

Central & Eastern Oregon Land Use Planning Assessment

Sage-Grouse Habitat

Harney County Grant Project

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Executive Summary

This report considers the existing presence of habitat fragmentation activities in Oregon’s Sage-grouse habitat and describes state and local land use programs that apply to development proposals. The review is generally limited to nonfederal lands where local governments have direct jurisdiction.

Habitat Fragmentation Threats

According to the Conservation Objectives Team (COT) Report multiple habitat fragmentation threats are found in the various management zones identified across the range. The following threats have been identified for the management zones (IV. & V.) and Sage-grouse populations located in Oregon:

- Conversion to Agriculture
- Energy Development
- Mining
- Infrastructure
- Urbanization

Land Use Planning Programs

Each of the seven counties implements a local land use planning program consistent with state law. Most habitat fragmentation threats (Mining, Energy Development, Infrastructure, Urbanization) are regulated by county comprehensive plans and zoning ordinances. Conversion to Agriculture is the only identified habitat fragmentation threat not regulated by local planning programs.

Almost all of the lands (98%) identified as Sage-grouse habitat are designated as resource land devoted to farm, ranch or forest uses and also receive protection for wildlife. The regulatory environment for these lands is characterized by very large minimum parcel size requirements (80 to 320 acres or more), limited land division opportunities and limited provisions for uses not related to farm, ranch or forest management. Wildlife protection programs that apply in addition to resource land zoning commonly require coordination with ODFW, clustering new uses in areas of existing conflicts or simply not allowing certain new uses to become established.

The applicable programs have done an outstanding job limiting rural residential and urban development and maintaining large parcel sizes. Demand for large scale development has historically been very low. To the extent it has occurred, it has generally been located along existing transportation corridors.

Governance

Oregon’s Sage-grouse territory is simply dominated by federal land. As stated in the Harney County element of this report, lands under county jurisdiction are like:

“...an island of privately-owned tracts in a sea of publically managed land.”

However, even with the amount of nonfederal lands making up less than 24% of the state's total habitat area these areas remain important as a higher level of scrutiny on public land could create an increased demand on private lands. Furthermore, much of the private or nonfederal land in central and eastern Oregon is managed in conjunction with public land for commercial livestock grazing. In order to secure a promising future for Oregon's Sage-grouse population all lands, federal or nonfederal should be included in Oregon's strategy for Sage-grouse.

Settlement Pattern

Oregon's Sage-grouse habitat exhibits a very sparse settlement pattern. An estimated 900 dwellings are present across nearly 11.5 million acres of federal and non federal land. Assuming an average household size of 2.5, just 2,250 citizens are estimated to reside in these areas. This amount of population would result in a density of one person per eight square miles (about 5,100 acres) and is just less than one percent of the total population of all seven counties combined (269,805 in 2012).

Large scale infrastructure in the form of existing state highways, county roads and transmission lines are present. Mining in the form of existing aggregate quarries is also present. No new infrastructure was approved between 2003 and 2013. No new state or local infrastructure is planned for the future. Only a single new aggregate quarry was approved between 2003 and 2013. With no new road projects on the horizon it is unlikely that there will be a demand for new or expanded aggregate quarries.

Urban activities are concentrated within urban growth boundaries at local and regional population centers. Population centers are located outside of Sage-grouse habitat. Based on information from ODF, no development of any substance occurred in these areas between 1974 and 2009.

Other Threats

Invasive species, wildfire and conifer infestation are the primary threats to Sage-grouse habitat in Oregon. Although these threats are not regulated by state or local land use laws, attaching mitigation requirements as conditions of development approvals could assist in generating important habitat improvements.

Local governments should use the state's mitigation framework to determine appropriate thresholds of exaction for large scale development proposed in Sage-grouse habitat.

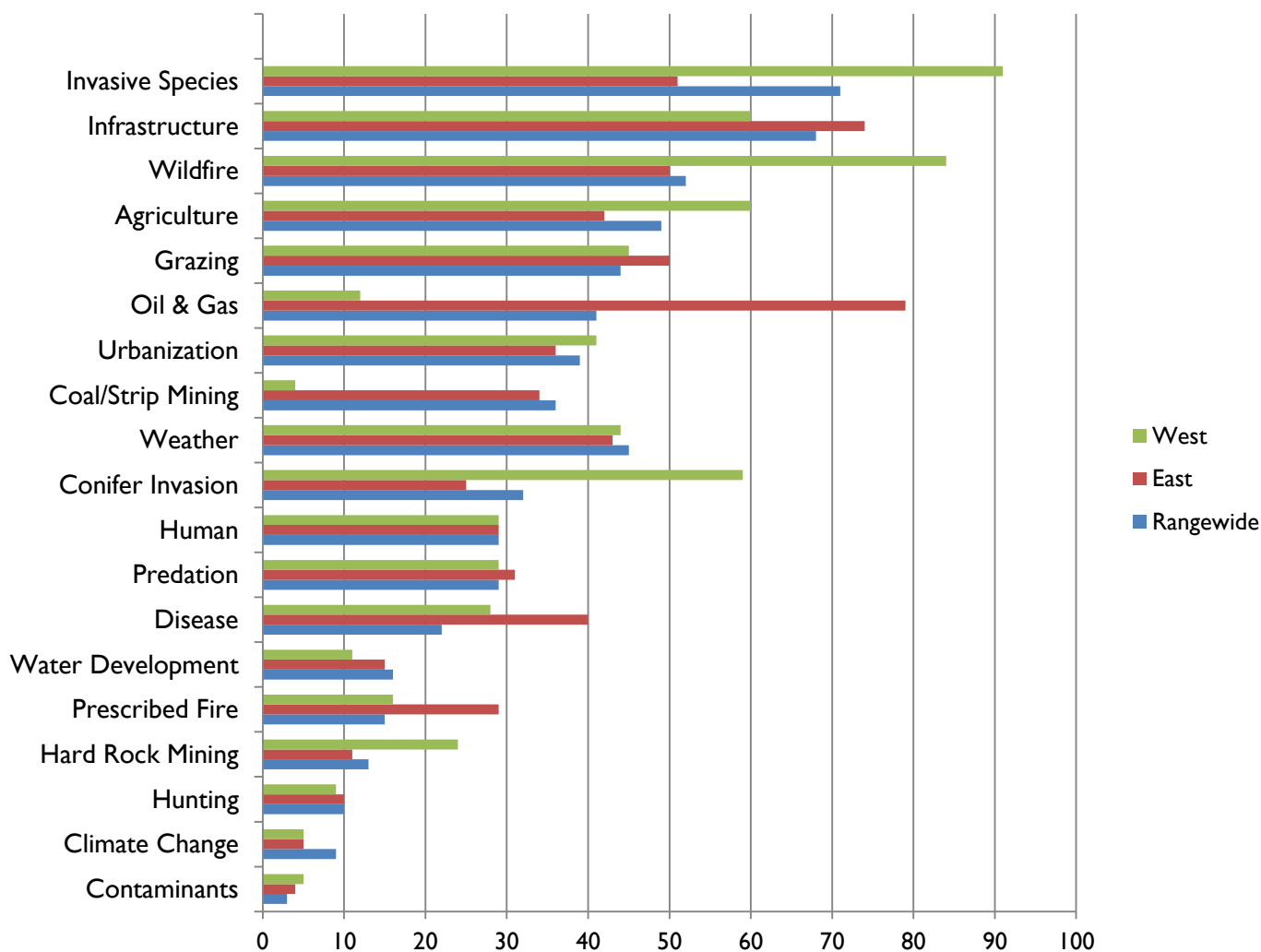
Final Conclusion

Oregon's statewide land use planning program as implemented by local comprehensive plans and zoning ordinances has succeeded in discouraging habitat fragmentation in central and eastern Oregon. The existing framework of state and local laws are ideally equipped to guarantee the adequate regulatory mechanisms necessary to provide continued protection of Sage-grouse and Sage-grouse habitat from anthropogenic threats associated with energy development, mining, infrastructure and urbanization. Furthermore, local land use approvals may serve as the primary factors to require mitigation relative to Oregon's primary Sage-grouse threats such as invasive species, conifer infestation and wildfire.

Purpose of the Report

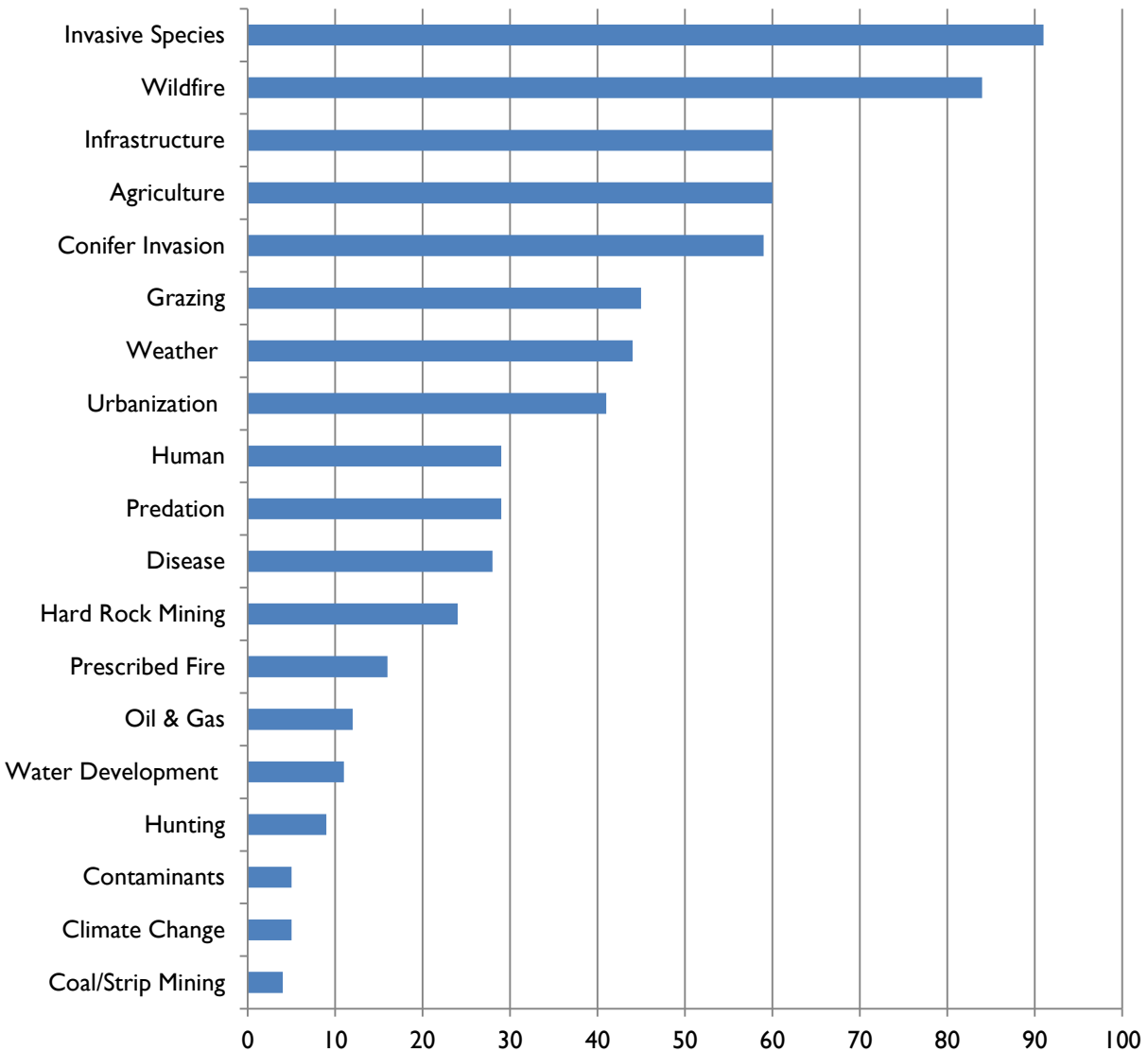
The purpose of this report is to assist state and local decision makers in their efforts to arrest the decline of the Greater Sage-grouse. Success in Oregon will ultimately mean restoring the species to a breeding population of about 30,000 up from a 2010 population of about 24,000. Meeting objectives to distribute the species across five Bureau of Land Management (BLM) management areas is also central to the state’s goal. In order to promote the desired amount of recovery, strategies will be established that adequately consider threats to the species. In 2005 a U.S. Fish and Wildlife Service (USFWS) review of the species identified a variety of threats to Sage-grouse and Sage-grouse habitat. Findings prepared in 2010 were nearly the same.

Table I: Threats to Sage-grouse Range Wide¹



¹ USFWS (2013). Greater Sage-grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report. Denver, CO.

Table 2: Threats to Sage-grouse in the West¹



The U.S. Fish and Wildlife Service’s (USFWS) “Identified Threats”¹ register slightly different for the western portion of Sage-grouse habitat. This area includes Oregon but is not specific to Oregon. Wildfire presents a greater threat to Sage-grouse in the western portion of their range compared to oil & gas development, which presents the leading threat in the eastern portion of the range. After reviewing Tables 1 & 2 it is apparent Sage-grouse populations are threatened in two basic ways: activities that directly inflict mortalities (i.e. predation, hunting, disease) and activities that damage or otherwise fragment Sage-grouse habitat. Both types of threats place the future of the species in jeopardy.

Habitat fragmentation constitutes a threat to the Greater Sage-grouse and can come from many different sources. Activities that severely threaten Sage-grouse in some areas of their range are not present in Oregon. Other threats are naturally occurring or not otherwise subject to regulation. In March of 2013 the Conservation Objective Team assembled by the USFWS released a report assessing threats to Sage-grouse. The “COT Report” identifies five broad categories of large scale land disturbances that could have the potential to cause habitat fragmentation in Oregon. These categories are as follows:

- Conversion to Agriculture
- Urban Sprawl
- Infrastructure
- Mining
- Energy Development

Aside from conversions to agriculture, the identified threats are accounted for by Oregon's Statewide Land Use Planning program and regulated through local comprehensive plans and zoning ordinances. Conversion to agriculture in central and eastern Oregon most often involves introducing irrigation to rangeland in order to support hay production. Adjusting farm and ranch management practices is not ordinarily regulated by land use planning programs. However, establishing new irrigation water rights does require a permit from the Oregon Water Resources Department.

This report provides a description of the Oregon Planning Program and how it is carried out at the local level. Specifically, the report looks at the central and eastern Oregon regions including all or portions of Baker, Crook, Deschutes, Lake, Harney, Malheur, and Union counties. These seven (7) counties have agreed to move forward in a collaborative fashion to address the presence of Sage-grouse and Sage-grouse habitat.

This report does not attempt to inventory or describe the actual condition of Oregon's Sage-grouse habitat as that is the purview of biological experts in partnership with local officials or public and private land managers. Instead, the report documents existing conditions in two ways. First, land use regulations that apply to large scale development are identified and discussed. Second, existing development is also described to the extent possible. Other components of the report attempt to reasonably forecast future development pressure in the affected areas and suggest possible policy alternatives. Appropriate strategies will consider the existing regulatory environment and adaptive management strategies that promote long lasting, collaborative partnerships.

Background

U.S. Fish and Wildlife

In April 2010, the U.S. Fish and Wildlife Service (USFWS) determined that protection of the Greater Sage-grouse under the federal Endangered Species Act (ESA) was warranted but precluded. Listing the Sage-grouse was precluded at this time by the need to address other listings facing greater risk of extinction and hence for now is just a candidate species for listing. More than any native species since the spotted owl, the Sage-grouse sparks direct conflict with traditional industries and emerging large-scale renewable energy projects from livestock grazing to the construction of wind turbines and power lines. The status of the Sage-grouse, both biologically and legally, is significant to the state of Oregon because so much of Central and Eastern Oregon consists of Sage-grouse habitat. If Sage-grouse become protected as a threatened or endangered species, federal agencies will be required to consult with USFWS on projects and approvals that affect its habitat. "Taking" a Sage-grouse will be illegal, and the USFWS will be required to designate "critical habitat" resulting in further restrictions upon activities within those areas. The USFWS will begin reviewing the status of Sage-grouse in 2014 in order to make a final determination of whether to list the species in 2015.

ODFW Sage-Grouse Population Management

The Oregon Department of Fish and Wildlife (ODFW) is Oregon's lead state agency managing Sage-grouse. In 2005 a multi-stakeholder group (including federal, state and private agencies) developed *The Greater Sage-Grouse Conservation Assessment and Strategy for Oregon (Strategy)*² to help manage Sage-grouse populations in Oregon. The strategy was adopted by the Oregon Fish and Wildlife Commission in April 2011. It describes ODFW's management of greater Sage-grouse and provides guidance to public land management agencies and land managers for Sage-grouse conservation. Conservation actions are encouraged on private lands while ODFW's overall goal is to maintain or enhance Sage-grouse abundance and distribution at the 2003 spring breeding population level of approximately 30,000 birds over the next 50 years.²

Sage-Grouse Core Area and Low Density Habitat

ODFW's strategy identifies and maps Core Areas of habitat that are essential to Sage-grouse conservation.² According to ODFW, the maps and data provide a tool for planning and identifying appropriate mitigation in the event of human development within Sage-grouse habitats. Core Areas represent a proactive attempt to identify a set of conservation targets to maintain a viable and connected set of populations before the opportunity to do so is lost. These areas should be targeted for conservation actions or protections when large scale disturbances are proposed. Alternatively, the Low Density habitats may assist in identifying areas where impacts to Sage-grouse populations can be less of a risk or opportunities exist to mitigate for lost habitat.

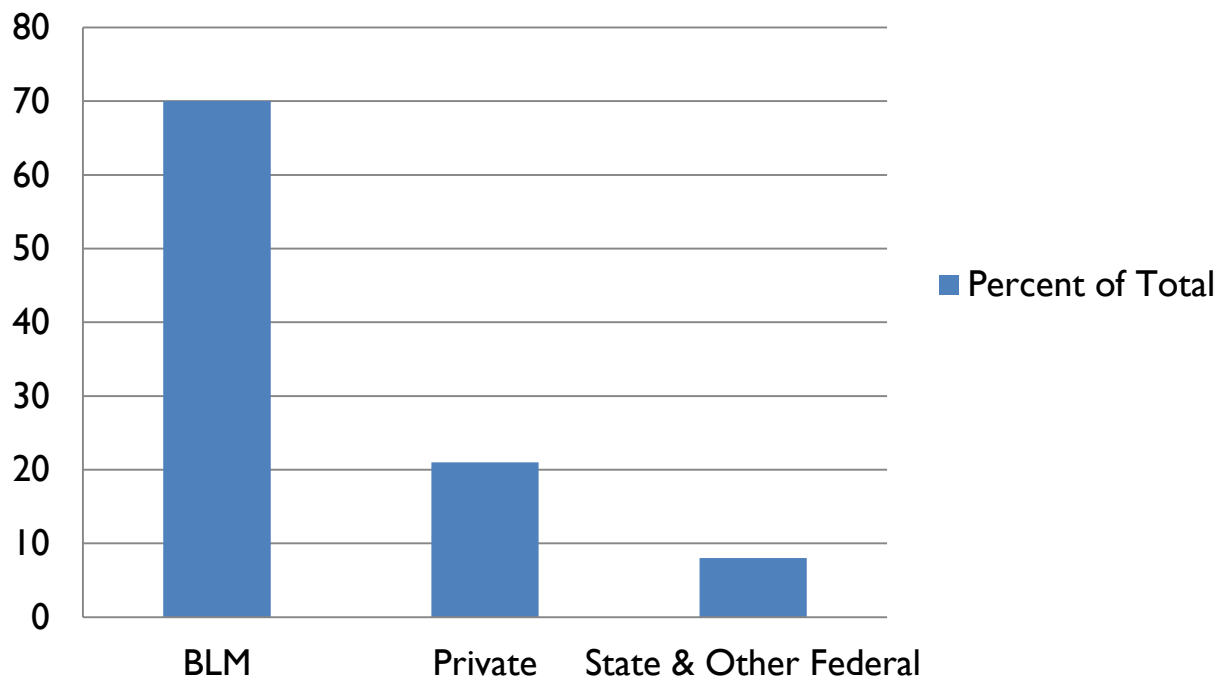
Overview of the Territory

Sage-grouse habitat in Oregon includes approximately 11 million acres. The vast majority of this of this territory is owned and managed by the Federal Government and nearly all the Federal land is managed by the Bureau of

² Source Document. ODFW, Greater Sage-Grouse Conservation Assessment and Strategy for Oregon: A Plan to Maintain Populations and Habitat. April 22, 2011.

Land Management (BLM). Private lands comprise scarcely 20 percent of this territory while other nonfederal lands account for less than 10 percent of the total.

Table 1: Land Ownership Pattern in Oregon



The following table compares Sage-grouse population estimates from 2003 and 2010 and shows how that population is expected to be distributed across the Burns, Lakeview, Prineville and Vale BLM Districts, and the Baker Resource Area which is a portion of the Vale BLM District. The table shows that in 2010, Oregon’s Sage Grouse population was about 82% of the target identified by ODFW and that some BLM management areas have more robust populations than others.

Table 2: Estimated Percent of Target Population²

BLM District	County(ies)	2003 Population	2010 Population	Percent of Target
Baker RA	Baker, Union	1,566-2,546	872-1,650	61%
Burns	Harney	3,722-4,941	3,877-5,195	105%
Lakeview	Lake	8,613-10,134	5,523-6,445	64%
Prineville	Crook, Deschutes	2,072-2,440	1,775-2,084	86%
Vale	Malheur	8,474-13,921	9,016-11,740	93%
Statewide		24,447-33,982	21,064-27,115	82%

The population numbers and percent of target expressed in Table 2 do not account for the severe wildfires encountered in southeast Oregon during the summer of 2012. Nearly 1 million acres of rangeland was burned and much of it within Sage Grouse habitat. As of the drafting of this document, it is unknown what effects the wildfire season of 2012 might have had on Oregon’s Sage-grouse population, or what it could mean for the future.

Land Use Planning in Oregon

Importance of Comprehensive Plans

The purpose of a comprehensive plan is to provide a blueprint for land use conservation and development. This is accomplished through goals and policies that tell a cohesive story of where and how development should occur. A comprehensive plan provides a consistent policy framework for more specific land use actions and regulations such as zoning. Goals and policies are based on existing conditions and trends, population projections, and community values. In Oregon, comprehensive plans must comply with the statewide planning system, which as noted above, was adopted in 1973 to ensure consistent and proactive land use policies state wide. While compliance with the statewide system is required, it is also important for a comprehensive plan to reflect local issues and interests.

Legal Framework

In 1973 the Oregon Legislature adopted a statewide planning system that draws a bright line between urban and rural land uses, channeling growth and infrastructure into urban areas while protecting farm and forest lands. Public outreach around the state led to the adoption of 19 Statewide Planning Goals (Statewide Goals). These Statewide Goals are implemented through local governments' adopted comprehensive plans. Local comprehensive plans are reviewed for compliance with the Statewide Goals by the Oregon Land Conservation and Development Commission (LCDC), a seven-member committee appointed by the Governor and staffed by the Department of Land Conservation and Development (DLCD). The comprehensive plans are in turn implemented through zoning, land division ordinances, and other planning techniques. The majority of the Statewide Goals are written broadly with specific regulations cited either in Oregon Revised Statute (ORS) or Oregon Administrative Rule (OAR). The LCDC adopts OARs which clarify and implement the Statewide Goals.

Hallmarks of Oregon's Planning Program

Oregon's Statewide Planning Program has attracted national and international acclaim. As mentioned above, maintaining rural lands for rural uses and preparing urban areas for development are the principle underpinnings of state land use policy. Additional features include integrating transportation and land use and protecting sensitive areas like wetlands and wildlife habitat. More recently, the state has been working to develop an additional strategy for climate change.

Oregon's commitment to its working rural landscapes led early policy makers to place an unmistakable emphasis on protecting lands devoted to commercial farming, ranching, or timber production, from conflicting activities. Statewide Planning Goals 3 and 4 implemented by OAR Chapter 660, Divisions 6 and 33, direct counties to identify and protect valuable agriculture and forest lands. A detailed legal structure including state statute, Oregon administrative rules, and local planning programs has emerged to guide preservation and development. Longstanding protective measures include, but are not limited to:

- Very large minimum parcel sizes required for farm, ranch, or forest related land divisions originating in state statute. ORS 215.780 prescribes a range of parcel sizes from 80 to 320 acres.
- Very narrow opportunities to create new parcels for uses other than farm, ranching or forest activities.
- Authorizing other uses only under certain circumstances.
- Not allowing certain land use activities on lands devoted to farming, ranching or timber production.

Oregon pioneered the use of Urban Growth Boundaries to contain urban development in and around incorporated cities. Statewide Goal 14 and its implementing rule OAR 660, Division 24, require each city to establish an Urban Growth Boundary (UGB). Every UGB should furnish a supply of land capable of supporting

growth and development over a 20-year planning horizon. Urban growth management promotes efficient, vibrant communities with a strong sense of place. Cities must coordinate with the respective counties to establish their UGB. A hierarchy established at ORS 197.298 acts in addition to Statewide Planning Goals to direct urban planning efforts away from productive lands in favor of areas with less value for farming or timber production.

Special safeguards designed to protect wildlife are commonly employed by Oregon's cities and counties. Statewide Planning Goal 5 and its implementing administrative rule, OAR Chapter 660, Division 23, call for local governments to adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. Big game habitat and winter range are commonly protected resources on rural lands governed by counties. Protection is implemented in a number of ways ranging from requiring uses to be located in proximity to existing disturbance to an outright prohibition of conflicting uses. Most county programs involve some sort of balancing assessment between private property rights and protection of the identified resource.

Oregon's land use policies act collectively to maintain large areas for commercial agriculture and forestry while containing urban sprawl and offering special consideration for distinct places and sensitive lands. Minimizing sprawl is considered better for the maximization of agriculture and forestry production while a strong natural resource sector benefits local economies. Currently in Oregon about 15.5 million acres are inventoried as farm or ranch land in local comprehensive plans and an additional nine million acres are inventoried as forest land. When combined, these figures represent nearly 25 million acres that are inventoried and protected for resource uses. A rural landscape is generally better for other values like open space and natural areas. Much of this land, millions of acres, also receives additional protection to ensure their function as wildlife habitat. Even species that are not targeted benefit from land use provisions regulating types and intensity of future development.

Comparison with Other States

Greater Sage-grouse habitat spans a vast area that is a part of up to eleven (11) western states where land use policy and guidelines vary. Whereas it is common for all states to grant land use planning authority to local jurisdictions, the role of individual states and their locally imposed guidelines can differ. Some states require local planning while others consider it optional. A lack of required planning at the local level could lead to poor implementation of policies that affect the environment at a broad scale, possibly due to the jurisdictions inability to deal with issues cohesively. Alternatively, greater influence at a state level may lead to regulation that does not adequately reflect local values. A combination of these strategies like Oregon incorporates can help to adequately address broad scale concerns such as Sage-grouse conservation, while allowing local counties and municipalities to continue addressing local individual needs.

Notably, the eight western states with the largest area of Sage-grouse habitat demonstrate subtle differences among their influence upon a county's ability to use land use planning as a tool for conservation of the Greater Sage-grouse. Table 1 demonstrates a comparison of general differences between each state's land use planning guidelines. This table helps to exhibit how Oregon's land use planning program stands out by providing structured consistency among each county's individual plans while allowing for individualistic authority to address specific needs. While other states such as Washington and Nevada have developed similar attributes, they are influenced by the groundbreaking work laid down by Oregon's pioneering land use program. The following is a brief summary of each Western state's approach to land use planning.

- **Oregon:** Oregon requires cities and counties to develop their own individual land use planning through adoption of comprehensive plans and zoning, land-division, and ordinances. Each comprehensive plan is required to be consistent with statewide planning goals which are the foundation of Oregon's Statewide Planning system. The Department of Land Conservation and Development oversees local implementation of state land use goals.
- **Washington:** The 1990 Growth Management Act established state land use goals that are required as a part of city and county comprehensive plans. One caveat to these guidelines is that cities and counties only have

to comply when they reach certain population or growth boundaries, so small or low growth counties are not required to participate. Land use is still determined at city and county levels to meet the specific needs of individual counties, and is overseen by the Environmental and Land Use Hearings Office.

- **Nevada:** State law mandated counties to adopt a comprehensive (master) plan when populations reach specified threshold. Planning is done primarily at the local level with cities and counties making decisions for their district with technical assistance provided by regional planning commissions and the state.
- **Wyoming:** State law requires use of a comprehensive plan at a local county level that incorporates the needs of cities within that county. Each plan is specific to the individual county needs regarding planning regulations and processes under state law.
- **Idaho:** Land use planning is done at the local level with less influence or oversight from a state agency that monitors compliance. Cities and counties are required to develop comprehensive land use plans based upon 13 duties, but implementation is strictly at the local level with little or no technical assistance from the state.
- **Montana:** Land use planning is done at a local level. Local governing bodies can develop growth policy should they choose. There is little to no state involvement in development of land use policy.
- **Colorado:** No formal state land use plan. All planning decisions are done at the local level with minimal guidelines provided by the state.
- **Utah:** Utilizes a state land use plan that addresses broad issues at a state level, but the majority of decisions are done at a county or municipal level, granting land use planning authority to local jurisdictions. Comprehensive plans are required, but little oversight or assistance provided by the state on how local plans are developed or implemented.

Table I - State Land Use Planning Comparison³

State	Local Planning Authority Granted by State	Local Planning Required by State	Specification of Plan Elements	Zoning Regulations Conform with Comprehensive Plan	Local Plans Consistent with higher Jurisdiction	Local Plans Consistent with Neighboring Jurisdictions
Oregon	X	X	X	X	X	X
Washington	X	*X	X	X	X	X
Nevada	X	*X	X	X	X	X
Wyoming	X	X	X	X	X	
Idaho	X	X	X	X		
Montana	X		X	X	X	
Colorado	X		X			
Utah	X	X				

* Local planning requirement based on population of counties. Under a specified population threshold, no planning is required.

³ Source. Schwab 2010. Summary of State Land Use Planning Laws. Presentation. American Planning Association.

Oregon Land Use Change 1974-2009

Forests, Farms and People

In January 2011 the Oregon Department of Forestry released a report examining changes in land use on non-Federal land in Oregon between 1974 and 2009⁴ (hereafter ODF Report). This period effectively represents the existence of Oregon's Statewide Planning Program.

The following is an excerpt from the ODF Report introduction:

Introduction

This report examines changes in land use on non-Federal land in Oregon between 1974 and 2009.

We collected consistent, sample-based data to address two key topics: 1) changes in the distribution of private and public non-Federal land by land use class and 2) development patterns on private land by land use class and by planned, county-level land use zone. Data collected for this report may also be used to analyze the effects that land use change has on forest resources and forest management practices on non-Federal owner- ships in a later report. Highlighted in this report are trends in land use before and after the implementation of comprehensive land use plans in the mid-1980s. An Appendix provides detailed statistics in tabular formats for Oregon and by region and county.

The report updates 3 previous publications: Forests, Farms and People: Land Use Change on Non-Federal Land in Western Oregon 1973-2000 (Lettman and others 2002), Forests, Farms and People: Land Use Change on Non-Federal Land in Eastern Oregon 1975-2001 (Lettman and others 2004), and Forests, Farms and People: Land Use Change on Non-Federal Land in Oregon 1974-2005 (Lettman and others 2009).

The Oregon Progress Board and the Oregon Board of Forestry requested this information and will use it to evaluate several Oregon Benchmarks and Indicators of Sustainable Forest Management.

Approach

Using 2009 digital imagery with one-meter resolution, we updated previously collected land use information on a sample of 37,003 points distributed across non-Federal land in Oregon. We interpreted each sample point for land use class, number of structures, and nearest distances to adjacent land use classes. These attributes had been evaluated in earlier inventories with aerial imagery using the same sample points; for eastern Oregon, the images were taken in 1975, 1986, 1994, 2001, 2005, and 2009 and for western Oregon, in 1973, 1982, 1994, 2000, 2005, and 2009. Definitions associated with these attributes are the same for 2009 and these earlier years. We also determined owner class and land use zone at each sample point.

A major strength of this report is that it is based on data that are sampled and defined consistently back to 1973.

Land use class: We interpreted the land use present at each sample point. Eight land use classes are recognized:

⁴ Source Document. Forests, Farms & People, Land Use Change on Non-Federal Land in Oregon 1974-2009 (Lettman et al. 2011)

Wildland forest – A polygon of land in forest use of at least 640 acres. The polygon has fewer than 5 structures per 640 acres, and these structures are scattered generally across the polygon. Forest land occupies more than 80-percent of the polygon and the remainder is agricultural or “other” land except for the structures. In eastern Oregon, the remainder can also include range land.

Wildland range – A polygon of undeveloped land in range use (non-forest or non-agricultural land) of at least 640 acres. The polygon has fewer than 5 structures per 640 acres, and these structures are scattered generally across the polygon. Forest land comprises less than 51 percent of the polygon, and agricultural land less than 20 percent. This class may include grassland, non-irrigated pastures or hayfields, marshes or sagebrush land. This land use classification is used only in eastern Oregon.

Intensive agriculture – A polygon of land in agricultural use of at least 640 acres. The polygon has fewer than 9 non-farm-related structures per 640 acres, and these structures are scattered generally across the polygon. Agricultural land occupies more than 80-percent of the polygon. Agricultural land is land used for growing row crops, seed crops, orchards, vineyards, hay fields, nursery stock, Christmas trees, and for improved pasture and grazing land.

As discussed above, the ODF report measures changes in land use based not on zoning but on actual development trends revealed by digital imagery. Several other land use classes were identified and mapped in this effort. Only those most relevant to Sage Grouse habitat have been included above.

The figures below compare ODFW’s Sage Grouse Core Areas map with the mapped distributions of land use classes across Oregon. The land use class map is identified as Table 1 located on page 5 of the ODF report.

Figure 1: Oregon Land Use 2009⁴

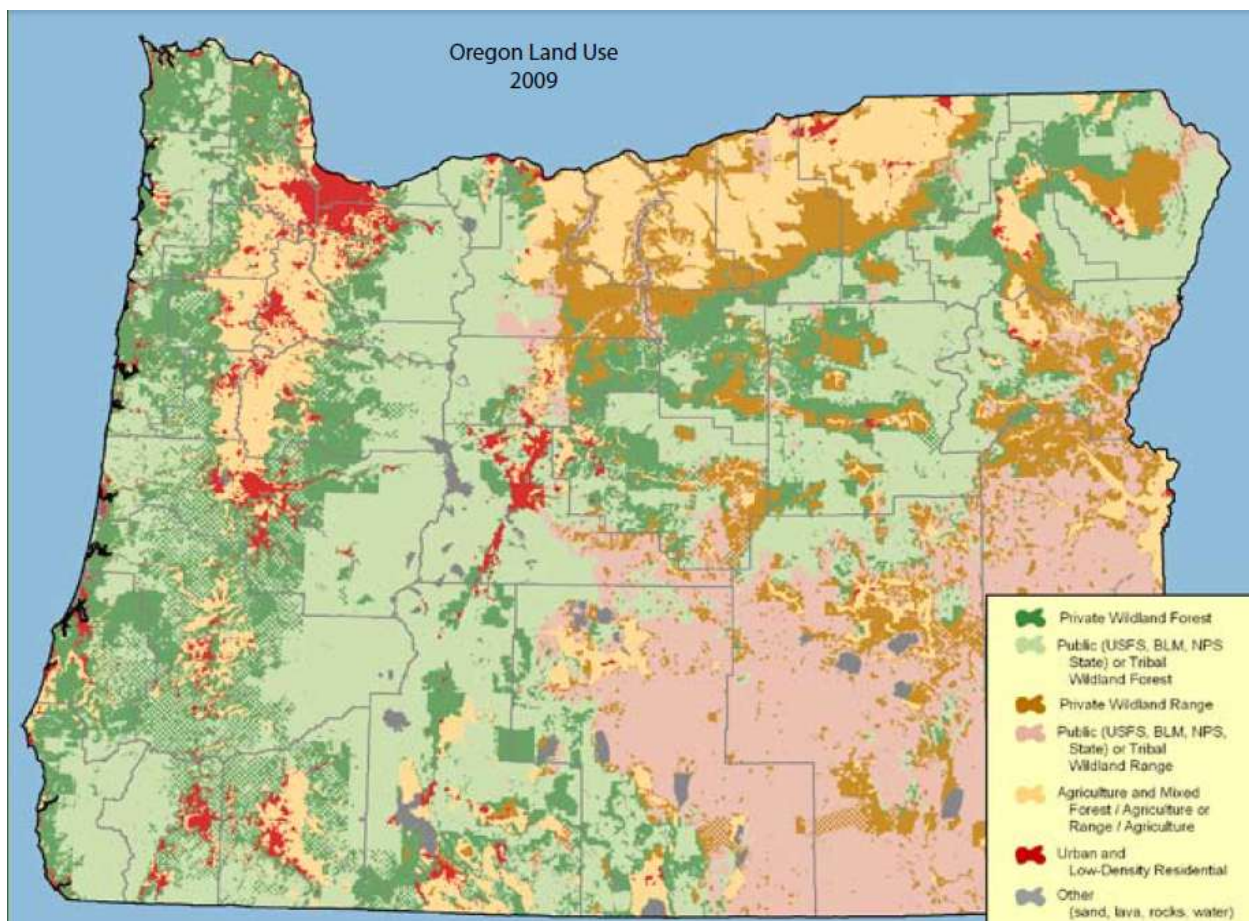
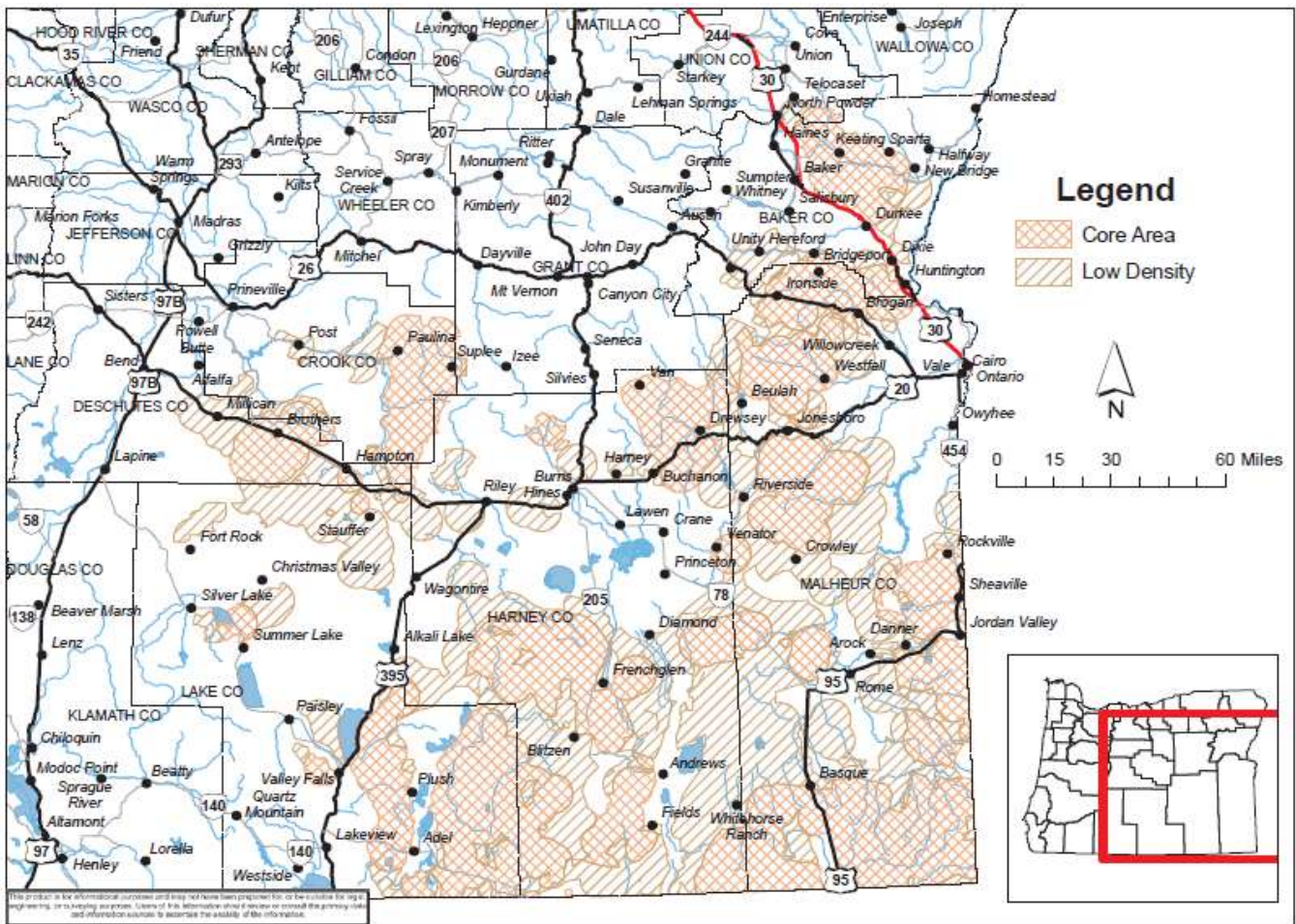


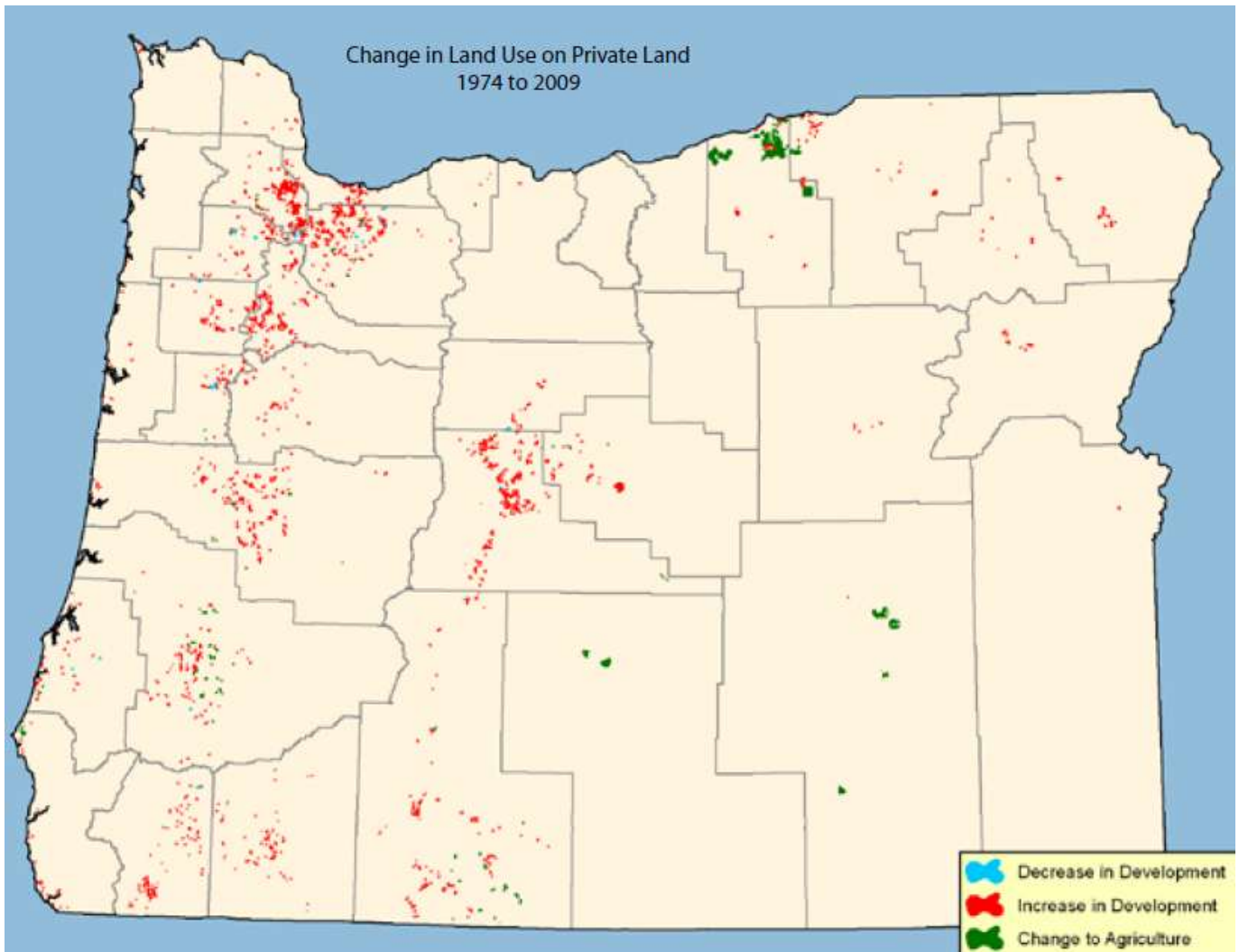
Figure 2: ODFW Sage-grouse Core Areas⁵



A close look at Figures 1 and 2 above clearly shows two things. First, public lands managed by BLM make up the vast majority Sage grouse Habitat in Oregon. This is not an unknown feature and has been identified previously in Section II of this Report. However, seeing the ODF map helps to emphasize just how much land is controlled by BLM across the landscape and how little of it is privately held. Second, nearly all of the privately held land is classified as Wildland range.

⁵ ODFW GIS; Aug 24, 2011.

Figure 3: Change in Land Use on Private Land



The basic question asked by the ODF report is whether or not there have been changes to Oregon's land use patterns during the period between 1974 and 2009. The answer for most of Oregon is that some areas have been affected by development but by and large the land use pattern remains intact. The answer for Sage grouse habitat is that other than some limited changes to irrigated agriculture there has been no substantive increase in development for 35 years.

Summary of Important Points

The ODF Report offers key findings and other statistics regarding land use changes on private land in Oregon. Most of the findings are of a statewide nature. However, some are particularly relevant to lands identified as Sage Grouse habitat. For instance:

- Ninety-eight percent of all non-federal land and 98 percent of private land that was in forest, agricultural, and range land uses in Oregon in 1974 remained in these uses in 2009.
- One percent of Oregon's Wildland range outside of the Bend Area and Klamath County was converted to other uses between 1974 and 2009.
- Number of structures per square mile of Wildland range increased from 0.4 to 0.8 between 1974 and 2009.

- Most all of the Wildland range converted to a different land use category between 1974 and 2009 was planned and zoned for development activity.
- The rate at which private land in range land uses shifted to low-density residential or urban land uses is related to the distance between land in these resource uses and land in more developed uses.

The picture provided by the ODF Report shows very little of Oregon's landscape has been converted by development during the 35 year history of the Statewide Planning Program. An even smaller percentage of lands identified as Wildland range changed during this period. Furthermore, most of the Wildland range that did convert to a different land use class was planned for development activities rather than farm or ranch use. Although the number of structures on Wildland range did increase, the amount of development grew at the rate of only one new structure per 1,600 acres, hardly a startling amount.

Based on the identified trends it is also unlikely that Sage Grouse habitat will convert to other land use classes in the future. This is because all or nearly all of it is classified as Wildland range and, as Section IV. of this report will demonstrate, virtually all Sage Grouse habitat in Oregon is planned for farm and ranch activities rather than development and is located a great distance from population centers.

County Land Use Planning Programs

Working under a regional memorandum of understanding county planners along with DLCD collaborated to produce a stand-alone development report for each county. There are 7 counties in central and eastern Oregon which have land use planning jurisdiction (development permitting) over non-federal lands which contain Sage Grouse habitat areas. Each report was created to provide an understanding of the county-specific land use programs and show development trends on non-federal lands within habitat areas. The findings for each county will show existing developments such as housing, mining sites, and infrastructure within habitat and list county permitting decisions over a ten year period from 2003 through 2013. Each report lists area specific development designations and in some instances special programs for habitat protection. In addition to the development studies listed in the report, 3 counties (Deschutes, Harney, Lake) produced a series of overview maps showing existing development, ownership, and zoning designations or districts

Baker County

Baker County Planning Overview

Baker County's planning program formally began in 1970 with the adoption of the County's first zoning ordinance. In the early 1980's, Baker County's first Comprehensive Land Use Plan was written, and the implementing Zoning Ordinance was revised based on the goals and policies set forth in the Comprehensive Land Use Plan and the statewide planning goals and regulations in place at that time. The Comprehensive Land Use Plan has been amended as needed over time. Two of the most notable changes relating to sage grouse habitat are the 1994 Aggregate Inventory update and Big Game Habitat update.

The Comprehensive Land Use Plan and the Zoning Ordinances in place from 1970 to present, covers all lands in Baker County that are outside incorporated city limits and not managed by the federal government. The planning program aims to protect lands appropriate for agriculture, timber production and mining as well as identify lands appropriate for development. Zones for farm use, timber production, mineral extraction, rural development, commercial, and industrial lands are all implemented within the framework of the Comprehensive Land Use Plan. The vast majority of lands in Baker County are within a zone designed to protect agriculture or timber resource uses and have specific protections in place to prevent intensive development. These protections also have benefits for wildlife habitat, leaving large areas of open space. Baker County's Comprehensive Land Use Plan includes a protection program specific to elk, deer and antelope habitat in areas of the County designated as important habitat for each species. The land use program provides additional habitat protection for other wildlife species.

Land Base

Over half of Baker County's land base is managed by federal agencies such as Bureau of Land Management and USDA Forest Service. Table 1 Total Acreage in Baker County identifies over a million acres in federal land management and 934,755 acres in non-federal ownership (including private & state owned land).

Table 1: Total Acreage in Baker County

	Federal Lands	Non-federal Lands	Total
Acreage			
Number	1,003,306.89	934,755	1,938,062.47
Percent	51.7%	48.3%	100%

*This data does not include acreages for public right-of-ways

Table 2 identifies the total acres and total Baker County Assessor’s Tax Lots within Core Area and Low Density sage grouse habitat divided between federal and non-federal lands. About 38.6 percent of Baker County is in designated sage grouse habitat (69% Core Area & 31% Low Density) and about 75 percent of that habitat is in non-federal land ownership.

Table 2: Sage Grouse Habitat Acreage & Tax Lots in Baker County

	Core Area		Low Density		Total	Percent Habitat (Core and Low Density)	
	Federal Lands	Non-federal Lands	Federal Lands	Non-federal Lands		Federal Lands	Non-federal Lands
Acres	131,659.32	385,140.38	56,223.25	175,885.32	748,908.27	25%	75%
Tax Lots	193	965	118	655	1931		

Comprehensive Plan and Zoning

Overview

The Baker County Comprehensive Land Use Plan was adopted in 1984 and acknowledged to be in compliance with statewide planning goals in 1986. The Plan identifies general land use classifications, land use policies, recommendations and provides the foundation for land use regulations in the unincorporated county.

The Baker County Zoning and Subdivision Ordinance #83-3 includes the county-wide zoning map, zoning designations, uses and minimum parcel sizes authorized, development standards and procedural requirements. Table 3 Baker County Zoning Designations identifies those zones that include sage grouse habitat.

Table 3 – Baker County Zoning Designations

Zone Designations	Ordinance Section(S)
Exclusive Farm Use	BCZPO Section 301,301.05: 80 ac. irr. 160 ac. non irr.
Timber Grazing	BCZPO Section 302.01 - .10: 5 – 80 ac.
Mineral Extraction	BCZPO Section 307, 308.03; 5ac.
Rural Service Area	BCZPO Section 305.01, 305.04, 7500sqft.
Primary Forest (PF)	Federal Land
Cemetery	
Commercial Industrial	BCZPO Section 311, DEQ
Big Game Habitat (EFU & TG)	BCZPO Section 301.05(2)(D) – 40 ac. for non-farm or lot of record dwellings

Base Zoning within Sage Grouse Designated Areas

The majority (85%) of sage grouse habitat in Baker County and on non-federal is in an Exclusive Farm Use Zone that conforms to state law (ORS Chapter 215). This EFU Zone includes private crop and rangeland (see Table 4). About 70 percent in this zone is Core Area and 30 percent is in Low Density Habitat.

There are some private properties in both EFU and TG Zones. Table 4 does not include these properties in a separate category. Each property was assigned to the most dominant zone.

About 6.81 percent of non-federal land in sage grouse habitat is in a Primary Forest (PF) Zone that applies to all federal lands (forest and range). The County does not regulate land uses on federal lands, however, if there are private land inclusions or federal ownership converted to state or private ownership the County will apply an EFU or Timber Grazing Zone, whichever is applicable.

The Timber Grazing Zone includes about 58,546.22 acres in sage grouse habitat which represents only about 3 percent of sage grouse Core Area and 4.8 percent of Low Density Habitat. This zone also conforms to state law.

Other minor inclusions are in the County’s Mineral Extraction Zone (3344.16 acres), Rural Service Area (82.90 acres), Commercial – Industrial (370.60 acres) and Cemetery (5.75 acres).

Combining or Overlay Zone within Sage Grouse Designated Areas

Baker County has three wildlife overlay zones for elk, deer and antelope. The Big Game Habitat Overlay Zone limits new non-farm parcels with non-farm dwellings and lot-of-record dwellings to no smaller than 40 acres. Otherwise, new parcels with dwellings must meet the statutory 160 acre minimum for cropland, 240 acre minimum for forestland and 320 acre minimum for rangeland.

Table 4 – Baker County Zoning Designations

	Core Area		Low Density		Total Acres	Percent in Sage-Grouse Habitat
	Federal Lands	Non-federal Lands	Federal Lands	Non-federal lands		
Exclusive Farm Use						
Acres	80059.29	363805.88	52071.90	139554.72	635491.79	84.89%
Timber Grazing						
Acres	2563.48	20019.11	1858.14	34105.49	58546.22	7.81%
Mineral Extraction						
Acres	256.16	1000.65	0	2087.35	3344.16	0.44%
Rural Service Area						
Acres	0	6.91	18.65	57.34	82.90	0.01%
Primary Forest						
Acres	48780.39	0	2274.56	0	51054.95	6.81%
Cemetery						
Acres	0	5.75	0	0	5.75	0.00076%
Commercial Industrial						
Acres	0	295.17	0	75.43	370.60	0.04%
Rural Residential 2						
Acres	0	0	0	4.99	4.99	0.00066%
Rural Service Area						
Acres	0	6.91	0	0	6.91	0.00092%
Total					748908.27	100%

Built Environment and Development Activity

Housing Units

Existing dwelling units based on the County’s rural addressing system include 158 dwellings in Core Areas and 88 dwellings in Low Density sage grouse habitat. Table 5 lists a nine (9) year history for residential single family dwelling approvals. A total of nine (9) dwellings over 9 years were built in Core Areas and four(4) dwellings over 9 years in Low Density Habitat. For perspective, the average is 1.4 dwellings per year over 604,000 acres of sage grouse habitat or 46,461 acres per dwelling over the 9 years.

Roads and Utilities

No major highways in Baker County bisect sage grouse habitat. Several existing secondary highways and county roads extend through sage grouse habitat and have existed for many years. No new State highway or County Road are anticipated or planned through sage grouse habitat.

I-84 borders sage grouse habitat on one side or another south of Baker City. An Idaho Power existing 230 kilovolt high voltage transmission line parallels I-84 through the County and a new 500 kilovolt transmission line that parallels the existing line is proposed. Idaho Power Corp. is currently pursuing BLM/USFS federal approval through the NEPA process and Oregon EFSC approval for the proposed 500 kV route. Sage grouse habitat has been a major consideration during route selection.

Surface Mining Sites

Table 6 identifies 29 aggregate sites in Core Areas and 20 aggregate sites in Low Density Habitat. The general locations are broadly distributed throughout sage grouse habitat. Each site is only used periodically for road improvement or maintenance work in each site's general vicinity. No permanent continually operated sites exist within sage grouse habitat.

Table 5: Land Use Approvals in Sage Grouse Habitat

Year	Dwellings in Core	Dwellings in Low Density	Other in Core	Other in Low Density	Note
2012	0	0	0	0	
2011	0	1	0	0	LOR
2010	1	1	0	0	
2009	0	0	0	0	
2008	2	1	1	0	C: SFmd, LD: FmD, Other: Agr Site
2007	1	0	0	0	Secondary Farm Dwelling
2006	1	1	0	0	C: LOR, LD: SFmD
2005	4	0	0	0	Farm Dwellings
2004	0	0	0	0	
Total	9	4	1	0	

Table 6: Aggregate Sites within Sage Grouse Habitat

Area	Aggregate Sites
Core	29
Low Density	20
Total	49

Impact Analysis

Risk Assessment

Risks identified for sage grouse habitat in Oregon counties include the following activities:

Table 7: Sage-Grouse Habitat Risk levels

Land Use Related Risk Levels	Threat Rating
Agriculture Conversion	Present, but localized (rangeland to cropland)
Energy	Present, but localized (wind and solar farms)
Mining	Present, but localized
Infrastructure	Present, but localized (power lines and roads)
Recreation	Unknown
Urbanization	Not known to be present (increased residential density)

Findings

Rangeland conversion to cropland in Baker County only occurs where irrigation water is available. Over the last 10 years no new water sources such as irrigation reservoirs have been developed and no known conversions within sage grouse habitat have occurred.

One small wind farm (3MW) has been developed above the Old Lime Plant on BLM land. The County has approved two new wind farms, one 20 MW and the other 30 MW in the same general vicinity. No solar projects currently exist or are proposed.

Recreation in sage grouse habitat is limited to big game and upland bird hunting in the fall. Other form of recreation on private lands is undeveloped and minimal. No destination resorts currently exist or are planned within sage grouse habitat.

Urbanization of sage grouse habitat has not occurred as witnessed by the 13 new dwellings over 9 years and 604,000 acres. Urbanization on non-federal land is not expected to be a future risk to sage grouse habitat because 93 percent is in large lot resource zoning (EFU or TG) and 6.81 percent is in federal ownership in a Primary Forest Zone.

Conclusion

Historical development within Baker County sage grouse habitat has been incidental at best. An average of 1.4 new dwellings per year per 46,461 acres over the last 9 years is not even noteworthy. Future development (residential or otherwise) is severely limited by statewide resource zoning (EFU and TG) and federal land ownership.

Conversion of rangeland to cropland has not occurred over the last 10 years and is not anticipated unless new water sources developed.

Very limited opportunities exist for renewable energy development.

The proposed 500 kV Idaho Power Corp. transmission line will parallel the existing 230 kV transmission line consolidating impacts to a transmission corridor.

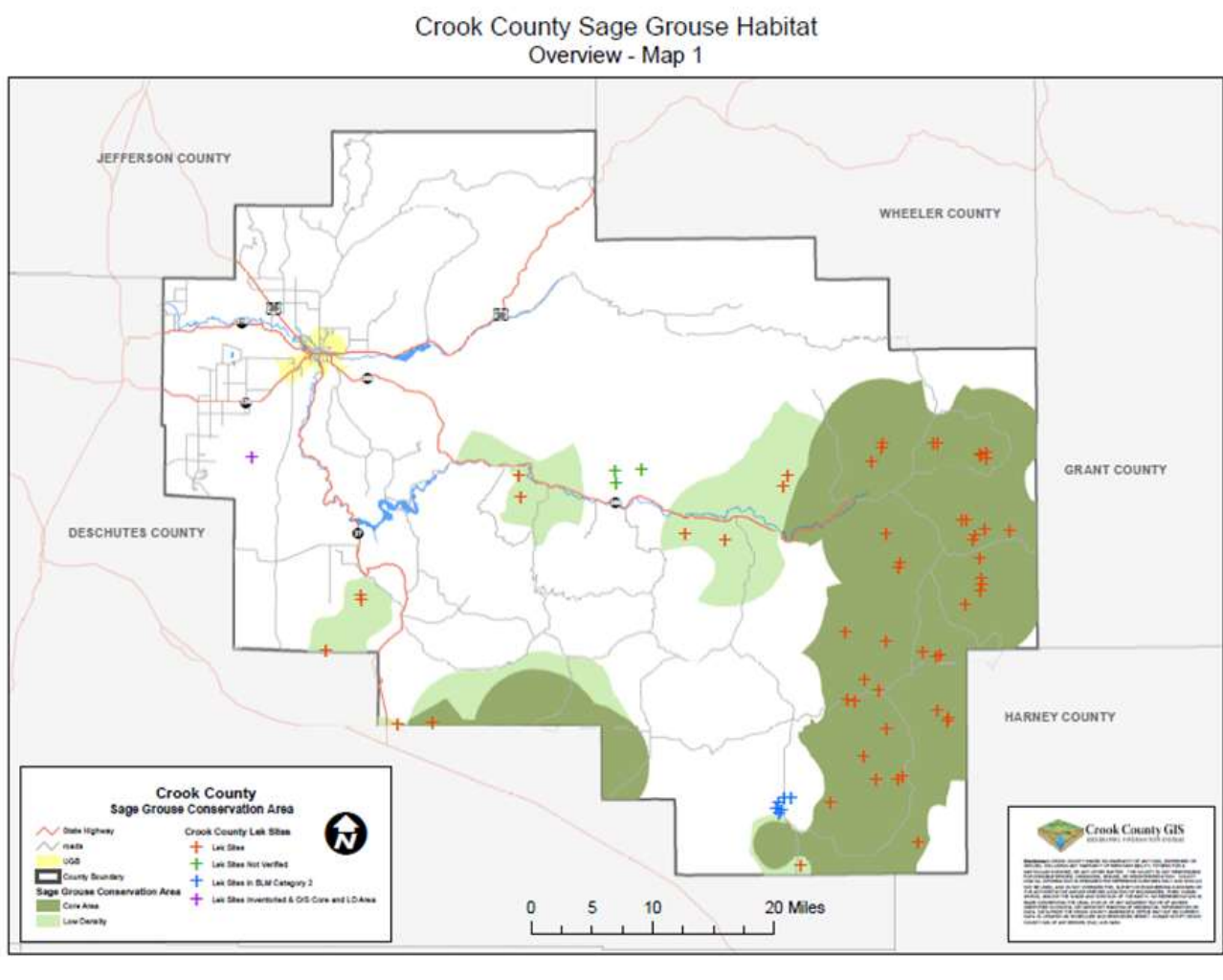
In conclusion, historical impacts to sage grouse habitat have been insignificant and future impacts are not anticipated to be significant.

Crook County

Overview of Sage Grouse Habitat in Crook County, Oregon

In Crook County, Sage Grouse habitat is found in the southeast two thirds of the county as shown on Map 1 below. There are:

- 423,726 acres of Sage Grouse Core Habitat in Crook County that covers 23% of the county;
- 140,134 acres of Sage Grouse Low Density Habitat in Crook County that covers 7% of the county;
- 563,860 acres of Core and Low Density Sage Grouse Habitat (when combined) in Crook County that covers 30% of the county.



Zoning Statistics for Sage Grouse Habitat

Exclusive Farm Use Zone, EFU-1 Total Acres within Sage Grouse Habitat - 546,054 Acres

Core Area

- Federal parcels (acres, number of parcels) – 138,585 Acres, 101 Parcels
- Non-federal parcels (acres, number of parcels) – 269,639 Acres, 362 Parcels

Low Density

- Federal parcels (acres, number of parcels) – 44,924 Acres, 68 Parcels
- Non-federal parcels (acres, number of parcels) – 91,432 Acres, 346 Parcels

Forest Zone, F-1 Total Acres within Sage Grouse Habitat – 19,070 Acres

Core Area

- Federal parcels (acres, number of parcels) – 14125 Acres, 5 Parcels
- Non-federal parcels (acres, number of parcels) – 1233 Acres, 11 Parcels

Low Density

- Federal parcels (acres, number of parcels) – 2606 Acres, 5 Parcels
- Non-federal parcels (acres, number of parcels) – 1105 Acres, 11 Parcels

Rural Service Center Zone, RSC Total Acres within Sage Grouse Habitat – 52 Acres,

Core Area

- Federal parcels (acres, number of parcels) – 0 Acres, 0 Parcels
- Non-federal parcels (acres, number of parcels) – 19 Acres, 43 Parcels

Low Density

- Federal parcels (acres, number of parcels) – 0 Acres, 0 Parcels
- Non-federal parcels (acres, number of parcels) – 19 Acres, 6 Parcels

Highway and Road Statistics within Sage Grouse Habitat

Core Habitat

- State Highway or County Roads in Core Area - 103 Miles, 15 Roads

Low Density Habitat

- State Highway or County Roads in Low Density Area - 22 Miles, 8 Roads

Ownership of Land within Sage Grouse Habitat

Core Habitat

Ownership of the land within the Core Habitat, when divided into two groups of federal and non-federal lands, indicates:

- Federal ownership is 152,709 acres (102 parcels) acres; and
- Non-Federal ownership is 271,017 acres (394 parcels).

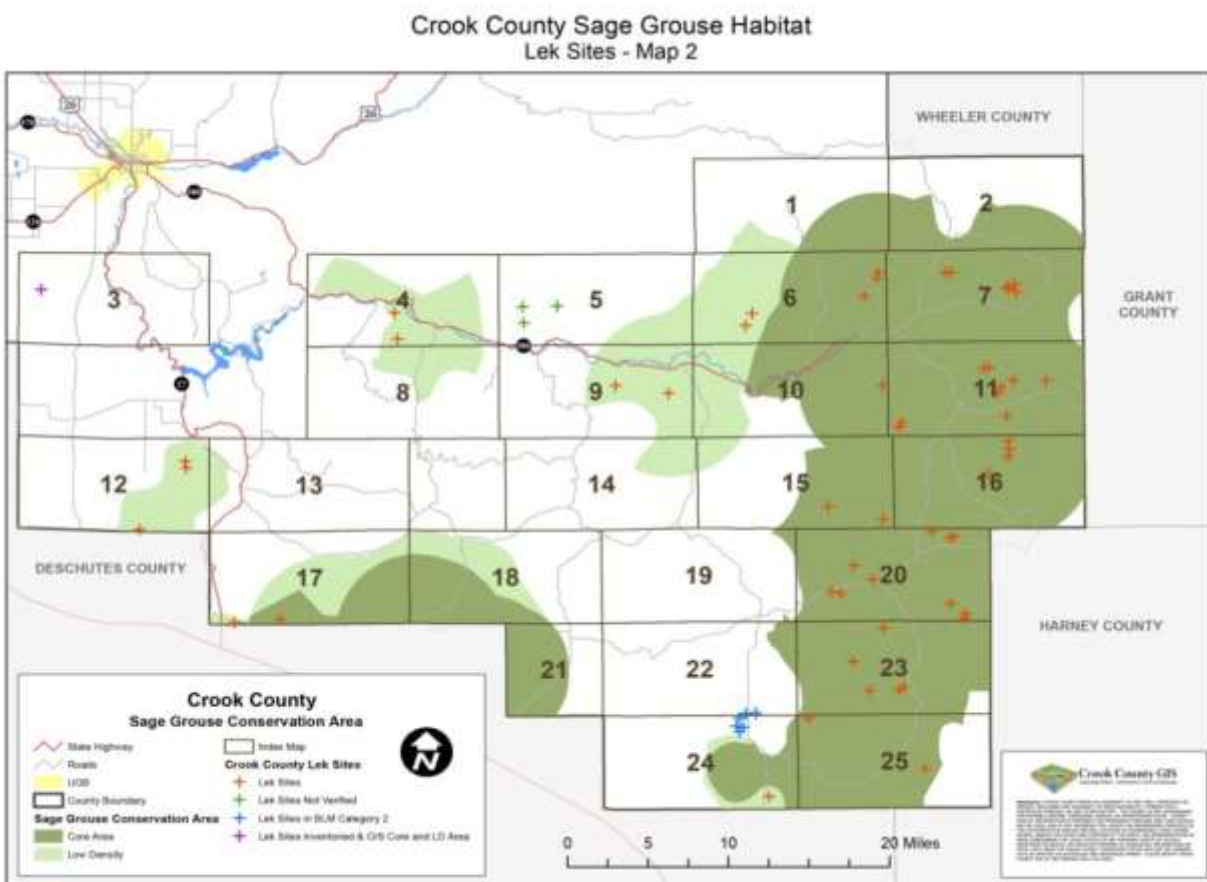
Low Density Habitat

Ownership of the land within the Low Density Habitat, when divided into two groups of federal and non-federal lands, indicates:

- Federal ownership is 47,530 acres (70 parcels); and
- Non-Federal ownership is 92,604 acres (349 parcels).

Sage Grouse Lek Sites in Crook County

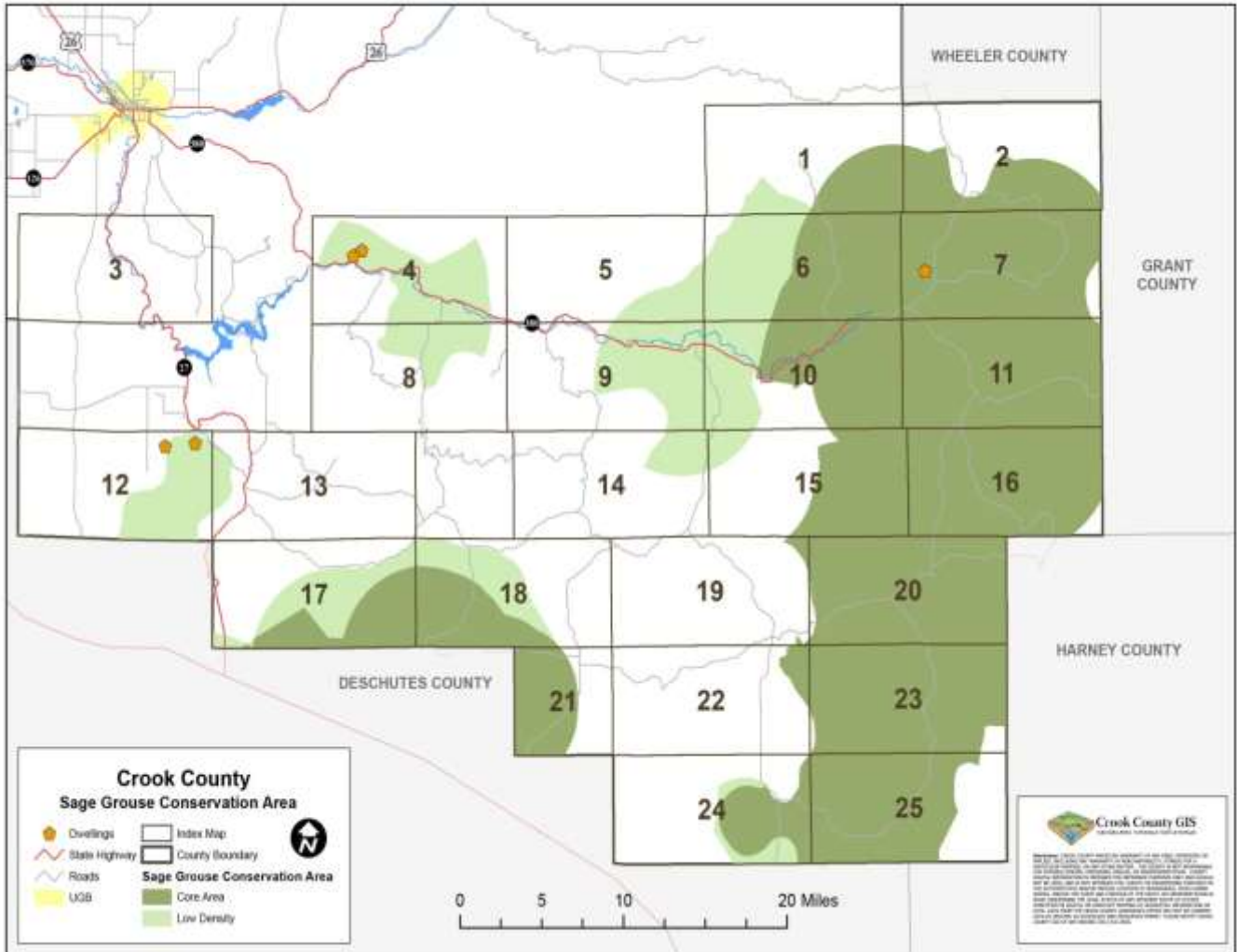
- In 1993, there were 24 Lek Sites in Crook County.
- There are currently 64 Lek Sites in Crook County as of 2012.
- 43 of the Lek Sites (67%) are within Sage Grouse Core Habitat found in area 6, 7, 10, 11, 15, 16, 17, 20, 23 and 25 on Map 2 below.
- 11 (18%) of the Lek Sites are within Sage Grouse Low Density Habitat found in area 4, 6, 9, 12, 17 and 24 on Map 2 below.
- 10 (15%) Lek Sites are outside the Core and Low Density Habitat and are:
 - not verified (3 sites) found in area 5 on Map 2 below; or
 - in BLM Category 2 Habitat (6 sites) found in area 22 and 24 on Map 2 below; or
 - inventoried and outside the identified Core and Low Density Habitat (1 site) found in area 3 on Map 2 below.



Non-Farm Dwellings approved and built in Core and Low Density Sage Grouse Habitat

Non-Farm Dwellings in Core and Low Density Sage Grouse Habitat are an uncommon occurrence in Crook County. Crook County has seen only five Non-Farm Dwellings be approved and built in Core or Low Density Sage Grouse Habitat in the last ten years. One Non-Farm Dwelling was approved and built in the Core Habitat (found in area 7 on Map 3 below), with the remaining four Non-Farm Dwellings being approved and built near the very westerly edge of the Low Density Habitat (found in area 4 and 8 on the Map 3 below).

Crook County Sage Grouse Habitat
Non-Resource Dwellings - Map 3

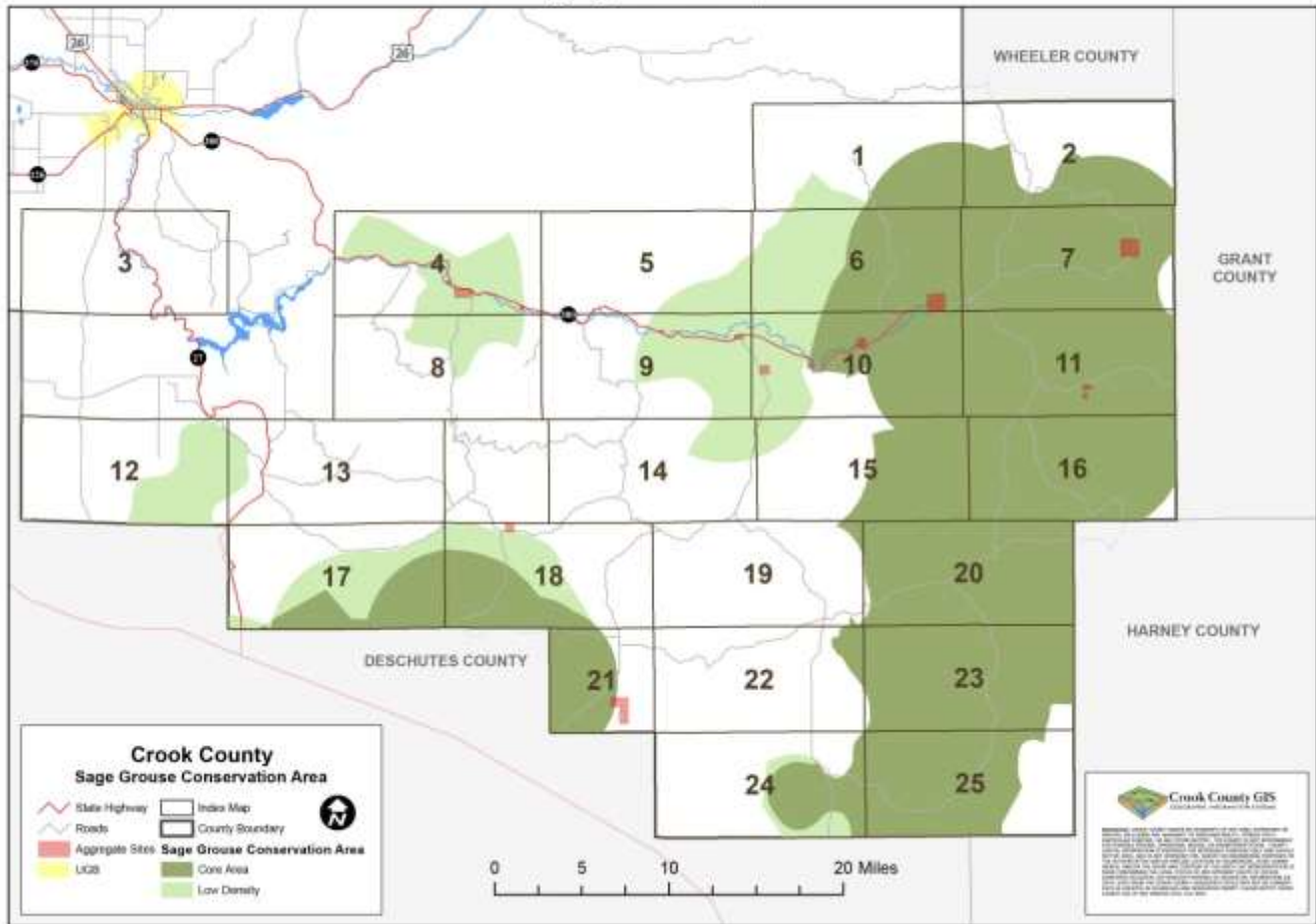


Aggregate Sites in Core and Low Density Sage Grouse Habitat

In Crook County there are thirteen Aggregate Sites within Core and Low Density Sage Grouse Habitat.

- Six of the thirteen Aggregate Sites are in Core Sage Grouse Habitat, one (8% of the Aggregate Sites) of which is adjacent to SE Paulina Highway which runs east to west in Crook County (found in area 6 and 10 on Map 4 below); and
- Seven Aggregate Sites are in Low Density Sage Grouse Habitat, all of which (100% of the Aggregate Sites) are adjacent to a State Highway or a County Road (found in area 4, 9 and 10 on Map 4 below).

Crook County Sage Grouse Habitat
Aggregate Sites - Map 4

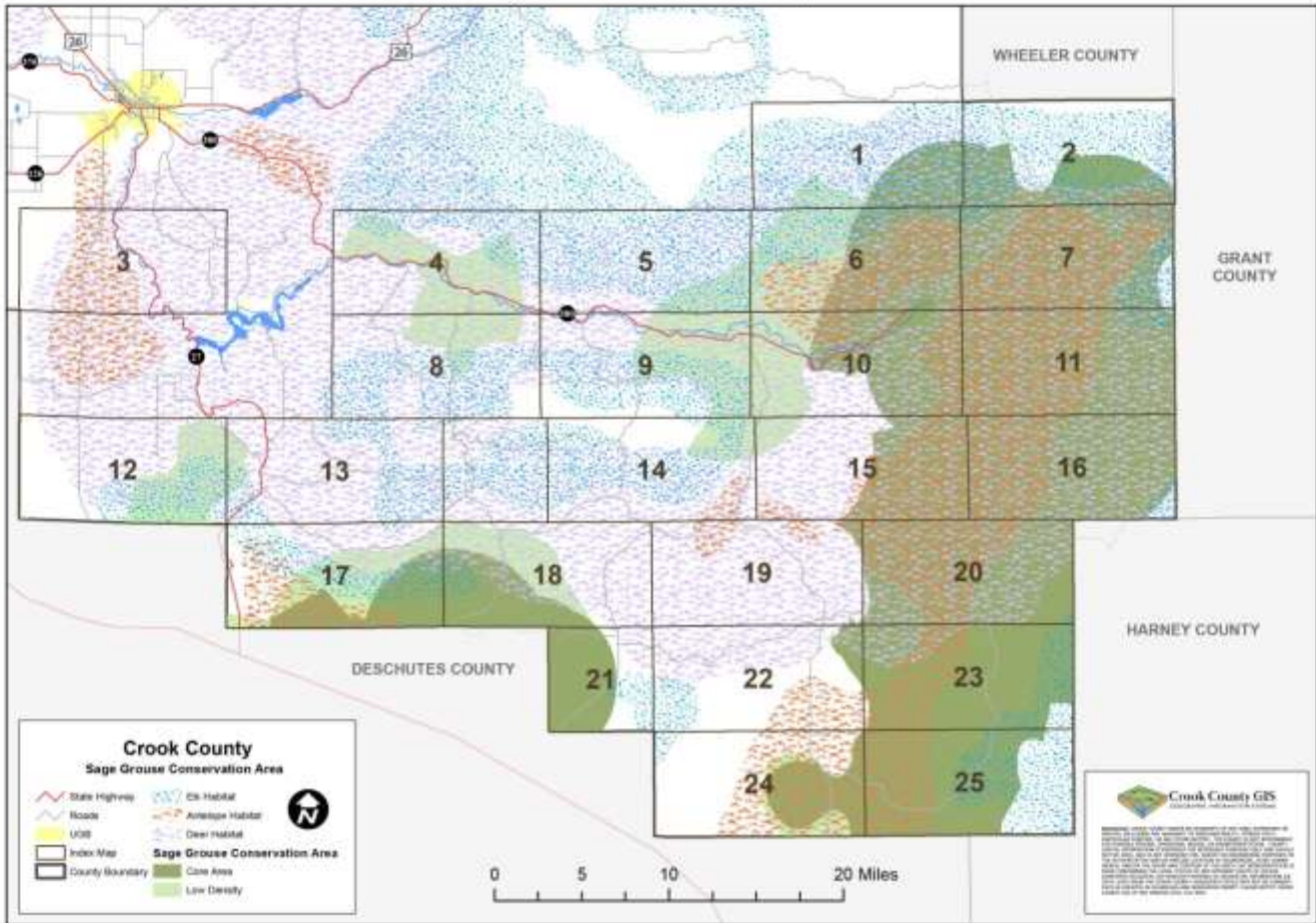


Core and Low Density Sage Grouse Habitat and Big Game (Antelope, Elk and Deer) Habitat in Crook County

The map below shows the Core and Low Density Sage Grouse Habitat along with Crook County’s Antelope, Deer and Elk Habitat Protection Overlay. The map indicates that approximately 90% of the Sage Grouse Core Habitat and 95% of the Sage Grouse Low Density Habitat is within Crook County’s Habitat Protection Overlay for Antelope, Deer, and Elk.

- 90% of the Core Sage Grouse Habitat is within Crook County’s Habitat Protection Overlay for Antelope, Deer, and Elk.
- 95% of the Low Density Sage Grouse Habitat is within Crook County’s Habitat Protection Overlay for Antelope, Deer, and Elk.

Crook County Sage Grouse Habitat Big Game Habitat Areas - Map 5



Summary

Background

The Crook County Comprehensive Land Use Plan was adopted on February 2, 1978 and has been in use by the County since that time. Over the years, there have been amendments to the maps and text of the Comprehensive Plan. The Plan provides guidance on land use throughout Crook County with the exception of the City of Prineville.

In 1992, Crook County went through Periodic Review which included inventory and policy updates for Goal 5. This Goal 5 Periodic Review included inventorying Sage Grouse Leaks. This 1992 Goal 5 Periodic Review data for Sage Grouse Leaks is used in this report in addition to 2012 data from the BLM and ODFW.

Crook County’s Comprehensive Plan also has inventory and policy guidance for Exclusive Farm Use, Forest and Rural Service Center Zoned land as well as Antelope, Deer and Elk habitat Protection Overlay’s. The Comprehensive Plan works in concert with Crook County Land Use Code and Ordinances which have been adopted over the years to keep Crook County’s Land Use Program contemporary.

Land Use Activity

Crook County's Land Use Program provides for a number of land use activities based on what is allowed by Oregon Revised Statutes, Oregon Administrative Rule, the Oregon Statewide Planning Goals and a host of other laws and regulations.

When considering land use in Crook County it is important to understand Crook County's land use history. There are approximately 21,000 people who call Crook County home. Approximately 90% (18,900) of Crook County residents live in the western most 15% of the County. The western 30% of the County is home to approximately 95% (19,950) of the population. This means approximately 1,050 people live on farms and ranches in the eastern 70% of the County (1,319,276 acres), or approximately 1 person per 1,256 acres. This sparse settlement pattern is characteristic of what Crook County anticipates for its future, and is codified in its Comprehensive Plan and Land Use Zoning Code.

This report includes information and a map (on page 27) showing non-resource dwelling approvals for the last ten years. Non-Farm Dwellings in Core and Low Density Sage Grouse Habitat are an uncommon occurrence in Crook County. Crook County has seen only five Non-Farm Dwellings be approved and built in Core or Low Density Sage Grouse Habitat in the last ten years. One Non-Farm Dwelling was approved and built in the Core Habitat, with the remaining four Non-Farm Dwellings being approved and built near the very westerly edge of the Low Density Habitat.

Six of the thirteen Aggregate Sites in Crook County (on page 28) are in Core Sage Grouse Habitat, one of the sites is adjacent to SE Paulina Highway which runs east to west in Crook County; and seven Aggregate Sites are in Low Density Sage Grouse Habitat all of which are adjacent to a State Highway or a County Road.

Core and Low Density Sage Grouse Habitat in Crook County is also typically within a Habitat Protection Overlay for Crook County's Antelope, Deer and Elk. Approximately 90% of the Sage Grouse Core Habitat and 95% of the Sage Grouse Low Density Habitat are within Crook County's Habitat Protection Overlay for Antelope, Deer, and Elk. The Antelope, Deer and Elk Habitat Protection Overlay is designed to reduce development opportunities for dwellings with an allowable density of no more than one dwelling per 160 acres or 320 acres in most instances. This Antelope, Deer and Elk Habitat Protection Overlay combined with the fact the Sage Grouse Core and Low Density Habitat lands are also zoned Exclusive Farm Use of Forest, reduces development and protects Sage Grouse Habitat.

Conclusion

Crook County has established a strong land use program in 1978, and has continued to implement the program throughout the years. The background mentioned above and the land use activity mentioned above describe Crook County's actions which have provided solid protection for animal habitat over the years. In conclusion, one only look to on page 27 of this report to see evidence that Crook County has been and is continuing to do a great job protecting identified Sage Grouse Habitat in Crook County. If one looks closely at the 1992 Lek Site numbers (24) from ODFW and compares them with the 2012 Lek Site numbers (64) found on on page 27, it becomes quite clear that Sage Grouse Core and Low Density Habitat has been successfully protected by the Crook County Land Use program. The Lek Site numbers show a 166% increase in Lek Sites over the past twenty years. This is average an annual increase of approximately 8.3% over the last twenty years. This significant and steady increase indicates that Crook County's Sage Grouse Core and Low Density Habitat have been well protected by Crook County's Land Use program.

Deschutes County

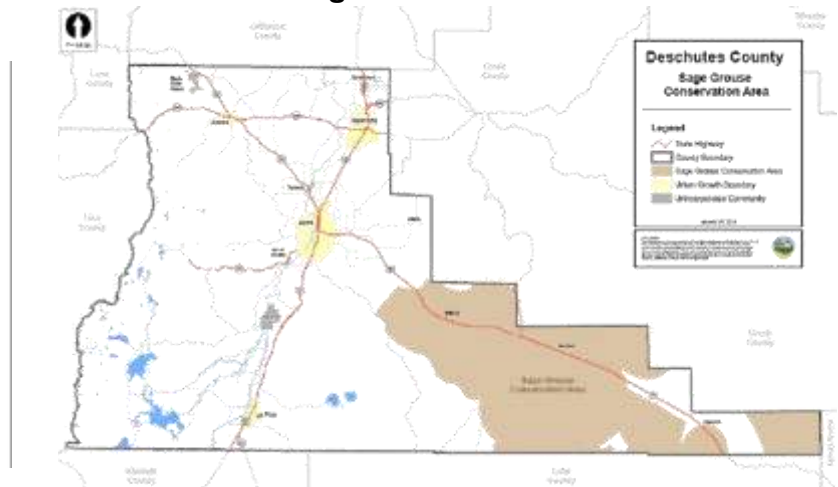
Deschutes County Sage-Grouse Habitat

As shown in Figures 1 and 2, sage-grouse habitat in Deschutes County is located in the southeast, near Millican, Brothers, and Hampton.

Figure 1



Figure 2



ODFW’s management recommendations for the U.S. Bureau of Land Management (BLM) Prineville District, which include the affected portions of Deschutes County shown in Figure 2, are:

Restore greater sage-grouse abundance and distribution near the 1980 spring breeding population level, approximately 3,000 birds.⁶

According to the Strategy, because the Prineville District is at the northern edge of sage-grouse range, connectivity in this region is important. The primary habitat block where sage-grouse occur is contiguous with the area shared by the Lakeview and Burns districts. Table 1 lists the total number of federal and non-federal parcels and their respective acreages in Deschutes County. Seventy-six percent of Deschutes County’s land base is managed by the federal government. As shown in Table 2, 437,987 acres are designed Core Area and Low Density habitat. This constitutes 23% of the total acreage in Deschutes County.

Table 1 - Total Acreage and Parcels in Deschutes County

	Federal Lands	Non-Federal Lands	Total
Acreage			
Number	1,446,395	466,506	1,912,901
Percent	76%	24%	100%
Parcels			
Number	615	95,569	96,184
Percent	1%	99%	100%

⁶ Greater Sage-Grouse Conservation Assessment and Strategy for Oregon: A Plan to Maintain and Enhance Populations and Habitat. April 22, 2011. Page 39

Table 2 - Acreage and Parcels in Deschutes County Containing Sage-Grouse Habitat

	Core Area		Low Density		Total	Percent Habitat (Core and Low D.)	
	Federal Lands	Non-Federal Lands	Federal Lands	Non-Federal Lands		Federal Lands	Non-Federal Lands
Acres	182,482	66,723	132,946	55,836	437,987	72%	28%
Parcels	114	402	125	464	1,105	22%	78%

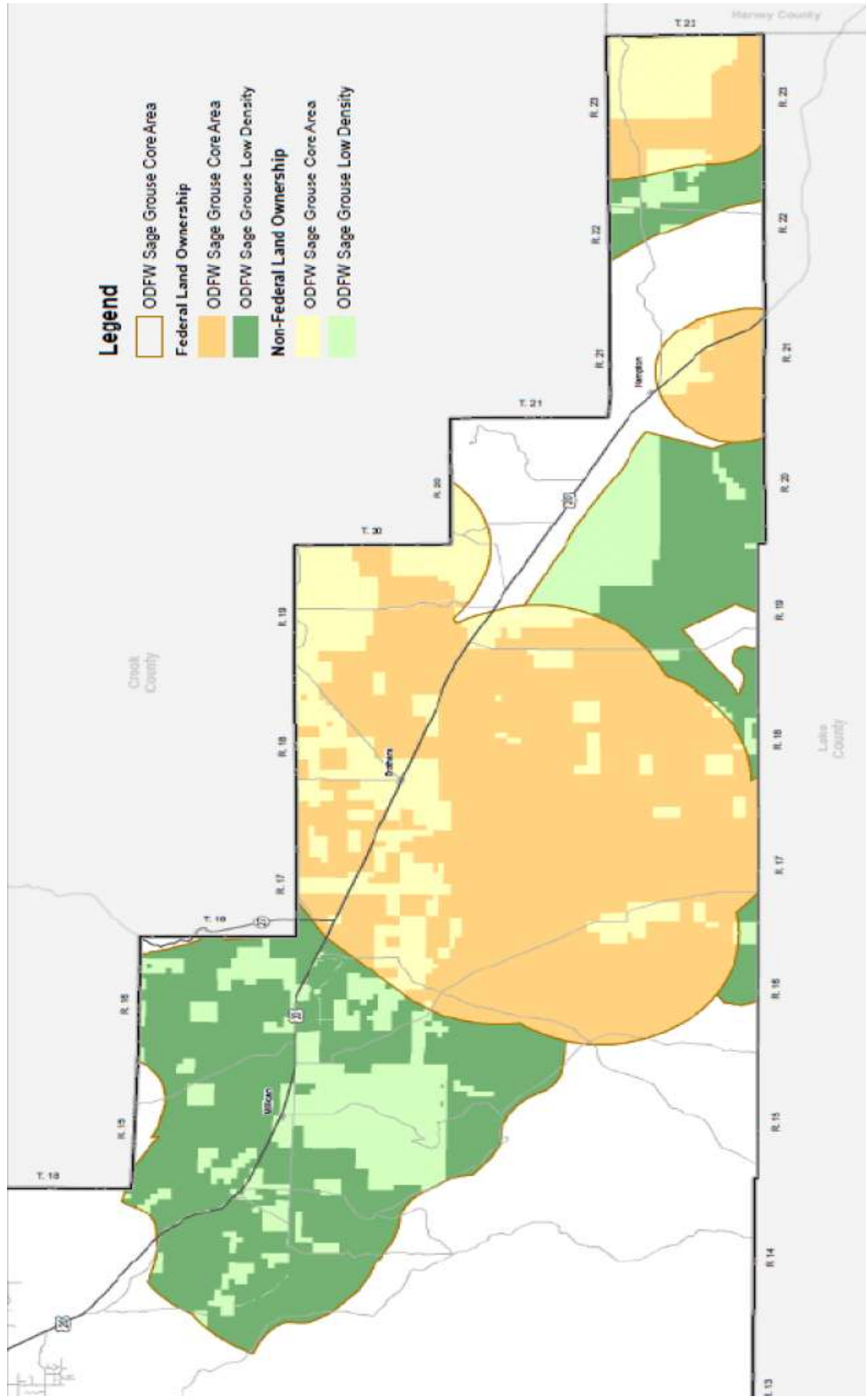
Disaggregating the acreage further, 22% of the federal lands and 26% of non-federal lands in Deschutes County are designated in sage-grouse habitat. Seventy-two percent of the habitat is located on federal lands and 28% on non-federal lands. Parcel data shows that the federal government is also the most affected. Thirty-nine percent of the federal government’s total parcels in Deschutes County are designated in sage-grouse habitat, compared to 1% of non-federal lands. Figure 3 shows the region in greater detail by depicting federal and non-federal lands within Core Area and Low Density habitat.

Land Use Planning History

In Deschutes County, the Comprehensive Plan provides a policy framework for the rural, unincorporated areas. The cities of Bend, La Pine, Redmond and Sisters each maintain their own comprehensive plans within their respective Urban Growth Boundaries (UGB). Intergovernmental agreements between the cities and Deschutes County coordinate land use within urban unincorporated boundaries.

Deschutes County’s first comprehensive plan, Comprehensive Plan to 1990, was adopted in 1970. To comply with newly adopted statewide planning regulations a new plan was adopted in 1979, titled, Year 2000 Comprehensive Plan (Plan 2000). In 1981, Plan 2000 was acknowledged as being in compliance with the Statewide Goals. Along with Plan 2000, the County adopted a Resource Element. It contained valuable background information, including maps depicting the long-term general land use categories for all lands in the county. Over time the County amended Plan 2000 to comply with changes initiated by LCDC, the Board of County Commissioners and property owners through Post Acknowledgement Plan Amendments (PAPAs). Periodic Review, a mandatory plan update process required by DLCD was initiated in 1988 and completed in 2003. Periodic Review included major additions and amendments to Plan 2000 to keep the plan and its policies current with evolving land use law and local conditions. Plan 2000 was codified into Title 23 of the Deschutes County Code (DCC). Responding to rapid growth and changing demographics, in 2011, the Board of County Commissioners completed a multi-year effort to establish the 2030 Comprehensive Plan Update (Plan 2030). This new plan incorporates updated goals and policies, community plans for Tumalo and Terrebonne, and new projects like the South County Plan, destination resort remapping, a 2030 Transportation System Plan, and a South County Local Wetland Inventory. Plan 2030 continues to balance statewide requirements and local land use values.

Figure 3 - Federal and Non-federal Lands Affected by ODFW Sage-Grouse Core and Low Density Habitat



Comprehensive Plan and Zoning

Local comprehensive plans govern land use regulations. On rural lands, growth is significantly restricted to protect farms, forests and natural resources. Deschutes County is required to plan in compliance with the Statewide Goals in order to promote orderly and efficient growth and protect resources important to Oregonians. The comprehensive Plan Map (Plan Map) illustrates the County's goals and policies. The Plan Map describes land use categories that provide for various types of conservation and development for the rural area during a 20-year planning period. Each Comprehensive Plan designation provides the land use framework for establishing zoning districts.⁷ The Plan map designations are defined below.

Agriculture: Preserves and maintains agricultural lands for farm use.

Airport Development: Allows development compatible with airport uses while mitigating impacts on surrounding lands.

Bend Urban Area Reserve: Define lands outside of Bend's Urban Growth Boundary but within its General Plan area that are expected to be brought into its UGB.

Destination Resort Eligibility Areas: Shows lands eligible for siting a destination resort.

Forest: Conserves forest lands for multiple forest uses.

Open Space and Conservation: Protects natural and scenic open spaces, including areas with fragile, unusual or unique qualities.

Redmond Urban Reserve Area: Defines Redmond's additional 30-year growth boundary for lands expected to be brought into its UGB.

Resort Community: Defines rural areas with existing resort development that are not classified as a destination resort, based on OAR 660, Division 22.

Rural Commercial: Defines existing areas of isolated rural commercial development that do not fit under OAR 660, Division 22.

Rural Community: Defines rural areas with limited existing urban-style development, based on OAR 660, Division 22.

Rural Industrial: Defines existing areas of isolated rural industrial development that do not fit under OAR 660, Division 22.

Rural Service Center: Defines rural areas with minimal commercial development as well as some residential uses, based on OAR 660, Division 22.

Surface Mining: Balances protection of surface mines while minimizing adverse impacts on the natural environment.

Urban Growth Boundaries: Defines land that provides for urban development needs and identifies and separates urban and urbanizable land from rural land.

Urban Unincorporated Community: Defines rural areas with existing urban development, based on OAR 660, Division 22.

⁷ The Deschutes County zoning map exists in official replica form as an electronic map layer with the County's geographic information system.

Table 3 lists Deschutes County’s Comprehensive Plan designations and related zoning districts in DCC, Titles 18, 19, 20, and 21. Some Plan designations apply county-wide, others only to designated areas of existing development.

Table 3 - Deschutes County Comprehensive Plan and Zoning Designations⁸

Comprehensive Plan Designation	Associated Zoning Districts
County-wide designations	
Agriculture	Title 18, Chapter 18.16 - Exclusive Farm Use Zones
Airport Development	Title 18, Chapters 18.76 and 18.80 - Airport Development and Airport Safety Combining Zones
Destination Resort Eligibility Areas	Title 18, Chapter 18.113 - Destination Resorts Zone
Forest	Title 18, Chapters 18.36 and 40 - Forest Use 1 and Forest Use 2 Zones
Open Space and Conservation	Title 18, Chapters 18.48 and 18.84 - Open Space and Conservation and Landscape Management Zones
Rural Residential Exception Area	Title 18, Chapter 18.60 and 18.332 - Rural Residential and Multiple Use Agriculture Zones
Surface Mining (SM)	Title 18, Chapters 18.52 and 18.56 - Surface Mining and Surface Mining Impact Area Combining Zones
Area specific designations	
Bend Urban Growth Area	Title 19, Bend Urban Growth Boundary Ordinance
Redmond Urban Growth Area	Title 20, Redmond Urban Area Zoning Ordinance
Redmond Urban Reserve Area (URA)	Chapter 18.24 - Redmond Urban Reserve Area Combining Zone
Resort Community	Chapter 18.110 - Resort Community Zone (Black Butte Ranch and Inn of the 7 th Mountain/Widgi Creek)
Rural Commercial	Chapter 18.74 - Rural Commercial Zone
Rural Community	Chapters 18.66 and 18.67 - Tumalo and Terrebonne Rural Community Zoning Districts
Rural Industrial	Chapter 18.100 - Rural Industrial Zone
Rural Service Center (RSC)	Chapter 18.65 - Rural Service Center, Unincorporated Community Zone (Alfalfa, Brothers, Hampton, Millican, Whistlestop, Wildhunt)
Sisters Urban Growth Area	Title 21, Sisters Urban Area Zoning Ordinance
Urban Unincorporated Community	Chapter 18.108 - Urban Unincorporated Community Zone, Sunriver

⁸ Deschutes County Geographical Information System and Deschutes County Code

Base Zoning within Sage-Grouse Designated Areas

To systematically assess Core Area and Low Density habitats in Deschutes County, staff developed a map series consisting of the following:

- An overview map of Deschutes County;
- An index map dividing the sage-grouse designated areas into 13 sub-areas; and
- Customized sub-area maps displaying federal and non-federal lands, base zoning, and combining zones.⁹

Table 4 summarizes in acres and parcels, County zoning within ODFW’s Core Area and Low Density habitat on federal and non-federal land. It is important to note that some parcels overlap both habitat designations.

Table 4 - Deschutes County Base Zoning within ODFW’s Core and Low Density Habitat

	Core Area		Low Density		Total Acres	Percent in Sage-Grouse Habitat
	Federal Lands	Non-federal Lands	Federal Lands	Non-federal lands		
Exclusive Farm Use, Horse-Ridge Subzone						
Acres	165,974	64,412	113,551	43,659	387,596	88%
Parcels	113	397	121	462		
Flood Plain Zone						
Acres	1,124	329	646	380	2,479	0.6%
Parcels	20	11	25	48		
Forest Use I Zone						
Acres	13,174	40	16,418	9,568	39,200	9%
Parcels	2	1	20	7		
Open Space and Conservation Zone						
Acres	2,202	1,735	2,278	0	6,215	1%
Parcels	13	12	4	0		
Rural Service Center, Commercial/Mixed Use District (Brothers and Millican)						
Acres	0	38	0	26	64	0.015%
Parcels	0	6	0	3		
Rural Service Center, Open Space District (Brothers and Millican)						
Acres	0	10	0	0	10	0.002%
Parcels	0	1	0	0		
Surface Mining						
Acres	0	167	53	2,203	2,423	0.6%
Parcels	0	17	2	26		
Total					437,987	100%

⁹ Deschutes County Sage-Grouse Conservation Area Index Map. February 28, 2013.

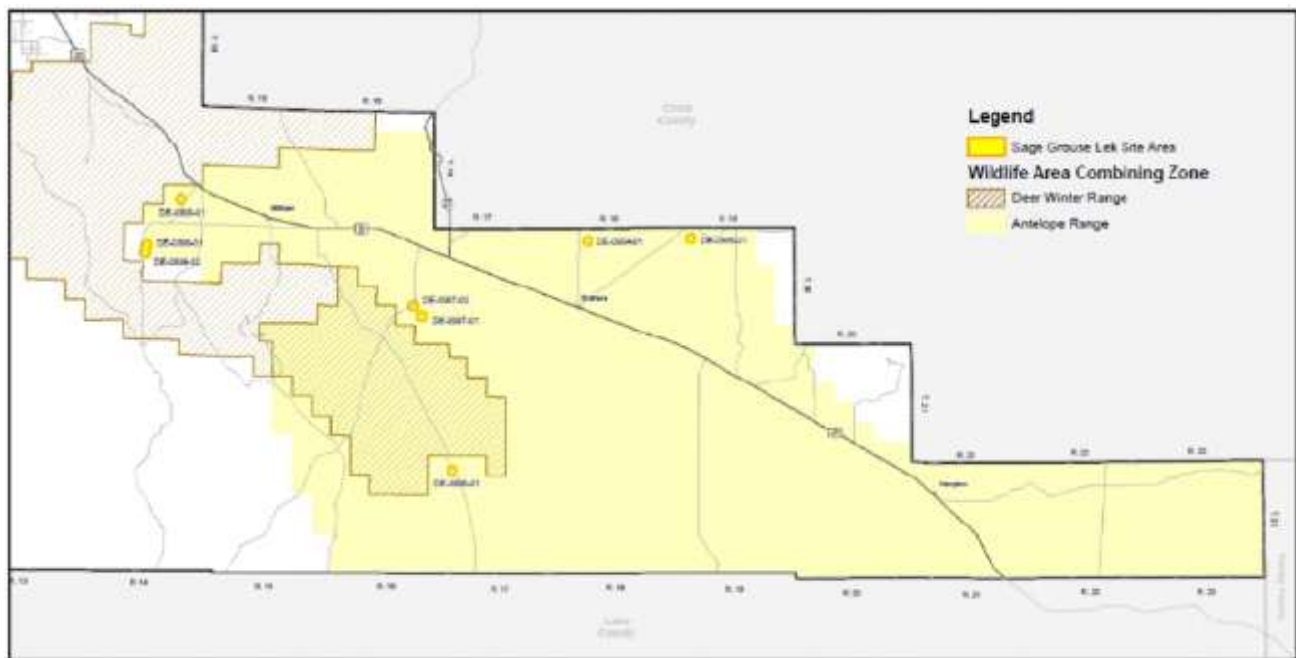
Combining Zones within Sage-Grouse Designated Areas

In 1992, during Periodic Review, the County was required to review and update its Comprehensive Plan and implementing ordinances to address fish and wildlife resources. Deschutes County updated its inventories, policies and land use regulations within its Sensitive Bird and Mammal Habitat and Wildlife Area combining zones to protect sage-grouse, antelope, and deer winter ranges, among others.¹⁰ These three habitat types encompass 96% (117,914 acres) of ODFW’s Core Area and Low Density designations on non-federal lands. The remaining 4% (4,645 acres) is zoned Exclusive Farm Use. Table 5 summarizes in acres and parcels how the County’s two combining zones intersect them. Figure 4 shows sage -grouse, antelope, and deer winter ranges recognized in its Comprehensive Plan specifically for the southeast portion of the county.

Table 5 - Deschutes County Combining Zones within ODFW’s Core and Low Density Habitat

	Core Area		Low Density		Total
	Federal	Non-federal	Federal	Non-federal	
Sensitive Bird and Mammal Habitat Combining Zone (Sage-Grouse Leks)					
Acres	12	139	862	225	1,238
Parcels	3	3	6	6	
Wildlife Area Combining Zone (North Paulina Antelope Range)					
Acres	181,535	62,155	89,837	39,360	372,887
Parcels	114	388	98	426	
Wildlife Area Combining Zone (North Paulina Deer Winter Range)					
Acres	32,376	992	59,767	22,914	116,049
Parcels	12	10	60	149	

Figure 4 - Sensitive Bird and Mammal Habitat and Wildlife Area Combining Zones in Southeastern Deschutes County



¹⁰ Ordinance Nos. 92-040, 92-041, 92-042, 92-046, 93-043, 94-004, 94-005, and 94-021 pertain specifically to sage-grouse.

Existing Habitat Conservation Measures

Exclusive Farm Use: Horse-Ridge East Subzone

As demonstrated on Table 4, the Exclusive Farm Use (EFU) Horse Ridge Subzone intersects ODFW's Core Area and Low Density habitats. In 1992 a commercial farm study was completed as part of the Periodic Review process. The study concluded that irrigation is the controlling variable for defining farm lands in Deschutes County. Soil classifications improve when water is available. Seven new agricultural subzones were identified based on the factual data provided in the 1992 study. Minimum acreages were defined based on the typical number of irrigated acres used by commercial farms in that particular subzone with one exception. The Horse-Ridge East Subzone contained 20 ownership tracts with the median consisting of 2,100 acres. The report noted the following:

*"Since there is virtually no demand for land partitions or dwelling units in this subzone, it would achieve the overall objectives of the farmland plan to leave the minimum parcel size at the current 320-acre size."*¹¹

DCC, Chapter 18.16 implements the EFU zone. There are 859 parcels, consisting of 108,071 acres of non-federal land in the Horse-Ridge East Subzone affected by sage-grouse habitat. Three hundred and ninety-seven EFU parcels are located in Core Area and 462 in Low Density. The minimum parcel size for a land division is 320 acres (DCC 18.16.065).

Non-Farm Dwelling Policy

Creating new lots in the EFU Horse-Ridge Subzone as noted above is significantly limited by the 320 acre minimum parcel size. The potential for new dwellings in this subzone are predominantly non-farm dwellings on existing lots stemming from several pre1970 unplatted subdivisions sold to uninformed buyers. Approval for a non-farm dwelling usually turns on three key factors:

1. Legal Lot of Record. There are many small, unrecorded subdivisions in the EFU-Horse Ridge Subzone that are undeveloped. Some, but not all are legal lots of record based on historic deeds.
2. Access. Many parcels do not have legal access.
3. Wildlife Area Combining Zone. Most of these properties are subject to a Wildlife Area Combining Zone that limits new dwellings to within 300 feet of a historic road. Many do not adjoin one.

These requirements currently curtail non-farm dwelling development. Additionally, a 1992 finding by the Board of County Commissioners (Board) denying a conditional use permit has effectively prohibited new non-farm dwellings in this region. The Board found in Conditional Use Permit 92-169:

*"That the overall land use pattern of the area of review is resource lands, primarily as antelope range, sage grouse range and open grazing for cattle. For this reason, the Board finds that the proposed non-farm dwelling would constitute the introduction of an incompatible use to an area where now none exist. Approval of the proposed dwelling could serve to set a precedent for future non-farm dwellings and, thus, tip the balance from resource to nonresource use. Therefore, the Board finds that approval of this nonfarm dwelling would alter the stability of the overall land use pattern of the area by increasing density and causing compatibility problems, as well as set a precedent for similarly situated parcels."*¹²

¹¹ Deschutes County Agricultural Resource Lands Project, Oregon State University Extension Service. June 1992. Page 51.

¹² Deschutes County Conditional Use Permit 92-169. Pages 6 and 7.

In 2007, a Hearings Officer summarized its effect by finding the County established a policy that any nonfarm dwelling application in the Millican area will not meet the approval criteria because such approval would force a significant change or significantly increase the cost of accepted farming practices in the area because of the precedent such an approval is perceived to set for the area.¹³ To date, the Board has not issued a decision reversing it.

Flood Plain Zone

Special flood hazard are identified by the Federal Insurance Administration in a scientific and engineering report titled, "Flood Insurance Study for Deschutes County, Oregon and Incorporated Areas." Its effective date is September 28, 2007. Within the Core Area and Low Density habitats, the Federal Emergency Management Agency (FEMA) has mapped floodplains associated with features such as portions of the Dry River, Fehrenbacker Reservoir, as well as approximately 20 other unnamed depressions. FEMA designates them as a Special Flood Hazard Area subject to inundation by a 1% annual chance of a flood. Deschutes County's Flood Plain Zone includes all areas designated as Special Flood Hazard Areas.¹⁴ Structures in these locations require a conditional use permit. In this region, there are 59 parcels, consisting of 709 acres of non-federal land in the flood plain. Of these, 11 parcels are located in Core Area and 48 in Low Density.

Forest Use Zone

In 1990, LCDC initiated the Forest Rule, OAR 660-006, defining allowed uses, siting conditions, and minimum lot sizes in forest zones. As part of Periodic Review, in 1992 Deschutes County adopted Ordinance No. 92-025 and revised its forest designations and associated regulations to Forest Use 1 (F1) and Forest Use 2 zones. The F1 zone intersects ODFW's Core Area and Low Density habitats. DCC, Chapter 18.36 implements the F1 zone. There are 8 parcels, consisting of 9,608 acres of non-federal land in the F1 zone within these designations. One F1 parcel is located in Core Area and 7 in Low Density. The minimum parcel size for a land division is 80 acres (DCC 18.36.090).

Open Space and Conservation Zone

Deschutes County Year 2000 Comprehensive Plan (Plan 2000) contained a list of open spaces and areas of special concern, the majority of which were in federal or state control. As part of Periodic Review, in 1992 Deschutes adopted Ordinance No. 92-052 and updated this inventory. The Open Space and Conservation Zone (OSC) intersect ODFW's Core Area and Low Density habitats. DCC Chapter 18.48 implements the OSC zone. There are 12 parcels, consisting of 1,735 acres of non-federal land in the OSC zone within these designations. All twelve OSC parcels are located in Core Area. The minimum parcel size for a land division is 80 acres (DCC 18.48.040).

Sensitive Bird and Mammal Habitat Combining Zone

In 1993, state biologists released, The Oregon Department of Fish and Wildlife Research Report, Sage Grouse in Oregon. It listed the population of adult sage -grouse in Deschutes County at 775. It also cited BLM estimates of 275 adult birds. ODFW conducted field work to obtain accurate inventory information on the precise location of sage-grouse leks. A total of 22 leks were identified, 14 on federal lands and 8 on non-federal lands.¹⁵ They identified a radius of 1,320 feet (1/4 mile) around a lek as a sensitive habitat area where conflicting uses with the habitat or strutting birds should be regulated.¹⁶ Based on these recommendations, Deschutes County adopted Ordinance No. 94-004 on June 17, 1994. This ordinance revised a Sensitive Bird and Mammal Habitat Combining Zone and inventory, first adopted in 1992, by containing inventories of sage-grouse leks on federal and non-federal land. The ordinance contained site specific economic, social, environmental and energy consequence analysis (ESEE) for the sage-grouse inventoried sites on non-federal land. According to ODFW:

¹³ CU-97-93. Page 14.

¹⁴ DCC 19.96.020, Flood Plain Zone. Designated Areas.

¹⁵ Deschutes County Ordinance No. 94-004. Exhibit 4. Pages 5 and 6.

¹⁶ Ibid. Exhibit 4. Page 4

Conflicts with sage grouse habitat are reduced by the limitations on uses in exclusive farm use and flood plain zone, by the 320 acre minimum lot size, and by the predominance of Bureau of Land Management land throughout their range. However, because of their sensitivity and importance, the sage grouse leks or strutting grounds need additional protection. Uses conflicting with the leks are activities or development which would disturb birds during the breeding season, disturb or occupy the ground in the lek area which could displace the birds, or destroy the vegetation within the sensitive habitat area the birds use for roosting and cover. These activities could include road construction activity, structural development and associated use of structures within 1,320 feet of the lek.

For each of the 8 leks located on non-federal lands, the ESEE analysis discusses site characteristics, affected tax lot, zoning, area the birds use for display, and conflicting uses. Table 6 lists the conflicting uses for each lek site. Figure 5 shows the lek location and its 1,320 foot radius in relation to non-federal lands. There are 9 parcels, consisting of 364 acres of non-federal lands in sage-grouse habitat designated by Ordinance No. 94 -004. Of these, 3 parcels are located in Core Area and 6 in Low Density.

Table 6 - Conflicting Uses with Goal 5 Sage-Grouse Lek Habitat Sites

ODFW Site #	Zone	Permitted Use	Conditional Use
DE 0994-01 (Circle Reservoir)	Exclusive Farm Use	Farm Use Exploration for Minerals Some road Construction	Single Family Dwelling; Residential homes; Private Park, Campground; Personal Airstrip; Home Occupation; Process Forest Products; Solid Waste Disposal Site; Storage, Crushing, Processing of Aggregate; Church or School; Certain Road Projects; Bed and Breakfast
	Floodplain	Farm Use (no structure) Forest Management Open Space	Road or Bridge; Single Family Dwelling; Agricultural Accessory Buildings; Recreation Uses
DE 0995-01 (Merril Road) DE 0996-01 (Dickerson Well) DE 0997-01 (Moffit Ranch) DE 0997-02 (Moffit Ranch Satellite) DE 0998-01 (Evans Well) DE 0998-02 (Evans Well Satellite)	Exclusive Farm Use	Farm Use Exploration for Minerals Some road Construction	Single Family Dwelling; Residential homes; Private Park, Campground; Personal Airstrip; Home Occupation; Process Forest Products; Solid Waste Disposal Site; Storage, Crushing, Processing of Aggregate; Church or School; Certain Road Projects; Bed and Breakfast
DE 0999-01 (Millican Pit)	Exclusive Farm Use	Farm Use Exploration for Minerals Some road Construction	Single Family Dwelling; Residential homes; Private Park, Campground; Personal Airstrip; Home Occupation; Process Forest Products; Solid Waste Disposal Site; Storage, Crushing, Processing of Aggregate; Church or School; Certain Road Projects; Bed and Breakfast
	Floodplain	Farm Use (no structure) Forest Management Open Space	Road or Bridge; Single Family Dwelling; Agricultural Accessory Buildings; Recreation Uses
	Surface Mining	Subject to Site Plan	
Extraction of Minerals Storage of Minerals Screening, Washing, Structures Necessary for Extraction, Storage			

Figure 5 - Deschutes County Goal 5 Sage-Grouse Range

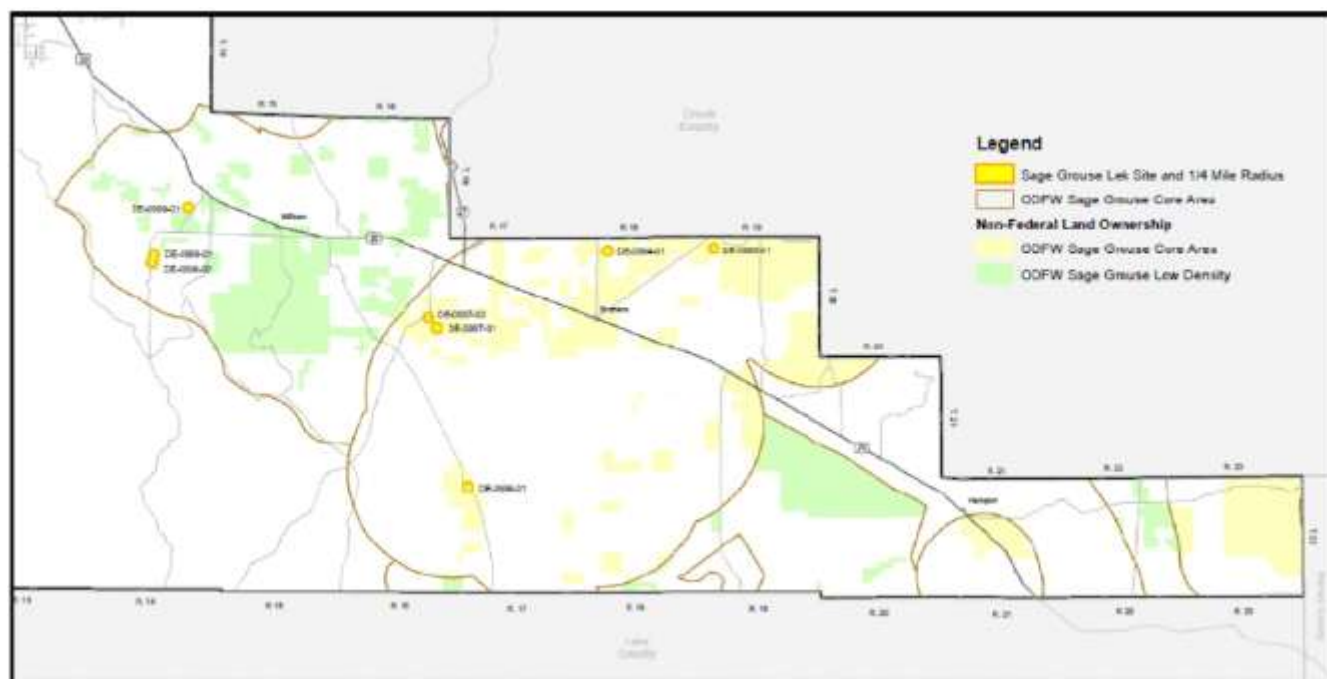


Table 7 describes Deschutes County’s restrictions for protecting leks and their sensitive habitat areas, while allowing limited conflicting uses. DCC Chapter 18.90, Sensitive Bird and Mammal Habitat Combining Zone implements the provisions in Table 7. It defines the Sensitive Habitat Area as 1,320 feet (DCC 18.90.20), site plan review requirements (DCC 18.90.050), and Site Plan Review Criteria (DCC 18.90.060).¹⁷ Table 8 summarizes the code in more detail.

Table 7 - Program to Meet Goal 5 Sage-Grouse Lek Habitat Sites

ODFW Site #	Program
DE 0994-01 (Circle Reservoir) DE 0995-01 (Merril Road) DE 0996-01 (Dickerson Well) DE 0997-01 (Moffit Ranch) DE 0997-02 (Moffit Ranch Satellite)	In order to protect both the lek and the sensitive habitat area and allow limited conflicting uses, the following restrictions shall apply: <ol style="list-style-type: none"> 1. Site plan review under the Sensitive Bird and Mammal Habitat Combining Zone shall be required for all land use within the sensitive habitat area requiring a conditional use permit. 2. Structural development within the quarter mile sensitive habitat area shall be prohibited because there are alternative locations for structures outside of the sensitive area. 3. Partitions creating a residential building site within the sensitive habitat area shall be prohibited. *In addition, the BLM is working with private property owners to develop grazing management to minimize grazing conflict with the lek site.
DE 0998-01 (Evans Well) DE 0998-02 (Evans Well Satellite)	Includes the program elements listed above, plus: <ol style="list-style-type: none"> 4. Existing structures may be repaired and maintained.
DE 0999-01 (Millican Pit)	Includes the program elements listed above, plus: <ol style="list-style-type: none"> 5. The amended ESEE analysis for the surface mine (Site #494) identifies the lek as a conflicting use and requires consultation with ODFW prior to operation or expansion of the site to determine what specific requirements are necessary to protect the lek from surface mining conflicts.

¹⁷ DCC Chapter 18.90, Sensitive Bird and Mammal Habitat Combining Zone

Table 8 - Summary of Sensitive Bird and Mammal Habitat Combining Zone for Sage-Grouse

Code	Sage-Grouse Habitat Overview
DCC 18.90.020 (Definition of Sensitive Habitat Area)	<p>A. The sensitive habitat area is the area identified in the Deschutes County Comprehensive Plan Resource Element inventory and site specific ESEE for each sensitive bird or mammal site.</p> <p>I. Within a radius of 1,320 feet of a sage-grouse lek.</p>
DCC 18.90.030 (Limitations and Uses Permitted)	<p>B. When there is a conflict between the site specific ESSE analysis and the provisions of DCC Title 18 (County Zoning), the site-specific ESEE analysis shall control.</p>
DCC 18.90.040 (Applicability)	<p>Review under DCC 18.90 shall be triggered by the following proposals occurring within a sensitive habitat area, as defined in DCC 18.90.020:</p> <p>A. An application for a building permit for a new structure or addition to an existing structure;</p> <p>B. Land divisions creating new lots or parcels within the sensitive habitat area;</p> <p>C. An application for a conditional use permit; or</p> <p>D. An application for site plan approval.</p>
DCC 18.90.050 (Site Plan Review Requirement)	<p>A. For those proposals identified in DCC 18.90.040 to be sited within an inventoried sensitive habitat area, as defined under DCC 18.90.020, a site plan shall be prepared in accordance with the requirements of DCC 18.90.050.</p> <p>B. The County shall submit a copy of the site plan to the Oregon Department of Fish and Wildlife for comment. ODFW shall have 20 days from the date the site plan is mailed to submit written comments to the County.</p> <p>C. Based upon the record, and evaluation of the proposal based on the criteria in DCC 18.90.060, and conformance with the ESEE analysis for the site contained in the Resource Element of the Comprehensive Plan, the County shall approve or reject the site plan.</p>
DCC 18.90.060 (Site Plan Review Criteria)	<p>Approval of site plan shall be based on the following criteria:</p> <p>A. The site plan shall consider the biology of the identified sensitive species, nesting trees, critical nesting periods, roosting sites and buffer areas. Based on the biology of the species and the characteristics of the site, the site plan shall provide protection that will prevent destruction of the subject nesting site, lek, hibernation site or rookery and will, to a reasonable certainty, avoid causing the site to be abandoned.</p> <p>B. Development activities, including grading and fill, mining, construction, or activities generating noise or dust within the sensitive habitat area shall be prohibited during the nesting, strutting or hibernation season identified in the site specific ESEE analysis and decision for each habitat site. An exception to this standard may be made if ODFW determines in writing that the nest, lek or rookery is not active and will not become active during the proposed construction period or if the sensitive birds have fledged.</p> <p>C. New roads, driveways or public trails shall be located at the greatest distance possible from the nest, lek, rookery or hibernation site unless topographic or vegetation or structural features will provide greater visual and/or noise buffer.</p> <p>D. Existing vegetation or other landscape features which are located on the subject property and which obscure the view of the nest, rookery, lek or hibernation site from the proposed development, shall be preserved and maintained. A restrictive covenant to preserve vegetation shall be required when specified in the ESEE for the site.</p> <p>E. No partitions or subdivisions shall be permitted which would force location of a dwelling or other structure, not otherwise permitted by the site specific ESEE, within the designated sensitive habitat area.</p> <p>F. All exterior lighting, including security lighting shall be sited and shielded so that the light is directed downward and does not shine on the subject nest, rookery, lek or hibernation site.</p> <p>G. The site plan shall conform to the requirements of the ESEE decision for the sage- grouse habitat contained in the Resource Element of the Comprehensive plan.</p>

Wildlife Area Combining Zone

During Periodic Review, Deschutes County worked with ODFW to obtain the most recent inventory information on wildlife resources in the county. In 1998, the Board adopted Ordinance Nos. 92-040, 92 -041, and 92-046. These ordinances updated the Wildlife Area Combining Zone, inventory and ESEE Analysis. Two wildlife resources, North Paulina antelope and deer winter ranges overlap the Core Area and Low Density habitats. There are 814 parcels, consisting of 101,515 acres of non-federal land in antelope range. Of these, 388 parcels are located in Core Area and 426 in Low Density. There are 159 parcels, consisting of 23,906 acres of non-federal land in deer winter range. Of these, 10 parcels are located in Core Area and 149 in Low Density. Table 9 summarizes the Wildlife Area Combining Zone requirements for both habitat types.¹⁸

Table 9 - Summary of Wildlife Area Combining Zone for Antelope and Deer Winter Range

Code	Overview
DCC 18.88.040 (Use Permitted Outright)	<ul style="list-style-type: none"> A. All “permitted uses” require a conditional use permit. B. Following uses are not permitted in WA Zone designated as antelope and deer winter ranges: golf course, commercial dog kennel, church, school, bed and breakfast inn, dude ranch, playground recreational facility, timeshare, and veterinary clinic.
DCC 18.88.050 (Dimensional Standards)	<ul style="list-style-type: none"> A. In deer winter range, minimum lot size shall be 40 acres. B. In antelope range, minimum lot size shall be 320 acres.
DCC 18.88.060 (Siting Standards)	<ul style="list-style-type: none"> A. The footprint, including decks and porches, for new dwellings shall be located entirely within 300 feet of public roads, private roads or recorded easements for vehicular access existing as of August 5, 1992.
DCC 18.88.070 (Fence Standards)	<ul style="list-style-type: none"> A. New fences in the Wildlife Area Combining Zone shall be designed to permit wildlife passage. The following standards and guidelines shall apply unless an alternative fence design which provides equivalent wildlife is approved by the County after consultation with ODFW: <ul style="list-style-type: none"> 1. The distance between the ground and the bottom strand or board of the fence shall be at least 15 inches. 2. The height of the fence shall not exceed 48 inches above ground level. 3. Smooth wire and wooden fences that allow passage of wildlife are preferred. Woven wire fences are discouraged.

¹⁸ DCC Chapter 18.88, Wildlife Area Combining Zone.

Built Environment and Development Activity

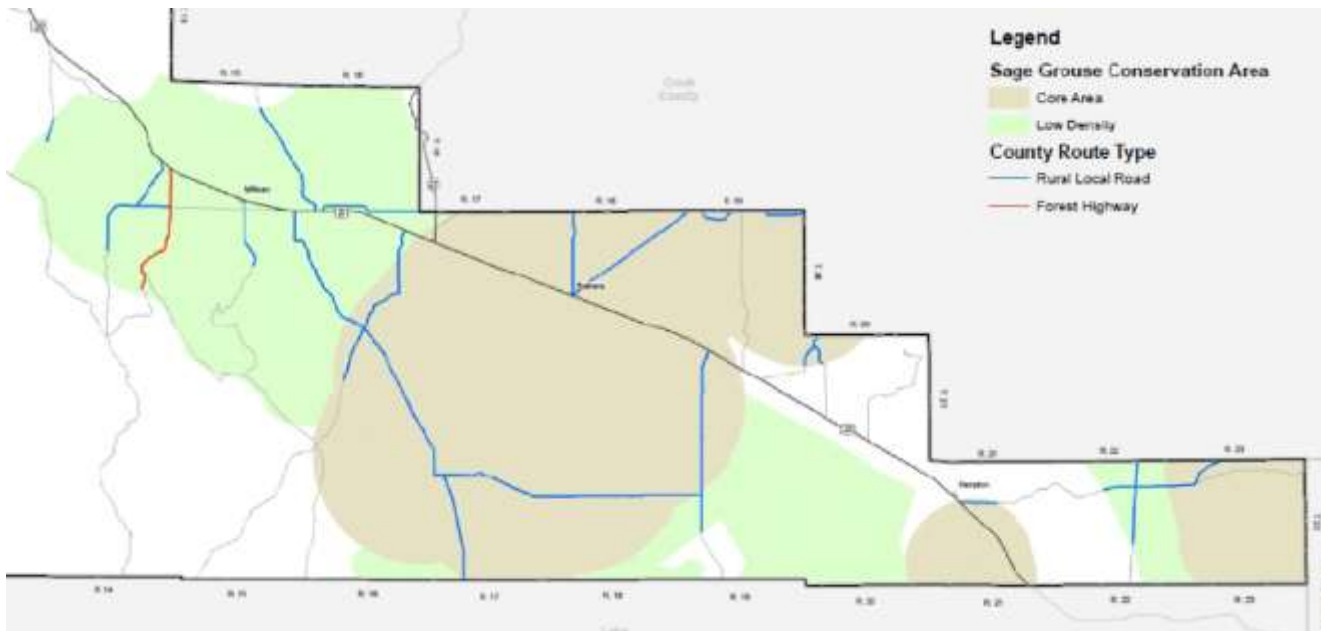
Housing Units

According to 2010 Census, there are 42 housing units occupying 63 residents within the 122,575 acres of non-federal lands designated Core Area and Low Density habitat. Twenty-seven residents in 13 homes live in the Core Area. Thirty-six residents in 29 homes live in Low Density habitat.

Roads and Utilities

Excluding U.S. 20, there are 19 county designated roads, spanning approximately 115 miles within the Core Area and Low Density habitat. Eighteen are classified as a Rural Local Road. The other is designated a Forest Highway. Figure 6 shows their location. Three Bonneville Power Administration overhead transmission lines transect the region as well. Deschutes County Sage-Grouse Conservation Area Index Maps show their location.¹⁹ There are no regional gas lines (TransCanada) in the region.

Figure 6 - County Roads in ODFW Sage-Grouse Core and Low Density Habitat



Surface Mining Sites

There are a total of 21 surface mines within Core Area and Low Density habitat. With the exception of two federal parcels affiliated with Sites 404 and 505, all the mines are located on non-federal lands. Table 10 summarizes them. Figure 7 shows their location.

¹⁹ ODFW. Greater Sage-Grouse Conservation Assessment and strategy for Oregon: A Plan to Maintain and Enhance Populations and Habitat. April 22, 2011. Pages x and 34.

Table 10 - Surface Mining Sites in Sage-Grouse Habitat

Surface Mining Site (ESEE) #	Sage-Grouse Designation	Description
Site No. 404: Moon Mining Claim. Quantity is 193,000 cubic yards of sand and gravel and 800,000 to 2M cubic yards of rock; (Ord. 90-025 and 95-041)	Low Density	This site is part of a working ranch. Access to the site is along a dirt road which leaves the highway at the base of the Horse Ridge grade, 1 mile NE of the highway.
Site No. 408: RL Coats. Quantity is 3 million cubic yards of sand and gravel; (Ord. 90-025)	Low Density	Site is located north of Highway 20 near the intersection with Highway 27
Site No. 413: Deschutes County. Quantity is 30,000 cubic yards of sand and gravel; (Ord. 90-025) Site No. 414: Deschutes County. Part of same 35 acres of 413 (Ord. 90-025)	Low Density	These two sites are located partway up the base of Pine Mountain.
Site No. 415: Deschutes County. Quantity, 30,000 cubic yards of sand and gravel; (Ord. 90-025) Site No. 416: Deschutes County. Quantity, 30,000 cubic yards of sand and gravel; (Ord. 90-025) Site No. 417: Deschutes County. Quantity, 20,000 cubic yards of sand and gravel; (Ord. 90-025) Site No. 418: Deschutes County. Quantity, 30,000 cubic yards of sand and gravel; (Ord. 90-025)	Core Area	Sites Nos. 415, 416, 417, 418 and 419 run along the north side of Highway 20 East. Sites are located roughly 1.5 miles east of Route 27, the Prineville cutoff at mile marker 38.
Site No. 419: Deschutes County. Quantity, 30,000 cubic yards of sand and gravel; (Ord. 90-025)	Core Area	Sites Nos. 415, 416, 417, 418 and 419 run along the north side of Highway 20. Sites are located roughly 1.5 miles east of Route 27, the Prineville cutoff at mile marker 38.
Site No. 496: Taylor. Quantity is 1,800,000 cubic yards of sand and gravel; (Ord. 94-050, 94-051, 94-052)	Low Density	Site is located on the Old Bend-Burns Highway, roughly 2 miles west of the east end of the road, just to the east of Horse Ridge grade.
Site No. 498: State of Oregon. Quantity is 200,000 cubic yards of sand and gravel; (Ord. 90-025)	Low Density	Site is located approximately one mile south of Highway 20 and four miles west of Millican.
Site No. 499: Oregon State Highway. Quantity is 50,000 cubic yards of sand and gravel; (Ord. 90-025)	Low Density	Site is located approximately one-half mile west of Millican on both sides of the highway.
Site No. 500: Oregon State Highway. Quantity is 130,000 cubic yards of sand and gravel; (Ord. 90-025)	Low Density	Site is located approximately one mile of Millican on the north side of the highway.
Site No. 501: Deschutes County. Quantity is 50,000 cubic yards of sand and gravel; (Ord. 90-025)	Low Density	Site is located approximately one and one-half mile east of Millican.
Site No. 503: State Highway. Quantity is 200,000 cubic yards of sand and gravel; (Ord. 90-025)	Low Density	Site is located north of Highway 20, roughly 4.5 miles east of Millican.
Site No. 505: Oregon State Highway. Quantity is 275,000 cubic yards of sand and gravel; (Ord. 90-025) Site No. 506: State Highway. Quantity is 36,000 cubic yards of sand and gravel; (Ord. 90-025)	Low Density	These two sites are located near one another and are roughly 1.6 miles west of the Prineville cutoff on east Highway 20. Both sites are along the highway.
Site No. 508: Oregon State Highway. Quantity is 100,000 cubic yards of sand and gravel; (Ord. 90-025)	Core Area	Site is located approximately 2.5 miles north of the site, roughly 4 miles NW of Brothers.

Table 10 - Surface Mining Sites in Sage-Grouse Habitat (continued)

Surface Mining Site (ESEE) #	Sage-Grouse Designation	Description
Site No. 515: Oregon State Highway. Quantity is 100,000 cubic yards of sand and gravel; (Ord. 90-025)	Core Area	This site is a cinder pit which is located on Camp Creek Road, roughly 6 miles NE of Brothers.
Site No. 533: Oregon State Highway. Quantity is 1 Million cubic yards of sand and gravel; (Ord. 90-025)	Core Area	Site is east of Hampton, approximately 1 mile off the highway
Site No. 600: Robinson Site. Quantity is 3.8 million cubic yards of sand and gravel; (Ord. 96-076)	Low Density	Site 600 adjoins Site 496. It is located approximately one-half mile off of Highway 20 along the Old Bend-Burns Highway.

Figure 7 - Deschutes County Goal 5 Surface Mines Affected by ODFW Sage-Grouse Core and Low Density Habitat



Land Use and Building Permit Activity (2003-2013)

Tables 11 and 12 list the land use planning and building permits issued from 2003 to 2013. As shown in Table 11, taking into account the projects requiring multiple land use permits, there were a total of seventeen site specific proposals.²⁰ Building permits followed a similar pattern. Deschutes County issued 26 permits. Only 12 pertained to non-federal lands, with 5 of those applying to a particular Oregon Department of Transportation (ODOT) site.

Table 11 - Land Use Planning Permits (2003-2013)

4 Administrative Determinations for a Farm Dwelling (AD-05-10, AD-06-6, AD-07-18, AD-12-10)
9 Conditional Use Permits CU-03-9: Farm Dwelling CU-03-19: Manufactured Home Park and RV Park ²¹ CU-07-43: Type 3 Home Occupation for Auto Sales CU-07-63: Private Shotgun Only Trap Shooting Facility CU-07-79: Paintball Facility CU-07-94: Hunting Preserve CU-09-12: Commercial Wind Farm Accessory Operations and Maintenance Building CU-11-26: Lot of Record Dwelling CU-11-27: Lot of Record Dwelling
1 Landscape Management Permit for an Accessory Building (LM-07-138)
2 Non-conforming Use Alternation Request to Replace a Total of Four Manufactured Homes at ODOT Maintenance Station in Brothers
1 Partition Creating Two Parcels Associated with CU-03-9 (MP-03-3)
6 Site Plan Permits SP-03-13: Addition to Existing Toilet Building at ODOT Rest Area SP-03-14: Manufactured Home Park and RV Park Approved under CU- 03-19 SP 07-32: Private Shotgun Only Trap Shooting Facility Approved under CU-07-63 SP-08-6: Paintball Park Approved Under CU-07-79 SP-09-9: Wind Project Operations and Maintenance Building Approved under CU-09-12 SP-09-30: Expansion of Trap Club Approved Under CU-07-63
1 Variance Altering the Survey Requirement for Partition Approved under CU-03-9 (V-03-6)

²⁰ See CU-03-09, MP-03-3, V-03-6; CU-03-19 and SP-03-14; CU-07-63 and SP-07-32; CU-07-79 and SP-08-6; CU-09-12 and SP-09-9; CU-07-63 and SP-09-30.

²¹ As of February 28, 2013, the manufactured home park and RV park have not been developed.

Table 12 - Building Permits (2003-2013)

Permittee	Building Permit	Multiple Permits Issued for One Site (Y/N)
Bend Trap Club	1. Club House 2. Range Building 3. Storage / Warming Hut	Yes
Century Tel	4. Foundation	No
Federal Government (leases with ATT and Deschutes County)	5. Cell Tower 6. Cell Tower Antennae Co-location 7. Co-locate on Existing Tower 8. Equipment Shelter 9. Foundation for Radio Equipment 10. Gold Label Equipment Shelter	Yes
Federal Government (lease with Central Oregon Shooting Association)	11. Pole Barn 12. Pole Barn	Yes
Federal Government (leases with Pine Mountain Observatory and Technology Associates)	13. Cell Tower Co-locate 14. Demolition of Existing Residence 15. Microwave Dish Installation 16. Replace Microwave Dish 17. Residence	Yes
Homeowners	18. Detached Storage 19. Ramada for Manufactured Home 20. Residence / Attached Garage 21. Residence / Garage	No
State of Oregon	22. Additional Bathrooms 23. Break Room 24. Detached Garage 25. Replacement Dwelling 26. Replacement Dwelling	Yes

Impact Analysis

Risk Assessment

In December 2011, Wyoming Governor Matt Mead and Secretary of the Interior Ken Salazar cohosted a meeting to address coordinated conservation of the Greater sage-grouse across its range. Ten states within the range of the sage-grouse were represented, as were the FS, NRCS, and the Department of the Interior and its BLM and FWS. The primary outcome of the meeting was the creation of a Sage-Grouse Task Force. The Task Force was directed to develop recommendations on how to best move forward with a coordinated, multi-state, range-wide effort to conserve the sage-grouse, including the identification of conservation objectives to ensure the long-term persistence of the species. The FWS was tasked by its Director with the development of conservation objectives for the sage-grouse. Recognizing that state wildlife agencies have management expertise and retain management authority for this species, the FWS created a Conservation Objectives Team (COT) of state and FWS representatives to accomplish this task.²² The Sage-Grouse Conservation Objectives Draft Report, created by the COT identifies risk levels and priority areas for Central Oregon. Approximately 700,000 acres of habitat for the Central Oregon sage-grouse population has been identified as priority areas for conservation. The COT assigns the Central Oregon management zone a rating of C2/C3 (At Risk, Potential Risk).²³ Those risk levels pertaining to land use are summarized below in Table 13. According to the COT, this population faces a wide suite of threats.

²² Sage-Grouse Conservation Objectives Draft Report, Submitted August 1, 2012. Page 1.

²³ Ibid., Page 16, C2 means the population is at risk because of very limited and/or declining numbers, range, and/or habitat, making sage-grouse in this area vulnerable to extirpation. C3 means the population is potentially at risk because of limited and/or declining numbers, range, and/or habitat, even though sage-grouse may be local abundant in some portion of the area.

Table 13 - Central Oregon Sage-Grouse Risk Levels²⁴

Risk Levels (Land Use Related)	Rating
Agriculture Conversion Energy Infrastructure Recreation Urbanization	Localized, Substantial
Mining	Slight Threat

According to ODFW, there is also the potential for renewable energy developments (i.e., geo-thermal, solar, and wind) in most sage-grouse regions in Oregon.²⁵ Recently, the Oregon Department of Geology and Mineral Industries (DOGAMI) upgraded its online geothermal data with in-depth information about wells, hot springs and other resources across the state.²⁶ Data obtained from DOGAMI identifies 17 geothermal wells along the Brothers fault zone and Glass Butte within Core Area and Low Density habitat. Eleven wells are located on non-federal lands. Of those, 6 are in Core Area and 5 in Low Density.

Findings

From a land use perspective, the COT’s threat analysis as it pertains to Deschutes County does not take into account its land use planning program. The Periodic Review process required by DLCD from 1988-2003, positioned Deschutes County to adopt significant measures for the protection of farm lands and wildlife resources. The analysis contained in this report demonstrates that Deschutes County is effective in minimizing land use conflicts within Core Area and Low Density habitat on non-federal lands. A sparse residential population, coupled with farm and forest zoning and Sensitive Bird and Mammal Habitat and Wildlife Area combining zones have enabled non-federal lands to remain rural. Deschutes County’s land use program does not pose a risk to sage-grouse populations. Presently, there are regulatory safeguards in place to prevent urbanization, recreation, renewable energy, and infrastructure projects on non-federal lands from disrupting sage-grouse habitat.

Deschutes County retains land use authority on 122,559 acres of non-federal lands designated Core Area and Low Density habitat. This constitutes 28% of the affected area designated by ODFW. A majority of the land is zoned for farm and forest uses. Eighty-eight percent (108,071 acres) of the area is zoned EFU and 8% (9,608 acres), F1. The remaining 6% is zoned open space, surface mining, or rural service center. Due to Periodic Review, Deschutes County also applies Sensitive Bird and Mammal Habitat and Wildlife combining zones on 96% (117,914 acres) of the area designated Core Area and Low Density. The remaining 4% (4,646 acres) is zoned EFU. Table 14 recaps Deschutes County’s base and combining zones for this particular region as well as its non-farm dwelling policy. As demonstrated by the land use and building permit activity occurring from 2003 to 2013, Deschutes County’s land use program, when applied cumulatively to the region, is effective in limiting rural development. Just 63 residents, living in 42 houses, occupy the area, amounting to a population density of one person for every 3 square miles. Land use and building permits issued from 2003 to 2013 reveal limited activity and disturbance on non-federal lands. Deschutes County issued a total of 24 land use permits for 17 properties and just 12 building permits during this ten-year period. Five of the building permits applied to a specific site managed by ODOT near Brothers. The most intensive building permits pertained to the Bend Trap Club for a clubhouse, range building, and storage/warming hut.

²⁴ Id. Pages 25 and 63.

²⁵ See note 1. Pages x and 66.

²⁶ Rachel Ross, “Oregon Doubles its Geothermal Info Online”, The Bulletin, February 18, 2013.

Table 14 - Recap of Deschutes County's Conservation Zoning

Base Zones	Description
Exclusive Farm Use (EFU) Horse Ridge Subzone; and * Non-farm dwelling policy	<ul style="list-style-type: none"> • 320 acre minimum parcel size • Policy: Limits non-farm dwellings, deeming them incompatible with resource lands, antelope range, sage-grouse range, and open grazing for cattle. • Non-farm dwellings required to take access within 300 feet of a historic road
Forest Use Zone (FI)	<ul style="list-style-type: none"> • 80 acre minimum parcel size
Flood Plain Zone	<ul style="list-style-type: none"> • New structures require conditional use permit in Special Flood Hazard Areas
Open Space Zone	<ul style="list-style-type: none"> • 80 acre minimum parcel size
Sensitive Bird and Mammal Combining Zone	Description
Sage-Grouse Range	Activity proposed within ¼ mile of a designated sage-grouse lek requires site plan review, specific conditions noted in each ESEE analysis, and coordination with ODFW
Wildlife Area Combining Zone	Description
Antelope and Deer Winter Range	All permitted uses require a conditional use permit. Minimum parcel size is 40 acres in deer winter range and 320 in antelope range Access for new dwellings limited to 300 feet of a historic road

Conclusion

Land use represents just one of the many tools that need to be in place to prevent sage-grouse from being listed on the federal ESA. As the Governor’s Sage Con efforts develops and refines its “all lands, all threats” approach, it must be paired with BLM’s resource management plan amendments and the efforts underway by the Oregon Cattlemen Association to develop a programmatic Candidate Conservation Agreement (CCA) for sage-grouse on BLM lands within the state. In 1992, Deschutes County recognized that conserving sage-grouse leks depends in part on BLM working with private property owners to develop grazing management plans. This collaborative partnership is more important than ever. The BLM controls 72% of Core Area and Low Density habitat in Deschutes County.

Harney County

Harney County Land Use Planning Program

Land Use Planning History

Harney County's land use planning program, as it is practiced and recognized today in relation to the Oregon Statewide Planning Program, began in the early 1980s. Although the county adopted a comprehensive plan on June 26, 1980, the plan was not issued a Land Conservation and Development Commission (LCDC) compliance acknowledgement order until April 17, 1984, which was subsequently adopted by the county in October 10, 1984. Planning Staff refer to 1984 as the very first Harney County Comprehensive Plan (HCCP) and refer to this date as the beginning of the local program for purposes of administration. With exception to the incorporated cities of Burns and Hines, the HCCP provides the overarching development goals, policies, and related implementation measures for all lands within the county boundary. While the HCCP has been through a number of minor/major revisions, the plan itself is considered a living document in the sense that it will continually be updated, within the plan's specified framework, to reflect the needs and desires of the local community. In fact this is one objective of the plan. Amendments have been made to ensure the plan continues to reflect community interests. Yet, the basic intent of the plan has not changed significantly. ²⁷ In 2009, the latest revision, the plan was modified to improve organization of the document with the aim to provide better administration and usability. The plan contains tools (not all contained within the singular document) that provide guidance for the local program. Examples include the plan's maps which graphically depict primary or underlying zoning/plan designations such as the Exclusive Farm and Range Use zone, or other zoning overlays such as Urban Growth Boundaries or the Airport Approach Vicinity Area. Another example can be found within the related and adopted inventories such as local aggregate mining sites, or even commercial energy development areas as listed under the Harney County Renewable Energy Plan. The HCCP is implemented primarily through specific regulations contained within the Harney County Zoning Ordinance. Other local plans and/or ordinances also contribute to implementing the goals and policies of the HCCP, such as the Harney County Transportation System Plan, Urban Growth Boundary agreements with the incorporated cities, etc...

Comprehensive Plan and Zoning

Overview

The majority of lands within Harney County (not inclusive of the incorporated cities) fall under a county zoning designation meant to protect and preserve resources for agriculture and forest use. These zoning designations are illustrated in the HCCP maps along with other specific zoning designations aimed at providing for area-specific appropriate development. As an example, chapter 3 of the HCCP defines the county's agriculture designation, related goals, and policies. Policy 3 is implemented by the creation of the Exclusive Farm and Range Use Zoning underlying zoning district. Table 1 below lists the HCCP land use and zoning designations as found and described within the plan.

²⁷ Source Document 1. Harney County Comprehensive Plan, October 2009.

Table I – Harney County Comprehensive Plan and Zoning Designations

Plan Designation	Zoning Districts (Harney County Zoning Ord - HCZO)
Agriculture	HCZO, 3.010/3.020, Exclusive Farm and Range Use Zones: EFRU-1, EFRU-2
Airport Development	HCZO, 3.070, Airport Development Zone: AD-1
Commercial & Industrial	HCZO, 3.130, Commercial & Industrial Zone: C-1
Forest Use	HCZO, 3.0060, Forest Use Zone: FU
Rural Community	HCZO, 3.120.3,.5, Rural Community Zone (Crane, Drewsey), RC HCZO, 3.120.2,.8,.9,.10,.11, Rural Commercial Zone (Buchanan, Lawen, Princeton, Riley, Wagontire), RCA HCZO, 3.120.1,.4,.6,.7, Rural Service Center (Andrews, Diamond, Fields, Frenchglen), RSC
Rural Recreational	HCZO, 3.110, Rural Recreational, R-2
Rural Residential	HCZO, 3.090, Rural Residential, R-1
Zoning Map Overlays	Zoning Districts (Harney County Zoning Ord - HCZO)
Airport Vicinity	HCZO, 3.080, Airport Overlay Zone, AVO
Flood Hazard	HCZO, 4.080, HCCP Map No. 2 (*FEMA Flood mapping)
Mineral & Aggregate Resource	HCZO, 3.150, Mineral & Aggregate Resource Overlay Zone, MARO (*Applied to proposed aggregate sites)
Urban Growth Boundaries	HCCP Map No. 11 (*UGB agreement contained in separate local ord. Revisions)

Zoning and Overlays within Sage-Grouse Designated Areas

To assess Core Area and Low Density habitats in Harney County, staff developed 3 maps dividing the county into 30 sub areas. Each map depicts the following:

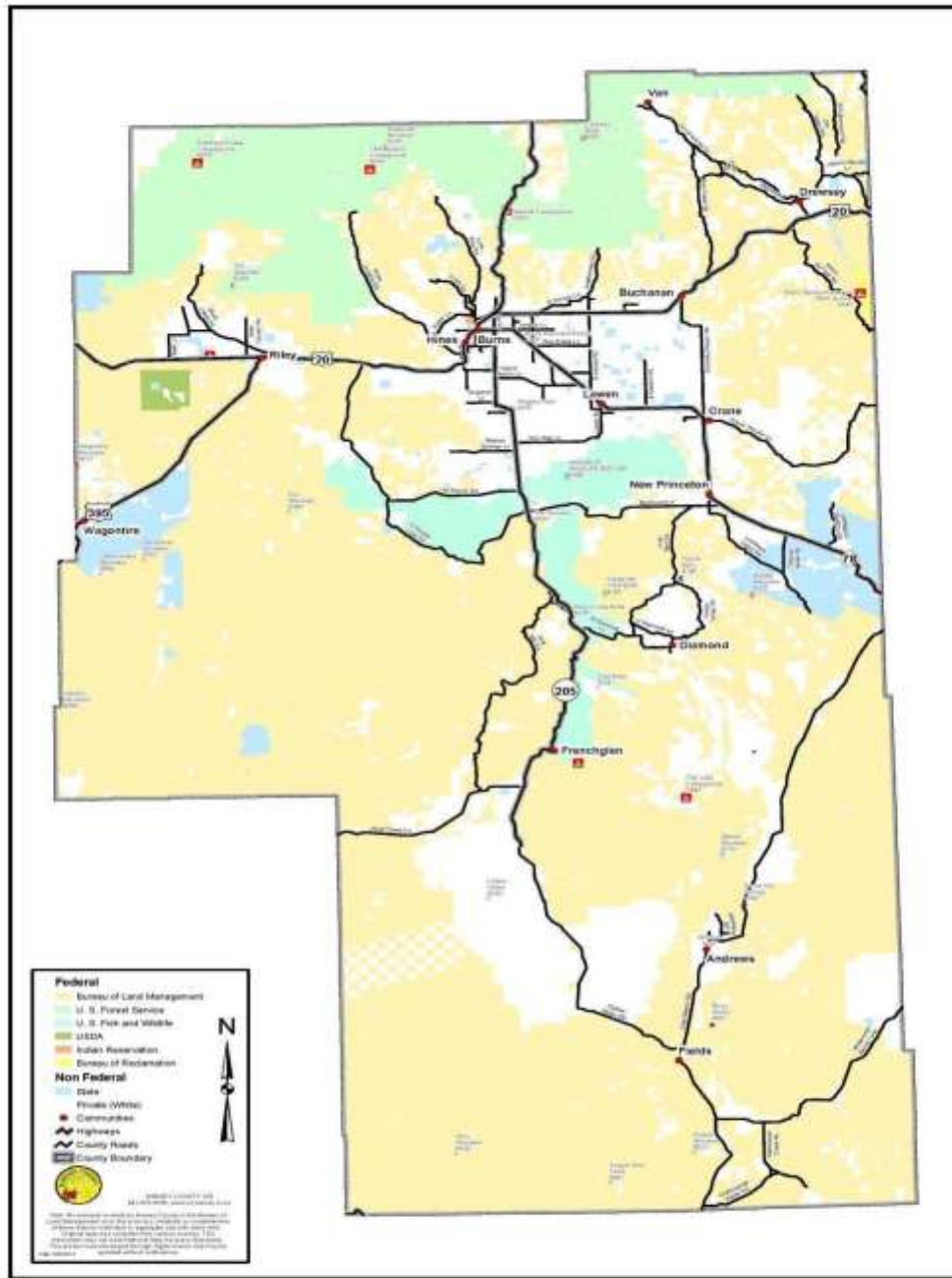
- **Development:** Existing homes, land use permits, and building permits within habitat areas
- **Ownership:** Land ownership, rural communities, and Core/Low Density habitat areas
- **Zoning:** County base zoning districts and DOGAMI surface mining permit locations

Table 2 summarizes in acres and parcels, County zoning within ODFW’s Core Area and Low Density habitat on federal and non-federal (private) lands. It should be noted, as in other county reports, that some parcels overlap both habitat designations and gaps between habitat designations in the GIS layers exist. So, for the purposes of this report these instances have been reported conservatively as Core Area.

Table 2 – Harney County Zoning Designations within ODFW’s Core and Low Density Habitat

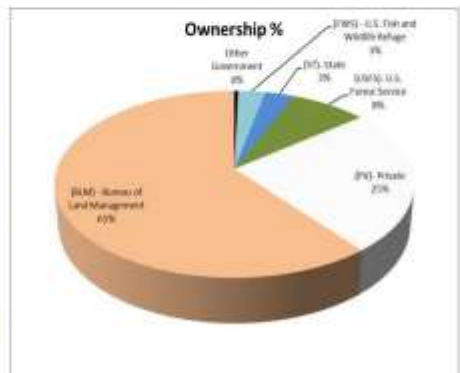
	Core Area		Low Density		Total Acres	Percent in Sage-Grouse Habitat
	Federal Lands	Non-federal lands	Federal Lands	Non-federal lands		
Exclusive Farm and Range Use , EFRU-1						
Acres	1,372,702	353,041	1,556,706	415,148	3,697,597	67.0%
Parcels	271	928	236	1,046		
Exclusive Farm and Range Use - 2, EFRU-2						
Acres	0	0	16,587	12,886	29,474	5.9%
Parcels	0	0	5	45		
Forest Use, FU Zone						
Acres	30,519	890	7,984	0	39,394	7.4%
Parcels	19	13	8	0		
Commercial & Industrial, C-1						
Acres	0	0	0	0	0	0.0%
Parcels	0	0	0	0		
Rural Community (RC), Rural Commercial (RCA), Rural Service Center (RSC)						
Acres	0	0.2	0	133	133	25.0%
Parcels	0	RCA –Drewsey(1)	0	RSC-Fields(11) RSC-French Glen(1)		
Rural Recreational, R-2						
Acres	0	0	0	0	0	0.0%
Parcels	0	0	0	0		
Rural Residential, R-1						
Acres	0	0	0	8	8	0.6%
Parcels	0	0	0	3		
Special Flood Hazard Areas (100-Year Flooding)						
Acres	9,557		11,359		20,916	6.0%
Parcels						

Figure I – Harney County Ownership



OWNERSHIP	ACRES	SQ MILES
Other Government	25,737.28	40.21
(FWS) - U.S. Fish and Wildlife Refuge	188,069.68	293.86
(ST)- State	197,815.83	309.09
(USFS)- U.S. Forest Service	523,043.64	817.26
(PV)- Private	1,630,185.03	2,547.16
(BLM) - Bureau of Land Management	3,968,469.28	6,200.73
Total	6,533,320.74	10,208.31
Federal	Non-Federal	

* Data Used: BLM County Boundry & BLM Ownership



Existing Habitat Conservation Measures and Zoning Designations

“Goal 5” and Wildlife Mapping and Protection within Habitat Areas

When the HCCP was first acknowledged in 1984 official maps were made a part of the document that outlined or depicted particular areas of sensitivity or importance. In 2009 Harney County organizationally formatted its plan to correspond with the related Oregon State Planning Goals. An example of this is within Chapter 5 of the HCCP. It has goals and policies relating to the county’s natural resources. The county has these resources inventoried in either tabular or mapping form. In many county goal 5 inventories, a protection element or program is established for each singular site or region. Harney County’s wildlife inventory is composed of a broad group listing of resource site name/description (such as “big game winter range “or “Upland Game Birds”) and a corresponding area listed within the Plan map depicting coverage ranges.

Harney County’s policy is to provide notice and an opportunity to comment on land use applications to ODFW. In practice, County Planning Staff will perform site plan reviews of proposed developments within ODFW habitat and critical species areas. If the development intersects one of these mapped areas, the local ODFW office will be provided an adjacent landowner notification of the development proposal from Staff.

This policy is aimed at providing ODFW an opportunity to aid the county in review of a land use proposal and landowner’s development objectives by commenting and/or producing recommendations on how to either avoid or mitigate for impacts to big game winter range and/or other sensitive species habitat areas. The conditional use provisions of Article 6 of the HCZO provide the county opportunities to impose conditions of approval which can directly execute the recommendations from ODFW.

To that end, Harney County has regularly provided notice to or communicated with ODFW relating to proposed developments within areas of either big game habitat/winter range, or sensitive species habitat.

Flood Plain Zone Overlay

Special flood hazard areas are identified by the Federal Insurance Administration in a scientific and engineering reported titled, “Flood Insurance Study for Harney County, Oregon unincorporated Areas.” Its effective date is March 28, 1984. Within the Core Area and Low Density habitats, the Federal Emergency Management Agency (FEMA) has mapped floodplains. FEMA designated these floodplains as areas of Special Flood Hazard (SFHA) subject to inundation by a 1% annual chance of flood. Harney County’s floodplain SFHA or “A” zones are immense covering roughly 351,385 acres of land. These and other areas of the county are generally flat with little to no drainage. Harney County actively discourages new development in the SFHA. 9,557 acres of the SFHA is located in Core Area, and 11,359 acres in Low Density.

EFRU-1 & EFRU-2 Zones

The lands designated for agriculture use within Harney County are zoned Exclusive Farm and Range Use (EFRU-1 & EFRU-2). These designations are nearly identical, with the only difference being the minimum size parcel that can partitioned or created (EFRU-1 = 160 minimum & EFRU-2 = 80 minimum). Harney County applied this designation to both private and federally-managed lands within its boundary lines. As a matter of perspective, Harney County has more lands designated EFRU (6,008,914 acres or roughly 9,389 square miles) than Vermont, New Hampshire, Massachusetts, New Jersey, Hawaii, Connecticut, Delaware, and Rhode Island have total land area within their State borders.²⁸ In fact 84.25% of the county is zoned EFRU, 1,827,907 acres of that non-federal.

²⁸ U.S. Geological Survey Weblink: http://nationalatlas.gov/articles/mapping/a_general.html

The EFRU zoning designations follow closely to Oregon Statutory standards and related Oregon Administrative Rules, which are guided by the principles established under 3rd goal of the Oregon Statewide Planning system (protection of agriculture lands). In Harney County the most prevalent development type aside from agriculture is housing related to farm use (see Table 3). Two types of housing are allowed in the zone: Dwellings on parcels 160 acres in size or larger (most common), or dwellings provided to families that have owned specific tracts of land prior to 1/1/1985. Only one dwelling per tract is permitted through these provisions. Farm-related dwellings may also be allowed on tracts below 160 acres in size if the corresponding farm operation on the tract has produced a certain amount of revenue over time (uncommon in Harney County). Otherwise, dwellings are conditionally permitted on tracts of land smaller than 160 acres, however they move through a more stringent set of standards and must be found to not inhibit the expansion of existing farming operations in the area. Newly created or adjusted property boundaries must conform to a minimum dimension or lot size of either 160 or 80 acres (EFRU-1, EFRU-2 respectively). This standard has lessened the possibility for high dwelling density or urban sprawl based on the limited opportunities for dwelling per ownership tract.

Forest Use Zone

The forest land in Harney County, which is zoned FU-80, is in the northern part of Harney County. Of the total 409,290 acres (or 93%), 382,770 acres of land is in federal ownership. The remaining 7 % is scattered throughout the forest zone. The minimum parcel size in the FU-80 zone is 80 acres, however very few land divisions have occurred since the early 1980's. There are 3 possible ways to permit a single-family dwelling in the FU-80 zone: (A) Large Tract (240 contiguous acres or 320 throughout the county), (B) dwellings provided to families that have owned specific tracts of land prior to 1/1/1985, and (C) on a tract of land that is capable of producing a certain range of cubic feet per acre of wood fiber, etc. In addition, new dwellings proposed within the Forest Use Zone must also comply with strict siting standards relating to access from public roads, water supply needs, and meet stocking requirements of the Department of Forestry.

The FU-80 zone is the most restrictive zoning district for new developments. Due to a low amount of privately-owned land and large lot size requirement for new dwellings, very few new dwelling approvals are located within the Forest Use Zone. Many of the privately-owned lands in this area are around the edges of the Forest Service boundary. In fact only two (2) of the approvals over last decade in Sage Grouse habitat are in the FU-80 zone. (*see Table 4, files: 11-17, 11-18))

Built Environment and Development Activity

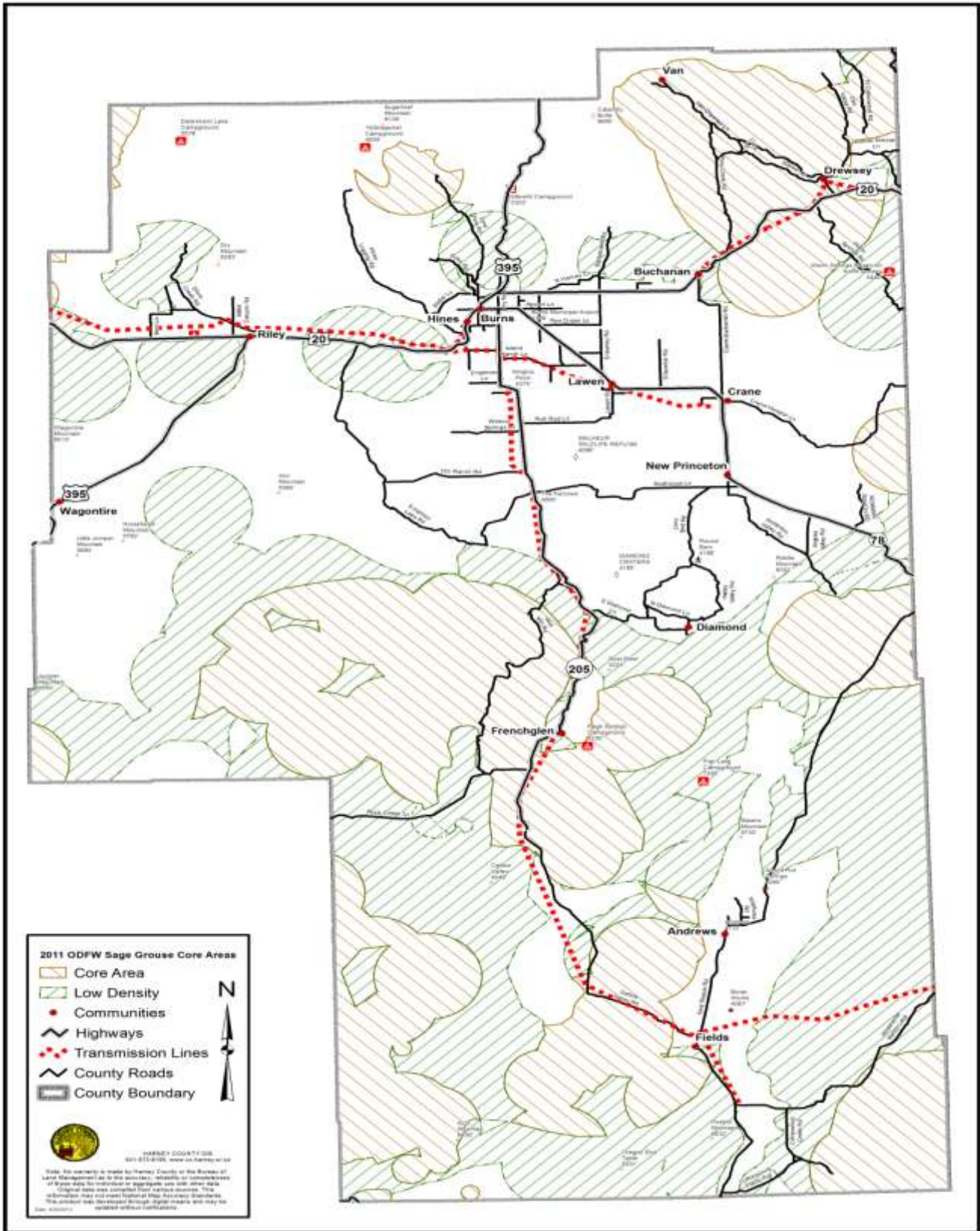
Housing Units

According to local addressing records there are a total 282 housing units or single-family dwellings within 782,107 acres of non-federal lands designated Core Area and Low Density habitat. 134 of those dwellings are within Core Area, 132 are within Low Density, 11 are within the Paiute Indian Reservation (Low Density), and 5 are within the Rural Community of Fields (Low Density).

Roads and Utilities

Excluding U.S. HWY 20, U.S. HWY 395, State Highway 78, and State Highway 205, there are 121 county designated roads spanning approximately 781 miles within Harney County. 174 and 158 miles of those roads are in Core Area and Low Density habitat respectively. While minor alterations have been made to existing roads, no new county roads have been created from 2003-2013. In fact, no new local roads have been constructed since the loss of timber receipts. Figure 1 shows their locations. Bonneville Power Administration, Idaho Power, and the Harney County Electrical Cooperative maintain overhead transmission lines totaling approximately 246 miles through the region. 105 of those miles are within sage grouse habitat. There are no gas utility lines within Harney County. These general locations are also depicted in figure 1.

Figure 2 – County Roads and Transmission Lines



Surface Mining Sites

There are a total of 16 surface mines within Core Area and Low Density habitat on non-federal lands, 13 are closed and 3 active/permited.²⁹ DOGAMI GIS (Oregon Department of Geology and Mineral Industries) reports that 387.1 acres of land are disturbed by surface mines in Harney County, and of those sites, 3.4 acres are disturbed within Core Area and 12.8 acres are disturbed in Low Density habitat.³⁰ Harney County has not permitted a surface mine within Core Area or Low Density habitat from 2003 – 2013. Table 3 lists the 3 surface mines within ODFW sage grouse habitat that are active or permitted. Figure 3 shows the locations of these mine throughout the entire county and also shows an example how the bulk of the mines are located close to the two incorporated towns of Burns and Hines.

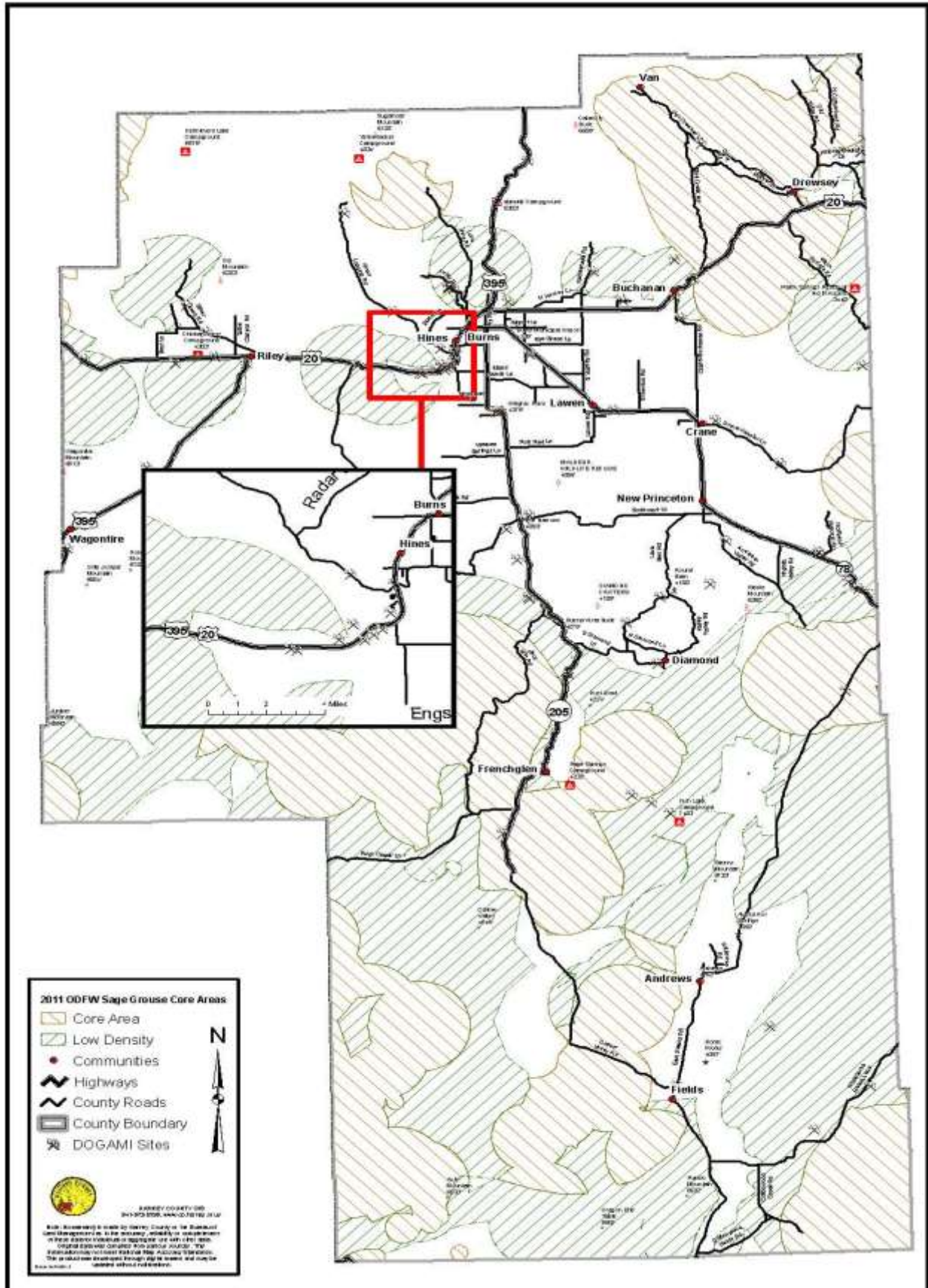
Table 3 – DOGAMI Permits within Sage Grouse Habitat

Surface Mining Site (DOGAMI Permit # & Permittee) (Non-Federal)	Habitat Designation	Status
I3-0085 - Hammond Ranches, Inc.	Low Density	Permitted
I3-0057 - ODOT LaGrande	Low Density	Permitted
I3-0041 - ODOT LaGrande	Low Density	Permitted

²⁹ DOGAMI Online Permit Inventory Weblink: <http://www.oregongeology.org/mlrr/surfacemining-report.htm>

³⁰ DOGAMI GIS, Ed Buchner - Analysis Results for Harney County 4/17/2013

Figure 3 – Mapped DOGAMI Permits for Surface Mines within Sage Grouse Habitat on Non-Federal Lands



Land Use and Building Permit Activity (2003-2013)

Tables 4 and 5 list the land use planning and building permits issued from 2003 to 2013 within Core Area and Low Density habitat. As shown in Table 4, there were a total of 36 approved land use permits for development. 13 of the approvals were within Core Area, 20 within Low Density, and 2 with both Core Area and Low Density. Table 5 shows that 27 building permits have been taken out as well. Of that number, 16 are structural and 11 are manufactured dwelling placements. 4 of the structural permits are on federally-managed lands for either new or existing cell towers, or remodeling an existing rest area. 6 of the 11 manufactured dwelling permits were for replacement of existing homes (structures).

Table 4 – Land Use Planning Permits (2003-2013)

30 Administrative Decisions:

Farm Dwellings - FD (160 acre or greater), Accessory Farm Dwelling - AFD, Lot of Record Dwelling - LORD
-> (Blue = No dwelling has been developed on the subject parcel)

03-10: (FD - 12.6 miles west of Drewsey)
03-29: (AFD - 8.9 miles north west of Riley)
03-32: (FD - 10.7 miles south west of French Glen)
03-33: (FD - 11.8 miles south west of French Glen)
03-36: (FD - 6 miles south west of French Glen)
03-45: (FD - 3.7 miles north west of Drewsey)
04-11: (AFD - 9.8 miles north east of Burns)
05-23: (AFD - 18 miles south of Fields (near Denio, NV))
06-23*: (LORD - 7.7 miles north of Andrews)
06-24*: (LORD - 7.7 miles north of Andrews)
06-51*: (LORD - 20.8 miles south east of Princeton)
07-01: (AFD - 13.2 miles south east of Princeton)
07-25: (FD - 4.8 miles south west of Hines)
07-69: (AFD - 4.9 miles north west of Drewsey)

07-76: (LORD - 5 miles south west of Andrews)
07-83*: (LORD - 9.6 miles south east of French Glen)
07-84*: (LORD - 10.9 miles south east of French Glen)
08-01*: (LORD - 8 miles east of Diamond)
08-02: (AFD - 9.1 miles south east of French Glen)
08-43*: (LORD - 5 miles north west of Andrews)
08-47: (FD - 7.5 miles south north/north east of Burns)
08-55: (AFD - 2.4 miles north west of Drewsey)
10-22: (FD - 3.3 miles north of Burns)
10-24: (FD - 0.8 miles south of Diamond)
10-25: (FD - 17.7 miles south east of Fields)
10-29*: (LORD - 14.7 miles east/south east of French Glen)
11-06*: (FD - 14.2 miles east of French Glen)
11-17*: (LORD - Forest Use Zone, 27 miles north/north east of Burns)
11-18*: (LORD - Forest Use Zone, 27 miles north/north east of Burns)
12-04: (AFD - .5 Miles from Drewsey)

Table 4 (continued) – Land Use Planning Permits (2003-2013)

6 Conditional Use Permits:
03-01: Non-Farm Dwelling (.45 Miles from Drewsey Rural Community)
05-36: Single-Wide MFH (Within Fields Rural Commercial Area)
07-04: Non-Farm Dwelling (North of USHWY 20, 2.4 Miles west from Hines)
07-13: Partition & Non-Farm Dwelling (5 Miles from Drewsey Rural Community)
07-56: Partition & Non-Farm Dwelling (North of USHWY 20, 4.5 Miles west from Hines)
08-35: Non-Farm Dwelling (1.5 miles SW of Fields Rural Service Center)

Table 5 – Building Permits (2003-2013)

Permit Type	Permit Number	Habitat Designation	Permittee	Work – Private/Federal
Structural	BLD03-00094	Core Area	Private Landowner	Pole Barn Storage Building, Private
	BLD04-00040	Core Area	Private Landowner	New single Family Dwelling, Private
	BLD04-00227	Low Density	Utility	Replacing existing foundation Only (MFH), Fields Service Yard (Home Site 1), Private
	BLD07-00132	Low Density	Private Landowner	Home Addition (existing), Private
	BLD08-00049	Low Density	Private Landowner	New single Family Dwelling, Private
	BLD10-00179	Low Density	Private Landowner	New single Family Dwelling, Private
	ST11-HAR0017	Core Area	Private Landowner	Home Addition (existing), Private
	ST11-HAR0032	Core Area	American Tower Corp.	New Cell Tower, Federal Lands
	ST11-HAR0038	Core Area	Verizon	Updates to existing Cell Tower, Federal Lands
	ST12-HAR0041	Low Density	BLM	Replacing restrooms at Sage Hen Rest Area (existing), Federal Lands
	ST12-HAR0056	Core Area	Private Landowner	New Garage, Private
	ST12-HAR0057	Core Area	Private Landowner	New single Family Dwelling, Private
	ST12-HAR0059	Low Density	BLM/Verizon	New antennas mounted to existing cell tower, Federal Lands
Manufactured Home	MA11-HAR0014	Core Area	Private Landowner	New MFH Placement, Private
	MA12-HAR0001	Low Density	Private Landowner	Replacing existing MFH, Private
	MA12-HAR0010	Core Area	Private Landowner	Replacing existing MFH, Private (ST12-HAR0042 – Daylight Basement Portion)
	MFH03-00043	Low Density	Private Landowner	Replacing existing MFH, Private
	MFH05-00012	Low Density	Private Landowner	Replacing existing MFH (Fields Rural Community), Private (BLD05-00037 – Stem Wall)
	MFH05-00038	Low Density	Private Landowner	Replacing existing MFH (Field Rural Community), Private
	MFH05-00057	Low Density	Private Landowner	New MFH (Fields Rural Community), Private
	MFH06-00012	Low Density	Utility	Replacing, existing MFH (Placement Fields service yard *Home Site 2), Private
	MFH06-00035	Core Area	Private Landowner	New MFH Placement, Private
	MFH07-0053	Core Area	Private Landowner	New MFH Placement, Private (BLD07-00254– Stem Wall)
	MFH09-00030	Low Density	Private Landowner	New MFH Placement, Private

Impact Analysis

Risk Assessment

According to the COT (Conservation Objectives Team) report, Harney County falls within an area designated as Management Zone V (5), the Northern Great Basin, or more pointedly the Western Great Basin Subarea (31). According to the report, this area contains one of the few remaining large intact expanses of sagebrush habitat, with most of the sagebrush-dominated landscape in Oregon. Oregon’s portion of the (bird) 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, though habitat in the Trout Creeks was likely compromised by 2012 fires. 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. Invasive weeds, fire, and juniper encroachment (particularly on the western edge) represent the greatest risks to this 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. 31 Table 6 depicts habitat fragmentation threats and their corresponding levels for Harney County (COT report).

Table 6 – Southeastern Oregon Sage-Grouse Risk Levels

Land Use Related Risk Levels	Threat Rating
Agriculture Conversion	Present, but localized
Energy	Present, but localized
Mining	Present, but localized
Infrastructure	Present, but localized
Recreation	Unknown
Urbanization	Not known to be present

Findings and Conclusion

As listed in the other county development reports, the COT does not provide a consideration of county land use programs. Harney County has zoning jurisdiction over a vast area principally reserved for natural resource production (agriculture and forest use). This development report shows that Harney County is effective in minimizing land use impacts or conflicts within its large regulatory jurisdiction (1,839,624 acres). As reflected in the other county reports, sparse residential population across a vast open landscape, coupled with agriculture and forest zoning have preserved non-federal lands as rural.

Harney County’s land use program does not pose a risk to sage-grouse populations. As listed earlier, agriculture-designated lands cover the large majority of non-federally managed parcels within the county. This zoning designation is important to the ecological values of the county and has largely been intact over the last decade. Oregon’s land use program has in place procedural steps for counties to change the land use designation of agriculture lands to residential or other uses by taking what is defined as a “goal exception.” From 2003 – 2013 only two exceptions (or re-zones) have occurred totaling 268 acres in area, both residential and in the same year (2006). Over a decade’s time only ½ of 1% of agriculture lands have been re-designated to a different land use

³¹ Sage-Grouse Conservation Objectives Report

purpose. This means that the large tract requirements of local agriculture lands have remained intact throughout the development study period. In Harney County, the large majority of these lands are utilized as range use, further highlighting the important correlation between local agriculture planning designation and the preservation of large tract (non-converted) sage brush lands.

Looking specifically at the development of these lands, the local land use planning and building programs show that over a ten year period, thirty six (36) land use permits have been approved within designated Core and Low Density habitat (of those, 11 have yet to be developed, all Lot of Record Dwelling approvals). All of these approvals are for single-family dwellings. 13 of the approvals were within Core Area, 20 within Low Density, and 2 with both Core Area and Low Density. Based on the current number of dwellings inside habitat on non-federal lands within Harney County (section IV), and conservatively proposing for the sake of this study that all existing dwellings (282) were there prior to said land use approvals and considered by ODFW when both Core and Low Density habitat ranges were developed, and considering that on average 3.6 dwelling permits are approved per year over a habitat area covering 782,107 acres, it is apparent that urban sprawl is not a habitat fragmentation threat in Harney County based on local land use regulatory controls. Building permit activity from 2003-2013 also show a limited amount of activity within habitat.

Development Activity within Core and Low Density Habitat on Privately-owned lands within Harney County (Data from Tables 4 and 5):

- Over the last ten years, an average of 3.6 new homes were approved for land use permits
- Only single-family dwellings approved, no other land use permit approvals were granted within habitat areas
- (9) building permits for new home sites (new residence)
- (11) building permits for existing homes being replaced, added on to, or updated (existing residence)
- (1) storage pole barn

It is clear that development trends in local land use decisions over the last decade have proven to be a strong tool for limiting potential developments not related to rural residential developments. Over the study’s 10 year period, no new county roads, transmission lines, or surface mining permits have been issued within Core or Low Density habitat ranges.

Table 7 – Harney County Habitat Risk Levels Revisited

Land Use Related Risk Levels	Threat Rating	Harney County Results
Agriculture Conversion	Present, but localized	Protected by land use laws, not a significant threat
Energy	Present, but localized	Regulated, limited opportunities, not a significant threat
Mining	Present, but localized	Regulated, limited acreage for sites, not a significant threat
Infrastructure	Present, but localized	Regulated, limited opportunities for growth, not a significant threat
Recreation	Unknown	Not regulated, limited travel/vehicle counts across state & county roadways, unknown threat level
Urbanization	Not known to be present	Regulated, not occurring

This report indicates that over a very large portion of non-federal lands, local development standards and policies have allowed for considerably low habitat fragmentation activity; however, one should also consider the total size Harney County’s landscape. The lands discussed within the report should be considered conceptually as an island of privately-owned tracts within a sea of publicly-managed lands. As depicted in Figure 1, public lands account for roughly 3 quarters of the landscape of Harney County, the largest county in Oregon, and the 9th largest in the continental United States. This is significant, considering the latest sage grouse population counts within the Burns BLM district compared to that of the surrounding regions as shown below. This indicates that county development policies do not pose a significant habitat fragmentation threat to Federally-managed lands, or comprehensively, the county as a whole.

Table 7 – Current BLM District Sage Grouse Populations

BLM District	County(ies)	2003 Population	2010 Population	Percent of Target
Baker RA	Baker, Union	1,566-2,546	872-1,650	61%
Burns	Harney	3,722-4,941	3,877-5,195	105%
Lakeview	Lake	8,613-10,134	5,523-6,445	64%
Prineville	Crook, Deschutes	2,072-2,440	1,775-2,084	86%
Vale	Malheur	8,474-13,921	9,016-11,740	93%
Statewide		24,447-33,982	21,064-27,115	82%

Lake County

Lake County Land Use Planning Program

Land Use Planning History

Lake County's land use planning program, as it is practiced and recognized today in relation to the Oregon Statewide Planning Program, began in the early 1980s. Although the county adopted a Comprehensive Plan on May, 1980, the plan was not issued a Land Conservation and Development Commission (LCDC) compliance acknowledgement order until July 8, 1982. The Plan has been amended a number of times with significant changes in July 1981, April 1982, February 1985, and also in June 1989. Minor adoptions including Plan Designation Amendments to allow for further development in areas approved for Goal 3 exceptions have been approve over the years although not included as a major topic of history in this report. None of those Amendments were in area of Wildlife concern. Planning Staff refer to Amended 1989 version of the Plan as the Amended Lake County Comprehensive Plan of 1989 (LCCP) and refer to this version of purposes of administration and to the Zoning Ordinance for implementation. With exception to the incorporated communities of Lakeview and Paisley, the LCCP provides the overarching development goals, policies, and recommendations for all lands within the county boundary. While the LCCP has been through a number of minor/major revisions, the plan itself is considered a living document in the sense that it will continually be updated, within the plan's specified framework, to reflect the needs and desires of the local community. Amendments have been made to ensure the plan continues to reflect community interests; however, the basic intent of the plan has not changed significantly.³² In 2013, Lake County will be applying for a Technical Assistant Grant through the Department of Land Conservation and Development (DLCD) to update the Comprehensive Plan and Implementing Ordinances. If awarded the Grant the plan will be modified to improve organization of the document with the aim to provide better administration and usability. The updating of references to Oregon Revised Statutes and Oregon Administrative Rules and the direct inclusion of the criteria that must be met by certain uses as well as the inclusion of those uses are all updates that will be reviewed and applied as appropriate, to see that the County is in compliance with the ORS and OAR requirements.

The plan contains tools (not all contained within the singular document) that provide guidance for the local program. Examples include the plan's maps which graphically depict primary or underlying zoning/plan designations such as the Exclusive Farm Use Zones, or other zoning overlays such as Urban Growth Boundaries or the Airport Approach Combining Zone. Another example can be found within the related and adopted inventories such as local aggregate mining sites, and envisioned commercial energy development areas as listed under the Lake County Renewable Energy Plan of October, 1984. The LCCP is implemented primarily through specific regulations contained within the Amended Lake County Zoning Ordinance of September 6, 1989. Other local plans and/or ordinances also contribute to implementing the goals and policies of the LCCP, such as the Lake County Transportation System Plan, Urban Growth Boundary agreements with the incorporated cities, Lake County Development Ordinance etc., all of which have been periodically updated.

³² Source Document 1: Lake County Comprehensive Plan, June 1989.

Comprehensive Plan and Zoning

Overview

The majority of lands within Lake County (not inclusive of the incorporated communities) fall under the county zoning designation of either A-1: Exclusive Farm Use which purpose “is intended to preserve productive agricultural land for the continued agricultural use in compliance with Comprehensive Plan provisions and in compliance with State Statute as a ‘qualified’ farm use zone”³³ or the A-2: Agriculture Use, which purpose is “to preserve grazing and other agricultural land, except in those areas designated by the Plan as Rural or Farm Residential, and to allow rural home sites, hobby farms and similar ‘not for profit’ farm residences in accord with Comprehensive Plan policies and provisions for such uses.”³⁴ These zoning designations are illustrated in the LCCP maps along with other specific zoning designations aimed at providing for area-specific appropriate development. Table 1 below lists the LCCP land use and zoning designations as found and described within the plan.

Table 1 – Lake County Comprehensive Plan and Zoning Designations

Comprehensive Plan and Zoning Designations	
Plan Designation (LCCP)	Zoning (Lake County Zoning Ordinance – LCZO)
A – Agriculture	Article 2: Exclusive Farm Use: A-1 Article 3: Agriculture Use: A-2
R – Range	Article 2: Exclusive Farm Use: A-1 Article 3: Agriculture Use: A-2 Article 5: Forest Use: F-1
F – Forest	Article 5: Forest Use: F-1 Article 2: Exclusive Farm Use: A-1 Article 3: Agriculture Use: A-2
RR – Rural Residential	Article 6: Rural Residential: R-1 Article 8: Suburban Residential: R-3
C – Commercial	Article 9: Commercial: C-1
FR – Farm Residential	Article 7: Farm Residential: R-2
RC – Rural/Recreation Center	Article 4: Rural Center: A-3 (Adel, Alkali Lake, Christmas Valley, Five Corners, Fort Rock, New Pine Creek, Plush, Quartz Mountain, Silver Lake and Summer Lake)
I – Industrial	Article 10: Light Industrial: M-1 Article 11: Heavy Industrial: M-2
P – Public	Public 12: Public Facility: P-F
Zoning Map Overlays	Zoning (Lake County Zoning Ordinance – LCZO)
Airport Approach	Article 13: Airport Approach Combining Zone: A-A
High Groundwater	Article 14: High Groundwater Combining Zone: H-G
Mobile Home Exclusion	Article 15: Mobile Home Exclusion Zone: R-A
Waste Disposal, Inactive Uranium Mill Tailings	Article 16: Waste Disposal, Inactive Uranium Mill Tailings Zone: WD
Geological Hazard	Article 17: Geological Hazard Combining Zone: G-H
Significant Resource	Article 18: Significant Resource Combining Zone: S-R
Limited Use	Article 19: Limited Use Combining Zone: L-U

³³ Source Document 2: Lake County Zoning Ordinance, September 1989, Article 2, Section 2.01.

³⁴ Source Document 3: Lake County Zoning Ordinance, September 1989, Article 3, Section 3.01.

Zoning and Overlays within Sage-Grouse Designated Areas

To assess Core Area and Low Density habitats in Lake County, the county was divided into 21 sub areas. Each map depicts the following over the period of 2003 to current:

- Development: Existing homes permitted since 2003 and additional land use permits within habitat areas
- Ownership: Land ownership, rural communities, and Core/Low Density habitat areas
- Zoning: County base zoning districts and DOGAMI surface mining permit locations

Table 2 summarizes in acres and parcels, County zoning within ODFW's Core Area and Low Density habitat on federal and non-federal (private) lands. It should be noted, as in other county reports, that some parcels overlap both habitat designations and that there are gaps between habitat designations in the GIS layers exist, and so for the purposes of this report these instances have been reported conservatively as Core Area.

Table 2 – Lake County Zoning Designations within ODFW's Core and Low Density Habitat

	Core Area		Low Density		Total Acres	Percent in Sage-Grouse Habitat
	Federal Lands	Non-Federal Lands	Federal Lands	Non-Federal Lands		
Exclusive Farm Use: A-1						
Acres	0.22	2,342.79	478.87	6,183.61	9,005.49	0.17%
Parcels						
Agriculture Use: A-2						
Acres	884,293.32	135,938.87	677,390.63	78,899.12	1,776,521.94	33.20%
Parcels						
Forest Use: F-1						
Acres	2,900.40	18.11	9,271.97	305.71	12,496.19	0.23%
Parcels						
Rural Residential: R-1						
Acres	0.00	0.00	0.00	66.72	66.72	0.0012%
Parcels						
Farm Residential: R-2						
Acres	8,877.43	488.16	208.45	0.00	9,574.04	0.18%
Parcels						
Total Acres in Sage Grouse Habitat						
	Core Area		Low Density		Total Acres	Percent in Sage-Grouse Habitat
	Federal Lands	Non-Federal Lands	Federal Lands	Non-Federal Lands		
	896,071.36	138,787.93	687,349.93	85,455.16	1,807,664.38	33.78%
	16.75%	2.59%	12.85%	1.60%		
Total County Acres					5,350,660.45	

Existing Habitat Conservation Measures and Zoning Designations

Wildlife Mapping and Protection within Sage Grouse Designated Areas

When the LCCP was first acknowledged in 1982 official maps were made a part of the document that outlined or depicted particular areas of sensitivity or importance. Lake County organizationally formatted its plan to correspond with the related Oregon State Planning Goals. An example of this is within Chapter 5 of the LCCP. It has goals and policies relating to the county's natural resources. The county has these resources inventoried in either tabular or mapping form. In many county goal 5 inventories, a protection element or program is established for each singular site or region. Lake County's wildlife inventory is composed of a tabular listing of resource site name/description (such as "big game winter range") and a corresponding area listed within the Plan map depicting coverage ranges.

Lake County has taken a broad range approach regarding programs for resource protection relating to wildlife habitat. As an example, under big game resource areas (including Mule Deer and Rock Mt. Elk habitat ranges) the program for protection listed states as a Plan Policy "That the Oregon Department of Fish & Wildlife's 'Fish & Wildlife Habitat Protection Plan of Lake County' will be recognized as a guideline for Plan implementation.³⁵ An additional Comprehensive Plan Policy states, "That new uses within the Hart Mountain Nation Antelope Refuge Boundary will be limited to wildlife management, livestock grazing, and incidental recreation. No new residential, commercial or industrial uses will be allowed."³⁶ However, two other County Policies state the need to "determine support...only after consideration of economic and environmental consequences of both protection and non-protection."³⁷

It is fairly apparent that while Lake County has goals to conserve and protect existing fish and wildlife areas, its related preservation policies are intended to provide for broad flexibility of habitat protection measures (not site specific). Lake County's implementation strategy for these policies is to provide notice and an opportunity to comment on land use applications to ODFW.

The original inventory data and mapping is still officially utilized since the plan was acknowledged in 1982. Over the years Lake County staff has worked with ODFW to attain more updated and accessible mapping data to be utilized in administering the plan's wildlife preservation implementation strategy. Said strategy is aimed at providing ODFW an opportunity to aid the county in review of a development and landowner's development objectives by commenting and even producing recommendations on how to either avoid or mitigate for impacts to big game winter range and/or other sensitive species habitat areas. The conditional use provisions of Article 24 of the LCZO provide the county opportunities to impose conditions of approval which can directly execute the recommendations from ODFW. To that end, Lake County has regularly provided notice to or communicated with ODFW relating to proposed developments within areas of either big game habitat/winter range, or sensitive species habitat.

Exclusive Farm Use (A-1) & Agriculture Use (A-2) Zones

The lands designated for exclusive farm use within Lake County are zoned Exclusive Farm and Agriculture Use (A-1 & A-2). These designations are nearly identical, with the minimal difference being the wording of the purpose of the zone, as well as lands zoned A-2 may have a plan designation of RR – Rural Residential or FR – Farm Residential. Either lot has the possibility of being designated as either A- Agriculture or R – Range by the Comprehensive Plan, thus the minimum size that a parcel can be partitioned to would be 80 acre minimum – Agriculture and 160 acre minimum - Range. Lake County applied this designation to both private and federally-managed lands within its boundary lines. As a matter of perspective, Lake County's has a total of more than 5 million acres of which only 250,000 acres, which is less than 5% of the total County acres are privately owned and

³⁵ Lake County Comprehensive Plan, June 1989, Planning Guidelines (V)(B)(3).

³⁶ Lake County Comprehensive Plan, June 1989, Planning Guidelines (V)(B)(2).

³⁷ Lake County Comprehensive Plan, June 1989, Planning Guidelines (V)(B)(13 & 14).

thus regulated through a County Land Use Process if not outright permitted by the underlining zone. A number of land uses are outright permitted as they have significant value to preserving the historical use of the land (i.e. grazing and agricultural uses). In fact, 74.53% of the county is zoned, 3,986,224.98 acres are federally owned, and another 112,562.65 (2.10%) acres are State owned. The majority of these lands are designated either Farm or Forest lands including Range land.

The EFU zoning designations follow closely to Oregon Statutory standards and related Oregon Administrative Rules, which are guided by the principles established under Goal 3 of the Oregon Statewide Planning system (protection of agriculture lands). In Lake County the most prevalent development type aside from agriculture is housing related to farm use. Two types of housing are allowed in the zone: Dwellings on parcels 80 acres in size or larger (most common), or dwellings provided to families that have owned specific tracts of land prior to 1/1/1985 (although never applied for in Lake County), where only one dwelling per tract is permitted through this process. Farm-related dwellings may also be allowed on tracts below 80 acres in size if the corresponding farm operation on the tract has produced a certain amount of revenue over time (uncommon in Lake County). Otherwise, dwellings are conditionally permitted on tracts of land smaller than 160 acres, however they move through a more stringent set of standards and must be found to not inhibit the expansion of existing farming operations in the area. Proposed partitions of parcels above the minimum standards that will continue to be used for agriculture are reviewed administratively. All proposed partitions that are below the minimum acreage must be reviewed by the Planning Commission to see that the property is not able to be farmed, and a finding that the partitioning will not negatively impact the farming/ranching in the area. This standard has lessened the possibility for high dwelling density or urban sprawl based on the limited opportunities for dwelling as per the stringent Conditional Use Permit criteria.³⁸

Forest Use (F-1) Zone

The forest land in Lake County, zoned F-1, is primarily on the west side. However, the Warner Range, located in the South Central part of Lake County, is also zoned and designated Forest. The majority of the land zoned Forest is in federal ownership, with the remaining acres scattered throughout the forest zone by multiple owners. The minimum parcel size in the F-1 zone is 80 acres, however very few land divisions have occurred since the early 1980s. There are 3 possible ways to permit a single-family dwelling in the F-1 zone: (A) Large Tract (240 contiguous acres or 320 throughout the county), (B) dwellings provided to families that have owned specific tracts of land prior to 1/1/1985 (although never used in Lake County), and (C) on a tract of land that is capable of producing a certain range of cubic feet per acre of wood fiber, etc. In addition, new dwellings proposed within the Forest Use Zone must also comply with strict siting standards relating to access from public roads, water supply needs, and meet stocking requirements of the Department of Forestry. Lands zoned Forest also have the possibility of being within the Big Game Habitat inventoried areas, thus additional siting standards shall be met, which are required by the Significant Resource Combining Zone.

The F-1 zone is the most restrictive zoning district for new developments. Due to a low amount of privately-owned land and large lot size requirement for new dwellings, very few new dwelling approvals are located within the Forest Use Zone. In fact, no new approvals over last decade have occurred in the F-1 zone or in Sage Grouse habitat areas in the F-1 zone.

Built Environment and Development Activity

Roads and Utilities

Lake County is located in the south-central portion of Oregon and encompasses 8,359 square miles. Lake County has two north-south trending highways and one highway for east-west travel. The Fremont Highway (OR 31/US 395) and the Lakeview-Burns Highway (US 395) provide for north-south travel and the Klamath Falls-Lakeview

³⁸ Source Document 7: Lake County Zoning Ordinance, September 1989, Article 24, Section 24.19.

Highway (OR 140) and the Warner Highway (OR 140) traverse the southern portion of the county and provide for east-west travel. Central Oregon Highway (US 20) also provides an east-west link at Lake County’s northern boundary.³⁹ These State Highways as well as many County Roads have been designated as within Core and Low Density areas. The jurisdiction of roads within the County include: BLM, Forest Service, State and County, along with many private roads. County designated roads span approximately 757 miles within Lake County, many of which have sections of road that fall within Core Area and Low Density habitat respectively. BLM roads totaling approximately 2,500 miles all of which are made of gravel or natural surfaces, are also within Sage Grouse habitat. US Forest Service roads are also of gravel and natural surfaces with paved roads totaling 240-250 miles of the approximate 7,000 miles. There are nearly 305 miles of state highway in Lake County, with areas in which Core and Low Density covers. While minor alterations have been made to existing roads, no new county roads have been created from 2003-2013. Highway 31 is registered as a National Scenic Byway. Figure 1 shows the locations of major overhead transmission lines (including lines owned by Bonneville Power Administration, Surprise Valley Electric, Pacific Corp and Harney County Electrical Cooperative) totaling approximately 300 miles through the region, with about half of those miles within sage grouse habitat. The Ruby Pipeline, a natural gas utility line, lies within Lake County on the southern boundary extending on into Klamath County. This pipeline was permitted through a Federal Government process in the mid 2000’s. The Ruby Pipeline is not depicted in figure 1.

Surface Mining Sites

There are a total of 15 surface mines within Core Area and Low Density habitat on non-federal lands, 9 are closed and 6 active/permitted/exempt.⁴⁰ DOGAMI GIS (Oregon Department of Geology and Mineral Industries) reports that of the 15 sites that are disturbed by surface mines in Lake County, 9 are in Core Habitat 6 sites are disturbed in Low Density habitat. Each site is not more than 5 acres in size and located near an existing road way. Lake County has not permitted a surface mine within Core Area or Low Density habitat from 2003 – 2013. Table 3 lists the 15 surface mines within ODFW sage grouse habitat. All permits on Federal and Non-Federal lands are included on the list.

Table 3 – DOGAMI Permits within Sage Grouse Habitat

Surface Mining Site - DOGAMI Permit # & Permittee (Federal or Non-Federal Lands)	Habitat Designation	Status
19-0034 – Robert E. Mitchell (Federal)	Core Area	Closed
19-0045 – Gordon & Don Tracey (Federal)	Core Area	Closed
19-0071 – ODOT – Bend (Federal)	Core Area	Closed
19-0036 – ODOT – Bend (Federal)	Core Area	Permitted
19-0046 – ODOT – Bend (Federal)	Core Area	Permitted
19-0108 – Collins Timber Company, LLC (Non-Federal)	Core Area	Closed
19-0017 – Lake County (Non-Federal)	Core Area	Exempt
19-0041 – ODOT – Bend (Non-Federal)	Core Area	Permitted
19-0109 – Jay & Gloria Counts (Non-Federal)	Core Area	Permitted
19-0031 – Robert E. Mitchell (Federal)	Low Density	Closed
19-0032 – Robert E. Mitchell (Federal)	Low Density	Closed
19-0072 – U.S. Minerals Exploration (Federal)	Low Density	Closed
19-0084 – Glenn D. Plato (Federal)	Low Density	Closed
19-0073 – Cornerstone Industrial Minerals Corp. (Federal)	Low Density	Permitted
19-0114 – Sierra Cascade LLC (Non-Federal)	Low Density	Closed

³⁹ Lake County Transportation System Plan, 2002.

⁴⁰ DOGAMI Online Permit Inventory Weblink: <http://www.oregongeology.org/mlrr/surfacemining-report.htm>

Figure I – County Roads and Transmission Lines

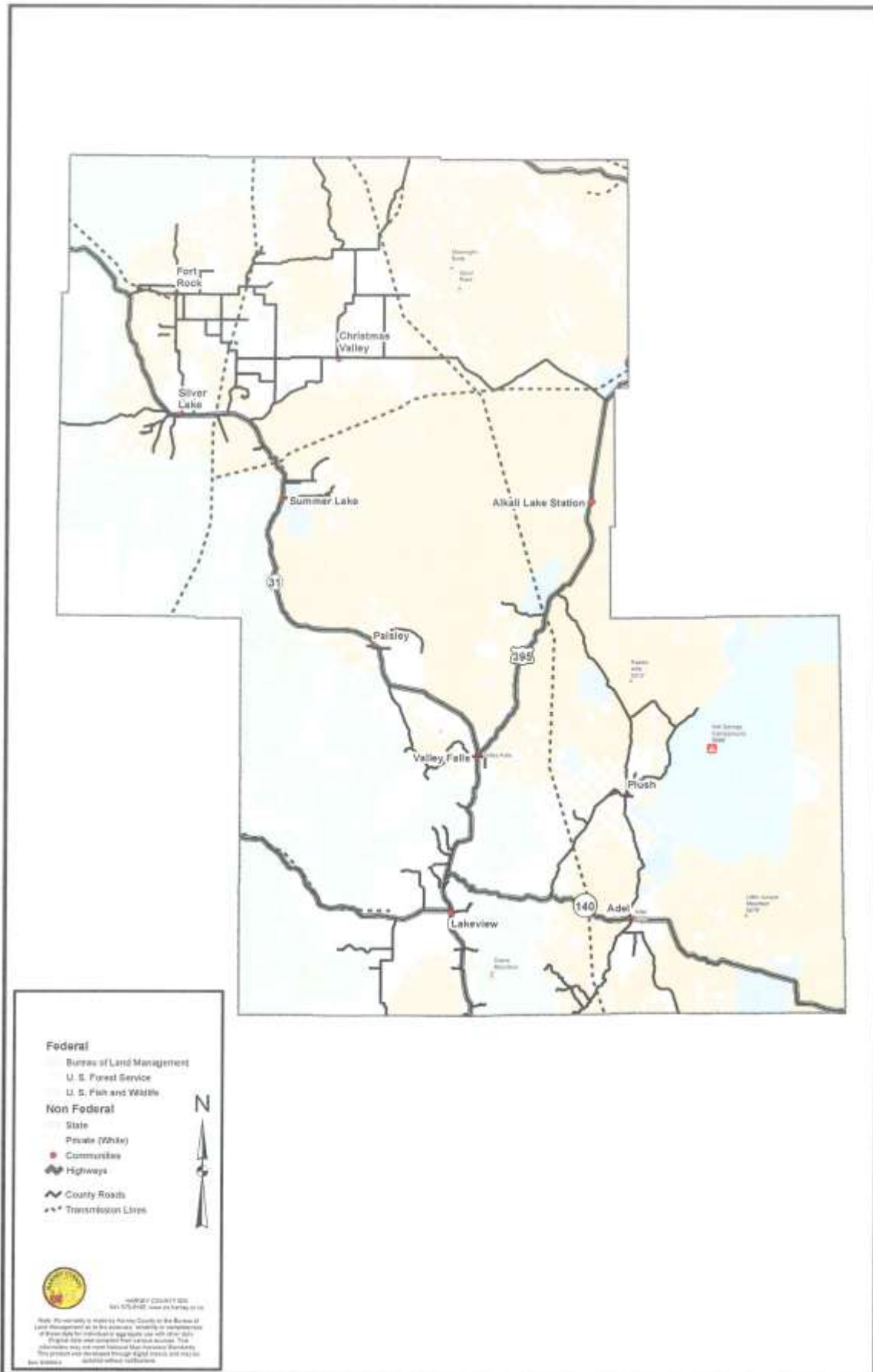
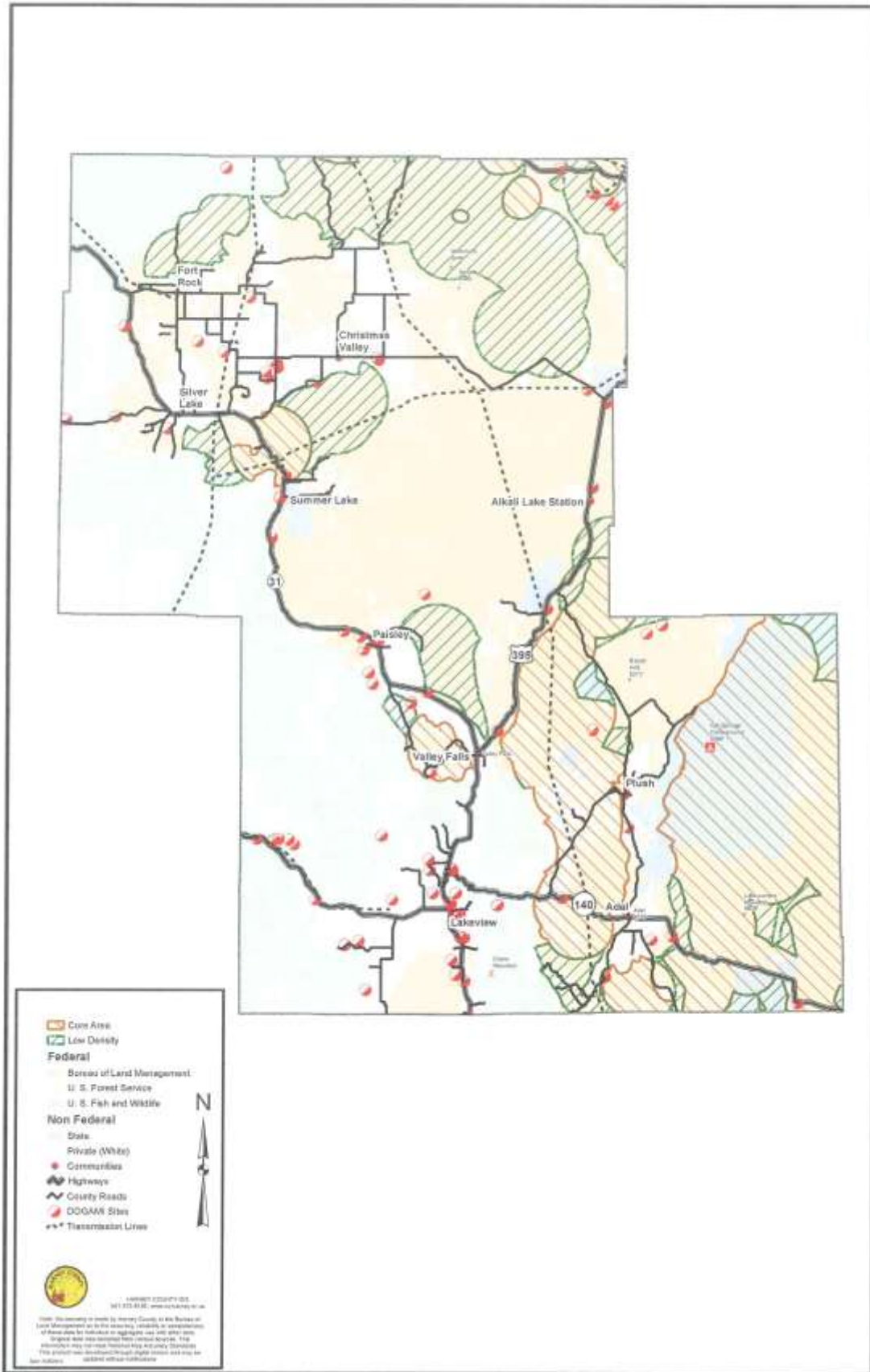


Figure 2 – Mapped DOGAMI Permits for Surface Mines within Sage Grouse Habitat on Non-Federal Lands including Transmission Lines



Land Use and Building Permit Activity (2003-2013)

Table 4 lists the land use planning decisions and assessed real market building values issued from 2003 to 2013 within Core and Low Density habitat. As shown in Table 4, there were a total of 19 land use files of which 16 were approved for development, 2 denied and 1 withdrawn by the applicant. Of the 16 approvals 11 were within Core Area, 5 were within Low Density. Of the 16 approvals 4 of the approvals are on 2 lots, and 1 was a partition with no development. There was a total of 10 Non-Farm Dwellings of which 3 are built, 2 are partially built and the remaining 5 are not built.

Table 4 – Land Use Planning Permits (2003-2013)

Year	Land Use File #	Use	Decision	Acct	T	R	Sec	TL	Acres	Real Market Building	Habitat
2003	927-CUP	School	Denied	8348	28	16	-	202	20.00	\$0	Low D.
2004	940-CUP	Non-Farm Dwelling	Approved	10279	36	23	31	2400	40.00	\$1,410	Core
2004	955-CUP	Non-Farm Dwelling	Approved	10367	36	24	-	900	20.00	\$4,800	Core
2004	128-FD	Farm Dwelling	Approved	9853	36	23	-	3500	280.00	\$0	Core
2005	985-CUP	Non-Farm Dwelling	Approved	18264	33	24	-	102	20.44	\$10,031	Low D.
2005	1028-CUP	Non-Farm Dwelling	Approved	15328	39	22	-	1100	39.61	\$0	Core
2005	1401-AP	Admin Partition	Approved	10516	37	23	-	1400	266.90	-	Core
2006	1096-CUP	Non-Farm Dwelling	Approved	17870	29	17	-	1601	32.40	\$0	Low D.
2006	1097-CUP	Non-Farm Dwelling	Approved	8155	29	17	-	400	15.48	\$0	Low D.
2006	1098-CUP	Non-Farm Dwelling	Approved	8155	29	17	-	400	15.48	\$0	Low D.
2006	148-ZP	Farm Dwelling	Approved	18458, 18459	29	16	-	801, 802	200.00	\$0	Core
2006	149-ZP	Farm Dwelling	Approved	18460	29	16	-	803	490.00	\$69,380	Core
2007	1117-CUP	RV Campground	Approved	81	24	18	-	200	630.50	\$94,180	Low D.
2007	1123-CUP	Temporary Storage	Approved	7876	28	16	20	2100	17.27	\$83,405	Core
2007	1127-CUP	Non-Farm Dwelling	Approved	7876	28	16	20	2100	17.27	\$83,405	Core
2009	1478-TP	Partition	Denied	6812	27	18	-	7300	20.00	-	Low D.
2009	1481-TP	Partition	Withdrawn	7899, 7895	28	16	21	1100, 900	25.03	-	Core
2010	1245-CUP	Non-Farm Dwelling	Approved	15732	40	27	5	100	98.15	\$0	Core
2010	10-0179-ZP	Non-Farm Dwelling	Approved	8388	30	16	01B	100	2.33	\$106,580	Core

Impact Analysis

Risk Assessment

According to the COT (Conservation Objectives Team) report, Lake County falls within an area designated as Management Zone V (5), more pointedly the Western Great Basin. According to the report, this area contains one of the few remaining large intact expanses of sagebrush habitat, with most of the sagebrush-dominated landscape in Oregon. Oregon's portion of the (bird) 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, though habitat in the Trout Creeks was likely compromised by 2012 fires. 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. Invasive weeds, fire, and juniper encroachment (particularly on the western edge) represent the greatest risks to this 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.⁴¹ Table 5 depicts habitat fragmentation threats and their corresponding levels for Lake County (COT report).

Table 5 – Southeastern Oregon Sage-Grouse Risk Levels

Risk Levels (Land Use Related)	Threat Rating
Agriculture Conversion	Present, but localized
Energy	Present, but localized
Mining	Present, but localized
Infrastructure	Present, but localized
Recreation	Unknown
Urbanization	Not known to be present

Findings and Conclusion

As listed in other county reports, the COT does not provide a consideration of county land use programs. Lake County has zoning jurisdiction over a vast area principally reserved for natural resource production (agriculture and forest use). This development report shows that Lake County is effective in minimizing land use impacts or conflicts within its large regulatory jurisdiction (1,362,312 acres). As reflected in the other county reports, sparse residential population across a vast open landscape, coupled with agriculture and forest zoning have preserved non-federal lands as rural.

Lake County's land use program does not pose a risk to sage-grouse populations. As listed earlier, agriculture-designated lands cover the large majority of non-federally managed parcels within the county. This zoning designation is important to the ecological values of the county and has largely been intact over the last decade. Oregon's land use program has in place procedural steps for counties to change the land use designation of agriculture lands to residential or other uses by taking what is defined as a "goal exception." From 2003 – 2013 no exceptions (or re-zones) have occurred within Habitat areas.

⁴¹ Sage-Grouse Conservation Objectives Report

Over a ten year period, sixteen (16) land use permits have been approved within designated Core and Low Density habitat (of those, 8 have yet to be developed). Of the total land use approval 3 were for Farm Dwellings which are a use that is found to be in conjunction with the purposes of the State Land Use goals and system. The remaining were for Non-Farm related uses that have a place in the County and State as a whole and are conditionally allowed. Of these, the majority were within 1 mile of being out of habitat area and located on existing major roadways. The total land use approvals averages out to less than 1.5 permits a year over a 10 year period. The majority of these approvals are for single-family dwellings with one RV-campground approved on a ranch that likely is looking for a bit of supplemental income for the improvement of their ranch. Based on the number of new dwellings and uses inside habitat on non-federal lands within Lake County (Table 4), it is apparent that urban sprawl is not a habitat fragmentation threat based on local land use regulatory controls. Building permit activity from 2003-2013 also show a limited amount of activity within core and low density habitat. Only 8 total sites developed within the time period studied, with two of those related to the same site (e.g., temporary storage became a permanent non-farm dwelling).

It is clear that development trends in local land use decisions over the last decade have proven to be a strong tool for limiting potential developments not related to rural residential developments. Over the study's 10 year period, no new county roads, transmission lines, or surface mining permits have been issued.

Malheur County

Malheur County Land Use Planning Program

Land Use Planning History

Comprehensive planning in Malheur County began in 1966. At that time, Oregon counties were authorized (but not required) to adopt planning and zoning regulations for all or part of their lands. In cooperation with the Bureau of Municipal Research and Service, the Malheur County Planning Commission developed a comprehensive plan for the Ontario-Nyssa-Vale area. However, the plan was never officially adopted by the county.

In 1969 the Oregon State Legislature mandated that all Oregon counties adopt comprehensive plans and zone their lands. In accordance with the provisions of ORS 215.050 and 215.055, the county adopted its first official comprehensive plan and zoning ordinance in 1973.

In 1976 Malheur County and its cities established the Comprehensive Planning Office funded by a combination of LCDC and local moneys. The comprehensive planning staff began by preparing a series of background reports to provide detailed information on which to base the plans. The staff then worked with each of the cities and their citizens advisory committees to develop comprehensive plans for Ontario; Nyssa, Vale, Adrian and Jordan Valley. At the same time, the staff developed a draft comprehensive plan for Malheur County.

After countless work sessions with citizen's advisory committees, major revisions to the plan, at least four series of public hearings, and extensive review sessions with the Planning Commission and County Court, this document has evolved as Malheur County's comprehensive plan.

The plan includes zoning/plan designations for example Exclusive Farm and Range Use, Urban Growth Boundaries and other overlays.

Comprehensive Plan and Zoning

Zoning and Overlays within Sage-Grouse Designated Areas

The majority of lands within Malheur County (not including incorporated areas) are designated as resource or agriculture and forest preservation. These zoning designations are aimed at providing for area-specific appropriate development.

Table 1 summarizes in acres and parcels, County zoning within ODFW's Core Area and Low Density habitat on federal and non-federal (private) lands. It should be noted, as in other county reports, that some parcels overlap both habitat designations and gaps between habitat designations in the GIS layers exist. So, for the purposes of this report these instances have been reported conservatively as Core Area.

Table 1: Malheur County Zoning Within ODFW Core and Low Density Habitat

	Core Area		Low Density		Total Acres	Percent of Sage-Grouse Habitat
	Federal Lands	Non-federal lands	Federal Lands	Non-federal lands		
Exclusive Farm Use, (C-A1)						
Acres	5.08	1,183.65	8.81	347.6	1,545.00	0.03%
Parcels	1	49	1	20		
Exclusive Range Use, (C-A2)						
Acres	2,120,713.12	574,747.00	1,493,908.76	382,551.32	4,571,920.20	99.59%
Parcels	621	1299	513	1076		
Exclusive Farm Forest Use (C-A3)						
Acres	1,442.00	4,240.94	1,121.92	9,983.94	16,788.80	0.37%
Parcels	7	18	6	33		
Rural Service Center (C-RSC)						
Acres	0.00	266.48	0.00	6.79	273.27	0.01%
Parcels	0	117	0	7		
Total	2,122,160.20	580,438.07	1,495,039.49	392,889.51	4,590,527.27	100.00%

Existing Habitat Conservation Measures and Zoning Designations

“Goal 5” and Wildlife Mapping and Protection within Habitat Areas

When Malheur County adopted the Comprehensive Plan and Zoning Ordinance in 1988, official plan maps were approved by Malheur County to outline particular areas of importance. Once such map (map 8) depicts the county’s fish and wildlife habitat areas. Inventories of Malheur County’s fish and wildlife habitats are presented in the “Fish and Wildlife Protection Plan” prepared by ODFW (basis for mapped areas).

Malheur County’s policy is to provide notice and an opportunity to comment on land use applications to ODFW. Adjacent landowner will also be on pending land use actions and allowed and opportunity to comment.

This policy will provide the opportunity for ODFW to assist the county in review of a land use action by comment and/or recommendations on how to either avoid or mitigate impacts on sensitive species habitat areas.

Flood Plain Zone Overlay

Flood Plains in Malheur County consist of a very small area mainly along the Snake, Malheur and Owyhee River. Development is generally discouraged in the 100 year flood plan and not allowed in the flood way. A very small area is located in the low density area.

EFU & ERU Zones

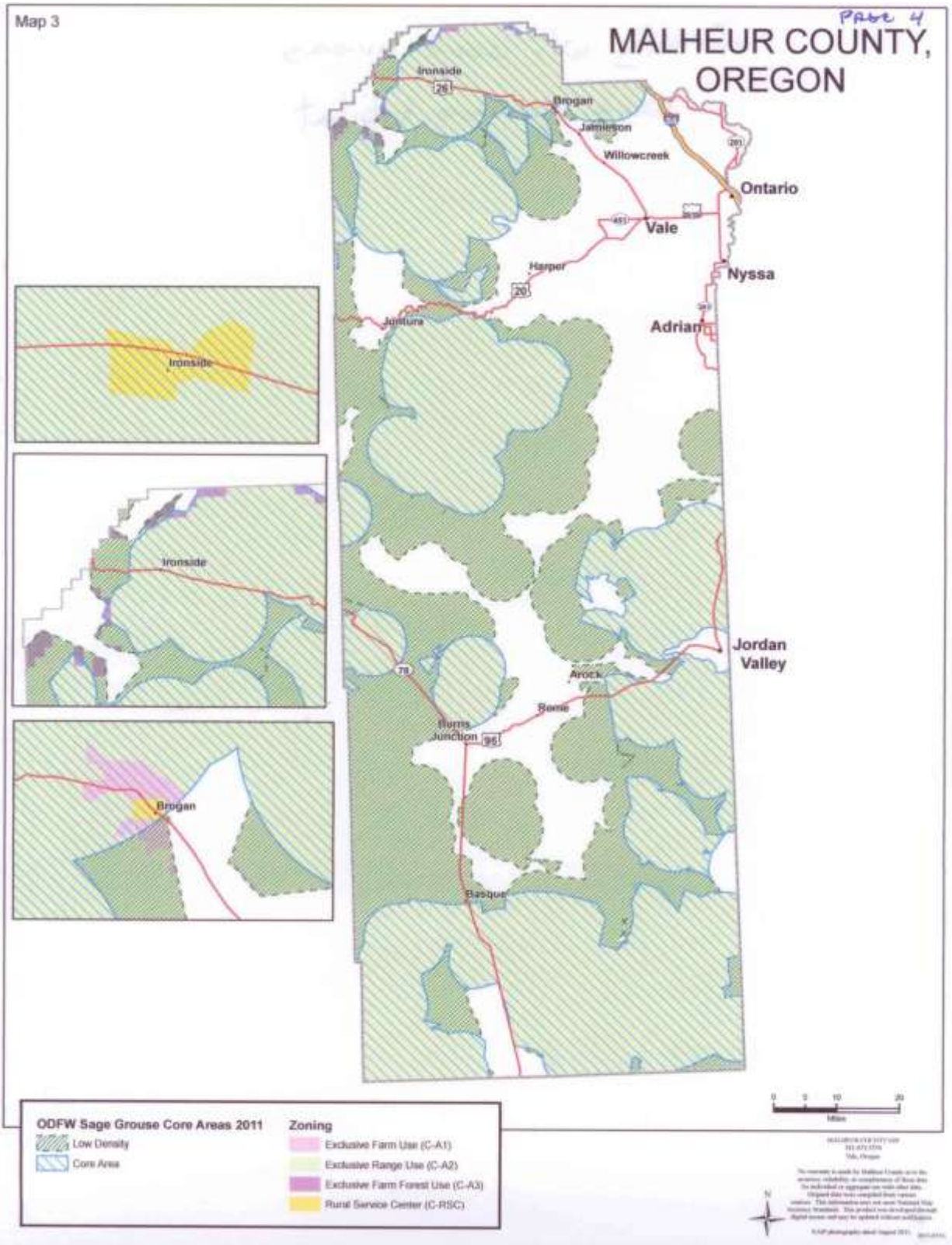
The designated agricultural lands in Malheur County fall under two zoning classifications: Exclusive Farm Use (EFU) and Exclusive Range Use (ERU). The only difference is the size of the parcel that can be partitioned. These designations apply to both private and federal lands.

The EFU and ERU zoning designations follow closely to Oregon Statutory standards and related Oregon Administrative Rules, which are guided by the principles established under the 3rd goal of the Oregon Statewide Planning system (protection of agriculture lands). There are 22 dwelling sites split evenly between the Core Area and Low Density Existing housing in these large areas is predominantly related to farm/range use (dwellings permitted on large private tracts). Non-Farm dwellings are allowed as a Conditional Use, however they must meet a more stringent set of standards and must be found to not inhibit the expansion of existing farming operations in the area. This standard has lessened the possibility for high dwelling density or urban sprawl based on the limited opportunities for dwelling per ownership tract.

EFFU Zone

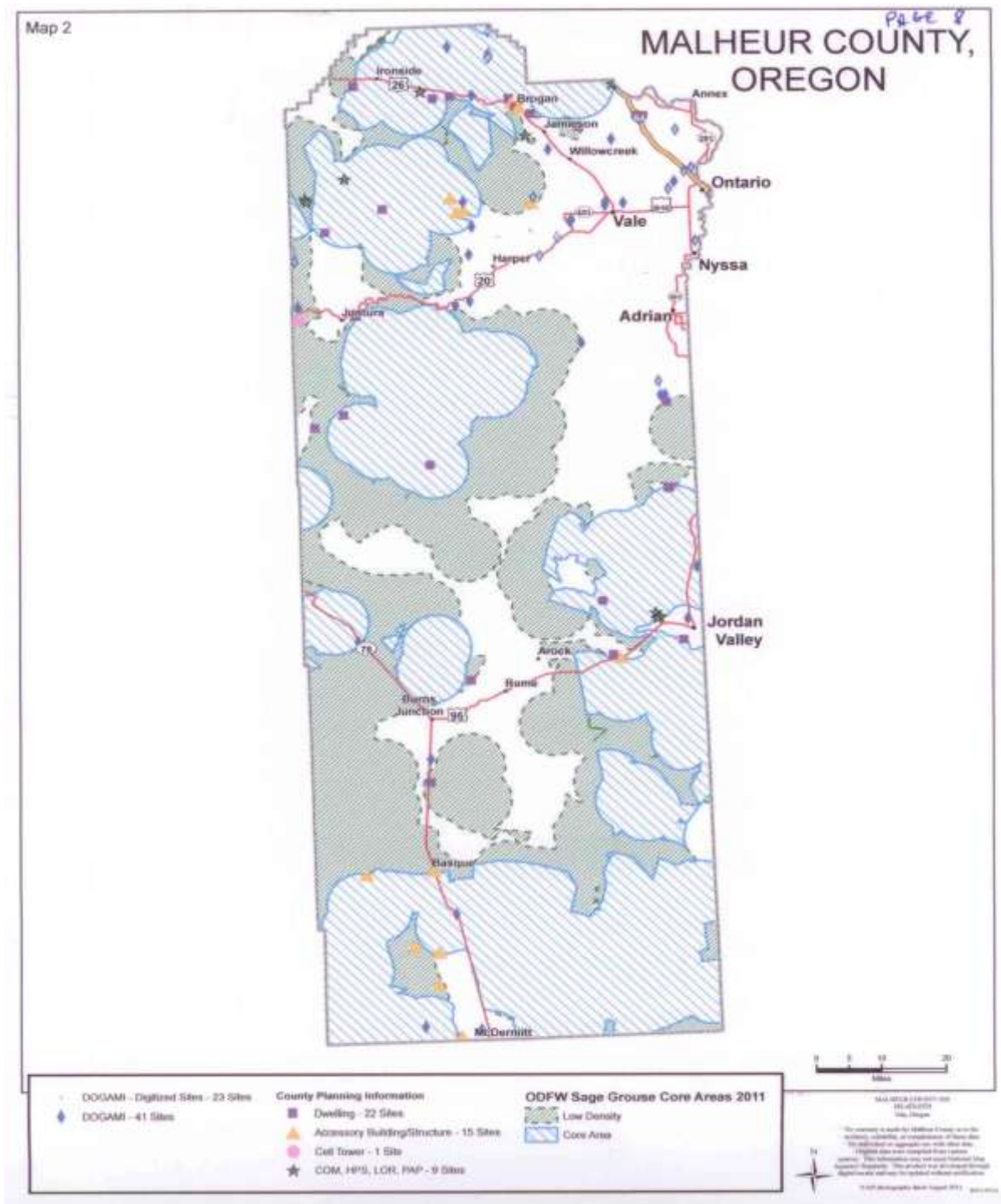
Malheur County has a small amount of what is designated as mixed Farm and Forest Use. Only 0.37% of the EFFU Zone is located in the Sage-Grouse habitat.

Map 1: Malheur County Sage-grouse Core & Low Density



Built Environment and Development Activity

Map 2: Malheur County Permitted Sites in Sage-grouse Habitat



Housing Units/Structural Developments

Malheur County is the most populous of the Southeastern counties within the region, having a population of 30,630 (2012 US Census Bureau). The County's population centers consist mostly of its incorporated cities: Adrian, Jordan Valley, Nyssa, Vale, with its largest being Ontario. A number of unincorporated communities are also located within the county. With the exception of Brogan (unincorporated community) none of Malheur County's population centers is within Core Area or Low Density Sage Grouse habitat ranges. The community of Brogan is within Core Area habitat and has a total of 24 dwelling units within its designated zoning district (see map 1).

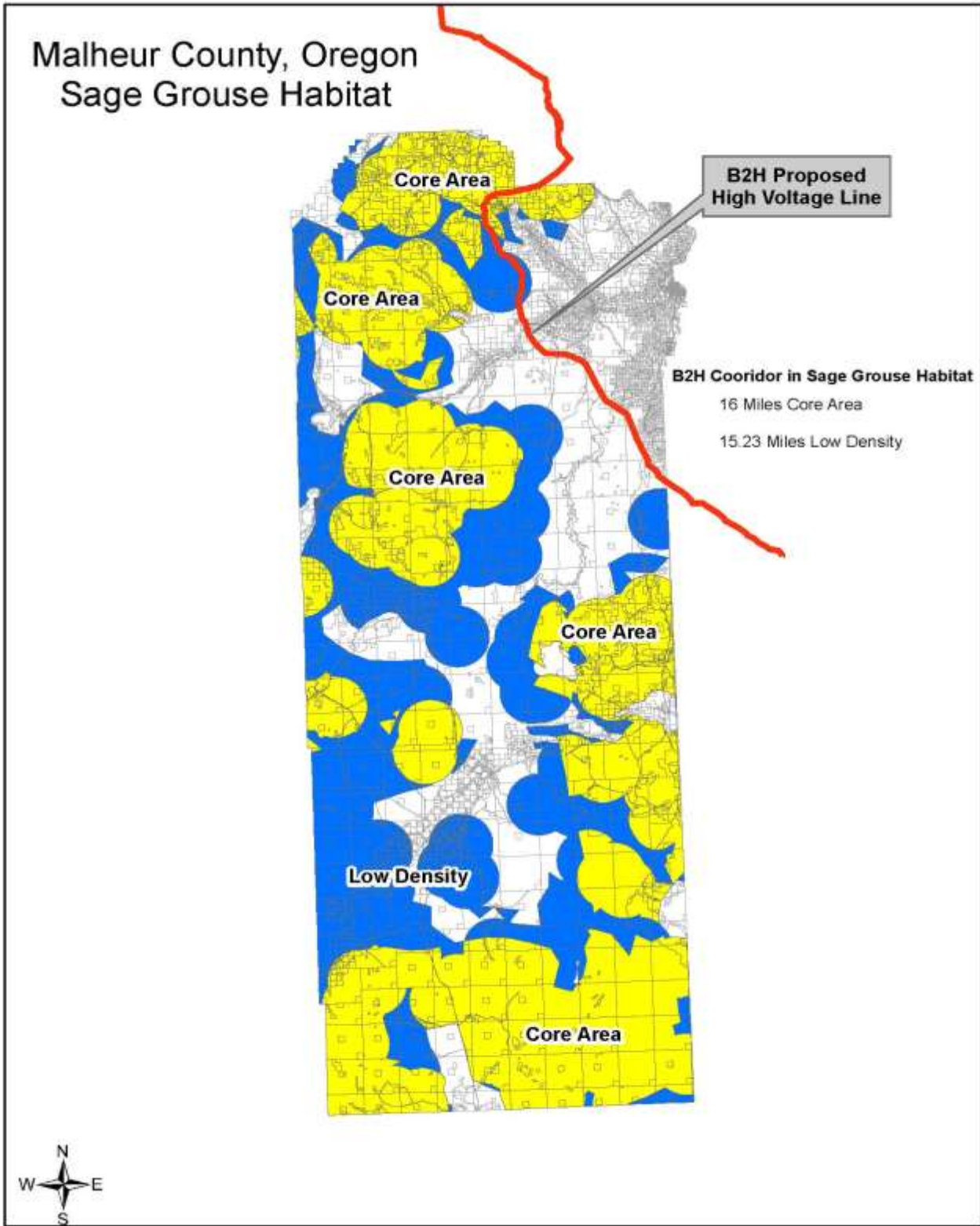
With Brogan aside, local addressing records indicate that there are a total 22 housing units or single-family dwellings within 973,327.72 acres of non-federal lands designated Core Area and Low Density habitat. 14 of those dwellings are within Core Area and 8 are within Low Density. Malheur County also tracks accessory 'agriculture buildings' (e.g., barns, machinery sheds, etc...). A total of 15 such buildings are located in both Core and Low Density. See Map 2 "*Malheur County Permitted Sites in Sage-grouse Habitat.*"

Roads and Utilities

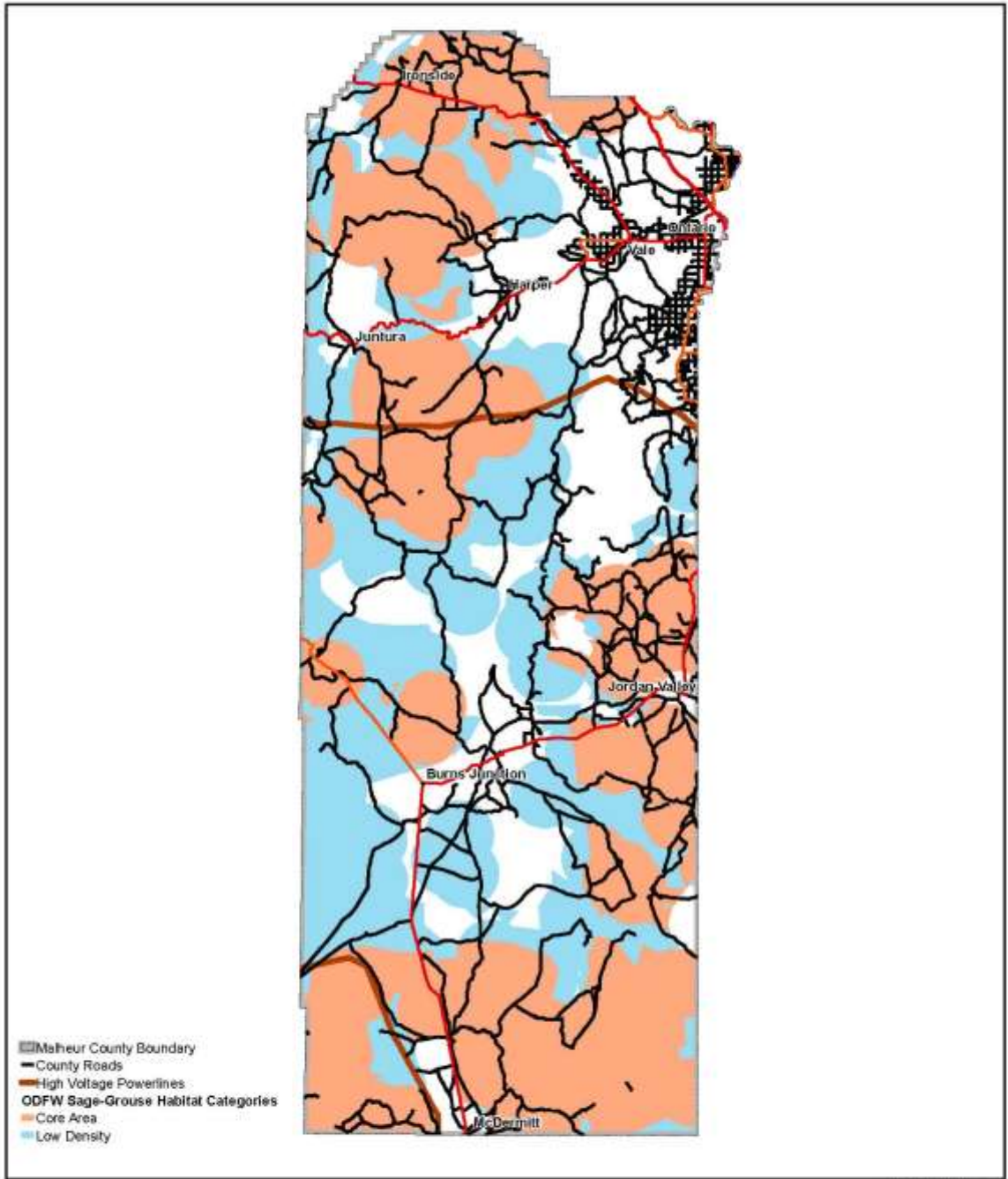
Malheur County's county road system has been constructed principally for the purposes of life safety. These roads are critical for emergency access to federal and private lands throughout the county. Excluding the Federal and State Highway system (*U.S. HWY 20, 26, 95, and interstate 84*) there are 518 county designated roads spanning approximately 2,920 miles within Malheur County. 127 of these roads intersect BLM lands. 1,071 and 604 road miles are in Core Area and Low Density habitat respectively. While alterations have been made to existing roads, no new county roads have been created from 2003-2013.

Existing overhead high voltage transmission lines in Malheur County total 46 miles within Core Area and 32 miles within Low Density. Although not constructed, Idaho Power has proposed a new high voltage power line through habitat areas (see map 3 below) known as the "Boardman to Hemingway" or "B2H" line. The B2H line will cross through 16 miles of Core Area and 15.23 miles of Low Density habitat ranges.

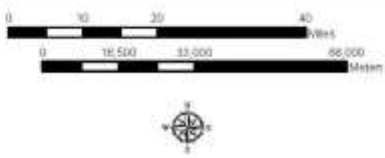
Map 3: Malheur County – B2H line (Proposed Location)



Map 4: Malheur County – County Roads and Transmission Lines



**Malheur County, Oregon
Greater Sage-Grouse Habitat
and
Infrastructure**



U.S. Department of Interior
Bureau of Land Management
Vale District
October 25, 2013

Surface Mining Sites

Table 2 below lists 14 existing surface mining/exploration sites within Core Area and Low Density habitat. Of these sites, only 3 are currently active at this time. Malheur County has approved just one surface mining site within Core Area over the last ten years, however said approval was not acted upon within the timeframe allotted under local standards for a conditional use permit, and therefore is no longer permitted.

Table 2: Surface Mining Sites within Sage Grouse Habitat

Permit Number	Permittee → Type - Status	Habitat Designation
23-0005	ODOT – Aggregate – Not Active	Core Area
23-0050	Paul Vaden – Aggregate – (last active 12/13) – Not Active	Core Area
23-0125	ODOT – Aggregate – Not Active	Core Area
23-0126	ODOT - Aggregate – Not Active	Core Area
23-0140	Oregon Energy LLC – Uranium – Not Active	Core Area
23-0159	ODOT - Aggregate – Not Active	Core Area
23-0176	ODOT - Aggregate – Not Active	Low Density
23-0187	Eldorado Resources LLC – Exploration Only – Not Active	Core Area
23-0224	Seabridge Gold Corp. – Exploration Only – Not Active	Core Area
23-0234	White Mountain Natural Products Inc. – Zeolite – Not Active	Core Area
23-0267	Mineral Valley LLC – Exploration – Not Active	Core Area
23-0269	Three Valleys Ranch LLC – Gold Mine - Active	Core Area
23-0272	Industrial Builders Inc. – Aggregate - Active	Low Density
N/A	Blackburn Family Trust – Aggregate – Active	Low Density

Land Use and Building Permit Activity (2003-2013)

Table 3 shows the land use planning permits & authorizations issued from 2003 to 2013 within Core Area and Low Density habitat. As listed below, there were a total of 8 approved land use permits for new development, all within Core Area. 9 of the authorizations were for replacement of legally existing dwellings, of which 6 are in Core Area and 3 within Low Density. Although not considered a land use decision, Malheur County shows 7 buildings related to existing agriculture operations or “agriculture buildings.” Such buildings are allowed as an out-right use within the C-A1 zoning designation and do not require a permit for development beyond a site plan review for consistency with local siting standards. Building permits follow a nearly identical pattern. All new dwelling sites (newly approved and replacement) received structural permits. One existing telecommunication facility received a structural permit to locate new antennas (not exceeding the previous height). Agricultural buildings do not require structural permits.

Table 3: Land Use Decisions (2003-2013)

Land Use Decisions (2003-2013)	Core Area		Low Density	
	Federal Lands	Non-federal Lands	Federal Lands	Non-federal Lands
<i>All Land Use Approvals Within Exclusive Range Use (C-A1)</i>				
New Dwellings	0	8	0	0
Replacement Dwellings	0	6	0	3
Accessory Building (*not Land Use Decisions)	0	7	0	0

Impact Analysis

Risk Assessment

According to the COT (Conservation Objectives Team) report, Malheur County falls within two areas designated as Management Zones IV (4) and V (5), more specifically the “Northern Great Basin” and “Western Great Basin” Subareas. The Northern Great Basin Subarea which contains large parts of Harney/Malheur County is described as representing one of the largest bird populations of the subarea. *“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 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 report goes on to describe wildfire and the proliferation of invasive weed species as the primary and most recent risks to habitat. *“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 previously mentioned 582,000 acre Long Draw fire of 2012. 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.”*

Table 4 lists habitat fragmentation threats and their corresponding levels for the subareas Malheur County falls within (COT report).

Table 4: Southeastern Oregon Sage-Grouse Risk Levels

Land Use Related Risk Levels	Threat Rating
Agriculture Conversion	Present, but localized
Energy	Present, but localized
Mining	Present, but localized
Infrastructure	Present and widespread
Recreation	Unknown
Urbanization	Present and widespread

Findings and Conclusion

As listed in the other county development reports, the COT does not provide a consideration of county land use programs. Malheur County has zoning jurisdiction over a vast area principally reserved for natural resource production (agriculture and forest use). This development report shows that Malheur County is effective in minimizing land use impacts or conflicts within its large regulatory jurisdiction (1,541,299 acres or 24.4% of the County). As reflected in the other county reports, sparse residential population across a vast open landscape, coupled with agriculture and mixed farm and forest zoning have preserved non-federal lands as rural.

While conversion of agriculture lands is not regulated by the county land use program, it is found that on-the-ground changes to actual intense agricultural practices (as found in the ODF report cited earlier in the report) has not occurred and is not projected to expand due to future restrictions in water availability.

Malheur County’s land use program does not pose a risk to sage-grouse populations. Agriculture-designated lands cover the large majority of non-federally managed parcels within the county. This designation is important to the ecological values of the county, and as listed earlier, is the principle factor in the preservation of large tracts with little to no urban developments outside of the county’s population centers.

Looking specifically at the improvement of these lands, the most common structural development is single-family dwellings. This development type is not a significant impact however, as only 22 total dwellings currently exist within Sage Grouse habitat. This translates into 1 single-family dwelling per 44,242.2 acres of Non-Federal Sage Grouse habitat within Malheur County.

The local land use and building programs show that 14 of the 22 dwellings existed prior to 2003. Over a ten year period only eight (8) land use permits/authorizations for new home sites have been approved within designated Core Area, with no approvals within Low Density.

14 total surface mines (or exploratory activities) exist within Sage Grouse Habitat areas in Malheur County. 11 are within Core Area, and 3 within Low Density, however only 3 of those sites are active according to local and state information (see table 2). It is clear that land use approvals over the last decade have proven to be a strong tool for limiting potential developments not related to rural residential developments (see map 2 “Malheur County

Permitted Sites in Sage-grouse Habitat). Over the study’s 10 year period, no new county roads or surface mining permits have been issued within Core or Low Density habitat ranges.

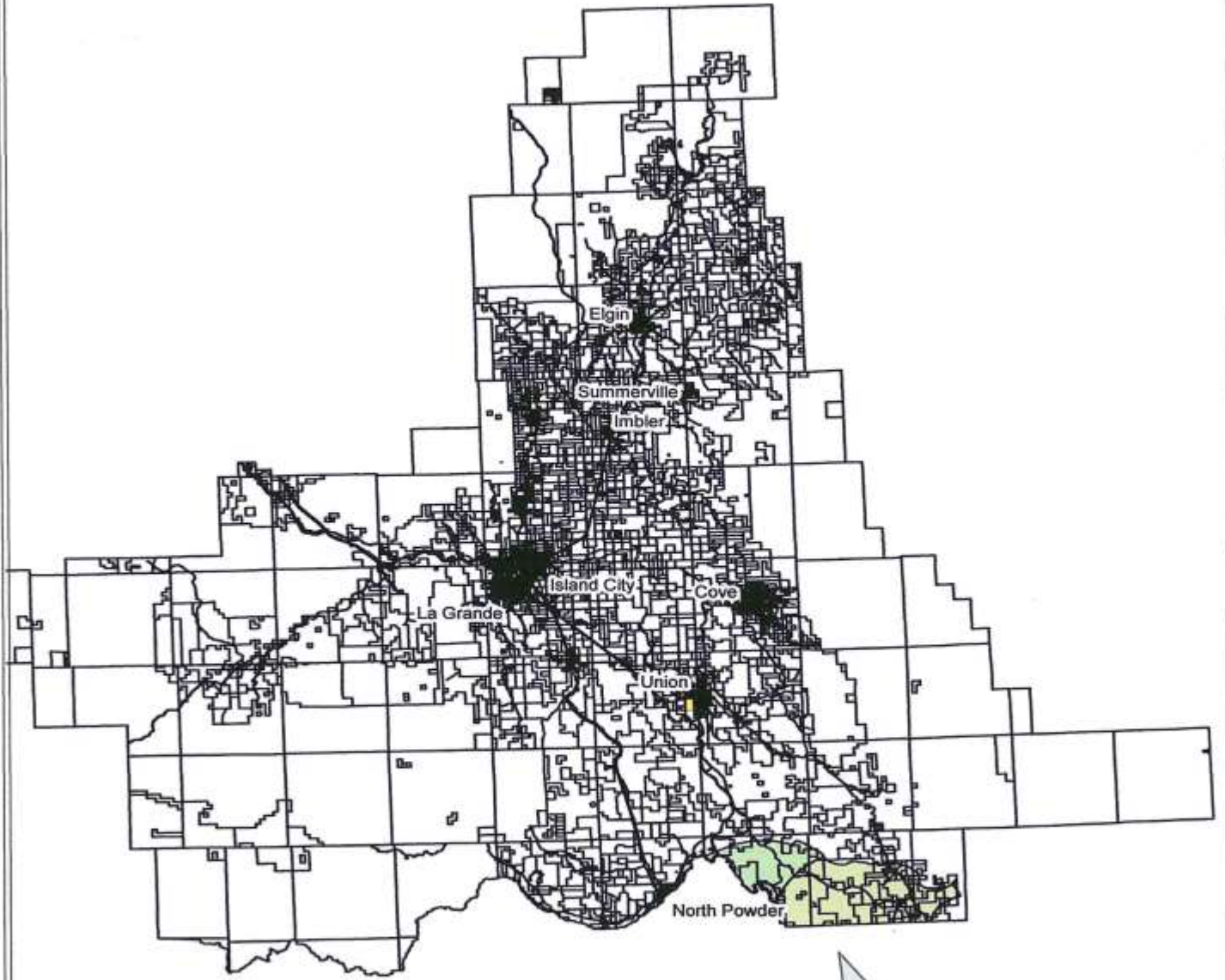
The COT report categorized Malheur County within two sub areas, one of which (26a) accounts for parts of southern Idaho, NE Nevada, and NW Utah. Malheur County stands apart from this area because of its utilization of local land use controls which have effectively preserved valuable agriculture lands in large tracts while controlling urban sprawl (22 total dwellings over hundreds of thousands of acres). This is in stark contrast to the adjacent area of Southern Idaho. Another important distinction is the disparity of actual jurisdiction area within Malheur County. Only 21.2% (973,327.58 acres) of Sage Grouse habitat is under the County Jurisdiction. The remaining 78.8% (3,617,199.6 acres) is located on Federal lands.

Table 5 – Malheur County Habitat Risk Levels Revisited

Land Use Related Risk Levels	Threat Rating	Harney County Results
Agriculture Conversion	Present, but localized	Unregulated, limited water expansion opportunities, not a significant threat
Energy	Present, but localized	Regulated, limited opportunities, not a significant threat
Mining	Present, but localized	Regulated, not a significant threat
Infrastructure	Present and widespread	Regulated, limited opportunities for growth, not a significant threat
Recreation	Unknown	Not regulated, unknown threat level
Urbanization	Present and widespread	Regulated, not occurring

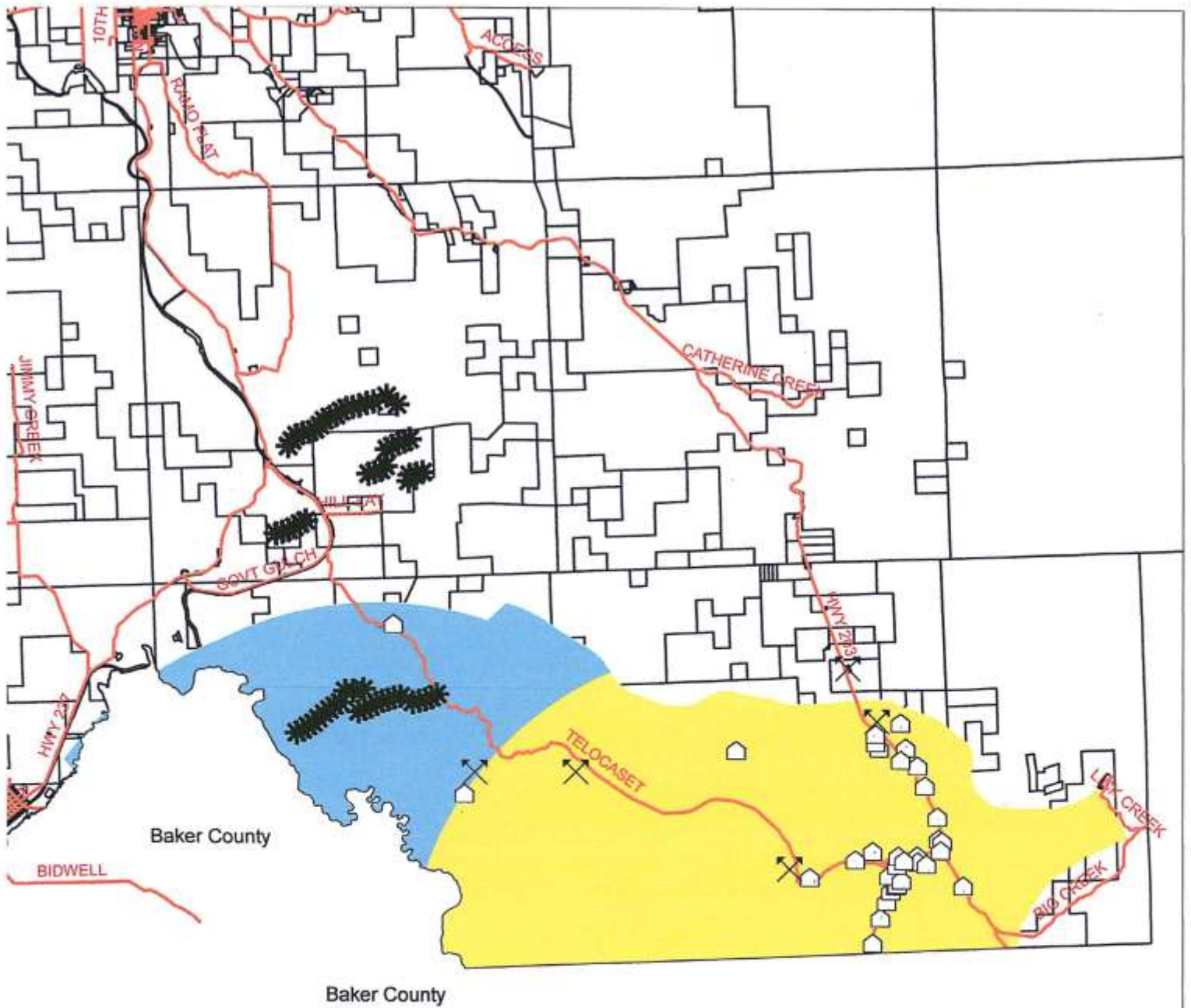
Union County

UNION COUNTY, OREGON



Sage Grouse Habitat





Land Use Impacts

- ⊗ Agg_Sites
- Dwellings
- * Elkhorn Windfarm

- Core Area
- Low Density

Baker County



Land Use History

Union County adopted its first comprehensive land use plan on April 11, 1979 which was intended to be in compliance with statewide planning goals. However, a number of inconsistencies were identified by the Oregon Land Conservation & Development Commission (LCDC) so the County was required to pursue several revisions. Ultimately, the County received acknowledgement from LCDC that its land Use Plan and land use regulations were in compliance with statewide planning goals on June 20, 1985.

The land use regulation amendments developed over that 6 years to bring the County into compliance with statewide planning goals significantly reduced or limited development opportunities in currently identified Union County sage grouse Core Areas and Low Density Areas (Union County sage grouse habitat). The 1979 Land Use Plan had identified the currently inventoried Union County sage grouse habitat in an Agriculture-Timber-Grazing Zone that had a 40 acre minimum parcel size, except for about 160 acres in the Pondosa-Medical Springs Rural Center. By the time of the 1985 acknowledgement this area was changed to a new Agriculture-Grazing Plan/Zone⁴² that had a 160 acre/80 acre minimum parcel size. Where properties were being actively farmed, parcels as small as 80 acres could be created, otherwise the minimum was 160 acres.

The other major change by 1985 was the identification of Big Game Winter Range for all of the area in Union County sage grouse habitat. For these areas new dwellings were and are required to be sited based on a cooperative wildlife management plan signed by Oregon Department of Fish & Wildlife and the landowner. Usually, this meant siting a new dwelling within 280 feet of an open, maintained public use road.

As Oregon's land use program has evolved since 1985 restrictions on resource zones has increased. Statutory minimum parcel sizes for resource zones were adopted by the Oregon Legislature in 1993 (House Bill 3661). Union County applied these statutory minimum parcel sizes directly and in 1996 the County revised its resource zones to be in compliance with the statutes. The new A-2 Agriculture-Grazing Zone minimum parcel size was increased to 160 acres for predominantly cropland parcels and 320 acres for predominantly rangeland parcels. These minimum parcel sizes exist until today. There are no predominantly cropland parcels in Union County sage grouse habitat, therefore the majority of the Union County sage grouse habitat has a 320 acre minimum parcel size for the creation of new parcels.

Also worth noting is that Oregon's exclusive farm use zone statutes do not allow the creation of four or more lots from a parent parcel in a calendar year (defined as a subdivision). Therefore, only partitions are allowed that create up to two new parcels (at least 320 acres in size) and a remainder (also, at least 320 acres in size).

Oregon land use statutes allow the creation of non-farm parcels (parcels less than the minimum parcel size) with non-farm dwellings in exclusive farm use zones. Because this opportunity was optional, counties had to specifically authorize these opportunities. Union County chose not to allow the creation of new non-farm parcels until March 21, 2007. This opportunity is limited to a maximum of two new non-farm parcels as long as the remainder is greater than 320 acres. The County has not processed any non-farm parcel requests in Union County sage grouse habitat.

In conclusion, Union County sage grouse habitat (about 30,000 acres) is in an A-2 Agriculture-Grazing Zone that effectively has a 320 acre minimum parcel size, except for about 160 acres that is in the Pondosa-Medical Springs Rural Cluster Development Zone that has a specific development plan for a maximum of 17 lots or parcels. All new residential development in the A-2 Agriculture-Grazing Zone (nonfarm & farm) must be sited subject to a wildlife management plan, which generally means within 280 feet of an open, public use road. While non-farm parcels and non-farm dwellings have been allowed in the A-2 Agriculture-Grazing Zone since 2007, none have been requested or authorized in Union County sage grouse habitat.

⁴² The Agriculture-Grazing Zone is a qualifying ORS 215.283 Exclusive Farm Use Zone.

Comprehensive Plan and Zoning

Base Zoning within Sage Grouse Designated Areas

The Union County sage grouse Core Area and Low Density habitat include about 30,000 acres in four zoning districts (see Table 1 and Maps 1 and 2). Approximately 93% of this area is in an A-2 Agriculture-Grazing Zone. Incidental acres are included in a County A-1 Exclusive Farm Use Zone (45 acres), A-4 Timber-Grazing Zone (1,307 acres or 4%), and Pondsosa-Medical Spring Rural Cluster Development Zone (154 acres).

Table 1 identifies the acres in each zone divided between sage grouse Core Area and Low Density habitat and whether those acres are in federal ownership (5%) or non-federal ownership (95%). The 45 acres in the A-1 Exclusive Farm Use Zone are river bottom used for pasture and are designated Low Density habitat. This area is just east of the City of North Powder, includes small segments west of the Powder River and is adjacent to Baker County which is on the other side of the Powder River.

Table 1 - Union County Base Zoning within ODFW's Core and Low Density Habitat

	Core Area		Low Density		Total Acres	Percent of Sage-Grouse Habitat
	Federal Lands	Non-federal Lands	Federal Lands	Non-federal lands		
Exclusive Farm Use Zone						
Acres	0	0	0	45.43	45.43	0.15%
Tax Lots	0	0	0	2		
Agriculture Grazing Zone						
Acres	661.81	19,265.48	0	7807.56	27,734.85	94.85%
Tax Lots	17	96	0	17		
Timber Grazing Zone						
Acres	340.02	865.54	0	101.0	1306.56	4.46%
Tax Lots	1	9	0	1		
Rural Cluster Development Zone						
Acres	0	153.50	0	0	153.50	0.54%
Tax Lots	0	16	0	0		
Rural Cluster Development Zone						
Acres	0	153.50	0	0	153.50	0.54%
Tax Lots	0	16	0	0		
Total	1001.83	20,284.52	0	7,953.99	29,240.34	100%

The A-2 Agriculture-Grazing Zone is predominantly rangeland, except for about 438 acres in wild hay production and 30 acres in crop production.

The 1306.56 acres in the A-4 Timber-Grazing Zone are primarily along the north boundary of the Core Area. About 74% of this area is in non-federal ownership and in a mix of timber and grazing uses. Forestlands have a 240 acre minimum parcel size and rangeland has a 320 acre minimum parcel size requirement.

The 154 acres in the Pondosa-Medical Springs Rural Cluster Development Zone is entirely in non-federal ownership and includes, or has nearby, most of the residential development in the sage-grouse habitat. This zone has a maximum development capacity of 17 lots or parcels.

Combining or Overlay Zones within Sage Grouse Designated Areas

All of the Union County sage grouse Core Area and Low Density habitat is in a Big Game Winter Range Overlay Zone.

Sage grouse habitat was not identified by ODFW as a significant Statewide Planning Goal 5 resource in 1985 at the time of LCDC acknowledgement. However, because big game winter range was inventoried and identified as a significant Statewide Planning Goal 5 resource, the County evaluated big game winter range through the Goal 5 process. The County decided to balance big game winter range and conflicting uses (such as dwellings) through a cooperative wildlife management plan process. The result is conflicting uses (such as homes in elk winter range) can't be denied but they can be sited to have the least amount of impact on big game winter range use. Essentially this has resulted in dwellings being sited within 280 feet of an open, maintained public use road.

While the County's Land Use Plan has not specifically inventoried or evaluated sage grouse habitat, the big game winter range mitigation measures will generally limit new residential development to within 280 feet of open, maintained public use roads and afford sage grouse habitat similar indirect protections.

Built Environment and Development Activity

Table 2: Union County Sage Grouse Habitat Area Land Use Assessment and Impact Analysis

- 33 Total Dwellings
- Non-Active Aggregate Removal Sites
- 30 Acres of Cultivated Cropland
- 438 Acres of Wild Hay Production
- 29,701.56 Total Acres in Core Area and Low Density Habitat
- Miles ODOT Secondary Highway (Hwy. 203)
- 10.06 Miles of County Local Roads

Development Activity 2003 – 2013

Core Area	
R-1 Rural Center Zone	1 – Rural Fire Protection Building 3 – Dwellings
A-2 Agriculture Grazing Zone	1 – Lot-of-record dwelling/Replacement dwelling 1 – Farm dwelling/office 3 – Measure 37 Dwellings
A-4 Timber Grazing Zone	No Activity
Low Density	
A-1 Exclusive Farm Use Zone	No Activity
A-2 Agriculture Grazing Zone	1- Farm dwelling 25 wind turbines
A-4 Timber Grazing Zone	No Activity

Housing Units

There are 33 dwellings in the Union County sage grouse habitat areas. Thirty-one (31) of them are in the Core Area sited in the vicinity of the Pongosa-Medical Springs Rural Cluster Development Zone and adjacent to an existing State Highway or County Roads. Two dwellings are located in sage grouse Low Density habitat. Only two dwellings, one in Core Area and one in Low Density, are set back from open public use roads.

Roads and Utilities

There is one state highway, Oregon Highway 203, about 5.06 miles long extending from north to south through the eastern portion of the Core Area. Two County Roads about 10.06 miles long, Telocaset Lane and Big Creek Road, extend from Ore. Hwy 203, are gravel surfaced roads and are open and maintained by the County. Telocaset Lane extends east to west through the center of the Core Area and Low Density habitat (see Map 2).

Above ground electrical distribution lines are in the road right-of-way along Ore. Hwy 203, Big Creek County Road and only the eastern 2 miles along Telocaset Lane.

Idaho Power LLC has a 230kv transmission line extending from south to north through the very western edge of the Low Density habitat area.

Surface Mining Sites

There are four (4) non-active surface mining sites within sage grouse habitat (see Map 2). These sites are small and used periodically for nearby road projects and neighboring farms and ranches.

Elkhorn Wind Farm

The Elkhorn Wind Farm was constructed in 2007 and is partially located in Low Density habitat (see Map 2). There are 25 turbines in Low Density habitat on ridgelines out of the 61 turbines in the whole project. The turbines are in a string connected by one gravel private access road from Telocaset Lane.

A second, larger wind farm has been proposed in Union County. The proposed site is northwest of the existing wind farm and outside of sage grouse Low Density habitat and Core Area. An ODFW evaluation in 2011 of this proposal found no significant anticipated conflicts between sage grouse habitat and the proposed project.

Local Land Use and Building Permit Activity

Table 3: Building Permit Activity in the Last 10 Years identifies structural improvements over the last 10 years within the Union County sage grouse habitat areas.

As discussed above, the Elkhorn Wind Farm is partially (25 turbines out of a total of 62 turbines) located in sage grouse Low Density habitat. During construction a temporary rock crusher, concrete batch plant and lay-down yard were established. All of these structures and improvements were removed once the wind farm was operational. A separate application was approved for a permanent microwave tower outside of sage grouse habitat.

One single-family farm dwelling just west of the 25 turbines received land use and building permit approval in 2003. In 2008 this residence was sold to the Elkhorn Wind Farm and converted to their office and operations building.

Another single-family farm dwelling east of Thief Valley Reservoir was constructed in 2011 and received land use approval but no building permit. This dwelling is on the line between the Core Area and Low Density habitat.

A property about one mile north of Pondosa-Medical Springs Rural Cluster Development Zone was subdivided into five (5) lots through the voter approved Oregon Measure 37 process. Each lot is about 80 acres in size, one includes the existing dwelling, three (3) were built on and “vested” under Measure 37 and the last 80 acre parcel no longer has dwelling approval.

Table 3: Local Land Use & Building Permit Activity in the Last 10 Years

Structural Type	Local Approvals	Multiple Permits Issued for One Site (Y/N)
Elkhorn Wind Farm (2007)	Temporary rock crusher Temporary batch plant Temporary lay down yard 25 turbines & met towers	Yes
Dwelling converted to office & operating building	Farm dwelling CUP - office	Yes
Dwelling	Farm dwelling	No
Dwelling	Lot-of-record dwelling Replacement dwelling	Yes
3 Dwellings & Rural Fire District building	Rural Cluster Development Zone – exception area	Yes
3 Dwellings	Measure 37 claims	Yes

No State or Federal development within sage grouse habitat in Union County.

One property immediately west of Medical Springs received Lot-of-Record dwelling approval in 2000 and the approved dwelling was later replaced in 2008.

The Pondosa-Medical Springs Rural Cluster Development Zone was originally (1985) identified as a Rural Center Zone with a one acre minimum parcel size. This zoning was later changed (1998) to the Rural Cluster Development Zone that limited residential development to 17 lots. Three (3) of those lots have been built on and one was dedicated to a new Medical Springs Rural Fire District building in the last 10 years.

Impact Analysis

Risk Assessment

The Deschutes County Sage-Grouse Conservation Land Use Assessment and Impact Analysis includes Table 13-Central Oregon Sage-Grouse Risk levels obtained from the Sage-Grouse Conservation Objectives Draft Report prepared by the Conservation Objectives Team:

Table 4 – Central Oregon Sage-Grouse Risk Levels

Risk Levels (Land Use Related)	Rating
Agriculture Conversion Energy Infrastructure Recreation Urbanization	Localized, Substantial
Mining	Slight Threat

Findings

The Union County risk levels and threats to sage grouse habitat from the uses listed in Table 13 are minimal.

Rangeland conversion to cropland has not occurred in the last 10 years for the 30,000 acres identified in sage grouse habitat. Rangeland conversion to other non-agricultural uses has been limited to those uses identified in Table 3. The 25 wind turbines that are part of the Elkhorn Wind Farm only eliminate livestock grazing on the quarter acre for each turbine footprint and the private gravel access road. Infrastructure is limited to the State Highway and County Roads described above. No additional roads or road improvements are planned.

Thief Valley Reservoir is partially in Union County and in sage grouse Core Area and Low Density habitat. The dam was constructed in 1933 for irrigation purposes. No minimum pool is required for fisheries. Therefore, the reservoir is periodically drained on dry summers which results in reduced recreational fishing, boating and camping. Land under and around the reservoir was purchased by the Bureau of Reclamation and is currently managed by the Bureau of Land Management. There is a small County park on the east side of the reservoir that allows overnight camping, has a vaulted toilet, hand pump potable water and a boat ramp. No park expansion has occurred in the last 10 years and no park expansion is anticipated.

No urbanization has occurred in sage grouse habitat and none is planned or allowed within sage grouse habitat. Rural residential development has occurred in the Pondsosa-Medical Springs Cluster Development Zone but it is limited to a maximum of 17 buildable lots within 154 acres.

Four small-scale family aggregate sites have periodically operated in sage grouse Core Area habitat. No permanent processing facilities exist at any of the sites and they are primarily used for local road projects and as needed by neighbors. No expansion plans are known.

Conclusion

Sage grouse Core Area and Low Density habitat in Union County totals about 30,000 acres or about 2% of the County. About 93% of the sage grouse habitat areas is in a County A-2 Agriculture-Grazing Zone that has a 320 acre minimum parcel size for the creation of new predominantly rangeland parcels. All new residential development in this area will be sited within 280 feet of an open public use road. There are 33 existing dwellings in the sage grouse habitat and 8 of them were located in the last 10 years. Except for 3 dwellings, all of the rest are adjacent to Oregon Highway 203, Big Creek and Telocaset County Road or in the Pondosa-Medical Springs Rural Cluster Development Zone.

Other development includes 25 of 64 wind turbines in the Elkhorn Wind Farm and its office and operations building. A new wind farm is proposed west of the identified sage grouse habitat area and ODFW does not anticipate any sage grouse impacts from this proposal.

There has been no conversion from rangeland to cropland, and no increased infrastructure, recreation or urbanization over the last 10 years. Development in the Pondosa-Medical Springs Rural Cluster Development Zone is limited to a maximum of 17 lots in 154 acres.

In conclusion, recent (last 10 years) impacts to sage grouse habitat have been minimal and future impacts are severely limited by the A-2 Agriculture-Grazing Zone and Big Game Winter Range Overly Zone.

Regional Summary

The Territory

Oregon’s affected territory encompasses seven counties. All together, these jurisdictions make up over 25 million acres of which nearly 12 million acres are identified as either low density or core Sage-grouse habitat by ODFW. The affected territory is also characterized by vast expanses of rangeland managed by federal agencies and not subject to state or local governance.

Harney, Lake and Malheur counties comprise the majority of the region’s land base (72%). These three counties also include most of Oregon’s Sage-grouse habitat and have the highest proportion of federal lands (74% federal, 26% nonfederal).

Baker, Deschutes, Crook and Union counties have lesser amounts of total land area and Sage-grouse habitat. Union County in particular has a very low amount of identified habitat when compared to other jurisdictions. Although the overall amount of Sage-grouse habitat is less significant when compared to Harney, Lake and Malheur; Baker, Crook and Union counties have a much higher ratio of private lands included in the ODFW inventory.

Table I: Region-wide Acreage by County

County	Size	Core Habitat	Low Density Habitat	Total Habitat By County
Baker	1,938,062	265,095	82,996	348,091
Crook	1,920,000	423,726	140,134	563,860
Deschutes	1,912,901	249,205	188,782	437,987
Lake	5,350,660	1,034,859	772,805	1,807,664
Harney	6,533,320	1,757,152	2,009,444	3,766,596
Malheur	6,353,930	2,702,598	1,887,928	4,590,526
Union	1,304,960	21,286	8,374	29,660
Overall Totals	25,310,143	6,453,921	5,090,463	11,544,384

Each county has one or more population centers where the majority of their citizens reside and where most commercial and employment opportunities are available. Each population center is characterized by one or more incorporated city and associated urban growth boundary. In every case, local and regional population centers are located outside of identified Sage-grouse habitat. The city of Unity, in Baker County, is located within Low Density Sage-grouse habitat. However, with a 2012 population of 70 residents it is not considered a population center for purposes of this report.

Table 2: County Population and Primary Population Centers (2012)

County	County Population	Primary Population Centers
Baker	16,210	City of Baker City – Pop 9,890
Crook	20,650	City of Prineville – Pop 9,245
Deschutes	160,140	City of Bend – Pop 77,455 City of Redmond – Pop 26,345
Harney	7,315	City of Burns – Pop 2,835 City of Hines – Pop 1,565
Lake	7,290	Town of Lakeview – Pop 2,300
Malheur	31,395	City of Ontario – Pop 11,415 City of Nyssa – Pop 3,270 City of Vale – Pop 1,890
Union	26,175	City of La Grande – Pop 13,110

All population numbers are taken from the Certified Population Estimates for 2012 prepared by Portland State University.

As indicated above, lands that are used by the species are usually very remote, sparsely inhabited and lacking in infrastructure to support community development. For instance, there are no commercial airports located in Sage-grouse habitat and most of these lands are distant from major transportation systems. Although state highways are present across the range, most serve district levels of traffic and are not expected to support interstate travel. Rail service is generally unavailable south of Interstate 84.

Table 3: Region-wide Acreage Containing Sage-grouse Habitat

	Core Area		Low Density		Total	% Habitat (Core and Low D.)	
	Federal Land	Non-Federal Land	Federal Land	Non-Federal Land		Federal Lands	Non-Federal Lands
Deschutes	182,482	66,723	132,946	55,836	437,987	72.02%	27.98%
Baker	78,279	186,816	12,605	70,391	348,090	26.11%	73.89%
Crook	152,709	271,017	47,530	92,604	563,860	35.51%	64.49%
Harney	1,403,221	353,931	1,581,277	428,175	3,766,604	79.24%	20.76%
Lake	896,071	138,788	687,350	85,455	1,807,664	87.59%	12.41%
Malheur	2,122,160	580,438	1,495,039	392,890	4,590,527	78.80%	21.20%
Union	1,002	20,285	0	7,954	29,240	3.43%	96.57%
Total	4,835,924	1,617,997	3,956,748	1,133,304	11,543,973	76.17%	23.83%

**Figure 1: Total County Size by Federal and Non-Federal Land
(In Millions of Acres)**

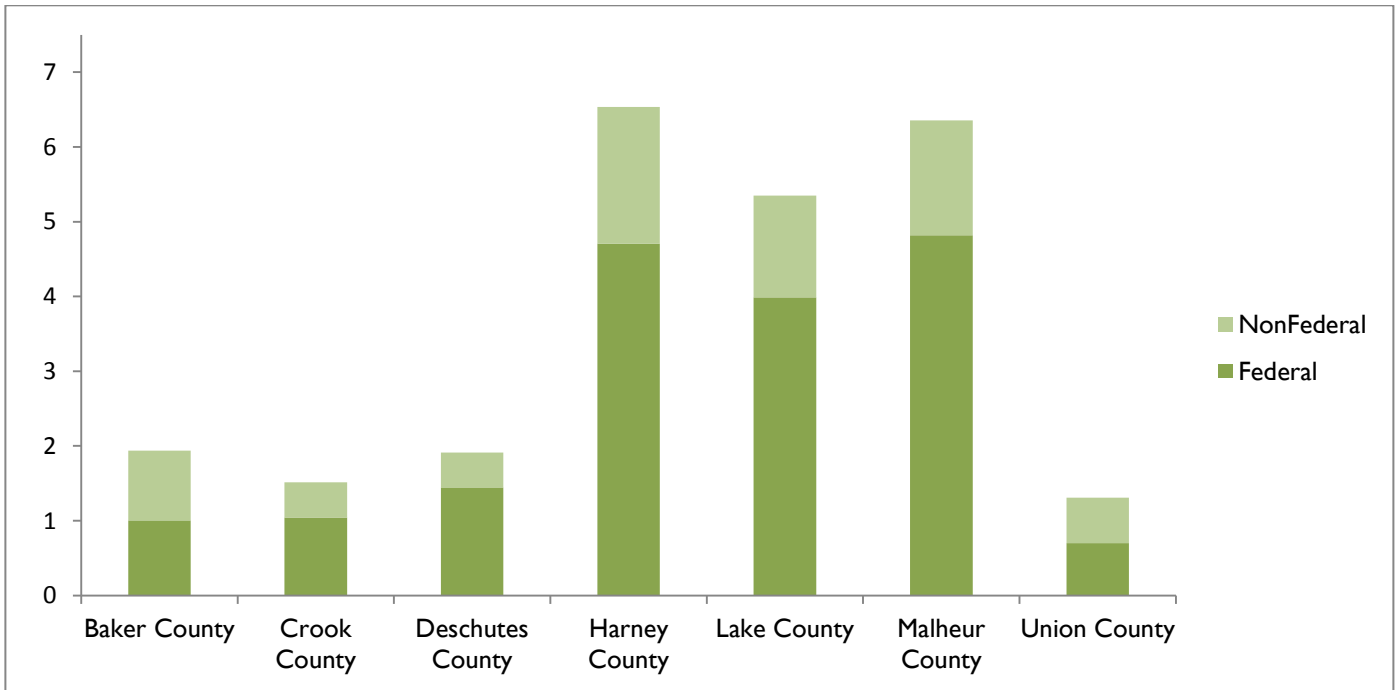


Figure 2: Total County Size as Portion of the Region

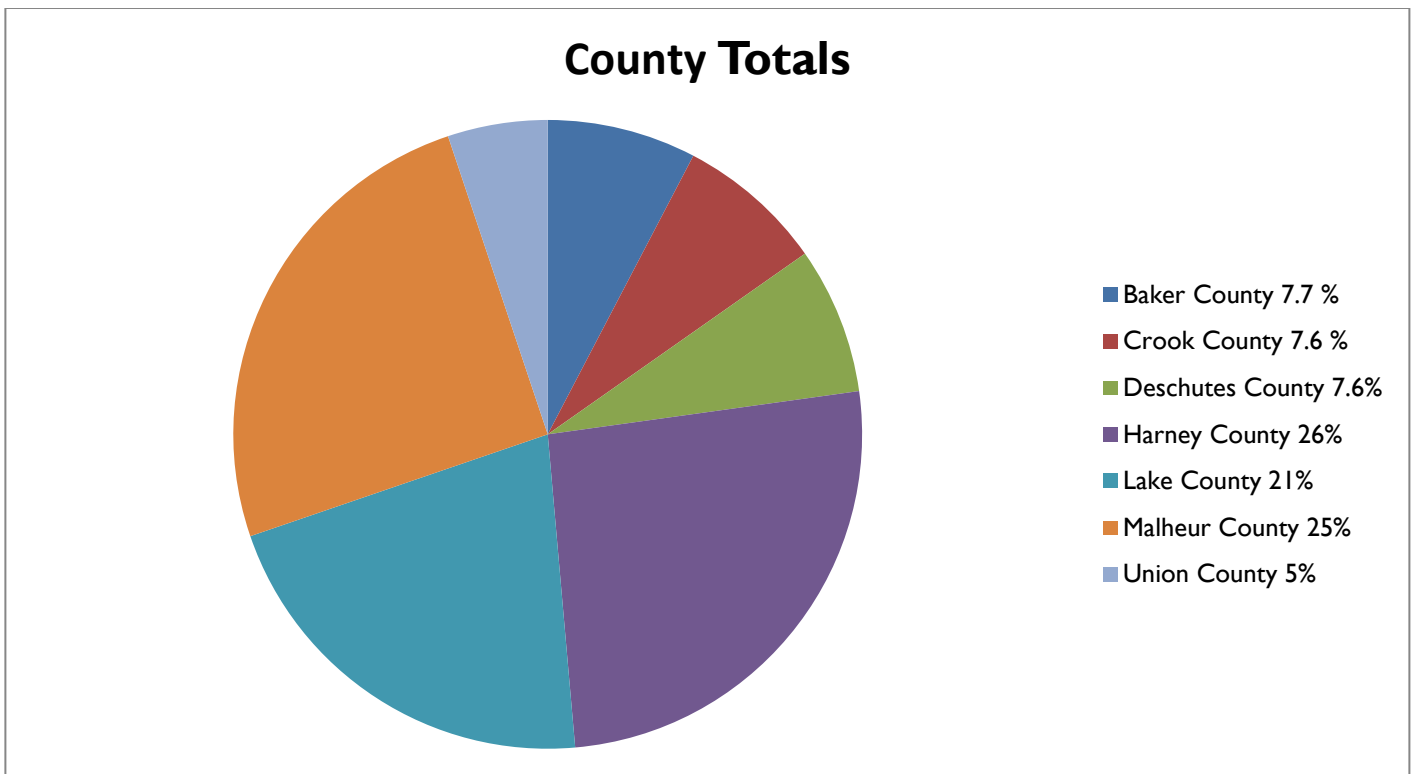
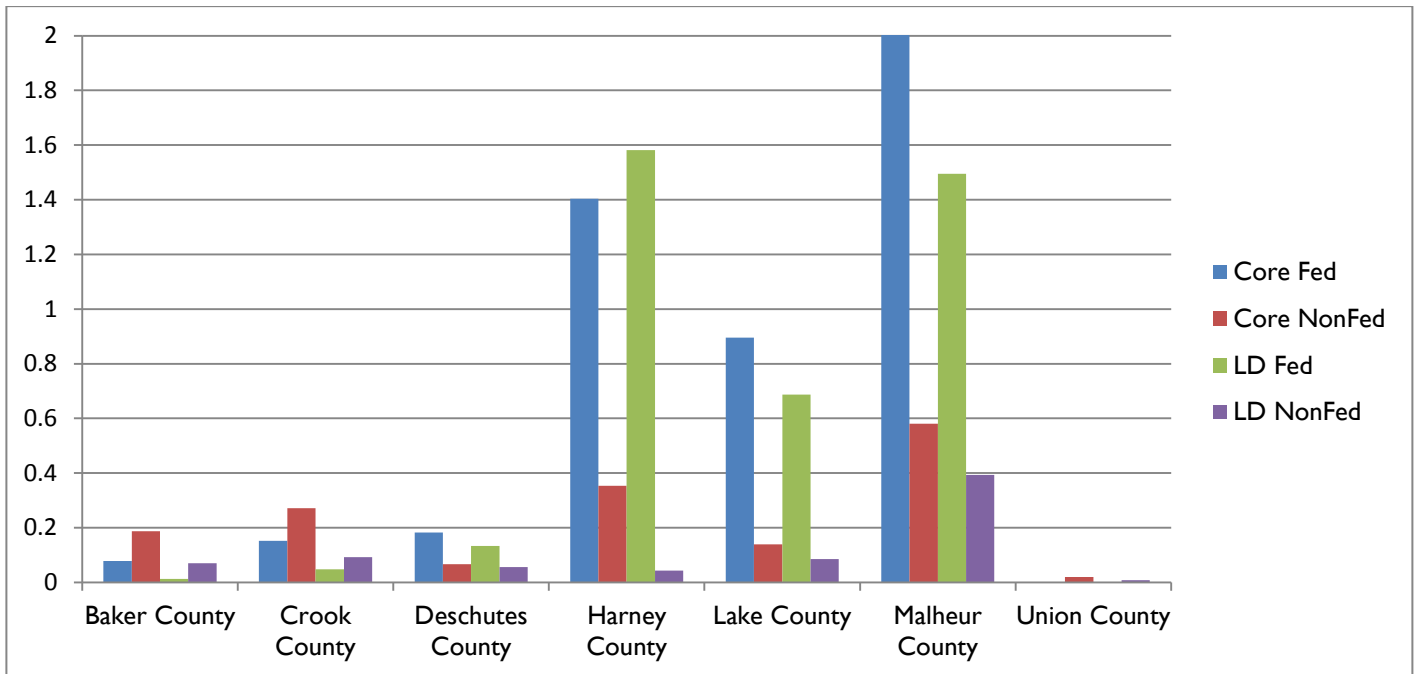


Figure 3: Sage Grouse Habitat by Type and Land Ownership



County Land Use Planning Programs

Land Use Planning History

All seven of Oregon’s affected counties have land use planning programs that consist of comprehensive plans and implementing ordinances. In several cases, these programs originated as far back as the 1960’s or early 1970’s. Each local land use planning program has been acknowledged to be in compliance with Oregon’s Statewide Planning Goals since the late 1970s or early-mid 1980s. Changes to local land use programs have occurred through Post Acknowledgment Plan Amendments (PAPAs) or through an official Periodic Review process required by the State of Oregon. Any amendment to an acknowledged plan must be found to be consistent with the applicable Statewide Planning Goals, as well as any applicable state statutes or administrative rules. Counties have a legal obligation to amend their local programs to reflect changes or updates to state law (Goals, statutes or rules). In most instances new laws are directly applicable until local programs have been updated. In other instances the new law includes prescribed time frames for compliance.

Comprehensive Plan and Zoning

Land Use Designations within Sage-grouse Habitat

The preceding elements of this report identify that local comprehensive plans designate most all of the region, nearly the entire territory, for protection of farming, ranching and forestry activities under Statewide Planning Goals 3 (*Agricultural Lands*) and 4 (*Forestlands*). The comprehensive plan designations are carried out by a variety of Exclusive Farm Use or Forestland zoning districts.

Exclusive Farm Use and Forest Use zoning districts are collectively known as “resource” zones. They implement the policy objectives of Statewide Planning Goals 3 and 4, as well as a host of legal provisions included in ORS Chapter 215 and OAR Chapter 660, Divisions 6 & 33. Over time, many of the state’s legal requirements have been interpreted by the Oregon Courts. The resulting case law is also applicable and binding upon local decision makers. As mentioned before, resource zoning requirements are characterized by very large minimum parcel size requirements and strict limitations on activities that are not farm, ranch or forest related.

Table 4: Local Resource Zoning Districts Implementing Statewide Goals 3 and 4

County	Exclusive Farm Use or Forest Use Zoning Districts
Baker	Exclusive Farm Use Timber Grazing
Crook	Exclusive Farm Use 1 Forest Use – F1
Deschutes	Exclusive Farm Use – Horse Ridge Subzone Forest Use 1
Harney	Exclusive Farm & Range Use – EFRU-1 Exclusive Farm & Range Use – EFRU-2 Forest Use - FU
Lake	Exclusive Farm Use – A-1 Agricultural Use – A-2 Forest Use – F-1
Malheur	Exclusive farm Use – C-A1 Exclusive Range Use – C-A2 Exclusive Forest Use – C-A3
Union	Exclusive Farm Use – A-1 Agriculture Grazing- A-2 Timber Grazing – A-4

Figure 4: Resource Zoning of Sage Grouse Habitat

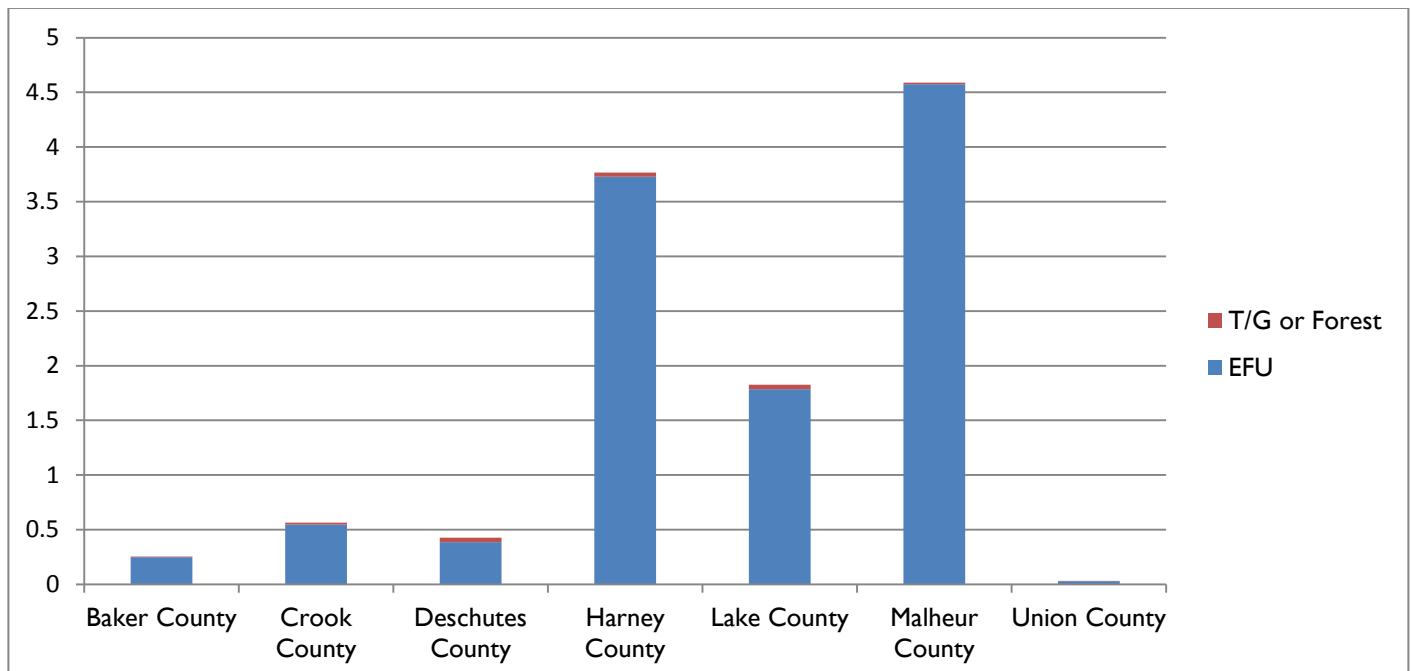
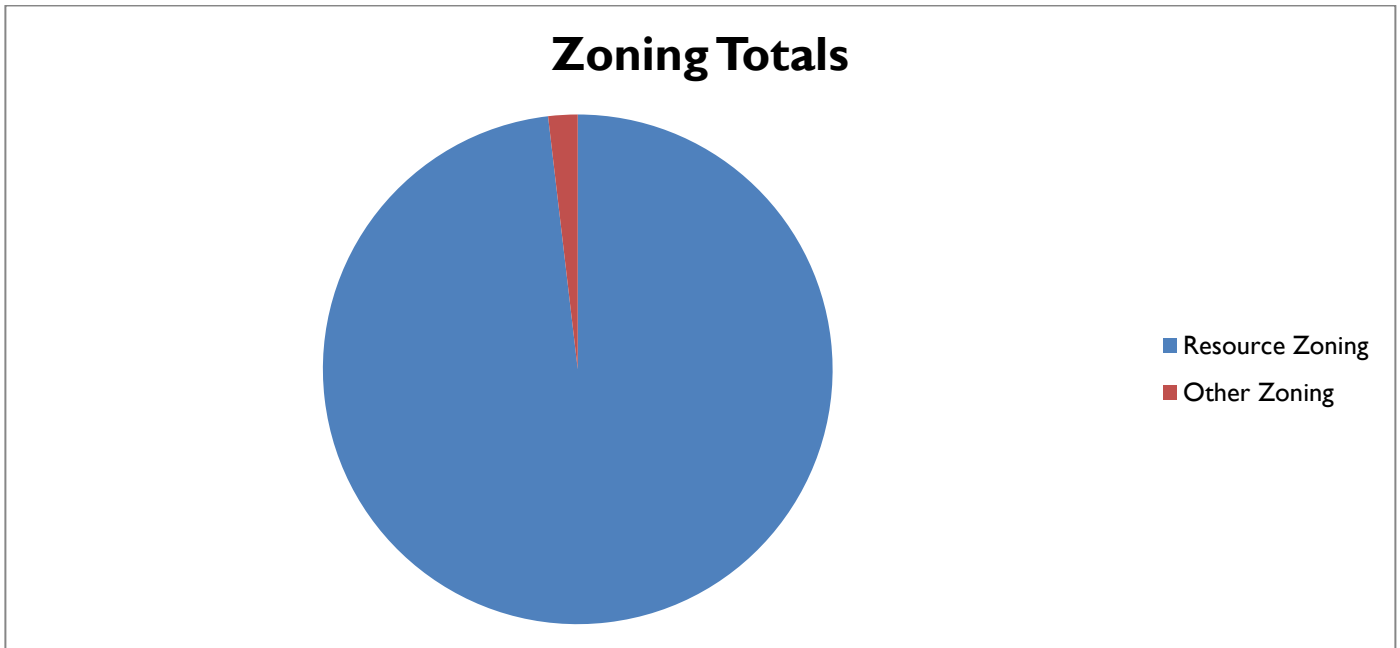


Figure 5: Resource Zoning



Zoning categories other than Exclusive Farm Use or Forest Use (“Resource Zoning”) make up less than 2% of lands mapped by ODFW as Sage-grouse habitat. The majority of these areas are unincorporated communities. These areas resemble small towns in that they include a combination of residential, commercial or employment uses but have no municipal government structure. Examples of unincorporated communities include Fields in Harney County and Brogan in Malheur County. It is very possible that closer examination of unincorporated communities would reveal that their longstanding settlement pattern makes them unavailable to serve as valuable wildlife habitat for Sage-grouse or any other species.

Existing Habitat Conservation Measures and Zoning Designations

“Goal 5” and Wildlife Mapping and Protection within Habitat Areas

Statewide Planning Goal 5 (*Open Space, Scenic, Historic and Natural Areas*) directs local government to inventory, among other things, significant wildlife habitat. With assistance from ODFW counties are to consider the location, quality and quantity of a potential resource and determine if it is “significant.” If a resource is determined to be significant the jurisdiction is to identify possible uses that require land use approval and could be in conflict with the resource. From there a process to consider the Economic, Social, Environmental and Energy Consequences (ESEE) of fully allowing, partially allowing or not allowing conflicting uses is conducted, which finally results in a program to achieve the goal by protecting the resource or not.

All seven counties have acknowledged programs to protect wildlife habitat. In most cases these local programs focus on the value of mule deer, rocky mountain elk or pronghorn antelope. Two counties – Crook and Deschutes have adopted programs specific to Sage-grouse. The Deschutes County Sage-grouse program furnishes special protections to lekking areas on private property. The exact components of the Crook County Sage Grouse program are less clear.

Table 5: Region-wide Zoning and Protection Programs

	Resource Zoning	Big Game Protection Program	Sage Grouse Protection Program
Baker	X	X	
Crook	X	X	X
Deschutes	X	X	X
Lake	X	X	
Harney	X	X	
Malheur	X	X	
Union	X	X	

Flood Plain Zone Overlay

All counties in Oregon employ some type of flood plain program to discourage investment and human habitation from areas prone to flooding. Special flood hazard areas are identified by the Federal Insurance Administration. Although Sage-grouse habitat is primarily a desert landscape flood plain areas do exist. For example, in Harney County a Special Flood Hazard Area is present on 9,557 acres of Core Habitat and 11,359 acres of Low Density Habitat.

Public policy steering development from flood hazard area contributes to maintaining an open landscape and provides benefits to wildlife habitat, including Sage-grouse.

Built Environment and Development Activity

Housing Units

The number of residential housing units in Oregon’s Sage-grouse habitat reflects the wide open landscape and is reminiscent of a frontier settlement pattern. An estimated 900 existing homes (exact information for Crook and Malheur Counties not available) are present across over 11.5 million acres in portions of seven counties. The dramatic absence of residential activity is well illustrated by the population distribution of Deschutes County, which is consistently been among Oregon’s fastest growing jurisdictions. Anchored by the region’s largest population centers of Bend (pop.77,455) and Redmond (pop. 26,345) and with a total population of over 160,000 citizens in 2012 Deschutes County is far and away the most populous county in central and eastern Oregon. However, despite strong growth levels along the Hwy 97 corridor, just 63 citizens make their home in the county’s nearly 438,000 acres of Sage-grouse habitat.

Roads and Utilities

State highways and county roads are present in each county, as are overhead transmission lines. Local electrical distribution lines are generally placed in existing road right-of-ways and have not been considered for the purposes of this report. Not all counties have reported the exact amount of either type of feature. Harney

County has reported 105 miles of transmission lines in Core and Low Density habitat areas. Lake County estimates about 150 miles of transmission lines traversing Sage-grouse habitat. Overhead transmission lines in Crook County exist primarily in the western portion of the county outside of most Sage-grouse habitat. Figures for roads appear proportional with Deschutes County reporting 115 miles of county facilities in Sage-grouse habitat and Baker County reporting about 125 miles. Union County, with the least amount of habitat has reported about five miles of state highway and about 10 miles of county roads. No new roads or transmission lines have been developed in the period between 2003 and 2013. No new roads are called for in local Transportation Systems Plans (TSPs) and none are expected to be constructed, especially in light of severe funding constraints.

Idaho Power is planning a major transmission line that would run from Hemingway, Idaho to Boardman, Oregon. The B2H line, as it is commonly called could run through Sage-grouse habitat in Malheur and Baker Counties. BLM and ODFW are working with Idaho Power to identify wildlife issues with regard to potential routes. The Captain Jack line, which is under consideration by PacifiCorp would extend through southeastern Oregon from Malin, Oregon to Hemingway, Idaho has not advanced to any detailed planning stages and is not expected to move forward during the next 10 years. The Ruby Pipeline is a 42 inch natural gas line that will run from Malin, Oregon to Opal, Wyoming as an interstate transporter. The project route runs through about 86 miles in Oregon, including a portion of southern Lake County. The Oregon portion of the project has been completed. The Ruby Pipeline was approved by the Federal Energy Regulatory Commission in 2010. Natural gas is not generally available to areas of identified Sage-grouse habitat, nor is rail service.

Surface Mining Sites

Permitted mining appears limited to aggregate extraction and processing activities. Although gold mining was common in portions of the region during the two preceding centuries no large commercial mines are currently in operation. The Grassy Mountain project has been proposed by the Calico Company on a site in northern Malheur County. The applicants have been working in coordination with ODFW and several other state agencies as they work through the permitting process required by Oregon's Department of Geologic and Mineral Industries (DOGAMI).

There are about 120 existing aggregate quarries present in Oregon Sage-grouse habitat. Many of the quarries are in ODOT or local government ownership and almost all of them are in close proximity to a state highway or county road. Most quarries operate only during road maintenance projects and often go unused for years at a time. Only a single new quarry received local land use approval between 2003 and 2013 (Baker County).

Table 6: Land Use Decisions in Sage Grouse Habitat

	Dwellings		Quarries		Energy Project		Roads		Misc. Other	
	Core	LD	Core	LD	Core	LD	Core	LD	Core	LD
Baker	9	4	1	0	0	0	0	0	0	0
Crook	1	4	0	0	0	1	0	0	0	0
Deschutes	7		0	0	0	1	0	0	5	
Harney	21	14	0	0	0	0	0	0	0	0
Lake	9	4	0	0	0	0	0	0	1	2
Malheur	8 (6 RD)	0 (3 RD)	0	0	0	0	0	0	7	0
Union	6	1	0	0	0	1	0	0	1	0
Totals	88		1		3		0		16	

Impact Analysis

Risk Assessment

The FWS was tasked by its Director with the development of conservation objectives for the sage-grouse. Recognizing that state wildlife agencies have management expertise and retain management authority for this species, the FWS created a Conservation Objectives Team (COT) of state and FWS representatives to accomplish this task. The Sage-Grouse Conservation Objectives Draft Report, created by the COT identifies risk levels and priority areas throughout the range. The final COT report was released in February 2013.

Oregon is included in two of the seven Management Zones identified in the COT Report. Management Zone IV Snake River Plain includes Baker and Union Counties in its Baker subarea (17) and portions of Harney and Malheur Counties in its Northern Great Basin subarea (26a). Management Zone Northern Great Basin includes Crook and Deschutes Counties in its Central Oregon subarea (28) and portions of Harney and Malheur Counties in its Western Great Basin subarea (31). Lake County appears to be substantially located in the Western Great Basin subarea as well.

The Baker subarea (17) and the Central Oregon (28) subarea includes lands in Oregon only. The Northern Great Basin subarea (26a, as opposed to Management Area V Northern Great Basin) includes lands in Oregon, Idaho, Nevada and Utah. The Western Great Basin subarea (31) includes lands in Oregon, California and Nevada.

Table 7: Populations

COT Management Zone	Sage Grouse Population	Counties
IV. Snake River Plain	Baker (17) Northern Great Basin(26a)	Baker & Union Harney & Malheur
V. Northern Great Basin	Central Oregon (28) Western Great Basin (31)	Crook & Deschutes Harney, Lake & Malheur

Table 8: Ratings

Land Use Related Risk Levels	Threat Rating
Agriculture Conversion	Present but localized (26a)(28)(31) Present and widespread(17)
Energy	Present but localized (17)(26a)(28)(31)
Mining	Present but localized (26a)(31) Present and widespread (17)(28)
Infrastructure	Present, but localized(17)(28)(31) Present and widespread (26a)
Urbanization	Not known to be present (31) Present but localized (17)(28) Present and widespread (26a)

Findings

It is clear that the COT report did not take into account Oregon’s local planning programs required by state law. For example, on page 76, the COT Report makes the following statement with regard to 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 2011b). 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.”

The statement is correct regarding the proportion of private lands identified as Sage-grouse habitat in Baker and Union County. However, it misses the mark with respect to the extent and applicability of regulatory mechanisms residing in local comprehensive plans. Oregon is unique among other states with regard to its land use planning programs. We do things different here. This report has identified the overarching protections and land use safeguards that currently apply in all seven of Oregon’s Sage-grouse counties – Urban Growth Boundaries to contain urban development, resource zoning that requires very large parcel sizes and limits development that is not related to farm, ranch or forest activities, and wildlife protection programs, some specific to Sage-grouse. The COT report also understandably overlooks the fact that changes to statewide planning law is directly applicable to the subject jurisdictions in most instances.

The following assessments have been done with the benefit of data and local knowledge that was not available to the authors of the COT Report. Areas outside of Oregon and activities on federal lands have not been identified or considered. Naturally, the combination of greater, more detailed information and a smaller area of inquiry have led to some different findings in some cases. This is not a criticism of the COT Report, it is instead an attempt to provide a more complete picture with regard to Oregon's Sage-grouse habitat on nonfederal lands.

Conversion to Agriculture

Converting rural land to cultivated agriculture is not generally regulated by state or local planning programs. According to the COT report this activity is present but localized in Sage Grouse Populations including Crook, Deschutes, Harney, Lake and Malheur Counties. More surprising, the COT Report indicates that conversion to agriculture is widespread in Baker and Union Counties. This report reaches a different finding.

The Forests, Farms and People Report completed by the Oregon Department of Forestry (ODF) identified on pages 11-14 tracked actual, on the ground changes in land use activities from 1974 to 2009 by viewing and interpreting tens of thousands of photographic points. Over this 35 year period only a very small amount of the region was observed to convert from a wildland range category to intensive agriculture. Furthermore, lands that did convert were located in Harney County not Baker and Union Counties.

While there is no doubt that lands have been converted to agriculture, most all of those conversions would have happened in the distant past and not since 1974. The ODF data specific to this issue shows that there has been no significant conversion to agriculture in any of Oregon's Sage-grouse habitat. Information obtained from the Oregon Water Resource Department (OWRD) indicates that new water rights in the foreseeable future will not result in any significant conversions of Sage-grouse habitat to cultivated agriculture.

Key Findings:

- 1. Conversion to Agriculture is not generally regulated by state and local land use regulations.**
- 2. There has been no substantial conversion to agriculture in Oregon's identified Sage-grouse habitat since at least 1974.**
- 3. Future conversions to agriculture appear unlikely based on water rights information and availability. New sources of irrigation must be permitted by OWRD.**

Energy Development

State and local land use laws apply to the siting of new energy facilities, particularly as they occur on lands zoned for resource uses. Projects that would occupy more than 12 acres of high-value farmland or 20 acres of non-high-value farmland, including rangeland, are subject to a detailed land use process known as an "exception". Among other things, the exceptions process requires an alternatives analysis and a demonstration of need. An exception also requires an amendment to the local comprehensive plan, which requires giving notice to the state of Oregon. This process is referred to as a Post Acknowledgement Plan Amendment (PAPA).

More specific rules have been established regarding wind and solar power projects. Wind projects on farm or ranchlands are excused from the ordinary size thresholds but any other requirements, including wildlife protection standards remain intact. Commercial solar projects proposed for dry rangeland areas operate under a 250 acre threshold. Solar projects on these lands are also subject to a specific rule provision that ensures any important wildlife issues will be recognized and accounted for during the review process. The policy objective

behind the solar rules is to encourage solar projects to site on lands with the poorest capacity for farm and ranch activities and with the lowest value for wildlife.

Small and medium sized energy facilities are reviewed by local government. A project may not be approved unless it is found to comply with the applicable provisions of law. Large energy projects are reviewed by the state's Energy Facility Siting Council (EFSC) who apply state and local land use provisions in addition to their own legal tests. The COT Report indicates that Energy Development is a present but localized threat throughout the four subareas that include Oregon's identified Sage-grouse habitat. This report reaches a different finding.

Oregon's energy portfolio includes multiple energy sources. Base load plants – plants that generate a consistent supply of power day in and day out, are often dependent on the presence of natural gas, transportation facilities such as rail road spurs or developed truck routes, or both. Consequently, most of Oregon's base load plants are located inside urban growth boundaries or other areas identified for industrial development where such services are available.

Between the years of 2001 and 2011 some areas of Oregon experienced high levels of renewable energy development. State policy requirements, favorable tax conditions and subsidies and access to strong outside markets combined created a rewarding environment for energy developers. Wind energy development received nearly all of the focus and occurred almost exclusively at locations with access to high voltage transmission facilities near the Columbia River and along the Interstate 84 freeway.

Oregon's Sage-grouse habitat has experienced almost zero energy development. As of this writing, the Elkhorn Valley project in Union County is the only developed wind energy generation facility in any of the seven counties. With 25 of 61 turbines located in Low Density habitat it represents the only form of energy development in any of Oregon's Sage-grouse areas. Possible future projects include the West Butte Wind project permitted by Crook and Deschutes County, and the Echanis Wind Project permitted in southern Harney County. Both wind projects encountered difficulties in gaining access to transmission. Neither project would impact core sage grouse habitat. Baker County has recently approved two small wind projects near Huntington, Oregon that if constructed would place a limited amount of towers within Core habitat.

Currently, many of the factors spurring renewable energy growth in Oregon in the last decade are no longer in place. Incentives like the Business Energy Tax Credit (BETC) have been retired or substantially revised, Oregon's investor owned utilities have largely satisfied their obligations under the state's Renewable Portfolio Standard (RPS) and access to the California market has been severely constrained by energy policy in that State. An absence of rail and natural gas to most all of this area effectively precludes traditional, nonrenewable forms of energy generation.

Key Findings:

- 1. Developing new energy facilities is subject to state and local land use requirements.**
- 2. There is virtually no energy development existing in Oregon's identified Sage-grouse habitat.**
- 3. Limited potential exists for three permitted wind projects to be developed.**
- 4. Future energy development is unlikely because either the necessary infrastructure, government policy or market conditions are not available.**

Mining

State and local land use laws apply to the siting of new Mining activities, particularly as they occur on lands zoned for resource uses. The COT Report indicates that Mining is present but localized in the Northern Great Basin (26a)

and Western Great Basin (31) Sage Grouse Populations. These Sage Grouse Populations include Harney, Lake and Malheur Counties. The data collected by Oregon's seven counties to describe existing circumstances appears to support this assessment. There are, in fact, aggregate quarries present throughout the region. No new quarries have been established in the period from 2003 to 2013. In other words, what is there is there.

However, the COT Report also indicates that Mining threats are present and widespread in the Baker (17) and Central Oregon (31) Sage Grouse Populations that include the identified Sage-grouse habitat of Baker, Crook, Deschutes and Union Counties. This report reaches a different finding

Aggregate quarries are present in these four counties. Although other materials have been mined in the past (precious metals in Baker County and Mercury in Crook County) such activities have been abandoned. To the extent that they may have ever operated in Sage-grouse habitat they are no longer being conducted. A total of 87 aggregate quarries, 49 of which are in Baker County, are identified by the preceding county elements of this report. Only a single new quarry was permitted during the period between 2003 and 2013 (Baker County). Many of the quarries are in ODOT or local government ownership and almost all of them are in close proximity to a state highway or county road. In fact, nearly all quarries are located within close proximity to a state highway or county road. The economics of hauling aggregate tends to discourage quarry development in areas distant from transportation facilities.

Most quarries operate only during road maintenance projects and often go unused for years at a time. With no significant state or local road projects planned for the future it is unlikely that there will be a demand for additional quarry expansion or development.

Key Findings:

- 1. Mining activity is subject to state and local land use requirements.**
- 2. Aggregate quarries existing prior to 2003 represent most current mining activities in the region. Only one new quarry was approved between 2003 and 2013.**
- 3. Aggregate quarries are almost always located within close proximity to state highways or county roads and may not be used for extended periods of time due to scheduling of road projects.**
- 4. With no significant state or local road projects planned for the future it is unlikely that there will be a demand for additional quarry expansion or development.**

Infrastructure

State and local land use laws apply to the siting of new infrastructure facilities, particularly as they occur on lands zoned for resource uses. For purposes of this report, Infrastructure is identified as road systems and transmission lines. New roads that accommodate only local traffic may be considered through a conditional use process at the local level. Larger transportation facilities are subject to a detailed land use process known as an "exception". Among other things, the exceptions process requires an alternatives analysis and a demonstration of need. An exception also requires an amendment to the local comprehensive plan, which requires giving notice to the state of Oregon. This process is referred to as a Post Acknowledgement Plan Amendment (PAPA). Transmission facilities are subject to the provisions of ORS 215.275, which are similar to the exceptions requirements but do not require a PAPA.

The COT Report indicates that Infrastructure is present but localized in the Baker (17), Central Oregon (28) and Western Great Basin (31) Sage Grouse Populations. These Sage Grouse Populations include Baker, Crook,

Deschutes, Lake and Union Counties, as well as portions of Harney and Malheur Counties. The data collected by Oregon's seven counties to describe existing circumstances appears to support this assessment. There is, in fact, large scale infrastructure present in the form of state highways, county roads and overhead transmission lines throughout the region. No new facilities have been constructed in the period from 2003 to 2013. In other words, what is there is there. Furthermore, no new local facilities are planned for the future.

However, the COT Report also indicates that Infrastructure threats are present and widespread in the Northern Great Basin (26a) Sage Grouse Population. This report reaches a different finding. The Northern Great Basin Sage Grouse Population includes portions of Harney and Malheur Counties. The majority of this Sage Grouse Population is located outside of Oregon and takes in portions of Idaho, Nevada and Utah. Harney and Malheur counties contain some of Oregon's most remote areas. Development activities in other states have not been assessed. However, the reported Oregon conditions are no different than those present in Oregon's other Sage-grouse areas. Road and overhead transmission lines are present. The amount of overhead transmission lines reported by Harney County is consistent with the amount estimated for Lake County (Western Great Basin Sage Grouse Population). No new facilities have been developed in the period from 2003-2013. The Idaho Power B2H transmission line, should it be built, would traverse the northern portion of Malheur County. An exact route has not been determined.

Key Findings:

- 1. Developing new facilities is subject to state and local land use laws requirements.**
- 2. Large scale infrastructure is present in all seven counties and does traverse Sage-grouse habitat.**
- 3. No new state or local facilities are planned.**

Urbanization

State and local land use laws regulate urban development proposals. In Oregon, urban development is directed into the urban growth boundaries of incorporated cities. The COT report indicates that Urbanization is not known to be present in the Western Great Basin Sage Grouse Population (31) of Management Zone V. This area includes lands in Lake County and the southwest portions of Harney and Malheur Counties. Everything in this report supports the COT assessment with regard to Urbanization in Oregon's portion of the Western Great Basin Sage Grouse Population.

However, the COT Report also indicates that Urbanization is present but localized in the Central Oregon (28) and Baker (17) Sage Grouse Populations and is present and widespread in the Northern Great Basin Sage Grouse Population (26a). This report reaches a different finding.

The Central Oregon and Baker Sage Grouse Populations are located entirely in Oregon and include the Sage-grouse habitat in Baker, Crook, Deschutes and Union Counties. The available information regarding settlement pattern, new land use approvals and monitoring conditions indicate that urbanization has not occurred on these lands.

Identified Sage-grouse habitat is located 20 miles or more from the population centers in Deschutes and Crook Counties (Bend, Redmond, Prineville) and it is located a greater distance and an entire watershed away from Union County's population center at the City of La Grande and the communities of the Grande Ronde Valley. In Baker County, the population center at Baker City is in closer proximity to identified Sage-grouse habitat but largely remains within the confines of the Baker Valley and has not encroached into the sagebrush landscape used by Sage-grouse. All of these cities have acknowledged urban growth boundaries to contain urban development over a 20 year planning horizon.

As mentioned above, while Deschutes County has the highest population in all of central and eastern Oregon, just 63 of its residents make their home on lands identified as Sage-grouse habitat. Across the four identified counties (Baker, Crook, Deschutes, Union) a total of about 350 dwellings are present, suggesting a resident human population of about 700 citizens over a total of 1,379,598 acres (average of one dwelling per 3,942 acres). A local planning frame work characterized by a variety of resource zoning and wildlife habitat protection does not provide for new rural residential development. No Sage-grouse habitat within these Sage Grouse Populations have been identified by ODF as having converted to more highly developed land use classification between 1974-2009.

The Northern Great Basin Sage Grouse Population (26a) includes portions of Harney and Malheur Counties. The majority of this Sage Grouse Population is located outside of Oregon and takes in portions of Idaho, Nevada and Utah. Harney and Malheur counties contain some of Oregon's most remote areas. Development activities in other states have not been assessed. However, the available information regarding settlement pattern, new land use approvals and monitoring conditions indicate that no form of urbanization has occurred on Oregon's portion of this Sage Grouse Population.

Malheur County's primary population centers of Ontario (pop. 11,415), Nyssa (pop. 3,270) and Vale (pop. 1,890) are located in Oregon's portion of the Treasure Valley and well outside of identified Sage-grouse habitat. Most of Harney County's 7,315 citizens reside in and around the Burns/Hines population center (pop. 2,835 and 1,565 respectively), which is also outside of identified Sage-grouse habitat. All of these cities have acknowledged urban growth boundaries designed to contain urban development over a 20 year planning horizon.

Because the Sage Grouse Population includes portions of two counties it is difficult to identify the exact number of existing dwellings. It may be suffice to say that it is a small number. A local planning frame work characterized by a variety of resource zoning and wildlife habitat protection does not provide for new rural residential development. No Sage-grouse habitat within this Sage Grouse Population was identified by ODF as having converted to more highly developed land use classification between 1974 and 2009.

Across the seven county region a total of just 88 new dwellings have been reported between 2003 and 2013. This is roughly equivalent to a new dwelling for each 124,000 acres or one additional resident per 77 square miles of federal and nonfederal land. These numbers do not account for vacant or abandoned home sites within existing inventories.

Key Findings:

- 1. New development is subject to state and local land use requirements.**
- 2. There has been no new urbanization activity in Oregon's identified Sage-grouse habitat since at least 1974.**
- 3. Future urbanization opportunities are not available because urban uses are directed to occur inside of urban growth boundaries and existing zoning arrangements do not provide for rural residential development.**

Final Conclusion

Oregon's statewide land use planning program as implemented by local comprehensive plans and zoning ordinances has succeeded in discouraging habitat fragmentation in central and eastern Oregon. The existing framework of state and local laws are ideally equipped to guarantee the adequate regulatory mechanisms necessary to provide continued protection of Sage-grouse and Sage-grouse habitat from anthropogenic threats associated with energy development, mining, infrastructure and urbanization. Furthermore, local land use approvals may serve as the primary factors to require mitigation relative to Oregon's primary Sage-grouse threats such as invasive species, conifer infestation and wildfire.