Chapter 3: Forest Conditions & Wildfire History

Fire Agency Coordination

Each fire agency (including ODF and USFS) was interviewed during the 2017 CWPP process to receive feedback on countywide wildfire issues, assess local wildfire hazards, identify local Communities at Risk, and develop a series of action items to guide local wildfire prevention and response efforts. These interviews resulted in individual CWPP subsections for each fire agency, found in chapter 10.

History of Wildfire in Clackamas County (since 2005)

Clackamas County has escaped the recent large fire occurrences of other western Oregon counties. However, weather, fuels buildup, and climatic changes have provided conditions conducive for a large fire event. Residential development in Clackamas County is heavily interwoven with forest land, so a relatively small fire of only a few hundred acres would pose a significant risk to many residents and their homes. Oregon Department of Forestry places the number of homes on forest land within ODF's boundary in Clackamas County at over 11,000.

Since 2005, there have been eight significant fires on USFS land in or affecting Clackamas County (Table 3.1). The majority of these had a wildland urban interface component, triggering voluntary and/or mandatory evacuations.

Table 3.1. Significant USFS Fires in the Clackamas County Area 2005-2012

Year	Name	Acres	Cause	Area
2014	36 Pit	5,508	Human	Hwy 242 SE of Estacada
2011	Mother Lode	2,700	Lightning	Bull of the Woods Wilderness
2011	Nasty Fire	< 100	Lightning	Opal Creek Wilderness
2011	Dollar Lake	5,000	Lightning	Mount Hood
2010	View lake	2,900	Lightning	Ollalie Lake/ Bull of the Woods
2009	Microwave	2,100	Lightning	Mosier/Hood River
2008	Lake Lenore	450	Lightning	Bull of the Woods Wilderness
2008	Ruddy	47	Lightning	Ollalie Lake
2006	Blister	790	Lightning	North of Bagby Hot Springs
Total USFS Acres Burned		21,695		

ODF North Cascade District Fire Ignitions

In addition to the USFS fires reported above, ODF responded to a total of 268 wildfire ignitions since 2012, burning approximately 2,516 acres. Most of these fires were controlled during initial attack, and thus did not result in significant losses. The 36 pit fire in 2014 was not caught during initial attack and is responsible for burning nearly 1,700 acres of ODF protected lands. However, the number of ignitions underscores potential for a large scale wildland urban interface fire in the

ODF protection boundary. Causes of these fires are tracked to assist in directing public outreach and prevention efforts:

Table 3.2. ODF Ignition Sources in the Clackamas County Area 2012-2017

Cause	Fire Ignitions	ODF Protected Acres
Lightning	10	2
Rail road	1	1
Equipment Use	71	61
Recreation	41	1,692
Smoking	7	2
Debris Burning	94	657
Arson	10	3
Juveniles	5	1
Miscellaneous	29	97
Total	**268**	**2,516**

Forest Conditions

There have been no significant changes to forest conditions since 2012. The majority of forest lands in Clackamas County have a Moderate to High Severity Fire Regime in Condition Class 1.

Climate and Future Conditions

According to the *Third Oregon Climate Assessment Report*[1], in the Willamette Valley, declining snowpack, earlier snowmelt, and greater summer water demand may increase summer water scarcity; and wildfire activity is expected to increase.

Over the last several decades, warmer and drier conditions during the summer months have contributed to an increase in fuel aridity and enabled more frequent large fires, an increase in the total area burned, and a longer fire season across the western United States, particularly in forested ecosystems. The lengthening of the fire season is largely due to declining mountain snowpack and earlier spring snowmelt. In the Pacific Northwest, the fire season length increased over each of the last four decades, from 23 days in the 1970s, to 43 days in the 1980s, 84 days in the 1990s, and 116 days in the 2000s.

Under future climate change, wildfire frequency and area burned are expected to continue increasing in the Pacific Northwest. Model simulations for areas west of the Cascade Range project that the fire return interval, or average number of years between fires, may decrease by about half, from about 80 years in the 20th century to 47 years in the 21st century. The same model projects an increase of almost 140% in the annual area burned in the 21st century compared to the 20th century.

Prolonged periods of warm temperatures, low humidity, and low soil moisture can lead to tree mortality and make trees more susceptible to insect and disease outbreaks and wildfires.

[1] The Third Oregon Climate Assessment Report (2017), OCCRI.net