THE CONSERVATION OBJECTIVES TEAM

In 2012, the Conservation Objectives Team representing state and federal entities convened and subsequently produced a report, which has served as the basis for much of the current conservation strategy. The team's report established priority areas for conservation (key habitats identified by state conservation plans or through other conservation efforts) within greater sage-grouse habitat, the principal threats to the greater sage-grouse and its habitat within those areas, and the degree to which such threats should be reduced to effectively conserve the species.

2006

Due to differences in the ecological characteristics of sagebrush across the greater sage-grouse's range, the Western Association of Fish and Wildlife Agencies (representing state agencies), with federal-agency input, delineated seven Management Zones based primarily on geographic areas with a relatively uniform composition of plant species.

2010

The U.S. Fish and Wildlife Service decided listing under the Endangered Species Act was warranted but precluded by higher priority species.

2011

The Sage-grouse National Technical Team (including state and federal partners) completed a report identifying science-based conservation measures, focusing on threats in each greater sage-grouse Management Zone.

The Bureau of Land Management and the Forest Service announced their intent to prepare environmental impact statements to incorporate greater sage-grouse conservation measures into land use plans across the species' range.

The Western Governors' Sage Grouse Task Force (including state and federal partners) identified high-priority actions and began to develop land use plans to address declining populations.

2012

The U.S. Fish and Wildlife Service convened the Conservation Objectives Team.

The Forest Service chartered a strategy to coordinate with the Bureau of Land Management to develop new or revised regulatory mechanisms through land management plans to conserve and restore the greater sage-grouse and its habitat on National Forest System lands on a range-wide basis.

2013

The draft land use plan amendments and environmental impact statements were published. These documents incorporated analysis and input from the public; organizations; Native American Tribes, and local, state, and federal agencies.

2014

The U.S. Geological Survey published *Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review*, a compilation and summary of published scientific studies that evaluate the influence of anthropogenic activities and infrastructure on greater sage-grouse populations.

2015

Final environmental impact statements for the land management plan amendments were published. Developed through state partnerships and local-partner input, the plan amendments provide a balanced and sustainable approach to wildlife, outdoor recreation, ranching, and other traditional land uses that rely on healthy sagebrush landscapes.

The U.S. Fish and Wildlife Service is under a court ordered deadline to issue a determination for greater sage-grouse by September 30, 2015.

GREATER SAGE-GROUSE CONSERVATION STRATEGY

The strategy was chartered to amend existing land management plans to incorporate management actions intended to conserve, enhance, and restore greater sage-grouse populations and habitat. The Forest Service developed a targeted, multi-tiered, collaborative landscape-level conservation strategy. This strategy is based on the best available science that offers the highest level of protection for greater sage-grouse in the most important habitat areas to address the specific threats identified in the 2010 U.S. Fish and Wildlife's "warranted but precluded" decision and 2013 Conservation Objectives Team report. It will allow us to meet our ultimate goal of conserving, enhancing, and restoring greater sage-grouse populations and habitat.

CONSERVATION OBJECTIVE TEAM

The goal of this team is to identify and incorporate appropriate land management plan amendment decisions to conserve, enhance, and restore greater sage-grouse habitat by reducing, eliminating, or minimizing threats to greater sage-grouse habitat. State and federal scientists and wildlife managers have articulated conservation objectives for the management of greater sage-grouse populations and sagebrush habitat to meet this goal. The Conservation Objectives Report defines these objectives clearly, and they have served as a guide for the Forest Service and the Bureau of Land Management:

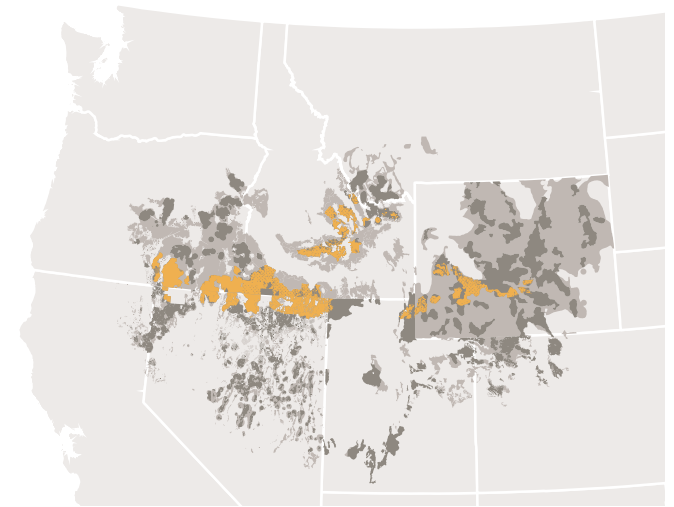
- Stop population declines and habitat loss.
- Implement targeted habitat management and restoration.
- Develop and implement state and federal greater sage-grouse conservation strategies and associated incentive-based conservation actions and regulatory mechanisms.
- Develop and implement proactive, voluntary conservation actions.
- Develop and implement monitoring programs to track the success of state and federal conservation strategies and voluntary conservation actions.
- Prioritize, fund, and implement research to address existing uncertainties.

CONSERVATION ACTIONS & LAND MANAGEMENT AMENDMENTS

Part of the 2010 U.S. Fish and Wildlife Service's warranted but precluded decision stated that existing regulatory mechanisms were insufficient to protect greater sage-grouse habitat. To address this issue, and in accordance with the National Forest Management Act, the Forest Service developed 20 land management plan amendments encompassing about 6 million acres across six Western states. The land management plan direction represents the regulatory mechanisms necessary to conserve, enhance, and restore the greater sage-grouse population and its habitat on National Forest System lands.

To ensure that these land management plan amendments embrace the highest standards, the Forest Service applied the following key considerations during plan amendment development:

- 1. Landscape-level:** The planning effort encompasses identified greater sage-grouse habitat on National Forest System lands in Idaho and Southwest Montana, Nevada, Northwest Colorado, Utah, and Wyoming.
- 2. Best available science:** Each land management plan amendment is grounded in the best available science.
- 3. Targeted, multi-tiered approach:** The land management plan amendments incorporate a layered management approach. The figure to the right offers further explanation.
- 4. Coordinated and collaborative:** The Forest Service coordinated with the Bureau of Land Management as a cooperating agency, and with the States of Colorado, Idaho, Utah, Nevada, and Wyoming and the U.S. Fish and Wildlife Service during analysis of resources and to establish direction to conserve, enhance, and restore greater sage-grouse habitat. The U.S. Geological Survey and Natural Resources Conservation Service also provided critical technical and scientific support. Each land management plan amendment also reflects input from local partners, Native American Tribes, and other organizations.



To protect the most important greater sage-grouse habitat, the planning effort uses a multi-tiered approach that began with mapping areas of key habitat across the range of the greater sage-grouse. This classification allows land managers to prioritize habitat while providing some management flexibility.

Priority habitat management areas

National Forest System lands identified as having the highest habitat value for maintaining sustainable greater sage-grouse populations.

General habitat management areas

National Forest System lands that are either occupied seasonally or provide year-round habitat where some special management would apply to sustain the greater sage-grouse populations.

Sagebrush focal areas

Areas that the U.S. Fish and Wildlife Service identified that represent recognized greater sage-grouse "strongholds," with the highest densities of greater sage-grouse and other criteria important for the species' persistence. In the land management plan amendments, sagebrush focal areas are a subset of priority habitat management areas, with some additional protections.

GREATER SAGE-GROUSE POPULATIONS THREATS & KEY MANAGEMENT RESPONSES

The Conservation Objectives Team Report provided an overview of threats to the greater sage-grouse's survival based upon the U.S. Fish and Wildlife Service's 2010 findings and an assessment of the extent to which these threats affect remaining greater sage-grouse populations. Below is a description of each threat and the guidance from the Conservation Objectives Team Report and a summary of how the Forest Service intends to respond to that threat.



HABITAT CONVERSION TO AGRICULTURE

Threat: Conversion of sagebrush habitat to tilled agricultural crops or re-seeded exotic grass pastures resulting in greater sage-grouse habitat loss and fragmentation.

Report Guidance: None directly applicable to Bureau of Land Management and Forest Service activities.

Land Management Plan Amendment Direction: Retain lands, priority habitat management areas, and general habitat management areas in federal management, preventing the land from being converted for agricultural use.



URBANIZATION

Threat: Urban and ex-urban development results in direct and indirect negative effects on the greater sage-grouse, including habitat loss, disturbance, and introduction of new predators and invasive species.

Report Guidance: Limit urban and ex-urban development in greater sage-grouse habitat and maintain intact sagebrush plant communities.

Land Management Plan Amendment Direction: Retain priority habitat management areas and general habitat management areas in federal management to remove the threat of urban development. The

Did you know that sage-grouse breeding grounds are called leks?

Each spring males congregate in leks & perform elaborate courtship rituals. The photo here shows a male 'strutting' for potential mates.



urbanization threat is also addressed through restrictions on infrastructure, including roads, power lines, and other features that negatively affect habitat.



INFRASTRUCTURE

Threat: Infrastructure development (roads, pipelines, power lines, cellular towers, etc.) results in habitat loss and fragmentation that may cause greater sage-grouse habitat avoidance. Additionally, this infrastructure can inadvertently introduce invasive plant species.

Report Guidance: There should be no new power transmission corridor infrastructure development in priority areas for conservation; and infrastructure should be buried in power transmission corridors that cannot avoid these areas.

Land Management Plan Amendment Direction: Restrict authorization of high-voltage transmission lines, major pipelines, distribution lines, and communication tower sites in greater sage-grouse habitat.



RECREATION, COMMERCIAL USE & TRAVEL MANAGEMENT

Threat: Recreational activities within greater sage-grouse habitat can result in habitat loss or fragmentation (creation of off-road trails, camping facilities, etc.) and both direct and indirect disturbance to the birds (noise, disruptive lek viewing, dog presence, and dispersed camping).

Report Guidance: Maintain healthy native sagebrush communities based on local ecological conditions with consideration for drought conditions and manage direct and indirect human disturbance (including noise) to avoid interruption of normal greater sage-grouse behavior. Close important habitat areas to off-road vehicle use, and avoid recreation-facility development in these areas.

Land Management Plan Amendment Direction: Manage infrastructure, including roads, fences, and recreation facilities, to minimize impacts to the greater sage-grouse and its habitat. New recreation facilities will not be approved unless the development results in a net conservation gain to the species and its habitat.



FIRE

Threat: Rangeland fire can lead to the conversion of previously healthy sagebrush habitat into non-native, cheatgrass-dominated landscapes. Experts have identified wildfire as one of the greatest threats to sagebrush habitat and, therefore, to the sage-grouse.

Report Guidance: Restrict or retain fire within the normal range of fire activity; eliminate intentional fires; immediately suppress fires in all sagebrush habitat; ensure close coordination with firefighters from other management agencies and local fire departments; manage land uses to minimize the spread of invasive species; and design and implement restoration of burned sagebrush habitat.

Land Management Plan Amendment Direction: In all fire responses, the first priority is the management of risk to firefighters and the public. Greater sage-grouse habitat will be protected from loss due to unwanted wildfires or damages resulting from management related activities, while using Forest Service risk management protocols to manage for firefighter and public safety and other high priority values.



INVASIVE PLANTS

Threat: Ground disturbances, wildfire, and improper grazing facilitate loss of available sagebrush by introducing invasive plant species, including annual grasses, which pose a major threat to greater sage-grouse habitat. The invasive plants subsequently contribute to an increase in wildfire frequency and further loss of sagebrush habitat.

Report Guidance: Control or stop the spread of invasive annual grasses and reduce or eliminate established annual grasses; restore altered ecosystems such that nonnative invasive plants are reduced; and remove highly flammable pinyon-juniper stands.

Land Management Plan Amendment Direction: Restore habitats that have been altered as a result of invasive species encroachment, with the objective of establishing 10 to 30 percent sagebrush canopy cover on 70 percent or more of lands capable of producing sagebrush. The amendments also have guidance that aims for a variety of sagebrush-community compositions without invasive species within greater sage-grouse landscapes.



CONIFER ENCROACHMENT

Threat: Pinyon-juniper expansion has negatively affected the greater sage-grouse in its habitat. As pinyon-juniper increases in abundance and size, the habitat quality diminishes and the overall availability of sagebrush is reduced. Additionally, pinyon-juniper can provide habitat for predators.

Report Guidance: Remove pinyon-juniper at a rate that is at least equal to the rate of pinyon-juniper incursion; and focus initially on priority areas for conservation.

Land Management Plan Amendment Direction: Remove invading conifers and other undesirable species and prioritize vegetation treatments closest to occupied habitats and near occupied greater sage-grouse leks.



GRAZING

Threat: Livestock grazing is the most widespread type of land use across the sagebrush biome, and almost all sagebrush areas are managed for livestock grazing. Improper management of the activity may have negative impacts on greater sage-grouse seasonal habitat.

Report Guidance: Ensure that grazing allotments meet ecological potential and wildlife habitat requirements; incorporate greater sage-grouse habitat needs or characteristics into relevant resource and allotment management plans; conduct habitat assessments and make adjustments to achieve habitat characteristics; and focus on priority areas for conservation and adjacent habitat in conducting assessments.

Land Management Plan Amendment Direction: Establishes desired conditions relative to the composition and height of perennial grass in greater sage-grouse habitat and seasonal habitat desired conditions for greater sage-grouse. Apply grazing guidelines in upland and wet meadow habitats to maintain or achieve desired conditions of sagebrush, forbs, and perennial grasses.



RANGE MANAGEMENT STRUCTURES

Threat: Structures that support range management activities can have negative impacts on greater sage-grouse habitat by increasing fragmentation (fences and roads) or diminishing habitat quality.

Report Guidance: Range management structures should be designed and placed to be neutral or beneficial to the greater sage-grouse; and structures currently contributing to negative impacts to the greater sage-grouse or its habitat should be removed or modified to remove the threat.

Land Management Plan Amendment Direction: Do not construct or reconstruct fences and other livestock facilities near occupied leks. Mitigate the negative impact of fences on the greater sage-grouse with design features.



FREE-ROAMING EQUIDS (WILD HORSES & BURROS)

Threat: Free-roaming equid grazing is considered separately from livestock grazing due to different impacts on sagebrush ecosystems and separate management authorities. Horses consume more forage per capita body mass than cattle or sheep, potentially reducing shrub canopy and resulting in a greater abundance of annual invasive grasses.

Report Guidance: Develop, implement, and enforce adequate regulatory mechanisms to protect greater sage-grouse habitat from negative influences of grazing by free-roaming equids. Manage free-roaming equids at levels that allow native sagebrush vegetative communities to minimally achieve proper functioning condition for riparian areas and rangeland health standards for uplands.

Land Management Plan Amendment Direction: Adjust appropriate management levels for wild horse and burro territories where greater sage-grouse management standards are not being met due to degradation that is at least partially attributed to wild horse and burro populations.



ENERGY DEVELOPMENT (FLUID MINERALS)

Threat: The primary potential risks to the greater sage-grouse from energy and mineral development include direct disturbance; displacement or mortality; direct loss of habitat; fragmentation; and cumulative landscape-level impacts.

Report Guidance: Avoid energy development in priority areas for conservation. If this is not possible due to pre-existing rights, development should occur in non-habitat areas with adequate buffers to preclude impacts to greater sage-grouse habitat from noise and other human activities, or where no reasonable alternative exists, in the least suitable habitat by reducing the density of energy structures; consolidating structures and infrastructure; mitigating impacts, and minimizing other features associated with development.



MINING

Threat: Surface mining and adjacent facilities within greater sage-grouse habitat results in the direct loss of habitat, habitat fragmentation, and indirect impacts from disturbance (noise, dust, etc.).

Report Guidance: Avoid new mining activities and any associated facilities within occupied habitats, including seasonal habitats; avoid leasing in greater sage-grouse habitat until other suitable habitats can be restored; reclamation plans should focus on restoring habitats to healthy sagebrush ecosystems, including evidence of greater sage-grouse use; and abandoned mine land reclamation should focus on restoring areas to healthy sagebrush ecosystems where possible.

Land Management Plan Amendment Direction: Do not authorize new mineral material development or disposal or apply certain restrictions. Permit free-use permits and the expansion of existing active pits. New underground coal leases will include a lease stipulation prohibiting the location of surface facilities in priority habitat management areas. The Forest Service will recommend to the Secretary of the Interior that sagebrush focal areas not already withdrawn as designated Wilderness from mineral entry be withdrawn.

KEY COMPONENTS

The land management plan amendments include other components to help maintain, restore, and enhance the greater sage-grouse by eliminating or minimizing threats to its habitat. Consistent with guidance contained in both the report and the Sage-grouse National Technical Team Report, four essential components of the greater sage-grouse conservation strategy were identified: (1) avoiding or minimizing additional habitat disturbances, (2) improving habitat conditions, (3) reducing wildfire threats to greater sage-grouse populations and its habitat, and (4) monitoring and evaluating the effectiveness of conservation measures and implementing adaptive management.

1. MINIMIZING HABITAT DISTURBANCE

Habitat Protections and Disturbance Measures

The land management plan amendments developed direction to avoid and minimize disturbance associated with proposed projects in priority, sagebrush focal, and general habitat management areas. The amendments specify locations within the planning area that will be available or unavailable for certain uses and also addresses conservation and restoration direction applied to habitat management areas.

Disturbance Cap

The land management plan amendments limit the percentage of human-caused disturbance within priority habitat management areas. Generally, if the percentage is exceeded, no further disturbance will be authorized.

Buffers

The land management plan amendments establish a buffer, or disturbance-free zone, around greater sage-grouse leks. The plan amendments define different buffer distances for various types of disturbances and infrastructure.





2. COMMITMENT TO MONITORING

The Forest Service will consistently and systematically monitor the implementation of land management plan amendment direction within the designated greater sage-grouse habitat management areas. This monitoring will be based on the Greater Sage-Grouse Monitoring Framework developed by the Interagency Greater Sage-Grouse Disturbance and Monitoring Sub-team, May 30, 2014. The Framework describes a monitoring process to ensure that decisions are being implemented in a timely manner, that actions are consistent with the plan decisions, and that the decisions and implementation actions achieve the desired conservation goals. Monitoring also includes effectiveness monitoring to understand the effectiveness and validate the results of land management plan amendment direction.

3. ADAPTIVE MANAGEMENT

Adaptive management triggers are essential for identifying when potential management changes are needed to continue meeting greater sage-grouse conservation objectives. The Forest Service will adjust management decisions through an adaptive management process consistent and in accordance with applicable law. The adaptive management strategy includes soft and hard triggers and responses.

4. MITIGATION

When authorizing new land uses that result in habitat loss and degradation, the Forest Service will require mitigation that provides a net conservation gain to the greater sage-grouse, including consideration of any uncertainty associated with the effectiveness of such mitigation. This will be achieved by avoiding, minimizing, and compensating for impacts by applying beneficial mitigation actions.

Moving Forward: RECORDS OF DECISION & PLAN IMPLEMENTATION



RECORDS OF DECISION

The Records of Decision are the culmination of an unprecedented planning effort in cooperation with the Bureau of Land Management to conserve greater sage-grouse and its habitat on National Forest System lands and Bureau of Land Management-administered lands.

The Forest Service manages approximately 8 percent of the remaining greater sage-grouse habitat, and has a responsibility under the National Forest Management Act and applicable regulations to provide for the diversity of plant and animal communities and provide habitat for viable populations of native and desired non-native vertebrate species.

The Records of Decision approve the desired conditions, standards, and guidelines in the land management plan amendments that address what can and can't occur on National Forest System lands in the Great Basin and Rocky Mountain

regions in greater sage-grouse habitat. The amendments seek to reduce the disturbances occurring in greater sage-grouse habitat and for the disturbances that do occur, limit the duration, timing, and location of activities to best protect the greater sage-grouse during all of its life stages.

The decisions strive for balancing the interests of the public at large and those with special interests in the resources of the planning area while providing desired conditions standards and guidelines that will conserve, enhance, or restore sagebrush and associated habitats for the long-term viability of the greater sage-grouse and its habitat. Interests include managing future forest and grassland activities to provide sustainable habitat conditions while continuing to provide for recreation and access opportunities, livestock grazing opportunities, access to locatable mineral resources, development of renewable energy resources, and active habitat restoration efforts on National Forest System lands.

The greater sage-grouse conservation measures approved by the Records of Decision, in addition to other state, federal, and local partners' greater sage-grouse conservation actions, represent an unprecedented, collaborative, landscape-level conservation effort. Through past and future partnerships and cooperation, the Forest Service will manage the sagebrush steppe ecosystem to achieve the common goal to conserve, enhance, and restore greater sage-grouse habitat across the National Forest System land in the Great Basin and Rocky Mountain regions.

LAND MANAGEMENT PLAN IMPLEMENTATION

The land management plan amendments provide the overall direction and guidance for management activities on National Forest System lands. The actual changes on the ground, however, will occur as project-level decisions and resulting actions are implemented.

There will be changes in how National Forest System lands and uses are managed and, as actions are being implemented, they will have impacts on some users. For instance, many users will be contributing to greater sage-grouse conservation by changing their use or operations on National Forest System lands. These changes may be challenging for some users, yet past experience shows that working collaboratively leads to mutual success.

The Forest Service is committed to continuing to work at the local level to find ways to implement the direction and guidance in the land management plan amendments. Implementation will not occur instantaneously, and to be successful, implementation must proceed in a thoughtful way that is collaborative and transparent with federal, state, and local partners.

During implementation, the Forest Service will ensure that greater sage-grouse conservation and the multiple uses (grazing, recreation, energy development, etc.) that occur on National Forest System lands can be harmonized, as much as possible, and that adequate transition time is provided consistently with the analysis.

Through future experiences in implementing the plan amendments, completing additional project analysis, and conducting monitoring and additional research, the Forest Service and its partners will learn more about these landscapes and the wildlife and uses they support. The agency will embrace an attitude of continual learning and adaptation.







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