

Deschutes County Comprehensive Plan

This version of the Deschutes County Comprehensive Plan (7.20.2023) contains draft narrative, goals, and policies. Updated layout and additional graphics including photographs, maps, charts, and tables will be included in subsequent versions.

Cover Page

Acknowledgements

Revisions

Comprehensive Plan Chapters

- **Chapter 1:** Community Involvement
- **Chapter 2:** Land Use and Regional Coordination
- **Chapter 3:** Farm and Forest Resources
- **Chapter 4:** Mineral and Aggregate Resources
- **Chapter 5:** Natural Resources
- **Chapter 6:** Historic Resources
- **Chapter 7:** Natural Hazards
- **Chapter 8:** Recreation
- **Chapter 9:** Economic Development
- **Chapter 10:** Housing
- **Chapter 11:** Unincorporated Communities and Destination Resorts
- **Chapter 12:** Public Facilities
- **Chapter 13:** Transportation
- **Chapter 14:** Energy

Appendices

- **Appendix A:** Goal 5 Inventories
- **Appendix B:** Transportation System Plan
- **Appendix C:** Tumalo Community Plan
- **Appendix D:** Terrebonne Community Plan
- **Appendix E:** Newberry Country Plan

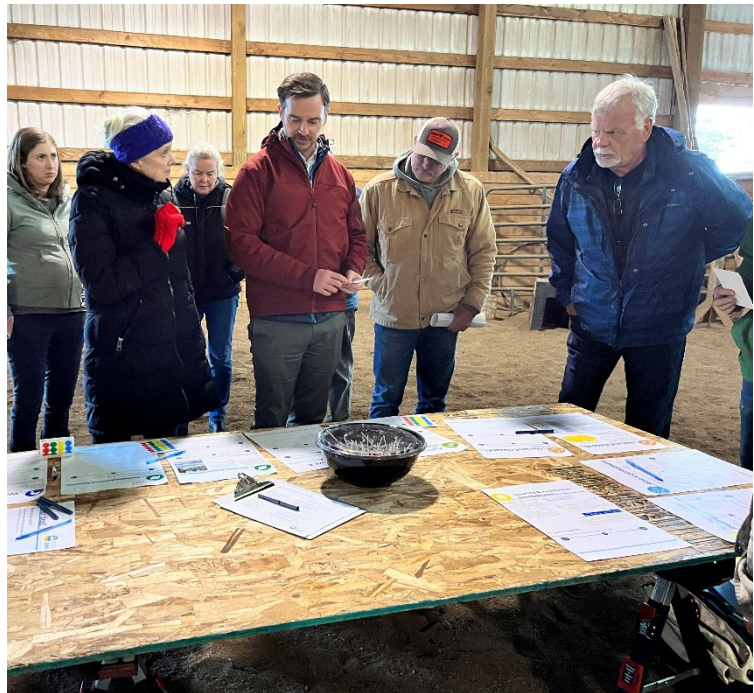
Deschutes County Comprehensive Plan

Draft Comprehensive Plan Chapters

Chapter 1: Community Engagement

Opportunities, Challenges, and Considerations

Community engagement is the touchstone of planning in Oregon. As Deschutes County grows and its population changes over the course of the next 20 years, the County must be prepared to find innovative ways to keep community members involved in the planning process and provide ample and accessible ways to find and digest information. Challenges including funding, resources, and ongoing state appeals might pose challenges to this work. The County has an opportunity to plan for adequate resources and staffing to support a robust public engagement program.



Statewide Planning Goal 1 calls for "the opportunity for citizens to be involved in all phases of the planning process." It requires each city and county to have a citizen involvement program that addresses:

- Opportunities for widespread public involvement
- Effective two-way communication with the public
- The ability for the public to be involved in all phases of the planning process
- Making technical information easy to understand
- Feedback mechanisms for policy-makers to respond to public input, and
- Adequate financial support for public involvement efforts

Context

A far-reaching community conversation was a vital part of updating the Deschutes County Comprehensive Plan. This effort included:

- Two phases of engagement – one focusing on long-range vision, opportunities, and challenges; and another phase focusing on important and controversial topics.
- Outreach events in all parts of the County.
- A deliberate audit of engagement activities to learn and build on successes.
- Engagement infographic

Involving the public in planning is a critical part of Oregon’s land use system. Statewide Planning Goal 1, Citizen Involvement, is intended to ensure that the public has the opportunity to be meaningfully involved in all phases of the land use planning process. Creating these opportunities requires time and energy on the part of County staff, as well as systems to incorporate that input in a meaningful way.

Whether it be focus groups for a larger planning project, email notification lists for department activities, or mailed notices of public hearings, local governments need to be aware of changing technologies and best practices to involve the community. To participate in planning actions, the public needs to be notified of the proposal or project, understand the legal framework for the decision and understand the implications of the decision.

Regulatory Framework

Statewide Planning Goal 1 – Citizen Involvement lays the groundwork for the County’s public involvement program. Jurisdictions are required to establish a Citizen Involvement Program that provides widespread community involvement, ensures two-way communication with appropriate feedback mechanisms, provides opportunities for engagement in all phases of the planning process, makes technical information available in an intelligible form, and is adequately funded.

Deschutes County’s Community Involvement Program

Statewide Planning Goal 1 is implemented by Deschutes County’s Community Involvement Program, as described below.

[Graphic/flowchart of public engagement opportunities.]

Deschutes County Planning Commission

The Deschutes County Planning Commission serves as the County’s Committee for Community Involvement (CCI). The Planning Commission is composed of seven volunteer members appointed to four-year terms by the Board of County Commissioners (Board).

Membership of the commission is representative of the various geographic areas of the County. Members are selected through an open process that aims to balance the diverse views of Deschutes County residents.

The purpose of the CCI is to create a direct and transparent connection between County decision-making and the public by providing regular updates, speakers, panel discussions, and handouts on land use law and policy. The CCI aims to make materials intelligible and convenient for the public and to provide a venue for civil discourse on important issues for the County.

Historic Landmarks Commission

The Historic Landmarks Commission serves as a hearings body for matters concerning historical districts, structures and sites within unincorporated Deschutes County as well as the city of Sisters. The Landmarks Commission is composed of nine voting and several non-voting ex-officio members who have demonstrated expertise in historic preservation related disciplines. Commissioners serve four-year terms.

Other Land Use Related Advisory Groups

Project Wildfire is a committee formed to coordinate, develop and implement strategies to mitigate the effects of losses due to natural disasters that strike Deschutes County. Project Wildfire is composed of 15 to 27 members who reside or represent agencies within Deschutes County. All members are appointed by the Board and serve four years (see also Chapter 7 Natural Hazards).

The Deschutes River Mitigation and Enhancement Program helps achieve Oregon Department of Fish and Wildlife (ODFW) habitat and management goals and objectives within the Upper Deschutes River sub-basin, consistent with an agreement between the Central Oregon Irrigation District (COID) and ODFW. As part of that agreement COID provides ODFW with funds to develop and implement a fish and wildlife habitat mitigation and enhancement program for the Upper Deschutes River Basin. The Deschutes River Mitigation and Enhancement Committee has seven voting members appointed to three-year terms by the Board (see also Section 2.5).

In addition to convening these groups, Deschutes County engages with the public through numerous methods, including:

- Conducting regular work sessions and hearings
- Providing timely public notice of important items
- Maintaining the County Website at www.deschutes.org, including the planning departments “Community Engagement Center” page.

- Advertising events and engaging with constituents through social media channels
- Coordinating with media organizations, such as local newspapers.
- Meeting with individuals and small groups to get feedback on important issues.

These activities were part of the most recent update of this Comprehensive Plan.

Key Community Issues

Deschutes County is changing and community members are seeking new ways to engage in key issues. To provide ample opportunities to engage, new tools and technologies will be needed to engage new groups. Issues that the policies in this section address include:

- Continuing to simplify materials to use plain language and be accessible to a variety of audiences
- Continuing to maintain a presence throughout the County, including holding meetings and events throughout the County
- Supporting engagement activities that allow community members to participate virtually and at the time of their choosing.

With these issues in mind, Deschutes County has adopted the following goals and policies:

Goals and Policies

Goal 1.1: Provide for a robust community involvement program that includes all members of the community, including those who are commonly under-represented, by ensuring access to information, encouraging community collaboration, identifying and addressing barriers to involvement, and promoting efficient and transparent planning processes.

- **Policy 1.1.1.** Convene the Deschutes County Planning Commission as the County's Committee for Community Involvement in order to provide a direct and transparent connection between County decision-making and the public.
- **Policy 1.1.2.** Write all County planning documents to be understandable, intuitive, and easily available to the general public, using simplified language where possible, with acronyms spelled out and technical language explained.
- **Policy 1.1.3.** Hold area-specific comprehensive plan and zoning text amendment public hearings in locations and at times convenient and accessible to area residents, as appropriate.
- **Policy 1.1.4.** Provide property information to the public in an intuitive and easy-to-use manner.

- **Policy 1.1.5.** Coordinate with developers before submitting applications as required or recommended by the County Development Code to identify and discuss project requirements and impacts.
- **Policy 1.1.6.** Invest in and support land use educational resources for community members including information related to rural living, agricultural practices, natural resources, and natural hazards.
- **Policy 1.1.7.** Promote opportunities for community members to have civil dialogue around key community issues.
- **Policy 1.1.8.** Explore new and innovative ways to reach community members and promote participation in the planning process.

Goal 1.2: Support the activities of the Committee for Community Involvement

- **Policy 1.2.1.** Maintain adequate funding and staffing support for the Committee.
- **Policy 1.2.2.** Provide regular updates, speakers, panel discussions, and handouts on land use law and policy.
- **Policy 1.2.3.** Appoint members through an open and public process to reflect the diverse geographic regions, demographics, and values of Deschutes County residents.
- **Policy 1.2.4.** Meet with the Board of County Commissioners at least once a year to coordinate planning policies and activities.
- **Policy 1.2.5.** Complete periodic reports on community involvement implementation for the State Citizen Involvement Advisory Committee, the Board of County Commissioners, and the public.
- **Policy 1.2.6.** Maintain open and civil discourse among Committee members and with the public.

Deschutes County Comprehensive Plan

Draft Chapters

Chapter 2: Land Use Planning and Regional Coordination Opportunities, Challenges, and Considerations.

Deschutes County has been one of the most rapidly growing parts of Oregon for many years. This growth can cause tension and highlight trade-offs between community priorities, such as the need for housing, preservation of natural resources, adequate infrastructure, and intergovernmental collaboration. To manage this growth, the County partners with its cities, special districts, and state and federal agencies to ensure a collaborative approach to development activities. As the County continues to navigate emerging issues, intergovernmental agreements and new partnerships will be key.

One purpose of the Deschutes County Comprehensive Plan is to provide a blueprint for land use throughout the County. This is accomplished through goals and policies that tell a cohesive story of where and how development should occur and what places are expected to remain undeveloped. The Plan provides a legal framework for establishing more specific land use actions and regulations.

Deschutes County regulates and manages the use of land in the unincorporated parts of the County. This is accomplished by:

- Implementing state policy and laws and furthers local planning goals by maintaining, updating and applying County land use policies, standards and regulations in its zoning codes and this Comprehensive Plan.
- Reviewing development and land use proposals and help applicants to navigate the application process.
- Coordinating with other local jurisdictions on issues of regional growth management, infrastructure, and public services.
- Coordinating land use and transportation planning efforts in rural areas including planning for farm and forest lands and natural resource management and protection.
- Administering land use regulations for unincorporated communities in the County.

The policies contained in this chapter, as well as all chapters in this Plan, establish the legislative policy basis for the County's land use planning program. The program is implemented primarily through application of the County's Zoning Code, regulatory maps,

and development permitting application and approval procedures. In addition, these policies establish important criteria to be used when initiating regulatory changes or reviewing and developing code, map, and policy amendments.

Context

Comprehensive Plan Designations

Comprehensive Plan designations provide a high-level policy basis for more detailed zoning regulations – each Comprehensive Plan designation may be implemented by one or more specific zones.

Comprehensive plan designations in Deschutes County are shown in the figure below and described in the following table. Comprehensive Plan designations within the Bend, Redmond, Sisters, and La Pine Urban Growth Boundaries are excluded – local jurisdictions have responsibility for comprehensive planning within Urban Growth Boundaries.

[Map of comprehensive plan designations]

Comprehensive Plan Designation	Purpose Statement
County-wide Designations	
Agriculture	To preserve and maintain agricultural lands for farm use.
Airport Development	To allow development compatible with airport use while mitigating impacts on surrounding lands.
Forest	To conserve forest lands for multiple forest uses.
Open Space & Conservation	To protect natural and scenic open spaces, including areas with fragile, unusual or unique qualities.
Rural Residential Exception Area	To provide opportunities for rural residential living outside urban growth boundaries and unincorporated communities, consistent with efficient planning of public services.
Surface Mining	To protect surface mining resources from development impacts while protecting development from mining impacts.
Resort Community	To define rural areas with existing resort development that are not classified as a destination resort.
Rural Community Rural Service Center Urban Unincorporated Community	To define rural areas with limited existing urban-style development.
Urban Designations	

Deschutes County coordinates with cities to adopt comprehensive plan designations for areas within Urban Growth Boundaries or as part of Rural Reserves. These designations are reflected in the Deschutes County GIS database.

Area Specific Designations

Parts of Deschutes County (Sunriver for example) have area-specific Comprehensive Plan designations. These are detailed in Chapter 11, Unincorporated Communities of this Comprehensive Plan.

Zoning Designations

Zoning designations in Deschutes County are shown in the figure below and described in the following table. Zones within the Bend, Redmond, Sisters, and La Pine Urban Growth Boundaries are excluded - local jurisdictions have responsibility for zoning within Urban Growth Boundaries.

[Table and map of zoning designations]

Overlay Zones

Deschutes County has the following overlay zones, which apply in addition to the base zone of a given property.

- **Airport Safety:** The purpose of the AS Zone is to restrict incompatible land uses and airspace obstructions around airports in an effort to maintain an airport's maximum benefit.
- **Destination Resort:** The purpose of the Destination Resort Combining Zone is to identify lands eligible for siting a Destination Resort and establish procedures and standards for establishing this type of development.
- **Landscape Management:** The purposes of the Landscape Management Combining Zone are to maintain scenic and natural resources of the designated areas and to maintain and enhance scenic vistas and natural landscapes as seen from designated roads, rivers, or streams.
- **Greater Sage-Grouse Combining Zone.** The purpose of the Greater Sage-Grouse Combining Zone is to fulfill obligations of OAR 660-23-0115. This state rule requires

seven Oregon counties to mitigate impacts of large-scale development on sage-grouse habitat.

- **Sensitive Bird and Mammal Habitat:** The purpose of the Sensitive Bird and Mammal Combining Zone is to insure that sensitive habitat areas identified in the County's Goal 5 sensitive bird and mammal inventory as critical for the survival of the northern bald eagle, great blue heron, golden eagle, prairie falcon, osprey, great grey owl, and the Townsend's big-eared bat are protected from the effects of conflicting uses or activities which are not subject to the Forest Practices Act.
- **Surface Mining Impact Area:** The purpose of the SMIA zone is to protect the surface mining resources of Deschutes County from new development which conflicts with the removal and processing of a mineral and aggregate resource while allowing owners of property near a surface mining site reasonable use of their property.
- **Wildlife Area:** The purpose of the Wildlife Area Combining Zone is to conserve important wildlife areas in Deschutes County; to protect an important environmental, social and economic element of the area; and to permit development compatible with the protection of the wildlife resource.

Sidebar: Land Use Planning in Oregon

The foundation of statewide program for land use planning in Oregon is a set of 19 Statewide Land Use Planning Goals. The goals express the state's policies on land use and related topics, like citizen involvement, housing, and natural resources.

Oregon's statewide goals are achieved through local comprehensive planning. State law requires each city and county to adopt a comprehensive plan and the zoning and land-division ordinances needed to put the plan into effect.

Local comprehensive plans must be consistent with the Statewide Planning Goals. Plans are reviewed for such consistency by the state's Land Conservation and Development Commission (LCDC). When LCDC officially approves a local government's plan, the plan is said to be acknowledged. It then becomes the controlling document for land use in the area covered by that plan.

The goals relevant to Deschutes County are:

- Goal 1 Citizen Involvement
- Goal 2 Land Use Planning
- Goal 3 Agricultural Lands

- Goal 4 Forest Lands
- Goal 5 Natural Resources, Scenic and Historic Areas, and Open Spaces
- Goal 6 Air, Water and Land Resources Quality
- Goal 7 Areas Subject to Natural Hazards
- Goal 8 Recreational Needs
- Goal 9 Economic Development
- Goal 10 Housing
- Goal 11 Public Facilities and Services
- Goal 12 Transportation
- Goal 13 Energy Conservation
- Goal 14 Urbanization

City Coordination

Deschutes County includes the following jurisdictions, each with their own authority and needs. The role of the County is largely one of coordination across these multiple communities.

Deschutes County contains four incorporated cities. The County, per statute, is responsible for coordinating with cities on growth related issues including urban growth boundary and urban reserve planning. The County maintains intergovernmental agreements with each city to define land use authority for lands outside of city limits and within urban growth boundaries.

City of Bend - Bend is the largest incorporated area in Deschutes County. It is centrally located in the county, with Highways 20 and 97 crossing paths through the center of the city. Bend has experienced rapid growth in the last few years, accelerated by the COVID-19 pandemic and “Zoom Town” remote working trends. The 2022 estimated population of the Bend UGB is 103,976. The Bend UGB accounts for most of the population share among all UGBs in Deschutes County with a population of 225,619 (57.4% of the population) by 2072.

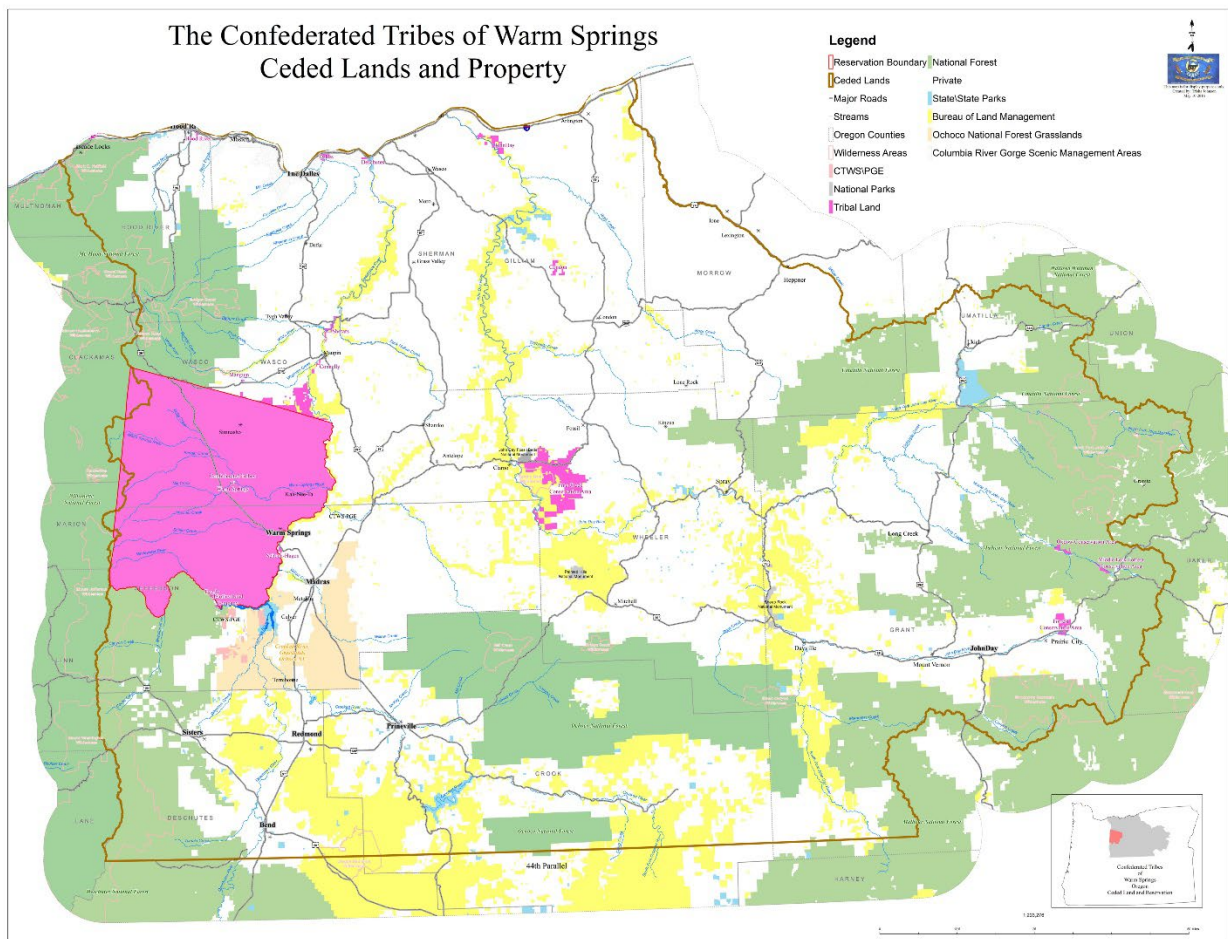
City of La Pine - The City of La Pine is located close to the southern edge of the county along Hwy. 97. The current (2022) estimated population of the La Pine UGB is 2,736. The population of the La Pine UGB is projected to increase by 87% to 5,129 in 2047. By 2072, the population is projected to be 8,336.

City of Redmond - Redmond is located northeast of Bend with Hwy. 97 running through the center of town. The current (2022) estimated population of the Redmond UGB is 37,342. The population of the Redmond UGB is projected to increase by 121% to 82,601 in the next 50 years. By 2047 it is estimated that the population of the Redmond UGB will increase to 60,060.

City of Sisters - Sisters is located on the eastern edge of the Willamette National Forest and Cascade Mountains. The current (2022) estimated population of the Sisters UGB is 3,437. The Sisters UGB is projected to increase by 130%, to 7,911 in 2047, and to 14,881 by 2072.

Tribal Coordination

In the Treaty of 1855, the Confederated Tribes of Warm Springs ceded approximately 10.2 million acres to the United States Government in exchange for creation of the Warm Springs Reservation. As part of this agreement, the Tribes maintained rights to hunt, fish, gather, and graze on these ceded lands. The map below identifies the location of these ceded areas in Deschutes County, which primarily intersect with publicly owned lands. Coordination with the Confederated Tribes of Warm Springs on growth and development related issues is important to ensure consistency with these treaty rights.



Key Community Considerations

The rapid pace of growth in Deschutes County and its impacts on urban, rural, natural, and recreational areas has been one of the most significant – and at times the most controversial – topics of discussion among the community. Some topics and comments include:

- Strong desire by some for greater densities in urban areas, in order to accommodate growth while preserving open space and resource land in rural areas.
- A similarly strong feeling by some that the cities in Deschutes County are becoming too urban already.
- Concern about the amount and distribution of benefits and burdens created by destination resorts and tourism-related activities in rural areas.
- Strong desire for interagency collaboration to manage growth in a coordinated manner.

With these ongoing conversations in mind, Deschutes County drafted and refined the following goals and policies to guide the growth of our community for the next 20 years.

Goals and Policies

Goal 2.1: Maintain an open and public land use process in which decisions are based on substantial evidence and a balancing of community needs.

- **Policy 2.1.1.** Balance the consideration of private property rights and the economic impacts of land use decisions on property owners with other community goals identified in the Comprehensive Plan.
- **Policy 2.1.2.** Review the Comprehensive Plan periodically in order to address current conditions, issues, and opportunities.
- **Policy 2.1.3.** The Deschutes County Comprehensive Plan Map will be retained in official replica form as an electronic map layer within the County Geographic Information System and is adopted as part of this Plan.
- **Policy 2.1.4.** Implement Comprehensive Plan policies through the Community Development Department's annual work plan and other actions by the Department and the Board of County Commissioners.
- **Policy 2.1.5.** Explore methods to integrate carrying capacity into County land use decision making.

Goal 2.2: Coordinate and support regional planning efforts relating to growth, natural resources, recreation, and major infrastructure investments.

- **Policy 2.2.1.** Periodically review and update intergovernmental and urban management agreements to coordinate land use review on land inside urban growth boundaries and outside city limits.
- **Policy 2.2.2.** Help coordinate regional planning efforts with other agencies on land use policies and actions that impact their jurisdictions.
- **Policy 2.2.3.** Support the use of high value natural resource and recreational lands for public purposes, whether through acquisition, easements, or other means.
- **Policy 2.2.4.** Support the implementation of long-range plans of Deschutes County jurisdictions, incorporating elements of those plans into the County's Comprehensive Plan as appropriate.
- **Policy 2.2.5.** Encourage cities to conduct, in collaboration with Deschutes County, urban reserve planning to facilitate orderly and thoughtful management of growth and infrastructure needs.
- **Policy 2.2.6.** Collaborate with federal agencies on land management issues including homelessness, sustainable recreation expansion, and energy projects.
- **Policy 2.2.7.** Collaborate with tribal governments on regional issues, particularly those that impact ceded lands or shared natural resources.
- **Policy 2.2.8.** Support efforts to reduce barriers to regional infrastructure projects with community benefit while mitigating negative impacts.
- **Policy 2.2.9.** Support updates to unincorporated community area plans.
- **Policy 2.2.10.** In accordance with OAR 660-024-004 and 0045, Deschutes County, fulfilling coordination duties specified in ORS 195.025, shall approve and update its comprehensive plan when participating cities within their jurisdiction legislatively or through a quasi-judicial process designate regionally significant sites.
- **Policy 2.2.11:** The County and City shall periodically review the agreement associated with the Redmond Urban Reserve Area (RURA). The following land use policies guide zoning in the RURA.

- a. Plan and zone RURA lands for rural uses, in a manner that ensures the orderly, economic and efficient provision of urban services as these lands are brought into the urban growth boundary.
- b. Parcels shall be a minimum of ten acres.
- c. Until lands in the RURA are brought into the urban growth boundary, zone changes or plan amendments shall not allow more intensive uses or uses that generate more traffic, than were allowed prior to the establishment of the RURA.
- d. For Exclusive Farm Use zones, partitions shall be allowed based on state law and the County Zoning Ordinance.
- e. New arterial and collector rights-of-way in the RURA shall meet the right-of-way standards of Deschutes County or the City of Redmond, whichever is greater, but be physically constructed to Deschutes County standards.
- f. Existing and future arterial and collector rights-of-way, as designated on the County's Transportation System Plan, shall be protected from development.
- g. A single-family dwelling on a legal parcel is permitted if that use was permitted before the RURA designation.

Additionally, the County will coordinate planning efforts and development goals with the City of Redmond prior to bringing County-owned property into Redmond's urban growth boundary.

Goal 2.3: Manage county-owned lands to balance the needs of the community as articulated in the goals and policies of this Plan and other supporting planning documents.

- **Policy 2.3.1.** Manage lands with a park designation consistent with the goals and policies in Chapter 5 Natural Resources.
- **Policy 2.3.2.** Support the efforts of park districts, state and/or federal agencies to identify additional properties along rivers, streams, or creeks, or containing significant wildlife, scenic resources, or open space resources to designate as park land.

Goal 2.4: Minimize onerous barriers to land use application and development review processes.

- **Policy 2.4.1.** Explore opportunities to build or obtain specialty planning knowledge and experience among staff within CDD in related fields such as wildlife, natural resources, and/or agricultural practices.

- **Policy 2.4.2.** Explore measures to reduce development costs for projects related to agriculture and addressing houselessness, including fee reductions and expedited land use applications.

Deschutes County Comprehensive Plan

Chapter 3: Farm and Forest Resources

Opportunities, Challenges, and Considerations.

Farm and forestry resources and operations continue to play an important role in the character and economy of Deschutes County. However, a variety of ongoing and forecasted trends will impact the viability and vitality of these industries and the people who contribute to them. A number of these trends and challenges are described below and more information about some issues is found in the Water Resources section of this Plan (see Chapter 5: Natural Resources).

Prevalence of small farming operations and hobby farms. The 2017 Census of Agriculture profiles Deschutes County as primarily consisting of small acreage, hobby farms and other relatively small agricultural operations. As of 2017, there were approximately 1,484 farms, an increase of 16% from 2012. Although the average size of a farm in Deschutes County is 91 acres, the majority of acreage (about 85%) is in farms of 10 acres or less in size.

Marginal or low productivity soils. While a large proportion of the County is zoned for exclusive farm use, much of the land in these areas has marginal soils which provide limited productivity, particularly for higher value crops. Limited access to water rights and irrigation can further hamper productivity in some areas. Deschutes County attempted to reclassify certain agricultural lands through a nonresource lands program. This approach was rejected at the state level. Since that time, some landowners have successfully redesignated property, primarily to residential zones, through an applicant-initiated process.

Financial challenges. According to the 2017 Agricultural Census, agricultural producers in Deschutes County are often operating in the red. The per-farm average of market value of products sold was \$19,386, a 21% increase from 2012, and average production expenses of \$34,748. This results in a deficit of approximately \$12,866 per farm per year. Government payments help cover a portion of this deficit, with the average farm receiving \$7,477 in assistance. The costs of operating continue to be a major challenge from small family operations, resulting in approximately 46% of farms in Deschutes County reporting under \$2,500 in sales.

Declining forest products industry. Approximately 1,032,436 acres of Deschutes County area zoned for Forest Use. Historically, forestry on public and private land was a primary

industry in Central Oregon with key mill sites along the Deschutes River in Bend. Over time, species protections, international competition, and new technologies have reduced the overall footprint of the timber industry in Central Oregon. Recently, land uses are shifting toward recreation and residential development in these natural resource areas.

Water supply and irrigation. Much of Deschutes County is served by six irrigation districts – these are special entities created for the purpose of delivering water to their patrons. These districts are effectively non-profit water user associations. In addition to irrigation, these districts also supply other services including municipal, industrial, and pond maintenance. The total water available for irrigation and other human uses in Deschutes County is fixed under the current water regime. No additional water rights can be issued without the decommissioning of a previous claim. Therefore, there is little opportunity to expand irrigated farming in the County. Existing farms with senior water rights in general have relatively generous irrigation rights, which have rarely been fully utilized, and are expected to have sufficient water to cope with increasing temperatures and drought conditions in the future. Junior water right holders, associated with Arnold Irrigation District and North Unit Irrigation District, have recently seen challenges with water delivery due to limited availability and drought.

[Map of districts]

Conflicts with other uses. Agricultural uses continue to be affected by conflicts with adjacent or surrounding non-farm uses (primarily new rural homes). In some cases, new residents object to impacts of common farming practices, such as noise, dust, and odors related to farm activity.

Changes in climate conditions. A number of forecasted trends may impact agriculture and forestry resources and production either positively or negatively by the middle of this century, including the following:

- *Drought conditions.* Increasing temperatures will lead to an increase in the length of the growing season and a slight change in the cold hardiness zones throughout the County. The ongoing patterns of drought and lack of sufficient water for irrigation in some districts is likely to be exacerbated by increasing temperatures.
- *Growing season.* Projected increases in average temperature will have the effect of drastically increasing the length of the growing season. For example, currently the region around Bend has a growing season of just under 100 days a year, but that will increase by more than a month to between 133 to 143 days a year. The eastern part of the county will likely see an even more marked increase from a brief 35 days to between 85 and 100 days. This may increase potential agricultural productivity in parts of the County.

- *Water demand and availability.* Water demand is likely to increase due to increased temperatures. Warmer days and warmer nights will increase evaporation and transpiration, requiring an increase in irrigation and recreational consumption. Because the total volume of water available for agricultural and human use is fixed, strategies to decrease water usage (capping irrigation channels, irrigation timing strategies, water conservation) will become more crucial.

Context

Agriculture and ranching operations in Deschutes County vary widely based on water availability, soil, and microclimate. The following subzones were created through a commercial farm study conducted in 1992. This study concluded that irrigation is a key factor to viability of operations, and opted for smaller acreages than allowed by state law to provide additional flexibility.

Subzone Name	Minimum Parcel Size (<i>for farm divisions and farm-related dwellings</i>)	Profile
Lower Bridge	130	Irrigated field crops, hay pastures
Sisters/Cloverdale	63	Irrigated alfalfa, hay and pastures, wooded grazing and some field crops
Terrebonne	35	Irrigated hay and pasture
Tumalo/Redmond/Bend	23	Irrigated pasture and some hay
Alfalfa	36	Irrigated hay and pasture
La Pine	37	Riparian meadows, grazing and meadow hay
Horse Ridge East	320	Rangeland grazing

Additional information about farm and forest resources is provided in the tables and charts below.

Figure 1. Land in Farms by Use

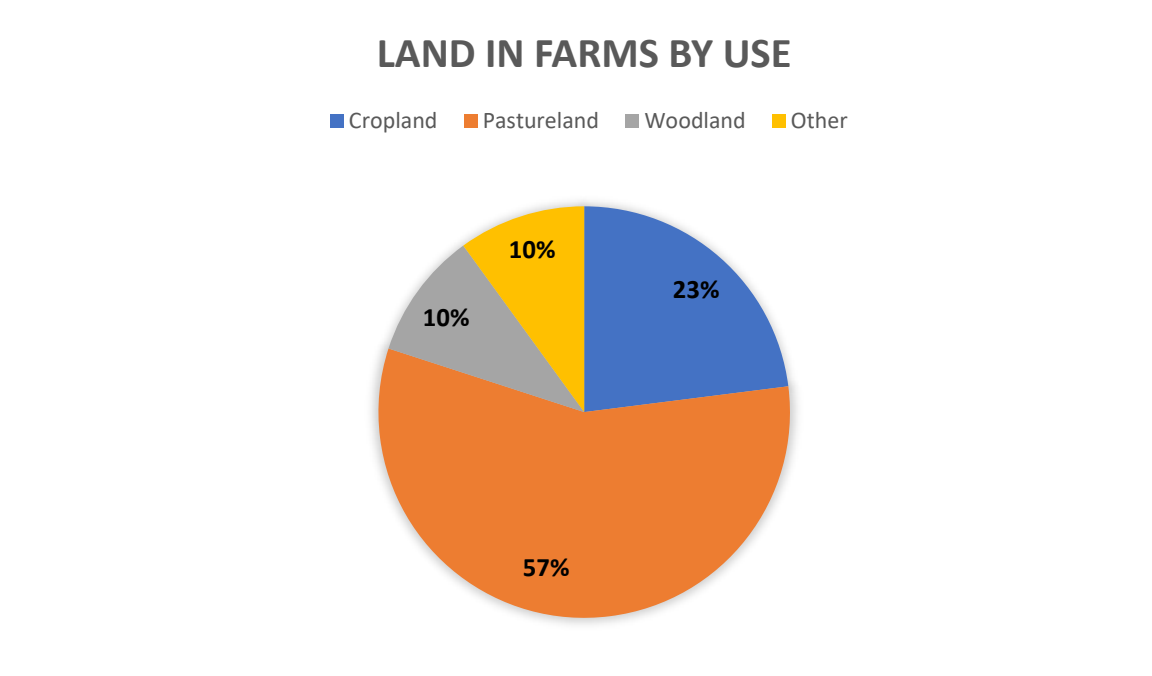


Figure 2. Farms by Value of Sales

FARMS BY VALUE OF SALES

■ Less than \$2,500
 ■ \$2,500 to \$4,999
 ■ \$5,000 to \$9,999
 ■ \$10,000 to \$24,999
■ \$25,000 to \$49,999
 ■ \$50,000 to \$99,999
 ■ \$100,000 or more

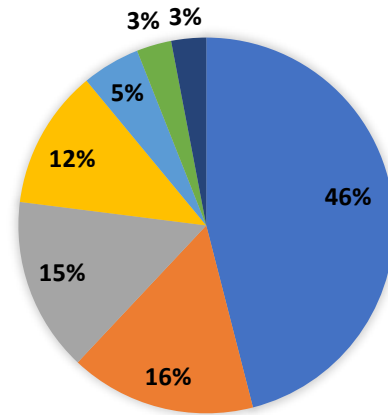
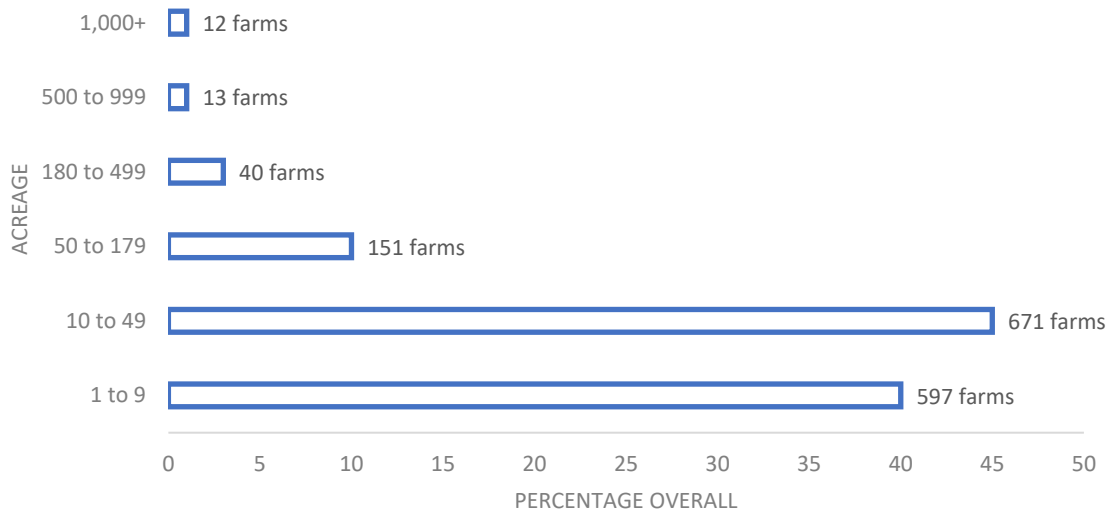


Figure 3. Farms by Size

Farms by Size (acres)



Forest Lands

Deschutes County classifies Forest land in one of two zones. Forest 1 zoning is intended for land that is primarily used for forest management or commercial forestry, with a lot size over 160 acres, and not developed with residential or non-forest uses. Forest 2 zoning is intended for land that does have residential or non-forest uses, is less than 160 acres, and may contain roads or other public facilities that serve the property.

State regulations limit residential and non-forestry related development on forest lands and the County sees only a few applications for development in these areas each year. Even with this limitation on development, forest managers and service providers continue to express concern with wildfire risk associated with residential development in heavily wooded areas.

Most lands in either of these classifications within Deschutes County are federally owned and managed by the US Forest Service. Historically, forest lands were used for timber production. As timber harvesting decreases, other uses for forest lands are emerging. State regulations permit five general types of uses, including forest operations; environmental, agricultural or recreational uses; two types of dwellings and locally dependent uses. Permitted uses are defined and clarified in OAR 660-006. The following uses have continued to be

Secondary forest products (forest operations): There is an increasing use of secondary forest products, such as hog fuel (chipped wood) or wood slash. This type of product is generally seen as providing dual benefit, by providing economic opportunity while also reducing wildfire risk through thinning projects.

Alternative Energy: Biomass is an emerging technology for renewable energy and can also be integrated with these products. The first biomass facility in the County is currently under development through a partnership with Mt. Bachelor Ski Resort and the US Forest Service.

Recreation (environmental, agricultural and recreation uses): The proximity of federal forests for hiking, mountain biking, skiing, hunting, fishing, wildlife viewing and other outdoor recreation draws tourists and residents alike. Skyline Forest, a 33,000-acre privately owned property in the Forest 1 zone has been identified as a potential community asset, with several groups and nonprofits seeking to acquire and utilize the property as a community forest. In 2022, Deschutes Land Trust facilitated a community visioning process to identify preferred community uses if land were to be purchased as a privately held recreational asset.

Key Community Considerations.

Given the range of issues and conditions discussed above and, this plan includes a variety of policies to support farm and forest operations in Deschutes County. Additional related policies also are found in Chapter 2: Land Use and Regional Coordination, Chapter 5: Natural Resources, and Chapter 9: Economic Development. These strategies are underpinned by the following results of Comprehensive Plan outreach efforts.

- Community members opposed rezoning low productivity farmland with poor soil to allow greater opportunities for housing, while supporting rezoning of this land to preserve open space.
- There is strong support for conduct educational outreach to encourage water conservation and on-farm efficiency measures.
- Community members also strongly support allowing greater flexibility for income-producing supplemental activities on farms such as farm-to-table dinner, farm stands, weddings, or similar events.
- Outreach participants expressed support for investment in the agricultural economy through grants or exploring a farmland conservation program.

Farm and Forest Resources Goals and Policies

Farm Resources Goals and Policies

Goal 3.1: Preserve and maintain agricultural lands, operations, and uses to support Deschutes County's agricultural economy

- **Policy 3.1.1.** Retain agricultural lands through Exclusive Farm Use zoning.
- **Policy 3.1.2.** Continue to apply Exclusive Farm Use sub- consistent with the County's most up-to-date adopted studies of agricultural land and as implemented through the County Development Code.
- **Policy 3.1.3.** Develop comprehensive plan policy criteria and code to provide clarity on when and how EFU parcels can be converted to other designations.
- **Policy 3.1.4.** Regularly review farm regulations to ensure compliance with changes to State Statute, Oregon Administrative Rules and case law.

Goal 3.2: Promote a diverse, sustainable, and thriving agricultural sector.

- **Policy 3.2.1.** Encourage farming by promoting the raising and selling of crops, livestock and/or poultry.
- **Policy 3.2.2.** Support agriculture through the use of grant funds, research, and other resources dedicated to agricultural community members and stakeholders, including but not limited to farmers, agricultural researchers, farm bureaus, and other organizations in studying and promoting economically viable agricultural opportunities and practices.
- **Policy 3.2.3.** Support and encourage small farming enterprises through a variety of related strategies and programs, including, but not limited to, niche markets, organic farming, food council, buy local, farmers markets, farm-to-table activities, farm stands or value-added products, or other programs or strategies.
- **Policy 3.2.4.** Work cooperatively with irrigation districts, public agencies and representatives, and landowners to promote and support agricultural uses and operations, including through use of rural reserves, conservation easements, transfer of development rights programs, land acquisition, and other preservation strategies.
- **Policy 3.2.5.** Support efforts to control noxious weeds and invasive species.
- **Policy 3.2.6.** Continue to review and revise County Code as needed and consistent with state rules and regulations to permit alternative and supplemental farm activities that are compatible with farming, such as agri- tourism or commercial renewable energy projects.
- **Policy 3.2.7.** Work with the State to review and revise their regulations when a desired alternative or supplemental use identified by the County is not permitted by State regulations.
- **Policy 3.2.8.** Use land use policy and development code requirements, including right-to-farm provisions, as well as coordination with other jurisdictions to minimize conflicts between residential uses and agricultural uses and continue to promote the viable operation of agricultural uses.
- **Policy 3.2.9.** Provide resources such as technical assistance and access to grants to support on-site efficiency upgrades relating to agriculture.

Goal 3.3: Ensure Exclusive Farm Use policies, classifications, and codes are consistent with local and emerging agricultural conditions and markets.

- **Policy 3.3.1.** Identify and retain accurately designated agricultural lands.
- **Policy 3.3.2.** Continue to explore new methods of identifying and classifying agricultural lands.
 - a. Apply for grants to review and, if needed, update farmland designations.
 - b. Study County agricultural designations considering elements such as water availability, farm viability and economics, climatic conditions, land use patterns, accepted farm practices, and impacts on public services.
 - c. Lobby for changes to State Statute regarding agricultural definitions specific to Deschutes County that would allow some reclassification of agricultural lands.
- **Policy 3.3.3.** Address land use challenges in the Horse Ridge subzone, specifically:
 - a. The large number of platted lots not meeting the minimum acreage;
 - b. The need for non-farm dwellings and location requirements for farm dwellings;
 - c. Concerns over the impact on private property from off-road vehicles, facilities, and trails located on adjacent public lands.
- **Policy 3.3.4.** Continue to work with the State to review and revise accessory farm dwelling requirements to address the needs of local farmers.
- **Policy 3.3.5.** Encourage coordination between agricultural interests and fish and wildlife management organizations, including public agencies, non-governmental organizations and others.
- **Policy 3.3.6.** Explore the evaluation and potential redesignation of lands with a farm designation and poor soils and low productivity for protected open space, development of needed housing, or other uses that support community goals as follows.
 - A. Allow comprehensive plan and zoning map amendments, including for those that qualify as non-resource land, for individual EFU parcels as allowed by State Statute, Oregon Administrative Rules and this Comprehensive Plan.
 - B. Explore creation of a new zoning classification intended to balance value of high desert environment while allowing for limited housing opportunities and applying this designation through coordination with interested and willing property owners.

Forest Resources Goals and Policies

Goal 4: Protect and maintain forest lands for multiple uses and objectives, including forest products, watershed protection, conservation, recreation, wildlife habitat protection, carbon sequestration, forest health, and wildfire resilience.

- **Policy 4.1.** Retain forest lands through Forest 1 and Forest 2 zoning.
- **Policy 4.2.** To conserve and maintain unimpacted forest lands, retain Forest 1 zoning for those lands with the following characteristics:
 - a. Consist predominantly of ownerships not developed by residences or non-forest uses;
 - b. Consist predominantly of contiguous ownerships of 160 acres or larger;
 - c. Consist predominantly of ownerships contiguous to other lands utilized for commercial forest or commercial farm uses;
 - d. Are accessed by roads intended primarily for forest management; and
 - e. Are primarily under forest management.
- **Policy 4.3.** To conserve and maintain impacted forest lands, retain Forest 2 zoning for those lands with the following characteristics:
 - a. Consist predominantly of ownerships developed for residential or non-forest uses;
 - b. Consist predominantly of ownerships less than 160 acres;
 - c. Consist of ownerships generally contiguous to tracts containing less than 160 acres and residences, or adjacent to acknowledged exception areas; and
 - d. Provide a level of public facilities and services, including roads, intended primarily for direct services to rural residences."
- **Policy 4.4.** Notwithstanding any other quasi-judicial plan or zone change criteria, lands designated as Forest under this Plan and zoned Forest 2 may upon application be redesignated and rezoned from Forest 2 to Exclusive Farm Use if such lands:
 - a. Do not qualify under State Statute for forestland tax deferral,
 - b. Are not necessary to permit forest operations or practices on adjoining lands and do not constitute forested lands that maintain soil, air, water and fish and wildlife resources,
 - c. Have soils on the property that fall within the definition of agricultural lands as set forth in Goal 3,
 - d. Are a tract of land 40 acres or less in size,
 - e. Do not qualify under State Statute and the terms of the Forest 2 zone for a dwelling, and;

- f. Were purchased by the property owner after January 1, 1985 but before November 4, 1993.

Such changes may be made regardless of the size of the resulting EFU zoning district. Such changes shall be processed in the same manner as other quasi-judicial plan or zoning map changes.

- **Policy 4.5.** Ensure that criteria for and designation of Forest Lands are consistent with state administrative rules and statutes.
- **Policy 4.6.** Coordinate and cooperate with the U.S. Forest Service, the Bureau of Land Management and other public agencies to promote sustainable forest uses, including recreation and biomass facilities, on public forest land, including currently adopted Forest and Land Management Plans prepared by the US Forest Service (USFS) and US Bureau of Land Management (BLM).
 - a. Using the Deschutes National Forest Land and Resource Management Plan, or its successor, as the basis for mutual coordination and cooperation with the U.S. Forest Service;
 - b. Using the Prineville Bureau of Land Management Upper Deschutes Resource Management Plan, or its successor, as the basis for mutual coordination and cooperation with the Bureau of Land Management.
- **Policy 4.7.** Notify affected agencies and tribal governments when reviewing land use applications and proposals for development that could impact Federal or State forest lands.
- **Policy 4.8.** Support economic development opportunities that promote forest health, create opportunities for local production of related forest products, and reduce the prevalence of invasive plant species that adversely affect forest health and soil quality.
- **Policy 4.9.** Provide input on public forest plans that impact Deschutes County.
- **Policy 4.10.** Coordinate with community stakeholders to support forest management plans and projects that are consistent with the policies of this chapter and with local community forest management and wildfire protection plans.
 - a. Promote forest health and resilience to wildfire.
 - b. Contribute to public safety by treating wildland hazardous fuels particularly in the designated Wildland Urban Interface as identified in the Community Wildfire Protection Plans described in Chapter 13, Natural Hazards, of this Plan.

- c. Retain fish and wildlife habitat.
- **Policy 4.11.** Continue to review and revise the County Code as needed to ensure development in forest zones minimizes and/or mitigates impacts on fish and wildlife habitat, forest health, and wildfire resiliency

Deschutes County Comprehensive Plan

Draft Comprehensive Plan Chapters

Chapter 4: Aggregate and Mineral Resources

Opportunities, Challenges, and Considerations.

Surface mining provides non-renewable resources, such as pumice, cinders, building stone, sand, gravel and crushed rock. The extraction of these materials provides employment as well as products important to local economic development. However, mining of mineral and aggregate resources creates noise, dust and traffic and potential pollution that can conflict with neighboring land uses, particularly residential uses.

Oregon Department of Geology and Mineral Industries (DOGAMI) regulates surface mining sites in Deschutes County. The last available published analysis of mineral resources in Deschutes County was completed by DOGAMI in 1976. No updates have been completed during that time due to limited staff. A continued challenge is monitoring the availability of this resources.

When a mineral resource is exhausted, the site is required to submit a reclamation plan to Deschutes County and DOGAMI. This plan identifies how the site will be closed for mineral operations, environmental impacts will be mitigated, and steps to be taking to return the site to a new use. As mineral and aggregate resources are exhausted, property owners often rezone the site from the "Surface Mine" designation to a new zone (often a residential zone), to allow for new development to occur. Coordination with DOGAMI and property owners is imperative to ensure this reclamation process occurs in an efficient and environmentally focused manner.

Context

Surface mining is protected through Statewide Planning Goal 5, Natural Resources, Scenic and Historic Areas and Open Spaces and the associated Oregon Administrative Rule (OAR) 660-023 (this rule replaced 660-016 in 1996). Mineral and aggregate resources are included on the list of Statewide Goal 5 resources that the County must inventory and protect.

The County maintains an inventory of surface mining sites as part of its Goal 5 program. There are currently 59 mining sites identified in the Deschutes County GIS data, and 8 sites that have been reclaimed.

Mining sites are subject to a Surface Mining Impact Area Combining Zone that applies within ½ mile of the mining site boundary. This combining zone limits new uses and expansion of existing uses that may be impacted by mining activities and are not in

compliance with the site-specific Economic, Social, Environmental, and Energy (ESEE) analysis for nearby mining sites.

[Map of aggregate sites, buffer zones]

Surface Mining in 2023

- Number of Active Mining Sites: 59
- Number of Reclaimed Sites: 8
- Acres in Surface Mining Zone (including Black Butte Ranch Surface Mine/Limited Use Zone): 9235.25
- Acres in the Surface Mining Impact Area Combining Zone (SMIA): 58,881

Source: Deschutes County GIS information

Key Community Considerations.

Transportation agencies expressed concern regarding the impact of depleting mineral resources on road operations, including the use of cinder for winter maintenance and other resources for use in new road projects. The topic of mineral and aggregate resources was not a focus of community discussion as part of this Comprehensive Plan update, though the priorities of a diverse economy and protected natural areas for habitat and open space are interrelated with this subject. The following goals and policies represent a balance of these community interests.

Goals and Policies

Goal 4.1: Protect and utilize mineral and aggregate resources while minimizing adverse impacts of extraction, processing and transporting the resource.

- **Policy 4.1.1:** Implement adopted Goal 5 Surface Mining inventories.
- **Policy 4.1.2:** Coordinate with the Oregon Department of Geology and Mineral Industries (DOGAMI) on mining regulations and studies.
- **Policy 4.1.3:** Balance protection of mineral and aggregate resources with conflicting resources and uses.
- **Policy 4.1.4:** Support the required reclamation of mining sites following mineral extraction.

Deschutes County Comprehensive Plan

Draft Comprehensive Plan Chapters

Chapter 5: Natural Resources

Opportunities, Challenges, and Considerations

Natural resources in Deschutes County are abundant. Wildlife, scenic views of forests and peaks, and open spaces to preserve habitat and native vegetation are among the County's top assets.

Oregon Statewide Planning Goal 5 governs Natural Resources, Scenic and Historic Areas, and Open Spaces. Through this goal, the County maintains inventories and regulatory protections to preserve these many resources. These regulations are created by weighing Economic, Social, Environmental, and Energy (ESEE) consequences associated with protection of a resources.

Topics covered in this chapter include:

- Protected Wildlife Resources
- Open Space and Scenic Views
- Water Resources

Protected Wildlife Resources

Deschutes County has some of the broadest and most robust wildlife protections in the state, covering a variety of species. The County has development protections within and surrounding numerous wildlife habitats. Some of these habitats have mapped geographic boundaries such as Deer Winter Range, Deer Migration Range, Antelope Habitat, Golden Eagle – Sensitive Bird Habitat, and Elk Habitat.

Other species are commonly found in protected riparian areas, such as wetlands and floodplains. Deschutes County contains unmapped habitats for fish, fur-bearing animals, waterfowl, and upland game birds.

A continued challenge to wildlife resources is rural development and impacts on habitat. Mule deer are seeing steady declines, approximately 10% each year per Oregon Department of Fish and Wildlife biologists. These declines in population are due to a variety of factors, including but not limited to loss of habitat, predation, and disease.

Context

Protected Wildlife Resources

Wildlife diversity is a major attraction of Deschutes County. The key to protecting wildlife is protecting the habitats each species needs for food, water, shelter, and reproduction. Also important is retaining or enhancing connectivity between habitats to protect migration routes and avoid isolated populations.

In considering wildlife habitat, counties rely on the expertise of the Oregon Department of Fish and Wildlife (ODFW) and U.S. Fish and Wildlife Service (USFWS). Those agencies provide information for the required wildlife inventory and recommendations on how to protect wildlife habitat on private lands.

Statewide Planning Goal 5

Oregon land use planning protects wildlife with Statewide Planning Goal 5 and the associated Oregon Administrative Rule (OAR) 660-023. Goal 5 includes a list of resources which each local government must inventory, including wildlife habitat.

The Goal 5 process requires local governments to inventory wildlife habitat and determine which items on the inventory are significant. For sites identified as significant, an Economic, Social, Environmental and Energy (ESEE) analysis is required. The analysis leads to one of three choices: preserve the resource, allow proposed uses that conflict with the resource or strike a balance between the resource and the conflicting uses. A program must be provided to protect the resources as determined by the ESEE analysis.

Appendix A of the Comprehensive Plan contains the full ESEE ordinances for the County's protected Goal 5 resources.

A summary of Deschutes County's wildlife protection programs follows:

Mule Deer: Migration corridors and winter range are essential habitats needed to support mule deer in Deschutes County. The Bend/La Pine migration corridor is approximately 56 miles long and 3 to 4 miles wide and parallels the Deschutes and Little Deschutes Rivers. The corridor is used by deer migrating from summer range in the forest along the east slope of the Cascades to the North Paulina deer winter range. Deschutes County adopted a "Deer Migration Priority Area" based on a 1999 ODFW map submitted to the South County Regional Problem Solving Group. This specific sub-area is precluded from destination resorts.

The ODFW identified the Metolius, Tumalo and North Paulina deer winter ranges during Deschutes County's initial comprehensive plan creation. The boundaries of these winter ranges are shown on the Big Game Sensitive Area map in the 1978 Comprehensive Plan and have been zoned with the Wildlife Combining Zone since 1979. The winter ranges support a population of approximately 15,000 deer. In 1992, ODFW recommended deer winter range in the northeast corner of the county, in the Smith Rock State Park area, be included in the Deschutes County inventory and protected with the same measures applied to other deer winter range. This area was officially included and mapped on the Wildlife Combining Map when Ordinance 92-040 was adopted by the Board of County Commissioners.

Sensitive Birds: Nest sites for the northern bald eagle, osprey, golden eagle, prairie falcon, great grey owl, and great blue heron rookeries are inventoried by the County. The area required for each nest site varies between species. The minimum area required for protection of nest sites has been identified by the ODFW in their management guidelines for protecting colony nesting birds, osprey, eagles, and raptor nests.

Elk: The Land and Resource Management Plan for the Deschutes National Forest identifies 6 key elk habitat areas in Deschutes County. The ODFW also recognizes these areas as critical elk habitat for calving, winter or summer range. The following areas are mapped on the Big Game Habitat Area map and in the Deschutes National Forest Land and Resource Management Plan:

- Tumalo Mountain
- Kiwa
- Ryan
- Crane Prairie
- Fall River
- Clover Meadow

Antelope: The Bend and Ochoco District offices of the ODFW provided maps of the antelope range and winter range. The available information is adequate to indicate that the resource is significant. The antelope habitat is mapped on Deschutes County's Big Game Habitat-Wildlife Area Combining Zone Map.

[Map - wildlife zones]

Scenic Views and Open Space

Deschutes County has a rich abundance of open space. Open spaces are generally undeveloped areas that are being maintained for some other purpose, such as farms, parks, forests, or wildlife habitat. Besides the value that stems from the primary use of the

land, open spaces provide aesthetically pleasing undeveloped landscapes. Because these areas are undeveloped, they also provide additional benefits such as water recharge, buffers from habitat, and safety zones from natural hazards such as flooding.

Open spaces and scenic views are an important draw for visitors and are often mentioned as important to the area's quality of life. The backdrop of the Cascade Mountains, with its vast forest and sagebrush landscapes and riparian and wetland habitats, all provide an inspirational setting for visitors and residents alike. Statewide Planning Goal 5 recommends, but does not require, creating an inventory and protections for open spaces, scenic views and sites. Oregon Administrative Rule (OAR) 660-023 defines open space designations as parks, forests, wildlife preserves, nature sanctuaries, and golf courses.

Open spaces are protected through an Open Space and Conservation map designation and zoning district. Scenic view protection is implemented through the Landscape Management Combining Zone regulations.

[Map: Landscape Management Roads and Rivers, Open Space and Conservation districts]

Water Resources

Deschutes County's Role in Water Management is described below.

Regulatory Agencies. The primary state regulator of water availability is the Oregon Water Resources Department (OWRD). The Oregon Department of Environmental Quality (DEQ) leads the monitoring and enforcement of water quality standards. The Oregon DEQ is required to comply with the Federal Environmental Protection Agency.

Statewide Planning Goals. There are two Statewide Planning Goals relating to the protection of water resources. *Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces)* requires an inventory and protection of the following water resources. In Deschutes County, these inventories have been completed and acknowledged by the Land Conservation and Development Commission (See Appendix A for Goal 5 Inventories). *Goal 6 (Air, Land, and Water Resources Quality)* requires comprehensive plans to be consistent with state and federal pollution regulations.

The policies in this section relating to water provide the framework for evaluating land use actions and define the responsibility of the County to work in partnership with cities, agencies, non-profits and others to achieve efficient use of water resources and effective management of water quality in the Upper Deschutes Basin.

It is important to underscore that the primary water resource management process occurs outside of the state land use planning system. Oregon land use and water management

are not integrated; there are no overarching administrative rules that consider statewide water management in conjunction with land use planning.

Deschutes Basin Hydrogeology

The Deschutes River Basin, from its headwaters to the Columbia River, encompasses 10,400 square miles of the north central part of the State. Nearly 91% of Deschutes County lies within the Deschutes Basin. The upper Deschutes River Basin is characterized by recent volcanic activity and strong and rapid groundwater flows. The geologic conditions lead to a strong connection between surface and ground water (see also Section 3.10).

Groundwater flows eastward from the Cascade Range through permeable volcanic rocks out into the basin and then generally northward. Groundwater recharge comes from precipitation in the Cascade Range, inter-basin flow and leaking irrigation canals. No long-term water-level declines attributable to groundwater pumping were found in the upper Deschutes Basin. Approximately one-half of the ground water flowing from the Cascade Range discharges to spring-fed streams along the margins of the range. The remaining groundwater flows through the subsurface, and eventually discharges to streams near the confluence of the Deschutes, Crooked, and Metolius Rivers.

The large amount of groundwater discharge in the confluence area is primarily caused by geologic factors. The Deschutes River flows north through permeable rock until it hits a region of low-permeable rock near the confluence area. There the permeable rock strata terminates, forcing water to the surface. Virtually all of the regional groundwater in the upper Deschutes Basin discharges to streams south of the area where the Deschutes River enters this low- permeability terrain, at roughly the location of Pelton Dam.

[Water Use](#)

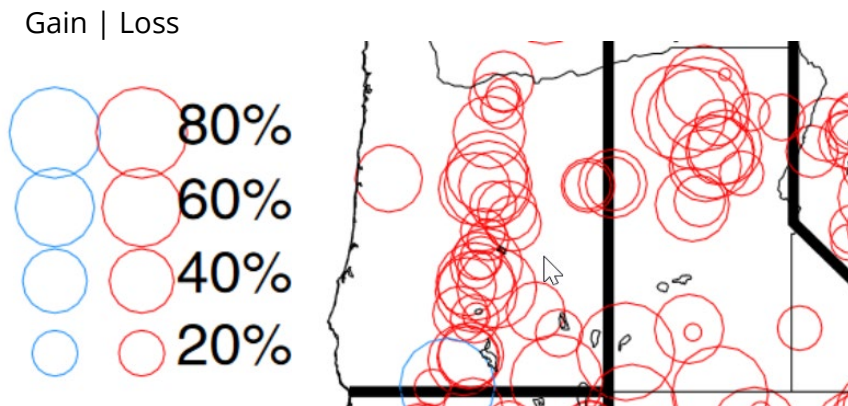
The Deschutes aquifer has a recharge rate of roughly 3 million acre feet per year. The current water usage comes to roughly 720 thousand acre feet per year. Roughly 40 to 50 thousand acre feet of that water goes toward municipal and non-agricultural use, while the remaining goes toward crop and pasture irrigation. The majority of that municipal water use goes towards outdoor watering (gardens, sports fields, etc.). As an example: the City of Bend uses 5 times as much water in the summer as in the winter.

[Snowpack](#)

Although there is expected to be a slight increase in winter precipitation by the middle of the century, snowpack is expected to decline throughout the Cascades. The decline in

snowpack (which has already been observed, see figure below)¹ is due largely to increasing temperatures causing some precipitation to fall as rain rather than snow. This has the double effect of decreasing snowfall and melting the previously fallen snow. At the Mt Bachelor Ski Resort, April snowpack is expected to decline between 11% and 18% by the middle of the century and between 18% and 43% by the end of the century.

Snowpack Change 1955-2016



Lava Sponge

Deschutes county is fortunate to be underlain on the Western side by relatively young volcanic lava sponge. This sponge is highly porous and is able to absorb large quantities of water during the wet season and gradually release it via abundant springs along the eastern slope. The great advantage this provides is that the resulting summer flows into the Deschutes basin are not as dependent on overground flow of snowmelt, and therefore are expected to maintain a relatively stable water supply even as snowpack decreases into the next century.

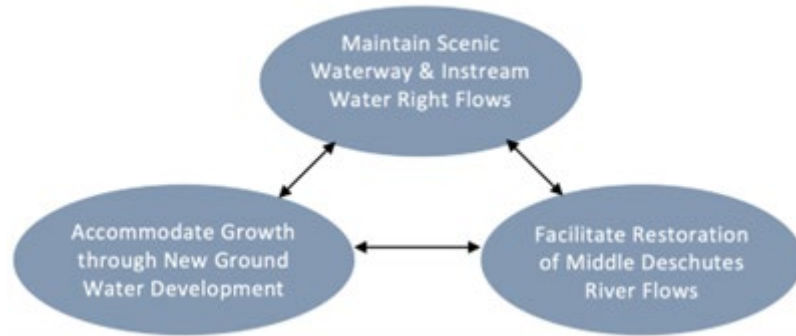
Groundwater

The groundwater aquifer is roughly 1000 feet thick and is replenished yearly by the Cascades' precipitation. Recent years of "exceptional drought" have lowered the aquifer level by roughly 30 feet, resulting in a small percentage of wells running dry, and raising concerns about available groundwater for new developments. Although it is likely that some wells will need to be deepened to cope with increasing temperatures and drought frequency, there is likely to remain ample sustainable groundwater supply.

Because the groundwater in the Deschutes Basin is directly connected to the flow of the Deschutes River, all additional groundwater use must be mitigated by decreased use of

¹¹ Adapted from Mote, P.W., Li, S., Lettenmaier, D.P. et al. Dramatic declines in snowpack in the western US. *npj Clim Atmos Sci* 1, 2 (2018). <https://doi.org/10.1038/s41612-018-0012-1>

groundwater elsewhere through the Oregon Water Resources Department's Deschutes Groundwater Mitigation program. This can include retiring of other water rights, or the release of water into the waterway. A mitigation permit must be obtained before a new groundwater right can be accessed.²



Reservoirs

The majority of the irrigation in Deschutes County comes from reservoirs which are mostly spring fed from the Cascades. Reservoirs serve the dual purpose of supplying water for irrigation and ensuring sufficient streamflow in the lower Deschutes River. The water levels in these lakes have been low in recent years due to drought in the region. When water is limited, the supply rate is determined by the age of water rights, with the more senior water permits having priority over the youngest. The Swalley and Central Irrigations are the most senior in the county, while the North Union Irrigation District is the most junior.

Algal Blooms

Algal blooms have been a problem for recreational lakes in the cascade mountains in recent years. Since 2007, the Wickiup Reservoir, Crane Prairie Reservoir, and Paulina Lake have experienced algal or bacteria blooms that required a health advisory.³

Although not all algal blooms are toxic, they interfere with recreation and aesthetic enjoyment. In general, algal blooms are caused by elevated nutrients, elevated temperature, and still water. Algal blooms in other parts of the state have led to drinking water concerns, but Deschutes County cities are supplied by groundwater and so the risk in algal blooms is mainly to recreation.

Key Community Considerations.

Natural resources for recreation, passive enjoyment, habitat protection, and economic production are a fundamental part of life in Deschutes County, and as such were a key part of the community conversation in this Comprehensive Plan update. Highlights of this conversation include:

² Information from the Oregon Water Resources Board Mitigation Program.

³

https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/RECREATION/HARMFULALGAE/ALGAE_BLOOMS/Pages/archive.aspx

- Concern about the ability of the County’s water supply to accommodate more residents, visitors, and water-intensive jobs in the future
- Interest in a re-evaluation of water rights for urban, agricultural, and “hobby farm” uses.
- A robust discussion around wildlife inventories, habitat conservation, open space regulations, and impacts on private property owners. The topic of habitat conservation came up frequently, with most respondents saying that further protections are needed. However, there was some push back related to the burden these protections may put on property owners.

Goals and Policies

Water Policies

Goal 5.1: Develop regional, comprehensive water management policies that balance the diverse needs of water users and recognize Oregon water law.

- **Policy 5.1.1.** Participate in Statewide and regional water planning including, but not limited to:
 - a. Work cooperatively with stakeholders, such as the tribal governments, the US Fish and Wildlife District, irrigation districts, Oregon Water Resources Department (OWRD), the Deschutes Basin Water Collaborative, the County Soil and Water Conservation District, and other non-profit water organizations and stakeholders;
 - b. Support the development and implementation of Upper Deschutes Basin Study, Habitat Conservation Plan, and Biological Opinion from National Marine Fisheries Service for the middle and lower Deschutes Rivers.
- **Policy 5.1.2.** Support grants for water system infrastructure improvements, upgrades, or expansions.
- **Policy 5.1.3.** Consider potential impacts on water quality and availability in surrounding areas as part of the siting, planning, and approval processes for Destination Resorts and other large-scale developments.

Goal 5.2: Increase water conservation efforts.

- **Policy 5.2.1.** Support efficient water use through targeted conservation, educational and, as needed, regulatory or incentive programs.
 - a. Encourage new development incorporates efficient water use practices for all water uses.

- b. Encourage the reuse of grey water for landscaping.
 - c. Encourage and educate the community about the relative impacts of thinning or reduction of plant species that adversely impact forest health, water availability, and soil quality.
 - d. Encourage and educate the community about on-farm efficiency measures, including upgrades to equipment.
 - e. Encourage and educate the community about use of voluntary metering of water use to monitor seasonal impacts on water use.
 - f. Provide access to educational materials and tools related to water conservation including publications, information about grant opportunities, and/or partner with organizations on educational events.
 - g. Encourage and educate community members on stewardship of wetlands and waterways.
- **Policy 5.2.2.** Promote coordinated regional water conservation efforts and implementation by regional and local organizations and agencies, including increasing public awareness of and implementing water conservation tools, incentives, and best practices.
 - **Policy 5.2.3.** Support conservation efforts by irrigation districts and property owners, including programs to provide incentives for water conservation, such as piping of canals and laterals, water banking, exchanges of water rights, voluntary transfers of in-stream flows, onsite efficiency measures, and other means.

Goal 5.3: Maintain and enhance a healthy ecosystem in the Deschutes River Basin.

- **Policy 5.3.1.** Notify the Oregon Department of State Lands and other state and federal agencies as appropriate-of any development applications for land within a wetland identified on the statewide wetland inventory maps.
- **Policy 5.3.2.** Work with stakeholders to restore, maintain and/or enhance healthy river and riparian ecosystems and wetlands, including the following:
 - a. Encourage efforts to address fluctuating water levels in the Deschutes River system;

- b. Cooperate to improve surface waters, especially those designated water quality impaired under the federal Clean Water Act;
 - c. Support research on methods to restore, maintain and enhance river and riparian ecosystems and wetlands;
 - d. Support restoration efforts for river and riparian ecosystems and wetlands;
 - e. Inventory and consider protections for cold water springs;
 - f. Evaluate waterways in coordination with OPRD for possible designation under the Scenic Waterways program;
 - g. In collaboration with stakeholders, map channel migration zones and identify effective protections;
 - h. Develop comprehensive riparian management or mitigation practices that enhance ecosystems, such as criteria for removal of vegetation that adversely impacts water availability and soil health.
- **Policy 5.3.3.** Support studies of the Deschutes River ecosystem and incorporate strategies from current watershed studies that provide new scientific information about the Deschutes River ecosystem.
 - **Policy 5.3.4.** Support educational efforts and identify areas where the County could provide information on the Deschutes River ecosystem, including rivers, riparian areas, floodplains and wetlands.
 - a. Support efforts to educate property owners to understand regulations pertaining to rivers, riparian areas, floodplains and wetlands.

Goal 5.4: Maintain and enhance fish and riparian-dependent wildlife habitat.

- **Policy 5.4.1.** Coordinate with stakeholders to protect and enhance fish and wildlife habitat in river and riparian habitats and wetlands.
- **Policy 5.4.2.** Promote healthy fish populations through incentives and education.
- **Policy 5.4.3.** Support healthy native fish populations through coordination with stakeholders who provide fish habitat management and restoration.
 - a. Review, and apply where appropriate, strategies for protecting fish and fish habitat.

- b. Promote salmon recovery through voluntary incentives and encouraging appropriate species management and habitat restoration.
- **Policy 5.4.4.** Review Habitat Conservation Plans for species listed under the Endangered Species Act, to identify appropriate new policies or codes.
 - a. Spawning areas for salmonids should be considered significant habitat and should be protected in rivers and streams.
 - b. Cooperate with irrigation districts in preserving spawning areas for trout, where feasible.
- **Policy 5.4.5.** Use a combination of incentives and/or regulations to mitigate development impacts on river and riparian ecosystems and wetlands.
- **Policy 5.4.6.** Support plans, cooperative agreements, education, water quality monitoring and other tools that protect watersheds, reduce erosion and runoff, enhance riparian vegetation, and protect other natural water systems/processes that filter and/or clean water and preserve water quality.
- **Policy 5.4.7.** Coordinate with the Oregon Department of Environmental Quality and other stakeholders on regional water quality maintenance and improvement efforts such as identifying and abating point (single-source) and non-point (unidentified or multiple-source) pollution or developing and implementing Total Maximum Daily Load and Water Quality Management Plans.
- **Policy 5.4.8.** Coordinate with stakeholders to address water-related public health issues.
 - a. Support amendments to State regulations to permit centralized sewer systems in areas with high levels of existing or potential development or identified water quality concerns.
 - b. If a public health hazard is declared in rural Deschutes County, expedite actions such as legislative amendments allowing sewers or similar infrastructure.
- **Policy 5.4.9.** Continue to evaluate and/or implement regulations, such as a wellhead protection ordinance for public water systems, in accordance with applicable Federal and/or State requirements.
- **Policy 5.4.10.** Coordinate and work with the Oregon Department of Agriculture and agricultural uses to support and implement proven new technologies and best practices to maintain and enhance water quality, such as minimizing nitrate

contamination, maintaining streamside vegetation, reducing streambank soil erosion and runoff, limiting livestock access to riparian areas, and minimizing weeds and bare patches in grazing areas.

- **Policy 5.4.11.** Support regulations, education programs, and cleaning procedures at public and private boat landings.

Goal 5.5: Coordinate land use and water policies to address management and allocation of water in Deschutes County.

- **Policy 5.5.1.** Coordinate with other affected agencies when a land use or development application may impact rivers or riparian ecosystems or wetlands.
- **Policy 5.5.2.** Regulate land use patterns and promote best practices to preserve the integrity of the natural hydrologic system, recognize the relationship between ground and surface water, and address water impacts of new land uses and developments, including water-intensive uses.
- **Policy 5.5.3.** Support OWRD’s efforts to update and modernize Oregon’s groundwater allocation rules and policies to protect existing surface water and groundwater users and to maintain sustainable groundwater resources.
- **Policy 5.5.4.** Support efforts by the OWRD in collaboration with Central Oregon Cities Organization and non-governmental organizations to revisit the Deschutes Basin Groundwater Mitigation Program.
- **Policy 5.5.5.** Coordinate with the irrigation districts to ensure irrigated land partitions and lot line adjustments are not approved without notice to the affected district.
- **Policy 5.5.6.** Utilize Central Oregon Stormwater Manual to apply appropriate stormwater management practices land use decisions.
- **Policy 5.5.7.** Allow for development of wastewater facilities and improvements where needed or required to address water quality issues and maintain water quality, consistent with state and local wastewater system requirements.

Open Space and Scenic Views Goals & Policies

Goal 5.6: Coordinate with property owners to protect open spaces, scenic views, and scenic areas and corridors through a combination of incentives and/or educational programs.

- **Policy 5.6.1.** Work with stakeholders to create and maintain a system of connected open spaces while balancing private property rights with community benefits.
- **Policy 5.6.2.** Work to maintain the visual character and rural appearance of open spaces such as the area along Highway 97 that separates the communities of Bend and Redmond or lands that are visually prominent.-
- **Policy 5.6.3.** Work to maintain and protect the visual character and rural appearance of visually prominent open spaces within the County, particularly those that are identified in the Goal 5 inventory.
- **Policy 5.6.4.** Seek to protect the cultural identity of rural communities, such as the Highway 97 area/corridor between Bend and Redmond, and others.
- **Policy 5.6.5.** Protect significant open spaces, scenic views, and scenic sites by encouraging new development to be sensitive to these resources.
- **Policy 5.6.6.** Incentivize the placement of structures in a way that is sensitive of view corridors to maintain the visual character of the area.

Wildlife Goals & Policies

Goal 5.7: Maintain and enhance a diversity of wildlife and habitats.

- **Policy 5.7.1.** Promote stewardship of wildlife habitats through incentives, public education, and development regulations.
- **Policy 5.7.2.** Ensure Goal 5 wildlife inventories and habitat protection programs are up-to-date through public processes, expert sources, and current or recently adopted plans and studies.
- **Policy 5.7.3.** Provide incentives for new development to be compatible with and to enhance wildlife habitat.
- **Policy 5.7.4.** Require, incentivize, or encourage clustering of development in inventoried wildlife areas to reduce impacts to wildlife populations.

Goal 5.8: Balance protection of wildlife and habitat with the economic and recreational benefits of wildlife and habitat.

- **Policy 5.8.1.** Encourage responsible and sustainable wildlife related tourism and recreation.
- **Policy 5.8.2.** Coordinate with stakeholders to ensure access to appropriate recreational opportunities within significant wildlife and riparian habitat through public or non-profit ownership.

Goal 5.9: Comply with federal and state regulations related to sensitive, threatened, and endangered species, including the Endangered Species Act, the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and others as applicable.

- **Policy 5.9.1.** Coordinate with Federal and State agencies to develop strategies to protect Federal or State Threatened or Endangered Species, or Species of Concern.
- **Policy 5.9.2.** Mitigate conflicts between large-scale development and sage grouse habitat.
- **Policy 5.9.3.** Consider adopting recommendations from Oregon Department of Fish and Wildlife and the Deschutes River Mitigation and Enhancement Program in dock construction.

Environmental Quality Goals & Policies

Goal 5.10: Maintain and improve upon the quality of air and land in Deschutes County.

- **Policy 5.10.1.** Use building techniques, materials, and technologies in existing and future County operations and capital facilities that help maintain and improve environmental quality.
- **Policy 5.10.2.** Implement a dark skies educational and or incentive program and periodically update the Dark Skies ordinance to reduce the impacts of light pollution and reduce lighting impacts on adjacent properties.
- **Policy 5.10.3.** Coordinate with agency partners to educate residents about controlled burning projects and air quality concerns.
- **Policy 5.10.4.** Use public education, education for County departments, and regulations to control noxious weeds and invasive species.

Goal 5.11: Promote sustainable building practices that minimize the impacts of development on the natural environment.

- **Policy 5.11.1.** Use the County Code and educational materials to promote the use of resource-efficient building and landscaping techniques, materials, and technologies that minimize impacts to environmental quality.
- **Policy 5.11.2.** Encourage and support reuse and recycling of consumer goods, green waste, construction waste, hazardous waste, and e-waste through education and enhanced recycling opportunities through the Recycling Program.
- **Policy 5.11.3.** Support the process for siting new County solid waste management facilities in rural Deschutes County, consistent with facility needs and County standards for the location and approval of such facilities.
- **Policy 5.11.4.** Implement best practices in solid waste management throughout the County.
- **Policy 5.11.5.** Develop and implement a Climate Action Plan to address the potential future impacts of climate change on Deschutes County.
- **Policy 5.11.6.** Promote and incentivize green infrastructure in new development to improve stormwater management.

Deschutes County Comprehensive Plan

Draft Comprehensive Plan Chapters

Chapter 6: Historic and Cultural Resources

Opportunities, Challenges, and Considerations.

Deschutes County is a certified local government (CLG), as designated by the State of Oregon Historic Preservation Office. This certification recognizes the County's commitment to implementing and maintaining a formal historic resources program. Deschutes County has 13 nationally registered historic and cultural sites and 35 locally significant historic sites. The County currently administers grant programs and zoning requirements to preserve and restore these sites.

Historic resources are recognized by Statewide Planning Goal 5, Natural Resources, Scenic Views and Historic Areas and Open Spaces, and Oregon Administrative Rule (OAR) 660-023. The Statewide Goal and OAR recommend cities and counties inventory and protect historic and cultural sites. Recognizing the value and importance of having a connection to our past, Deschutes County chose to implement and maintain a historic preservation program and Historic Preservation Strategic Plan (Adopted 2022).



Camp Abbot Site, Officers' Club



Allen Ranch Cemetery

The 2022 Historic Preservation Strategic Plan identified three overarching goals to guide historic and cultural resource preservation in Deschutes County: collaborate, coordinate, and educate. The plan identifies opportunities to strengthen relationships between historic preservation and community partners, and to involve community members in historical and cultural preservation efforts. Improving access to historic resource information and providing content in an easily accessible format will be paramount to preservation efforts and increase community appreciation for resources. Along with improved educational resources, more outreach and education opportunities could be explored.

[Other Captioned photos of historic resources]

Context

Deschutes County has several notable historical and cultural sites. These sites receive special protections to avoid land use or development activity that may disturb the historical or educational resources existing on site.

Locally Significant Historic Sites

Deschutes County has 35 locally significant sites including cemeteries, ranches, dams, bridges, schools, and granges among numerous historic homesteads and homesites.

Nationally Registered Sites

Deschutes County has 13 sites that have completed the national register process, including highways, bridges, lodges, and rock gardens.

[Map of historic and cultural sites]

One of the primary sites of historic and cultural learning in the county is the nationally acclaimed High Desert Museum. The museum is dedicated to broadening the understanding of the High Desert's wildlife, culture, art, and natural resources. In doing so, it strives to promote thoughtful decision making to sustain the region's natural and cultural heritage.

Key Community Considerations

As part of the 2023 Comprehensive Plan update, community members shared their vision for the protection of historic and cultural resources. Comments included:

- The importance of county-wide coordination on cultural and historic, as well as increased representation of the indigenous history of Central Oregon.
- Acknowledging previous landowners and preserving the County's historical and cultural resources are both important.
- A county-wide historic and cultural resource signage program was also suggested.
- The community shared an interest in capitalizing on the High Desert Museum to continue to support indigenous culture and Central Oregon's history.

Historic and Cultural Resources Goals and Policies

Goal 6.1: Promote the preservation of designated historic and cultural resources through education, incentives, and voluntary programs.

- **Policy 6.1.1.** The Historic Landmarks Commission shall take the lead in promoting historic and cultural resource preservation as defined in DCC 2.28.

- a. Support incentives from the State Historic Preservation Office (SHPO) or other agencies for private landowners to protect and restore historic resources.
 - b. Support the Historic Landmarks Commission to promote educational programs to inform the public of the values of historic preservation.
 - c. Support improved training for the Historic Landmarks Commission.
 - d. Support the goals, objectives, and actions of the Historic Preservation Strategic Plan.
- **Policy 6.1.2.** Coordinate cultural and historic preservation with the Oregon State Historic Preservation Office.
 - a. Maintain Deschutes County as a Certified Local Government, which includes the City of Sisters.
 - b. Encourage private property owners to coordinate with the State Historic Preservation Office.
- **Policy 6.1.3.** Coordinate with Native American tribes and SHPO to adopt a program to identify and protect archaeological and cultural resources, as appropriate, and prevent conflicting uses from disrupting the scientific value of known sites.

Deschutes County Comprehensive Plan

Draft Comprehensive Plan Chapters

Chapter 7: Natural Hazards

Opportunities, Challenges, and Considerations

Central Oregon is a dynamic region formed and shaped by the powerful forces of nature. Deschutes County residents and visitors rely on the County and its partners to plan for hazardous events and limit harm to people and property.

Continued rapid population growth, development in wildfire-prone areas, and an increased frequency of natural hazard events make planning for and mitigating risks ever more important. As temperatures rise globally, Central Oregon will face challenges due to drought, wildfire, heat events, and storms. The impacts a major Cascadia Subduction Zone earthquake would have on Deschutes County would be substantial as well.

In order to plan for and address natural hazards, Deschutes County has partnered with local jurisdictions to create its Natural Hazards Mitigation Plan (NHMP). Additional opportunities exist to create greater defensible spaces, encourage fire hardening, utilize grant programs, and pursue education measures to reduce these impacts over time.

Statewide Planning Goal 7 requires local comprehensive plans to address Oregon's natural hazards. Protecting people and property from natural hazards requires knowledge, planning, coordination, and education. Good planning does not put buildings or people in harm's way. Planning, especially for the location of essential services like schools, hospitals, fire and police stations, is done with sensitivity to the potential impact of nearby hazards.

According to the NHMP, the hazards with greatest risk in Deschutes County are:

- **Winter Storm.** Destructive storms producing heavy snow, ice and cold temperatures occurred throughout the County's history. Increases in population and tourism make potential impacts to shelter, access to medical services, transportation, utilities, fuel sources, and telecommunication systems more acute. The relative frequency of these events combined with their widespread impacts make winter storms the highest-ranked hazard in the NHMP.
- **Wildfire.** Historically, wildland fires have shaped the forests and wildlands valued by residents and visitors. These landscapes, however, are now significantly altered due to increased rural development and a general lack of large-scale treatments,

resulting in overgrown forests with dense fuels that burn more intensely than in the past.

- **Windstorm.** A windstorm is generally a short duration event involving straight-line winds and/or gusts in excess of 50 mph. Although windstorms can affect the entirety of Deschutes County, they are especially dangerous in developed areas with significant tree stands and major infrastructure, especially above ground utility lines.
- **Drought.** Periods of drought can have significant impacts on public health, agriculture, and industry. Many counties in eastern Oregon are experiencing more frequent and severe droughts than is historically the norm, and many climate predictions see this trend continuing into the future.
- **Earthquake.** The Pacific Northwest is located at a convergent plate boundary, called the Cascadia Subduction Zone, where the Juan de Fuca and North American tectonic plates meet. This fault line is subject to rare but potentially very large earthquakes. Such an event would impact Deschutes County communities both directly through damage to infrastructure and property, as well as economically and socially as the broader region recovers from the disaster.

Context

Informed by an understanding of natural hazards, Deschutes County can reduce the risks to property, environmental quality, and human safety through land use planning and review of specific development proposals. The County's policies provide the framework for the County's natural hazards review program. This includes: identification of areas subject to natural hazards, regulations for evaluating land use actions for how they may result in exposure to potential harm from natural hazards, and programmatic elements including partnerships and funding opportunities to support natural hazard risk reduction.

Deschutes County has taken on a number of proactive projects, including:

- 2021 Natural Hazards Mitigation Plan (NHMP)
- 2019 Wildfire Mitigation Advisory Committee
- Project Wildfire, a County-led wildfire education and mitigation program has been in operation since 2012 and has been very successful in changing attitudes towards wildfire and prevention.
- Community Wildfire Protection Plans (CWPP) for many communities, including:
 - Greater Bend CWPP (2016, expected revision 2021)
 - Greater La Pine CWPP (2020, expected revision 2025)
 - Greater Redmond CWPP (2018, expected revision 2023)
 - Greater Sisters Country CWPP (2019, expected revision 2024)
 - Sunriver CWPP (2020, expected revision 2025)
 - East and West Deschutes County CWPP (2018, expected revision 2023)
 - Upper Deschutes River Coalition CWPP (2018, expected revision 2023)

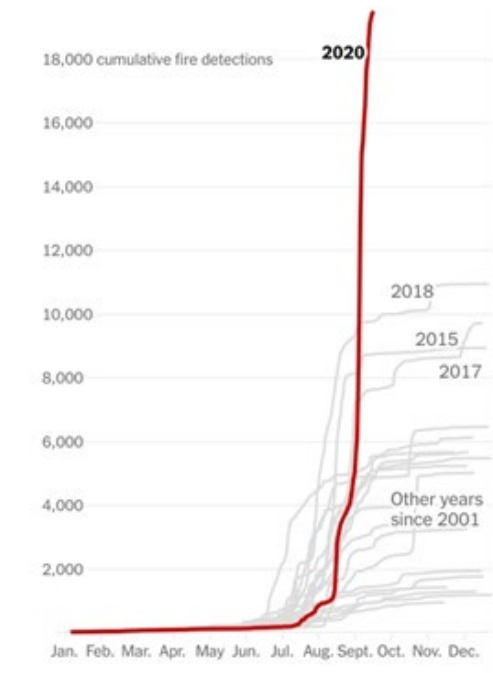
In addition, dozens of neighborhoods are pursuing or have received FireWise certification through the National Fire Protection Association. The County also supports the Heart of Oregon and Youth Conservation Corps crews in fuels reduction work and other mitigation efforts, with financial assistance from other entities.

Wildfire

According to the Natural Hazards Mitigation Plan, wildfire is the second most significant hazard to the county (after winter storms) and was the most discussed natural hazard discussed during outreach events. Throughout the 20th century, the years with warm and dry conditions corresponded with larger fires that have burned greater areas. Figure 1 shows the devastation of the 2020 fire season compared to all other years earlier in the century.¹ Overall increases in heat will also lengthen growing seasons - building greater fuel loads and decreasing soil and fuel moisture, thereby increasing the likelihood of larger fires. By mid-century, the annual potential for very large fires is projected to increase by at least 350% over the 20th century average.²

The annual frequency of very high and extreme fire danger days is expected to increase by 10-15 additional days per year by mid-century⁴ (up from 36 currently). These trends are due to exacerbated conditions with a combination of high air temperatures and very low fuel moisture, which increases the likelihood of fire starts that can spread. As Deschutes County communities have experienced, increased fire activity - even at quite a distance - will impact air quality, increasing public health risks and impacting aspects of everyday life.

Figure 1. 2020's Record Fire Year in the Western US, New York Times



¹ From the New York Times, "Record Wildfires on the West Coast Are Capping a Disastrous Decade" By Blacki Migliozi, Scott Reinhard, Nadja Popovich, Tim Wallace and Allison McCann Sept. 24, 2020

² Halofsky, J. Peterson, D, Harvey, B. "Changing Wildfire, changing forests: the effects of climate change on fire regimes and vegetation in the Pacific Northwest, USA. [Fire Ecology](#). 2020.

Research indicates that in regions where fire has moved through the landscape with increased severity, regrowth is changing the species composition of the forests, which are likely to be more resilient to future fires.³ Other compounding factors, like drought and pest outbreaks, will continue to build fuel loads in the forests and change the forest's composition. Post-fire landscapes in Deschutes County will likely see increases in the prevalence of invasive and pioneer tree species, and a reduction in fire-susceptible species

such as western hemlock, subalpine fir, and some spruce. Fire resistant species like mature Douglas fir and western larch will have greater survival capacity to fire,⁴ but perhaps not to other stressors. Larger fires that occur over shorter intervals will negatively impact seed dispersion capacity, and reduced moisture available in ponderosa forest regions will be vulnerable to reforestation failures, leading to conversion to other ecosystem types. In the mountain forests, the average yearly area burned is expected to nearly double by mid-century, while the area burned in the grass/shrub plateau areas is likely to decrease slightly by mid-century. This is partly due to extended drought decreasing plant growth and therefore available fuel. The risk of unusually severe fires is expected to increase across large swaths of Oregon, including Deschutes County (Figure 2).⁵

Figure 2: Increasing risk of extreme fires

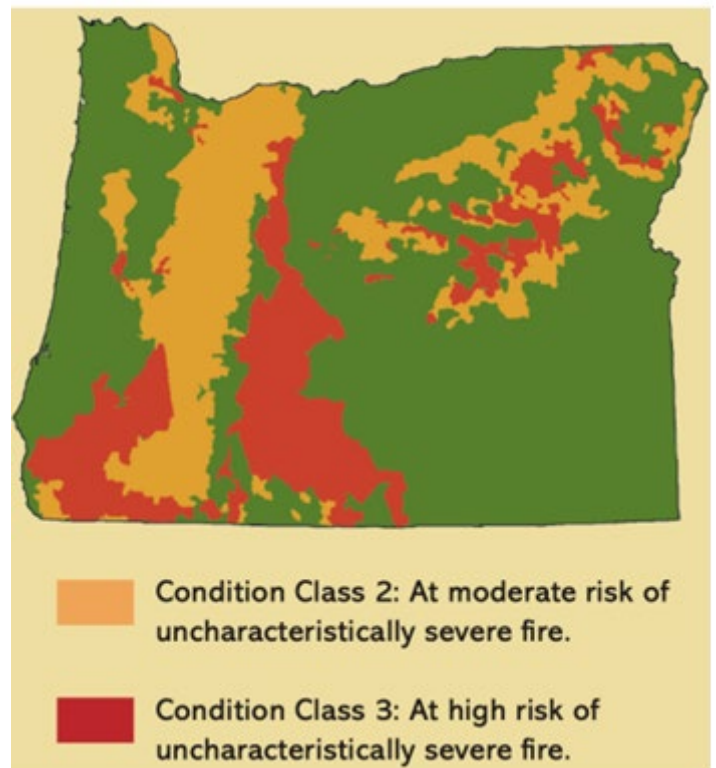
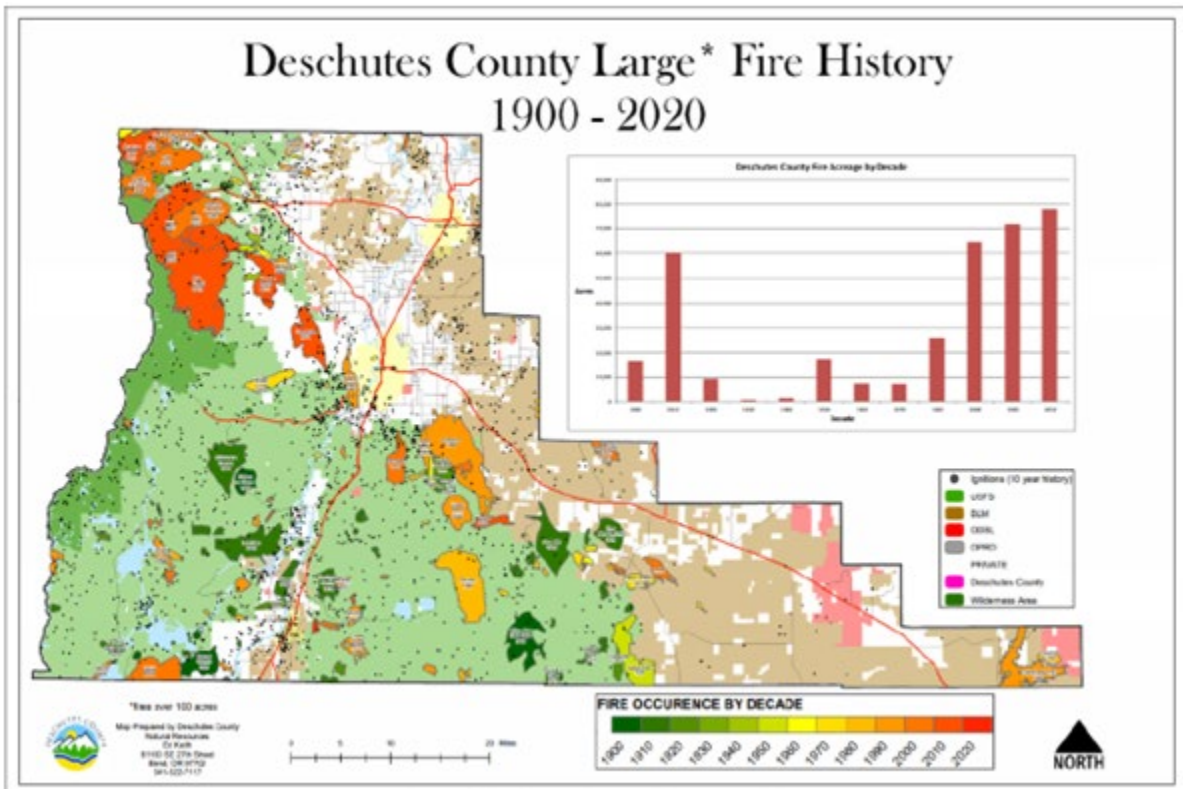


Figure 3: Deschutes County Large Fire History

³ Sebastian U. Busby, Kevan B. Moffett, Andrés Holz. High-severity and short-interval wildfires limit forest recovery in the Central Cascade Range. *Ecosphere*, 2020; 11 (9) DOI: [10.1002/ecs2.3247](https://doi.org/10.1002/ecs2.3247)

⁴ [Halofsky et al. 2020.](#)

⁵ Oregon Forest Resources Institute Fact Sheet



Source: Deschutes County Forester, 2021.

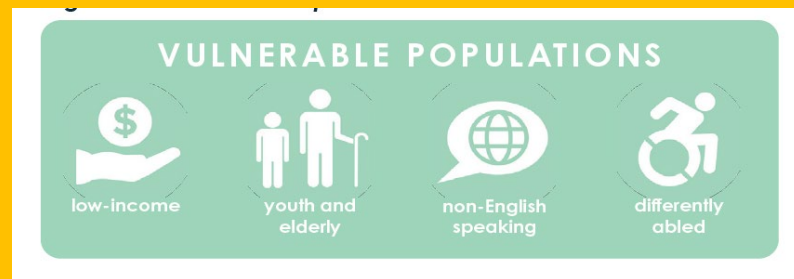
Wildfire And Heat

By the middle of this century, increasing temperatures are expected to drive increasing wildfire risk, especially in the Cascades. The yearly percentage of area burned is likely to increase in the mountains and the interval of return (years between fires) is expected to decrease across the county. Both the highest and lowest summer temperatures will increase, leading to more extreme heat days and reducing the historical nighttime cooling effect of the high desert.

Under all change projections, there will be an increase in the number of days with a heat index above both 90° and 100°F by mid-century.⁸ By 2100, Deschutes County can expect summer maximum temperatures to be 12°F hotter than current highs. Overall, extreme heat is not considered a human health risk in Deschutes County because of low night temperatures and the low humidity in the region. However, the Redmond airport, which sees the hottest temperatures in the county, will likely start to see occasional temperatures above 105° every few years by mid-century, and at least once a year by 2100. In addition, summer night lows are likely to increase by up to 5° degrees by mid-century, reducing the cooling effect of the high desert climate.

Vulnerable Populations (Sidebar)

The socio-demographic qualities of the community population such as language, race and ethnicity, age, income, and educational attainment are significant factors that can influence the community's ability to cope, adapt to and recover from natural disasters. A disproportionate burden is placed upon special needs groups, particularly children, the elderly, the disabled, minorities, and low-income persons. Population vulnerabilities can be reduced or eliminated with proper outreach and community mitigation planning. For planning purposes, it is essential that Deschutes County and the cities of Bend, La Pine, Redmond, and Sisters consider both immediate and long-term socio-demographic implications of hazard resilience



Key Community Issues

Community conversations related to natural hazards have centered around the following topics:

- **Impacts of Climate Change.** Throughout the community engagement process, community members spoke to the importance of recognizing and addressing the impacts of climate change in Deschutes County and its relationship with natural hazard events.

- **Education and Communication.** Providing information about potential risks to residents and visitors can help the community as a whole be more prepared for natural hazards.
- **Development Code Regulations and Incentives.** Some community members expressed a desire for stricter regulations and additional incentives about “fire-wise” construction and defensible space practices.
- **Limiting Development in hazard-prone areas.** Increased development in remote areas of the County, where life-saving services may be scarce and human impacts may exacerbate risks, was a concern for some.

Goals, Policies, and Strategies

Goal 7.1: Develop policies, partnerships, and programs to increase resilience and response capacity in order to protect people, property, infrastructure, the economy, natural resources, and the environment from natural hazards.

- **Policy 7.1.1.** Partner with county, state, and regional partners to regularly update and implement the Deschutes County Natural Hazards Mitigation Plan.
- **Policy 7.1.2.** Collaborate with federal, state, and local partners to maintain updated mapping of high wildfire risk areas, floodplains, and other natural hazard areas within the county.
- **Policy 7.1.3.** Communicate and cooperate with federal, state, and local entities to clarify responsibilities regarding wildfire mitigation and suppression to improve fire protection services.
- **Policy 7.1.4.** Use the development code to provide incentives and regulations to manage development in areas prone to natural hazards.
- **Policy 7.1.5.** Work with agency partners to address and respond to increased episodes of poor air quality resulting from wildfires in the region.
- **Policy 7.1.6.** Protect wildlife with wildland fire mitigation measures on private lands.
- **Policy 7.1.7.** Address wildfire risk, particularly in the wildland urban interface.
- **Policy 7.1.8.** Identify all areas not protected by structural fire protection agencies and promote discussions to address fire protection in unprotected lands in the County.

- **Policy 7.1.9.** Support forest management practices that reduce wildfire risk.
- **Policy 7.1.10.** Support local fire protection districts and departments in providing and improving fire protection services.
- **Policy 7.1.11.** Continue to review and revise County Code as needed to:
 - a. Ensure that land use activities do not aggravate, accelerate or increase the level of risk from natural hazards.
 - b. Require development proposals to include an impact evaluation that reviews the ability of the affected fire agency to maintain an appropriate level of service to existing development and the proposed development.
 - c. Minimize erosion from development and ensure disturbed or exposed areas are promptly restored to a stable, natural and/or vegetated condition using natural materials or native plants.
 - d. Ensure drainage from development or alterations to historic drainage patterns do not increase erosion on-site or on adjacent properties.
 - e. Reduce problems associated with administration of the Floodplain Zone.
 - f. Require new subdivisions and destination resorts to achieve FireWise Standards or other currently accepted fire mitigation standards from the beginning of the projects and maintain those standards in perpetuity.

Goal 7.2: Ensure the County’s built environment and infrastructure are adequately prepared for natural disasters.

- **Policy 7.2.1.** Increase the quality, resiliency, diversity, and redundancy of utility and transportation infrastructure to increase chances of continued service following a natural disaster.
- **Policy 7.2.2.** Prohibit the development of new essential public facilities and uses that serve vulnerable populations from being located within areas at high risk of flooding and wildfire, and aim to relocate existing uses in these areas.
- **Policy 7.2.3.** Support siting of Central Oregon Ready, Responsive, Resilient (CORE3) regional coordinated emergency services training facility.
- **Policy 7.2.4.** Coordinate with emergency service providers when new development is proposed to ensure that response capacity can meet the needs of the new development.

- **Policy 7.2.5.** Require new development to follow home hardening, defensible space, and other resilient design strategies in areas prone to wildfires and other natural hazards.
- **Policy 7.2.6.** Encourage and incentivize development that exceeds minimum building code standards and promote retrofitting of existing development for better natural disaster resiliency.
- **Policy 7.2.7.** Require development to be designed to minimize alteration of the natural landform in areas subject to slope instability, drainage issues or erosion.
- **Policy 7.2.8.** Regulate development in designated floodplains identified on the Deschutes County Zoning Map based on Federal Emergency Management Act regulations.
 - a. Continue evaluation of participation in and implementation of the Community Rating System as part of the National Flood Insurance Program.
 - b. Cooperate with other stakeholders to identify alternatives for acquiring and/or relocating existing structures prone to flooding.
 - c. Continue to coordinate with stakeholders and agency staff to correct mapping errors.

Goal 7.3: Develop programs that inform the public about the increased risks from natural hazards.

- **Policy 7.3.1.** Identify high risk, high need populations and ensure equitable access to emergency preparedness and recovery services.
- **Policy 7.3.2.** Increase outreach and education for hazard awareness and natural disaster preparedness, especially for low-income, elderly, non-English speaking, and other vulnerable populations.
- **Policy 7.3.3.** Expand partnerships with government agencies, utilities, and other groups that can help Deschutes County residents prepare for natural disasters.
- **Policy 7.3.4.** Work with regional partners to establish and maintain adequate support for a Deschutes County Community Emergency Response Team (CERT) to aid in responding to natural hazard events.
- **Policy 7.3.5.** Promote and support business resilience planning.

Deschutes County Comprehensive Plan

Chapter 8: Recreation

Opportunities, Challenges, and Considerations

Recreation is an important quality of life issue for Deschutes County and recreational tourism is a key part of the local economy. Both residents and visitors are drawn by the County's extensive public lands, seasonal climate, and wide variety of activities and settings. Recreational opportunities include places set aside for specific activities such as campgrounds or sports fields as well as passive spaces such as natural areas.

The primary focus of recreation in rural Deschutes County is outdoor recreation. Outdoor activities promote healthy communities by encouraging people to enjoy an active lifestyle and by providing opportunities to reconnect with the natural world.



Deschutes County does not have a parks department; instead, it coordinates with the federal and state agencies, local park districts, and private entities that provide park and recreational opportunities. Coordination assures that resources are used efficiently, and

duplication is avoided. With a holistic view of recreation in Deschutes County, the County can also provide other agencies and jurisdictions with guidance for service gaps to fill.

Sidebar/Box: Statewide Planning Goal 8, Recreation and Oregon Administrative Rule (OAR) 660-034 address recreation, but do not require local governments to provide park and recreation services. Several agencies and special districts already provide recreation services in Deschutes County. These include Bend Parks and Recreation District, La Pine Parks and Recreation District, Sunriver Parks and Recreation District, and Oregon Parks and Recreation Department.

The health of the County's recreational assets and industry is inexorably tied to the health of the land, forests, and waterways of Central Oregon. The effects of human activity - from development pressures and overuse of recreational facilities to resource extraction and climate change - will have a significant impact on recreation in Deschutes County. Some of these impacts include:

- Changes in precipitation affecting the timing and conditions for winter sports
- Loss of habitat
- Wildfire and risk of wildfire limiting recreational access
- Increased number of dangerously warm days

Future Challenges to Recreation. The health of the County's recreational assets and industry is inexorably tied to the health of the land, forests, and waterways of Central Oregon. The effects of human activity - from development pressures and overuse of recreational facilities to resource extraction and climate change - will have a significant impact on recreation in Deschutes County.

There are several environmental concerns that may affect parks and recreation in Deschutes County in the future. Activities such as hiking, hunting, fishing, swimming, and foraging are an important part of recreation in Deschutes County - these activities are likely to be impacted by future changes to the climate.

Fishing may be impacted by drought as water bodies warm and seasonally drop. Foraging animals, like deer and elk, may express changing behavior like earlier-season high elevation foraging and increased interactions with agricultural communities due to drought. Drought also severely reduces the prominence of fruiting fungi for annual mushroom hunters, and may increase pressure on the remaining harvest areas. Fungi are crucial to the health of the forest ecosystem, adapting and responding to changing conditions and disease.

These conditions may also lead to greater frequency and severity of algal and bacterial blooms in fresh water. Algal blooms in other parts of the state have led to drinking water

concerns, but Deschutes County cities are supplied by groundwater and so the risk in algal blooms is mainly to recreation – boaters, swimmers, anglers, and campers may be less motivated to visit.

Winter Sports. Snow sports are a significant component of recreation in Deschutes County. Overall decline in snow pack is expected in the coming decades, which will heavily impact winter sports that rely on snowpack in the Cascades. At the Mt. Bachelor Ski Resort, April Snowpack is expected to decline between 11% and 18% by the middle of the century and between 18% and 43% by the end of the century. Additionally, inconsistent snowpack buildup will increase due to more precipitation falling as rain instead of snow throughout the season, making winter sports seasons less predictable.



Summer Recreation. The summer outdoor season has additional risks from degraded to severely degraded air quality due to wildfire throughout the west coast. With degraded air quality, outdoor recreators may avoid the region, impacting regional income and generally degrading the perception of the county as a retreat to the natural world. Additionally, an increase in the frequency of very high temperature days may impact the safety and desirability of outdoor recreation.



Context

Deschutes County does not directly provide parks and recreation services. The only public parks the County maintains are a section of the County Fairgrounds and the Worrell Wayside in downtown Bend. Although there is no County parks department, there are County-owned properties which are designated as park lands. Parks and recreation services are provided by the following entities.

Oregon Parks and Recreation Department: OPRD owns and manages several key parks and scenic areas in the County. These include state parks such as line Falls State Scenic Viewpoint, La Pine State Park, Pilot Butte State Scenic Viewpoint, Smith Rock State Park, and Tumalo State Park. In addition, they also manage the Upper and Middle Deschutes River Scenic Waterway segments, and Cascade Lakes and McKenzie Pass-Santiam Pass Scenic Byways.

The Bend Parks and Recreation Special District (BPRD) owns and maintains approximately 3,035 acres of parkland including 81 parks and 70 miles of trails. The largest park district in the County, the taxing district follows the City of Bend Urban Growth Boundary closely, although extends past the UGB to the west and east to include several properties outside of city limits.

The La Pine Parks and Recreation Special District operates in 85 square miles and 11 parks and recreation facilities in southern Deschutes County including the City of La Pine.

The Redmond Area Parks and Recreation Special District operates five recreational facilities including the Cascade Swim Center and extends beyond city limits to Tetherow Crossing. In 2022, the district received voter approval for a general obligation bond to build a new community center with a variety of recreational, fitness, and therapeutic activities.

The Sisters Park and Recreation Special District operates approximately 15 acres of land within City of Sisters city limits, including Bike Park 242, Hyzer Pines Disc Golf Course, a playground, a skatepark, and Coffield Community Center. The district boundary extends far past city limits, serving approximately 14,000 residents through programming and activities.

The U.S. Forest Service, Bureau of Land Management: Approximately 76% of the County's total land area is owned by the federal government, primarily these two agencies. Community members seek out extensive recreation activities in these areas, including skiing, mountain biking, hiking, backpacking, fishing, hunting, kayaking, and off-road vehicle riding.

County-Owned Open Space. Starting in 1994 the County received donation of several properties along rivers, creeks, or streams or with wildlife, wetlands, or other value as park lands. The intent of this donation was not to develop these lands for park use but rather to preserve lands with valuable resources, which were protected through deed restrictions. The park designation means that the lands would be retained in public ownership unless there was a public hearing and the Board of County Commissioners determined that selling was in the best interest of the public.

ORS 275.330 governs the disposal of these lands, stating that if they are sold the proceeds must be dedicated to park or recreation purposes. As of 2009, there were approximately 70 properties designated as park lands.

County Fairground and Expo Center. The 132-acre County Fairground and Expo Center site is located southwest of the Redmond airport, and it is placed strategically at the hub of the tri-county area (Deschutes, Jefferson, Crook Counties). The facility is used for a variety

of public and private events. Each of its lawn areas can be rented exclusively by groups for different events, which range from weddings, picnics, reunions, car shows, RV / motorcycle rallies, animal shows, and outdoor trade shows, among others.



Key Community Considerations

Recreation and access to nature is a key component of life in Deschutes County and a primary attraction for both residents and visitors. As part of this Comprehensive Plan update, community members noted concerns about increasing recreational use or overuse, conflicts among different users, and the need for permitting or other strategies to manage use, particularly in popular locations.

Because the county does not have a parks and recreation department, community members have identified service gaps and lack of continuity of trail networks, habitat and species preservation, and land access policies. Residents are concerned with private recreation development and use of natural resources such as land and water.

The tension between resource use of forest land and water, recreational use of these areas, and natural resource protection is evident among members of the community

Community members also noted that it is imperative for all special districts and agencies providing park services to coordinate on integrated services. These partnerships will be key to ensure sustainable recreation and land stewardship as the County continues to grow.

Goals and Policies

Goal 8.1: Increase affordable, sustainable, and diverse recreation opportunities through partnerships with government and private entities.

Policy 8.1.1: Reduce barriers to regional parks and recreation projects in Deschutes County, including acknowledgement or adoption of federal, state and local parks district trail and facility plans.

Policy 8.1.2: Collaborate with partners to develop a regional system of trails and open spaces, prioritizing recommendations from local parks districts, County,-state, and federal recreational plans and studies.

Policy 8.1.3: Encourage coordination between the U.S. Forest Service, the Bureau of Land Management and recreational use interest groups to minimize environmental degradation, agricultural fragmentation and user conflicts on public and private land.

Policy 8.1.4: Support the creation and improvement of accessible park and recreation opportunities in compliance with the Americans with Disabilities Act.

Policy 8.1.5: Support efforts to coordinate recreation planning between the County, park and recreation districts, school districts, irrigation districts, unincorporated communities, and cities.

Policy 8.1.6: Support the development of parks and trails identified in locally-adopted plans.

Policy 8.1.7: Coordinate with unincorporated communities to identify opportunities for parks, trails, open spaces, and community centers.

Policy 8.1.8: Establish trail design standards and identify specific funding sources for trails as part of future transportation system planning efforts to ensure development of identified priority rural trail segments and bicycle routes.

Policy 8.1.9: Explore creation of a County Parks and Recreation Department to increase the County's role in recreation and natural resource management and implement if deemed appropriate.

Policy 8.1.10: Support community efforts for acquisition and management of Skyline Forest as a community amenity.

Policy 8.1.11: Work with stakeholders to promote new recreational and tourist initiatives that maintain the integrity of the natural environment.

Deschutes County Comprehensive Plan

Draft Comprehensive Plan Chapters

Chapter 9: Economic Development

Opportunities, Challenges, and Considerations.

Statewide Planning Goal 9 provides guidance on economic development for Oregon jurisdictions. This goal is intended to “provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.” For Deschutes County, implementing Goal 9 is focused on ensuring opportunities for economic development, while protecting rural land uses.

In Deschutes County, several areas are designated for rural industrial and rural commercial activities to allow for activities such as manufacturing or resource processing. Additionally, unincorporated communities and rural service centers allow for limited commercial opportunities, including restaurants, services, and retail stores.

Economic development agencies in Central Oregon cite the tremendous natural resource access and amenities to be essential for drawing in new businesses and workers. As the County grows, childcare will continue to be challenge for rural residents along with access to high speed and reliable internet services.

A continued challenge for Deschutes County will be to balance adequate economic opportunity for rural residents, with protection of natural resource lands. Community members have expressed interest in providing for new and emerging economic opportunities through renewable energy development, including potential for biomass, solar, geothermal, and wind projects that may be compatible with rural uses.

Context

Background. Deschutes County’s economy was initially built around farming and logging. As those sectors declined in the 20th century, recreation and tourism increased as people were drawn to the beauty and opportunities to recreate on public lands. Deschutes County’s high quality of life became a draw for employers and employees alike. In the 2000’s, the building sector boomed as new housing was built to meet both increased housing demand and the real estate speculation that followed. Housing prices rose so high that workforce housing became a limiting factor in economic growth. The period of strong growth ended with the national recession that began in late 2007, leading to falling housing prices and rising unemployment. The 2010’s and early 2020’s have proven to be another period of booming economic growth for Deschutes County, exacerbated by the COVID-19 pandemic and the dramatic increase in remote work.

Primary Industries. Deschutes County is known for its abundant natural resources, though the County continues to balance its economy through a variety of industries. The top 10 industries overall in Deschutes County (including those within urban areas) are:

1. Trade, transportation, utilities (15,742 jobs)
2. Education/Health Services (13,479 jobs)
3. Goods-producing (13,169 jobs)
4. Leisure and hospitality (12,990 jobs)
5. Health care and social assistance (12,541 jobs)
6. Retail trade (11,714 jobs)
7. Accommodation and food services (10,718 jobs)
8. Professional/business services (10,067 jobs)
9. Food services/drinking places (8,304 jobs)
10. Local government (7,396 jobs)

Employers in Deschutes County: Currently, the largest private employers in Central Oregon include:

[Insert table of employers]

Deschutes County's economy remains strong compared to Oregon as a whole, as shown in the following statistics:

- Median Household Income: \$74,082 (\$70,084 in Oregon)
- 9.4% of county population experiencing poverty (12.1% in Oregon)
- 63.3% of population in civilian workforce (62.6% in Oregon)

Tourism. Tourism continues to be a major facet of Central Oregon's economy, with approximately 4.5 million visitors entering Central Oregon each year. The majority of those visitors travel to Bend and Deschutes County in particular but other communities in the County also are popular destinations, including Sisters, Redmond and Terrebonne, as well as destination resort such as Sunriver, Eagle Crest, Pronghorn and others. In addition, recreational opportunities throughout the County also attract a multitude of visitors, from skiing on Mt. Bachelor, hiking in the Three Sisters Wilderness, and rafting the Deschutes River, to fishing, hunting and camping at dispersed sites on National Forest and BLM land throughout the County.

Resource Land. While much of the County’s economic activity occurs in urban areas, County administration of farmland, forest land, and natural resources plays a vital role in protecting and enhancing the economic development potential of the area.

Coordination. A key partner for the County in promoting a healthy economy is Economic Development for Central Oregon (EDCO). This private non-profit organization is dedicated to diversifying the tri-county regional economy by attracting new investment and jobs. This organization also tracks the local economy.

Connections to Other Comprehensive Plan Chapters. Much of the County’s economic development activity is directly related to farmland (Chapter X), forest land (Chapter X), mineral and aggregate resources (Chapter X), and natural resources (Chapter X). Additional information can be found in these sections.

Key Community Considerations.

As part of this comprehensive plan update, community members expressed the following:

- A recognition that tourism is an important industry in the County, but some concern that the interests of tourism-related activity play an outsized role in the County.
- Desire for a strong and diverse economy that benefits local residents.
- Strong interest in expanding access to childcare for rural residents, especially those who travel into incorporated cities for employment.
- Interest in exploring new economic opportunities including renewable energy development.
- Desire for additional educational and job training opportunities, including expansion of colleges and universities.

Goals and Policies

Goal 9.1: Maintain a stable, and sustainable, and thriving rural economy, compatible with rural lifestyles and a healthy environment.

- **Policy 9.1.1.** Promote rural economic initiatives, including home-based businesses, that maintain the integrity of the rural character and natural environment.
- **Policy 9.1.2.** Support a regional approach to economic development in concert with Economic Development for Central Oregon or and similar organizations.
- **Policy 9.1.3.** Support growth and expansion of colleges and universities, regional educational facilities, and workforce training programs.

- **Policy 9.1.4.** Support renewable energy generation as an important economic development initiative, while taking other community goals and concerns into consideration.
- **Policy 9.1.5.** Support and participate in master planning for airports in Deschutes County, including expansion of noise impact boundaries and upgrades to facilities as airports continue to grow.
- **Policy 9.1.6.** Within the parameters of State land use regulations, permit limited local-serving commercial uses in higher-density rural communities. Support limited and locally-serving commercial uses in appropriate locations.
- **Policy 9.1.7.** Support expansion of high-speed internet in rural areas and integrate infrastructure such as fiber-optic cables into new development and road projects.
- **Policy 9.1.8.** Support funding and development of childcare locations across the County to support families in the workforce.
- **Policy 9.1.9.** Explore need for master planning for rural economic development lands, including Deschutes Junction.
- **Policy 9.1.10.** Recognize the importance of maintaining a large-lot industrial land supply that is readily developable in Central Oregon, and support a multi-jurisdictional cooperative effort to designate these sites.

Deschutes County Comprehensive Plan

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Chapter 10: Housing

Opportunities, Challenges, and Considerations

Deschutes County faces a variety of housing demands, issues, and challenges. The County continues to be a desirable and attractive place to live, with access to jobs, recreation, beautiful natural landscapes, and a variety of other amenities. The County's population is projected to continue to grow in the coming decades. At the same time, there are several challenges to the development of housing in the County. Some of the key issues the County faces today include:

- Increased demand for rural housing.
- Housing affordability.
- State planning requirements related to Urban Growth Boundaries, farm and forest land, destination resorts, and others.
- Water Availability
- Issues related to homelessness.

What type of housing is allowed in unincorporated Deschutes County? (Sidebar)

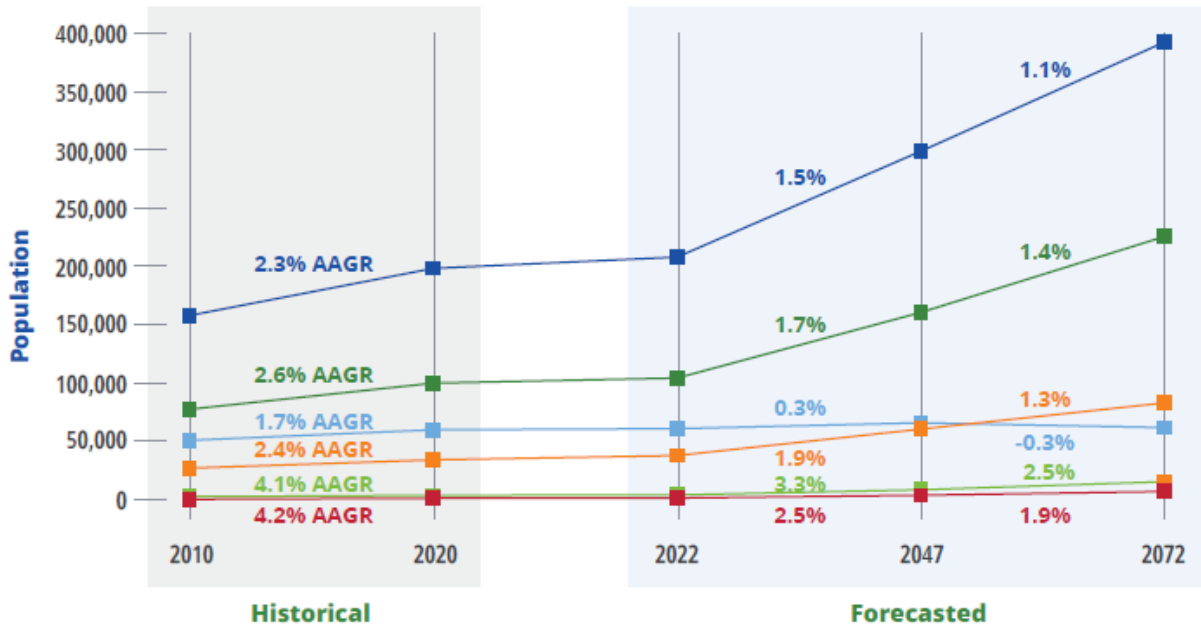
Residential development in Deschutes County is less dense than the Cities of Bend, La Pine, Redmond and Sisters due to state land use rules. Single family homes are most common type of housing throughout the county in all zones. Recreational vehicles are allowed to be placed on property for temporary living situations or as medical hardship dwellings for family members but are not intended to be permanent living situations. Accessory Dwelling Units or ADUs, also known as “granny flats” or “carriage houses” are smaller secondary residences on a property. In 2021, the Oregon legislature passed Senate Bill 391 which allows for rural ADUs with certain parameters, and Deschutes County is currently in the process of implementing this legislation.

Context

Projected population growth in unincorporated Deschutes County. Deschutes County is one of the fastest growing counties in Oregon, and that trend is expected to continue. Significant growth is expected to occur in Deschutes County in the coming years (over 90,000 new residents in the next 25 years). However, the majority of this growth is forecasted to happen in urban areas with a more modest amount occurring in

unincorporated parts of the County (about 5,000 additional people during the same period).

Historical and Forecasted Population and AAGR in Deschutes County and its Sub-Areas



	Historical			Forecasted				
	2010	2020	AAGR (2022-2047)	2022	2047	2072	AAGR (2022-2047)	AAGR (2047-2072)
Deschutes County	157,733	198,253	2.3%	207,921	298,937	392,790	1.5%	1.1%
Larger Sub-Areas:								
Bend	77,122	99,598	2.6%	103,976	160,361	225,619	1.7%	1.4%
Redmond	26,508	33,608	2.4%	37,342	60,060	82,601	1.9%	1.3%
Larger Sub-Areas:								
La Pine	1,653	2,512	4.2%	2,736	5,129	8,336	2.5%	1.9%
Sisters	2,038	3,064	4.1%	3,437	7,911	14,881	3.3%	2.5%
Outside UGBs	50,412	59,471	1.7%	60,430	65,476	61,352	0.3%	-0.3%

Source: Portland State University Population Research Center

Increased demand for rural housing. Between 2010 and 2022, Deschutes County processed seven applications to rezone approximately 1,200 acres of property from a non-residential zone to a residential zone, with several more applications recently submitted and under review. Most of these applicants requested rezonings of farmland due to poor soil quality for farming. This trend is likely to continue.

Housing affordability. The median value of owner-occupied housing units in Deschutes County (including cities), is significantly higher than that of the State of Oregon (\$435,600 compared to \$362,200 according to 2017-2021 Census figures), and consistently increasing. In July 2023, Becon Appraisal Group reported an all-time high median home value for Bend area homes, in the amount of \$785,000. The same report estimated a median home price as \$694,000 for Sisters area homes, \$473,000 for Redmond area homes, and \$401,000 for La Pine area homes. Given that median income is generally on par with the state as a whole, high housing prices are likely an indicator of an inadequate supply of housing affordable to many residents of the Deschutes County, particularly those with low to moderate incomes.

State Planning Requirements. Although Deschutes County has numerous prospects to expand residential development, some of these opportunities face challenges with respect to state rules and regulations. The Oregon land use system is designed to concentrate most growth within Urban Growth Boundaries. A variety of statewide planning goals, laws, and administrative rules designed to protect farm and forest land, regulate destination resorts, and ensure cost-effective provision of infrastructure limit where and how housing can be built outside of urban areas.

Water availability and consumption. A growing demand for water for residential, business, recreation, and agricultural uses; changes in water table depth; allocation of water rights; and potential future changes in water supply related to climate change all may impact the availability of water to support new housing. Water resources are discussed in Chapter 5 in more detail.

Homelessness. The incidence and impacts of homelessness have been rising in Deschutes County, as well as across the state and nation in recent years. A variety of factors have contributed to this trend, including rising housing costs, increasing income disparities, and limited transitional housing and supportive resources. As a result, impacts on both urban areas and natural resources have increased, with elevated levels of community concern and support for more action by the County and its partners to address these issues.

Balancing residential development opportunities with visitor accommodations.

Although population growth in unincorporated Deschutes County is forecasted to be relatively limited, rural parts of the County, including several destination resorts, include significant capacity for new residential development. Community members have expressed concern regarding the use of these homes as primary residences, second homes, or vacation rentals.

[chart or infographic that summarizes info in tables shown below - show table totals or subtotals by category of area or community (e.g., destination resorts, resort communities, rural residential zones, etc.)]

Table 1. Vacant Lots in Resort Areas, Source: Deschutes County 2020 Housing Profile

Table 8, Resort Areas	Number of Vacant Lots
Destination Resorts	
Caldera Springs	101
Eagle Crest	139
Pronghorn	285
Tetherow	200
Resort Communities	
Black Butte	27
Inn of the 7th Mountain/Widgi Creek	12
Urban Unincorporated Area	
Sunriver	118
Total Vacancies, Resort Areas	882

Table 2. Vacant Lots in Rural Residential Areas, Source: Deschutes County 2020 Housing Profile

Table 9, Rural Residential Areas	Number of Vacant Lots
Rural Residential Zones	
Rural Residential	2439
Multiple Use Agriculture	518
Suburban Low Density Rural Residential	32
Urban Area Reserve	292
Rural Communities	
Tumalo (TUR/TUR5)	32
Terrebonne (TER/TER5)	134
Total Vacancies, Rural Residential Areas	3447

Table 3. Expected Future Opportunities for Rural Residential Lots, Source: Deschutes County 2020 Housing Profile

Table 10, Future Opportunities for Rural Residential Lots	Count
Thornburgh Destination Resort	950
Caldera Springs Destination Resort Phase 2	340
West Side Transect	187
Tumalo Irrigation District Rezoned Parcel	72
Gopher Gulch (North of Bend)	10
Future Opportunities, Rural Residential Lots	1,559

Recent changes in County housing rules. The County has recently adopted and/or is currently considering new rules related to development and regulation of different types of housing. These include:

- Changes to where accessory dwelling units are allowed.
- Repeal of the County’s “Conventional Housing Combining Zone” which prohibited manufactured homes in three large unincorporated areas east and west of Tumalo and east of Bend.

Key Community Considerations

Given the range of issues and conditions discussed related to this important topic, the Comprehensive Plan includes a variety of policies to guide future development of housing and address impacts to residents in rural areas. Additional related policies are found in

Chapter 2 (Land Use) and Chapter 13 (Transportation). These strategies are underpinned by community sentiment, as described below.

- Some community members expressed support for allowing or encouraging growth in rural areas, particularly to alleviate housing pressure and provide larger-lot options. However, engagement showed greater opposition to residential development outside of Urban Growth Boundaries.
- Overall support for allowing a wider range of types of housing (e.g., accessory dwelling units, manufactured homes, recreational vehicles, etc.), but concerns about the quality of this housing and additional rural residential development in general.
- Concern about homelessness and its impacts, coupled with strong support for a proactive approach by the County to work with partner agencies and groups to address this issue.
- Relatively strong opposition for rezoning low productivity farmland with poor soil to allow greater opportunities for housing, due to negative impact on open space, habitat, transportation, and active farm practices.

Housing Goals and Policies

Goal 10.1: Support housing opportunities and choices for rural County residents in unincorporated Deschutes County, while meeting health and safety concerns, minimizing environmental and resource land impacts.

- **Policy 10.1.1.** Incorporate annual farm and forest housing reports into a wider system for tracking the cumulative impacts of rural housing development.
- **Policy 10.1.2.** Continue to update the County zoning ordinance and work with partnering organizations to address health and safety issues associated with housing.
- **Policy 10.1.3.** Encourage and/or require, where consistent with County policies and requirements, new subdivisions to incorporate alternative development patterns, such as cluster development, that mitigate community and environmental impacts.
- **Policy 10.1.4.** Implement legislation allowing accessory dwelling units in rural areas to expand housing choices.
- **Policy 10.1.5.** Create and encourage opportunities for flexibility in rural housing including development of manufactured home parks, safe parking sites, and RV parking areas.

- **Policy 10.1.6.** Reduce barriers to housing development and supporting services (such as locally serving medical offices or similar uses) in unincorporated communities.
- **Policy 10.1.7.** Explore grants and funding opportunities for ongoing maintenance and rehabilitation of existing housing stock.
- **Policy 10.1.8.** Evaluate the impacts of short-term rentals and consider regulations to mitigate impacts, as appropriate.

Goal 10.2: Support agencies and non-profits that provide affordable housing.

- **Policy 10.2.1.** Support Central Oregon Regional Housing Authority and other stakeholders to meet the housing needs of all Deschutes County residents by assisting, as needed, in coordinating and implementing housing assistance programs.
- **Policy 10.2.2.** Utilize block grants and other funding to assist in providing and maintaining low- and moderate-income housing in partnership with Housing Works and other housing agencies and providers in Deschutes County.

Goal 10.3: Regulate the location and density of housing in the area located between the Bend UGB and Shevlin Park through Westside Transect policies

- **Policy 10.3.1.** Protect the sensitive eco-systems and interrelationships of the urban/rural interface on the west side of Bend between the urban area and Shevlin Park and the public and forestlands to the west.
- **Policy 10.3.2.** Protect natural resources and environmentally sensitive areas and provide special setbacks between development and Shevlin Park, Tumalo Creek, and forestlands.
- **Policy 10.3.3.** Development patterns shall reflect the protection of land with environmental significance and fire-wise and other fire prevention community design best practices.
- **Policy 10.3.4.** Limit residential development to 200 single-family residential lots.
- **Policy 10.3.5.** Manage all areas outside of the structural building envelopes on residential lots for wildfire mitigation and wildlife habitat in accordance with coordinated plans prepared by professionals, reviewed annually with reports submitted to the County every three years. The wildfire mitigation and wildlife

habitat plans shall be funded through homeowner assessments and administered and enforced by a homeowners association established at the time of creation of any residential lots.

- **Policy 10.3.6.** Reduce the impact of construction by using best management practices to minimize site disturbance during construction and construction impacts (i.e., erosion) on Shevlin Park, Tumalo Creek, and forestlands.
- **Policy 10.3.7.** Coordinate with the City of Bend for mitigation of impacts to City infrastructure from development within the Transect.

Goal 10.4: Participate in regional efforts to plan for housing.

- **Policy 10.4.1.** Collaborate with cities and private sector partners on innovative housing developments to meet the region's housing needs.
- **Policy 10.4.2.** Partner with cities to incentivize development within urban growth boundaries and reduce infrastructure costs for workforce and affordable housing.
- **Policy 10.4.3.** Partner with local, state, and federal agencies to address and limit nuisance and public health issues related to homelessness.
- **Policy 10.4.4.** Utilize County owned land in city limits for affordable and workforce housing, where appropriate.
- **Policy 10.4.5.** Promote regional housing planning, including urban reserve planning for cities, to allow for longer term and multi-jurisdictional housing strategies.
- **Policy 10.4.6.** Limit parcelization and development adjacent to cities or in conflict with planned and/or known road/utility corridors to preserve land for future urban development.

Deschutes County Comprehensive Plan

Draft Comprehensive Plan Chapters

Chapter 11: Unincorporated Communities and Destination Resorts

Opportunities, Challenges, and Considerations

Deschutes County is home to numerous unincorporated communities, which contain urban levels of development outside of city limits. Many of these communities provide services and amenities to rural residents. As the county continues to grow, many residents are concerned about increasingly dense development in these unincorporated areas which may feel out of scale with the surrounding rural uses. However, many residents also see the need for more opportunities for small-scale rural services and retail opportunities to serve existing and future community members. Deschutes County will need to continue to refine the vision and guidelines for development in these areas while balancing infrastructure needs, protection of natural resources and rural land uses, and community desires.

In addition to these unincorporated communities, Destination Resorts are another form of development outside of urban areas. In recent years, community members have expressed concern about the creation of new resorts for a variety of reasons. While Destination Resorts are an opportunity for economic development and housing in the rural County, many residents have expressed opposition to additional development of this type.

[Map – Unincorporated Communities and Destination Resorts]

Context

Unincorporated Communities

Deschutes County's unincorporated communities generally pre-date Oregon's statewide land use system and have more urban-scale uses in outer-lying rural areas, within a defined geographic boundary.

In 1994, Oregon Administrative Rules (OARs) were amended to define unincorporated communities and the types of uses that could be allowed in these areas. The OARs established four types of unincorporated communities, all of which were required to be in existence at the time of the change - the Rule did not allow for new rural communities to be established. These community types are described below.

- **Urban Unincorporated Community** - this is a community which contains at least 150 permanent dwelling units, a mixture of land uses, and contains a community water and sewer system. Sunriver is an Urban Unincorporated community. One parcel just outside of the City of La Pine was mistakenly left outside of the City's urban growth boundary, and is technically under this classification as well.
- **Rural Community** - this is a community which consists of permanent residential dwellings and at least two other types of land uses – such as commercial, industrial, or public uses provided to the community or travelers. Terrebonne and Tumalo are Rural Communities.
- **Resort Community** - this type of community was established for a recreation-related use on private land prior to 1989 when the state adopted its Destination Resort rules. Black Butte Ranch and Inn of the 7th Mountain/Widgi Creek are Resort Communities. It's important to note that there are several other resort style developments in the County on private lands called "Destination Resorts." See the next section for more information.
- **Rural Service Center** – this is an unincorporated community that has primarily commercial or industrial uses that provide goods and services to the surrounding rural area and travelers. These are the most common type of unincorporated community in Deschutes County and include Alfalfa, Brothers, Hampton, Millican, Whistlestop, and Wildhunt.

Destination Resorts

[Images of existing destination resorts, map of destination resorts and other areas that are similar but don't fall under that definition, table with information of proposed/platted/developed lots]

Since 1979 destination resorts have increased in importance to the economy of Deschutes County. In 1989, recognizing the importance of tourism to the economy of the State of Oregon, the state legislature and the Land Conservation and Development Commission (LCDC) took steps to make it easier to establish destination resorts on rural lands in the state. Statewide Planning Goal 8, the recreation goal, was amended to specify a process for locating destination resorts on rural land without taking an exception to Goals 3, 4, 11 and 14, which govern development in rural resource lands. Under these changes, destination resorts may be sited in EFU zones where they weren't previously allowed. In 1990, LCDC amended the rule for siting destination resorts on forest lands as well.

Eagle Crest Resort, although it had existed prior to these changes, applied for legislative changes to comply with these new rules and expand onto adjacent lands.

In 2010, Deschutes County completed an amendment to its destination resort mapping process, adding “clear and objective” requirements for eligible and ineligible sites, and the process for amending the destination resort map based on changes in state law. Since that time, Pronghorn, Caldera Springs, and Tetherow resorts have gone through the siting process. Resorts existing prior to the legislative change, such as Black Butte, Sunriver, and the Inn of the Seventh Mountain have also expanded and been rezoned to Urban Unincorporated Community and Resort Community, respectively. Thornburgh Resort has received preliminary approvals, but has not yet broken ground.

Key Community Considerations

Unincorporated Communities are limited in their development potential due to their specific geographic footprint. Protecting open space and natural resources while providing economic opportunities in these unincorporated areas continues to be a balancing act.

As additional rural development occurs, so does the demand for services and goods that can be reached without having to drive to an incorporated city. Aging residents have expressed a desire for additional medical care and offices in rural areas to support aging in place. On the other hand, many residents would prefer limiting development in unincorporated communities in order to preserve the rural of the area.

Destination Resort development continues to be a contentious issue. Community members have expressed concern regarding the water use of large-scale development – specifically the effects to groundwater for neighboring property owners. Many community members have expressed a desire to further limit destination resorts, golf courses, and visitor accommodations in order to preserve water access and availability for year-round residents.

Goals and Policies

Destination Resorts Policies

Goal 11.1: Provide for development of destination resorts in the County in a manner that will be compatible with farm and forest uses, existing rural development, and in a manner that will maintain important natural features including habitat of threatened or endangered species, streams, rivers, and significant wetlands.

- **Policy 11.1.1.** Provide a process for the siting of destination resorts facilities that enhance and diversify the recreational opportunities and economy of Deschutes County, on lands that have been mapped by Deschutes County as eligible for this purpose.

Goal 11.2: Provide for development of destination resorts consistent with Statewide Planning Goal 12 in a manner that will ensure the resorts are supported by adequate transportation facilities.

- **Policy 11.2.1.** Destination resorts shall only be allowed within areas shown on the “Deschutes County Destination Resort Map” and when the resort complies with the requirements of Goal 8, ORS 197.435 to 197.467, and Deschutes County Code 18.113.
- **Policy 11.2.2.** Create and implement additional limitations on the siting and development of destination resorts that go beyond current state regulations to ensure protection of water quality, recreational resources, and other County resources and values.
- **Policy 11.2.3.** Ensure that destination resort developments support and implement strategies to provide workers with affordable housing options within or in close proximity to the resorts.
- **Policy 11.2.4.** Mapping for destination resort siting.
 - a. To assure that resort development does not conflict with the objectives of other Statewide Planning Goals, destination resorts shall pursuant to Goal 8 not be sited in Deschutes County in the following areas:
 - 1. Within 24 air miles of an urban growth boundary with an existing population of 100,000 or more unless residential uses are limited to those necessary for the staff and management of the resort;
 - 2. On a site with 50 or more contiguous acres of unique or prime farm land identified and mapped by the Soil Conservation Service or within three miles of farm land within a High-Value Crop Area;
 - 3. On predominantly Cubic Foot Site Class 1 or 2 forest lands which are not subject to an approved Goal exception;
 - 4. On areas protected as Goal 5 resources in an acknowledged comprehensive plan where all conflicting uses have been prohibited to protect the Goal 5 resource;
 - 5. Especially sensitive big game habitat, and as listed below, as generally mapped by the Oregon Department of Fish and Wildlife in July 1984 and as further refined through development of comprehensive plan provisions implementing this requirement.
 - i. Tumalo deer winter range;
 - ii. Portion of the Metolius deer winter range;
 - iii. Antelope winter range east of Bend near Horse Ridge and Millican;

- 6. Sites less than 160 acres.
 - b. To assure that resort development does not conflict with Oregon Revised Statute, destination resorts shall not be sited in Deschutes County in Areas of Critical State Concern.
 - c. To assure that resort development does not conflict with the objectives of Deschutes County, destination resorts shall also not be located in the following areas:
 - 1. Sites listed below that are inventoried Goal 5 resources, shown on the Wildlife Combining Zone, that the County has chosen to protect:
 - i. Antelope Range near Horse Ridge and Millican;
 - ii. Elk Habitat Area; and
 - iii. Deer Winter Range;
 - 2. Wildlife Priority Area, identified on the 1999 ODFW map submitted to the South County Regional Problem Solving Group;
 - 3. Lands zoned Open Space and Conservation (OS&C);
 - 4. Lands zoned Forest Use 1 (F-1);
 - 5. Irrigated lands zoned Exclusive Farm Use (EFU) having 40 or greater contiguous acres in irrigation;
 - 6. Non-contiguous EFU acres in the same ownership having 60 or greater irrigated acres;
 - 7. Farm or forest land within one mile outside of urban growth boundaries;
 - 8. Lands designated Urban Reserve Area under ORS 195.145;
 - 9. Platted subdivisions;
 - d. For those lands not located in any of the areas designated in Policy 3.9.5(a) though (c), destination resorts may, pursuant to Goal 8, Oregon Revised Statute and Deschutes County zoning code, be sited in the following areas:
 - 1. Forest Use 2 (F-2), Multiple Use Agriculture (MUA-10), and Rural Residential (RR-10) zones;
 - 2. Unirrigated Exclusive Farm Use (EFU) land;
 - 3. Irrigated lands zoned EFU having less than 40 contiguous acres in irrigation;
 - 4. Non-contiguous irrigated EFU acres in the same ownership having less than 60 irrigated acres;
 - 5. All property within a subdivision for which cluster development approval was obtained prior to 1990, for which the original cluster development approval designated at least 50 percent of the development as open space and which was within the destination resort zone prior to the effective date of Ordinance 2010-024 shall remain on the eligibility map;

visitors to the resort, and uses consistent with preservation and maintenance of open space.

- e. The zoning ordinance shall include measures that assure that developed recreational facilities, visitor-oriented accommodations and key facilities intended to serve the entire development are physically provided or are guaranteed through surety bonding or substantially equivalent financial assurances prior to closure of sale of individual lots or units. In phased developments, developed recreational facilities and other key facilities intended to serve a particular phase shall be constructed prior to sales in that phase or guaranteed through surety bonding.

Sunriver Policies

General Sunriver Policies

- **Policy 11.3.1.** Land use regulations shall conform to the requirements of OAR 660 Division 22 or any successor.
- **Policy 11.3.2.** County comprehensive plan policies and land use regulations shall ensure that new uses authorized within the Sunriver Urban Unincorporated Community do not adversely affect forest uses in the surrounding Forest Use Zones.
- **Policy 11.3.3.** To protect scenic views and riparian habitat within the community, appropriate setbacks shall be required for all structures built on properties with frontage along the Deschutes River.
- **Policy 11.3.4.** Open space and common area, unless otherwise zoned for development, shall remain undeveloped except for community amenities such as bike and pedestrian paths, and parks and picnic areas.
- **Policy 11.3.5.** Public access to the Deschutes River shall be preserved.
- **Policy 11.3.6.** The County supports the design review standards administered by the Sunriver Owners Association.

Sunriver Residential District Policies

- **Policy 11.4.1.** Areas designated residential on the comprehensive plan map shall be developed with single family or multiple family residential housing.

Sunriver Commercial District Policies

- **Policy 11.5.1.** Small-scale, low-impact commercial uses shall be developed in conformance with the requirements of OAR Chapter 660, Division 22. Larger, more

intense commercial uses shall be permitted if they are intended to serve the community, the surrounding rural area and the travel needs of people passing through the area.

- **Policy 11.5.2.** No additional land shall be designated Commercial until the next periodic review.
- **Policy 11.5.3.** Multiple-family residences and residential units in commercial buildings shall be permitted in the commercial area for the purpose of providing housing which is adjacent to places of employment. Single-family residences shall not be permitted in commercial areas.
- **Policy 11.5.4.** Approval standards for conditional uses in the commercial district shall take into consideration the impact of the proposed use on the nearby residential and commercial uses and the capacity of the transportation system and public facilities and services to serve the proposed use.

Sunriver Town Center District Policies

- **Policy 11.6.1.** Small-scale, low-impact commercial uses shall be developed in conformance with the requirements of OAR Chapter 660, Division 22. Larger, more intense commercial uses shall be permitted if they are intended to serve the community, the surrounding rural area or the travel needs of people passing through the area.
- **Policy 11.6.2.** Development standards in the town center district should encourage new development that is compatible with a town center style of development that serves as the commercial core of the Sunriver Urban Unincorporated Community. The following policies should guide development in the Town Center District in Sunriver:
 - a. Combine a mixture of land uses that may include retail, offices, commercial services, residential housing and civic uses to create economic and social vitality and encourage pedestrian use through mixed use and stand alone residential buildings.
 - b. Develop a commercial mixed-use area that is safe, comfortable and attractive to pedestrians.
 - c. Encourage efficient land use by facilitating compact, high-density development that minimizes the amount of land that is needed for development.
 - d. Provide both formal and informal community gathering places.
 - e. Provide visitor accommodations and tourism amenities appropriate to Sunriver.

- f. Provide design flexibility to anticipate changes in the marketplace.
 - g. Provide access and public places that encourage pedestrian and bicycle travel.
 - h. Provide road and pedestrian connections to residential areas.
 - i. Facilitate development (land use mix, density and design) that supports public transit where applicable.
 - j. Develop a distinct character and quality design appropriate to Sunriver that will identify the Town Center as the centerpiece/focal point of the community.
- **Policy 11.6.3.** Development within the Town Center (TC) District will be substantially more dense than development elsewhere in Sunriver. This increased density will require changes to existing topography and vegetation in the TC District to allow for screened, underground parking. The requirements of the County's site plan ordinance shall be interpreted to reflect this fact.

Sunriver Resort District Policies

- **Policy 11.7.1.** Areas designated resort on the comprehensive plan map shall be designated resort, resort marina, resort golf course, resort equestrian or resort nature center district on the zoning map to reflect a development pattern which is consistent with resort uses and activities.

Sunriver Business Park District Policies

- **Policy 11.8.1.** A variety of commercial uses which support the needs of the community and surrounding rural area, and not uses solely intended to attract resort visitors, should be encouraged.
- **Policy 11.8.2.** Allow small-scale, low-impact commercial uses in conformance with the requirements of OAR Chapter 660, Division 22. Larger more intense commercial uses shall be permitted if they are intended to serve the community, the surrounding rural area and the travel needs of people passing through the area.
- **Policy 11.8.3.** Small-scale, low-impact industrial uses should be allowed in conformance with the requirements of OAR Chapter 660, Division 22.

Sunriver Community District Policies

- **Policy 11.9.1.** Areas designated community on the comprehensive plan map shall be designated community general, community recreation, community limited or community neighborhood district on the zoning map to reflect a development pattern which is consistent community uses and activities.

- **Policy 11.9.2.** Lands designated community shall be developed with uses which support all facets of community needs, be they those of year-round residents or part-time residents and tourists.
- **Policy 11.9.3.** Development shall take into consideration the unique physical features of the community and be sensitive to the residential development within which the community areas are interspersed.

Sunriver Airport District Policies

- **Policy 11.10.1.** Future development shall not result in structures or uses which, due to extreme height or attraction of birds, would pose a hazard to the operation of aircraft.
- **Policy 11.10.2.** Future development should not allow uses which would result in large concentrations or gatherings of people in a single location.

Sunriver Utility District Policies

- **Policy 11.11.1.** Lands designated utility shall allow for development of administrative offices, substations, storage/repair yards, distribution lines and similar amenities for services such as water, sewer, telephone, cable television and wireless telecommunications.

Sunriver Forest District Policies

- **Policy 11.12.1.** Uses and development on property designated forest that are within the Sunriver Urban Unincorporated Community boundary shall be consistent with uses and development of other lands outside of the community boundary which are also designated forest on the Deschutes County comprehensive plan map.
- **Policy 11.12.2.** Forest district property shall be used primarily for effluent storage ponds, spray irrigation of effluent, biosolids application and ancillary facilities necessary to meet Oregon Department of Environmental Quality sewage disposal regulations.
- **Policy 11.12.3.** The development of resort, residential or non-forest commercial activities on Forest district lands shall be prohibited unless an exception to Goal 14 is taken.

Sunriver General Public Facility Policies

- **Policy 11.13.1.** Residential minimum lot sizes and densities shall be determined by the capacity of the water and sewer facilities to accommodate existing and future development and growth.

- **Policy 11.13.2.** New uses or expansion of existing uses within the Sunriver Urban Unincorporated Community which require land use approval shall be approved only upon confirmation from the Sunriver Utility Company that water and sewer service for such uses can be provided.
- **Policy 11.13.3.** Expansion of the Sunriver Water LLC/Environmental/LLC Water and Sewer District outside of the historic Sunriver boundaries shall adequately address the impacts to services provided to existing property owners.

Sunriver Water Facility Policies

- **Policy 11.14.1.** Water service shall continue to be provided by the Sunriver Utilities Company.

Sunriver Sewer Facility Policies

- **Policy 11.15.1.** Sewer service shall continue to be provided by the Sunriver Utilities Company.

Sunriver Transportation System Maintenance Policies

- **Policy 11.16.1.** Privately-maintained roads within the Sunriver Urban Unincorporated Community boundary shall continue to be maintained by the Sunriver Owners Association.
- **Policy 11.16.2.** The bicycle/pedestrian path system in Sunriver shall continue to be maintained by the Sunriver Owners Association or as otherwise provided by a maintenance agreement.
- **Policy 11.16.3.** The County will encourage the future expansion of bicycle/pedestrian paths within the Sunriver Urban Unincorporated Community boundary in an effort to provide an alternative to vehicular travel.
- **Policy 11.16.4.** All public roads maintained by the County shall continue to be maintained by the County. Improvements to County maintained public roads shall occur as described the County Transportation System Plan.

Resort Community Policies

General Resort Community Policies

- **Policy 11.17.1.** Land use regulations shall conform to the requirements of OAR 660 Division 22 or any successor.

- **Policy 11.17.2.** Designated open space and common area, unless otherwise zoned for development, shall remain undeveloped except for community amenities such as bike and pedestrian paths, park and picnic areas. Areas developed as golf courses shall remain available for that purpose or for open space/recreation uses.
- **Policy 11.17.3.** The provisions of the Landscape Management Overlay Zone shall apply in Resort Communities where the zone exists along Century Drive, Highway 26 and the Deschutes River.
- **Policy 11.17.4.** Residential minimum lot sizes and densities shall be determined by the capacity of the water and sewer facilities to accommodate existing and future development and growth.
- **Policy 11.17.5.** The resort facility and resort recreation uses permitted in the zoning for Black Butte Ranch and the Inn of the Seventh Mountain/Widgi Creek shall serve the resort community.

Black Butte Ranch General Policies

- **Policy 11.18.1.** County comprehensive plan policies and land use regulations shall ensure that new uses authorized within the Black Butte Ranch Resort Community do not adversely affect forest uses in the surrounding Forest Use Zones.
- **Policy 11.18.2.** The County supports the design review standards administered by the Architectural Review Committee.
- **Policy 11.18.3.** Residential, resort and utility uses shall continue to be developed in accordance with the Master Design for Black Butte Ranch and the respective Section Declarations.
- **Policy 11.18.4.** Industrial activities, including surface mining, shall only occur in the area zoned Black Butte Ranch Surface Mining, Limited Use Combining District (Black Butte Ranch SM/LU) located in the northwest corner of Black Butte Ranch.
- **Policy 11.18.5.** Employee housing shall be located in the area zoned Black Butte Ranch-Utility/Limited Use Combining District (Black Butte Ranch-U/LU).
- **Policy 11.18.6.** Any amendment to the allowable use(s) in either the Resort Community District or the Limited Use Combining District shall require an exception in accordance with applicable statewide planning goal(s), OAR 660-04-018/022 and DCC 18.112 or any successor.

- **Policy 11.18.7.** The westerly 38-acres zoned Black Butte Ranch Surface Mining, Limited Use Combining District (Black Butte Ranch SM/LU) shall be used for the mining and storage of aggregate resources. Uses that do not prevent the future mining of these resources, such as disposal of reclaimed effluent and woody debris disposal from thinning and other forest practices may be allowed concurrently. Other resort maintenance, operational and utility uses, such as a solid waste transfer station, maintenance facility or equipment storage may be allowed only after mining and reclamation have occurred.
- **Policy 11.18.8.** The 18.5 acres zoned Black Butte Ranch-Utility/Limited Use Combining District (Black Butte Ranch-U/LU) may be used for the disposal of reclaimed sludge.
- **Policy 11.18.9.** The area west of McCallister Road and east of the area zoned Black Butte Ranch may be used for large equipment storage, general storage, maintenance uses, RV storage, telephone communications, administration offices, housekeeping facilities and employee housing.
- **Policy 11.18.10.** Employee housing shall be set back at least 250 feet from the eastern boundary of the area zoned Black Butte Ranch Surface Mining, Limited Use Combining District (Black Butte Ranch SM/LU).
- **Policy 11.18.11.** Surface mining within the Black Butte Ranch community boundary shall adhere to the following Goal 5 ESEE “Program to Meet Goal” requirements:
 - a. Only the western most 38 acres of the site shall continue to be mined.
 - b. Setbacks shall be required for potential conflicting residential and other development. A minimum 50-foot setback shall be maintained from the perimeter of tax lot 202 for all surface mining activity.
 - c. Noise impact shall be mitigated by buffering and screening.
 - d. Hours of operation shall be limited to between 7:00 a.m. and 6:00 p.m. weekdays. No operations shall be allowed on weekends and holidays.
 - e. Processing shall be limited to 45 days in any one year, to be negotiated with Deschutes County in the site plan process in consultation with the Oregon Department of Fish and Wildlife (ODFW).
 - f. The conditions set forth in the August 10, 1989, letter of ODFW shall be adhered to.
 - g. Extraction at the site shall be limited to five acres at a time with on-going incremental reclamation (subject to DOGAMI review and approval).
 - h. Mining operations, siting of equipment, and trucking of product shall be conducted in such a manner that applicable DEQ standards are met and minimizes noise and dust.

- i. DOGAMI requirements for a permit once mining affects more than five acres outside the 8.6-acre exemption area shall be met.
- j. A conditional use permit shall be obtained from Deschutes County, under the provisions of section 18.128.280. Surface mining of resources exclusively for on-site personal, farm or forest use or maintenance of irrigation canals, before mining activity affects more than five acres outside the 8.6-acre exempt area.

Black Butte Ranch Public Facility Policies

- **Policy 11.19.1.** Police protection services shall be provided by the Black Butte Ranch Police Services District.
- **Policy 11.19.2.** The Black Butte Ranch Water Distribution Company and the Black Butte Ranch Corporation shall confirm the water and sewer service, respectively, can be provided for new uses or expansion of existing uses that require land use approval.
- **Policy 11.19.3.** The Black Butte Ranch Water Distribution Company shall provide water service for the Black Butte Ranch Resort Community.
- **Policy 11.19.4.** The Black Butte Ranch Corporation shall provide sewer service for Black Butte Ranch.
- **Policy 11.19.5.** The Black Butte Ranch Fire Protection District shall provide fire protection services for Black Butte Ranch.
- **Policy 11.19.6.** The roads and the bicycle/pedestrian path system within the Black Butte Ranch Resort Community boundary shall be maintained by the Black Butte Ranch Owners Association.

Inn of the 7th Mountain Widgi Creek General Policies

- **Policy 11.20.1.** Any amendment to the allowable uses in either the Resort Community District or the Widgi Creek Residential District shall require an exception in accordance with applicable statewide planning goal(s), OAR 660-04-018/022 or any successor, and DCC 18.112 or any successor.
- **Policy 11.20.2.** The County shall encourage and support land exchanges efforts by and between private property owners, public agencies, and public trusts for the purpose of fostering public access to and protection of natural resources, such as rivers, streams, caves, areas/features of historical importance and other natural features.

Inn of the 7th Mountain/Widgi Creek Public Facility Policies

- **Policy 11.21.1.** Police protection services shall be provided under contract with the Deschutes County Sheriff.
- **Policy 11.22.2.** Water service shall be supplied by on-site wells for the Inn/Widgi Resort Community.
- **Policy 11.22.3.** New uses or expansion of existing uses that require land use approval shall be approved only upon confirmation from the City of Bend that sewer service can be provided.
- **Policy 11.22.4.** Fire protection services for the Inn/Widgi shall be provided through a contract with the City of Bend until such time as Inn/Widgi develops another plan to provide adequate fire protection.
- **Policy 11.22.5.** The Resort Community, not Deschutes County, shall maintain roads in the community.
- **Policy 11.22.6.** The bicycle/pedestrian path system shall be maintained by the Inn/Widgi Owners Association.
- **Policy 11.22.7.** Emergency access between Widgi Creek and the Inn of the Seventh Mountain shall be provided in accordance with the approved development plan for the Elkai Woods town homes. The respective resort property owners shall maintain emergency access between the Inn and Widgi Creek

Deschutes County Comprehensive Plan

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Chapter 12: Public Facilities and Services **Opportunities, Challenges, and Considerations.**

Public facilities and services provide the basic infrastructure for urban and rural development. These systems include water and sewer systems, police and fire protection, health and social services, schools, and libraries. The transportation system is also a public facility – the County has developed and maintains a Transportation System Plan that is included as Appendix B.

These public services are provided by a variety of entities, each with their own jurisdiction, funding sources, and regulatory requirements. Overall, the provision of facilities and services is more efficient and cost-effective in urban areas than in rural development, where ratepayers may be few and far between. In some areas of the County, particularly east County, available services are limited due to lower population density and distance from urban centers. Many of the people who choose to reside there consider the limited availability of services and facilities as an acceptable tradeoff for a rural lifestyle.

Statewide Planning Goal 11, Public Facilities and Services and the associated Oregon Administrative Rule 660-011 specify that facilities and services should be appropriate for, but limited to, the needs and requirements of rural areas to be served. Public facility plans are not required (with some exceptions); in fact, Goal 11 and the associated rule set limits to the provision of sewers and water systems in rural areas, in order to limit rural growth.

There are several important issues relating to the provision of public facilities and services that this Comprehensive Plan addresses, including:

- Meeting the needs of county residents while supporting the protection of resource lands;
- Maintaining health, safety, and security throughout the county; and
- Cooperation among the various providers of public services.

Context

Deschutes County plays a role in ensuring that public facilities and services are planned for, however the facilities and services are often not provided by county government directly. The discussion below highlights who provides the services listed and how the County will manage development impacts on existing facilities and services.

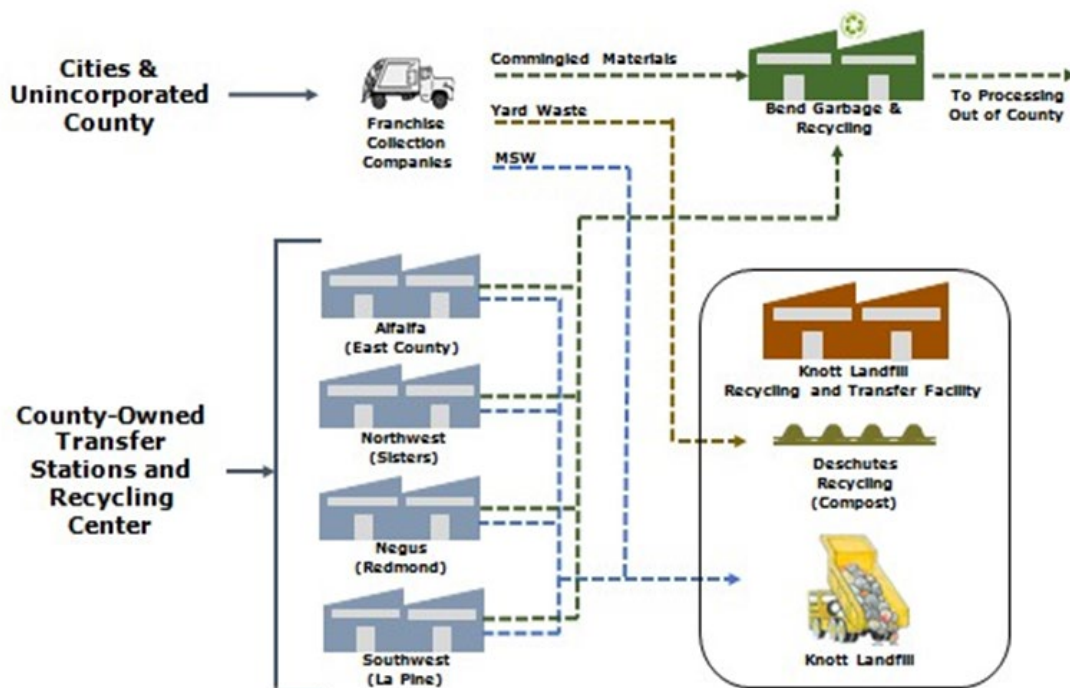
County Facilities and Services

Law Enforcement: The Deschutes County Sheriff’s Office is a full service organization providing patrol, traffic team, criminal investigations, corrections, civil and search and rescue. Special operations include a Marine Patrol, K-9 units, and Forest Patrol. The Sheriff is an elected public official who serves a four-year term. Housed within the Sheriff’s office is the County’s Emergency Management Unit, which coordinates the countywide response to natural hazards events.

Solid Waste: The County manages Knott Landfill Recycling and Transfer Station, which is the only landfill in Deschutes County. In addition to this, the department manages four additional transfer stations throughout the County which gather waste in convenient locations, before transferring to the Knott Landfill facility. Operations at the landfill include recycling, hazardous waste disposal, and composting. This landfill site is anticipated to remain open until 2029 at which time it is projected to reach maximum capacity.

The Deschutes County Solid Waste Department is currently undertaking a new landfill siting process, which is anticipated to be completed in 2024. In the future, the County will likely need to site addition facilities to support composting, recycling, and waste stream diversion facilities.

Figure x: Deschutes County Solid Waste System, Source: Solid Waste Management Plan, 2019



County Health Department: Deschutes County Health Services has a primary responsibility to help address the basic health and wellness of Deschutes County residents. The department offers services at more than 40 locations in Deschutes County including public schools; health clinics in Bend, La Pine, Redmond and Sisters; five school-based health clinics; agencies such as the KIDS Center and the State of Oregon Department of Human Services; area hospitals; care facilities and homes.

Fairgrounds: The County maintains the County Fairgrounds and Expo Center. With panoramic views of the snow-capped Cascade range, the Deschutes County Fair and Expo Center is situated on the outskirts of Redmond just off of Hwy 97 and adjacent to the Redmond Municipal Airport. Due to its central location, the fairgrounds also serves as an emergency center. The fairgrounds hosts the annual County Fair and numerous other events throughout the year.

Other Agency Facilities and Services

Where other agencies provide facilities and services, the County coordinates with numerous other providers of facilities and services for the benefit of County residents. Where there are gaps in the coverage for specific areas, the County can work with providers to fill them. A selection of other agencies and entities are noted below.

Central Oregon Intergovernmental Council (COIC): COIC began serving the residents and communities of Central Oregon in 1972 as a Council of Governments organized under ORS 190 by Crook, Deschutes and Jefferson Counties and Bend, Culver, Madras, Metolius, Prineville, Redmond and Sisters. COIC provides a wide variety of educational and economic development services such as workforce training, alternative high school education, business loans and public transportation. COIC continues to evolve to meet the needs of Central Oregon.

COIC is governed by a 15-member board made up of elected officials who are appointed by each of the member governments as well as appointed representatives of key economic sectors – business and industry, tourism and recreation, agribusiness and agriculture, timber and wood products, and the unemployed/underemployed.

School Districts: There are three school districts in Deschutes County:

- Bend-La Pine (SD 1),
- Redmond (SD 2J) and
- Sisters (SD 6).

Additionally, the Brothers Community School is owned and operated by Crook County School District (SD 15). The High Desert Education Service District (ESD) partners with the

districts to provide support services such as special education, school improvement, administrative and legal services.

Fire Districts: The following fire districts support rural residents: Bend Fire Department, Black Butte Ranch Rural Fire Protection District, Cloverdale Rural Fire Protection District, Crooked River Ranch Rural Fire Protection District, Deschutes County Rural Fire Protection District #1 and #2, La Pine Rural Fire Protection District, Sisters-Camp Sherman Rural Fire Protection District, and Sunriver Service District. Public lands are protected by federal agencies. There are some areas in Deschutes County that are not covered by a fire district. (See Chapter 7 for more on fire protection.)

Irrigation Districts: Irrigation districts in Oregon are organized as Special Districts under ORS Chapter 545. Six irrigation districts operate in Deschutes County: Arnold, Central Oregon, North Unit, Swalley, Tumalo, Three Sisters Irrigation Districts. They are public corporations under Oregon Law, with prescribed rules for purpose, boards, elections, staffing, charges, etc. The districts are created for the purpose of delivering water to their patrons. As such they are effectively non-profit water user associations. In addition to irrigation uses, these districts also supply a number of other services, including municipal, industrial, and pond maintenance, warranting coordination with municipalities.

Libraries: Deschutes Public Library has branches in Bend, Redmond, Sisters, La Pine and Sunriver. They also operate a bookmobile program that focuses on children and parenting books and a program for supplying books to homebound residents.

Higher Education: Deschutes County is home to Oregon State University Cascades Campus (Bend) and Central Oregon Community College (Bend and Redmond). These campuses are expected to grow significantly in the future.

Soil and Water Conservation District: Soil and Water Conservation Districts are authorized by the State of Oregon to provide for the conservation of its soil and water resources. Working in cooperation with stakeholders, the districts address issues such as control and prevention of soil erosion, conservation and development of water resources, water quality, and wildlife preservation. The Deschutes Soil and Water Conservation District is a legally defined subdivision of the state government, but, like all soil and conservation districts, functions as a local unity led by a locally elected board of directors who serve without pay.

Public Water Systems: Public Water Systems are defined as those that have more than three connections, supply water at least 60 days/year and are used by at least 10 persons/day. All water systems are regulated under the federal 1974 Safe Drinking Water Act and 1981 Oregon Drinking Water Quality Act. Public Water Systems serving over 3,300

people are overseen by the Oregon Department of Human Services Drinking Water Program. The County acts as a contractor for the Department of Human Services to monitor approximately 180 Public Water Systems. Some privately owned systems are, for various reasons, regulated by the Public Utility Commission, which sets rates and rules for public utilities.

Privately Owned Facilities and Services

Utilities

Electric: Electricity is provided by Pacific Power around Bend and Redmond. Central Electric Cooperative and Midstate Electric provide service in the rest of the County. Phone service is provided by Qwest and numerous cell phone providers. Cable is provided by Bend Cable and satellite providers. Internet access is provided by a variety of entities.

Hospitals: Cascade Healthcare Community manages two hospitals: St. Charles Bend and St. Charles Redmond. Additionally there are numerous health providers and clinics in the County.

Sewer Districts: Creating or expanding existing sewer systems outside an urban growth boundary or unincorporated community is governed by Statewide Goal 11 and OAR 660-011-0060. In order to protect rural areas from urban-style development, the rules regulate where and when rural sewers are appropriate. Some sewer districts, such as Oregon Water Wonderland Unit 2, have used the Statewide Goal 2 exception process to create or expand a sewer system.

Individual Facilities and Services

Private wells: Most rural properties are served by private wells that are approved and managed by the Oregon Water Resources Department. The County currently does not track the number of wells.

Individual septic systems: Most rural properties are served by septic systems that are approved by the County Environmental Soils Division.

Key Community Considerations

The role that Deschutes County plays in the provision of public facilities and services was part of the community discussion during the update of this Comprehensive Plan. Highlights included:

- City governments currently own property outside of urban growth boundaries and within County jurisdiction. In some instances, these lands are used for water and wastewater treatment facilities. As the County continues to grow, additional facilities

are likely to be needed, and coordination among jurisdictions regarding placement of these facilities will be key.

- Significant population growth will lead to an increase in solid waste, requiring at minimum the siting of a new landfill. Community members expressed a desire for consideration of livability among other factors when considering the placement of key public facilities.

Goals and Policies

Goal 12.1 Support the orderly, efficient, and cost-effective siting of rural public facilities and services.

- **Policy 12.1.1.** Encourage and support the formation of special service districts to serve the need for public facilities in rural areas.
- **Policy 12.1.2.** Encourage and support planning for and acquisition of sites needed for public facilities, such as transportation, water, and wastewater facilities.
- **Policy 12.1.3.** Support the siting of community health clinics, hospitals, and private medical practices to serve rural residents throughout the County.
- **Policy 12.1.4.** Continue to support the County Fairgrounds as a community gathering place, event facility and home to the annual County Fair.
- **Policy 12.1.5.** Maintain the County Fairgrounds as an emergency readiness location and staging area in the event of a Cascadia Subduction Zone earthquake or other large disaster.
- **Policy 12.1.6.** Prior to disposing of County-owned property, consider whether the land is appropriate for needed public projects such as schools, health clinics, fire stations, senior centers, or affordable housing.
- **Policy 12.1.7.** Coordinate with rural service districts and providers to review development proposals.
- **Policy 12.1.8.** Use the land use entitlement process to ensure new development addresses and mitigates impacts on existing and planned public facilities.
- **Policy 12.1.9.** Support education districts, library districts and recreation districts in meeting community needs, such as meeting spaces.

- **Policy 12.1.10.** Where practicable, locate utility lines and facilities within or adjacent to existing rights-of-way to avoid dividing farm or forest lands.
- **Policy 12.1.11.** Use the development code to mitigate visual and other impacts of public facilities and cell towers.
- **Policy 12.1.12.** Use the Comprehensive Plan and Development Code to guide rural development in a manner that supports the orderly and cost-efficient provision of public facilities and services.
- **Policy 12.1.13.** Support siting and development of city owned water and wastewater facilities on rural lands, including innovative facilities that include additional community amenities.

Goal 12.2. Pursue sustainable, innovative, and cost-effective waste management practices

- **Policy 12.2.1.** Allow for siting of waste management facilities on rural lands, including but not limited to landfill facilities, transfer stations, organics management facilities, material recovery facilities, and recycling modernization facilities, in a manner that is sensitive to environmental and community concerns.
- **Policy 12.2.2.** Provide incentives, education, and resources to promote reuse and recycling of construction waste.
- **Policy 12.2.3.** Encourage waste reduction through community education and partnerships with community groups such as the Environmental Center
- **Policy 12.2.4.** Support the creation of a landfill overlay zone.

Goal 12.3. Serve as a conduit for countywide resources.

- **Policy 12.3.1.** Provide resources to connect community members with a variety of housing and health related issues in Deschutes County

Deschutes County Comprehensive Plan

Draft Comprehensive Plan Chapters

Chapter 13: Transportation

The Deschutes County transportation system includes roadways, bicycle facilities, pedestrian facilities, and transit facilities, as well as rail, air, marine, and pipeline systems. In general, the County only owns, manages, and maintains facilities in the unincorporated portions of the County. Facilities within the Urban Growth Boundaries of the incorporated cities of Bend, Redmond, Sisters, and La Pine are managed and maintained by those cities. In addition, the Oregon Department of Transportation (ODOT) owns and maintains a number of state highways throughout the County.

Information about existing conditions, planned investments, and policies related to transportation are contained in the Deschutes County Transportation System Plan (TSP), which is adopted as Appendix B of this Comprehensive Plan.



Deschutes County Comprehensive Plan

Draft Comprehensive Plan Chapters

Chapter 14: Energy

Opportunities, Challenges, and Considerations

The amount, source, and distribution of energy used in Deschutes County is a fundamental component of how we live our lives, and it is influenced by land use and other decisions made at the County level. The State of Oregon requires land uses to be managed with an eye to their energy impacts.

Statewide Planning Goal 13: Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.

In Deschutes County, the key energy issues include:

- Community design in more urban areas to limit the need for large vehicles (generally powered with fossil fuel) for everyday tasks.
- Generating, transporting, and storing energy locally from a variety of sources, and managing the impacts of these facilities.
- Conservation of energy through building design and orientation, the use of energy-efficient technologies, and incentives/regulations/education to encourage others to do so.

Deschutes County coordinates with utility providers that serve the area, including:

- Central Electric Cooperative
- Midstate Electric Cooperative
- Pacific Power (PacifiCorps)
- Cascades Natural Gas

Context

The role of Deschutes County in planning for energy is addressed in more detail below.

Solar Orientation

The solar orientation of structures can create significant energy savings and allows for photovoltaic energy generation. The County has long promoted energy conservation through a passive solar code that requires new structures to be sited so that they do not block the sun from falling on adjacent properties.

Siting Large-Scale Energy Facilities

In general, cities and counties have siting authority over energy projects below a certain size or generating capacity. This includes individual projects powering or supplementing homes and businesses or small commercial projects which produce energy for sale. Larger facilities are regulated by the Oregon Energy Facility Siting Council. The thresholds for Siting Council jurisdiction are determined by the Legislature and are defined in Oregon Revised Statutes (ORS) 469.300. The Siting Council does not regulate hydroelectric development. Instead, the Oregon Water Resources Commission has the authority to issue licenses for hydroelectric development.

Deschutes County currently has five developed large-scale energy facilities, primarily located on the eastern side of the County, approved between 2015-2017. In 2018, the Department of Land Conservation and Development altered statewide rules related to these types of large-scale energy facilities on high value farmland, limiting development opportunities in parts of the County. Community members have expressed concern regarding impacts of these facilities on wildlife habitat and aesthetics.

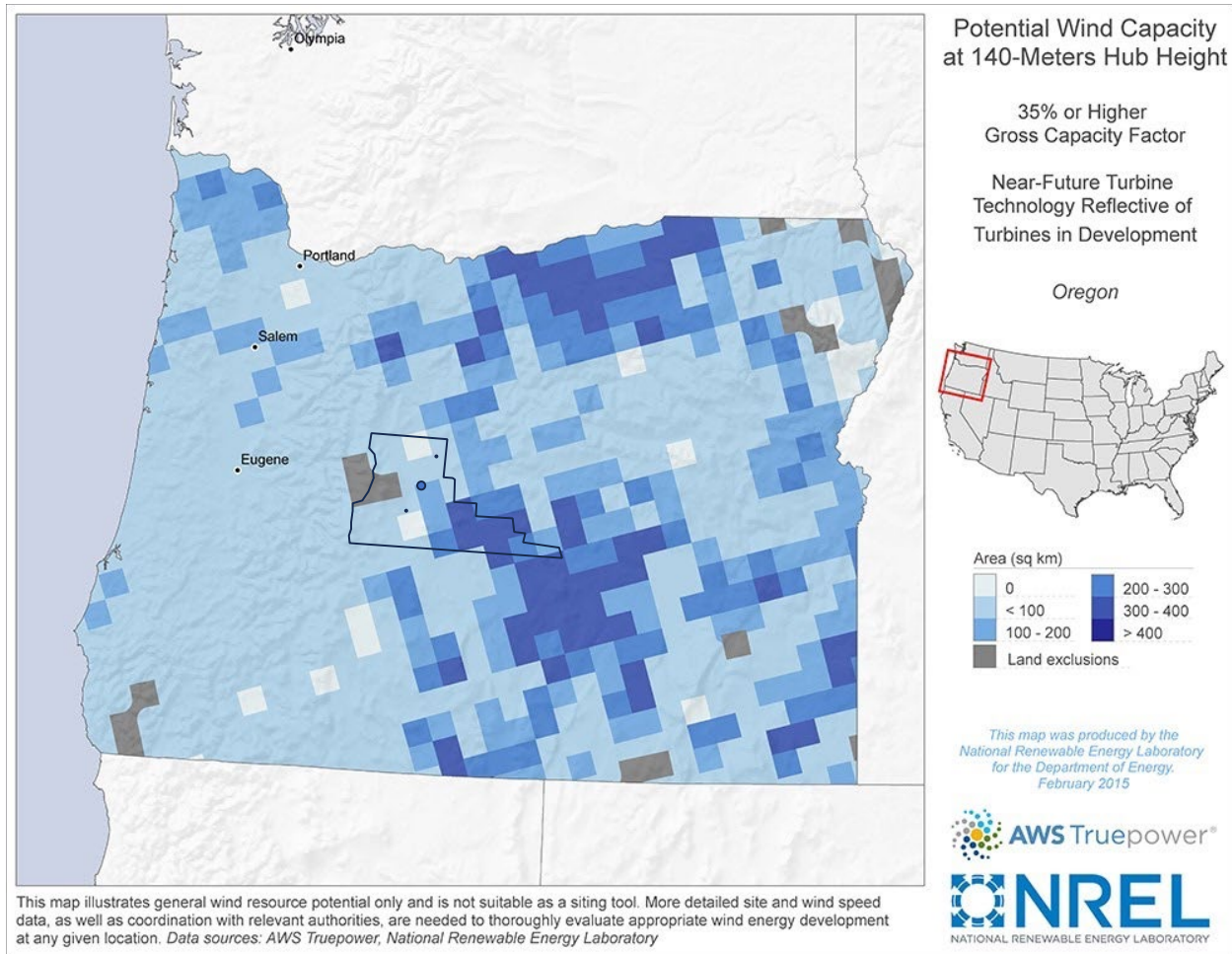
In addition to solar, several irrigation districts have developed in conduit hydroelectric facilities in which existing canals are upgraded with equipment for power generation. Three of these facilities currently exist, two of which are owned and operated by Central Oregon Irrigation District, and the third owned and operated by Three Sisters Irrigation District.

Small-Scale Residential, Business, and Commercial Energy Generation

The State oversees construction and approval of large commercial energy facilities, as noted above. However, there is a role for local governments to oversee smaller commercial projects. Commercial energy generation is considerably more complex than permitting small projects for homes and businesses. From a land use perspective, the scale, extended time frame, investment required and required off-site components all complicate the approval process. For example, to move the electricity generated at an alternative energy facility to market there is often a need for approval of roads, transmission lines or substations. The accessory facilities may or may not be in place at the same site as the main facility, but are an integral part of the project and are currently reviewed separately, based on State regulations.

Wind Energy Generation

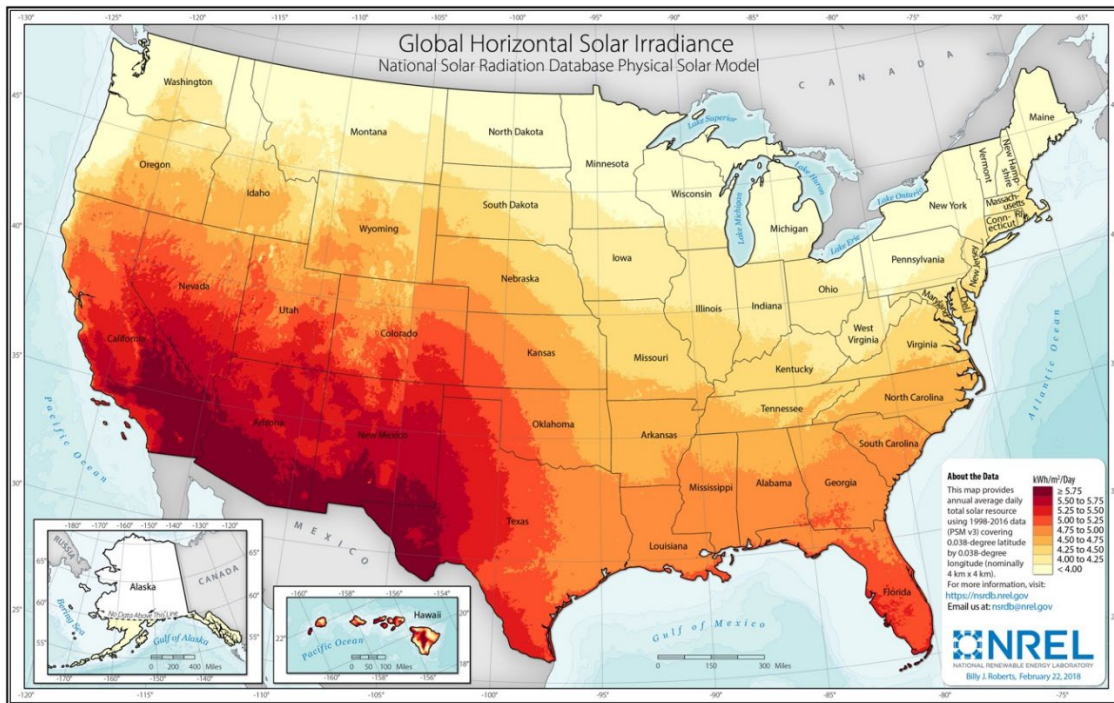
As shown in the following figure, wind energy is most abundant in the eastern portion of Deschutes County.



Potential impacts of this type of facility include temporary construction impacts, habitat loss and animal fatalities due to collision with turbines, visual impacts from towers and accessory structures, and noise. Deschutes County regulates small scale wind energy development generating less than 100 kilowatts of power. This allowance was added to the Deschutes County Code in 2010, although since that time no applications have been received to establish this type of facility.

Solar Energy Generation

The following figure gives a broad sense of where in the US solar irradiance is highest, and therefore where solar generation will be most efficient. Deschutes County is generally favorable to solar generation.



Potential impacts of this type of facility include temporary construction impacts, habitat loss, animal fatalities due to reflected sunlight (for some solar facilities), and visual impacts. As noted previously, the Department of Land Conservation and Development amended its rules in 2018 to limit solar development on high value farmland. Typically, solar developments require large acreage and relatively flat terrain for their operations. This requirement is a limiting factor in Deschutes County, as many of the properties that would meet large acreage and terrain requirements are actively used for farming purposes. The Bureau of Land Management is exploring an amendment to its rules to allow for greater opportunity for solar development in the western United States. The County anticipates limited solar development on private land going forward and an increase of leased BLM land for this type of development in the future.

Commercial Biomass

Commercial biomass uses organic material such as wood, agricultural waste or crop residues to power boilers to generate heat. According to the Oregon Forest Resources Institute an estimated 4.25 million acres (about 15% of Oregon’s forestland) have the potential to provide useful woody biomass through thinning to reduce the risk of uncharacteristic forest fires.

Potential impacts include temporary construction impacts, transportation impacts (as materials need to be transported to a central location), visual impacts, and air quality and climate impacts due to combustion of biofuels.

The County's first biomass facility is under construction through a partnership with the Deschutes National Forest and Mt. Bachelor Ski Resort. The project is located on federal land and outside of the purview of Deschutes County regulations.

Geothermal Energy Generation

Geothermal energy is a form of renewable energy derived from heat in the earth. This heat is transferred to water through various means and the steam produced is used to produce electricity. Geothermal energy is dependent on the location of geothermal resources; central Oregon may contain some of the best prospects for geothermal exploration in the continental United States.

Potential impacts include construction and visual impacts of geothermal facilities. Deschutes County regulates geothermal energy in accordance with state law, although no geothermal development projects have been proposed to date.

Hydroelectric Energy Generation

Several water districts in Deschutes County have implemented hydropower projects to harness the energy of moving water. These projects may have impacts on wildlife habitat and migration, as well as construction, visual, and noise impacts.

Currently, Deschutes County has three approved "in conduit" hydroelectric facilities that are owned and operated by irrigation districts within existing irrigation district canals. Approval of these facilities have previously been contentious with many community members expressing concern about wildlife and impacts to other basin users. Irrigation districts have expressed interest in reducing barriers to permitting these types of developments to promote renewable energy development using man-made waterways.

Key Community Considerations

Community discussions related to energy have revolved around the following topics:

- Interest in planning for and adapting to climate change, including using more renewable energy sources.
- Concern about the design and location of energy facilities and their impacts on environmental resources and scenic views.
- Preparation for more use of electric vehicles in the future, which often require specialized charging infrastructure.

Goals and Policies

Goal 14.1: Promote Energy Conservation and Alternative Energy Production

- **Policy 14.1.1.** Continue to incorporate energy conservation into the building and management of all County operations and capital projects using regular energy audits to refine the results.
- **Policy 14.1.2.** Reduce energy demand by supporting energy efficiency in all sectors of the economy.
- **Policy 14.1.3.** Encourage energy suppliers to explore innovative alternative energy conservation technologies and provide energy audits and incentives to patrons.
- **Policy 14.1.4.** Provide flexibility and exemptions for small properties and anomalous sites in the development code to promote energy conservation.

Goal 14.2: Promote affordable, efficient, reliable, and environmentally sound commercial energy systems for individual homes, and business consumers.

- **Policy 14.2.1.** Promote development of solar, hydropower, wind, geothermal, biomass and other alternative energy systems while mitigating impacts on neighboring properties and the natural environment.
- **Policy 14.2.2.** Provide incentives for homes and businesses to install small-scale on-site alternative energy systems consistent with adopted County financing programs.
- **Policy 14.2.3.** Support development of electric vehicle charging stations and facilities to help promote use of electric vehicles.
- **Policy 14.2.4.** Use the development code to promote commercial renewable energy projects while addressing and mitigating impacts on the community and natural environment.
- **Policy 14.2.5.** Use Oregon's Rural Renewable Energy Development Zones to support the creation of renewable energy projects.
- **Policy 14.2.6.** Identify, protect, and support the development of significant renewable energy sites and resources.