Oregon

Northern Great Basin – Management Zone V

There are four sage-grouse populations identified in Management Zone V (MZV), only one of which (Central Oregon) is entirely within Oregon. Two populations (Western Great Basin, Klamath) are shared with Nevada and/or California, while the Warm Springs Valley population occurs entirely within Nevada. Only two of the populations (Central Oregon and Western Great Basin) had sufficient information for a population assessment by Garton et al. (2011).

The *Greater Sage-grouse Conservation Assessment and Strategy for Oregon*, adopted in 2011 identified Core (priority) Areas for sage-grouse in the Central Oregon and Western Great Basin populations. In the entire state, including populations in the Management Zone IV (MZIV), 6.57 million acres of Core Area were identified. The Core Area represents about 36.5% of the known sage-grouse distribution in Oregon. The delineation of Core Areas were based on the existing breeding density, connectivity based on expected movements (16 km), and known wintering areas. The exterior boundaries of Core Areas were adjusted to remove non-habitat and incorporate additional priority habitats adjacent to existing Core Areas. Core Areas were not identified for sage-grouse in the Klamath population which are believed extirpated in Oregon, with the last confirmed observation in Oregon in 1993 (Hagen 2011).

Multiple Core Areas were identified within each of the Central Oregon and Western Great Basin populations in Oregon. Core Area maps will help in the siting of large-scale industrial developments, recognizing that siting such developments in Core Areas will likely be more of a challenge to avoid impacts to sage-grouse habitats. Generally, the recommendation is to avoid impacts to sage-grouse habitat in Core Areas and to mitigate at a no net loss with a net benefit for impacts to sage-grouse in non-Core Area habitat. The *Greater Sage-grouse Conservation Assessment and Strategy for Oregon* includes voluntary conservation guidelines that are designed to maintain or enhance the quality of sage-grouse habitat in Oregon, and are applicable to all sage-grouse habitat (Hagen 2011). If the prescribed conservation guidelines are followed and the existing sage-grouse habitat is protected and enhanced it is expected these areas will provide the necessary representation and redundancy for these populations to persist into the foreseeable future.

Central Oregon

The Central Oregon population has approximately the same distribution as the area covered by the Prineville administrative unit identified in Oregon's Sage-grouse Conservation Strategy. Approximately 700,000 acres of habitat for the Central Oregon population has been identified as Core Area. This is a relatively large population, with the minimum spring population estimated at 1,775-2,084 birds in 2010 (Hagen 2011). The population has declined steadily since 1980 (average, -0.004%/yr [Hagen 2011]). There is a 15.2% chance the population will decline below 500 by 2037, and a 91.3% chance that fewer than 500 birds will be in the population by 2137 (Garton et al. 2011).

The Central Oregon Population is estimated to have only 53% of historic sage-brush 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%) than other MZV populations in Oregon. This population faces a wide suite of threats, including juniper encroachment, renewable energy development (both wind and geothermal), transmission, roads, OHV 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 and increasing local interest sage-grouse conservation.

Western Great Basin

Oregon shares the Western Great Basin Population with NE California and NW Nevada. Oregon's portion of the 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. The delineation of the Western Great Basin population doesn't correspond well to any existing assessment for Oregon, but does include almost all of the Lakeview administrative unit, as well as portions of the Burns and Vale administrative units. In just Oregon, the spring population in the Western Great Basin likely exceeded 10,000 birds in 2010 (interpolation from Hagen 2011). Garton et al. (2011) estimated for the Western Great Basin a minimum population estimate of 5,904 birds in 2007 (includes NE CA, NW NV). Modeling suggested there is a 6.4% chance birds will drop below 500 by the year 2037, but a 99.1% chance the population will be below 500 by 2137 (Garton et al. 2011).

In the Oregon portion of the Western Great Basin, >80% of the historical sage-grouse habitat remains intact, and most of the habitat is in public ownership (Hagen 2011). In the Lakeview administration unit, which comprises most of the Western Great Population in Oregon, about 78% of the region is administered by the BLM and the USFWS manages more than 278,000 acres. Invasive weeds and juniper encroachment (particularly on the western edge) represent some of the greatest risks to this population. Renewable energy development (wind and geothermal) and fire also represent risks to the Oregon portion of the population. Feral horses have been identified as a threat to sage-grouse habitat in portions (e.g., Steens, Dry Valley/Jack Mountain Action Areas) of the Western Great Basin. Given the majority of this population occupies federal land, proper and proactive habitat management could ensure the persistence of this sage-grouse population well into the future.

Klamath

Sage-grouse in the Oregon part of the Klamath population are thought to be extirpated. As recently as the early 1990's, a few birds attended leks in Oregon, but there have been no confirmed sightings since 1993 despite periodic survey efforts. A few birds exist on the California side, particularly in the vicinity of Clear Lake National Wildlife Refuge. Oregon has permitted the trapping of birds from the Western Great Basin population to augment the population around Clear Lake.

The Klamath Population in Oregon likely had limited connection with sage-grouse populations to the east due to barriers of unsuitable habitat and was likely an extension of the population in NE California. Habitat in Oregon was severely compromised by juniper encroachment. Significant juniper treatments have taken place in the former Oregon range, particularly by BLM, and there is potential of limited habitat for sage-grouse in the future. Juniper encroachment, and invasive weeds, have also compromised the habitat it in California. Large treatments of juniper have been conducted on the Clear Lake NWR and in the vicinity in hopes of expanding suitable habitat in that area.

Snake River Plain – Management Zone IV

The Snake River Plain management zone includes sage-grouse populations in Oregon, Idaho, Nevada, Utah and Montana. Many of these populations are small and found in SW Montana and in Idaho. Two Snake River Plain populations occur in Oregon, the Baker and the Northern Great Basin. The Baker population is entirely within the state's border and while the large Northern Great Basin population is shared with southern Idaho, NE Nevada, and NW Utah. Both of the populations that occur in all or part of Oregon had sufficient information for assessment by Garton et al. (2011).

The *Greater Sage-grouse Conservation Assessment and Strategy for Oregon*, adopted in 2011 identified core (priority) areas for sage-grouse in the Baker and Northern Great Basin populations. In the entire state, including populations in the Management Zone V (MZV), 6.57 million acres of Core area were identified. The Core area represents about 36.5% of the known sage-grouse distribution in Oregon. The delineation of Core Areas were based on the existing breeding density, connectivity based on expected movements (16 km), and known wintering areas. The exterior boundaries of the Core Areas were adjusted to remove non-habitat and incorporate additional priority habitats adjacent to existing Core Areas.

Baker

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. The Baker spring population was estimated to be 872 -1,650 birds in 2010 (Hagen 2011), the smallest extant population in Oregon. Garton et al. (2011) based their Baker population assessment on minimum estimate of 137 birds in 2007 and estimated a 61.9% chance there will be fewer than 50 birds in the population by the year 2037, similarly, there is 66.8% chance of fewer than 50 birds by 2137. ODFW lek counts indicated more than 300 males (or 750 birds if applying the Garton et al. (2011) 2.5 sex ratio) 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. Recent telemetry information suggests that at least some birds move from the Weiser population in Idaho to Baker County, and Baker population birds move to the Weiser population.

More than 80% of the historic 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 Core Area, and includes much of the current range of the Baker population. Most (68%) of the sage-grouse habitat for the Baker population is in private ownership and 31% is administered by BLM (Hagen 2011). This is the largest proportion of privately managed sage-grouse habitat for any population in Oregon. Principal threats to this population include renewable energy development (primarily wind), transmission, invasive weeds, OHV recreation, and juniper encroachment. Recently, thousands of acres of juniper have been treated in this region to benefit sage-grouse and other sagebrush obligates.

Northern Great Basin

Oregon represents the western part of this large population which is shared with Southern Idaho, NE Nevada, and NW Utah. Within Oregon, this represents one of the largest populations. 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 just Oregon, the spring population in the Northern Great Basin is likely several thousand birds, with 2011 spring lek counts approaching 3,000 males (or 7,500 birds if applying the Garton et al. (2011) 2.5 sex ratio) in the Beulah, Malheur River, Owyhee, and eastern portion of White River Wildlife Management Units. Garton et al. (2011) estimated for the Northern Great Basin a minimum population estimate of 9,114 birds in 2007 (includes S. ID, NE NV, NW UT). Modeling suggested there is a 2.5% chance birds will drop below 500 by the year 2037, but a 99.7% chance the population will be below 500 by 2137 (Garton et al. 2011).

Historically this population was likely much larger in Oregon, but extensive sagebrush removal programs occurred during the 1960's and large fires in more recent times have reduced the available sage-grouse habitat. Some the treatments of the 1960's are beginning to be recolonized by sagebrush and should assist with maintaining local populations in the future. Fire remains a threat and is often followed by non-native annual grasses and other invasives which increase the probability of frequent fire. 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 and the population was subjected to the largest known WNv mortality event involving sage-grouse in Oregon (2006).