

Section 2.5 Water Resources

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Riparian Areas

Riparian areas are areas adjacent to rivers, streams, lakes or ponds where there is vegetation that requires free or unbound water or conditions that are more moist than normal. Riparian areas form an interconnected system within a watershed. At the water's edge they define the transition zone between aquatic and terrestrial systems. Riparian areas often contain a diversity of vegetation not found in upland areas. Riparian areas are limited in Deschutes County and are important habitats for both fish and wildlife.

The Deschutes County Comprehensive Plan, adopted in 1979 and revised, mapped riparian areas along the following rivers and streams.

Table 2.5.5 - Riparian Acreage in Deschutes County

Streams	Riparian Acres
Deschutes River	1,440
Little Deschutes River	2,920
Paulina Creek	846
Indian Ford Creek	573
Tumalo Creek	50
Whychus Creek	47
Fall River	43
Crooked River	38
TOTAL	5,966

Source: Deschutes County/City of Bend River Study 1986

Significant riparian habitat is located in one or more of the following three areas:

- The area within 100 feet of the ordinary high water mark of an inventoried river or stream. The 100 foot wide area may contain both riparian vegetation and upland vegetation.
- Wetlands and flood plain are also frequently within 100 feet of a stream or river. In some cases the riparian vegetation may extend beyond 100 feet from the ordinary high water mark if it is a designated wetland or flood plain.
- The area adjacent to an inventoried river or stream and located within a flood plain mapped by the Federal Emergency Management Agency and zoned Flood Plain Combining by the County. The flood plain may extend beyond 100 feet from the ordinary high water mark of the stream and may contain wetland.

The County has not conducted an inventory of riparian areas adjacent to lakes and ponds on private land. However, many of these areas are included in National Wetland Inventory Maps and are subject to County, State and/or Federal wetland fill and removal regulations. Riparian areas adjacent to the many lakes on federal lands are managed and protected under federal land and resource management plans and are not included in the County inventory.

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Exhibit B

Floodplains

Federal Emergency Management Agency Maps

The Federal Emergency Management Agency (FEMA) maps flood-plains adjacent to the following rivers and streams in Deschutes County. The floodplain along these rivers and streams is recognized in a Flood Plain Combining zone by the County.

Table 2.5.6 - Floodplains Adjacent to Rivers and Streams

• Deschutes River	• Long Prairie
• Little Deschutes River	• Dry River
• Whychus Creek	• Spring River
• Crooked River	• Indian Ford Creek
• Paulina Creek	

Source: Deschutes County GIS

Floodplains are defined as the lowland and relatively flat areas adjoining inland waters including at a minimum, that area subject to a one percent (100-year recurrence) or greater chance of flooding in any one year. Generally, river flooding along the Deschutes River has not historically been a serious problem in Deschutes County. This is due to the porous nature of the local geology, irrigation diversion canals and reservoir retention. Studies completed by the U.S. Army Corp of Engineers have resulted in designating a 100 year flood-plain for the Little Deschutes River and Whychus Creek. Regular flooding events have occurred near the headwaters of Tumalo Creek and in the Tumalo community. Along Whychus Creek, the city of Sisters frequently experiences flooding, with the most significant event occurring in 1964 (see also Section 3.5).

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Exhibit C

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Land Use Designations and Inventory

Deschutes County Comprehensive Plan designations identify general land uses for Tumalo and provide the legal framework for establishing zoning districts. Zoning regulates land uses that are allowed in each respective district. Table 4 lists Tumalo comprehensive plan designations and corresponding zoning districts. Table 5 summarizes existing property inventories within those zoning districts. Tumalo Comprehensive Plan designations are then described in greater detail.

Table 4 - Tumalo Land Use Designations

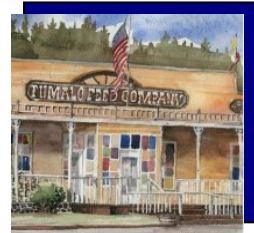
Comprehensive Plan Designations	Zoning Districts
Commercial (TUC)	Commercial District (TUC)
Floodplain (FP)	Floodplain (FP)
Industrial (TUI)	Industrial District (TUI)
Research and Development (TURE)	Research and Development District (TURE)
Residential (TUR)	Residential District (TUR)
Residential 5 Acre Minimum (TUR5)	Residential Five Acre Minimum District (TUR5)

Table 5 - Tumalo Land Use Inventory *

Zone	Residential Units	Commercial / Industrial Developments	Undeveloped Parcels	Total Number of Parcels
TUC	28	17	57	102
TUR	93	0	37	127
TUR5	75	0	27	99
TURE	0	2	1	3
TUI	0	2	1	3
Total	196	21	123	334

* Assessor's Data 2009

Commercial (TUC). A “Commercial” designation allows a range of limited commercial and industrial uses to serve Tumalo and the surrounding area. In general, the designation extends north from the intersection of Cook Avenue and U.S. 20 to 3rd Street between Wood and Wharton Avenues. Commercial lands also comprise an area west of U.S. 20 between 5th and 8th Streets.



This designation was originally intended to accommodate a mixture of small-scale commercial and limited industrial uses. The core commercial area initially encompassed lands adjacent to Cook Avenue, north of U.S. 20. The designation was ultimately expanded between Cook and Wharton Avenues that extends south to U.S. 20. This area includes the “Tumalo Mall,” an existing commercial and retail complex. The use of this building received authorization as a nonconforming use in 1986 and site plan alterations in 1987 and 1988. These land use actions brought the uses into compliance with the commercial zone.

~~Floodplain (FP). A “Floodplain” designation protects the public and private property from hazards associated with floodplains; conserves important riparian areas along rivers and streams for fish and wildlife resources; and preserves significant scenic and natural resources. This designation follows the channel of the Deschutes River that bisects Tumalo. The areas of special flood hazard are identified by the Federal Insurance Administration in a report titled Flood Insurance Study for Deschutes County, Oregon and Incorporated Areas. This report was revised in September 2007, and includes accompanying Flood Insurance Rate Maps. The Flood Insurance Study is on file at the Deschutes County Community Development Department.~~



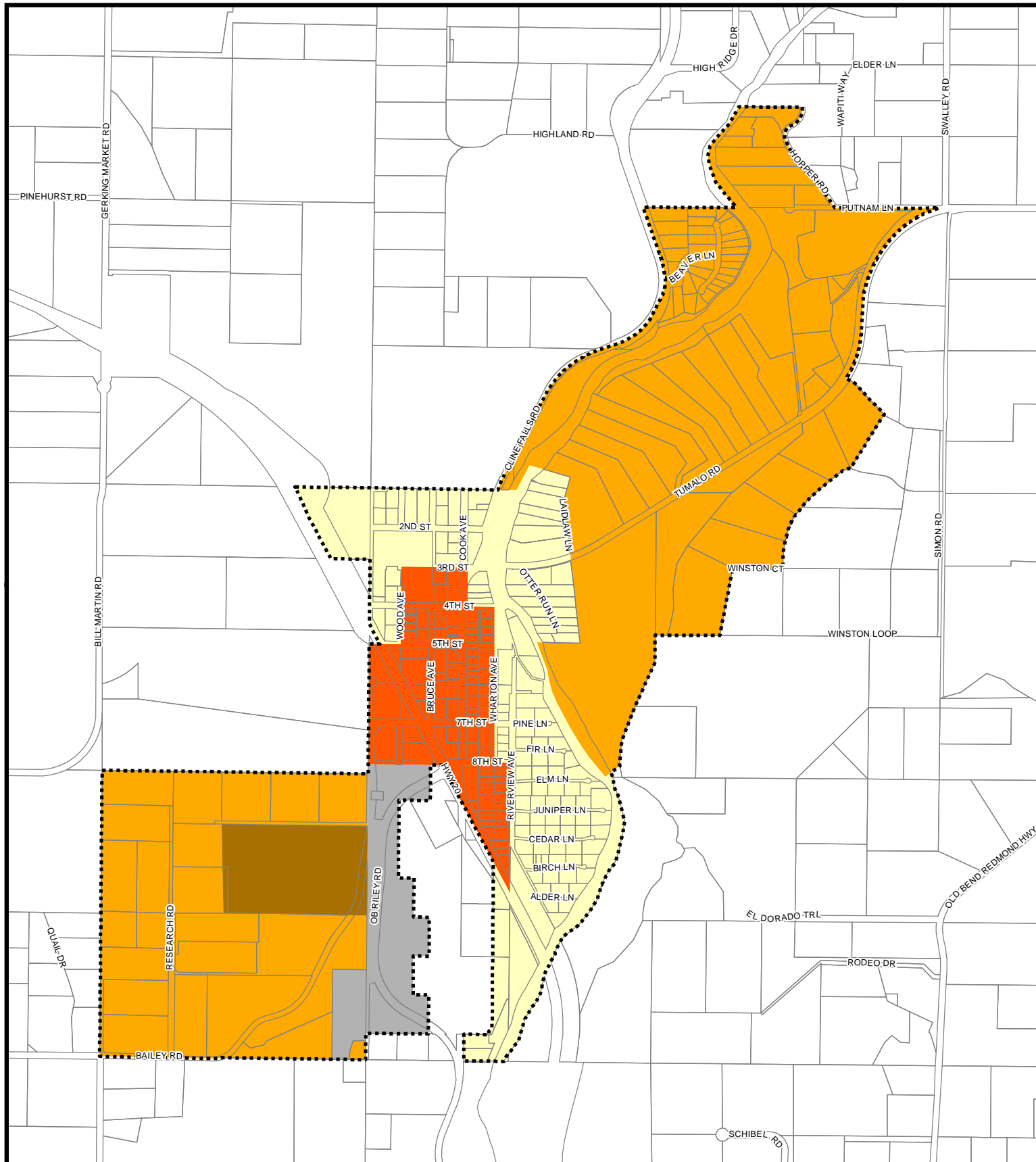
Industrial (TUI). An “Industrial” designation allows a limited range of industrial uses to serve Tumalo and the surrounding area. The designation recognizes nonconforming industrial uses and properties suitable for limited amounts of additional industrial development. This designation is concentrated around the Knife River operation that fronts O.B. Riley Road and U.S. 20.

Research and Development (TURE). A “Research and Development” designation allows research and development facilities requiring a more rural, non-industrial location to be sited in Tumalo. This designation contains two parcels in one ownership located on the southeast slope of Laidlaw Butte. It was originally created to accommodate a research and development site and associated uses predating Deschutes County’s 1979 zoning ordinance.

Residential (TUR). A “Residential” designation allows a mixture of housing types and densities suited to the level of available water and wastewater facilities. The purpose of this district is to allow new residential development that is compatible with the rural character of the area. Originally, the residential district boundary coincided with the boundary of the old Laidlaw Plat including the Deschutes River Homesites plats between Riverview Avenue and the Deschutes River. Today, it also includes the area surrounding the Knife River aggregate site south of U.S. 20.

Residential 5-Acre (TUR-5). A “Residential 5 Acre Minimum” designation retains large rural residential lots. The lands designated Residential-5 acre minimum include the larger parcels east of the Deschutes River and the west slope of Laidlaw Butte.





Tumalo Comprehensive Plan

Legend

--- Unincorporated Community Boundary

Tumalo Comprehensive Plan

■ TUC - Commercial

■ TURM - Residential

■ TUR5 - Residential 5 Acre Minimum

■ TURE - Research & Development

■ TUI - Industrial



0 300 600 1,200 1,800 Feet

March 8, 2017



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Policy Topics

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Land Use Designations

Land Use is governed by 19 Statewide Planning Goals, but particularly Goal 2, Land Use Planning. Refer to the Deschutes County Comprehensive Plan Section 1.3 for further details. Deschutes County Comprehensive Plan designations identify general land uses and provide a legal framework for establishing zoning districts. Zoning regulates land uses that are allowed in each respective district with development standards. **Table 4** lists the predominant comprehensive plan designations and corresponding zoning districts for South County. **Table 5** shows the acreage associated with the districts.

Table 4 - South County Area Land Use Designations	
Comprehensive Plan Designations	Zoning Districts
Agricultural	Exclusive Farm Use Zone
Destination Resort	Destination Resort Overlay Zone
	Floodplain Zone
Forest	Forest Use 1 & 2 Zone
Open Space and Conservation	Open Space and Conservation Zone
Rural Commercial	Rural Commercial Zone
Rural Residential Exception Area	Rural Residential 10 Zone
Surface Mining	Surface Mining Zone, Impact Combining Zone
Unincorporated Community	Unincorporated Community - Rural Service Center
	<u>Other Relevant Districts</u>
	Landscape Management Combining Zone
	Wildlife Area Combining Zone
	<u>Flood Plain Combining Zone</u>

Table 5 - South County Zoning District & Associated Acreages

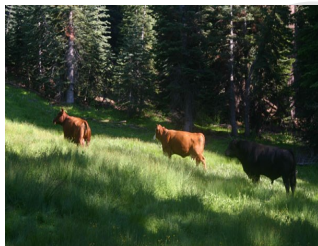
Zoning Districts ¹	Acres ²	Percent ³
Exclusive Farm Use La Pine	5,706	3%
Flood Plain	4,974	3%
Forest 1	135,827	76%
Forest 2	4,392	2%
Open Space and Conservation	8,979	5%
Rural Residential 10	17,596	10%
Other (Unincorporated Community, Surface Mining, Rural Commercial)	149	0%
Total	177,623	100%
Overlay and Combining Zones		
Wildlife Combining	99,655	56%
Destination Resort Overlay	2,000	1%
Landscape Management Combining	8,274	5%
Flood Plain Combining	4,974	3%

¹ Zoning districts, combining and overlay zones exclude Sunriver and La Pine

² Acres include roads, right-of way, lakes, rivers

³ Rounding may not add to 100%

Described below in greater detail are South Deschutes County's Comprehensive Plan designations.



An "Agricultural Lands" designation and EFU zone protects farmlands in Deschutes County pursuant to Statewide Planning Goal 3 (Agricultural Lands). As discussed in the Agricultural Lands Section of the Comprehensive Plan, protecting agriculture is one of the primary goals of the Oregon land use system. A 1992 study identified seven agricultural subzones. For each subzone, standards determine minimum parcel sizes for farm divisions to protect the commercial agricultural land base. The subzone applicable to south Deschutes County is EFU - La Pine (EFULP). Its specifically noted for riparian meadows, grazing and meadow hay. The minimum acreage for this subzone is 37 irrigated acres. Refer to Section 2.2 of the Agricultural Lands section of the Comprehensive Plan for more details.

Statewide Planning Goal 8, the recreation goal, was amended in 1989 to specify a process for locating destination resorts on rural land without taking an exception to Goals 3, 4, 11 and 14. This was followed by legislation incorporating Goal 8 into Oregon's land use statutes. By these actions, the State of Oregon recognized destination resorts as a legitimate rural land use. In order to allow destination resorts, Goal 8 requires that Deschutes County adopt a "Destination Resort" map



showing which lands are eligible for destination resort development.

Although a property is mapped as eligible for a destination resort, a destination resort may not be permitted outright in that location. In order to be approved, a proposal for a resort must be processed as a conditional use and comply with the specific standards and criteria established by the county. In 2010, the Board of County Commissioners adopted new criteria and procedures for updating its Destination Resort Maps. One year later the Board officially updated them. In south Deschutes County, 573 properties, encompassing 2,000 acres are designated as eligible for siting a destination resort. Refer to Section 3.9 of the Comprehensive Plan for more details.



~~A “Floodplain” designation protects public and private property from hazards associated with floodplains; conserves important riparian areas along rivers and streams for fish and wildlife resources; and preserves significant scenic and natural resources. Floodplains are defined as the lowland and relatively flat areas adjoining inland waters including at a minimum, that area subject to a one percent (100-year recurrence) or greater chance of flooding in any one year. The areas of special flood hazard are identified by the Federal Insurance Administration in a report titled, *Flood Insurance Study for Deschutes County, Oregon and Incorporated Areas*. This report was revised in September 2007, and includes accompanying Flood Insurance Rate Maps. Floodplains in Southern Deschutes County are adjacent to the Deschutes, Little Deschutes and Fall rivers. The Flood Insurance Study is on file at the Deschutes County Community Development Department. Refer to Section 2.5 of the Comprehensive Plan for more details.~~

Maintaining strong protections for forest land is another primary goal of the Oregon land use planning system. Statewide Planning Goal 4 sets forest identification and protection standards which must be met by local governments. The Goal requires forests to be designated on a comprehensive plan as “Forest Lands” and protected primarily for the growing and harvesting of trees. The key concept is local governments must inventory forest lands and protect them through local regulations.



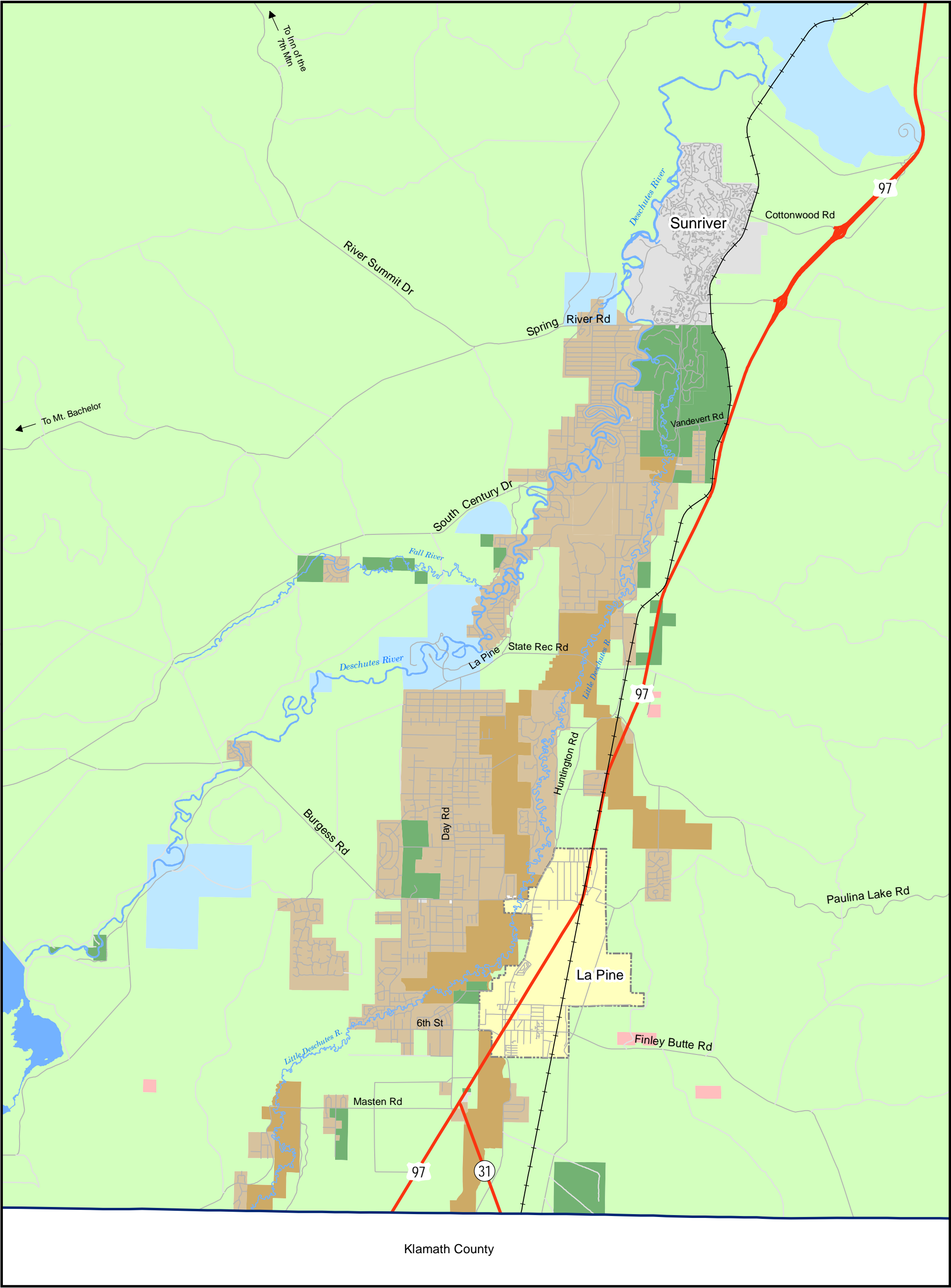
In 1992, as part of State mandated Periodic Review, Deschutes County revised its forest designations and associated regulations to two (F-1 and F-2). As shown in Table 5, the vast majority of lands in South County are zoned for forest uses. Refer to the Section 2.3 of the Comprehensive Plan for more details.

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Appendix 5.4 - Zoning



1" = 1.75 mi.



- Legend**
- Railroad
 - State Highway
 - Rivers & Lakes
 - Unincorporated Community
 - La Pine City Limit

- Zoning Designations**
- EFU- La Pine Subzone
 - F1 - Forest Use 1
 - F2 - Forest Use 2
 - OS&C - Open Space & Conservation
 - RR10 - Rural Residential 10 Acre Minimum
 - SM - Surface Mining

Exhibit E

Newberry Country

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