

Metolian

Preliminary Fire Safety Protection Plan:

Property Description:

The Metolian property is on the east side cascades crest and surrounded by Deschutes National Forest land. These slopes contain one of the highest rainfall gradients in the United States with over 100 inches of precipitation near crest and approximately 25 inches near Sisters, Oregon.

The combination of slope, aspect, elevation and moisture result in a unique combination of vegetation where a mix of several fire regimes converge. The higher elevations in the wilderness to the west is dominated by Fire Regimes IV and V where large high intensity fires like the B&B (Bear Butte and Booth Fire Complex) are within the historic range of variability and expected. The area to east in the Metolius Basin is dominated by Fire, Regime I and III where a high frequency of lower intensity fire historically kept the forest floor “clean” and the landscape was dominated by mature fire resilient trees. The Metolian area lies in the transitional zone between this mix but is dominated by Fire Regime III.

LANDFIRE Fire Regimes			
Fire Regime	Vegetation	Return Interval (years)	Severity
I	Open Pine forests	0 to 35	Low to mixed
II	Bitter Brush, Chaparral	0 to 35	Stand Replacement
III	Mixed Conifer, Pine, Douglas fir, larch	35 to 200	Low to mixed
IV	Lodge Pole Pine	35 to 200	Stand Replacement
V	Hemlock, spruce, True firs	200+ year	Stand Replacement

Fire regimes are analyzed on a landscape scale and applying the data on a project lever involves on site evaluation and professional judgment.

Nearly a century of successful fire exclusion has altered the natural fire processes that historically maintained the forest. The paradox of successful fire suppression is it has resulted in an increase of ground fuels, small to intermediate trees and denser canopy which contributed to wildfires becoming worse. In addition to suppression activities, several environmental factors combined that lead up to the increased wildfire risk that cumulated with the B&B fire in 2003 and remains a hazard in other areas. Between 1940 and 1985 a cooler, wetter weather cycle dominated the region that allowed true firs and other mixed conifer species to become overstocked in historically marginal growing sites. During the late 1980’s into the 1990’s a warmer weather cycle became established. Literally thousands of acres of trees died as a result of a spruce budworm infestation in overstocked stands of mixed conifer. As the trees died many fell contributing to increased fuel loading on the forest floor. Many of the remaining standing trees died leading to a forest canopy of dead aerial fuels.

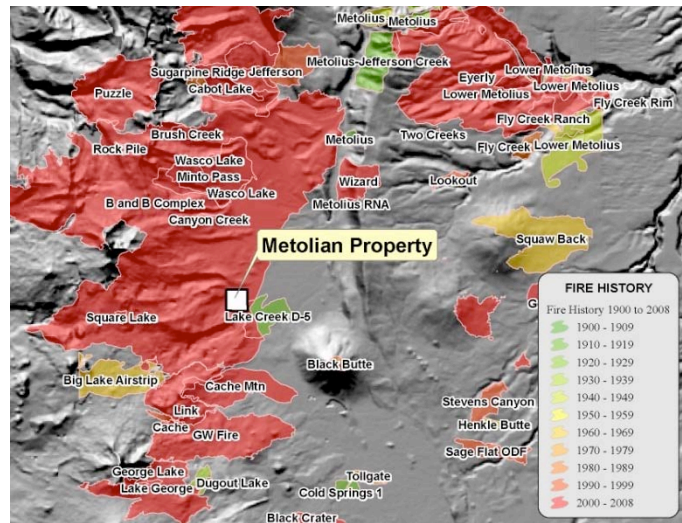
In 2003, the B&B Fire burned nearly 91,000 acres in the surrounding US Forest Service and Deschutes National Forest timberlands. The fire burned approximately 5% of the subject property primarily in the northwest area. Due to the lack of thinning on the surrounding forest land after the B&B and other area fires, the Metolian site is in an area of high risk.

The Metolian property will be treated and managed in a way to provide defensible space and fire breaks. This will help to protect the Metolian property. Moving forward, the plan is to work with the Sisters Ranger District to engage in specific thinning projects on the perimeter of the Metolian property as well as throughout the Deschutes National Forest (DNF). The health of the Metolius Basin is intrinsically tied to the health of the forest. Without strategic thinning projects our forests will continue to pose fire threats to communities throughout the west.

The subject property is within the Sisters-Camp Sherman Fire District for structural and interface fire response. Further it is within the Sisters-Camp Sherman Fire District Ambulance Service Area. Discussions have been held with both the Sisters Camp Sherman Fire District and the Black Butte Fire District regarding the mutual aid agreement between both districts. In the event of an emergency both districts are available to react subject to that agreement.

Historic Fire Occurrence

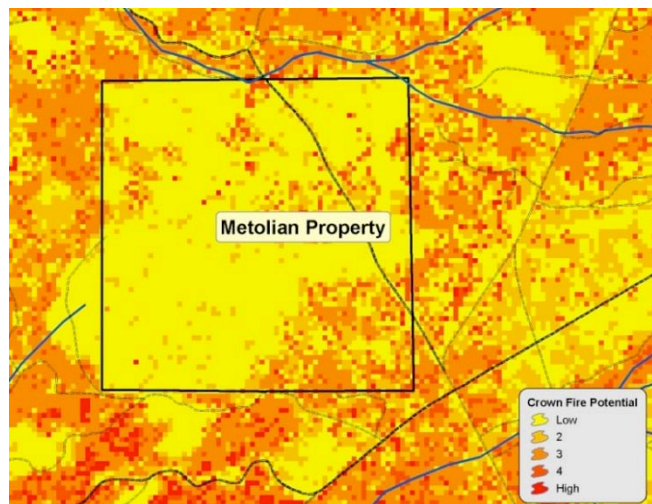
Between 1900 and 1999 there were approximately 39 fires greater than 25 acres that burned a total of 51,567 acres across and adjacent to the Metolian Project on the Sisters Ranger District. The average amount of forest burned per decade was less than 1400 acres.



In the eight years since the turn of the century, an additional 151,178 acres or 10 times as much forest has burned. The most significant of those was the B&B Fire that consumed 91,000 acres.

During the B&B fire, the adjacent USFS lands sustained significant mortality to the timber and associated resources. Section 13, on the other hand, had substantially less damage. Several actions that contributing to the difference were previous timber harvest on private lands, the extensive network of roads for access and an aggressive suppression action by Oregon Department of Forestry resources.

A post fire analysis undertaken by the USFS for the B and B Fire Recovery Project, Final Environmental Impact Statement determined that in the short term potential for crown fire on both USFS land and the interior Metolian Property would be minimal. The report however went on to predict that by 2030 a significant number of trees will have fallen and/or the increase of vegetation



from the developing stand could produce a combination of ground and ladder fuels that would sustain a crown fire. (Figure indicates relative hazard)

During the development of Greater Sisters Area Community Wildfire Protection (CWPP) the Wildland Urban Interface (WUI) boundary was modified from the default 1.5 mile standards identified in the Healthy Forest Restoration Act (HFRA). The buffer was increased from 1.5 miles to 2 miles or provide greater protection from fires that typically spreads from West to East. Section 13 was considered for inclusion but dropped because it was felt that the WUI designation was premature. Round Lake camp and the all the “Developed” properties in the Metolius basin are currently within the existing Sisters CWPP WUI.

Fire Prevention Measures:

The Metolian has been planned to provide defensible space throughout the project by implementing two highly successful proven strategies, The Principles of Fire Resistant Forests and The National Firewise Communities program. In addition design criteria will meet or exceed guidelines as outlined in National Fire Protection Association (NFPA **1144**) and The Oregon Forestland-Urban Interface Fire Protection Act, often referred to as Senate Bill 360.

The following fire prevention measures will be conducted on site:

- A 200-foot wide firebreak will be cleared around the entire exterior of the property. The 200-foot wide firebreak will include the removal of at least 70% of the brush type of vegetation and all trees less than 10” Diameter Breast Height (DBH, defined as 4.5 feet above the ground) that are within the “drip line” of an over-story tree. This firebreak will be completed before breaking ground on structures and maintained on an as-needed basis. A combination of all weather surface and paved trails will be established around the entire property along the property line, and in this case, the firebreak will include the width of the paved trail as “no vegetation.” This trail will serve a secondary purpose of providing emergency vehicle access along the perimeter of the property.
- It is possible that the 200-foot distance could be increased in areas adjacent to stands where future crown fire potential could be high.
- Fuelbreaks will be constructed in accordance with the Principles of creating Fire Resistant Forests (Agee, 2003). These principles focus on four main concepts:
 - Reduce surface fuels to minimize the rate of spread and flame length. This increases the ability to keep fires small and able to be suppressed quickly.
 - Manage “ladder fuels” so the flame length would not exceed resistance to control criteria under extreme fire weather conditions and would not spread into the canopy of the surrounding trees.
 - Reduce the canopy bulk density while thinning the stand to appropriate basal area to meet both fire safety and healthy timber management objectives

- Manage for large trees if they are present. Break up continuity of fuels while considering sufficient spatial variation in age classes to provide for replacement of the larger trees as they die. Manage for fire resilient species where possible.
- Interior roads will be buffered with 50-foot wide “shaded fuel breaks” along each side, where similar actions will be taken for vegetation and tree removal as described for the fire break above.
- A 50-foot fuel break will also be implemented on the grounds around structures or clusters of structures.
- In addition, all tree limbs below 10 feet in height will be removed from trees located near structures in order to remove ladder fuels.
- An on-going program to remove dead and dying trees throughout the property will be implemented as a precaution. DPR will work with the DNF to determine if it is possible to also remove some or all of the dead and dying trees along the property line that were casualties of the B&B fire.
- Large isolated logs or snags usually contribute minimally to the rate of fire spread and can often be more significant as wildlife habitat. If such features do not pose risk to surrounding uses, such snags and logs may be kept.
- An on-going program to remove ladder fuels throughout the property will be implemented.
- Any dwellings with woodstoves, fireplaces or other similar facilities will install a spark arrestors on all chimneys. Chimneys and spark arrestors will be constructed from nonflammable, corrosive resistant material. The opening in the mesh shall be no larger than ¼ inch.
- Within the 50-foot fuel break around structures and clusters, trees will be thinned to 15-foot between tree crowns.
- Isolated landscape trees are acceptable within the initial fuel break if no branches overhang near structures.
- Within 20 feet of structures, ground covers shall be non-flammable such as rock or natural forest floor.
- Roofs will be finished with non-flammable materials such as asphalt shingles. No cedar woodshake shingles will be permitted on roofs.
- Eaves and overhangs will be boxed or enclosed with non-flammable materials.

- Vents will be screened to prevent passage of objects larger than ¼ inch.
- Decks and porches will be boxed or enclosed with non-flammable materials.
- All habitable structures will be fitted with interior fire sprinklers.
- New dwellings will not be constructed on slopes that exceed 40%.
- The additional requirements of section 426 of the Jefferson County Zoning Code will be met or exceeded.
- Provisions will be established in the CC&Rs and/or design guidelines that will ensure adequate defensible space is maintained perpetually around individual structures and clusters.
- Include appropriate native fire resistant plants in the list of native plants permissible for landscaped areas and encourage inclusion of such plants (available at: <http://extension.oregonstate.edu/emergency/FireResPlants.pdf>).
- Metolian will seek process to become a Certified FireWise Community as CCRs and design requirements are finalized.

Preliminary Location of Fire Safe Areas:

Metolian's core area is planned for a number of uses including the lodge facility, conference facilities, parking areas and other uses. The core area will provide a parking area that will accommodate approximately 300 vehicles. The parking area will be treated for fuel reduction as outlined above. The parking area will provide a fire safe area for visitors to gather in the event of a surprise fire. Further, the main lodging facility and the conference facilities will be constructed with fire resistant materials. These facilities will offer additional fire-safe areas for visitors and residents to gather in the event of a fire.

The site plan for Metolian has been designed with the assistance of local fire agencies to provide defensible spaces. The plan is to provide a fire-wise type community that will reduce the risk of fire on site due to onsite forest management, appropriate building placement, use of appropriate materials and use of fire sprinklers for each structure. Although the property is planned to provide defensible space and reduce risk of fire onsite Metolian management stresses that in the event of area fires that pose serious risk to Metolian mandatory evacuations will be enforced to get people off the site. It is the goal of Metolian management to not use Fire Safe Areas as the plan is to evacuate the community long before such fire safe areas are needed.

Fire Evacuation Plan:

If a fire in the area is deemed to be a serious risk to Metolian, mandatory evacuations will be conducted and enforced. The evacuations will be conducted prior to hazardous fires encroaching within close proximity to the resort boundaries. Metolian management will stay in close contact with emergency services managers and officials to assess risk to the site. At the first sign of serious risk or danger, Metolian management will err on the side of caution and evacuate the community. No exceptions.

Metolian management will create a notification plan that will include door to door notification. Further, during the fire season (June – September) all guests and owners must check in and out at the central reservation desk so that management is aware of which structures are occupied on any given day. Once notified, guests will need to keep family members gathered, pack into vehicles and depart the site following evacuation routes that will be posted.

Based on the forewarning system proposed (evacuation notices will be provided while fire is more than a mile from the site) the likely evacuation route will be Jack Lake Road to Highway 20. Once on Highway 20, evacuees will need to drive to pre-arranged destinations outside of the fire risk area. For those that arrived on site via shuttle, the shuttles will provide evacuation services as will maintenance vehicles as demand dictates. Employees will be trained to provide emergency services and will provide assistance in assuring all people are evacuated from the site. The evacuation plan will assure that all people are removed from the site as needed to avoid a high risk fire on site.

Other evacuation routes are available including:

Jack Lake Road to Suttle-Camp Sherman Road and into Camp Sherman.
Forest Service Road 1210 to the Round Lake Road Loop (spring, summer, fall).

Fire District Coordination:

As mentioned above, Metolian has worked closely with the Sisters Camp Sherman Fire District to design a defensible layout for the site. Metolian will also work closely with the Oregon Department of Forestry. The 200-foot exterior firebreak as well as other fire prevention methods including fuels reduction, siting standards, fire sprinklers and others will create a community that has designed to create defensible space in the event of fire. Again, at the first sign of serious risk, all people on site will be evacuated. The district has submitted a letter as part of the Tentative Destination Resort Master Plan application explaining that it is not necessary to provide on-site trained personnel capable of operating fire suppression equipment. The applicant will provide fire hydrants as necessary as well as fire sprinklers in all structures. These safety features provide the fire district with the measures necessary to adequately respond to fire emergencies on site.