

## CONFERENCE OPINION

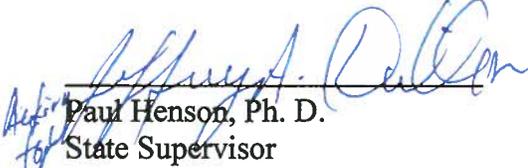
### **Regarding the Effects of the Proposed Greater Sage-Grouse (*Centrocercus urophasianus*) Candidate Conservation Agreement with Assurances between the Oregon State Land Board, Oregon Department of State Lands, and the U.S. Fish and Wildlife Service**

Action Agency: U.S. Fish & Wildlife Service

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Conducted by: U.S. Fish and Wildlife Service  
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## TABLE OF CONTENTS

INTRODUCTION .....	3
CONFERENCE HISTORY.....	3
CONFERENCE OPINION.....	4
1. Description of the Proposed Action.....	4
2. Analytical Framework for the Jeopardy Determination.....	5
3. Status of the Greater Sage-Grouse (Rangewide).....	6
3.1 Status .....	6
3.1.1 Life History .....	6
3.1.2 Distribution.....	7
3.1.3 Habitat and Diet.....	7
4. Environmental Baseline.....	8
4.1 Status of the Species in the Action Area and Role of the Action Area in the Conservation of the Species.....	8
4.1.1 Baker sage-grouse population .....	10
4.1.2 Central Oregon sage-grouse population .....	11
4.1.3 Northern Great Basin sage-grouse population.....	12
4.1.4 Western Great Basin sage-grouse population.....	13
4.2 Factors Affecting Species Environment within the Action Area .....	14
5. Effects of the Proposed Action .....	15
5.1 Injury or death .....	16
5.2 Harm .....	17
5.3 Harassment .....	17
5.4 Methods, Assumptions, and Rationale for Anticipated Effects and Incidental Take .....	18
5.4.1 Density and take calculations .....	19
5.5 Interrelated and Interdependent Effects.....	21
6. Cumulative Effects .....	21
7. Conclusion .....	21
8. Incidental Take Statement .....	22
8.1 Amount/Extent of Take Anticipated.....	22
8.2 Effect of the Take .....	23
8.3 Reasonable and Prudent Measures and Terms and Conditions .....	23
8.4 Reasonable and Prudent Measure.....	23
8.5 Terms and Conditions.....	23
9. Conservation Recommendations .....	24
10. Reinitiation - Closing Statement .....	24
LITERATURE CITED .....	24

## **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 (*Centrocercus urophasianus*) Candidate Conservation Agreement with Assurances between the Oregon State Land Board, Oregon Department of State Lands, and the Service (CCAA) and its effects on greater sage-grouse (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 aforementioned draft CCAA, the associated draft Environmental Assessment (EA) dated February 10, 2015, field investigations, and other sources of information. A complete record of this conference is on file at the Service's Oregon Fish and Wildlife Office in Portland, Oregon.

## **CONFERENCE HISTORY**

In anticipation of a final listing decision on sage-grouse by the Service, the Oregon Department of State Lands (DSL) requested assistance from the Service in developing a sage-grouse CCAA for rangeland management activities that they administer on behalf of the Oregon State Land Board in Baker, Crook, Deschutes, Grant, Harney, Lake, Malheur and Union Counties, 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.

- In December 2011, DSL became part of the Harney County Basement Task Force, the team that developed the first sage-grouse CCAA in Oregon.
- Shortly after the April 29, 2014 completion of the Harney County CCAA, DSL approached the Service with the interest of developing a CCAA for all DSL owned and managed lands within the range of sage-grouse and its habitat. They specifically requested to use the Harney County CCAA as the template for the DSL agreement.
- On May 14, 2014, a conference call was held to discuss the draft CCAA, the need for an EA, conducting habitat assessments, lease renewal timelines, and general planning efforts. Follow-up conference calls on these topics were held on July 16, 2014, July 27, 2014, August 15, 2014, and September 8, 2014.
- On September 24, 2014 and again on October 27, 2014, the Service discussed the development of NEPA alternatives with the Solicitor's Office.
- On December 4, 2014, the Service had a conference call with DSL to discuss progress on the draft CCAA and explain the NEPA process.
- On January 14, 2015, representatives from the Oregon Fish and Wildlife Office and the Service's Pacific Regional Office, the entity issuing the permit, had a conference call with DSL to clarify the DSL lease process along with the connection between the draft CCAA conservation measures and the sage-grouse habitat assessments.
- On February 3, 2015, the Service had a call with DSL to discuss any outstanding concerns on the draft CCAA prior to submission to the Federal Register.
- On February 23, 2015, the Service published the draft CCAA, the receipt of the Application for Enhancement of Survival Permit for the sage-grouse and the draft EA in the Federal Register and opened a 30-day comment period. The comment period closed on March 24, 2015.
- On April 10, 2015, the comment period was reopened until May 11, 2015.

- On May 11, 2015, the comment period on the draft CCAA and the associated EA closed.

## CONFERENCE OPINION

### 1. Description of the Proposed Action

This section provides a brief summary of the proposed action and its scope. This CO has been prepared to address the impacts to sage-grouse of the proposed issuance of an Enhancement of Survival Permit (permit) upon approval and signing of the CCAA to DSL for rangeland activities in Baker, Crook, Deschutes, Grant, Harney, Lake, Malheur and Union Counties, Oregon.

The CCAA provides a streamlined process for DSL to voluntarily create Sage-Grouse Habitat Assessments (SGHAs) and implement conservation measures (CMs) for sage-grouse on the grazing parcels that it administers. The purpose of the permit is to provide DSL and its lessees an exemption to section 9(a)(1)(b) of the ESA prohibiting “take” of sage-grouse while carrying out otherwise lawful rangeland management practices in the event that this species is listed under the ESA in the future. Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. If the species is listed, this CO may be adopted by the Service as a final Biological Opinion.

In return for signing on to the CCAA, the Service provides DSL with assurances that no additional CMs 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, as long as the CCAA is being implemented as agreed. The only exception is when an unforeseen circumstance occurs (See *Section 17: Unforeseen Circumstances* in the CCAA). This approach is consistent with the 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 DSL. 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, DSL may also voluntarily terminate their enrollment in a CCAA with a 30-day written notice.

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 65 other CMs to address threats to sage-grouse. For further details on the proposed action, refer to the CCAA, specifically *Section 10: Covered Activities*, *Section 15: Changed Circumstances*, and *Appendix A: Conservation Measures*. The complete CCAA is incorporated by reference herein. This CO considers effects on sage-grouse from issuance of a permit to DSL 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.

To ensure that the CMs are adequate, DSL must undertake or allow certain actions identified below (taken from *Chapter 9: Responsibilities of the Parties of the CCAA*):

**DSL will:**

- Continue current management practices that conserve sage-grouse and its habitats;
- Manage rangelands within current range of greater sage grouse to protect and where possible enhance habitat as identified in the CCAA;
- Develop Farm Plans, Leasehold Management Plans (LMPs) and Annual Operating Plans (AOPs) as needed to facilitate the accomplishment of appropriate CMs on individual leases;
- Provide SGHAs for 25 percent of the covered area to the Service for review prior to permit issuance and a minimum of 25 percent of the covered area per year for the first three years after permit issuance to ensure that 100 percent (25 percent will be reviewed prior to permit issuance) of the SGHAs have been reviewed for compliance and have met the CCAA standard; Work collaboratively with FWS to address Service comments on SGHAs to ensure that they meet the CCAA standard;
- Record dates, locations, and numbers of sage-grouse observed on their lands to be included in the habitat summary reports;
- Record new observations of noxious weeds;
- Report observed mortalities of sage-grouse;
- Conduct annual and long term monitoring activities and other reporting requirements;
- Review and update LMPs from time to time covering forage leases on all blocked ownership and on isolated parcels which include core habitat:
  1. Ensure LMPs incorporate applicable conservation strategies from the SGHAs when they are completed, and other provisions consistent with this CCAA;
  2. Provide the Service notice and opportunity to participate in LMP development and to comment during public review process. Notice will be sent to the Service's Oregon Fish and Wildlife Office at 2600 SE 98<sup>th</sup> Avenue, Suite 100, Portland, Oregon 97266.
- Work with lessees to ensure appropriate implementation of applicable CMs consistent with this CCAA. In the event that a lessee fails to implement required CMs, take such administrative or legal action as is necessary to enforce the lease terms.

## **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 rangewide and Oregon threats are available in the 12-month warranted but precluded sage-grouse finding (U.S. Fish and Wildlife Service 2010), as well as the original and updated ODFW Greater Sage-grouse Conservation Assessment and Strategy for Oregon (Hagen 2005, 2011).

#### **3.1 Status**

Prior to settlement in the 19<sup>th</sup> century, sage-grouse inhabited 13 western states and three Canadian provinces, and their potential habitat covered over 463,509 square miles. Sage-grouse distribution and numbers have declined across their range such that the birds now occur in just 11 states and two Canadian provinces. Many factors have played a role in reducing sage-grouse from an abundant, broadly distributed species to one warranted for ESA protection, but the primary threat across their range is loss of habitat due to increased surface disturbance and 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 rangewide listing. 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 (U.S. Fish and Wildlife Service 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 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 September 2015.

##### **3.1.1 Life History**

Sage-grouse are the largest North American grouse species with adult males ranging from 26 to 30 inches and weighing between 4 and 7 pounds, while adult females are smaller, ranging in length from 19 to 23 inches and weighing between 2 and 4 pounds. They are considered sagebrush obligates, resulting in a high degree of correlation between the distribution of sagebrush and the distribution of sage-grouse. They also exhibit strong site fidelity for breeding, nesting, and wintering. Sage-grouse are known for their elaborate mating ritual wherein males congregate and perform a courtship dance on a specific breeding area called a lek. Lek sites are

typically open areas within sagebrush stands that have good visibility for predator detection and good 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). 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). Although many males are present on a lek, females choose the same one or two males on a lek for mating (Gibson et al. 1991), leading to high levels of reproductive skew. Like many grouse species, males remain on the lek following mating and do not provide paternal care, whereas females leave the lek and begin their nesting effort after mating.

### **3.1.2 Distribution**

Sage-grouse were once found in most sagebrush habitats east of the Cascades but now occupy approximately 56 percent of their historical range. 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 of local extinction in Washington, California, Utah, Colorado, North Dakota, and South Dakota and in the Canadian provinces of Alberta and Saskatchewan due to long-term population declines and fragmented landscapes (Connelly and Braun 1997). Even in Oregon, Nevada, Idaho, Wyoming, and Montana, where the species is considered relatively secure, long-term population declines have averaged 30 percent (Connelly and Braun 1997, Garton et al. 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 (Hagen 2005, 2011). Habitat loss and fragmentation are the primary cause for long-term changes in population abundance and distribution (U.S. Fish and Wildlife Service 2010).

### **3.1.3 Habitat and Diet**

Optimum sage-grouse 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). Their diet is dominated by leaves year round but they also eat buds, stems, flowers, and fruit. In late spring and summer during the breeding season, insects such as grasshoppers, beetles, and ants become incorporated into the diet and are particularly important during the first 3 weeks of a chick's life (as summarized by Schroeder et al. 1999). Sage-grouse adults and chicks depend on high quality forage in riparian/wetland areas during the late growing season when upland communities are dry and juvenile birds are still growing (Savage 1968, Oakleaf 1971, Crawford et al. 2004, Gregg and Crawford 2009). 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 dominated by sagebrush leaves during late fall and winter.

In addition to requiring sagebrush for food, sage-grouse also require sagebrush for lek sites and for nesting habitat. On average, 80 percent of nests are within 4 miles of the lek, but some females have been shown to nest 12 miles from a lek (Hagen 2011). 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 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). 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).

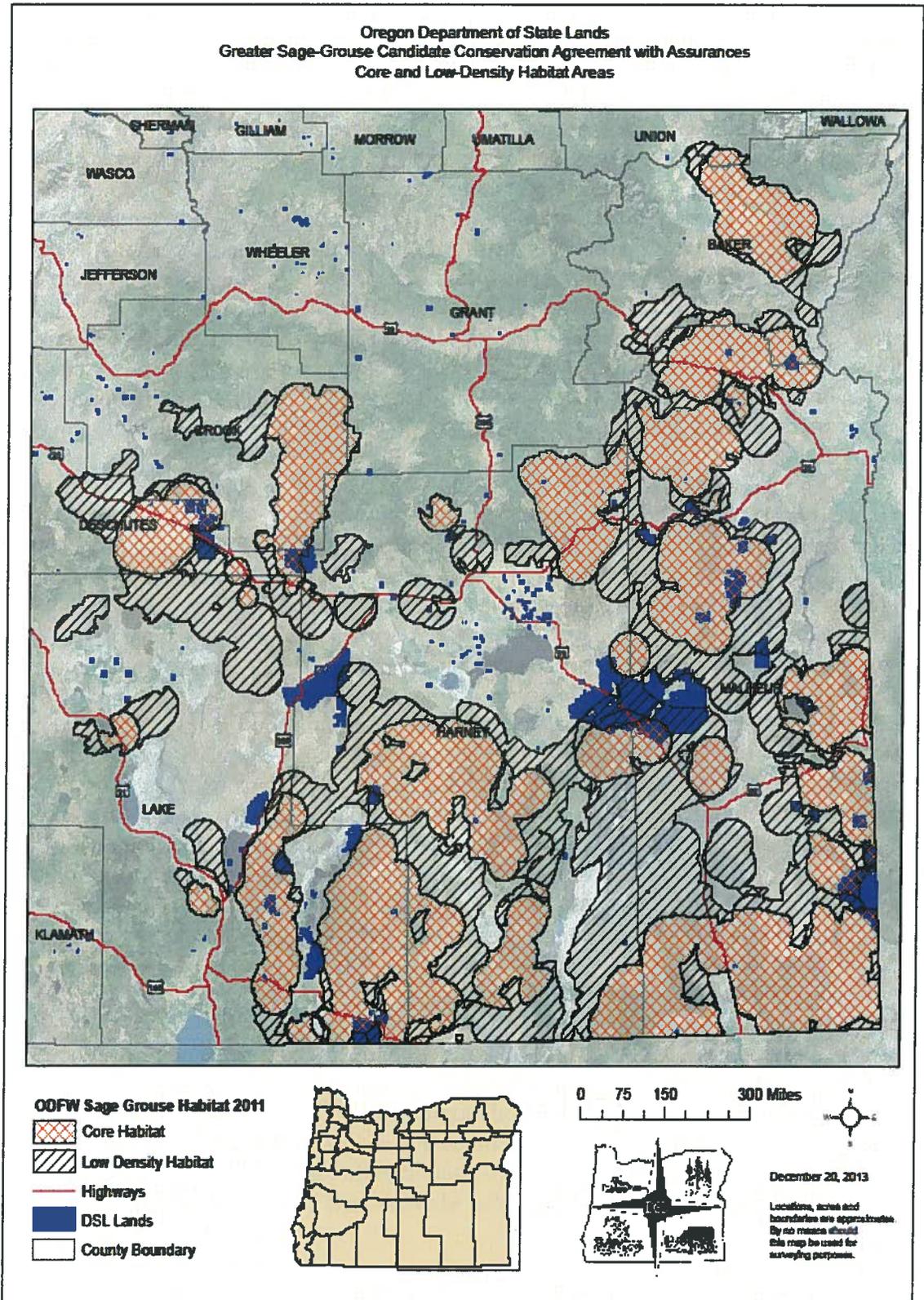
#### **4. Environmental Baseline**

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 and Role of the Action Area in the Conservation of the Species**

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 rangelands administered by DSL in Baker, Crook, Deschutes, Grant, Harney, Lake, Malheur, and Union Counties, Oregon (shown in Figure 1).

Figure 1.



Sage-grouse habitat on lands within the action area is designated as Preliminary Priority Habitat (PPH) or Preliminary General Habitat (PGH; See Table 1). For purposes of analysis, the Service used the PPH and PGH designations as representing the best current estimate of sage-grouse habitat and these designations 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. PPH areas are also known as Priority Habitat Management Areas.
- **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. PGH areas are also known as General Habitat Management Areas.

**Table 1. Covered area acres of PPH and PGH for DSL Lands**

<b>County</b>	<b>PPH (acres)</b>	<b>PGH (acres)</b>	<b>Total (acres)</b>
Baker	2,885	49	2,934
Crook	4,369	448	4,817
Deschutes	22,583	15,060	37,643
Grant	0	29	29
Harney	10,749	150,639	161,388
Lake	22,356	28,151	50,507
Malheur	90,165	186,329	276,494
Union	0	0	0
<b>Total</b>	<b>153,107</b>	<b>380,705</b>	<b>533,812</b>

Sage-grouse have been divided into five populations in Oregon known as the Baker, Central Oregon, Northern Great Basin, Western Great Basin, and Klamath OR/CA populations (Garton et al. 2011; Hagen 2011). Of these, only the Baker and the Central Oregon populations are entirely found within Oregon. The Northern Great Basin population is also found within Idaho, Utah, and Nevada. The Western Great Basin population is also found within California and Nevada. The Klamath OR/CA population is found in both Oregon and California, however, birds have not been documented there recently (U.S. Fish and Wildlife Service 2013).

#### **4.1.1 Baker sage-grouse population**

Baker and southern Union Counties support similar populations of sage-grouse as they did 20 years ago (Hagen 2011). While the majority of lands within Baker County are in the Baker population of sage-grouse, the southern portion of the county is within the Northern Great Basin

population (to be discussed under *Section 4.1.3*). The portion of Union County with sage-grouse habitat is entirely contained within the Baker population.

The Baker population has approximately the same distribution as the area covered by the Baker administrative unit identified in Oregon's Sage-grouse Conservation Strategy (Hagen 2011). The Baker spring population was estimated to be 872 to 1,650 birds in 2010, the smallest extant population of sage-grouse that is exclusively in Oregon. Garton et al. (2011) based their Baker population assessment on a minimum estimate of 137 birds in 2007 and estimated a 61.9 percent chance there will be fewer than 50 birds in the population by the year 2037, and a 66.8 percent chance of fewer than 50 birds by 2137. ODFW lek counts indicated more than 300 males in Baker County in 2011. Since systematic counts began in 1989, the number of counted males/lek has remained relatively stable (Hagen 2011). Due to habitat and topography, it has been assumed the Baker population has little connectivity with other sage-grouse populations. However, recent telemetry information suggests that at least some birds move between the Weiser population in Idaho and the Baker population (U.S. Fish and Wildlife Service 2013).

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. Unfortunately, due to habitat and topography changes over time, habitat suitability for sage-grouse has declined. 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 Off Highway Vehicle recreation (U.S. Fish and Wildlife Service 2013).

The Baker population is part of Management Zone IV, the Snake River Plain (Stiver et al. 2006). This zone represents one of the largest areas of connected sage-grouse habitat, as demonstrated by Knick et al. (2011), and supports the largest population of sage-grouse outside of the Wyoming Basin (Garton et al. 2011). The Snake River Plain management zone includes sage-grouse populations in Oregon, Idaho, Nevada, Utah and Montana. Garton et al. (2011) predicted a 10.5 percent chance this Management Zone will fall below 200 males by 2037, and a 39.7 percent chance it would fall below 200 males by 2107.

#### **4.1.2 Central Oregon sage-grouse population**

The minimum spring population for the Central Oregon population was estimated at 1,775 to 2,084 birds in 2010 but it has experienced steady population declines since 1980 (Hagen 2011). Population estimates suggest that this population will remain fairly resilient in 30 years, but not in 100 years (Garton et al. 2011). There is a 15.2 percent chance the population will decline below 500 by 2037, and a 91.3 percent chance that fewer than 500 birds will be in the population by 2137 (Garton et al. 2011).

This population is estimated to have only 53 percent of historic sagebrush habitat, having lost more historic habitat than any other sage-grouse administrative unit in Oregon. The area also has more privately owned sage-grouse habitat (48 percent) than most other sage-grouse management zone populations in Oregon. This population faces a wide suite of threats, including juniper encroachment, (Freese 2009) which threatens over 900,000 acres of the 1.8 million acres of sagebrush habitat in in this area (Hagen 2011). Additional threats include invasive weeds,

renewable energy development (both wind and geothermal), transmission, roads, Off Highway Vehicle recreation, and residential development. Projections based on historic trends suggest this population is at risk, but in the last 2 years there have been a number of positive developments including thousands of acres of habitat improvement under the NRCS's Sage-grouse Initiative. Juniper encroachment threatens connectivity with other Oregon populations to the south and east (Hagen 2011).

Priority areas for conservation and low density (non-priority but managed) habitat combined capture all but three percent of known summer, one percent of known breeding, and one percent of known wintering habitat for the Central Oregon population of sage-grouse. Most of the sites within this population probably have some connectivity with other sites in this population, though verification from genetics is lacking.

The Central Oregon sage-grouse population is part of Management Zone V, the Northern Great Basin (Stiver et al. 2006). There are three other sage-grouse populations identified in this management zone, known as Klamath, Warm Springs Valley, and the Western Great Basin. Garton et al. (2011) predicted a 2.1 percent chance this Management Zone will fall below 200 males by 2037, and a 29.0 percent chance it would fall below 200 males by 2107. Only two of the populations (Central Oregon and Western Great Basin) had sufficient information for a population assessment by Garton et al. (2011). Bureau of Land Management (BLM) lands are a major constituent of sagebrush landscapes in the Northern Great Basin (62 percent), followed by private (21 percent), Forest Service (10 percent), state (8 percent), and then other ownerships (Knick 2011). This zone is part of a stronghold for sage-grouse along with Management Zones III and IV because the three zones contain the largest area of habitat rangewide with low similarity to extirpated portions of the range (Wisdom et al. 2011).

#### **4.1.3 Northern Great Basin sage-grouse population**

Malheur and southwestern Grant counties in Oregon represent the western part of the Northern Great Basin population, which is shared with southern Idaho, northeast Nevada, and northwest Utah. Within Oregon, this represents one of the largest populations of sage-grouse. The delineation of the Northern Great Basin population doesn't correspond well to any existing assessment for Oregon, but does include almost all of the Vale administrative unit, as well as portions of the Burns administrative unit. 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).

The area containing the Northern Great Basin population in Oregon has 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). A recent rate of change analysis indicated that at least part of this large population has been stable to increasing from 2007 to 2010. Garton et al. (2011) indicated that this population had virtually no chance of declining below 50 in 30 or 100 years. Population analysis indicated that

sage-grouse will fluctuate around a carrying capacity that will decline from an estimated 6,770 males in 2007 to 1,787 males in 2037 if current trends continue (Garton et al. 2011).

Loss of sagebrush habitat has been and continues to be threat to the population in Oregon. 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 2012 Long Draw fire. That fire affected 582,000 acres of sagebrush with 455,000 of those acres considered either Core or Low Density sage-grouse habitat under Oregon's conservation strategy. In conjunction with fire, invasive weeds are also one of the greatest risks the 4+ million acres of sagebrush habitat for this population in Oregon. More than 580,000 acres is already dominated by invasive species (Hagen 2011b). 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. WNV has also been consistently detected in mosquitoes in this region (<http://public.health.oregon.gov/>) and the population was subjected to the largest known WNV mortality event involving sage-grouse in Oregon (2006). Despite efforts to manage wildfire risks, wildfires and invasive species have continued to reduce the quality of habitat in portions of this area.

#### **4.1.4 Western Great Basin sage-grouse population**

Oregon's portion of the Western Great Basin sage-grouse population has some of the best habitat and highest sage-grouse densities in the state, including Hart Mountain National Antelope Refuge and Trout Creek Mountains (U.S. Fish and Wildlife Service 2013). In just Oregon, the spring population in the Western Great Basin likely exceeded 10,000 birds in 2010 (interpolation from Hagen 2011) and >80 percent of the historical sage-grouse habitat remains intact (Hagen 2011). In the Lakeview administration unit, which comprises most of the Western Great Basin population in Oregon, about 78 percent of the region is administered by the BLM and the Service manages more than 278,000 acres.

Rangewide for sage-grouse, the area containing the Western Great Basin population contains one of four remaining large intact expanses of sagebrush habitat and connects south-central Oregon with northwest Nevada, with most of the sagebrush dominated landscape in Oregon (Knick and Hanser 2011). Habitat fragmentation increases to the south and west in the population, with northeast California having a high similarity with portions of extirpated range (Wisdom et al. 2011). Garton et al. (2011) estimated for the Western Great Basin a minimum population estimate of 5,904 males in 2007 (includes NE CA, NW NV). Modeling suggested there is a 6.4 percent chance birds will drop below 500 by the year 2037, but a 99.1 percent chance the population will be below 500 by 2137 (Garton et al. 2011). The Western Great Basin is the most resilient population in Management Zone 5, but reducing threats alone is not likely to ensure long-term persistence in some areas. Resiliency needs to be improved in the California and Nevada portions of the Western Great Basin with increased habitat suitability in terms of shrub densities and native grasses and forbs.

Invasive weeds, fire, and juniper encroachment (particularly on the western edge) represent the greatest risks to the Western Great Basin population. Renewable energy development (wind and geothermal) and wild horses have been identified as a threat to sage-grouse habitat in portions of Oregon's (e.g., Steens, Dry Valley/Jack Mountain Action Areas) Western Great Basin population. The Lone Willow portion of the Western Great Basin population (connected with Oregon) was affected by a very large wildfire in 2012. The Holloway Fire burned approximately 214,000 acres in Nevada and 245,000 acres in Oregon of which about 140,000 acres in Nevada and 221,000 acres in Oregon were considered important or essential sage-grouse habitat. The Miller Homestead fire in Oregon included an additional 162,000 acres of sagebrush habitat within its perimeter. Fire and annual grasses should be characterized as substantial and imminent threats within this portion of the population.

#### **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 throughout the state of Oregon may include, but are not limited to, the following specific factors (U.S. Fish and Wildlife Service 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 (U.S. Fish and Wildlife Service 2010). In southeastern Oregon, there are healthy populations of sage-grouse with limited hunting. 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 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 (U.S. Fish and Wildlife Service 2010).

## **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 10: 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 (*Appendix A* of the CCAA)
- Changed circumstances conservation measures (*Section 15* of the CCAA)
- Limited use of specific herbicides as described in *Appendix E*
- Inventory and monitoring activities identified in *Section 6* and the Appendices of 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 *Appendix A* and *Section 11: Anticipated Incidental Take* of the CCAA.

### **5.1 Injury or death**

- Haying and other farming operations that use heavy equipment can directly kill or injure adult and juvenile sage-grouse especially brooding females and their young or eggs. If only the female is killed or injured any young or eggs are likely to die due to lack of parental care. The risk of this is low because areas that are under cultivation are typically not suitable sage-grouse habitat; however margins of fields that have sagebrush habitat nearby may be used for nesting and foraging. This risk will be minimized by requiring specific farming practices in leases adjacent to sagebrush habitat under a written farm plan that DSL may reasonably impose on the property.
- 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 removing unnecessary fences; and marking fences in high-risk locations to make them more visible to sage-grouse (see CM 28 and 29). Vertical structures such as telephone and power lines and poles 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 removing unnecessary structures, undergrounding lines when feasible, and limiting new construction.

- Sage grouse can drown in livestock water tanks when they use them as a water source. This risk will be minimized by properly equipping stock-tanks with escape ramps.
- Standing water sources including stock-tanks and ponds managed for livestock watering can attract mosquitoes and increase the risk of West Nile virus outbreaks (U.S. Fish and Wildlife Service 2010). West Nile virus is known to injure or kill sage-grouse. This risk will be reduced by minimizing unnecessary standing water sources.
- Use of the herbicides listed in Appendix E are not known to directly injure or kill sage-grouse, however, there have been limited studies that are specific to sage-grouse. The risk of mortality associated with herbicide use will be minimized by only using approved herbicides consistent with Appendix E, implementing all best management practices and applicable CMs. If it is found that these herbicides do injure or kill sage-grouse, then their use may be discontinued as a covered activity consistent with changed circumstances provisions.

## **5.2 Harm**

- Construction of new fences or power lines is likely to decrease habitat quantity and/or quality. Any actions of this type will be carefully designed to minimize impacts and mitigation consistent with state policies will be required to ensure that the impact of these actions are mitigated in order to meet the CCAA standard and meet the objectives of CM 1.
- Removing sagebrush along roadsides to create firebreaks can decrease the amount of this habitat available to sage-grouse. However, the benefits of firebreaks outweigh the harm. Firebreaks can prevent large tracts of sage-grouse habitat from being degraded by fire or may serve as an anchor point to effectively fight fire from. Risk will be minimized by limiting size of firebreaks.
- Rangeland treatments may temporarily reduce sagebrush cover in order to inter-seed with desired grasses and forbs to improve sage-grouse habitat, resulting in a short term loss but long term gain in sage-grouse habitat. This risk will be minimized by limiting size of treatment area, consideration of how treatments will affect overall landscape for sage-grouse and assessment of current vegetation condition or other effective measure as identified.
- 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 lessees will be required to modify grazing practices if the threat of “improperly managed livestock grazing” is occurring on leaseholds. This risk will be further minimized with annual implementation/compliance monitoring and reporting of utilization as well as adapting to drought or other environmental factors that may increase or decrease forage.
- Concentration of livestock that results in compaction of soils and increased bare ground can degrade nesting and brood-rearing habitat and increase the risk of establishing invasive weeds (Mack and Thompson 1982; Miller and Eddleman 2000). This risk will be minimized if the threat is identified by changing timing, intensity, and duration of livestock grazing in areas at risk or other effective measure as identified.

## **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 nesting or otherwise

utilizing these areas. 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.

- 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 does not rise to the level of take.
- Farm operations including the use of heavy equipment, vehicles, noise from generators or windmill powered pumps may cause short-term disturbances to sage-grouse or in the case of ongoing noise and frequent activities, it may cause sage-grouse to avoid otherwise usable habitat. These impacts are expected to be fairly localized as birds using the margins of fields can easily retreat to sagebrush from machinery noise. When economically feasible, new and existing pumps would be converted to solar power to reduce noise and sage-grouse disturbance.
- Recreational activities in the vicinity of active leks may cause birds to flush or abandon. This risk will be minimized by limiting un-necessary access during certain times of the year when sage-grouse are using lands (for example: lekking, wintering or brood-rearing) as applicable.
- Development activities associated with construction of new fences or power lines can cause harassment of sage-grouse. Risk of disturbance from these activities can be minimized by timing them outside of the breeding and nesting season.

#### **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 or survival 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, are 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; and (4) sources of risk that emerge outside state 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.

Lek data and site-specific information on the number of sage-grouse is highly variable across the state of Oregon. ODFW conducts lek counts that are based on the number of sage-grouse (primarily males) attending designated leks (“trend leks”) each spring. Each trend lek is counted at least three times at 7 to 10 day intervals between 0.5 hours before and 1.5 hours after sunrise during the breeding season. Trend leks are counted consistently over a number of years, but they represent a sub-sample of all leks in a region. Therefore, we do not have counts for all leks within a given sage-grouse population area. Thus, the Service used statewide population estimates and the amount and type of sage-grouse habitat (PPH and PGH) on state land available to estimate the number and density of sage-grouse.

#### 5.4.1 Density and take calculations

The density of sage-grouse statewide was calculated as follows. There are an estimated 24,515 sage-grouse in Oregon based on a 10-year (2004 to 2013) average of the statewide total spring population (ODFW unpublished data 2013). According to Hagen (2011) 90 percent of sage-grouse occupy PPH, 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 percent of 24,515 equals 22,064 sage-grouse divided by 6.57 million acres of PPH). This statewide average density was then multiplied by the number of acres of PPH covered under each CCAA to come up with an estimated 10-year minimum population average. Average sage-grouse densities in PGH are estimated at 0.0003 birds per acre (10 percent of 24,515 equals 2,452 divided by 8.26 million acres). These statewide average densities were then multiplied by the number of acres covered under each CCAA of PPH (ex., 258,214 acres times 0.0034 birds/acre) and PGH (ex., 225,465 acres times 0.0003 birds/acre) using an excel spreadsheet to eliminate errors from repeated rounding of numbers (Table 2, below).

**Table 2. Estimated number of sage-grouse within the covered area by habitat type.**

<b>County</b>	<b>PGH (acres)</b>	<b>Birds in PGH</b>	<b>PPH (acres)</b>	<b>Birds in PPH</b>	<b>Total Acres</b>	<b>Total Birds</b>
Baker	49	0	2,885	10	2,934	10
Crook	448	0	4,369	15	4,817	15
Deschutes	15,060	5	22,583	77	37,643	81
Grant	29	0	0	0	29	0
Harney	150,639	45	10,749	37	161,388	82
Lake	28,151	8	22,356	76	50,507	84
Malheur	186,329	56	90,165	307	276,494	362
Union	0	0	0	0	0	0
<b>Total</b>	<b>380,705</b>	<b>114</b>	<b>153,107</b>	<b>521</b>	<b>533,812</b>	<b>635</b>

We recognize that these estimates are based on a number of assumptions. In general, the assumptions would likely result in an overestimate, rather than an underestimate, of take from the proposed action, and thus provide a more conservative approach to anticipated take. As noted above, we also expect that CMs including internal mitigation for developments 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.

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 are 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 10: 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 DSL will be required to retrofit stock troughs in occupied sage-grouse habitat as part of their site specific plans under the CCAA.
- **Patches of Unsuitable Habitat** - As part of the CCAA, DSL 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 the proposed action is 0.1 percent of the estimated 24,515 birds statewide. With implementation of the CCAA, we anticipate incidental take from covered activities to be 5.2 percent on the enrolled lands. Authorizing a total annual take of approximately 5.2 percent of the estimated sage-grouse population on state lands within Baker, Crook, Deschutes, Grant, Harney, Lake, and Malheur counties will not adversely affect sage-grouse populations (Sedinger et al. 2010; Connelly et al. 2000; ODFW 2010). The authorized take associated with the CCAA (5.2 percent), combined with ODFW's actual (3 percent), or allowed (5 percent) harvest rates (ODFW 2011) could account for an average 8.2 to 10.2 percent annual loss of the sage-grouse population in areas that are under the CCAA and where hunting of sage-grouse occurs. Cumulative impacts of harvest on sage-grouse populations in Oregon are evaluated annually by ODFW. An 8.2 to 10.2 percent loss follows the rangewide 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 that harvest rates <11 percent are 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 5-year average such that if take is high in one year it will not exceed authorized take unless the 5-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 state 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 associated permit, as proposed, is not likely to jeopardize the continued existence of the sage-grouse. 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 0.1 percent of the estimated 24,515 birds statewide and 5.2 percent of the sage-grouse population on state lands (see Table 2).
- CMs implemented through the CCAA will facilitate avoidance, minimization, and mitigation of threats on approximately 540,000 acres of sage-grouse habitat across eight counties in Oregon.
- Although the adverse effects listed previously 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 state 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.

The prohibitions against taking the species found in Section 9 of the ESA do not apply until the species is listed. However, the Service advises DSL to consider implementing the reasonable and prudent measures noted below. 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 following 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 DSL, 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 DSL 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 its 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 5 Effects of the Action*, the Service anticipates incidental take of sage-grouse due to the proposed action. The maximum amount of authorized incidental take from covered activities over the 30-year term of the CCAA would be 990 sage-grouse on state lands (33 birds/year).

This equates to approximately 0.1 percent of the estimated statewide population of 24,515 (average 2004 to 2013). The evaluation of take will be based on a rolling 5-year average such that if take is high in one year it will not exceed authorized take unless the 5-year average annual take exceeds authorized take.

Annual monitoring required as part of the CCAA (see *Section 6: Inventory and Monitoring and Appendix D*) provides an opportunity to track and report incidental take during the 30-year term.

DSL will report mortality from incidental take to the Service (as required in *Section 9: Responsibilities of the Parties*). Annual reports must be provided to the Service's Oregon Fish and Wildlife Office located in Portland. If any new information indicates that the activities associated with enrolled ranch and rangeland management practices and associated CMs 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 measure 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, DSL must ensure that implementation of the CCAA complies with the following Terms and Conditions that implement the Reasonable and Prudent Measure.

## **8.4 Reasonable and Prudent Measure**

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

## **8.5 Terms and Conditions**

In order to be exempt from the prohibitions of section 9 of the ESA once the species is listed, DSL must comply with the following terms and conditions, which implement the reasonable and prudent measure described above and outline required reporting/monitoring requirements. If this CO is adopted as a biological opinion following a listing or designation, these terms and conditions will be non-discretionary.

1. All reports, including a summary of compliance, are due one calendar year following the completion of an SGHA for the previous calendar year.
2. Upon locating any dead or injured sage-grouse, DSL shall immediately notify the appropriate Service and 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.

The Service believes that no more than the anticipated levels of take noted above for sage-grouse will be incidentally taken as a result of the proposed action. The reasonable and prudent measure, with its implementing terms and conditions, is designed to minimize the impact of incidental take that might otherwise result from the proposed action. If during the course of the action, this level of take is exceeded; such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measure provided. The

SWCD must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measure.

## **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 Oregon Fish and Wildlife 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.

The incidental take statement provided in this CO does not become effective until the species is listed and the CO is adopted as the biological opinion issued through formal consultation. At that time, the action will be reviewed to determine whether any take of sage-grouse or their habitat has occurred. Modifications of the opinion and incidental take statements may be appropriate to reflect that take. No take of sage-grouse or their habitat may occur between the

listing of sage-grouse and the adoption of the CO through formal consultation, or the completion of a subsequent formal consultation.

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