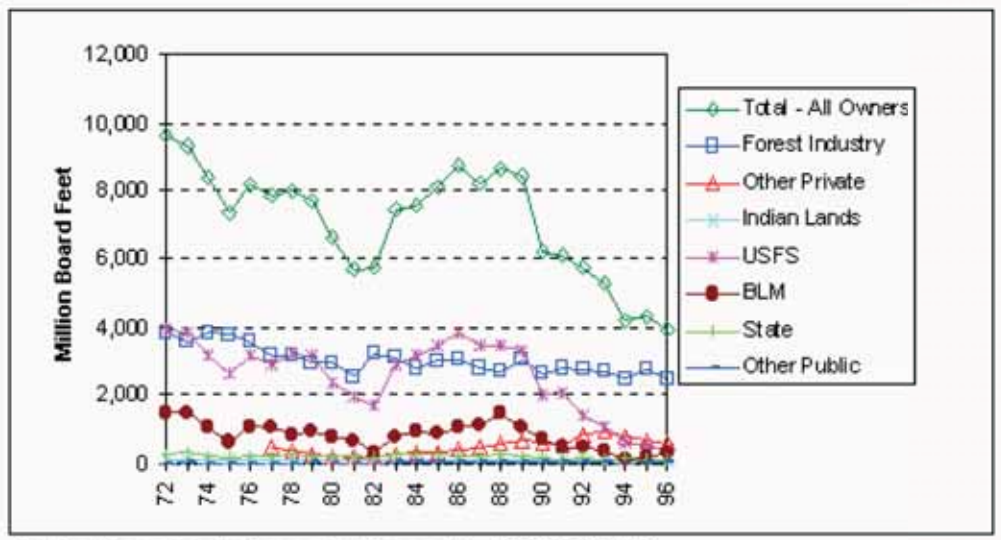
Figure 35: Timber Harvesting in Oregon by Ownership



Timber Harvesting in Oregon by Ownership, 1980-95 (ODF)

Fire and Fuels

Fire risk, priorities for suppression and fuels treatments, and operating procedures have been addressed 2004 Central Oregon Fire Management Service (COFMS) Fire Management Plan. The COFMS organization facilitates full collaboration among member Federal agencies and between the Federal agencies; and State, local, and private entities results in a mobile fire management work force available to the full range of public needs.

The Fire Management Plan designated six Fire Management Units throughout COFMS (see figure 36: Central Oregon Fire Management Plan—Fire Management Units)

Fire Management Unit 1 – Wildland Urban Interface (WUI)
COFMS has defined WUI as a 11/2 mi area surrounding each designated WUI community as well as around each intermixed polygon mapped by Oregon Department of Forestry. The areas meeting these criteria include:

The Fossil Beds area is composed of the area surrounding the John Day Fossil Beds National Monument. Vegetation is grass and shrub steppe.

The Monument area is located adjacent to the community of Monument and includes the communities of Kimberly, and Spray. Vegetation is primarily grass and sage with some timbered areas.

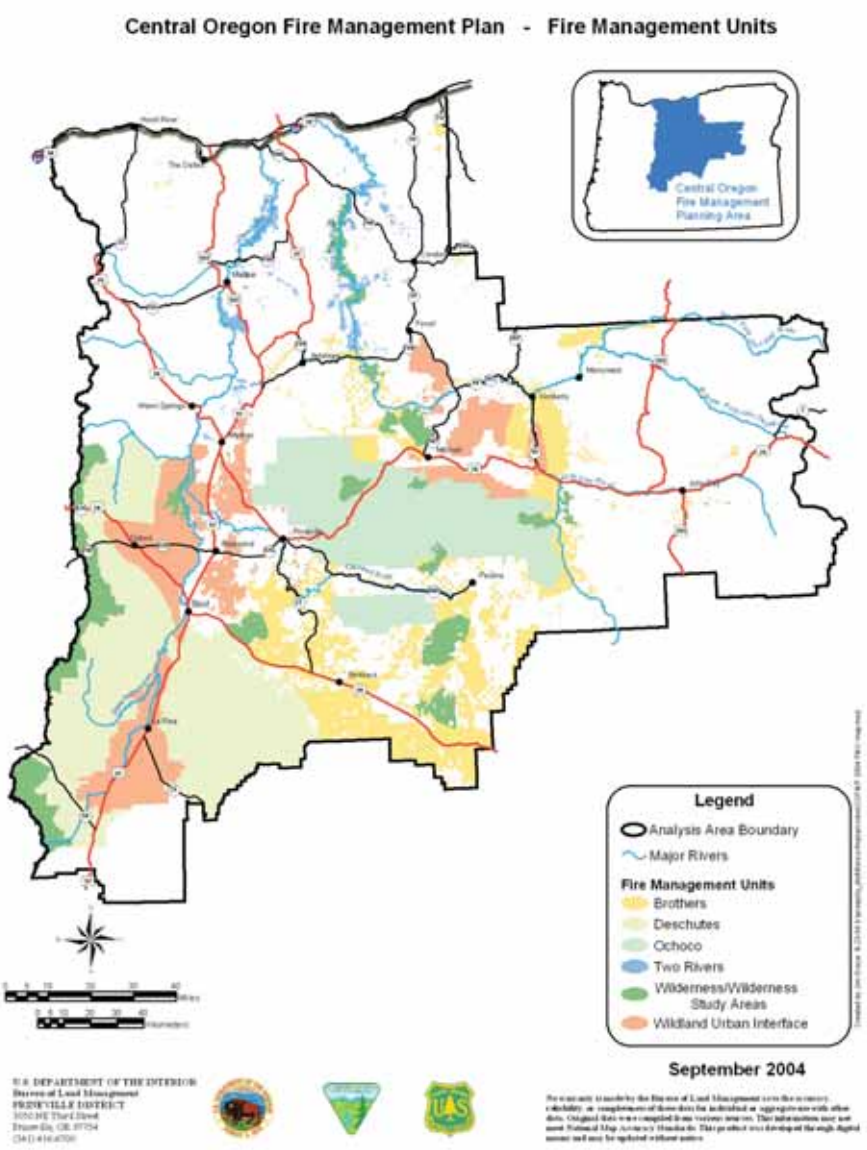
The Wheeler area includes WUI associated with the communities of Fossil and surrounding areas. Vegetation is dominated by grass and shrubs.

Other WUI communities include: Antelope, Anton, Arlington, Austin, Big Muddy Ranch, Biggs Junction, Canyon City, Clarno, Condon, Dayville, Grass Valley, John Day, Kent, Long Creek, Mayville, McDonald Crossings/Rock Creek, Mitchell, Moro, Mount Vernon, Prairie City, Seneca, Service Creek, Shaniko, South Fork John Day, Twickenham, and Wasco.

Community Wildfire Protection Plans (CWPP) are being developed for many of the communities within the planning area. The Grant County CWPP is completed. The Wheeler County CWPP is in progress. Gilliam County is in the process of developing a Natural Hazards Mitigation Plan that will address the threat of wildfire to the communities within the county.

Fire Management Unit 2 – Wilderness and Wilderness Study Areas
This FMU consists of designated Wilderness Study Areas on Prineville BLM District. Vegetation is composed of grass/shrub lands with timbered slopes of juniper and ponderosa pine.

Fire Management Unit 3 – Two Rivers
This FMU consists of lands administered by the BLM, primarily located along the Deschutes and John Day River corridors. The FMU consists of steep canyons associated with the Deschutes and John Day Rivers. Soils are generally shallow with surface rock. Vegetation is dominated by grass and shrubs. Elevation ranges from 2500 to about 500 feet.



Limited road access and irregular land ownership patterns result in poor emergency ingress/egress. The John Day River corridor has a high fire risk and is prone to weedy plant invasion. Much of the BLM lands along the John day River adjoin private lands. The private land (mostly range and farmland) creates an agricultural interface near the river where river access is limited.

Fire Management Unit 4 – Brothers
This FMU consists of lands administered by the BLM, primarily located in the southern and eastern portions of COFMS. A few scattered parcels of land within this FMU are located in the northern portions of COFMS within Sherman and Wasco Counties.

The FMU consists primarily of flat and rolling hill topography. Soils are generally shallow developed from basalt flows, with some areas of thin surface volcanic ash deposits. Vegetation is dominated by sage and other shrubs,

Figure 36: Central Oregon Fire Management Plan—Fire Management Units

perennial and annual grasses, and juniper. Ponderosa pine is present in foothill areas and adjacent to national forest areas. Elevation ranges from 2500 to 3500 feet.

Fire Management Unit 5 – Ochoco
This FMU includes the main portion of the Ochoco National Forest located near the center of the FPU. The FMU is located primarily within Crook, Wheeler, and Grant Counties.

The FMU consists of variable topography, vegetation and fuel types. Ponderosa pine and mixed conifer stands are abundant. Juniper and grass/sage types are also common. Scab stringer types are found east of Big Summit Prairie.

Fire Management Unit 6 – Deschutes (Does not occur within the planning area).

Fire Ecology

In this analysis, wildfire risk conditions are identified assigning a Fire Condition Class (FRCC) (USDA and USDI, 2001). Assessing FRCC can help guide management objectives and set priorities for treatments. The classification is based on a relative measure describing the degree of departure from the historical natural fire regime. This departure results in changes to one (or more) of the following ecological components: vegetation characteristics (species composition, structural stages, stand age, canopy closure, and mosaic pattern); fuel composition; fire frequency, severity, and pattern; and other associated disturbances (e.g. insect and diseased mortality, grazing, and drought).

FRCC classes serve as generalized wildfire risk rankings. The risk of loss of desired ecological conditions due to unwanted wildland fire increases from Fire Condition Class 1 (lowest risk) to Fire Condition Class 3 (highest risk) within a given fire regime" (USDA and USDI, 2001). (see Figure 37: Fire Regime Condition Class).

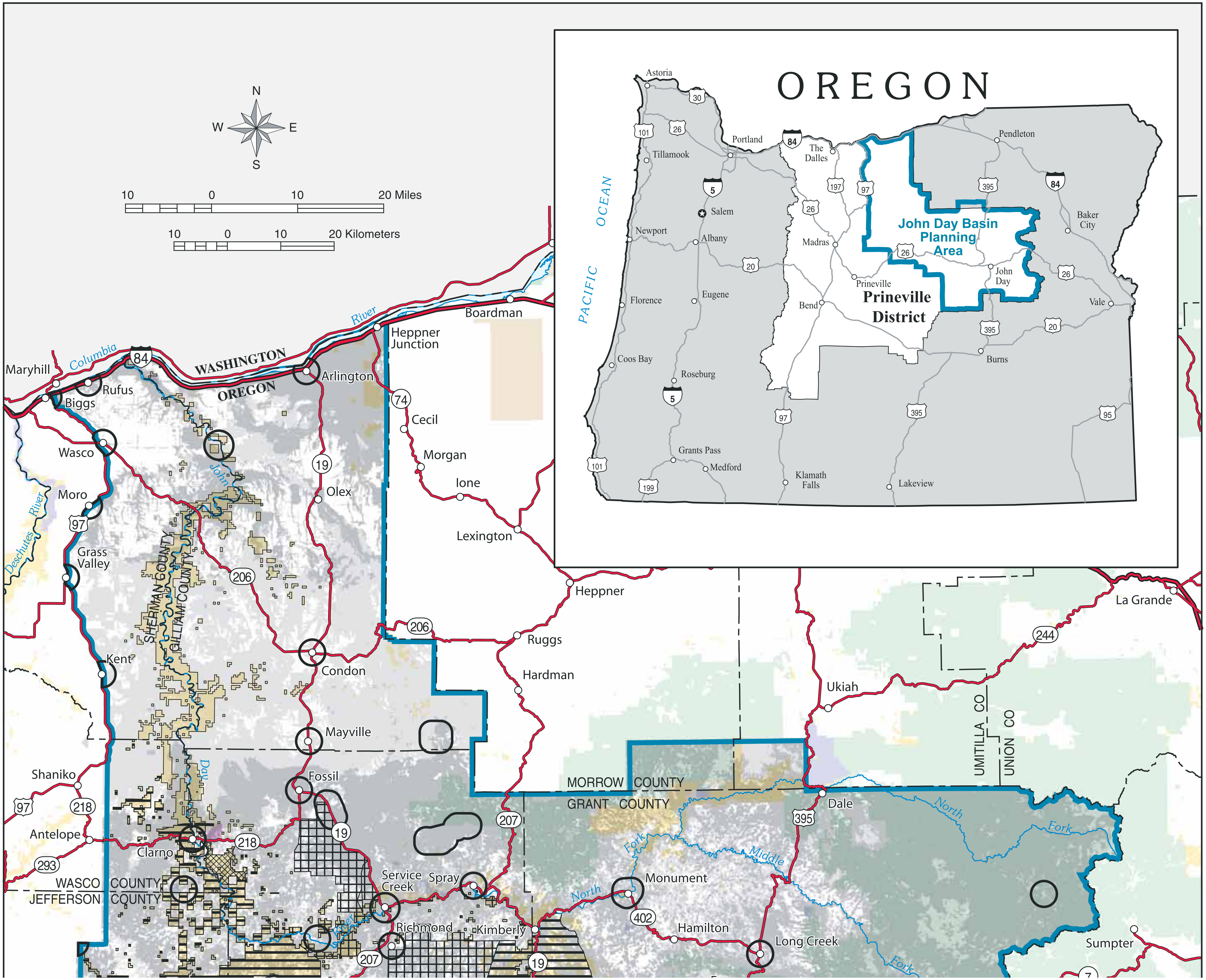
Figure 37 indicates that about 65% of BLM managed lands within the Blue Mountains Ecoregion are in Condition class 2 or 3 and are outside the natural range of variability. The figure also indicates that over 95 percent of BLM Lands within the Columbia Plateau Ecoregion are outside the natural range of variability

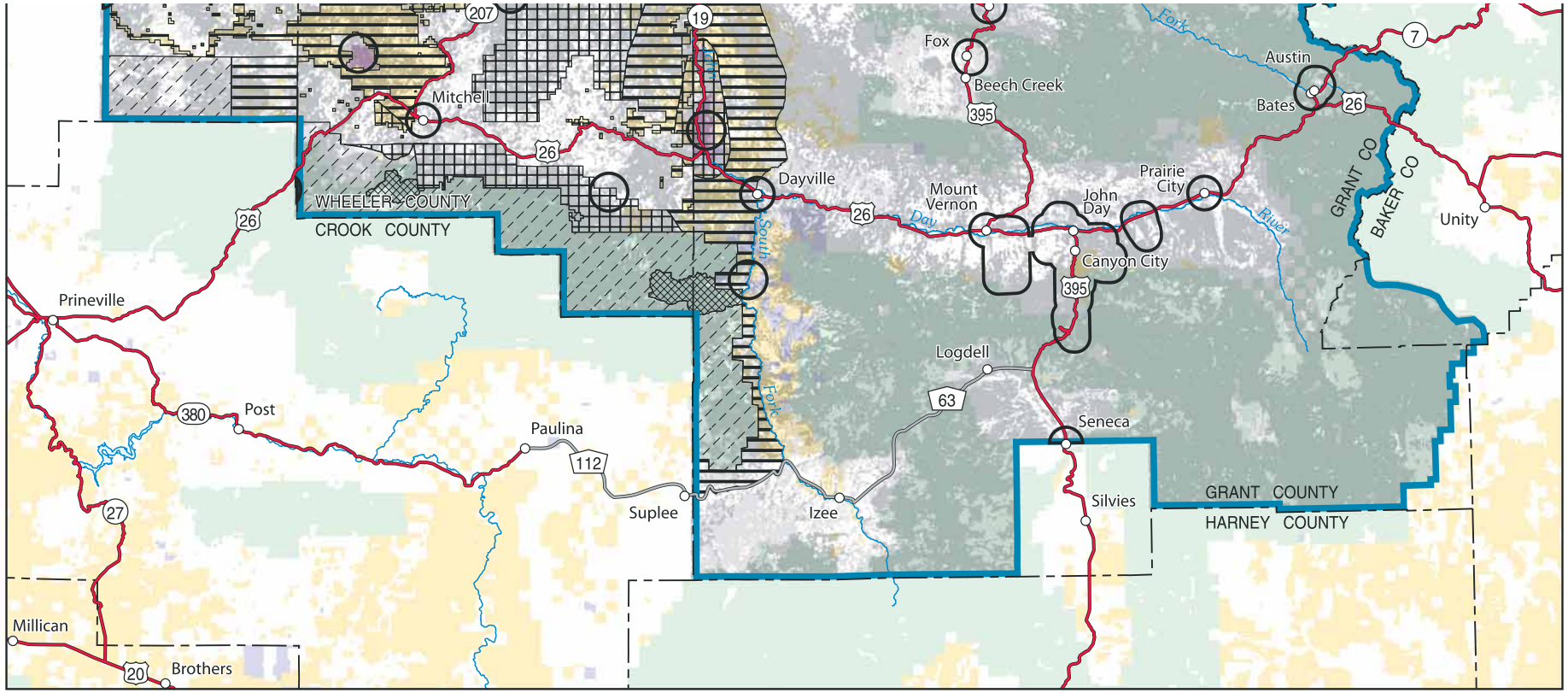
Figure 39 Indicates FRCC is similar between BLM lands and those not managed by BLM (Other). The majority of the landscape is in FRCC 2 and 3 (Blue Mt. EcoRegion3: BLM - 67% / Other - 80%, Columbia Basin EcoRegion3: BLM - 97% / Other - 99%). Of note is the extreme departure within the Columbia Basin primarily due to agricultural conversion. While conditions on BLM lands are similar to those seen on surrounding lands, BLM has the potential to influence approximately 8% of the landbase within the planning area.

In general most shrub steppe/juniper habitats are in Condition Classes 2 and 3. Most of the forested lands are in Condition Class 3. Many of the grass habitats on BLM managed lands have missed one or more disturbance events; however, the vegetative characteristics and fire intensities have not substantially changed. There are significant changes in the grass vegetation types throughout the planning area due to non-native annual grass expansion, noxious weed, and agricultural conversion. These conditions would put these lands in the Condition Class 3 rating. These sites would require extensive management actions (Restoration treatments) to allow them to function appropriately after disturbances such as fire.

Historical Fire Occurrence

Historic Fire Occurrence data below is a summary of the entire COFMS area contained in the Central Oregon Fire Management Plan. Relative acreages of FMUs by Land Management Agency can be ascertained from the following map.


OREGON
John Day Basin Planning Area
Prineville District
PACIFIC OCEAN
Astoria
Tillamook
Portland
The Dalles
Salem
Newport
Albany
Madras
Eugene
Prineville
Florence
Bend
Coos Bay
Roseburg
Grants Pass
Medford
Klamath Falls
Lakeview
Pendleton
Baker City
John Day
Vale
Burns
N
W
E
S
10 0 10 20 Miles
10 0 10 20 Kilometers
WASHINGTON
OREGON
Columbia River
Maryhill
Rufus
Biggs
Wasco
Moro
Grass Valley
Kent
Shaniko
Antelope
Clarno
Deschutes River
John Day River
Arlington
Heppner Junction
Boardman
Cecil
Morgan
Ione
Lexington
Olex
Condon
Mayville
Fossil
Heppner
Ruggs
Hardman
Ukiah
La Grande
Dale
Monument
Hamilton
Long Creek
Service Creek
Spray
Richmond
Kimberly
Sumpter
North Fork
Middle Fork
SHERMAN COUNTY
GILLIAM COUNTY
WASCO COUNTY
JEFFERSON COUNTY
MORROW COUNTY
GRANT COUNTY
UMITILLA CO
UNION CO



LEGEND

Land Fire Rapid Assessment

- Fire Regime Condition Class 2
- Fire Regime Condition Class 3

Fire Management Units

- Unit 1
- Wildland Fire Urban Interface
- Unit 2
- Unit 3
- Unit 4
- Unit 5

- Planning Area Boundary

Administered Land

- Bureau of Land Management
- Forest Service
- John Day Fossil Beds National Monument
- Other Federal
- State
- Private or Other

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

PRINEVILLE DISTRICT

John Day Basin Resource Management Plan

2006

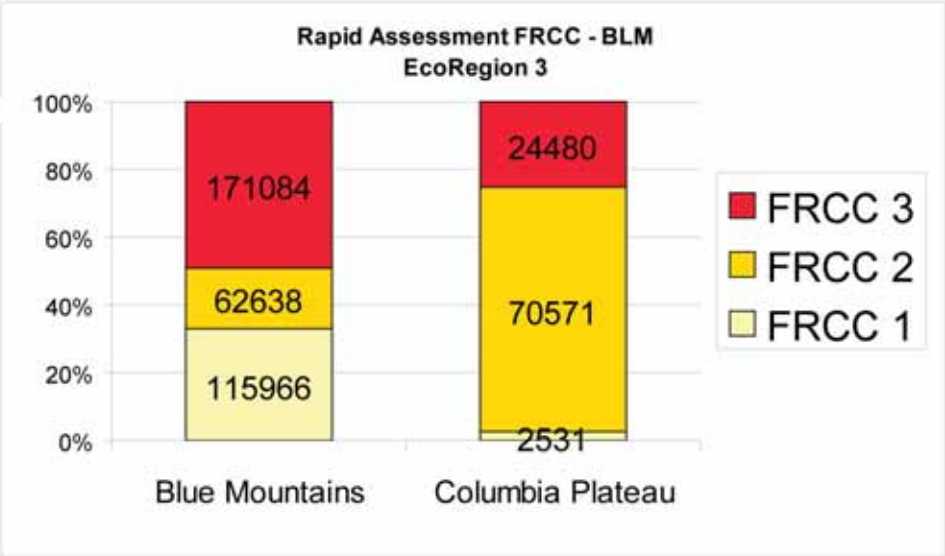
M06-09-01:11-16-06

Map 17: Fire and Fuels

Figure 37: Fire Regime Condition Class

Fire Regime Condition Class	Description	Potential Risks
Condition Class 1	Within the natural (historical) range of variability of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances	Fire behavior, effects, and other associated disturbances are similar to those that occurred prior to fire exclusion (suppression) and other types of management that do not mimic the natural fire regime and associated vegetation and fuel characteristics. Composition and structure of vegetation and fuels are similar to the natural (historical) regime. Risk of loss of key ecosystem components (e.g. native species, large trees, and soil) are low
Condition Class 2	Moderate departure from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances	Fire behavior, effects, and other associated disturbances are moderately departed (more or less severe). Composition and structure of vegetation and fuel are moderately altered. Uncharacteristic conditions range from low to moderate;
Condition Class 3	High departure from the natural (historical) regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated disturbances	Risk of loss of key ecosystem components are moderate Fire behavior, effects, and other associated disturbances are highly departed (more or less severe). Composition and structure of vegetation and fuel are highly altered. Uncharacteristic conditions range from moderate to high. Risk of loss of key ecosystem components are high

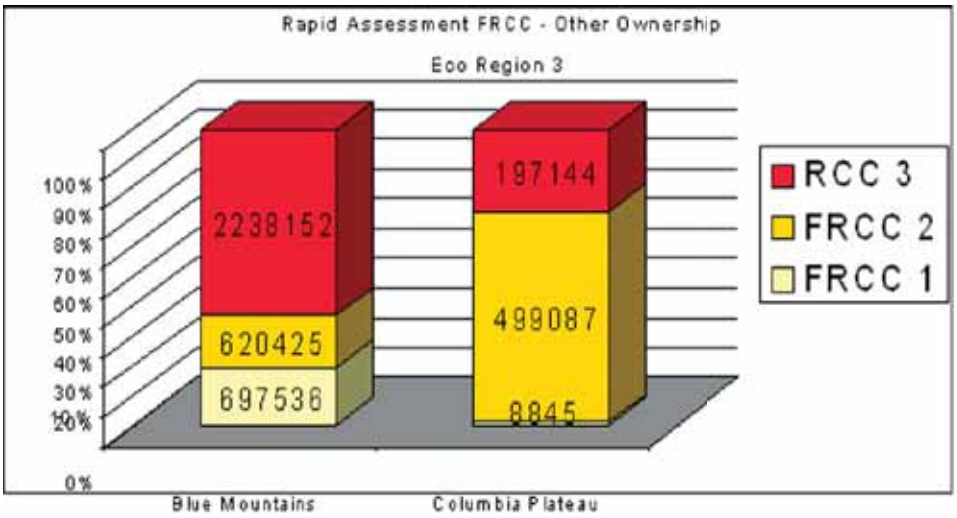
Figure 38: Rapid Assessment Fire Regime Condition Class – BLM Managed Lands



Fire Management Unit 1: WUI—There have been a total of 1,101 fires within this FMU during the period 1980 – 2002. The average annual occurrence is 50 fires per year. About 50% of the fires are lightning caused. Forty-three fires have exceeded 100 acres in the last 10 years, and 15 were larger than 1,000 acres. Average annual expected burn acres is about 5,540 acres.

Fire Management Unit 2 – WSA: There have been a total of 781 fires within this FMU during the period 1980 – 2002. The average annual occurrence is 35 fires per year. About 80% of the fires are lightning caused. Twelve fires have exceeded 100 acres in the last 10 years, and 6 were larger than 1,000 acres. Average annual expected burn acres is about 1,250 acres.

Figure 39: Rapid Assessment-Fire Regime Condition Class—Other Ownership



Fire Management Unit 3 – Two Rivers: There have been a total of 227 fires within this FMU during the period 1980 – 2002. The average annual occurrence is 10 fires per year. About 51% of the fires are lightning caused. A higher percentage of human caused fires occurs along the Deschutes River due to a railroad line and higher recreation use. Sixty-five fires have exceeded 100 acres in the last 10 years, and 16 were larger than 1,000 acres. Average annual expected burn acres is about 9,380.

Fire Management Unit 4 – Brothers: There have been a total of 648 fires within this FMU during the period 1980 – 2002. The average annual occurrence is 29 fires per year. Fire cause is 84% lightning. Seven fires have reached a size of 100 acres or larger. The largest was a fire in 1998 that reached a size of about 8,000 acres. Expected annual burn area is about 1,700 acres per year.

Fire Management Unit 5 – Ochoco: There have been a total of 1,425 fires within this FMU during the period 1980 – 2002. The average annual occurrence is 64 fires per year. About 75% of the fires are lightning caused. Eight fires have exceeded 100 acres in the last 10 years, and 2 were larger than 1,000 acres. Average annual expected burn acres is about 1,450 acres.

Historical Fuels Treatments

Since 2001 and the National Fire Plan Implementation the fuels management program, which includes prescribed burning and mechanical fuels treatments (manipulation of vegetation with chainsaws or other equipment) is on a steady increase. Prescribed burning and mechanical fuels treatments for the years 1995 through 2005 is summarized in Table 15. For more information on silvicultural treatments of forest fuels see the Timber section of this document.

Table 15: Historical Fuels Treatments		
Year	**Prescribed Fire**	**Mechanical Treatments**
1995	2411	
1996	450	
1997	2445	
1998	673	
1999	1034	
2000	725	
2001	12247	
2002	3915	63
2003	17488	100
2004	16656	2291
2005	14665	1500
TOTAL	**55221**	**3954**

Mineral Uses

Mining for gold and other metal ores have been important activities during the settlement and development of the John Day Basin. The quarrying of mineral material for construction purposes remains an important activity in the John Day Basin.

Locatable Minerals

Presently, there are 80 active mining claims within the planning area.

The Canyon Mining District includes the area surrounding John Day and Canyon City. Notable placer deposits were mined in the John Day River and in Canyon Creek. Lode deposits in quartz veins were mined on Little Canyon Mountain and on Miller Mountain. Between the discovery in Canyon Creek in 1862 and 1908, an estimated 600,000 ounces of gold were produced from the Canyon Mining District (Thayer and others, 1981). Dredges in Canyon Creek and the John Day River produced 124,000 and 13,000 ounces of gold and silver respectively from 1916-1942 (Brooks and Ramp, 1968; Thayer and others, 1981). Relatively small amounts of gold have been produced from the Canyon Mining District since the last dredge was dismantled in 1942.

The Quartzburg Mining District includes Prairie City and the Dixie Creek drainage basin. Placer deposits are found both in Dixie Creek and the John Day River and six lode mines were also worked in the area. Reliable production figures prior to 1930 are not available. Dredges in Dixie Creek and the John Day River produced more than 22,500 ounces of gold from 1930-1941 (Brooks and Ramp, 1968).

The Spanish Gulch Mining District is relatively small and is located near Antone in southwest Wheeler County. Mining in the district began in 1864 (Willingham, 1982).