CONFERENCE OPINION
Regarding the
Effects of Proposed Candidate Conservation Agreement with Assurances for Private Rangelands owned and leased by Mr. and Mrs. William Moore on the Greater Sage-Grouse
in
Baker and Malheur Counties, Oregon

Action Agency: U.S. Fish & Wildlife Service

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INTRODUCTION

This document represents the U.S. Fish and Wildlife Service's (Service) Conference Opinion (CO) based on our review of the proposed "Greater Sage-Grouse Candidate Conservation Agreement with Assurances for Private Rangelands owned and leased by Mr. and Mrs. William Moore in Baker and Malheur Counties, Oregon" (CCAA), and its effects on Greater sage-grouse (*Centrocercus urophasianus*; hereafter sage-grouse) in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq*.).

This CO is based on information provided in the July 30, 2014, CCAA, the associated July 30, 2014, draft Environmental Action Statement, field investigations, and other sources of information. A complete record of this consultation is on file at the Service's La Grande Field Office in La Grande, Oregon.

CONFERENCE HISTORY

In anticipation of a final listing decision by the Service, William and Nancy Moore (the Landowners) requested assistance from the Service in developing a sage-grouse Candidate Conservation Agreement with Assurances (CCAA) for ranch management activities on lands they own in Malheur County and lands they lease through a long-term lease in Baker County, Oregon. A CCAA is a voluntary agreement whereby a landowner agrees to manage their lands to remove or reduce threats to a species at risk of being listed under the ESA. In return for managing their lands to the benefit of a species at risk, the landowner receives assurances against additional regulatory requirements should that species ever be listed under the ESA.

- On December 12, 2012, the Landowners contacted the Service to start discussions on developing a sage-grouse CCAA for the lands they own and lease in Baker and Malheur Counties, Oregon.
- On January 22, 2013, the Service met with the Landowners to discuss the development of a sage-grouse CCAA.
- On April 11, 2013, the Service met with the Landowners to visit the leased property in Baker County and conduct lek surveys.
- On May 16, 2013, the Service met with the Landowners to visit the leased property in Baker County and discuss juniper treatment projects.
- On May 23, 2013, the Service sent the Landowners a draft sage-grouse CCAA for the lands they own and lease in Baker and Malheur Counties, Oregon.
- On July 24, 2013, the Service met with the Landowners to establish long-term monitoring points and collect baseline habitat conditions on the lands they lease in Baker County.
- On August 19, 2013, the Service met with the Landowners to establish long-term monitoring points and collect baseline habitat conditions on the lands they lease in Malheur County.
- On July 1, 2014, the Service met with the Landowners to re-collect baseline habitat conditions on the lands they lease in Malheur County.
- On September 15, 2014, the Service published the draft Greater Sage-Grouse Candidate Conservation Agreement with Assurances for Private Rangelands owned and leased by Mr. and Mrs. William Moore in Baker and Malheur Counties, Oregon in the Federal Register and opened a 30-day comment period.
- On October 15, 2014, the 30-day comment period on the draft CCAA closed.

CONFERENCE OPINION

1. Description of the Proposed Action

This section provides a brief summary of the proposed action and its scope. The proposed action is the issuance of an Enhancement of Survival Permit (Permit) to William and Nancy Moore (Landowners) upon approval and signing of the CCAA. For details on the proposed action, refer to the CCAA, specifically **Section 10: Conservation Measures, Section 15: Covered Activities, and Section 19: Changed Circumstances**. The entire CCAA is incorporated by reference herein. This CO considers effects on sage-grouse from issuance of a Permit to the Landowners pursuant to section 10(a)(1)(A) of the ESA and the Service's CCAA final rules (64 FR 326726, June 17, 1999, 69 FR 24084; May 3, 2004) for covered activities in the CCAA in Baker and Malheur Counties, Oregon.

The purpose of the Permit is to provide these landowners an exemption to section 9(a)(1)(b) of the ESA prohibiting "take" of sage-grouse – in the event that this species is listed under the ESA in the future and such prohibitions against take are put in place – while carrying out otherwise lawful ranch and rangeland management practices. If the species is listed, this CO may be adopted by the Service as a final Biological Opinion.

By signing the CCAA, the Landowners agree to implement the conservation measures (CMs) contained in the CCAA associated with current or future activities on the enrolled lands. These CMs are designed to reduce or remove threats to the sage-grouse and restore, enhance, or preserve its habitat. The Landowners also agree to allow access to monitor the effectiveness of the implemented measures. In return, the Service provides the Landowners with assurances that no additional conservation measures or additional land, water, or resource use restrictions, beyond those voluntarily agreed to, will be required should sage-grouse become listed as a threatened or endangered species, if the CCAA is being implemented as agreed. The only exception is when an unforeseen circumstance occurs (**Section 20: Unforeseen Circumstances**). This approach is consistent with CCAA Final Rule and the regulations implementing the rule.

The CCAA would be in effect for 30 years following its approval and signing by the Service and the Landowners. The associated Permit authorizing take of the species would also have a term of 30 years from the date the Permit is issued. While the species remains unlisted, the Service may renew the CCAA based upon a re-evaluation of the CCAA's ability to continue to meet the CCAA standard. At any time, the Landowners may also voluntarily terminate the CCAA with a 30-day written notice.

According to the Service's 2010 12-month finding in which we determined listing the sage-grouse was warranted but precluded by higher priorities (75 FR 13910), the primary threat to sage-grouse is habitat fragmentation. Potential threats to the sage-grouse addressed in the CCAA include: habitat loss, fragmentation, and degradation compounded by wildfire, invasive vegetation, juniper and conifer encroachment, human disturbance, livestock management, drought, predation, disease, and insecticide application.

The Landowners are currently minimizing many of these potential threats on the enrolled lands; however, through the CCAA have made a long-term commitment to continue to implement actions, as well as new actions, to minimize these threats. CMs are actions that the Landowners agree to implement to reduce threats to candidate species and that may contribute to keeping a species from requiring listing under the ESA. Beneficial effects of CMs are taken into consideration as one of several factors in evaluating the need to list the species as threatened or endangered under the ESA. The Service is expected to make a listing decision in September of 2015.

The CCAA contains one mandatory conservation measure: **CM 1: Maintain contiguous habitat by avoiding further fragmentation.** The objective for this required CM is for no net loss of sagebrush habitat and to maintain large acreages of contiguous sagebrush habitat, free from development or habitat conversion.

This required measure is included in the CCAA for preventing and/or reducing habitat fragmentation, the primary threat to sage-grouse. In addition to this CM, the CCAA includes 33 other CMs to address the threats listed above. See **Section 10: Conservation Measures** for a description of the threats and CMs. Additionally, **Section 19: Changed Circumstances** of the CCAA identifies wildfire, drought, disease, habitat fragmentation and disturbance resulting from development, predation, and invasive and/or noxious weeds, and identifies 17 changed circumstance conservation measures (CCCMs) to address these threats.

To ensure that the CMs are adequate, the Landowner must undertake or allow the following (taken from the Landowner Responsibilities section of the CCAA):

- Assist in the implementation of the CCAA in cooperation with the Service;
- Implement all agreed upon CMs within this CCAA within the agreed upon timeframe;
- Avoid impacts to populations and individual sage-grouse present on the enrolled lands to the maximum extent practicable via CMs identified in this CCAA;
- Continue those current practices that have been identified to assist with conserving sage-grouse via this CCAA;
- Record dates, locations, and numbers of sage-grouse found on the enrolled lands to be included in an annual report;
- Report and record new observations of noxious weeds found on the enrolled lands;
- Report observed sage-grouse mortalities on enrolled lands to the Service within two days;
- Seek funding from available sources to implement this CCAA;
- Provide the Service or their agreed upon representatives access to the enrolled lands at mutually agreeable times to identify or monitor sage-grouse and their habitat, implement CMs, and monitor effectiveness and compliance with this CCAA;
- Cooperate and assist with monitoring activities and other reporting requirements identified in this CCAA;
- Compile and submit monitoring information to the Service annually; and
- Allow the Service to share habitat, planning or monitoring information related to the enrolled lands, when requested.

2. Analytical Framework for the Jeopardy Determination

In accordance with policy and regulation, the jeopardy analysis in this CO relies on four components: (1) the **Status of the Species**, which evaluates the sage-grouse's rangewide condition, the factors responsible for that condition, and its survival and recovery needs; (2) the **Environmental Baseline**, which evaluates the condition of the sage-grouse in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the sage-grouse; (3) the **Effects of the Action**, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the sage-grouse; and (4) **Cumulative Effects**, which evaluates the effects of future, non-Federal activities in the action area on the sage-grouse.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the sage-grouse's current status, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of the sage-grouse in the wild.

The jeopardy analysis for the sage-grouse in this CO places an emphasis on consideration of the rangewide survival and recovery needs of the sage-grouse and the role of the action area in the survival and recovery of the sage-grouse as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

3. Status of the Greater Sage-Grouse (Rangewide)

Detailed descriptions of range-wide and Oregon threats are available in the 12-month warranted but precluded Greater sage-grouse finding (USFWS 2010), as well as the original and updated Oregon Department of Fish and Wildlife Greater Sage-grouse Conservation Assessment and Strategy for Oregon (Hagen 2005, 2011).

3.1 Status

Prior to settlement in the 19th century, Greater sage-grouse (sage-grouse) (*Centrocercus urophasianus*) inhabited 13 western states and three Canadian provinces, and their potential habitat covered over 463,509 square miles. Sage-grouse have declined across their range due to a variety of causes and now occur in 11 states and two Canadian provinces. Overall, the species distribution and numbers have shown a downward trend. Many factors played a role in reducing sage-grouse from an abundant, broadly distributed species, but the primary threat across their range is loss of habitat due to increased surface disturbance and general fragmentation of the landscape.

Between 1999 and 2003, the Service received eight petitions to list various populations of sage-grouse under the ESA. On January 12, 2005, the Service published a finding that the sage-grouse did not warrant range wide listing under the ESA. This "not warranted" finding was challenged in court, and in December 2007, a federal judge ordered the Service to reconsider its decision. On March 23, 2010, the Service released its finding that the sage-grouse warranted listing under the ESA, but the listing was precluded by other, higher priority actions thereby conferring

candidate status on the sage-grouse (USFWS 2010). The primary threats to the sage-grouse, as defined in the 2010 finding, are habitat loss, fragmentation, and degradation. In the Service's 2010 finding, additional concerns were identified as threats, including an increase in the use of sagebrush habitat for renewable energy such as wind power, and the spread of West Nile Virus (WNv). The Service is scheduled to make a new listing decision as to whether or not to list the sage-grouse under the ESA in 2015.

3.1.1 Life History

Greater sage-grouse in western North America were once abundant and widespread, but have declined throughout their range. Sage-grouse populations are closely associated with sagebrush (*Artemisia* spp.) habitats. Sage-grouse are known for their 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. 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 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.

3.1.2 Distribution

Sage-grouse were once found in most sagebrush habitats east of the Cascades. The pre-European settlement habitat of sage-grouse encompassed approximately 17.7 million acres of sagebrush habitat throughout eastern Oregon. Sage-grouse habitat has decreased by an estimated 21 percent compared to the amount of habitat available pre-settlement. The conversion of sagebrush steppe to agricultural land in the Columbia Basin alone was responsible for the loss of an estimated 1.5 million acres of sage-grouse habitat. The species has been extirpated in five states--Arizona, New Mexico, Oklahoma, Kansas, Nebraska, and in the Canadian province of British Columbia (Schroeder et al. 2004). It is considered "at risk" in Washington, California, Utah, Colorado, North Dakota, South Dakota and in the Canadian provinces of Alberta and Saskatchewan. Even in Oregon, Nevada, Idaho, Wyoming, and Montana, where the species is considered "secure," long-term population declines have averaged 30 percent (Connelly and Braun 1997, Garton et al. 2011). Many factors affect sage-grouse populations and occur at different temporal and spatial scales. Those factors that result in habitat loss and fragmentation have been linked to declines in populations.

In addition, Oregon sage-grouse numbers have declined over the long-term (1957-2003; Hagen 2005, 2011). Within the extant range of Oregon, spring population indices have demonstrated an overall decline since the 1940s. However, population indices over the last 30 years suggest a relatively stable statewide population. Habitat loss and fragmentation are the primary cause for long-term changes in population abundance and distribution (USFWS 2010).

3.1.3 Habitat and Diet

Optimum sage-grouse nesting habitat consists of a healthy sagebrush ecosystem complete with sagebrush plants (primarily basin big sagebrush *(Artemisia. tridentata* ssp. *tridentata),* mountain big sagebrush *(A. t.* ssp. *vaseyana),* Wyoming big sagebrush *(A. t.* ssp. *wyomingensis),* and low sagebrush *(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). Sage-grouse females that nest under sagebrush tend to have higher nest success rates (53%) than those females nesting under other species (22%; 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).

Sage-grouse adults and chicks depend on high quality forage (e.g., forbs) in riparian/wetland areas during the late growing season when upland communities have desiccated (Savage 1968, Oakleaf 1971, Crawford et al. 2004, Gregg and Crawford 2009). Chick survival has been identified as one of the greatest limiting factors for sage-grouse populations (Johnson and Braun 1999, Holloran 2005). Research suggests that when sage-grouse are forced to transition to a fall/winter diet of sagebrush earlier in the season during drought years, sage-grouse chicks have lower survival (Drut et al. 1994). In effect, riparian/wetland areas help fill the needs of a protein rich diet of forbs and insects before they change to a diet of sagebrush leaves during winter.

4. Environmental Baseline

The preamble to the implementing regulations for section 7 (51 FR 19932; third paragraph, left column) contemplates that the evaluation of "…the present environment in which the species or critical habitat exists, as well as the environment that will exist when the action is completed, in terms of the totality of factors affecting the species or critical habitat…will serve as the baseline for determining the effects of the action on the species or critical habitat." The regulations at 50 CFR 402.02 define the environmental baseline to include "the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process." The analyses presented in this section supplement the above Status of the Species evaluation by focusing on the current condition of the sage-grouse in the action area, the factors responsible for that condition (inclusive of the factors cited above in the regulatory definition of environmental baseline), and the role the action area plays in the survival and recovery of the sage-grouse. Relevant factors on lands surrounding the action area that are influencing the condition of the sage-grouse were also considered in completing the status and baseline evaluations herein.

4.1 Status of the Species in the Action Area

The action area is defined as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR §402.02). For the purposes of the CO, the Service recognizes the action area encompasses the private rangelands owned or leased by William and Nancy Moore, and enrolled in the CCAA, in Baker and Malheur Counties, Oregon (shown in Figure 1).

Sage-grouse habitat on lands within the action area is designated as Preliminary Priority Habitat (PPH) (3,682 acres) or Preliminary General Habitat (PGH) (3,662 acres). For purposes of analysis, the Service used the PPH and PGH designations as representing the best current estimate of sage-grouse habitat and are defined as follows:

- **PPH** - Areas that have been identified as having the highest conservation value to maintaining sustainable sage-grouse populations. These areas correspond to Core Area Habitat in the ODFW Sage-grouse Conservation Assessment and Strategy for Oregon (ODFW 2011) which includes known breeding, late brood-rearing, and known winter concentration areas. These areas also correspond to Priority Areas for Conservation (PACs) as identified in the Service's 2013 Conservation Objectives Team Report that include the most important areas for maintaining sage-grouse populations across the landscape.
- **PGH** - Areas of occupied seasonal or year-round habitat outside of PPH. These areas include Low Density Habitat as described in ODFW Sage-grouse Conservation Assessment and Strategy for Oregon, as well as additional areas of occupied habitat.

4.1.1 Baker County property

The Baker County property consists of approximately 3,662 acres of land. The Baker County property lies approximately one mile south of Unity, Oregon. The entire property falls within PGH sage-grouse habitat although the property contains three active sage-grouse leks. The birds that use the property belong to the Western Great Basin population (Garton et al. 2011). The property also falls within the Baker Resource Area population in Oregon (Hagen 2011) and Management Zone V (Stiver et al. 2006).

Baker County supports similar populations of sage-grouse as 20 years ago (Hagen 2011). The Baker spring population was estimated to be 872 -1,650 birds in 2010, the smallest extant population of sage-grouse that is exclusively in Oregon (USFWS 2013). Due to habitat and topography, it has been assumed the Baker population has little connectivity with other sage-grouse populations. Recent telemetry information suggests that at least some birds move between the Weiser population in Idaho and the Baker population (USWFS 2013).

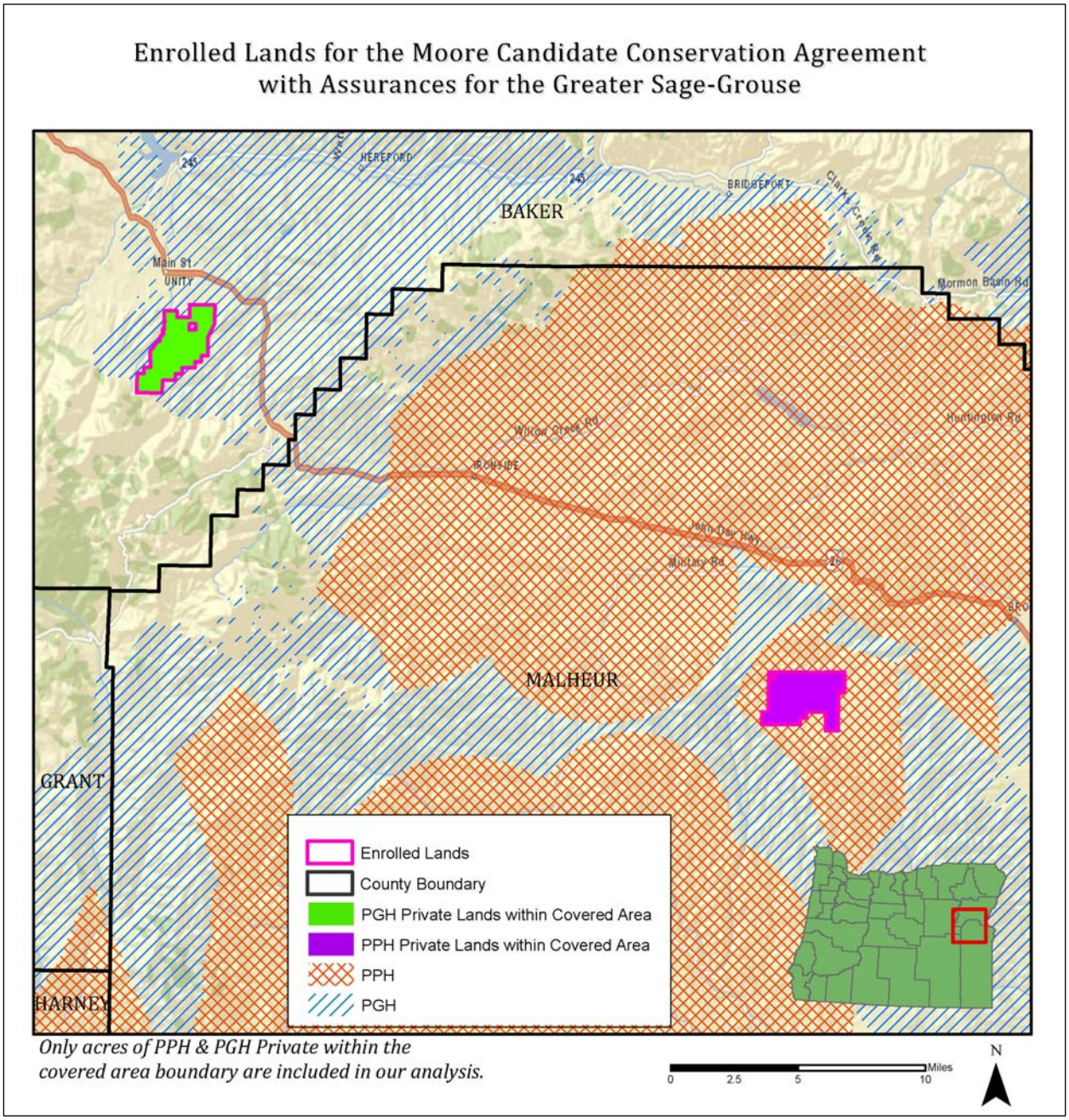

Figure 1. Enrolled Lands under the Moore Greater Sage-grouse CCAA

4.1.2 Malheur County property

The Malheur County property consists of approximately 3,628 acres of land. The Malheur County property lies approximately seven miles southwest of Brogan, Oregon. The property falls entirely PPH, with the closest sage-grouse lek approximately five miles south of the property. The birds that use the property belong to the Northern Great Basin population. The property also falls within the Vale District population in Oregon (Hagen 2011) and Management Zone V

(Stiver et al. 2006). In Malheur County, the sage-grouse population has fluctuated around the 2003 estimate since 1993 (Hagen 2011). However, because this region was the location for extensive sagebrush removal programs (1960s) it is likely that populations were significantly larger prior to those treatments. Because some of those treatments are returning to sagebrush habitat, they will assist in maintaining local populations.

4.2 Factors Affecting Species Environment within the Action Area

The long-term persistence of sage-grouse will depend on maintenance of intact landscapes. Sage-grouse are landscape-scale species and the destruction and fragmentation of their habitat has contributed to significant population declines over the past century. If current trends persist, many local populations may disappear in the next several decades, with remaining fragmented populations vulnerable to extinction. Based on a review of the scientific literature related to ranch management, threats to sage-grouse and their habitats in Oregon may include, but are not limited, to the following specific factors (USFWS 2010):

- Habitat fragmentation decreases habitat quantity and quality and threatens the long-term persistence of sage-grouse.
- Infrastructure (e.g., power lines, roads) fragments sage-grouse habitat, decreasing sage-grouse use and habitat quality.
- Establishment of plant communities that do not provide suitable habitat (i.e. monocultures of non-natives) reduces sage-grouse habitat quality and quantity.
- Introduction of non-native invasive plant species can eliminate native plant communities important to sage-grouse, thereby reducing habitat quality and quantity.
- Wildfire removes long-lived species such as sagebrush, thereby reducing sage-grouse habitat quality and quantity.
- Surface water developments (ponds) increase potential mosquito habitat, thereby resulting in increased sage-grouse mortality from disease (i.e. WNv) in some instances.
- Sagebrush management (e.g., prescribed fire, chemical, or mechanical) can result in a reduction of sage-grouse habitat quality and quantity.
- Grazing management practices that alter shrub cover and grass and forb composition can reduce sage-grouse habitat quality and quantity.
- Concentrated livestock use can affect vegetation and soil structure, thereby reducing sage-grouse habitat quality and quantity.
- Encroachment of woodland species into sage-grouse habitat can lead to a reduction in use or abandonment of habitat by sage-grouse.
- Livestock, human, and vehicle activity can physically disturb birds and cause them to leave leks or abandon nests, thereby resulting in decreased reproductive success.
- Water diversions and spring developments that dry up meadow and riparian areas reduce sage-grouse habitat quality.
- Farm and ranch facilities that provide additional raptor perches or dead piles or garbage dumps attract mammalian and avian predators, thereby increasing opportunities for predation on sage-grouse and sage-grouse nests.
- Application of insecticides removes insects important to sage-grouse, thereby reducing sage-grouse habitat quality.
- Prolonged drought harms plants important to sage-grouse, thereby reducing sage-grouse habitat quality and quantity.

- Livestock watering tanks and troughs without wildlife escape ramps cause sage-grouse mortality by entrapment and drowning.
- Concentrated or overabundant wildlife populations can harm plant communities important to sage-grouse, thereby reducing habitat quality and quantity.
- Poorly designed or located fences (e.g., fences in saddles or along ridgelines) provide a collision risk for birds, thereby resulting in serious injury or death to sage-grouse.
- Over-abundant predator numbers may affect local sage-grouse populations.

Currently, hunting is not considered a significant threat to sage-grouse populations (USFWS 2010). In southeastern Oregon, there are healthy populations of sage-grouse with limited hunting. Oregon Dept. of Fish and Wildlife (ODFW) allows harvest of up to five percent of the projected fall population of birds, and in practice, harvest has been estimated at less than three percent of the fall population in hunted areas (Hagen 2005). Current research found that such limited hunting does not affect populations (Connelly et al. 2000; Sedinger et al. 2010). Hunters contribute to sage-grouse management by submitting wings of harvested birds to ODFW, allowing biologists to learn more about age, sex, reproductive success, and distribution of the species.

Many of these threats are expected to be exacerbated by the effects of climate change, which may influence long-term habitat trends. Climate change will likely alter the range of individual invasive species, increasing fragmentation and habitat loss of sagebrush communities. Projected climate change and its associated consequences have the potential to affect sage-grouse and may increase its risk of extinction, as the impacts of climate change interact with other stressors such as disease, and habitat degradation and loss that are already affecting the species. Arid regions such as the Great Basin where sage-grouse occurs are likely to become hotter and drier; fire frequency is expected to accelerate, and fires may become larger and more severe. The loss of habitat due to wildland fire is anticipated to increase due to the intensifying synergistic interactions among fire, people, invasive species, and climate change. Climate change is expected to result in significant losses to sage-grouse habitat through facilitating conifer expansion at high-elevation interfaces and exotic weed encroachment at lower elevations. While it is not currently possible to predict the extent or location of future fire events, the best scientific and commercial information available indicates that fire frequency is likely to increase in the foreseeable future due to increases in cover of cheatgrass (*Bromus tectorum)* and the projected effects of climate change. USGWS 2010

4.2.1 Baker County property

Elevations range from 4,130 to 5,250 feet on the property. Major land forms include north-south trending drainages, with adjacent ridgelines characterized by shallow soils. Vegetation on the property consists of small patches of low sagebrush (*Artemisia arbuscula*) with an understory of primarily Sandberg bluegrass (*Poa segunda*) on the ridgetops, with mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and an understory of large perennial bunchgrasses such as bluebunch wheatgrass (*Pseudoroegneria spicata*), Idaho fescue (Festuca idahoensis), and Thurber's needlegrass (*Achnatherum thurberianum*) in the deeper soil sites. In the drainages, basin big sagebrush is common. Scattered western juniper (*Juniperus occidentalis*) trees occur throughout the property (Phase I), with higher concentrations of juniper in the drainages and on the southwestern edge of the property; the southwestern edge of the property is Phase II and III

juniper and conifer woodland. Several intermittent streams bisect the property, generally flowing along a northern route through the property. There are no perennial springs or wet meadows on the enrolled lands. Few invasive species (i.e. cheatgrass) occur on the enrolled lands.

The enrolled lands have perimeter fencing on the entire acreage and border irrigated lands. Currently, there are no powerlines traversing the property. One well-travelled public gravel road runs from the north boundary to south boundary (Forest Service Rd 1682), and runs adjacent to the leks. Various other roads and trails are evident on the property, but are only lightly used. Most of the observed and documented sage-grouse use occurs east of Forest Service Rd 1682.

The Baker County property has been owned by the same owner for over 30 years. Seasonal livestock grazing has been the primary use occurring on the property for the past 100 years. However, Bill and Nancy Moore have leased the Baker County property from the owner for the last ten years and maintain a long-term lease agreement with the owner. Under Moore's management, grazing duration and livestock numbers are adjusted annually, corresponding to annual precipitation and growing season conditions (i.e. snow pack and heat units during the growing season). Historically, fires near the property have occurred on a 75 to 100 year cycle, but during the last century fires have been controlled at 5 to15 acres. The last fire in the area occurred in 2005 or 2006 and burned less than 10 acres.

Current and anticipated management activities on the Baker County property include cattle grazing, annual fence maintenance, periodic maintenance on the ditch system that feeds the stock ponds (involves blading ditches to remove brush and sediment), periodic maintenance on springs and stock ponds (as needed), and traffic on horseback, pickup, and all-terrain vehicles (ATVs) to salt and check cattle. Periodic weed control will also be conducted, as needed.

4.2.2 Malheur County property

Elevations on the property range from 3,980 to 5,800 feet. Major land forms include northwest-southeast trending drainages, with Cottonwood Mountain crossing through the southern portion of the property. The property has intermixed deep and shallow soil types. Vegetation on shallow soil sites is dominated by low sagebrush with an understory of primarily Idaho fescue, Sandberg bluegrass, and bluebunch wheatgrass. Deeper soil sites are dominated by Wyoming big sagebrush (*A. t.* ssp. *wyomingensis*), mountain big sagebrush, and an understory of large perennial bunchgrasses such as bluebunch wheatgrass, Idaho fescue, and Thurber's needlegrass. Scattered patches of basin big sagebrush (*A. t.* ssp. *tridentate*) are also common in deeper soils and in the drainages. Scattered western juniper trees (Phase I) occur below the main road that bisects the property, with higher concentrations of juniper (Phase II) above the road towards the southwestern edge of the property. The mountain in the southwestern portion of the property (Cottonwood Mountain) also has pockets of curl-leaf mountain mahogany (*Cercocarpus ledifolius*), antelope bitterbrush (*Purshia tridentata*), spiny hopsage (*Grayia spinosa*), serviceberry (*Amelanshier alnifolia*), and hackberry (*Celtis ssp.*). Several intermittent streams bisect the property generally flowing along a northeastern route through the property. These intermittent streams have willow, alder, juniper, and sagebrush along the stream, with aspen higher in the drainages. Few weeds and invasive species (e.g., cheatgrass and Scotch thistle) occur on the enrolled lands.

The property has one home site, with associated corrals and outbuildings. The property has perimeter fencing and two interior cross-fences. Currently, there are no powerlines on the property. One relatively well-used dirt road crosses the property, running northwest to southeast, and is used by locals to access hunting opportunities. Various other roads and trails are also evident on the property, but are only lightly used.

The Malheur County Property has been under continuous family ownership since 1933. The property has been used for livestock grazing every year since 1933 and probably for at least 40-50 years prior to 1933. Portions of the property were hayed from 1933 to 1941. In 1941, the fields were abandoned when the focus was switched from farming to supporting the war effort. Storms that moved through the area after the fields were abandoned downcut most of the streams on the property and nearby areas. In addition, chemical brush control has been done on portions of the property; no brush control has been conducted since 1976 or 1977. This area historically would burn once every 75 to 100 years, but there have been no significant fires on this property since 1933.

Under the current management, grazing duration and livestock numbers are adjusted annually, corresponding to annual precipitation and growing season conditions (i.e. snow pack and heat units during the growing season). Current and anticipated management activities for the Malheur County property include cattle grazing, annual fence and spring maintenance, and traffic on horseback, pickups, and ATVs to salt and move cattle. Periodic weed control will also be conducted, as needed.

4.3 Role of the Action Area in the Conservation of the Greater Sage-grouse

4.3.1 Baker County property

The Baker County property is located in the Baker population area, which is more at risk and likely less resilient, since connectivity to other populations appears limited (USFWS 2013). There is no redundancy in this population, as all birds are believed to be in one general area. For the entire population, the environmental similarity to extirpated populations is high (Wisdom et al. 2011). Most (68%) of the sage-grouse habitat for the Baker population is in private ownership and 31 percent is administered by BLM (Hagen 2011). This is the largest proportion of privately managed sage-grouse habitat for any population in Oregon. Consequently, there are limited regulatory mechanisms in place, making it uncertain as to whether state-recommended conservation measures and practices will be applied on the majority of lands within this population.

More than 80 percent of the historical sagebrush habitat for the Baker Population remains available today but steeper habitat and rugged topography reduces the suitability for sage-grouse. Nearly 300,000 acres in this region were identified as priority areas for conservation, and includes much of the current range of the Baker population. Invasive weeds and juniper encroachment are considered to be the primary threats to this population (Hagen 2011), but other threats to this population include renewable energy development (primarily wind), energy transmission, and OHV recreation (USFWS 2013). Recently, thousands of acres of juniper have been treated in this region to benefit sage-grouse and other sagebrush obligates. Most of the area used by this population has been mapped as priority habitat.

4.3.2 Malheur County property

The Malheur County property is located in the Northern Great Basin sage-grouse population and is an extremely small area compared to this large population area found in Oregon, Idaho, Nevada, and Utah. It has been divided into the large portion in Oregon, Idaho, Nevada, and a small portion in northwestern Utah (USFWS 2013). This area contains a large amount of publicly managed land (largely BLM). The area also includes among the least fragmented and largest sagebrush dominated landscapes within the extant range of sage-grouse (Knick and Hanser 2011). However, the northern and eastern portions of the population are more environmentally similar to areas where sage-grouse have been extirpated (Wisdom et al. 2011).

Oregon represents the western part of this large population which, is shared with southern Idaho, NE Nevada, and NW Utah. In Oregon alone, the spring population in the Northern Great Basin is likely several thousand birds, with 2011 spring lek counts approaching 3,000 males (in the Beulah, Malheur River, Owyhee, and eastern portion of Whitehorse Wildlife Management Units).

Loss of sagebrush habitat has been and continues to be threat to the population in Oregon (USFWS 2013). Between 1963 and 1974, 500,000 acres of sagebrush habitat was seeded to crested wheatgrass or sprayed with herbicide, and 1,600 water developments and 463 miles of pipeline were installed in the Vale District BLM's area for the Vale project. More recently, wildfire is the most significant threat to landscape scale losses of sagebrush habitat as indicated by the previously mentioned 582,000-acre Long Draw fire of 2012. In conjunction with fire, invasive weeds are also one of the greatest risks to the sagebrush habitat for this population in Oregon. More than 580,000 acres is already dominated by invasive species (Hagen 2011). In many instances, these areas were historically dominated by Wyoming big sagebrush habitat. Other threats in this region include mining development, renewable energy development, transmission, and juniper encroachment at higher elevations. West Nile virus has also been consistently detected in mosquitoes in this region and the population was subjected to the largest known West Nile virus mortality event involving sage-grouse in Oregon (2006) (USFWS 2013). Despite efforts to manage wildfire risks, wildfires and invasive species have continued to reduce the quality of habitat in portions of this area. Largely due to the landscape altering potential of very large wildfires, with recent years as evidence, overall this part of the population is potentially at risk.

5. Effects of the Proposed Action

The effects of the action include the direct and indirect effects of implementing the federal action (issuance of a 10(a)(1)(A) permit to implement the CCAA) on the sage-grouse, together with the effects of other activities that are interrelated or interdependent with this action, that will be added to the environmental baseline (50 CFR 402.02). For the CCAA, the actions are considered to include ongoing and planned rangeland management practices, collectively referred to as "covered activities," and are described in the list below. For a complete description of all covered activities refer to **Section 15: Covered Activities** of the CCAA.

- Rangeland treatments
- Livestock Management
- Maintenance of outbuildings, fences and corrals, houses, and road maintenance

- Use of off-trail vehicles to conduct activities listed above
- Conservation measures (**Section 10** of the CCAA)
- Changed circumstances conservation measures (**Section 19** of the CCAA)
- Limited use of specific herbicides as described in **Appendix E**
- Inventory and monitoring activities identified in the CCAA

Based on the analysis of potential threats associated with ranch and rangeland management practices, and the suite of CMs identified to address those threats, we believe that most negative impacts to sage-grouse habitat and take of sage-grouse individuals will be avoided to the extent practicable. It is likely, however, that all impacts to habitat and individuals cannot be avoided and that some adverse effects, including incidental take of sage-grouse, will occur. We anticipate that all threats and associated effects described below may result in take of sage-grouse, and thus may require exemption from the incidental take prohibition if the species is listed. We considered three primary types of incidental take from the covered activities: (1) injury or death; (2) harm in the form of habitat fragmentation, loss, or degradation; and (3) harassment in the form of human activities that significantly disrupt normal behavioral patterns such as breeding, feeding, or sheltering. For each type of take, we describe the associated covered activities and conservation measures that will minimize the take. The CMs and sections referenced below can be found in **Section 10** of the CCAA.

5.1 Injury or death

- Fences used for livestock management, especially those in certain high-risk locations, can cause direct mortality to sage-grouse from collision (Beck and Mitchell 2000; Connelly et al. 2004; Crawford et al. 2004; Cagney et al. 2010). The risk of collision with fences will be minimized by limiting new fence construction and marking fences in high-risk locations to make them more visible to sage-grouse (**CM1** and **CM24**).
- Vertical structures such as telephone, power lines and poles, and fence posts serve as raptor perches and therefore can indirectly contribute to injury and death to sage-grouse from avian predators. This risk will be minimized by using perch deterrents where needed (**CCCM 13**).
- Livestock water tanks can pose a drowning risk to sage-grouse when they use them as a water source. This risk will be minimized by properly equipping stock-tanks with escape ramps (**CM21**).
- Herbicides listed in **Appendix E** of the CCAA are not known to directly injure or kill sage-grouse (USFWS 2010); however, there have been limited studies, which are specific to sage-grouse. The risk of mortality associated with herbicide use will be minimized by only using approved herbicides and implementing all best management practices on enrolled lands (**Appendix E**). If it is found that these herbicides do injure or kill sage-grouse their use will be discontinued as a covered activity under the changed circumstances provisions (**CCCM 18**).

5.2 Harm

- Improperly managed livestock grazing can result in decreased beneficial grasses and forbs in nesting and brood-rearing habitat (Hagen et al. 2007; Gregg et al. 1994). There are several CMs that address impacts of livestock grazing and the Landowners will be

required to modify grazing practices if the threat of "improperly managed livestock grazing" is occurring on the enrolled lands. This risk will be further minimized with annual monitoring and reporting of utilization on enrolled lands as well as adapting to drought or other environmental factors that may increase or decrease forage (**CM5**, **CM19**, **CM20**, **CM22**, **CM25** to **CM29**, **CCCM 6**, **CCCM 15**, **CCCM 16**, and **CCCM 17**).

5.3 Harassment

- Due to seasonal accessibility or weather issues, rangeland treatments such as juniper removal from sagebrush habitat may need to be conducted when sage-grouse are utilizing the enrolled lands. If so, this would cause some temporary harassment of sage-grouse. However, without treatment, juniper encroachment can make habitat unsuitable for sage-grouse. Harassment will be minimized through careful scheduling of treatments (**CM 8** and **CM11**).
- Livestock management activities such as moving cattle to different areas may cause sage-grouse to flush or otherwise disrupt their behavior. In the majority of instances, this disturbance is expected to be of very short duration such that it will only infrequently rise to the level of take.
- Activity near active leks may cause birds to flush or abandon. This risk will be minimized by limiting unnecessary access during certain times of the year when sage-grouse are using the enrolled lands (i.e. lekking, wintering or brood-rearing) as applicable (**CM16**, **CM17**, **CM18**, and **CM31**).
- Maintenance of existing fences or the construction of new fences for livestock management can cause harassment of sage-grouse. Risk of disturbance from these activities will be minimized by timing them outside of the breeding season (**CM1, CM16**, **CM17**, **CM18**, and **CM31**).

5.4 Methods, Assumptions, and Rationale for Anticipated Effects and Incidental Take

This section discusses some of the key methods and assumptions made to estimate impacts and incidental take from the proposed action. Estimated incidental take provided in this CO is based primarily on the risk of birds to disturbance, and the likelihood of their injury or mortality, or reduced breeding, feeding, or sheltering. We estimate risk by evaluating the potential exposure and likely response of individual birds to project-related effects described in this CO.

Importantly, not all birds exposed to a particular disturbance will respond so negatively that effects reach the level of take. In other words, negative effects may occur, such as flushing of birds during livestock management activities, but likely does not rise to a level such that reproduction success, survival, etc. are affected.

The Service assessed the adverse effects or potential risk(s) to the species and its habitat from implementation of the CCAA. Scientific data that quantify the effects of the proposed projects on sage-grouse, or similar gallinaceous birds, is very limited. Thus, there is uncertainty in generating specific metrics for anticipated adverse effects (such as number of expected mortalities of individuals, or numbers of habitat acres temporarily or permanently lost or temporarily affected). A complex range of factors will influence the response or fate of

individual birds to impacts. Factors contributing to this uncertainty include, but are not limited to: (1) inability to accurately measure the nature or extent of potential effects; (2) limited ability to pinpoint the source, or combined sources, of effect; (3) accounting for confounding or stochastic events such as drought; (4) sources of risk that emerge outside private lands covered under the CCAA.

Estimated incidental take provided in this CO is based primarily on the risk to disturbance, and the likelihood of their injury or mortality, or reduced breeding, feeding, or sheltering. We estimate risk by evaluating the potential exposure and likely response of individual birds to ranch and rangeland management practices related activities described in this CO.

The Service estimated the number of sage-grouse that use the Baker County property based on available lek data. In 2011 and 2012, 25 males and 4 males were observed on the leks, respectively (Ratliff pers. comm. 2013). In 2013, 14 males were observed on the leks (Meyer 2013). In 2014, there were six males on the leks (Moore pers. comm. 2014). Using these lek data, the average number of males that use the leks on the Baker County property is 12 males for this 4-year period. In order to estimate the number of sage-grouse that use the Baker County property, we used the same assumptions used by the ODFW as described in Hagen 2011. These assumptions are that the males observed on the leks during surveys represent 75 percent of the males in the area and that there are 1.66 females per male (Hagen 2011). Therefore, the average number of sage-grouse that use the Baker County property is 43 sage-grouse (12 males / 0.75 male lek attendance = 16 males + (16 x 1.66 female per male) = 16 males + 27 females = 43 birds). This equates to a density of 0.0117 birds/acre (43 birds / 3,662 acres).

No lek data or site-specific information on the number of sage-grouse that use the Malheur property are available. Therefore, the Service used statewide population estimates and the amount and type of sage-grouse habitat (PPH) available on the Malheur property to estimate the number and density of sage-grouse. The density of sage-grouse for the Malheur County property was calculated as follows. There are an estimated 24,515 sage-grouse in Oregon based on a 10-year (2004-2013) average of the statewide total spring population (ODFW unpublished data 2013). According to Hagen (2011) 90 percent of sage-grouse occupy PPH (i.e. Malheur County property), which is estimated at 6.57 million acres in Oregon. Using the 10-year minimum breeding population average, sage-grouse densities in PPH are estimated at 0.0034 birds per acre (90% of 24,515 = 22,064 sage-grouse divided by 6.57 million acres of PPH) (Table 3, below). This statewide average density was then multiplied by the number of acres of PPH (3,628 ac x 0.0034 birds per ac) covered under this CCAA to come up with an estimated 10-year minimum population average of 12 sage-grouse for the Malheur County property.

We recognize that these estimates are based on a number of assumptions. We feel the assumptions, in general, result in an overestimate of take from the proposed action, rather than an underestimate of those effects, and thus provide a more conservative approach. As noted above, we also expect that CMs including internal mitigation for developments (as stipulated in **Section 15** of the CCAA) will minimize adverse effects including the injury and death of individual birds. Refer to **Appendix F** in the CCAA for these, and other, assumptions used to estimate exposure rates and incidental take and this was used to develop Table 1 below.

Table 1. Estimated Take Calculation for Baker and Malheur County properties.

Treatment Type*	Acres Impacted	Birds Exposed	Rate of Injury or Mortality	Annual Take
Rangeland Treatments				
Baker County - no more than 625 acres per year (continuing until conservation objectives are met – approx. 12 years)	625	7	3.59%	0.26
Malheur County - no more than 2,260 acres treated in 3-year period (continuing until conservation objectives are met – approx. 12 years)	753	3	3.59%	0.09
Livestock Management				
Baker County (60% birds exposed)	3,662	26	3.59%	0.93
Baker County (60% birds exposed)	3,662	26	1.11%	0.29
Malheur County (60% birds exposed)	3,628	7	3.59%	0.26
Malheur County (60% birds exposed)	3,628	7	1.11%	0.08
Other Activities				
Baker County - fences (high risk marked)	3,662	43	1.62%	0.70
Baker County - additional authorized take (i.e. vehicle collision, drowning)	3,662	43	0.50%	0.22
Malheur County - fences (high risk marked)	3,628	12	1.62%	0.20
Malheur County - additional authorized take (i.e. vehicle collision, drowning)	3,628	12	0.50%	0.06
Total authorized Annual Take				***3.08***
Total Take over 30 years (includes 12 years of Rangeland Treatments)				***86.02***
Annual Take Percentage				**5.58%**

**Annual number of birds taken was rounded up to the nearest whole number.*

Additionally, we considered the following in our impact assessment but found that these actions are not likely to adversely affect the species and will not result in take:

- **Development** - the only types of permitted development within the CCAA is maintenance of out-buildings or corrals within a ranch headquarters footprint. Therefore, we do not expect any incidental take as a result of development (see CM 1 and the stipulations on development in **Section 15: Covered Activities** of the CCAA). There may be minor impacts to birds (flushing, etc.) when permitted development activities occur.
- **Stock tanks** - drowning in stock tanks has been reported as a cause of sage-grouse mortality. There is very little published information on background mortality rates for sage-grouse drowning in stock tanks that are not equipped with escape ramps.

Additionally, we could find no evidence of documented mortalities for stock tanks that have been retrofitted with an escape ramp for sage- grouse; therefore, we do not anticipate take to occur from drowning in stock tanks since the Landowners will be required to retrofit stock troughs in occupied sage-grouse habitat as part of the CCAA.

- **Patches of Unsuitable Habitat** - As part of the CCAA, the Landowners will be implementing conservation measures to minimize impacts and take to sage-grouse and their habitats. We recognize however that some habitat will be unsuitable in areas where livestock congregate (watering, supplements, etc.).

The total amount of annual incidental take associated with this proposed action is 0.00013 percent of the estimated 24,515 birds statewide. With implementation of the CCAA, we anticipate incidental take from covered activities to be 5.58 percent on the enrolled lands. Authorizing a total annual take of approximately 5.6 percent of the estimated sage-grouse population on the Baker and Malheur County properties will not adversely affect populations (Sedinger et al. 2010; Connelly et al. 2000; ODFW 2010). The authorized take associated with this CCAA (5.6%), combined with ODFW's actual (3%), or allowed (5%) harvest rates (ODFW 2011) could account for an average 8.6-10.6% annual loss of the sage-grouse population in areas that are under this CCAA and where hunting of sage-grouse occurs. Cumulative impacts of harvest on sage-grouse populations in Oregon are evaluated annually by ODFW. An 8.6-10.6 percent loss follows the range-wide sage-grouse management guidelines that recommend a harvest rate of 10 percent or less for healthy sage-grouse populations (Connelly et al. 2000), and below recently published peer-reviewed science for Colorado and Nevada, which found "at harvest rates <11 percent harvest is unlikely to have an important influence on local population dynamics of sage-grouse" (Sedinger et al. 2010). Additionally, the authorized amount of take may be adjusted if the statewide 10-year minimum spring breeding population average changes by more than 10 percent. Evaluation of take will be based on a rolling 3-year average such that if take is high in one year it will not exceed authorized take unless the 3-year average exceeds the amount of take permitted.

5.5 Interrelated and Interdependent Effects

Interrelated actions are those that are part of the larger action under consideration for consultation and depend on a larger action for their justification. Interdependent activities are those that have no significant independent utility apart from the measure that is under consideration for consultation. No interrelated or interdependent actions have been identified for the proposed action.

6. Cumulative Effects

Cumulative effects include the effects of future state, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this CO. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7 of the Act.

In general, land use activities, including agricultural activities, on private lands are expected to continue. Since current land-use activities are expected to continue for lands not enrolled under the CCAA, many of the threats to the sage-grouse would also continue, including those related to habitat degradation. Habitat condition on lands that are not enrolled would likely remain similar

to their current conditions. For these areas, the sage-grouse may be maintained similar to current conditions. If other landowners work cooperatively to develop and implement conservation measures similar to those proposed under the CCAA, threats to the species would further be reduced.

7. Conclusion

After reviewing the current status of the sage-grouse, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's conference opinion that approving the CCAA and issuing the Permit, as proposed, is not likely to jeopardize the continued existence of the species. Primarily short-term, localized, and unavoidable adverse effects to the sage-grouse and its habitat are expected to occur from projects implemented under the CCAA. No critical habitat has been designated for this species; therefore, none will be affected**.**

We have reached this conclusion based on the following reasons:

- The total amount of annual incidental take associated with this proposed action is 0.00013 percent of the estimated 24,515 birds statewide and 5.58 percent of the sage-grouse population on the enrolled lands.
- CMs implemented through the CCAA will facilitate avoidance, minimization, and mitigation of threats on approximately 7,290 acres of occupied sage-grouse habitat in Baker and Malheur Counties, Oregon.
- Although the adverse effects listed above may occur as a result of the action, the CCAA is intended to promote conservation efforts in the context of ranch and rangeland management practices that should result in the improvement of both the habitat and long-term viability of the species by addressing habitat loss, fragmentation, and degradation on enrolled lands.
- These beneficial effects are expected to accrue over time.

8. Incidental Take Statement

Section 9 of the ESA and federal regulations pursuant to Section 4(d) of the ESA prohibit the take of endangered and threatened species, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to the listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of Section 7(b)(4) and Section 7(o)(2), take that is incidental to and not intended as part of the agency action is not considered to be prohibited under the ESA provided that such take is in compliance with the terms and conditions of this Incidental Take Statement.

Prohibitions against taking the species found in Section 9 of the ESA do not apply until the species is listed. The incidental take statement would become effective upon listing of the sage-grouse, and following adoption of this CO as a biological opinion. If this CO is adopted as a

biological opinion follow a listing, these measures, with their implementing terms and conditions, will be nondiscretionary, and must be undertaken by the Service so that they become binding conditions of any permit issued to the Landowners, as appropriate, for the exemption in section 7(o)(2) to apply. The Service has the continuing duty to regulate the activity covered by this incidental take statement. If the Service (1) fails to assume and implement the terms and conditions or (2) fails to require the Landowners to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the Permit, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Service must report progress of the action and it impact on the sage-grouse as specified in the incidental take statement [50 CFR §402.14(i)(3)].

8.1 Amount/Extent of Take Anticipated

After applying the methods and assumptions described above in Section 4 Effects of the Action, the Service anticipates incidental take of sage-grouse due to the proposed action . The amount of authorized incidental take from covered activities would be a maximum of 67 sage-grouse on the Baker County property and a maximum of 19 sage-grouse on the Malheur County property over the 30-year term of this CCAA. However, no more than two birds annually on the Baker County property and no more than two birds every three years on the Malheur County property may be taken. This equates to approximately 0.00013 percent of the estimated statewide population of 24,515 (average 2004-2013). The evaluation of take will be based on a rolling 3-year average such that if take is high in one year it will not exceed authorized take unless the 3-year average annual take exceeds authorized take.

Annual monitoring required as part of the CCAA (see **Section 12: Inventory and Monitoring** and **Appendices B, C**, and **D**) provides an opportunity to track and report incidental take during the 30-year term. The Landowners will report mortality from incidental take to the Service (as required in the **Responsibilities of the Parties** section). Annual reports must be provided to the Service's La Grande Field Office. If any new information indicates that the activities associated with enrolled ranch and rangeland management practices and associated CM are resulting in take levels different than that described herein, conferencing may be reinitiated to evaluate changes to the CO.

8.2 Effect of the Take

The Service has determined that this level of anticipated take is not likely to result in jeopardy to the sage-grouse. If this CO is adopted as a biological opinion following a listing, these measures and their terms and conditions, will be non-discretionary.

8.3. Reasonable and Prudent Measures and Terms and Conditions

The Service believes that the following reasonable and prudent measures and their implementing terms and conditions are necessary and appropriate for the Landowners to minimize impacts of incidental take of sage-grouse. If the species is listed, in order to be exempt from the prohibitions of Section 9 of the ESA, the Landowners must ensure that implementation of the CCAA complies with the following Terms and Conditions that implement the Reasonable and Prudent Measures.

8.4 Reasonable and Prudent Measures

1. Provide an annual report that all actions are in compliance as described within the CCAA, including numbers of dead or injured sage-grouse.

8.5 Terms and Conditions

1. All reports, including a summary of compliance, are due by January 31 for the previous calendar year.
2. Upon locating any dead or injured sage-grouse the Landowners shall, immediately notify the appropriate Service and Oregon Department of Fish and Wildlife (ODFW) office. Instructions for proper handling and disposition of such specimens shall be given by the appropriate Service or ODFW office. Care must be taken in handling sick or injured birds to promote effective treatment and in handling dead specimens to preserve biological material in the best possible state.

9. Conservation Recommendations

Section 7(a)(1) of the ESA directs federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

The Service recommendations are as follows:

1. Work with other non-federal landowners to enhance sage-grouse habitat throughout the range of the species.
2. Continue to work with other federal agencies to expand sage-grouse conservation measures onto federal properties via Candidate Conservation Agreements.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the La Grande Field Office requests notification of any conservation recommendations.

10. Reinitiation - Closing Statement

This concludes the Service's CO for potential effects of the proposed action. If sage-grouse is listed, a request may be made that the Service adopt the CO as a final biological opinion satisfying the consultation requirements under Section 7(a)(2) of the ESA. The request must be submitted in writing. If the Service reviews the proposed action and finds that there have been no significant changes in the action as planned, or in the information considered during the CO, the Service will adopt the CO as the biological opinion on the project, and no further section 7 consultation will be required.

If the CO is adopted as the final consultation document, the following reinitiation conditions apply. Reinitiation of formal consultation is required and shall be requested by the federal agency or by the Service, where discretionary federal involvement or control over the action has been retained or is authorized by law and:

(a) amount or extent of taking specified in the incidental take statement is exceeded;

(b) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
(c) identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the BO; or
(d) new species is listed or critical habitat designated that may be affected by the identified action.

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