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Greater Sage-Grouse Programmatic Candidate Conservation  
Agreement for Rangeland Management Practices on  
Bureau of Land Management Lands in Oregon

Developed Cooperatively by the:  
Oregon Cattlemen's Association  
U.S. Bureau of Land Management  
U.S. Fish and Wildlife Service

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## EXECUTIVE SUMMARY

Greater sage-grouse (*Centrocercus urophasianus*, hereafter “sage-grouse”) have declined across their range for a variety of reasons and now occur in 11 States and two Canadian provinces. On March 23, 2010, the U.S. Fish and Wildlife Service (Service) released its finding that the sage-grouse warranted listing under the Endangered Species Act (ESA), but listing was precluded by other, higher priority actions (75 FR 13909). The primary threats to sage-grouse identified in this finding are habitat loss, fragmentation, and degradation. Other threats include an increase in the use of sagebrush habitat for renewable energy, such as wind power, and the spread of West Nile virus. While improperly managed livestock grazing was identified as a threat, the Service noted: “There are data to support both beneficial and detrimental aspects of grazing (Klebenow 1981, p. 122; Beck and Mitchell 2000, p. 993), suggesting that the risk of livestock grazing to sage-grouse is dependent on site specific management” (75 FR 13998). Positive impacts of grazing could include increased brood use of lightly to moderately grazed areas (as opposed to ungrazed or heavily grazed areas), the maintenance of large areas of contiguous sagebrush, and the ability of ranchers to detect weed infestations early (increasing the likelihood that weed control will be successful). A neutral impact could be the maintenance of perennial bunchgrasses with moderate levels of livestock use. A negative effect could be a reduction in residual perennial grass cover at nesting sites (i.e., visual obstruction).

In 2010, the Oregon Cattlemen’s Association (OCA) approached the Service and the Bureau of Land Management (BLM) seeking a collaborative, problem-solving approach that would support sustainable livestock grazing practices compatible with sage-grouse conservation needs. At the time, guidelines for managing sage-grouse populations and their habitats on public lands were available (e.g., Bureau of Land Management et al. 2000, Connelly et al. 2000, BLM 2004, Hagen 2011), and, nationally, most BLM Resource Management Plans (RMP) (82 of 92 examined by the BLM) contained specific measures or direction pertinent to management of sage-grouse or their habitats (75 FR 13976; BLM 2008). However, there was a high degree of uncertainty as to what the BLM and Service might require if sage-grouse were listed under the ESA. The Service, BLM, and OCA agreed to work together to develop a conservation agreement that livestock grazing permittees can voluntarily implement on BLM-administered allotments in Oregon.

The purpose of this Programmatic Candidate Conservation Agreement (Programmatic CCA) is to reduce or eliminate negative impacts of rangeland management practices to sage-grouse and to maintain and support livestock grazing practices that are beneficial or neutral to sage-grouse on enrolled allotments administered by the BLM in Oregon. Livestock production is a primary use of Oregon’s public rangelands, and listing the sage-grouse could have significant impacts on this use, as well as the communities and livelihoods which depend on livestock production. This Programmatic CCA is an important component of a strategic, landscape-level approach to address the conservation needs of sage-grouse.

The Programmatic CCA is an umbrella agreement among the Service, BLM, and OCA (Cooperators). It provides a framework for participating livestock grazing permittees to voluntarily implement conservation measures (CM) for sage-grouse on BLM-administered allotments in Oregon, beyond measures they are already required to implement by regulation. The BLM permittees can enroll allotments through individual, allotment-level conservation

agreements under (tiered to) this Programmatic CCA. Allotment-level CCAs (Allotment CCAs) are agreements between the BLM, the Service, and participating permittees to implement, monitor, and report effectiveness of the CMs they are implementing to benefit sage-grouse.

The CMs voluntarily undertaken by participating permittees in their Allotment CCAs are measures that are additive to those measures required in existing BLM RMPs. The BLM is amending its RMPs to incorporate explicit objectives and desired habitat conditions, management actions, and area-wide use restrictions, with the objective to conserve sage-grouse and its habitat and potentially avoid an ESA listing decision by the Service. The BLM has issued interim sage-grouse habitat management guidance to its field offices to follow during the RMP amendment (RMPA) process (BLM Washington Office (WO) Instruction Memorandum (IM) 2012-043). When the RMPA process is completed and the BLM issues its decision, the Programmatic CCA will continue to be the vehicle to identify and incorporate additional, voluntary conservation actions that are additive to those required by regulation. This agreement can be updated and revised through adaptive management procedures so that it will continue to provide the added conservation benefits for sage-grouse.

While neither the BLM nor the Service can provide a participating permittees with assurances against additional requirements resulting from the RMPAs and a possible sage-grouse listing decision, this Programmatic CCA provides a level of predictability for the types of activities and practices permittees are most likely to encounter. This is because the CMs are specifically designed to ameliorate threats that the Service has previously identified (75 FR 13909). Moreover, the CMs are the state-of-the-art for sage-grouse management in Oregon (Hagen 2005, 2011) and are consistent with Western Association of Fish and Wildlife Agencies guidelines (Connelly et al. 2000) and current BLM direction for management of sage-grouse habitat on BLM-administered lands (BLM et al., 2000, BLM 2004, BLM 2011a).

This Programmatic CCA includes:

- Description of the responsibilities of Cooperators
- Area to be covered under the Programmatic CCA
- Habitat requirements, status, and general threats to sage-grouse
- CMs designed to remove or reduce identified threats
- Expected benefits of the CMs
- Allotment CCA template
- Monitoring and annual reporting forms

## INTRODUCTION

When a species is listed under the ESA, both regulatory and conservation responsibilities for Federal land managers are triggered. These responsibilities stem in part from section 9 of the ESA that prohibits “take” (i.e., harass, harm, pursue, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct) of listed species. Along with the section 9 prohibitions, Federal agencies must ensure that their actions will not jeopardize the continued existence of the listed species and must carry out programs for the conservation of listed species.

Many candidate species occur on both Federal and non-Federal lands. Non-Federal property owners can enter into a separate Candidate Conservation Agreement with Assurances (CCAA) in order to implement conservation measures aimed at reducing and/or eliminating threats to candidates or other species to ensure that their land operations can continue unaffected if the species is federally listed in the future. However, property owners whose operations rely on using a combination of land ownership types (i.e., Federal and non-Federal) are concerned because assurances provided to them under a CCAA do not apply to Federal lands. These non-Federal property owners, as well as other Federal livestock grazing permittees, are seeking greater certainty that, if they implement conservation measures to enhance the habitat of candidate species on grazing allotments, they would not be required to change their activities on Federal lands in a way that could significantly impact their operations if the candidate becomes listed.

The goal of this Programmatic CCA is to reduce or to eliminate negative impacts of rangeland management practices to sage-grouse and to maintain and support practices that are beneficial or neutral to sage-grouse on enrolled allotments. While a CCA provides no formal assurances against additional requirements if a species is listed, it provides a level of predictability for the types of activities and practices permittees are most likely to encounter.

In the Service’s threats analysis in their 2010 warranted but precluded finding, habitat fragmentation and lack of adequate, existing, regulatory mechanisms were identified as the primary factors negatively impacting sage-grouse across its range (75 FR 13909). The Service identified the principal regulatory mechanism for the BLM as conservation measures in RMPs. The RMPs establish goals and objectives for resource management and the measures needed to achieve these goals and objectives. They are the basis for every on-the-ground action the BLM takes. Where changing conditions require updates to the information or analysis contained in the RMP, the BLM may amend the RMP to bring it into conformance with these changing conditions. The BLM is amending its RMPs to incorporate explicit objectives and desired habitat conditions, management actions, and area-wide use restrictions into RMPs. The BLM’s objective is to conserve sage-grouse and its habitat and potentially avoid an ESA listing. During the RMPA process, the BLM is implementing interim sage-grouse habitat management guidance (BLM 2004, BLM 2011a, BLM WO IM-043-2012).

The BLM is amending eight RMPs in Oregon to provide consistent management of sage-grouse habitat on all BLM-administered lands covered by these plans. The BLM has identified and mapped sage-grouse habitat in coordination with the Oregon Department of Fish and Wildlife (ODFW). This habitat falls into two categories:

- Preliminary Priority Habitat (PPH): Areas that have been identified as having the highest conservation value to maintaining sustainable sage-grouse populations. These areas, which correspond to ODFW Core Area Habitat, include breeding, late brood-rearing, and known winter concentration areas.
- Preliminary General Habitat (PGH): Areas of occupied seasonal or year-round sage-grouse habitat outside of PPH. These areas include ODFW Low Density Habitat as well as additional areas of suitable sage-grouse habitat.

The PPH and PGH habitat maps in use during the RMPA process are preliminary. They were developed using the best scientific data available at the time. The maps may need to be updated as new information becomes available, and they may be refined through the BLM planning process.

Regardless of whether a permittee participates in this CCA, the sage-grouse RMPAs will be applied to all activities requiring Federal authorization within the amended RMP plan area, including livestock grazing practices on BLM-administered lands. This CCA provides a level of predictability for the types of activities and practices the permittees are likely to be required to implement for sage-grouse. This is because the CMs identified in the Programmatic CCA are specifically designed to ameliorate threats to the species that the Service has previously identified. Moreover, the CMs are considered the state-of-the-art for sage-grouse management in Oregon (Hagen 2005, 2011) and are consistent with Western Association of Fish and Wildlife Agencies guidelines (Connelly et al. 2000) and current BLM direction for management of sage-grouse habitat on BLM-administered lands (BLM et al., 2000, BLM 2004, BLM 2011a).

## **PURPOSE AND SCOPE OF THE PROGRAMMATIC CCA**

The primary purpose of the Programmatic CCA is to promote grazing practices that reduce or eliminate threats to sage-grouse on the enrolled allotments and to ensure grazing practices that are neutral or beneficial to sage-grouse can likely continue unaffected if the species is listed in the future. The Programmatic CCA will be implemented through individual Allotment CCAs. Grazing allotments that are in compliance with BLM regulations and policies, and which are being managed with grazing practices that are neutral or beneficial to sage-grouse as determined through implementation of the Allotment CCA, may not incur additional restrictions. The Allotment CCA cannot and will not be used to bring an allotment into compliance with BLM regulations and policies (e.g., BLM Standards for Rangeland Health and Guidelines for Grazing Management). Further, a permittees/lessee's enrollment in the Programmatic CCA through signature of an Allotment CCA does not, by itself, change or otherwise modify an existing grazing permit or Allotment Management Plan. The Programmatic CCA provides a framework for livestock grazing permittees to voluntarily implement CMs for sage-grouse on BLM-administered allotments beyond those measures they already are required to implement by regulation. More specifically, the Programmatic CCA will accomplish the following:

- Identify CMs for rangeland management activities in Oregon that are beneficial for sage-grouse, based on best available science;

- Develop, coordinate, and facilitate conservation actions to reduce and/or eliminate known threats to sage-grouse;
- Support implementation of the sage-grouse Conservation Assessment and Strategy for Oregon (Hagen 2011);
- Serve as an umbrella document for CMs implemented by individual Allotment CCAs;
- Serve as an important component of a larger, landscape-level approach to address the conservation needs of sage-grouse in Oregon;
- Support the continuation of livestock operations while protecting and improving habitat conditions for sage-grouse; and
- Recognize the interrelated nature of public and private land and also the contribution to sage-grouse conservation made by working ranches.

## **EXPECTED BENEFITS**

The CMs identified in this CCA are expected to benefit sage-grouse through maintenance, enhancement and rehabilitation of sage-grouse populations and their habitats and by reducing threats causing direct and indirect mortality. Since the BLM in Oregon manages substantial acreage of important habitat for sage-grouse, implementation of CMs on enrolled grazing allotments could potentially maintain or improve more than 10 million acres of sage-grouse habitat throughout the state. The Service believes that, if similar conservation measures that address threats to sage grouse were implemented throughout its range, the need to list sage-grouse would likely be precluded and grazing on public lands could continue without additional restrictions. Working ranches support rural community stability and agricultural economics, relying on the same healthy landscapes and habitats as sage-grouse. Some specific benefits to sage-grouse habitat provided by working ranches are:

- Maintenance of large tracts of unfragmented and undeveloped land;
- Management of fuels to help reduce the risk of catastrophic wildfires;
- Potential for increased plant diversity, including perennial grasses and forbs; and
- Weed and invasive species detection and management.

Sage-grouse and well-managed grazing are the focus of this Programmatic CCA. Despite the potential problems with single-species management, many species like sage-grouse require individual attention, particularly where conservation efforts will require considerable effort (ODFW GSCS 2011). This agreement looks to improve habitat conditions for sage-grouse on millions of acres of public lands through the careful application of CMs and, by virtue of doing so, will benefit a wide range of sagebrush-obligate species.

## **RELATIONSHIP OF THE PROGRAMMATIC CCA TO SECTION 7 OF THE ESA**

The BLM will request that the Service provide a technical review of the proposed Programmatic CCA following the procedures for “conferencing” (50 CFR §402.10). While conference procedures are not required for a candidate species, the procedures may be used to assist a Federal agency in planning a proposed action to be as consistent as possible with the

conservation needs of a species that has not yet been listed under the ESA. Furthermore, BLM Policy 6840 for Special Status Species Management (SSSM) encourages the BLM to seek technical assistance from the Service when it is determined to be advantageous to a species' conservation or BLM management options.

A decision to list sage-grouse must be based on the five-factor threats analysis<sup>1</sup> required under the ESA. The Service will consider the overall effects of the Programmatic CCA and Allotment CCAs in its listing decision. If sage-grouse becomes a listed species, the Service will review the Programmatic CCA in coordination with the BLM to determine if there have been any significant changes in the information used during the development of the Programmatic CCA (e.g., a substantial and adverse change to the status of sage-grouse). If there have been no significant changes in the action or the information used during the development of the Programmatic CCA, the Service can reconfirm the Programmatic CCA and approve its continued implementation.

## **AUTHORITY**

Sections 2 and 7 of the ESA allow the Service to enter into a CCA with other cooperating partners. Section 2 of the ESA states that encouraging interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs is a key to safeguarding the Nation's heritage in fish, wildlife, and plants. Section 7(a)(1) of the ESA requires the Service to review programs that it administers and to utilize such programs in furtherance of the purposes of the ESA. By entering into this Programmatic CCA, the Service is utilizing its Candidate Conservation Programs to further the conservation of the Nation's fish and wildlife.

The Federal Land Policy and Management Act (FLPMA; Section 307, 43 USC 1737), which provides the overall direction to the BLM for conservation and management of public lands, allows the BLM to participate in cooperative agreements. Subject to the provisions of applicable law, the Department of the Interior Secretary may enter into contracts and cooperative agreements involving the management, protection, development, and sale of public lands. The BLM manual, Section 6840 ("Special Status Species Management"), provides overall policy direction to BLM managers to conserve listed threatened or endangered species on BLM-administered lands and to ensure that actions authorized on BLM-administered lands do not contribute to the need to list species deemed by the BLM to be "sensitive."

## **ALLOTMENT CCA**

This Programmatic CCA serves as an umbrella document for CMs that are implemented voluntarily through individual Allotment CCAs. It is also recognized that additional CMs may

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<sup>1</sup> Under Section 4 of the Endangered Species Act (16 U.S.C. 1533) the Service may determine a species to be endangered or threatened on the basis of any of the following five factors: (A) present or threatened destruction, modification, or curtailment of habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predations; (D) inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence.

be required based on interim BLM sage-grouse guidance and subsequent decisions resulting from the RMPA process. The Service, the BLM, and participating permittees or lessees will cooperatively develop the Allotment CCA (template at Appendix D) including selecting CMs from those listed in the Programmatic CCA (Table 1). Since the Cooperators cannot anticipate all appropriate CMs, they may elect, through mutual agreement, to include additional measures in the Allotment CCA that support healthy sage-grouse habitat. When he/she signs the Allotment CCA, the participating permittee agrees to the following on the BLM lands within the enrolled allotment:

- Implement and assist the BLM and Service to monitor the effectiveness of CMs identified in his/her Allotment CCA that were selected from Table 1 of the Programmatic CCA;
- Avoid negative impacts to sage-grouse on enrolled allotments;
- Cooperate and assist with monitoring activities and other reporting requirements identified in his/her Allotment CCA; and
- Report on his/her compliance with the Allotment CCA to BLM no later than December 31 each year on the forms provided in Appendix A and C of the Programmatic CCA.

### ***Prioritization of Allotments***

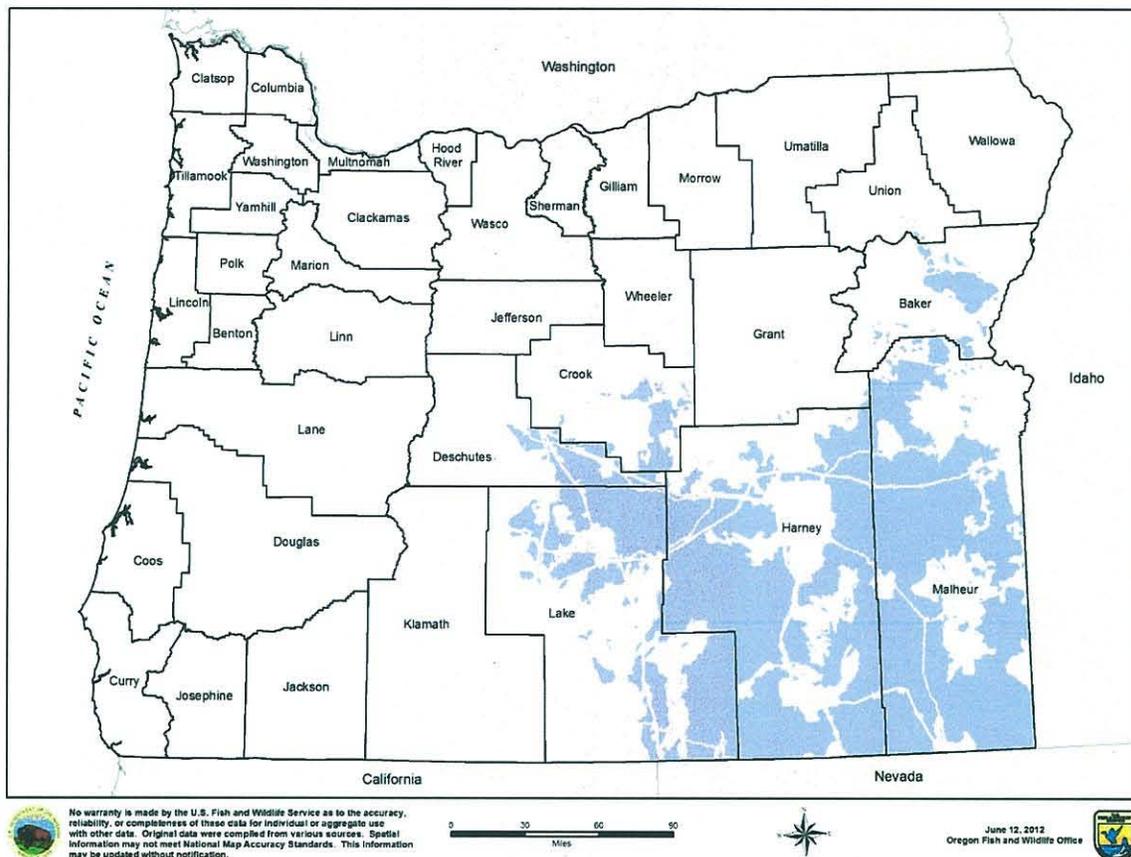
In the event that more applications for enrollment are received than the BLM and the Service can process simultaneously, the following considerations will be used to help prioritize the applications (in rank order):

- Allotment has a significant amount of sage-grouse PPH.
- Permittee has an existing or draft CCAA for his/her private lands (desirable but not required).
- Allotment is within sage-grouse PGH.
- Allotment will maintain or provide new connectivity among PPH and other sage-grouse habitat areas.
- Allotment has an approved Allotment Management Plan (AMP).
- Allotment meets or exceeds all rangeland health standards.
- Allotment is in Category "I".
- Selected CMs do not require additional National Environmental Policy Act (NEPA) analysis to implement. [Note: BLM field offices will complete a Determination of NEPA Adequacy (see BLM NEPA Handbook H-1790-1, section 5.1) for each Allotment CCA to determine if a NEPA analysis must be prepared prior to executing the agreement.]

The Service's Oregon Fish and Wildlife Office will assist the BLM to prioritize allotments for enrollment, but the BLM has full discretion to prioritize any Allotment CCA proposal it receives and to determine if it is in the best interest of the BLM to proceed with developing an Allotment CCA. Livestock permittees may nominate, and the OCA may suggest to the BLM and the Service, allotments for enrollment.

## DESCRIPTION OF COVERED LANDS

The Programmatic CCA covers approximately 10,209,692 acres of sage-grouse habitat, including 4,547,043 acres of PPH and 5,662,649 acres of PGH, on BLM grazing allotments in southeastern Oregon (Figure 1). We do not anticipate that all of these lands will be enrolled in Allotment CCAs. Nominated allotments will be evaluated and enrolled on the priority basis described in the Programmatic CCA.



**Figure 1.** Distribution of occupied sage-grouse habitat in Oregon that intersect a BLM grazing allotment (dark shading).

## SPECIES HABITAT USE AND HABITAT INDICATORS

Sage-grouse are considered a sagebrush obligate species. Sagebrush is important for cover and it is an important component in their diet throughout the year (Connelly et al. 2000). Sage-grouse habitat use varies throughout the year; consequently, the importance of some vegetation characteristics changes seasonally. Four generalized seasonal habitats are described briefly below: breeding (i.e., habitat for pre-laying hens, leks, nesting habitat, and early brood-rearing habitat), summer/late brood-rearing, fall, and winter. A more extensive treatment of these seasonal ranges can be found in Connelly et al. (2000).

The sage-grouse is known for its elaborate mating ritual wherein males congregate and perform a courtship dance on a specific strutting ground called a lek. Lek sites are typically open areas within sagebrush stands that have good visibility for predator detection and acoustical qualities so the sounds of display activity can be heard by other sage-grouse. The male sage-grouse display on leks in early morning and late evening to attract females. The timing of lek attendance varies considerably depending on snow depth, elevation, weather, and geographic region, with first attendance ranging from the end of February to early April and ending in late May or early June (Hagen 2011). Females exhibit strong fidelity to breeding areas (Fischer et al. 1993); habitats used by females prior to nesting are also part of the general breeding habitat. Breeding activities occur from March to early June; however, the lek is considered to be the center of year-round activity for resident grouse populations (Eng and Schladweiler 1972, Wallestad and Pyrah 1974, Wallestad and Schladweiler 1974). Dominant males will breed with more than one female. Females leave the lek and begin their nesting effort after mating; males provide no paternal care or resources. During the pre-laying period, which is the month prior to actual nesting, female sage-grouse continue to eat sagebrush but focus a growing portion of their diet on protein-rich forbs, which are thought to increase the nutritional status of the birds prior to the upcoming nesting period.

Optimum sage-grouse nesting habitat consists of a healthy sagebrush ecosystem complete with sagebrush plants (primarily *A. tridentata* ssp. *tridentata*, *A. t.* ssp. *vaseyana*, *A. t.* ssp. *wyomingensis*, *A. arbuscula* in Oregon) and a strong native herbaceous understory composed of grasses and forbs (Hagen et al. 2007). Nests are typically shallow bowls lined with leaves, feathers, and small twigs placed on the ground at the base of live sagebrush; however, nests have been found under other plant species (Connelly et al. 1991, Gregg 1991). Potential cover and height values for perennial grasses will vary strongly based on both ecological site and yearly conditions. The sage-grouse females that nest under sagebrush tend to have higher nest success rates (53 percent) than those females nesting under other species (22 percent; Connelly et al. 1991). In addition, female sage-grouse tend to select nest sites under sagebrush plants that have large canopies (Hagen et al. 2007). On average, 80 percent of nests are within 6.2 km (4 mi) of the lek, but some females have been shown to nest 20 km (12 mi) from a lek (Hagen 2011). Sagebrush canopies provide overhead cover and are often associated with an herbaceous understory that provides lateral cover for the birds and allows them to hide from predators (Patterson 1952, Klebenow 1969, Wallestad and Pyrah 1974, Gregg 1991, Gregg et al. 1994, Holloran et al. 2005). Female sage-grouse nesting in cover conditions that provide both overhead and lateral cover have higher nest success rates than those nesting under lesser cover conditions (Wallestad and Pyrah 1974, DeLong et al. 1995, Holloran et al. 2005). Mature sagebrush with umbrella-shaped canopies may provide increased screening cover of nests and this canopy shape also helps to decrease grazing of under-shrub screening cover by cattle (France et al. 2008).

Early brood-rearing generally occurs relatively close to nest sites; however, movements of individual broods may be highly variable. During this time, the diet of chicks is focused on forbs and insects (chicks are actually obligate insectivores for roughly the first two weeks of life). From a vegetation standpoint, these habitats are often represented by areas of reduced sagebrush canopy cover, with increased herbaceous expression. Brood females select early and late habitats with less sagebrush cover (about 14 percent) than that provided in optimum nesting

habitat, but need a canopy cover of at least 15 percent of grasses and forbs. Brood-rearing habitats having a wide diversity of plant species tend to provide an equivalent diversity of insects that are important chick foods.

In June and July, as forbs and other food plants mature and dry out, females usually move their broods to more moist sites where succulent vegetation is available. Selected summer areas include: riparian areas, irrigated fields, upland seeps and springs, and high elevation meadows. Sagebrush stands closely associated with these feeding areas provide important security cover.

As fall progresses toward winter, sage-grouse move toward their winter ranges, at which time their diet shifts primarily to sagebrush leaves and buds. Sagebrush canopy in winter habitats can be highly variable, but it is critical that sagebrush be exposed at least 25-30 cm (10-12 in) above snow level because this provides both food and cover for wintering sage-grouse (Hupp and Braun 1989). Low sagebrush may provide adequate winter habitat where snow depths are low or windswept slopes keep the sagebrush clear of snow.

The habitat indicators described above are based on extensive research conducted throughout the range of sage-grouse, including study areas in Oregon. However, some researchers and managers have questioned the applicability of management guidelines (Connelly et al. 2000) based on the indicator values, as well as the techniques used to derive estimates of vegetative cover and height (Bates et al. 2004, Schultz 2004, Davies et al. 2006). Hagen (2007) employed meta-analytical techniques to evaluate the strength (effect size) of the indicators to characterize nesting and brood-rearing habitat reported in peer-refereed articles, graduate research theses, and non-refereed agency reports, including new data published after 2000. The analysis confirmed a substantial shift in habitat selection by females between nesting and brood-rearing periods, primarily a shift in sagebrush and forb canopy cover. Moreover, the range of vegetation measurements reported in the large number of studies (N = 19) was found to be within the guidelines published by Connelly et al. (2000). Because these measurements are generally recorded over relatively small scales (<30 m), identifying the appropriate proportions of these vegetative characteristics in a larger landscape is paramount (Bates et al. 2004, Doherty 2010). Problems arise when vegetation measurements collected at the scale of a plant community are expected to conform to habitat guidelines that were derived from measurements of occupied habitat patches, such as a nest sites. "These issues point to the need for studies of breeding habitats that examine the relationship between vegetative communities, landscape metrics (e.g., habitat patch size, fragmentation, distance to roads, etc.) and demographic rates" (Hagen 2007).

## **THREATS TO SAGE-GROUSE**

Habitat loss and fragmentation are the primary causes for long term changes in population abundance and distribution of sage-grouse range wide (USFWS 2010). In sagebrush habitat in Oregon, wildfire in low elevation sagebrush and its resultant increase of exotic annual grasses, as well as juniper encroachment in the high elevation due to lack of fire are two of the largest factors in habitat loss. Detailed descriptions of range-wide and Oregon threats are available in the 12-month warranted but precluded sage-grouse finding (75 FR 13909), as well as the original and updated ODFW sage-grouse Conservation Assessment and Strategy for Oregon (Hagen 2005, 2011). Wildfire in low elevation sagebrush and its resultant increase of exotic annual

grasses, as well as juniper encroachment in high elevation due to lack of fire are the two largest factors causing habitat loss. Other threat factors include: sagebrush removal, drought, flooding, West Nile virus, unmanaged or improper grazing, recreation, predation, and wild horses.

## **RESPONSIBILITIES OF THE COOPERATORS**

The BLM will:

- Assist with preparation of Allotment CCAs.
- Ensure NEPA adequacy for actions proposed in an Allotment CCA.
- Provide technical assistance to aid permittees in implementing the CMs.
- Collect and interpret monitoring data, as agreed to in the Allotment CCA, to determine if CMs are providing the desired benefit to sage-grouse and provide these data to the Service in an annual report (Appendix B).
- Annually provide any sage-grouse observation or lek count data generated from this agreement to ODFW.
- Work with participating permittees and agencies (e.g., agriculture extension agents) to facilitate the rangeland monitoring required under the Allotment CCA.
- Compile the compliance and monitoring information received through the Allotment CCAs as an annual report.
- Assist permittees with preparing annual reports (Appendix A and C).
- Conduct outreach and public education to promote the conservation of sage-grouse through implementation of the Programmatic CCA.

The Service will:

- Provide assistance in coordinating development and implementation of the Programmatic CCA.
- Assist with preparation of Allotment CCAs.
- Advise the BLM on whether CMs and the Allotment CCA adequately address the identified threats.
- Provide technical assistance to aid the participating permittees in implementing the CMs.
- Provide Service funding, to the extent funding is available, and/or help secure funding sources, to support implementation of the Programmatic CCA and Allotment CCAs.
- Assist with the implementation of conservation, monitoring, or other measures that are developed and agreed upon by the Service in an Allotment CCA.
- Review monitoring data for consistency with CCA objectives to determine if CMs are providing the desired benefit to sage-grouse.
- Coordinate completion of all monitoring requirements set forth in the Programmatic CCA and agreed upon through the Allotment CCAs.
- Assist permittees with preparing annual reports (Appendix A and C).
- Assist the BLM with preparing its annual report (Appendix B).
- Conduct outreach and public education to promote the conservation of sage-grouse through implementation of the Programmatic CCA.

The OCA will:

- Provide assistance in the development and maintenance of the Programmatic CCA.
- Provide assistance to permittees if requested to nominate allotments for enrollment.
- Conduct outreach and public education to promote the conservation of sage-grouse through implementation of the Programmatic CCA.
- Work with participating permittees and agencies to facilitate appropriate rangeland monitoring.

Although the ODFW is not a signatory to the Programmatic CCA or the forthcoming Allotment CCAs, the BLM, the Service, and participating permittees agree to seek ODFW's technical expertise in the development and implementation of Allotment CCAs, as needed and appropriate.

## **CONSERVATION MEASURES**

This section describes CMs designed to reduce threats to sage-grouse on BLM-administered grazing allotments with sage-grouse habitat in eastern Oregon. The CMs described below are derived from existing guidelines for managing sage-grouse populations and their habitats issued by the BLM (2004, 2011); Western Association of Fish and Wildlife Agencies (Connelly et al., 2000); ODFW (Hagen 2011); and an interagency team of managers, fire ecologists, range conservations, and wildlife biologists from the BLM, Service, U.S. Forest Service (USFS), ODFW, and Oregon Department of State Lands (BLM et al. 2000). These guidance documents encourage the application of the best available scientific knowledge, anecdotal information, and professional judgment of local BLM personnel, state wildlife agency biologists, and local sage-grouse working groups to manage and restore sagebrush habitats. Available state, regional, and local information about the condition and distribution of sage-grouse and their habitats will help managers select appropriate management practices to address local habitat problems.

The process for selecting specific CMs in an Allotment CCA will be based on the specific threats that are identified for the covered allotment. The purpose for an Allotment CCA is to ameliorate the identified threats, to the extent possible. State and transition models (STM) developed for sagebrush steppe and riparian habitats in Oregon (Figures 2 and 3) will assist in identifying potential threats and CMs that will help to maintain or improve the habitat for sage-grouse. Each threat identified below has one or more corresponding CM. The Service and the BLM recognize that each allotment is unique, and the appropriate CMs to use are site-dependent. The Service and the BLM will work with each participating permittee to identify the specific threats to sage-grouse on allotments and select CMs that remove or reduce the threats. Some CMs the participating permittee can implement independent of the BLM and the Service, while others will require a coordinated approach. Moreover, some CMs may trigger NEPA, and the BLM will complete a Determination of NEPA Adequacy (see BLM NEPA Handbook H-1790-1, section 5.1) for each Allotment CCA to determine if a NEPA analysis must be prepared prior to executing the agreement. There is no minimum number of CMs that must be implemented to qualify for a CCA, and not all threats have to be fully addressed. However, the allotment must have appropriate, corresponding CMs addressing threats such that there is an overall

conservation benefit to sage-grouse from the implementation of the Allotment CCA. If the BLM and the Service cannot reach this conclusion for any specific Allotment CCA, then the agencies will not execute an Allotment CCA in that instance.

While these CMs should apply across the landscape, there may be circumstances where site-specific modifications or conditions warrant changes to the standard prescriptions. The BLM and the Service will work with participating permittees to modify CMs where necessary and appropriate. The Service will note these modifications on the Allotment CCA, including rationale or justification for any modifications.

These CMs are consistent with the BLM Oregon/Washington (OR/WA) Rangeland Health Standards and Guidelines (BLM 1997). Standard 5 states that “Habitats support healthy, productive and diverse populations and communities of native plants and animals (including SSS and species of local importance) appropriate to soil, climate and land form.” This requirement applies to all allotments regardless of enrollment in an Allotment CCA. Implementing the CMs will assist allotments to meet or exceed rangeland health standards.

Allotment CCAs must be in compliance with existing RMPs for the area covered under these agreements. The BLM is amending its RMPs to incorporate explicit objectives and desired habitat conditions for sage-grouse by the end of FY 2014. Regardless of whether a permittee enrolls in the Programmatic CCA, the RMPAs will apply to all activities requiring Federal authorization within the RMP planning area, including livestock grazing practices on BLM-administered lands. If a CM in an executed Allotment CCA is subsequently incorporated into a final RMPA decision that covers the enrolled allotment, implementation of that CM would cease to be voluntary, and it should be removed from the Allotment CCA because all CMs are voluntary actions that are additive to those actions required by RMPs or other regulation. There are provisions in the Programmatic CCA and Allotment CCA to revise or amend these agreements, if necessary.

Where livestock grazing is consistent with RMPs, Allotment Management Plans (AMP), terms and conditions of grazing permits or leases, other allotment-specific direction, and regulations; the habitat quality meets OR/WA Rangeland Health Standards and Guidelines (BLM 1997), and these plans adequately address the needs of the sage-grouse, then no changes to use or grazing management solely to benefit sage-grouse or its habitat are anticipated (BLM 2000, 2011). Where an allotment is not meeting one or more Rangeland Health Standards and Guidelines, and the BLM has determined the causal factor is livestock grazing, changes in grazing management that will improve or restore habitat quality will be made as soon as practical but no later than the start of the next grazing year, pursuant to 43 CFR 4180.2(c). The BLM identified the following as grazing management options to consider (BLM 2000, 2011):

- Changes in salting and/or watering locations;
- Change in the season, fencing, duration, or intensity of use;
- Reducing grazing use levels;
- Temporary livestock non-use (rest); and/or
- Extended livestock non-use until specific, local objectives are met as identified by ODFW-led Local Implementation Teams (Local Implementation Teams).

Following are the CMs to address threats to sage-grouse and the associated conservation benefits anticipated from implementing CMs. The CMs that permittees may implement independent of the BLM and Service are followed by an asterisk (\*). The CMs that require a more coordinated approach do not have an asterisk.

**Threat: Unmanaged and/or Improper Grazing** – Livestock, humans, and vehicles can physically disturb and cause birds to leave leks or abandon nests (i.e., direct impact to nests and brooding hens) resulting in decreased reproductive success. However, appropriate livestock grazing regimes can be compatible with sage-grouse habitat needs.

**Conservation Benefits:** Conservation measures will:

- Reduce disruptions to lekking and nesting activity that would result in abandonment and increased predation risk.
- Promote vegetation that supports nesting, brood-rearing, and winter habitats including maintenance or recovery of shrub and herbaceous (native grasses and forbs) cover.
- Retain residual cover adequate to conceal sage-grouse nests and broods from predation and plant communities that provide a diversity of plant and insect food sources.

**Conservation Measures:**

*Work with the BLM and the Service to engage in less adverse practices and maintain beneficial practices by using an appropriate combination of the following:*

1. Do not place salt or mineral supplements within 0.6 miles of the perimeter of an occupied lek.\*
2. There will be no disruptive activities one hour after sunset to two hours after sunrise from March 1 through June 30 within 0.6 miles of the perimeter of occupied leks, unless brief occupancy is essential for routine ranch activities (e.g., herding or trailing livestock into or out of an area at the beginning or end of the grazing season). Disruptive activities are those that are likely to alter sage-grouse behavior or displace birds such that reproductive success is negatively affected or an individual's physiological ability to cope with environmental stress is compromised. Examples of disruptive activities may include noise, human foot or vehicle traffic, or other human presence.\*
3. Do not concentrate livestock in nesting habitat or leks from March 1 through June 30. The timing and location of livestock turnout and trailing should not contribute to livestock concentrations on leks during the sage-grouse breeding season.\*
4. Off-trail vehicle use, where authorized, should be restricted to areas >2 miles from leks during the breeding season unless travel is essential for routine ranch activities (including but not limited to: repairing fence, "doctoring" livestock, finding lost livestock).\*
5. Supplemental winter feeding in occupied habitat will not occur unless it is authorized by the BLM as part of a plan to improve ecological health or to create mosaics in dense sagebrush stands that are needed for optimum sage-grouse habitat or is needed for emergency care of livestock (pursuant to 43 CFR 4130.3-2(c) and the BLM Handbook, H-4130-1 and IM No. OR-2011-039).
6. Locate new and/or relocate livestock water developments within sage-grouse habitat to maintain or enhance habitat quality.

7. Develop additional water sources for wildlife and livestock during drought to reduce impacts to riparian, wetland, and wet meadow areas important to sage-grouse.
8. Spring developments should be constructed or modified to maintain their free-flowing, natural, and wet meadow characteristics.
9. Ensure wildlife accessibility to water and install escape ramps in all new and existing water troughs.\*
10. Construct new livestock facilities (livestock troughs, fences, corrals, handling facilities, “dusting bags,” etc.) at least 0.6 miles from leks or other important areas of sage-grouse habitat (i.e., wintering and brood-rearing areas) to avoid concentration of livestock, collision hazards to flying birds, or avian predator perches.
11. Refer to the model by Bryan Stevens (2011) to identify fences that pose a threat to sage-grouse. Remove unused fences. Mark with anti-strike markers the fences that are needed but pose a threat to the sage-grouse. Remove or mark fences within one mile of newly discovered leks that were not included in the model (Christiansen 2009, BLM 2011a, Stevens et al 2012).
12. For playas, wetlands, and springs that have hydrologic modifications for livestock water facilities, Local Implementation Teams in cooperation with the Cooperators and participating permittee will identify water improvements that have population limiting implications. If such water improvements have been identified on the livestock grazing allotment, these should be rehabilitated and off-site livestock watering facilities developed, and new water should be available before existing water is eliminated.
13. Ensure the allotments are meeting or moving toward the desired vegetative condition.
14. The permittee will keep the BLM apprised of new, potential threats that could be negatively impacting the sage-grouse habitat on the allotment.\*

**Threat: Wildfire** – Wildfires can remove long-lived species such as sagebrush, reducing sage-grouse habitat quality and quantity.

**Conservation Benefits:** Conservation measures will help maintain or enhance sagebrush communities.

**Conservation Measures:**

*Work with the BLM and the Service to prevent or suppress wildfires in sage-grouse habitat, especially where rangelands have invasive annual grasses (e.g., cheatgrass, medusahead), using an appropriate combination of the following measures:*

15. Encourage and support the formation of Rural Fire Associations. They are effective in reducing the size of fires, in part because ranchers that are intimately familiar with the terrain volunteer in Rural Fire Associations.\*
16. Use direct attack tactics when it is safe and effective at reducing the amount of burned habitat. This applies to permittees that are members of Rural Fire Associations and trained in firefighting.\*
17. Where authorized by the BLM, establish new and maintain existing fire breaks or green-stripping along existing roadways to provide a fuel break and safe zone from which to fight fire. Work cooperatively with the BLM and the Service to determine the appropriate techniques and seed mixes to use.

18. At least annually, instruct employees, family members, and your guests that visit or frequent the allotment on the importance of fire prevention and fire prevention practices.\*
19. Report any new annual grass (e.g., cheatgrass, medusahead, ventenata) or noxious weed infestations. The Allotment CCA will describe whether there is a commitment to reporting incidental sightings or whether there will be specifically planned surveys.\*
20. Identify and, when authorized, implement fuels treatment options, including strategic grazing.

*Work with the BLM and the Service to reduce negative impacts of wildfire on the sage-grouse through prompt and appropriate habitat reclamation or rehabilitation using an appropriate combination of the following measures:*

21. Following wildfire, work with the BLM and the Service to develop a post-fire rehabilitation plan.
22. Following wildfire, help the BLM to implement a post-fire rehabilitation plan where authorized, feasible, and adequate funding is available.
23. Help the BLM evaluate the need for reclamation from fires/burns occurring in the sage-grouse habitat.
24. For post-fire rehabilitation, use appropriate species of sagebrush, native grasses, and forbs and appropriate non-native perennials that are not aggressive or invasive as recommended by the BLM and the Service and authorized by the BLM.
25. Fires burning over 10 acres of sage-grouse habitat that are at high risk for annual grass invasion will be evaluated for seeding with an appropriate species to reduce the likelihood of cheatgrass establishment.
26. Include sagebrush in fire rehabilitation seeding mixtures or seedlings as often as possible.
27. Encourage development of local native seed banks, in both public and private sectors.\*
28. Help develop and apply, if authorized, an appropriate seed mix for restoration, rehabilitation, and prevention of further spread of invasive weeds. When native seed/cultivar is unavailable, or where the BLM, the Service, and participating permittee determine restoration is highly unlikely to be successful without it, crested wheatgrass can be used instead of native seed/cultivar. If crested wheatgrass is used:
  - a. Native seed/cultivar should be added to the mix if there is enough native seed to compete with crested wheatgrass (based on best available science) and the seeding is in an area that could support this seed mix.
  - b. If crested wheatgrass is planted initially in an area where there is a conservation goal to restore habitat to a more native plant community, specific efforts or plans are needed to inter-seed native grasses, forbs, and shrubs in the rehabilitation areas.
  - c. Pure crested wheatgrass seedlings covered in this agreement are only to be used for restoration/rehabilitation purposes – e.g., to prevent imminent establishment of weeds or as part of a larger, agreed upon plan to provide relief from other, higher priority sage-grouse habitat.
29. Participate with post-treatment monitoring as needed to determine if rehabilitation techniques are adequate or should be modified or repeated. The type of monitoring (e.g.,

photo points), frequency (e.g., yearly, bi-annually, etc.), and length of time (e.g., 1, 3, 5, 10+ years) that you will use to monitor treatments should be described in the Allotment CCA.

**Threat: Juniper Expansion** – Juniper encroachment can lead to a reduction of sage-grouse habitat or use or abandonment. Slash from mechanical or chemical removals may continue to compromise habitat use.

**Conservation Benefits:**

- Maintenance of existing, important sagebrush communities.
- If done correctly, juniper removal can restore native vegetation communities to proper functioning condition.

**Conservation Measures:**

*Work with the BLM and the Service to develop and implement juniper treatments using a combination of the following measures:*

30. Work with agency specialists to determine the need to treat/remove encroaching juniper in sage-grouse habitats and, if needed, the appropriate method (e.g., chainsaw, heavy machinery, chemical, prescribed fire, or a combination). Choose methods that will minimize or prevent soil sterilization and methods least likely to result in weed invasions.
31. Juniper succession stage (Phase I, II, or III) and site conditions will be considered when selecting removal and post-treatment methods. Phase I and II juniper removal is generally a higher priority than Phase III removal.
32. For Phase I juniper <2 m (6 ft.) felling and leaving may be effective in the short-term, removing all branches on the stump is needed to prevent re-growth in the long-term. Consider limbing any branches >1.5 m (4 ft.) in height on a felled tree.
33. Seeding prior to treatment will be considered (and implemented if appropriate) when the current perennial grass community is in poor condition (<2 plants /10ft<sup>2</sup>, <1 plant/10ft<sup>2</sup> on dry and wet sites) or if exotic annual grasses are present. Broadcast seeding prior to soil disturbance or under slash may increase the chances of establishment.
34. The BLM, in cooperation with the Service and the participating permittee, will evaluate the need for temporary rest from grazing. If the BLM authorizes rest, length of rest from grazing following treatment will depend on understory composition at the time of treatment and response of desirable vegetation following treatment. This typically varies from less than 1 to more than 3 growing seasons, depending on vegetation and habitat objectives for the treatment.
35. Promote education and outreach through Soil Water Conservation Districts and Local Implementation Teams to encourage participation in the NRCS's sage-grouse Initiative and the Service's Partners for Fish and Wildlife Program.\*

**Threat: Invasive Vegetation** – Establishment of plant communities that do not provide suitable habitat (e.g., introductions and monocultures of non-native, invasive plants) is reducing sage-grouse habitat quality and quantity. Prevention and early detection is needed. Invasive weeds continue to expand from borders of large infestations. Many sagebrush-steppe communities have crossed a threshold after which they are no longer recoverable by control.

### **Conservation Benefits:**

- Reduce impacts to sage-grouse habitat quality and quantity.

### **Conservation Measures:**

*Work with the BLM and the Service to control and prevent further spread of noxious weeds and invasive annual grasses by using an appropriate combination of the following measures:*

36. "Invasive Plant Prevention Guidelines" developed by the Center for Invasive Plant Management should be followed to the extent practicable and with local input from the county weed board. \*
37. Work with the Service and the BLM to develop new and continue existing containment programs for large infestations. Border spraying infestations, planting aggressive (even appropriate non-native species) plants as a barrier, establishing seed feeding biological control agents, and grazing weeds to minimize seed production are all methods that could be authorized to help contain large infestations.
38. The goal of weed management should be to establish and maintain a healthy, functioning sagebrush plant community with resistance to invasion by undesirable species by maximizing ecological site occupation by native plants.
39. Areas with an adequate understory (> 20 percent composition) of desired vegetation should be identified and prioritized as high for control since they have a higher likelihood of successful rehabilitation than areas where desired (i.e., beneficial to sage-grouse) species are completely displaced.
40. In cooperation between agencies and permittees, a rehabilitation and/or restoration plan should be developed and implemented for areas with inadequate understory (< 20 percent composition) of desired vegetation. The species of choice should include those with a similar niche as the invasive weeds. The goal should be to maximize niche occupation with desired (i.e., beneficial to sage-grouse) species.
41. Help the BLM in its efforts to expeditiously complete site-specific analyses and consultations on herbicide treatments, preferably at the BLM district level.
42. Identify and report areas of invasive plants and help the BLM control them.\* Once patches are located, seed production of the invasives should be stopped and the weeds should be eradicated.
43. Use certified, weed-free seed mixes and mulches.
44. Work with the BLM and the Service to ensure suitable reclamation of weed treated areas for sage-grouse (e.g., seed mixes in sage-grouse habitat with appropriate shrub, forb, and grass components). Rest newly seeded/planted rangeland from livestock use. Consult agency specialist for amount of time to rest.
45. Work with the BLM and ranching personnel to ensure that they know and can identify the invasives that are a threat to the area. Have an easy process in place so new sites and areas where invasive plants are expanding can be reported to appropriate agency personnel.\*

**Threat: Vegetation Treatments** – Vegetation treatments that are not designed to benefit sage-grouse can reduce sage-grouse habitat quality and quantity.

**Conservation Benefits:**

- Sage-grouse can benefit from vegetation treatments that are designed to maintain or enhance sage-grouse habitat and are implemented properly.

**Conservation Measures:**

46. Work with the Service and the BLM to plan and implement, where authorized, vegetation treatments (e.g., mechanical and appropriate prescribed fire) that are beneficial to sage-grouse. Plans will address timing (e.g., spring burn versus fall), fuel loads, post-burn recovery, as well as the importance of the potential habitat treatment to sage-grouse.

**Threat: Recreation** – Repeated disturbance and harassment of sage-grouse could reduce reproduction.

**Conservation Benefits:**

- Minimize disruptions to sage-grouse, especially lek and nesting activity, thereby reducing abandonment and predation risk.

**Conservation Measures:**

47. Support public education programs to encourage appropriate use of Off-Highway Vehicle (OHV) areas and to avoid leks and areas used by nesting sage-grouse.\*
48. Work with agencies to identify and address sage-grouse habitat issues resulting from recreational activities on the allotment.

**Threat: Predation** – Some rangeland management operations can increase opportunities for predation of sage-grouse and sage-grouse nests.

**Conservation Benefits:**

- Reduce direct mortality to individuals and broods.

**Conservation Measures:**

*Minimize the effects of predation on isolated, translocated, or declining populations, where predation has been identified as a limiting factor, using an appropriate combination of the following measures:*

49. Support predator management programs on the allotment where predation is a limiting factor for local sage-grouse populations. If poor habitat conditions are causing a predator problem, habitat conditions should be addressed first, if possible; jointly; or shortly after predator control.
50. Use perch deterrents on power poles or fence posts and modifications to power poles or other human-made structures that are used by corvids or raptors for nesting.
51. Minimize attractants for corvids, raptors, and coyotes (i.e., dump sites, bone piles, etc.), especially during the breeding season, near lek and nesting sites.\*

**Threat: West Nile Virus (WNV)** – Sage-grouse immune systems lack resistance to WNV. Surface water developments may increase habitat for mosquitoes, increasing the potential for WNV exposure.

**Conservation Benefits:**

- Reduce potential for direct mortality and/or disease transmission.

**Conservation Measures:**

52. Preserve any sage-grouse carcasses that are found by placing the whole bird on ice. This will allow the ODFW to investigate and record deaths that could be attributed to disease or parasites. Make these available to the ODFW State Wildlife Veterinarian (866-968-2600).\*
53. Work cooperatively with agencies to develop and implement strategies to reduce WNV exposure risk to sage-grouse and to respond quickly to disease outbreaks where appropriate.
54. Continue to educate the public about WNV and sage-grouse.\*
55. Help monitor radio-marked sage-grouse during WNV season (July –September) where applicable.
56. Provide blood samples from hunter-harvested sage-grouse to monitor the presence of the disease over a broad area, if research is still being conducted. Consult with the ODFW on the collection methodology and to determine whether samples are needed.

**Threat: Wild Horses and Burros** – Concentrated or over-abundant wild horse and burro populations can reduce habitat quality and quantity.

**Conservation Benefits:**

- Reduce impacts to sage-grouse habitats.

**Conservation Measures:**

*The cumulative Appropriate Management Level (AML) for horse numbers should be kept within current AML in herd management areas.*

57. Support the BLM's efforts to gather horses in sage-grouse areas that are over AML.
58. Help evaluate AMLs for impacts on sagebrush habitat.

**Threat: Insecticide** – Application of insecticides can remove insects important to sage-grouse, reducing sage-grouse habitat quality.

**Conservation Benefits:**

- Measures will help maintain insects as a seasonally important food item.

**Conservation Measures:**

59. Support insect control programs by working with agency specialists to avoid harm to non-target species.
60. Implement effectiveness monitoring, if insecticides are used.

**Threat: Drought and Climate Change** – Prolonged drought can harm plants important to sage-grouse reducing sage-grouse habitat quality and quantity.

**Conservation Benefits:**

- Maintain or reduce potential loss of sage-grouse habitat, reproduction, and/or survival.

### **Conservation Measures:**

61. Work with agency specialists to incorporate a drought management component in grazing plans, considering the needs of sage-grouse (e.g., stock conservatively, destock when necessary to reduce impacting rangeland health, apply grazing regimes that protect sage-grouse habitats to the greatest extent practicable).
62. Adjust livestock use (season of use, intensity, and/or duration) to reduce the impact on perennial herbaceous cover, plant species diversity, and plant vigor.

## **INVENTORY AND MONITORING PROVISIONS**

There are a number of protocols the BLM currently uses to monitor rangelands (Herrick et al. 2009). Although the need to monitor standard indicators of ecosystem condition is generally accepted, the need for standardization of methods and rule sets for measuring the indicators is less accepted (Toevs et al. 2011). To address this inconsistency, the BLM has adopted a process to standardize resource data collection (MacKinnon et al. 2011). The Assessment, Inventory, and Monitoring (AIM) Strategy defines a set of core indicators and methods that are “well documented, widely used, easy to implement, and have minimal potential for bias” (MacKinnon et al. 2011, p. 3). Monitoring data will be integrated across field, district, and state office boundaries. The line-point intercept method is used in the AIM Strategy to measure vegetation composition, foliar cover, and vegetation height. Additional sage-grouse habitat indicators (Table 1) can easily be added to the AIM Strategy core indicators and methods, as pilot studies in Oregon have demonstrated. Not only is it more cost effective to use a single protocol to meet multiple monitoring objectives, but it encourages completion of the monitoring in a timely manner.

The overall management goal is to facilitate maintenance of or transition to a desired ecological state (state “A” or “B”) using an ecologically based model (see state and transition diagrams for low elevation, high elevation, and riparian habitat) that can serve the habitat needs of sage-grouse. Once this state is achieved, additional conservation measures may be used to further increase the quality/value of sage-grouse habitat (e.g., timing of grazing in nesting habitat) or mitigate species-specific threats (e.g., raptor perches in the vicinity of critical habitat). However, focusing on species-specific conservation measures in habitat that is in or at risk of transition to a non-desired state (states “C”, “D”, or “E”) can divert resources from addressing underlying ecological issues that ultimately define the current and future value of such habitats to sage-grouse and other sagebrush obligate wildlife species. For this reason, an ecologically based model will be used to determine inventory, monitoring, and conservation needs during the site-specific planning process.

Enrolled permittees and the BLM, with assistance from the Service and, if available, ODFW, will inventory sage-grouse habitats and monitor the implementation and effectiveness of CMs in accordance with monitoring plans established in individual Allotment CCAs. Inventory will be a point-in-time measurement of seasonal habitats to determine their locations and condition. Monitoring will collect repeated observations or measurements to assist in determining the overall effectiveness of CMs in ameliorating threats. Given resource constraints and competing needs, it is paramount that the inventory and monitoring be cost effective. To the extent possible, the monitoring should serve multiple objectives and the data be aggregated for use

across multiple scales. For this to be possible, the methods must provide data that can be combined and compared with data collected in other areas (i.e., within the same sage-grouse Management Zone) for same or similar purposes, as well as data collected to address other management objectives. Monitoring intensity should be matched with the desired level of accuracy and precision. Where only qualitative documentation of change is required, photographs will commonly suffice. Where precise, repeatable measurements (quantitative) of habitat indicators are needed, a line-point intercept or possibly a step-point intercept (provided that a pin is used in place of the toe) may be necessary. Most important, the monitoring must focus on those areas, properties, and processes that are likely to change in response to management (Herrick et al. 2009). These principles form the basis for the inventory and monitoring described below.

Issues of data collection costs and potential for errors in the interpretation of site-scale data will be considered when developing individual monitoring plans for each Allotment CCA. At a minimum, the mid-scale and fine-scale indicators in Table 1 will be measured. Measurement of site-scale indicators will be optional for the Allotment CCA. A variety of data sources and data collection methods are recommended. The specific methods and location of sampling points or transects will be described in the Allotment CCA monitoring plan.

Habitat occupancy by sage-grouse is related to multiple variables (not a single habitat indicator) associated with both local vegetation characteristics and landscape characteristics (Doherty 2010, Leu and Hanser 2011, U.S. Fish and Wildlife Service 2013). Freese (2009) found that most of his study area in Oregon did not meet habitat guidelines, but patches imbedded throughout the study area did, and most areas satisfied many but not all of the guideline requirements (Connelly et al. 2000). Doherty (2010) found that both local- and landscape-scale habitat features influenced nesting habitat selection by sage-grouse individually, but multi-scale models were more predictive than those containing only local- or landscape-scale features. These findings highlight the difficulty of assessing and managing habitat for species that select habitat at multiple scales and utilize resources within large, heterogeneous landscapes.

The results of inventory and monitoring efforts will be considered from an adaptive management perspective, which explicitly recognizes that multiple factors (environmental conditions and biological processes) affect sage-grouse habitat, distribution, and abundance. Many of the CMs have been successfully implemented as part of other conservation efforts. However, outcomes of CMs may vary based upon local site conditions. If the expected results of a CM are not achieved, the CM either will be modified or an alternative CM will be selected for implementation to achieve the expected results. Adaptive management relies on an iterative cycle of monitoring, assessment, and decision-making to clarify the relationships among the CMs and the response of habitat and, ultimately, sage-grouse populations.

**Table 1.** Sage-grouse habitat indicators recorded and monitored in Allotment CCAs (from Stiver et al. 2010, Connelly et al. 2003). First Order/Broad Scale (range of the species) not shown. Collection of site-scale data is optional for the Allotment CCA. (LIDF = line intercept – Daubenmire frame; PI = point intercept.)

Order: Scale	Scale Description	Habitat Indicators	Data Sources and Example of Measurement Technique
Second: Mid-Scale	Physical and geographic range of populations and subpopulations: (1) Habitat characteristics within populations and sub-populations; (2) Dispersal between sub-populations	General Habitat availability Patch size and Number Patch Connectivity Linkage Area Characteristics Landscape Matrix and Edge Effect Anthropogenic Disturbances	Eco-regional Assessments; Hagen (2011); BLM RMPs; Ecological Site Data; GIS data/analysis (aerial photos, satellite imagery, digitized maps)
Third: Fine-Scale	Physical and geographic range of populations and subpopulations: (1) Habitat characteristics within a home range (sagebrush and associated vegetation communities); (2) Movement between seasonal ranges (breeding to summer, summer to winter)	Seasonal Habitat Availability Seasonal Use Area Connectivity Anthropogenic Disturbances	Hagen (2011); BLM grazing operator and allotment files; resource specialists with local knowledge; Ecological Site Data; GIS analysis

<sup>1</sup> Musil (2011) recommends measuring “effective height” and “horizontal cover” using a cover pole.

<sup>2</sup> Collection of site-scale data for the Allotment CCA is optional.

## STATE AND TRANSITION MODELS

Natural variation in vegetation and the dynamic nature of mature sagebrush stands must be considered for all habitat descriptions and for predicting the outcome of any CM or other management action, such as vegetation treatments. Conceptual models of how vegetation and soils change due to different kinds of drivers (such as fire, invasives, drought, grazing) are a useful tool for making these predictions. State and transition models describe changes in community composition that are easy to reverse, as well as those that are not (i.e., transitions to new states). For this reason, an ecologically-based model will be used to determine inventory, monitoring, and conservation needs during the site-specific planning process. Projections in each model are based on the collective observations of experienced managers, research data, monitoring data, and simulation models.

As mentioned earlier, the overall management goal is to facilitate maintenance of or transition to a desired ecological state (state “A” or “B”) using an ecologically based model (see state and transition diagrams for low elevation, high elevation, and riparian habitat) that can serve the habitat needs of sage-grouse. Once this state is achieved, additional conservation measures may

be used to further increase the quality/value of sage-grouse habitat (e.g., timing of grazing in nesting habitat) or mitigate species-specific threats (e.g., raptor perches in the vicinity of critical habitat).

While STMs are typically viewed as being site specific, it is critical to recognize the consequences of spatial connectivity between vegetation states across the larger landscape. For example, a low elevation vegetation community in state “A” provides for year-round sage-grouse habitat. However, if a given community in this state is set within a larger landscape comprised mainly of low elevation state “C” (i.e., annual grass-dominated), then fire risk to state “A” will increase dramatically, suggesting that conservation measures to reduce annual grass abundance in the larger landscape will have significant implications to the security of state A. This example illustrates that conservation measures may have value to sustaining existing sage-grouse habitat, even if these measures are applied in locations that are currently non-habitat, and reinforces the importance of considering spatial connectivity between vegetation communities across the landscape when defining threats and associated conservation measures. This same concept can also be applied over time. For example, during wet years, fuel accumulations across the landscape may be high enough to create high fire danger for most vegetation communities, regardless of what “state” they are in. In such cases, conservation measures to reduce fuel loading could be applied generally, regardless of vegetation state, to reduce risk of wildfire. This example illustrates that conservation needs vary over time and that application of conservation measures must take place within the framework of adaptive management.

### ***Ecological States and Their Relationship to Sage-grouse Habitat***

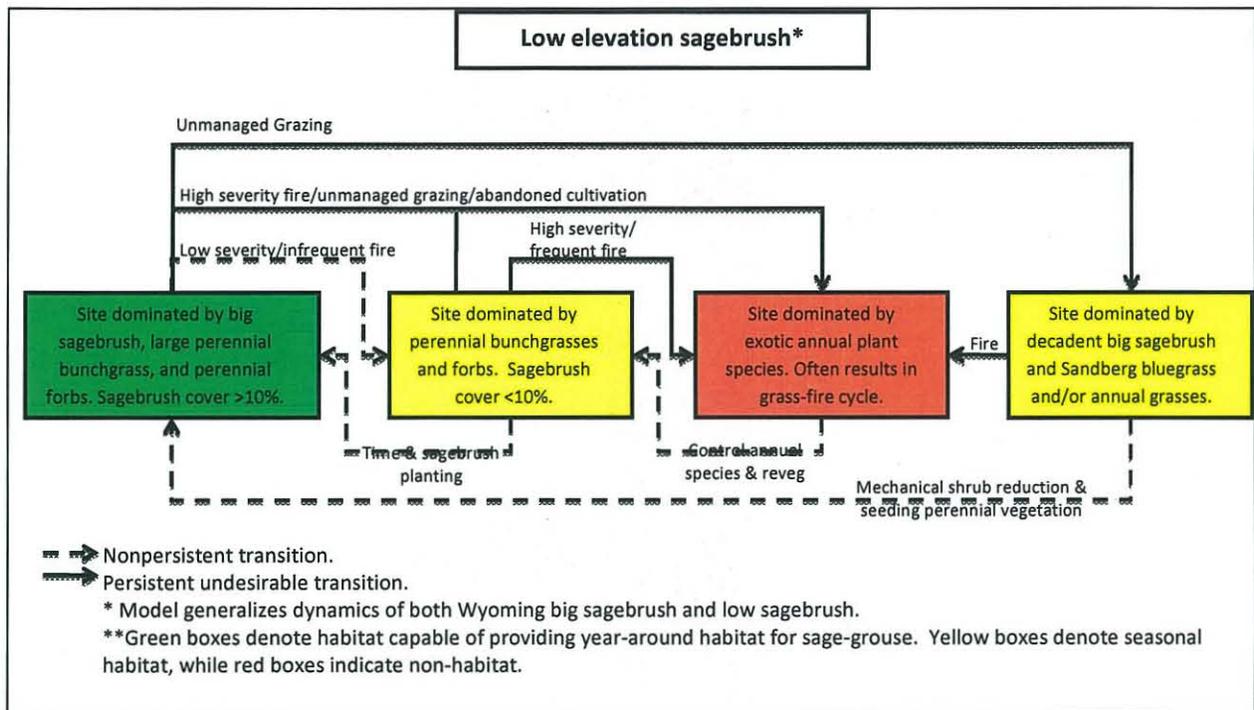
It is important to note that much of the knowledge base concerning vegetation composition and structure in habitats used by sage-grouse has been based on small-scale measurements that reflect the immediate vicinity of the location of radio-marked or flushed birds (e.g., Gregg et al. 1994; Sveum et al. 1998). This is significant because large-scale monitoring efforts (including procedures described in this document) are most feasible at the plant-community-scale or larger; current knowledge of successional change in the sagebrush steppe is firmly based on relationships described at the plant-community-scale. This discrepancy in scale can lead to problems when plant composition at the plant-community-scale is expected to conform to idealized vegetation attributes based on smaller scale measurements. For example, working at the community-scale, Davies et al. (2006) examined over 100 “late-seral” Wyoming big sagebrush communities and reported that: “No sites met the nesting or optimum brood-rearing habitat vegetation cover values suggested by Bureau of Land Management (2000). Mesic and arid breeding vegetation cover values suggested by Connelly et al. (2000) were met by 0% and 18% of the sites, respectively.” The focus in this Programmatic CCA is at the scale of the plant community and the monitoring procedures reflect that scale-specific focus. Thus, the intent is to use the best available knowledge to promote a sustainable composition of plants (termed “states” in these models) that provides elements necessary for sage-grouse habitat at the plant-community-scale.

The use of a color-coding system to label habitats as year-round (green), seasonal (yellow), or non-habitat (red) is based on the presumption of the presence or absence of specific vegetation components that comprise different elements of sage-grouse habitat. Those presumptions are based on the following characterizations of sage-grouse habitat elements as described by

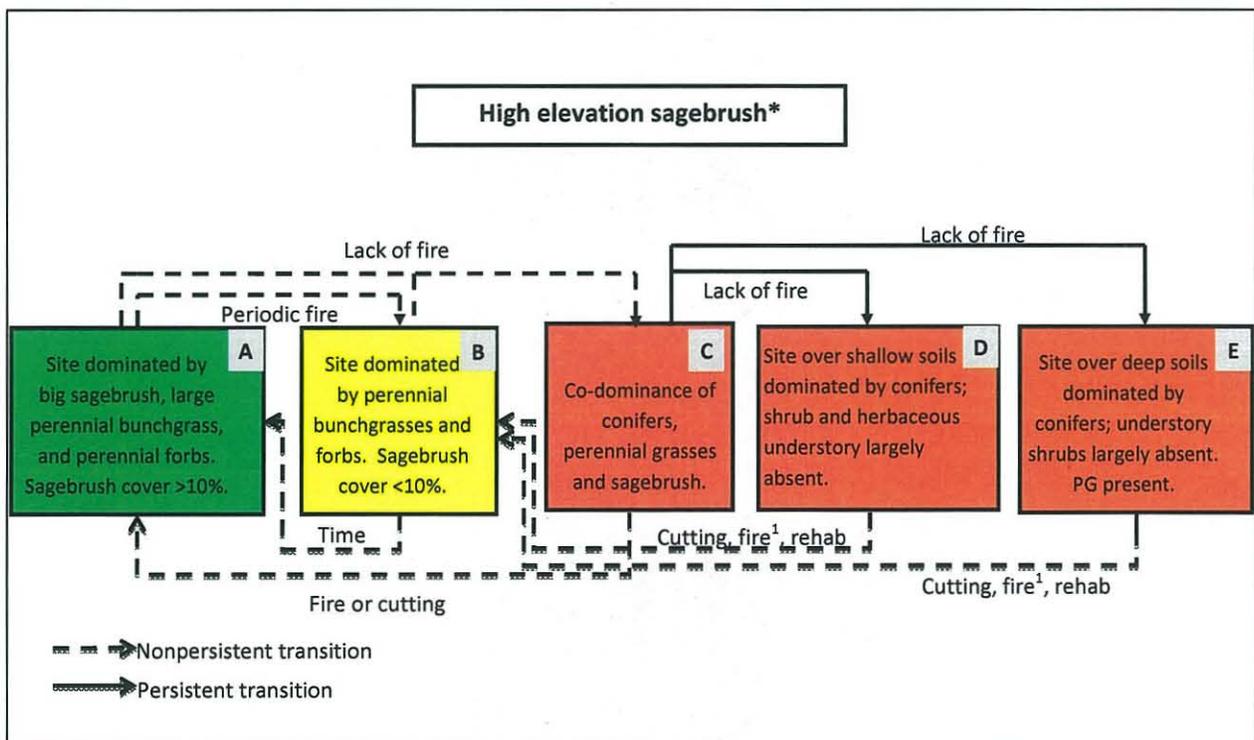
Crawford et al. (2004). Focusing on the low and high elevation models, different habitat needs with different vegetation states can be associated, and the sum of those associations can be used to broadly characterize habitat as year-round, seasonal, or non-habitat. However, just because a state may be suitable for, for example, nesting habitat, that doesn't mean that it is currently being used or will be used in the future for nesting purposes. That said, in both the **low and high elevation models, states A and B** have the potential to support **nesting activities**, although the suitability of state B for this purpose could be limited by sagebrush abundance in some cases. **Brood-rearing habitat** could occur in either **state A or B, although riparian areas in other states** have potential to provide late season, brood-rearing habitat. For the **low elevation model, winter habitat** will be associated primarily with states **A and D**, and in the **high elevation model winter habitat** would be mainly in **state A**.

The models for upland sagebrush rangelands developed for the Draft Harney County CCAA are included herein. Riparian models also have been proposed. Within the Low Elevation sites, generally, ecological states A and B are suitable habitat for sage-grouse, ecological state D is marginal, and ecological state C would be unsuitable habitat. Within the High Elevation sites, generally, ecological states A and B are suitable habitat, states C and E are marginal habitat, and state D is unsuitable habitat. Actions that cause transition to improve or maintain sage-grouse habitat are considered CMs; the actions or impacts which degrade sage-grouse habitat are considered threats to the habitat. Unmanaged grazing and invasive plant species are threats for all states of the low elevation and high elevation rangelands. Wildfire is a threat in low elevation sagebrush rangeland, but lack of fire is a threat in high elevation sagebrush rangeland. Vegetative treatments are a threat in low elevation sagebrush ecological states B and C. Conifer encroachment in high elevation sagebrush ecological states A, B, and C is a threat. These threats and associated CMs are described in this Programmatic CCA.

It should be noted that Ecological Site Descriptions and STMs do not address all dimensions of a species' ecological niche (Doherty et al. 2010, Doherty et al. 2011). Factors such as disease, predation, habitat isolation, and human disturbance, which are not reflected in an STM, may prevent a species from occupying otherwise suitable habitat. Knick et al. (2013) identified ecological minimums required by sage-grouse. Land cover of sagebrush and anthropogenic features were the primary variables defining occupied habitat. Leks with limited connectivity to only one or two neighboring populations did not persist. The importance of reducing or eliminating anthropogenic disturbances to sage-grouse is reflected in the identification of these threats and associated CMs in this Programmatic CCA.



**Figure 2.** Low elevation state and transition model (source: Draft Greater Sage-Grouse Programmatic CCAA for Private Rangelands in Harney County, Oregon).



**Figure 3.** High elevation state and transition model (source: Draft Greater Sage-Grouse Programmatic CCAA for Private Rangelands in Harney County, Oregon).

## INVENTORY

The approach to habitat inventory on each enrolled allotment will be to document the location and condition of sage-grouse habitat indicators at appropriate scales (Table 1). Sage-grouse habitat assessments are often made at varying scales. Habitat at the second- and third-order (mid- and fine-scale, respectively) will be described using mostly existing data supplemented with remotely sensed data. Habitat inventory will be conducted by the BLM and enrolled landowners, or mutually agreed upon third party, in cooperation with the Service and ODFW. Steps to completing the inventory are listed below. A more detailed explanation of data collection methods and interpretation of sage-grouse habitat indicators is provided in Stiver et al. (2010, Volume II, pages 16 - 32).

Step 1. Identify the sage-grouse Management Zone(s), population(s), and habitat areas (PPH and/or PGH) that encompass and adjoin the enrolled allotment. Descriptions and evaluation of habitat at this second order of habitat selection already exist. The BLM is in the process of using this information, supplemented with local GIS data, to prepare the sage-grouse amendments to the RMPs. Use these assessments to describe and evaluate large landscape-scale features and disturbances that influence sage-grouse distribution and abundance.

Step 2. Stratify the enrolled allotment into three broad categories: apparently suitable habitat, potentially suitable habitat, and persistently unsuitable habitat (non-habitat). These habitat categories are defined in Stiver et al. (2010). Base determinations on a combination of information obtained through the previous step, ODFW habitat viability assessments (Hagen 2011), remotely sensed data, Ecological Site Data, anthropogenic features (e.g., highways, transmission lines, mineral sites), disturbance (e.g., burn maps), and management history. Consider current and potential ecological states and examine any state and transition models (Figures 2 and 3) for the enrolled area. Habitat mapping in priority and general habitat will most likely result in relatively large polygons of suitable habitat with smaller inclusions of potential or unsuitable habitat.

Step 3. Map occupied seasonal habitats (breeding, summer late brood-rearing, and fall-winter) and identify potential habitat by seasonal use period. Seasonal habitats are described in Stiver et al. (2010). Sagebrush cover types within 18 km (11 miles) of a lek for migratory populations and 5 km (3 miles) for non-migratory populations are considered breeding habitat and mapped as such unless this distance includes sagebrush communities sage-grouse would not use for nesting (e.g., canyon areas, snow-covered sagebrush areas). Describe and map anthropogenic features within and between seasonal habitats. Possible sources of data to use include ODFW habitat viability assessments (Hagen 2011), remote sensing data (NAIP Imagery), digital elevation models, observation records, brood survey route data, telemetry data, written and oral histories, ecological sites and site descriptions, and soil maps. Occupied and potential seasonal habitats should be mapped in cooperation with ODFW.

Step 4. Verify suitable and potential habitat estimations by examining third- and fourth-order habitat indicators (Table 1), as well as any state and transition models (Figures 2 and 3). Some ground reconnaissance using a combination of qualitative (ocular) and semi-quantitative (pace transect) methods will likely be necessary. Field methods will be mutually agreed to by the permittee, BLM, and FWS and identified in the Allotment CCA. Note that a site-scale inventory

of suitable habitat is not required with an Allotment CCA. Rapid assessment and monitoring techniques (Herrick 2009) may be used to assess suitable habitat. Prioritization of potential, suitable habitat over suitable habitat for inventory is intended to focus attention and, with it, limited resources where there is the greatest need and opportunity to improve habitat through the implementation of CMs. Annual monitoring and reporting described below will be used to verify the implementation and effectiveness of any agreed-upon CMs.

## **MONITORING**

This section outlines the minimum monitoring requirements for an Allotment CCA. Two types of monitoring will occur. Implementation monitoring is designed to answer the question, were CMs carried out as designed? Effectiveness monitoring seeks to determine if the CMs had their desired or intended effect. Individual Allotment CCAs will describe the specific monitoring strategy for each allotment, including a description of the methods to be used, a description of permanent monitoring locations (e.g., transects, plots, permanent photo stations), a schedule for monitoring, and a description of who is responsible for each aspect of monitoring. Monitoring will typically be completed by the BLM and permittees with support from the Service and, if available, the ODFW. Monitoring may also be completed by mutually agreed upon third parties (e.g., contracted organization or individual).

### ***Implementation Monitoring***

In signing his/her Allotment CCA, a participating permittee commits to annually self-reporting the implementation of the selected CMs in his/her agreement. To simplify the reporting process, a list of compliance monitoring questions is provided at Appendix C of the Programmatic CCA. While the participating permittee is the primary party responsible for completing this form, the BLM will provide assistance when requested. Additionally, the Service will organize an annual field review of enrolled allotments to evaluate the CCA's progress toward maintaining and enhancing the sage-grouse habitat in order to provide an opportunity for adaptive management to correct problems and learn from successes. The number of site visits completed in a single year will depend on the number of allotments enrolled and the resources to conduct reviews. However, during the first 10 years of the Programmatic CCA, we anticipate each allotment will be reviewed at least once every 3 years, or more often if there are problems with an allotment meeting the terms of the Allotment CCA.

### ***Effectiveness Monitoring***

Effectiveness monitoring will include annual qualitative monitoring and periodic quantitative monitoring, described below. Additionally, where identified in the Allotment CCA, sage-grouse population trend assessment based largely on lek monitoring with the ability to include other types of population monitoring data (e.g., scat surveys in winter habitat) will occur.

**Qualitative Monitoring.** Local sage-grouse habitat conditions on enrolled allotments will be evaluated annually. This evaluation will include a regular retaking of established photo points by the BLM and/or the participating permittee on a schedule that is appropriate to what is being measured. Photo points may be (but are not required to be) augmented with other monitoring methods. The BLM and permittees will also document new occurrences of noxious weeds, especially areas of disturbed soils, to enable early detection and control of undesirable species.

**Quantitative Monitoring.** Sage-grouse habitat conditions will be assessed at least once every five (5) years, since sagebrush and its associated vegetation take years to respond to changes in management. We expect most changes in plant composition will be captured within this time frame. This schedule may be shifted if there is a wildfire in the allotment (an assessment should be made after the fire) or if there is an unusually dry or wet season (an assessment may wait until the next year). The monitoring locations and methods can be the same as those used in the habitat inventory. Alternatively, the cooperators, through mutual agreement, as identified in their Allotment CCAs, can modify the methods or adopt an entirely new method to monitor habitat indicators for sage-grouse. The BLM, in cooperation with the enrolled permittee and the Service, will determine the number and location of transects for monitoring and proper time of year to perform the monitoring. Monitoring will be conducted by the BLM and Service, or mutually agreed upon third party, in cooperation with the permittee.

**Population Trend Monitoring.** Lek counts will be the primary basis for monitoring populations. Lek monitoring will follow current monitoring protocols established by the ODFW (Hagen 2011, pp. 164-173) which typically coordinates monitoring. While population monitoring will not necessarily be required in the Allotment CCA, cooperators that have been trained in lek data collection protocols are encouraged to collect data annually. If used for population trend assessment, scat surveys may be used to monitor the status of wintering sage-grouse.

## **REPORTING REQUIREMENTS**

The BLM will provide an annual report to the Service that summarizes compliance and effectiveness monitoring information recorded for each enrolled allotment. Participating permittees will report their compliance to the BLM annually, by December 31, on the forms provided at Appendix A and C of the Programmatic CCA. The BLM will submit a copy of all reports, photos, and any newly executed Allotment CCAs to the Service by February 1 of each year. The template provided at Appendix B of the Programmatic CCA is a convenient way for the BLM to organize this information. Annual reports will include information such as:

- Any new allotments enrolled during the reporting period, including copies of the Allotment CCA.
- Summary of the monitoring program; results and findings for the current year, including the degree of compliance with the Programmatic CCA; effectiveness of habitat management activities at meeting the intended conservation benefits; and any population and vegetation information gathered over the past year.
- Any mortality or injury of sage-grouse observed over the previous year.

Monitoring reports or forms shall be delivered to:

State Director  
Bureau of Land Management  
OR/WA State Office  
P.O. Box 2965  
Portland, Oregon 97208  
Phone number: (503) 808-6001

Any reports of sage-grouse injury or mortality and the BLM's annual report required by this Agreement shall be delivered to:

State Supervisor  
Oregon Fish and Wildlife Office  
U.S. Fish and Wildlife Service  
2600 SE 98th Avenue, Suite 100  
Portland, Oregon 97266  
Phone number: (503) 231-6179

Any reports of sage-grouse injury or mortality and data collected from lek counts or incidental observations shall be delivered to:

Upland Game Bird Coordinator  
Oregon Fish and Wildlife Office  
3406 Cherry Avenue NE  
Salem, OR 97303  
Phone number: (503) 947-6323

## **ADAPTIVE MANAGEMENT**

This Programmatic CCA is based on adaptive management principles. The Service, BLM, and OCA agree and recognize that implementation of the CMs herein must be consistent with the concepts and principles of adaptive management. Adaptive management is an iterative learning process producing improved understanding and improved management over time (Williams et al 2007).<sup>2</sup> The Department of the Interior (DOI) has adopted the National Research Council's 2004 definition of adaptive management, which states:

“Adaptive management promotes flexible 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 both advances scientific understanding and helps adjust policies or operations as part of an iterative learning process. Adaptive management also recognizes the importance

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<sup>2</sup> The use of adaptive management by the Service and BLM is guided by the DOI Policy on Adaptive Management, The DOI Adaptive Management Technical Guide is located on the web at :[www.doi.gov/initiatives/AdaptiveManagement/index.html](http://www.doi.gov/initiatives/AdaptiveManagement/index.html).

or natural variability in contributing to ecological resilience and productivity. It is not a “trial and error” process, but rather emphasizes learning while doing. Adaptive management does not represent an end in itself, but rather a means to more effective decisions and enhanced benefits. Its true measure is in how well it helps meet environmental, social, and economic goals, increases scientific knowledge, and reduces tensions among stakeholders.”

The effectiveness of the CMs, monitoring methods, and new technologies will be reviewed by the Service and BLM on an as-needed basis. Upon such evaluation, appropriate modifications to the CMs in Table 1 of this Programmatic CCA will be incorporated to further enhance the goals of this conservation effort. Further, if a CM in an executed Allotment CCA is subsequently incorporated into a final RMPA decision that covers the enrolled allotment, implementation of that CM would cease to be voluntary and it should be removed from the Allotment CCA because all CMs are voluntary actions that are additive to those actions required by RMPs or other regulation. There are provisions in both the Programmatic CCA and Allotment CCA to revise or amend these agreements, if necessary.

## **AVAILABILITY OF FUNDS**

Federal parties to this CCA are subject to the requirements of the Anti-Deficiency Act and the availability of appropriated funds. Nothing in this CCA will be construed by any party to require the obligation, appropriation, or expenditure of any funds from the U.S. Treasury. The Service will not be required under this CCA to expend any Federal agency’s appropriated funds unless and until an authorized official of that agency affirmatively acts to commit to such expenditures as evidenced in writing.

## **DURATION OF PROGRAMMATIC CCA**

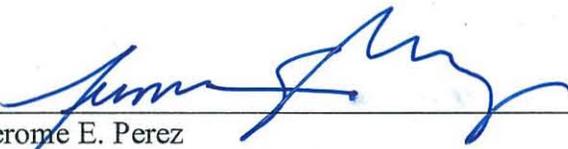
This Programmatic CCA will remain in effect until the BLM or the Service terminates it. Any signatory may withdraw from this agreement at any time by providing 30 days written notice to all other signatories. Any signatory may propose changes to this Programmatic CCA. Such changes will be in the form of an amendment and may be considered at any time after a 30-day notice to all Cooperators. No amendment shall be valid unless executed by all Cooperators to this agreement. All Cooperators will meet at least annually to review the Programmatic CCA and its effectiveness to determine whether revision is necessary. This review will take place prior to the next grazing season to give grazing operators time to make adjustments in management. However, since reports will be completed after the next grazing season’s plans are developed, needed adjustments may take another year before they can be fully implemented.

## SIGNATURES

IN WITNESS WHEREOF, THE COOPERATORS HERETO, agree to execute this Programmatic CCA, effective as of the date of the last signature, and hereby commit to carry out the responsibilities identified in the "Responsibilities of the Cooperators" section of this agreement.

  
\_\_\_\_\_  
Curtis Martin  
President  
Oregon Cattlemen's Association

05/30/2013  
Date

  
\_\_\_\_\_  
Jerome E. Perez  
State Director, Oregon/Washington  
Bureau of Land Management

May 30, 2013  
Date

  
\_\_\_\_\_  
Paul Henson, Ph.D.  
State Supervisor  
U.S. Fish and Wildlife Service

5/30/13  
Date

## LITERATURE CITED

- Bates, J., K. Davies, and R. Miller. 2004. Ecology of the Wyoming big sagebrush alliance in the northern Great Basin: 2004 Progress Report. Eastern Oregon Agricultural Research Center, Burns, OR.
- Beck, J. L., and D.L. Mitchell. 2000. Influences of livestock grazing on sage grouse habitat. *Wildlife Society Bulletin* 28:993-1002.
- Bureau of Land Management. 1997. Approval of OR/WA Standards and Guidelines. Memorandum. OR/WA State Office Files.
- Bureau of Land Management. 2004. Guidance for the management of sagebrush plant communities for sage-grouse conservation. Unpublished report. BLM, Portland, OR.
- Bureau of Land Management. 2008. Responses to concerns about the 2008 status review for greater sage-grouse to Kendra Womack, Branch Chief – Conservation Planning, U.S. Fish and Wildlife Service, Boise, ID. 6 pp.
- Bureau of Land Management. 2011a. A report of National Greater sage-grouse conservation measures. Unpublished report of the sage-grouse National Technical Team. BLM, Portland, OR.
- Bureau of Land Management. 2011b. Federal Register Volume 76, Number 237 (Friday, December 9, 2011). Notices. Pages 77008-77011. FR Doc No: 2011-31652.
- Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, Oregon Department of Fish and Wildlife, and Oregon Department of State Lands. 2000. Greater sage-grouse and sagebrush-steppe ecosystems management guidelines. BLM, Portland, OR.
- Christiansen, T. 2009. Fence marking to reduce Greater sage-grouse (*Centrocercus urophasianus*) collisions and mortality near Farson, Wyoming – Summary of interim results. Unpublished report. Wyoming Game and Fish Department, WY.
- Connelly, J.W., W.L. Wakkinen, A.D. Apa, and K.P. Reese. 1991. sage-grouse use of nest sites in southeastern Idaho. *Journal of Wildlife Management* 55(3): 521-524.
- Connelly, J.W., M.A. Schroeder, A.R. Sands, and C.E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats. *Wildlife Society Bulletin* 28(4): 967-985.
- Connelly, J.W., K.P. Reese, and M.A. Schroeder. 2003. Monitoring of Greater sage-grouse habitats and populations. College of Natural Resources Experiment Station, University of Idaho, Station Bulletin 80, Moscow, Idaho, USA.
- Dahlgren, D.K., R. Chi, and T.A. Messmer. 2006. Greater sage-grouse responses to sagebrush management in Utah. *Wildlife Society Bulletin* 34(4): 975-985.

- Davies, K.W., J.D. Bates, and R.F. Miller. 2006. Vegetation characteristics across part of the Wyoming big sagebrush alliance. *Rangeland Ecology and Management* 59:567-575.
- DeLong, A.K., J.A. Crawford, and D.C. DeLong Jr. 1995. Relationships between vegetational structures and predation of artificial sage grouse nests. *Journal of Wildlife Management* 59(1): 88-92.
- Doherty, K.E., D.E. Naugle, and B.L. Walker. 2010. Greater sage-grouse nesting habitat: the importance of managing at multiple scales. *Journal of Wildlife Management* 74(7): 1544-1553.
- Doherty, K.E., J.L. Beck, and D.E. Naugle. 2011. Comparing ecological site descriptions to habitat characteristics influencing Greater Sage-grouse nest site occurrence and success. *Rangeland Ecology & Management* 64(4): 344-351.
- Eng, R.L. and P. Schladweiler. 1972. Sage grouse winter movements and habitat use in central Montana. *Journal of Wildlife Management* 36(1): 141-146.
- Fischer, R.A., W.L. Wakkinen, and J.W. Connelly. 1993. Nesting-area fidelity of sage grouse in southeastern Idaho. *The Condor* 95: 1038-1041.
- Freese, M.T. 2009. Linking Greater Sage-grouse habitat use and suitability across spatiotemporal scales in central Oregon. M.S. thesis, Oregon State University, Corvallis, OR.
- Gregg, M.A. 1991. Use and selection of nesting habitat by Sage Grouse in Oregon. M.S. Thesis. Oregon State University. Corvallis, Oregon.
- Gregg, M.A., J.A. Crawford, M.S. Drut, and A.K. DeLong. 1994. Vegetational cover and predation of sage grouse nests in Oregon. *Journal of Wildlife Management* 58(1): 162-166.
- Hagen, C. A. 2011. Greater sage-grouse conservation assessment and strategy for Oregon: a plan to maintain and enhance populations and habitat. Oregon Department of Fish and Wildlife, Salem, USA.
- Hagen, C. A. 2005. Greater sage-grouse conservation assessment and strategy for Oregon: a plan to maintain and enhance populations and habitat. Oregon Department of Fish and Wildlife, Salem, USA.
- Hagen, C.A., J.W. Connelly, and M.A. Schroeder. 2007. A meta-analysis of greater sage-grouse *Centrocercus urophasianus* nesting and brood-rearing habitats. *Wildlife Biology* 13(1): 42-50.
- Herrick, J.E., J.W. VanZee, K.M. Havstad, L.M. Burkett, and W.G. Whitford. 2009. Monitoring manual for grassland, shrubland and savanna ecosystems. Volume II: design, supplementary methods and interpretation. USDA-ARS Jornada Experimental Range, Las Cruces, New Mexico.

- Higgins, K.F., J.L. Odemeyer, K.J. Jenkins, G.K. Clambey, and R.F. Harlow. 1994. Vegetation sampling and measurement. Pages 567-591 *in* T.A. Bookhout, editor. Research and management techniques for wildlife and habitats. The Wildlife Society, Bethesda, Maryland.
- Holloran, M.J., B.J. Heath, A.G. Lyon, S.J. Slater, J.L. Kuipers, and S.H. Anderson. 2005. Greater sage-grouse nesting habitat selection and success in Wyoming. *Journal of Wildlife Management* 69(2): 638-649.
- Hupp, J.W., and C.E. Braun. 1989. Topographic distribution of sage grouse foraging in winter. *Journal of Wildlife Management* 53:823-829.
- Klebenow, D.A. 1969. Sage grouse versus sagebrush control in Idaho. *Journal of Range Management* 33: 605-609.
- Klebenow, D.A. 1981. Livestock grazing interactions with sage grouse. Proceedings of the Wildlife-Livestock Relationship Symposium. 113-123 pp.
- Leu, M. and S.E. Hanser. 2011. Influences of the human footprint on the sagebrush landscape patterns: implications for sage-grouse conservation. Pp. 253-272 *in* S.T. Knick and J.W. Connelly (eds). Greater Sage-Grouse: ecology and conservation of a landscape species and its habitats. *Studies in Avian Biology* (vol. 38). University of California Press, Berkeley, CA.
- MacKinnon, W.C., J.W. Karl, G.R. Toevs, J.J. Taylor, M. Karl, C.S. Spurrier, and J.E. Herrick. 2011. BLM core terrestrial indicators and methods. Tech Note 440. U.S. Department of the Interior, Bureau of Land Management, National Operations Center, Denver, Co.
- Musil, D.D. 2011. Use of dwarf sagebrush by nesting Greater Sage-Grouse. Pp. 119-136 *in* B.K. Sandercock, K. Martin, and G. Segelbacher (editors). Ecology, conservation, and management of grouse. *Studies in Avian Biology* (no. 39), University of California Press, Berkeley, CA.
- Patterson, R.L. 1952. Sage grouse populations and land-utilization patterns in the mountain west. *Transactions of the North American Wildlife Conference* 15:384-398.
- Pellant, M., P. Shaver, D.A. Pyke, and J.E. Herrick. 2005. Interpreting indicators of rangeland health, version 4. Technical Reference 1734-6. U.S. Department of the Interior, Bureau of Land Management, National Science and Technology Center, Denver, CO. BLM/WO/ST-00/001=1734/REV05. 122 pp.
- Schultz, B. 2004. Analysis of studies used to develop herbaceous height and cover guidelines for sage grouse nesting habitat. Cooperative Extension Special Publication SP-04-11, University of Nevada, Reno.
- Stevens, B. S., Reese, K. P., Connelly, J. W. and Musil, D. D. 2012. Greater sage-grouse and fences: Does marking reduce collisions? *Wildlife Society Bulletin*, 36: 297–303.

- Stiver, S.J., A.D. Apa, J.R. Bohne, S.D. Bunnell, P.A. Deibert, S.C. Gardner, M.A. Hilliard, C.W. McCarthy, and M.A. Schroeder. 2006. Greater sage-grouse comprehensive conservation strategy. Western Association of Fish and Wildlife Agencies. Unpublished Report. Cheyenne, Wyoming.
- Stiver, S.J., E.T. Rinkes, and D.E. Naugle. 2010. sage-grouse Habitat Assessment Framework. U.S. Bureau of Land Management. Unpublished Report. U.S. Bureau of Land Management, Idaho State Office, Boise, Idaho.
- Sveum, C.M., D.W. Edge, and J.A. Crawford. 1998. Nesting habitat selection by sage-grouse in south central Washington. *Journal of Range Management* 51:265-269.
- Toevs, G.R., J.J. Taylor, C.S. Spurrier, W.C. MacKinnon, and M.R. Bobo. 2011. Bureau of Land Management Assessment, Inventory, and Monitoring Strategy: For integrated renewable resources management. Bureau of Land Management, National Operations Center, Denver, CO.
- U.S. Fish and Wildlife Service. 2013. Greater Sage-grouse (*Centrocercus urophasianus*) conservation objectives: final report. U.S. Fish and Wildlife Service, Denver, CO. February 2013.
- Wallestad, R. and D. Pyrah. 1974. Movement and nesting of sage grouse hens in central Montana. *Journal of Wildlife Management* 38(4): 630-633.
- Wallestad, R. and P. Schladweiler. 1974. Breeding season movements and habitat selection of male sage grouse. *Journal of Wildlife Management* 38(4): 634-637.

**APPENDIX A: Permittee Annual Reporting Form {TEMPLATE}**

Permittee Name:

Allotment Name, District:

Phone Number:

Email:

Agreement Tracking Number:

**NOXIOUS WEED MONITORING:** Please record the locations of new weed occurrences here. Provide map and/or GPS coordinates.

	Date	Location	Species Observed	New Site? (Y/N)	If N, What is Status? (I, D, S, U*)
1					
2					
3					
4					

\* Documentation of known sites is not required, but permittee may wish to document significant changes that are occurring to some infestations. I = Increasing, D = Decreasing, S = Stable, U = Unknown)

**PHOTO POINT MONITORING** (If permittee has accepted this responsibility.): Please attach photographs to this form.

Station	Date	Photographer	Record observations of general range condition here, if desired.
1			
2			
3			
4			



***sage-grouse Mortalities or Injuries:*** Please record sage-grouse mortalities or injuries that do not appear to be caused by predation.

	Date	Location (UTM— NAD83)	Number Observed	Comments
1				
2				

**APPENDIX B: BLM Annual Reporting Form {TEMPLATE}**

Allotment Name, District:  
 Reported By:  
 Phone Number:  
 Email:  
 Agreement Tracking Number:

Please summarize the monitoring program, results, and findings for the current year, including the degree of compliance with the Agreement, effectiveness of habitat management activities at meeting the intended conservation benefits, and population and vegetation information gathered over the past year. This template can be used to help summarize this information.

**ALLOTMENT ENROLLMENT UNDER THE PROGRAMMATIC CCA**

- Briefly describe the total number of allotments and acres of sage-grouse habitat enrolled under the Programmatic CCA.
- Provide copies of Allotment CCAs and any site-specific plans for newly enrolled allotments to the Service (if the Service does not already have a copy).

**NOXIOUS WEED MONITORING:** Please record the locations of new weed occurrences here (*compiled from permittee reports and BLM data*). Alternatively this information could be provided in a geospatial format.

	Date	Location (UTM)	Species Observed	New Site? (Y/N)	If N, What is Status? (I, D, S, U)*
1					
2					
3					
4					

\* Documentation of known sites is not required, but permittee may wish to document significant changes that are occurring to some infestations. I = Increasing, D = Decreasing, S = Stable, U = Unknown

**PHOTO POINT MONITORING** (If the BLM has accepted this responsibility.) Please attach photographs to this form.

Allotment Name	Station	Date	Photographer	Record observations of general range condition here, if desired.
	1			
	2			

IMPLEMENTATION OF CONSERVATION MEASURES

A. Please answer all of the questions that relate to the conservation measures BLM has agreed to implement. [Questions for all conservation measures are included in Appendix C since this is a template form. The BLM does not need to answer all questions. Instead, insert the relevant questions for the conservation measures the BLM will implement here. These questions were created with the permittee in mind. If BLM is implementing the same conservation measures throughout their district, or throughout Oregon, create a way to combine this information and make reporting more efficient.]

B. Please describe extra conservation measures BLM implemented this past year here.

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sage-grouse OBSERVATIONS: Please document sage-grouse observations here. Include BLM observations and a summary of observations received by the permittees in their annual report forms.

**Live sage-grouse Observed:** This is intended for any observations (e.g., winter, brood-rearing, lekking, nesting) and could include lek information if someone else (e.g., ODFW) *is not already* monitoring a lek. Lek monitoring information can also be provided through ODFW.

	Date	Time	Location (UTM)	Number Observed (Specify Sex if Known)			Observed By:	Comments
				Male	Female	Unknown		
1								
2								

**sage-grouse Mortalities or Injuries:** Please record sage-grouse mortalities or injuries that do not appear to be caused by predation.

	Date	Location (UTM)	Number Observed	Observed By:	Comments
1					
2					

## APPENDIX C: List of Compliance Monitoring Questions

[Use these questions for compliance monitoring forms (see Appendix A and B).]

Allotment:

Year:

<b>LIVESTOCK MANAGEMENT PRACTICES</b>		<b>Yes</b>	<b>No</b>	<b>Not Responsible for this CM</b>
<b>Conservation Measures</b>				
CM1	Were new salt or mineral supplements placed at least 0.6 miles from the perimeter of occupied leks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Did you move existing salt or mineral supplements least 0.6 miles from the perimeter of occupied leks?	<input type="checkbox"/>	<input type="checkbox"/>	
CM2	Did you avoid activity within 0.6 miles from the perimeter of occupied leks from one hour after sunset to two hours after sunrise between March 1 and the end of June (except brief occupancy that was essential for routine ranch activities)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM3	Did you avoid concentrating livestock in nesting habitat or leks from March 1 through June 30?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM4	Did you avoid traveling off-trail with vehicles in nesting habitat from March 1 through June 30?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If not, was this travel essential for routine ranch activities (including but not limited to: repairing fence, "doctoring" livestock, finding lost livestock)?	<input type="checkbox"/>	<input type="checkbox"/>	
CM5	Did supplemental winter feeding occur in occupied habitat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM6	Did you locate new and relocate existing livestock water developments within sage-grouse habitat to maintain or enhance habitat quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM7	Did you develop new water sources for wildlife and livestock during drought events, in order to reduce impacts to riparian, wetland, and wet meadow areas that are used by sage-grouse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM8	Were new spring developments constructed to maintain their free-flowing natural and wet meadow characteristics?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Were existing spring developments modified to maintain their free-flowing natural and wet meadow characteristics?	<input type="checkbox"/>	<input type="checkbox"/>	
CM9	Do existing water troughs have escape ramps?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Did you install escape ramps in new and existing water troughs?	<input type="checkbox"/>	<input type="checkbox"/>	

CM10	Did you place new livestock facilities (livestock troughs, fences, corrals, handling facilities, “dusting bags,” etc.) at least 1 km (0.6 mi.) from leks or other important areas of sage-grouse habitat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM11	Did you mark fences within 1.6 km (1 mile) of an active lek or known seasonal use area with anti-strike markers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Did you remove unused and unnecessary fences?	<input type="checkbox"/>	<input type="checkbox"/>	
CM12	For playas, wetlands, and springs that have hydrologic modifications for livestock water facilities, did you work with Local Implementation Teams in cooperation with the Cooperators to the Allotment CCA to identify water improvements that have population limiting implications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If so, do you have a plan to address this?	<input type="checkbox"/>	<input type="checkbox"/>	
	Have these been rehabilitated (after new livestock watering facilities have been developed)?	<input type="checkbox"/>	<input type="checkbox"/>	
CM13	Did you work with agency specialists to ensure the allotments are meeting or moving toward the desired vegetative condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM14	Did you keep BLM apprised of issues that could be detrimental to sage-grouse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Provide a copy of the grazing management plans that are relevant to this allotment (e.g., RMP, AMP, grazing leases, other site plans) to the Service, if not previously provided.
- Describe how you implemented your invasive plant management plan this year.
- Summarize the grazing management in sage-grouse habitat on this allotment for the past year (Jan 1-Dec 31) if it differed from your grazing management plan. Include the dates pastures were grazed if these vary by year due to adaptive management.
- For CMs where you answered “no,” please describe why this CM was not implemented.

<b>WILDFIRE Conservation Measures</b>		<b>Yes</b>	<b>No</b>	<b>NA or Not Responsible for this CM</b>
CM1	Did you help form, or continue to support (directly or indirectly) a local Rural Fire Association?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM2	Were direct tactics used to fight fire in sage-grouse habitat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM3	Did you establish or maintain fire breaks or green-stripping along existing roadways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM4	Were ranching personnel that frequented the allotment aware of fire prevention practices?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM5	Did you report any new weed infestations that occurred this past year (Jan 1-Dec 31)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Did you actively seek new weed infestations or monitor known sites this past year (Jan 1-Dec 31)?	<input type="checkbox"/>	<input type="checkbox"/>	

CM6	Did you help BLM implement a post-fire rehabilitation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM7	Did you assist in the development and implementation of a post-fire rehabilitation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM8	Did you help evaluate the need for post-fire reclamation on fires over 10 acres in sage-grouse habitat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM9	Did you use an appropriate seed mix (as described in this CM) when conducting post-fire restoration?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM10	Did you evaluate for seeding burns over 10 acres that are at high risk for cheatgrass invasion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Did you seed burns over 10 acres that are at high risk for cheatgrass invasion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM11	Was sagebrush included in your restoration/rehabilitation seed mixtures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM12	Did you develop or support the development of native seed banks this past year (Jan 1-Dec 31)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM13	Was crested wheatgrass used in any of your restoration seed mixes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If so, do you have a long-term plan to transition this to native plants? Describe below.	<input type="checkbox"/>	<input type="checkbox"/>	
CM14	Did you complete your post-treatment monitoring this year?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Provide copies of fire management plans to the Service (BLM action).
- Describe the fires that occurred on the allotment this past year (Jan 1-Dec 31), including location, acres of sage-grouse habitat burned, and the post-fire range condition.
- Describe fire suppression efforts for this allotment, *if these efforts differed* from your fire suppression plan.
- Describe specific fire prevention efforts conducted on this allotment in the past year (e.g., green-stripping).
- Describe post-fire rehabilitation efforts and post-treatment monitoring that occurred this past year. Include a description of seed mixes used. If non-natives were included in seed mixes, describe your plan, timeframe, and the time frame and post-treatment monitoring you will use to establish appropriate native species. *Attach pre- and post-treatment photos. You can attach and cross-reference a report if one is available.*
- For CMs where you answered “no,” please describe why this CM was not implemented

<b>JUNIPER EXPANSION Conservation Measures</b>		<b>Yes</b>	<b>No</b>	<b>Not Responsible for this CM</b>
CM1	Have you worked with agency specialists to determine whether there is a need for juniper treatment and, if needed, the appropriate method?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If areas need to be treated, do you have a plan for treatment?	<input type="checkbox"/>	<input type="checkbox"/>	
CM2	Are you giving Phase I and II treatments a higher priority for removal than Phase III?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CM3	For Phase I juniper treatments, did you use the "felling and leaving" method?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If so, did you limb any branches >1.5 m (4 ft.) in height on felled trees?	<input type="checkbox"/>	<input type="checkbox"/>	
CM4	Did you work with agency specialists to determine if seeding prior to treatment would be beneficial?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Did seeding occur prior to juniper treatment, for projects where this was determined to have a benefit?	<input type="checkbox"/>	<input type="checkbox"/>	
CM5	Did you work with agency specialists to determine an appropriate period of rest from grazing following juniper treatments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Were you able to implement this rest (if any) as agreed?	<input type="checkbox"/>	<input type="checkbox"/>	
CM6	Did you promote education and outreach through SWCD and Local Implementation Teams to encourage participation in the NRCS's sage-grouse Initiative and the Service's Partners for Fish and Wildlife Program?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Describe any juniper treatments conducted this past year. Include the following information: location, acres treated, methods used, results, and post-treatment monitoring. *Attach pre- and post-treatment photos. You can attach and cross-reference a report if one is available.*
- Please describe any other juniper treatments that were conducted under this Agreement in previous years that required follow-up treatment or multiple years of monitoring.
- For CMs where you answered "no," please describe why this CM was not implemented.

<b>INVASIVE VEGETATION Conservation Measures</b>		<b>Yes</b>	<b>No</b>	<b>Not Responsible for this CM</b>
CM1	Are you following Center for Invasive Plant Management guidelines to reduce the risk of invasive noxious weeds?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM2	Do you have a plan or program to contain large weed infestations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Did you take measures to contain large weed infestations? Measures include things such as border spraying, planting aggressive plants as a barrier, using biological control agents, and grazing weeds to minimize seed production?	<input type="checkbox"/>	<input type="checkbox"/>	
CM3	Is the goal of your weed management program to establish and maintain a healthy, functioning sagebrush plant community with resistance to invasion by undesirable species by maximizing ecological site occupation by native plants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Was the weed management implemented on the allotment this past year (Jan 1-Dec 31) consistent with this goal?	<input type="checkbox"/>	<input type="checkbox"/>	
CM4	Have you identified what areas have an adequate understory (> 20% composition) of desired vegetation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If so, did you focus invasive weed control efforts in these areas first?	<input type="checkbox"/>	<input type="checkbox"/>	
CM5	Is there a restoration plan for areas that do not have an adequate understory (< 20% composition) of native vegetation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM6	Did you work with agency specialists to develop site-specific plans for herbicide treatments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If so, did you treat any invasive plants with herbicides?	<input type="checkbox"/>	<input type="checkbox"/>	
CM7	Did you work with management agencies determine where invasive plants occur?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Did you conduct systematic detection surveys to detect new weeds?	<input type="checkbox"/>	<input type="checkbox"/>	
	Did you report new detections to the BLM quickly so they can remove/treat the weeds?	<input type="checkbox"/>	<input type="checkbox"/>	
	Are you working with the same agencies to control invasive plants/remove or treat the weeds?	<input type="checkbox"/>	<input type="checkbox"/>	
CM8	Did you use certified weed-free seed mixes and mulches?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM9	Did the permittee and agencies develop and implement a plan to ensure suitable reclamation of weed treated areas for sage-grouse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM10	Did agencies and permittees work together to ensure that permittees and agency personnel can identify invasive plants that are a threat to sage-grouse habitat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Did agencies and permittees develop a simple process so new sites and areas where invasive plants are expanding can be reported to the appropriate agency personnel?	<input type="checkbox"/>	<input type="checkbox"/>	

- Describe rehabilitation efforts and post-treatment monitoring that occurred this past year. Include a description of seed mixes used. If non-natives were included in seed mixes, describe your plan, timeframe, and post-treatment monitoring you will use to establish appropriate native species. *Attach pre- and post-treatment photos. You can attach and cross-reference a report if one is available.*
- For CMs where you answered “no,” please describe why this CM was not implemented.

<b>VEGETATION TREATMENTS</b>		<b>Yes</b>	<b>No</b>	<b>Not Responsible for this CM</b>
<b>Conservation Measures</b>				
CM1	Did you work with the BLM and Service to plan vegetation and prescribed fire treatments to address timing (e.g., spring burn vs. fall), fuel loads, post-burn recovery, as well as the importance of the potential treatment to sage-grouse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Vegetation treatments (i.e., sagebrush reduction or manipulation) should not result in conversion to cropland or grassland. Did you meet this goal?	<input type="checkbox"/>	<input type="checkbox"/>	
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- Describe vegetation treatments that occurred this past year. *Attach pre- and post-treatment photos. You can attach and cross-reference a report if one is available.*
- For CMs where you answered “no,” please describe why this CM was not implemented.

<b>RECREATION Conservation Measures</b>		<b>Yes</b>	<b>No</b>	<b>Not Responsible for this CM</b>
CM1	Did you support public education programs to encourage appropriate use of OHV areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM2	Did you work with agencies to identify and address sage-grouse habitat issues resulting from recreational activities on the allotment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>PREDATION Conservation Measures</b>		<b>Yes</b>	<b>No</b>	<b>Not Responsible for this CM</b>
CM1	Did you support predator management programs on the allotment where predation is a limiting factor for local sage-grouse populations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Did you work with agency specialists to determine where predator control methods are appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	
CM2	Did you use perch deterrents on power poles or fence posts, modifications to power poles or other human-made structures that are used by corvids or raptors for nesting?			
CM3	Did you minimize attractants for corvids, raptors, and coyotes (i.e., dump sites, bone files, etc.) during the breeding season near lek and nesting sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Describe any predator control that occurred on this allotment in the past year. Please include the location, methods used, species targeted, and results.
- For CMs where you answered “no,” please describe why this CM was not implemented.

<b>WEST NILE VIRUS (WNV) Conservation Measures</b>		<b>Yes</b>	<b>No</b>	<b>Not Responsible for this CM</b>
CM1	Did you collect and preserve detected sage-grouse carcasses and provide them to ODFW or report this information quickly to ODFW?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM2	Did you work cooperatively with agencies to develop and implement strategies to reduce WNV exposure risk to sage-grouse and to respond quickly to disease outbreaks where appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM3	Did you educate the public about WNV and sage-grouse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM4	Did you help monitor radio-marked populations during WNV season (July –September) where applicable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Describe any known or suspected disease outbreaks that occurred in sage-grouse populations on this allotment the past year.
- For CMs where you answered “no,” please describe why this CM was not implemented.

<b>WILD HORSES AND BURROS Conservation Measures</b>		<b>Yes</b>	<b>No</b>	<b>Not Responsible for this CM</b>
CM1	Did you support or conduct efforts to round-up wild horses and burros in sage-grouse areas that are over AML?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM2	Did you help evaluate AMLs for impacts on sagebrush habitat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- For CMs where you answered “no,” please describe why this CM was not implemented.

<b>INSECTICIDE Conservation Measures</b>		<b>Yes</b>	<b>No</b>	<b>Not Responsible for this CM</b>
CM1	Did you work with agency specialists to plan and design control efforts to avoid harming non-target species?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CM2	Did you implement effectiveness monitoring, if warranted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- List insecticide treatments that occurred on this allotment in the past year. Include their locations, species targeted, brief description of methods used, and results.
- For CMs where you answered “no,” please describe why this CM was not implemented

<b>DROUGHT AND CLIMATE CHANGE Conservation Measures</b>		<b>Yes</b>	<b>No</b>	<b>Not Responsible for this CM</b>
CM1	Did you work with agency specialists to develop a drought management plan that considers the needs of sage-grouse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Was this a drought year?	<input type="checkbox"/>	<input type="checkbox"/>	
	If so, did you implement conservation measures (e.g., stocking conservatively, destock when necessary to reduce impacting rangeland health, apply grazing regimes that protect sage-grouse habitats to the extent practicable)?	<input type="checkbox"/>	<input type="checkbox"/>	
CM2	Did you adjust livestock use (season of use, intensity, and/or duration) to reduce the impact on perennial herbaceous cover, plant species diversity, and plant vigor?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For CMs where you answered “no,” please describe why this CM was not implemented.

**APPENDIX D: Allotment CCA {TEMPLATE}**

**Greater Sage-Grouse  
Allotment Candidate Conservation Agreement for Oregon Bureau of Land  
Management Rangeland Management**

for

[insert name of participating permittee and BLM grazing allotment]  
[insert county name] County, Oregon

under the

Greater Sage-Grouse Programmatic Candidate Conservation Agreement  
for Oregon BLM Rangeland Management

Allotment CCA Tracking Number: [provided by the Service]  
Allotment CCA Duration: [insert number of years  $\geq$  10], [insert start date] to [insert end date]

[insert date]

This Allotment Candidate Conservation Agreement (CCA), entered into by the Bureau of Land Management (BLM), participating livestock grazing allotment permittee, and the U.S. Fish and Wildlife Service (Service), is intended to promote good land stewardship by helping the participating permittee carry out actions to benefit Greater Sage-Grouse (*Centrocercus urophasianus*, hereafter “sage-grouse”). This Allotment CCA is in accordance with the *Greater Sage-Grouse Programmatic Candidate Conservation Agreement for Oregon BLM Rangeland Management* (Programmatic CCA). The Programmatic CCA is between the Service, BLM, Oregon Cattlemen’s Association (Cooperators) and, through their respective Allotment CCAs, permittees. The responsibilities of the participating permittee and the Cooperators are detailed in the Programmatic CCA. The terms of the Programmatic CCA are hereby incorporated by reference.

## **I. Description of Enrolled Allotment**

[This section should:

- A. Identify the boundaries and acreage of the area covered by the Allotment CCA (i.e., the enrolled allotment or allotments if permittee holds more than one that they want included in a CCA) and should reference or include photos, maps, figures, township and range, and/or legal descriptions as necessary to clearly delineate the precise boundaries of the enrolled property.
- B. Describe and map (as appropriate) the outline of the allotment, physical features (e.g., roads (paved, graveled, unimproved), buildings, trees, structures and raptor perches over 5 feet tall, fences, water development, mineral placement, irretrievable lands, sage-grouse habitat, number and distribution of leks (or distance to closest historic or current lek), areas to be managed for conservation purposes, areas to be managed for other purposes, irretrievable lands, etc.).
- C. Describe the history, current land use practices, and existing agreements and/or easements on the property, as they relate to sage-grouse.
- D. Identify whether the area is within a core area, low density area, outside these areas but within the current range, or within the historic range only. Identify which population or subpopulation covers the enrolled area. Identify the appropriate sage-grouse management zone for the enrolled area. Overlay allotment boundary with the habitat viability map from the 2011 state conservation strategy (Hagen 2011).
- E. To the best of your ability, describe the amount of sage-grouse habitat (landscape-scale view). Specify and make available the data used to make this determination (e.g., GIS layer). Estimate the total amount of suitable, potential, and non-habitat; number and size of occupied habitat patches; distance between occupied patches.]

## **II. Description of Existing Conditions and Site Potential**

[In this section, describe the habitat suitability and ecological site potential of the enrolled property, and determine what ecological state the habitat is currently in, in reference to the State and Transition model referred to in the Programmatic CCA. Habitat suitability, the relative appropriateness of a certain ecological area for meeting the life requirements of an organism, will vary across the grazing allotment. For sage-grouse, suitable habitats provide the appropriate protective cover (sagebrush and herbaceous plants), food (forbs and sagebrush), and security (proximity of trees and tall structures for predators) needs to survive and reproduce (Connelly et al 2000, Sather-Blair et al. 2000). Marginal habitats include habitat components to support sage-

grouse but habitat conditions are lower in quality compared to suitable habitats. It is assumed that survival rates and reproduction are lower in marginal habitats compared to suitable habitats (Cooperrider et al. 1986, Morrison et al. 1998). Unsuitable habitats are currently missing one or more of the basic life requisites of food or shelter, though they may have the potential to provide these life requisites in the future.

Identify the seasonal sage-grouse habitat indicators (see Table 1 of the Programmatic CCA) used to characterize the environment in terms of suitability for shelter, food, water and space. The indicators are sensitive to the ecological processes operating at the scale of interest (i.e., grazing allotment). Indicators are based on scientific research findings and should be quantitatively repeatable for data summarization and to avoid bias. Based on extensive research in many western states, Connelly et al. (2000) developed and Hagen et al. (2007) refined habitat indicators required by sage-grouse for specific seasonal needs (leks, breeding, summer/brood-rearing, and wintering). It is important to remember that the numeric values described for productive habitat by Connelly et al. (2000) are guidelines and are not intended to be used as standards or strict prescriptions. Moreover, ecological site potential should be considered at the site-scale. Because of gaps in our knowledge and regional variation in habitat characteristics, throughout the range of the species and within the public lands covered by this agreement, the judgment of local biologists and quantitative data from population and habitat monitoring are necessary to implement the guidelines correctly (Connelly et al. 2000).]

**Estimate for enrolled allotment:**

Habitat Type	# Acres or # Leks	Qualitative Description of Quality	Describe Connectivity or Location Relative to Other Seasonal Uses
Lek			
Breeding (Pre-laying, nesting, early brood-rearing)			
Late brood-rearing			
Winter			
Historic range – Potential habitat			
Irretrievable – Non-habitat		Irretrievable	

**Information Collected at Sampling Points:** [Information to include here: Number and location of sampling points to be selected at allotment level. These points and the methodology used to collect data should be the same as what will be used for the periodic quantitative vegetation

monitoring. Allotment CCAs should have at least one sampling point in each habitat type and monitor as many known leks as possible (consider a rotational schedule). Vegetation baseline and monitoring data must be collected (specify time of year to be consistent with current BLM, ODFW practices) and lek population data must be collected according to ODFW protocol. This table, or another mutually agreed upon method to collect monitoring information (e.g., future sagebrush metric, part of Stiver et al. 2010) can be used in the Allotment CCA.]

**III. Identification of Threats, Conservation Measures, and Management Activities**

The following threats were identified on this allotment: [specify all, even those outside the permittee’s control].

The permittee will maintain or improve upon the existing conditions for sage-grouse by addressing the following threats: [specify those that the permittee can and will address]

<b>Potential Threat Identified in Agreement or ODFW state plan</b>	<b>Threat Present?</b>	<b>Conservation Measures to Address Threat (NA if threat not present, None if threat not addressed):</b>
Wildfire		
Prescribed Fire		
Juniper Expansion		
Invasive Vegetation		
Vegetation Treatments		
Realty		
Energy Development and Transmission		
Recreation		
Predation		
West Nile Virus		
Livestock Management		
Wild Horses and Burros		
Insecticide Use		
Drought or Climate Change		
Other (specify)		

The permittee agrees to implement the following conservation measures: [insert a list of specific conservation measures from the table in the Programmatic CCA here. Include a description of where these will be implemented (the entire allotment or a portion of it) and the timing (seasonally or all year), where possible. A management plan may be referenced. Use table if helpful.]

Implementation of these conservation measures is necessary to demonstrate a net conservation benefit for sage-grouse on this allotment.

#### **IV. Monitoring**

[In this section of the Allotment CCA, Cooperators to the Allotment CCA will determine who is responsible for monitoring and reporting the progress of the Allotment CCA (compliance monitoring) and will fully describe these responsibilities. Specifically, this section should establish quantifiable criteria for measuring progress associated with the implementation of the agreed-upon conservation measures. This section should also include provisions for monitoring and reporting the Allotment CCA's progress toward the expected conservation benefits (biological monitoring). The criteria for biological monitoring do not generally relate to the implementation of the measures but, instead, relate to determining the effectiveness of the measures. In addition, any adaptive management strategies or plans that are part of the Allotment CCA monitoring plan should also be described in this section. The reporting form templates (Appendix A and C) should be provided to the permittee before turn-out so they will have advance, refreshed knowledge of what information is requested in these forms.]

#### **V. Duration of the Allotment CCA**

Commitments under this Allotment CCA will be in effect \_\_\_ years [insert number of years. Minimum of 10 and not to exceed 30]. The commitments begin the date the Allotment CCA is signed by the Service, BLM, and permittee. Participating permittees or lessees may withdraw an enrolled allotment from this agreement if they are unable or unwilling to continue implementation of the CMs, monitoring, or reporting requirements of this agreement by providing 30 days prior written notice to the BLM and the Service.

#### **VI. Miscellaneous Provisions**

##### Terms and Conditions

In addition to the matters set forth herein, this Allotment CCA is subject to all of the terms and conditions of the *Greater sage-grouse Programmatic Candidate Conservation Agreement for Oregon BLM Rangeland Management*.

##### Notices and Reports

Any notices and reports, including monitoring and annual reports, required by this Allotment CCA shall be delivered to the persons listed below, as appropriate.

[List notices and reports here]

**VII. Approvals**

IN WITNESS WHEREOF THE PARTIES HERETO agreed to execute this Allotment CCA, effective on the day and year set forth following their signatures.

\_\_\_\_\_  
Permittee

\_\_\_\_\_  
Date

\_\_\_\_\_  
Bureau of Land Management

\_\_\_\_\_  
Date

\_\_\_\_\_  
U.S. Fish and Wildlife Service

\_\_\_\_\_  
Date