

APPENDIX R - SELECTED CONSERVATION MEASURES¹ TO BE CONSIDERED IN DEVELOPING VEGETATION TREATMENTS POTENTIALLY AFFECTING GREATER SAGE-GROUSE

R.1 PRESCRIBED FIRE

- Prior to planning prescribed burns or other vegetation management treatments in sagebrush communities, ensure that sage-grouse seasonal habitats have been mapped (see 5.3.2 for additional discussion of mapping).
- Once seasonal habitats have been mapped, ensure that proposed project areas have been evaluated on the ground in the context of the appropriate seasonal habitat characteristics (see 5.3.2).
- Avoid the use of prescribed fire and other sagebrush-reduction projects in areas where sagebrush is limiting on the landscape or in habitats that currently meet, or are trending toward meeting, breeding or winter habitat characteristics.
- If the analysis shows that a vegetation treatment may still be advisable, design habitat-manipulation projects to achieve the desired objectives, considering the following:
 - Where prescribed burning, or other treatments, in sage-grouse habitats may be warranted (e.g., sagebrush cover exceeds desired breeding or winter habitat characteristics; understory does not meet seasonal habitat characteristics and restoration is desired; there is a need to restore ecological processes; or a proposed treatment site is in an exotic seeding being managed for overall sage-grouse benefits on the surrounding landscape).
 - Project design should be done with interdisciplinary input and in cooperation with IDFG.
 - Ensure that any proposed sagebrush treatment acreage is conservative in the context of surrounding seasonal habitats and landscape.
 - Where appropriate, ensure that treatments are configured in a manner that promotes use by sage-grouse (see Connelly 2000 for additional discussion).
 - Leave adequate untreated sagebrush areas for loafing/hiding cover near leks for sage-grouse.
- Evaluate and monitor prescribed burns, and other treatments, as soon as possible after treatment and periodically thereafter to determine whether the project was successful and is meeting or trending toward desired objectives.
- Avoid the use of prescribed fire or other sagebrush treatments in habitats prone to the expansion or invasion of cheatgrass or other invasive species unless adequate measures are taken to control the invasive species and ensure subsequent dominance by desirable perennial species. In many—if not most—cases, this will likely require chemical treatments and reseeding.

¹ Idaho Sage-grouse Advisory Committee. 2006. Conservation Plan for the Greater Sage-grouse in Idaho

- Plan, execute, and monitor prescribed fires in a manner that provides for adequate control and provision for contingency resources.
- Ensure that burn plans address the importance of preventing escaped fires when prescription fires are planned in the vicinity of stronghold and key habitat.

R.2 ANNUAL GRASSLANDS

- Local working groups (LWG), land management agencies, IDFG, and other partners should work closely together to identify and prioritize annual grassland areas for restoration. Work cooperatively to identify options, schedules, and funding opportunities for specific projects.
- In general, the priority for implementation of specific sage-grouse habitat restoration projects in annual grasslands should be given first to:
 - Sites adjacent to or surrounded by sage-grouse stronghold habitats, then
 - Sites outside stronghold habitats but adjacent to or within approximately two miles of key habitat, and
 - Sites beyond two miles of key habitat. The intent here is to focus restoration outward from existing, intact habitat.
- All seeding project designs should include measures for noxious weed control and monitoring for at least 3 years following implementation.
- Seed used in sage-grouse habitat restoration seedings, burned area rehabilitation projects, and hazardous fuels/wildland urban interface projects will be tested and certified as weed-free, based on prevailing agency policy and protocol. Private landowners are encouraged to use only certified seed, as well.
- In designing rehabilitation and restoration projects, use the best available science relative to seeding technology and plant materials. Use of NRCS's "VegSpec" website may be helpful. VegSpec is a web-based decision support system that assists land managers in the planning and design of vegetation establishment practices. VegSpec uses soil, plant, and climate data to select plant species that are site-specifically adapted, suitable for the selected practice, and appropriate for the purposes and objectives for which the planting is intended. (See <http://plants.usda.gov>).
- Design vegetation treatments in areas of high fire frequency to facilitate firefighter safety; reduce the risk of extreme fire behavior; reduce the risk and rate of fire spread to stronghold, key, and restoration habitats; reduce fire frequencies; and shorten the fire season.
- Where rangelands are dominated by annuals (such as cheatgrass) or where they border farmlands or railroad right-of-ways, convert cheatgrass areas to perennials, or establish buffers of perennial species to reduce the risk of fire spread from railroad or agriculture-related activities (e.g., sparks from trains, field burns, burn barrels), where appropriate and feasible.
- To discourage the spread of invasive annuals and noxious weed seed, require the washing of fire vehicles (including undercarriage) prior to deployments and prior to demobilization from wildfire incidents.

- Human activities such as fence and pipeline maintenance or construction, facility maintenance, utility maintenance, or any project or related work at or within 1 km (0.6 miles) of occupied leks that results in or will likely result in disturbance to lekking birds should be avoided from approximately 6:00 PM to 9:00 AM. In general, this guideline should be applied from March 15 through May 1 in lower elevation habitats and March 25 through May 15 in higher elevation habitats.

R.3 PERENNIAL GRASSLANDS

- LWGs, land management agencies, IDFG, and other partners should work closely together to identify and prioritize perennial grasslands (exotic versus native) where plant species diversity or sagebrush is limiting on the landscape. Further, they should work cooperatively to identify options, schedules, and funding opportunities for reestablishing sagebrush in higher priority areas.
- When seeding sagebrush, source-identified, tested seed adapted to local conditions should be used.
- One or more of the following approaches for restoring sagebrush should be considered to improve likelihood of success (see Dalzell 2004 and Monsen et al. 2004):
 - Use of the "Oyer" compact row seeder, which compacts soil and presses seed into the surface.
 - Use of the Brillion cultipacker seeder, where seed is broadcast over the surface followed by cultipacking.
 - Transplant bare-root or containerized stock in small critical areas to establish a seed source.
 - Use the "mother plant" technique, and transplant bare-root or containerized stock in select locations throughout the area to establish a seed source.
 - For large areas (e.g., large wildland fires), aerial seed onto a rough seedbed (Monsen et al. 2004) coupled with one or more of the above options.
- In established stands of introduced perennial grasses, transplant sagebrush into strategic patches or strips in critical sites or throughout the area. Scalp spots or strips to reduce grass competition prior to planting. Or, as an alternative to scalps, consider the use of herbicides (see Monsen et al. 2004, Volume 3).
- Where the diversification of crested wheatgrass or similar seedings with native species of grasses, forbs, and/or shrubs is desired, Pellant and Lysne (2005) recommend a three-step process:
 - Reduce competition of crested wheatgrass to facilitate the establishment and persistence of the desired species. Possibilities include use of livestock, capitalizing on drought episodes that reduce grass vigor, herbicides such as glyphosate, and mechanical treatments.
 - Introduce desired, site-adapted species through drill seeding; aerial seeding followed by harrow, cultipacker or chaining; livestock trampling; or transplanting container stock, bareroot stock, or individual plants from native sources ("wildings"). Lambert (2005) provides descriptions, recommended seeding rates, and other useful

information for nearly 250 species of native and non-native grasses, forbs, and shrubs.

- As part of post-treatment management, ensure that livestock grazing and rest intervals are matched with the phenology and life history characteristics of the desired/seeded/transplanted species. Implement monitoring to clearly document how, what, when, and where treatments were implemented. Follow up with suitable effectiveness monitoring to document success of the treatments relative to project objectives.

R.4 CONIFER ENCROACHMENT

- LWGs, land management agencies, IDFG, and other partners should work closely together to identify and prioritize conifer encroachment areas for further management action. Work cooperatively to identify options, schedules, and funding opportunities for specific projects. For western juniper, Miller et al. (2005) provide *Guidelines for Selecting the Most Appropriate Management Actions*, pages 54–57.
- IDFG, land management agencies, LWGs, and other partners should work closely together to identify leks where conifer encroachment may be affecting lek attendance or nearby habitat quality.
- Remove Douglas fir or other conifers where they are encroaching on wet meadows, riparian areas, or sagebrush stands that provide potential sage-grouse habitat.
- Remove juniper, Douglas fir, pinyon pine, or other trees within at least 100 m (330 ft) or an 8-acre area of occupied sage-grouse leks. The purpose of this procedure is to reduce perching opportunity for raptors or other avian predators within view of leks. Techniques could include chainsaw, chipper, or other suitable mechanical means. Ensure cutting and slash disposal is completed between approximately July 15 and January 30 to minimize disturbance to grouse that may be in the vicinity (e.g., males at leks, nesting females, and young broods). This practice serves to reduce raptor predation on sage-grouse by eliminating potential perches, thereby improving survival, recruitment, and productivity. It may be particularly valuable where avian predation may be of greater concern such as in areas with fragmented habitat, nearby infrastructure features, and/or in the case of small, isolated sage-grouse populations.
- Where juniper or other conifer species have encroached upon sagebrush communities at larger scales, employ prescribed fire, chemical, mechanical (e.g., chaining, chipper, chainsaw, or commercial sale), or other suitable methods to reduce or eliminate juniper. Priority should be given to areas where there is a strong likelihood for recovery of perennial herbaceous vegetation or where preparatory and follow-up actions (e.g., control of invasive species and seeding) are likely to be successful. Whenever possible, but especially if sagebrush habitat is limited locally, use juniper-control techniques that are least disruptive to the affected stand of sagebrush. For example, if junipers are only scattered, and the associated sagebrush community is otherwise relatively healthy, cutting junipers with chainsaws will remove the encroachment threat while allowing for immediate use of the sagebrush by sage-grouse. In all cases, control efforts should be planned using interdisciplinary expertise.

- Where juniper control around leks is planned, monitor leks for at least three consecutive years post-treatment to document effects on lek attendance. Ideally, two to three years of pre-treatment monitoring is also recommended, but this may not always be feasible.

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