

Sample Management Actions for Sage-Grouse Habitat

The following was derived from the Conservation Actions identified in the Montana Sage-Grouse Plan.

Modify or adapt pipelines and natural springs, where practical, to create small wet meadows as brood habitat.

Remove [energy] facilities and infrastructure when use is completed.

Consider closed-loop drilling systems (pitless systems).

Employ integrated weed management treatment methods such as a combination of biological and cultural , e.g., grazing, mowing, or seeding, treatments in conjunction with herbicides to manage weeds in sage grouse habitat.

Remove power lines that traverse important sage grouse habitats when facilities being serviced are no longer in use or when projects are completed.

Reduce the availability of predator "subsidies" such as human-made den sites (nonfunctioning culverts, old foundations, wood piles) and supplemental food sources (garbage dumps, spilled grain, etc.) that contribute to increased predator numbers.

If predation is shown to be depressing sage grouse populations, consider predator management actions specific to the predator species, site, and situation.

Develop a transportation management plan across ownership boundaries in critical sage grouse habitats.

Re-vegetate closed roads with plant species beneficial to sage grouse.

If conifer encroachment is a concern, options for treatment include:

- a) prescribed fires when and where feasible (see Fire section for limitations)
- b) remove trees mechanically when feasible, and
- c) apply herbicides when and where feasible.

If sagebrush is lacking:

- a) develop and implement grazing practices that influence sagebrush growth,
- b) inter-seed historical breeding and winter habitats with the appropriate sagebrush species,
- c) identify and promote seed sources for habitat restoration efforts,
- d) encourage the voluntary use of sagebrush in habitat incentive programs, e.g., Conservation Reserve Program, and work to develop additional funding sources for such programs,
- e) reclaim and/or re-seed areas disturbed by treatments when necessary, and
- f) promote sage plantings, where appropriate, on project areas occurring within sage grouse habitats.

If mature sagebrush dominates (based on sagebrush age sampling) with suppressed herbaceous understory:

- a) identify areas of dense mature cover that do not appear to be serving as quality habitat and analyze these areas within the context of a larger landscape,
- b) determine the reason for suppressed herbaceous understory (e.g., soil condition, historical grazing management, drought) and identify/implement methods for improving understory health (e.g., applying prescriptive grazing treatments, see Livestock Grazing Management, Section VI),
- c) design sagebrush treatments to be compatible with sage grouse needs,
- d) develop specific objectives for sage grouse in breeding or winter habitats, and
- e) if sagebrush treatment is deemed appropriate, interrupt seral stages within the appropriate patch size using the appropriate method, e.g., brush beating, chaining, chemical means, prescribed fire, etc., compatible with local conditions.

Additional Sample Management Actions

The following is a compilation of additional management practices/actions for local planning areas to consider – the actions could vary by alternative AND vary among sage-grouse habitat areas (Sage-Grouse Habitat - Protection Priority Areas; Restoration Priority Areas or General Habitat Areas), depending upon local issues:

Increase utilization of crested wheatgrass seedings:

- Use prescribed fire, mowing, etc. to improve palatability of crested during periods of the year.
- Use fire to entice livestock to graze away from leks or nesting areas.
- Fence crested pastures to enable user to concentrate livestock utilization during desired periods of the year.

Increase diversity of species and structure in non-native seedings:

- Use of chemicals, fire grazing to reduce crested vigor and composition.
- Plantings of shrubs, forbs, native grasses. (food strips)
- Mechanical mowing of silver sage to increase density.
- Mowing or mechanical disturbance near existing sage plants in the non-native

Mitigate habitat fragmentation and loss of native species diversity due to energy development infrastructure such as roads, power lines, drill pads, etc. Actions would include:

- Maximize the area of interim reclamation on roads and well locations.
- Direct planting of seedlings of shrubs and forbs important for spring and summer food.
- Seeding of wild collected shrub seed to increase nesting habitat.
- Burying power lines to prevent predator perch sites.

Prescribed grazing

1. Increase utilization of introduced pastures for the benefit of native range.
 - a. Fence introduced pastures separate from native for prescribed management, reducing pressure on native range
 - b. Plan water developments that increase utilization of introduced pastures
2. Prescribed grazing on native sage grouse habitats
 - a. Consider AUM reductions/timing changes private, state and federal
 - b. Special attention would be given to riparian habitats, springs and wet areas.
 - c. Design grazing to control invasive and noxious weeds.
3. Infrastructure- fences, power lines, water tanks and roads existing and new.
 - a. Livestock fencing; tag to prevent collisions, relocate or remove.
 - b. Water tanks should be installed or retrofitted to be grouse friendly i.e. self filling drinkers and modify to prevent drowning.
 - c. Modify pipelines and natural springs to create small wet meadows as brood habitat.
 - d. Remove grazing infrastructure when no longer needed
 - e. Remove nonfunctioning culverts, old foundation and wood piles that contribute to predator habitat.
4. Encroachment of trees - ponderosa pine and juniper
 - a. Use prescribed fire when and where feasible
 - b. Remove trees mechanically/manually
 - c. Use herbicides when and where feasible
5. Sage brush management
 - a. Use prescribed grazing that assures the long term health and growth of the sage brush ecosystem. It should increase forbs and grass productivity and diversity.
 - b. Develop plans for on-the-ground safeguards that will protect core sage brush area from wildfire i.e. fire breaks.
 - c. Use prescribed fire to re-invigorate and increase grass and forb diversity and productivity, particularly in the silver sage brush communities.
 - d. In dense stands consider appropriate method to improve the sage brush environment by brush beating, chaining, chemical or mechanical treatments i.e. Dixie harrow, Lawson aerator.
6. Brood rearing habitat
 - a. Enhancement of meadow, riparian habitat
 - 1) Removal of unwanted vegetation
 - 2) Fertilization of brood rearing areas

3) Development of brood strips that are rich in forbs (located in non-native seedings, or in cultivated lands.

Surface disturbance and other actions that create permanent and high profile structures, such as buildings, storage tanks, overhead power lines, wind turbines, towers and water wells would be avoided whenever possible. When not possible, such structures would not be allowed within XX (consider range of 1.0 mile to 6.0 miles) of a lek.

Install reflectors on fence lines where appropriate.

Design and locate range improvements so they improve habitat conditions and do not negatively affect sage-grouse habitat

Use aggressive and appropriate wildfire suppression techniques only when lesser techniques would not adequately protect sage-grouse habitat.

Fuels management treatments will only be authorized where sage-grouse habitat will not be impacted (could be % habitat).

Encourage placement of new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors to reduce disturbance to sage-grouse and their habitat.

Close and reclaim unnecessary or redundant travel routes to decrease the level of disturbance in sage-grouse habitat.

Limit or decrease linear transportation routes in future site-specific travel plans.

Implement seasonal closures on existing travel routes to decrease the level of disturbance in sage-grouse habitat from (time).

Use off-site mitigation (ex: creation of sagebrush habitat or purchase conservation easements with proponent dollars) to offset habitat losses.

Consider creation of a "Mitigation Trust Account" when impacts cannot be avoided, minimized, or effectively mitigated through other means. If approved by the BLM, the proponent may contribute funding to maintain habitat function based on the estimated cost of habitat treatments or other mitigation needed to maintain the functions of impacted habitats. Off-site mitigation should only be considered when no feasible options are available to mitigate within and immediately adjacent to the impacted site, or when the off-site location would provide more effective mitigation of the impact than can be achieved on-site.

No wind energy development.

Consider avoidance areas for ROWs, roads, power lines, gas lines, etc.

Consider corridors/consolidate ROWs, roads, powerlines, gas lines, etc.

Provide protection for selected habitat and associated leks to support source populations.

Design and locate range improvements so as to not negatively affect sage-grouse habitat and/or improve habitat conditions.

Consider livestock grazing scenarios that emphasize sage-grouse habitat enhancement.

In an effort to reduce vehicle traffic and minimize habitat fragmentation and human presence, require remote monitoring of wells.

Restore new surface disturbance to potential vegetative community with emphasis on sagebrush.

Restore previous surface disturbance areas to desired plant communities with emphasis on sagebrush.

Control invasive and noxious species to restore sagebrush steppe plant communities.

Identify opportunities for rehabilitation or restoration of wildfire areas within sage-grouse habitat.