

Salmon River Fire Safe Council
Butler Cooperative Fire Safe Plan 2002 *Draft* 6/24/02
Butler Creek Cooperative Fire Safe Plan

Background

Salmon River Subbasin Fire History

The entire Salmon River watershed is at risk of catastrophic fire. The United States Congress passed the Weeks Act in 1911. This Act was precipitated by uncontrolled aboriginal and European settler burning practices and a severe fire year in 1910, particularly in the western U.S. The Act set up the collaboration between federal and state fire agencies for the purpose of systematically and efficiently suppressing forest fires. Since 1911, records show that 44% of the basin has burned. The 100+ years of fire suppression have had its effects on the fuels of the area. Suppression, coupled with an abnormally wet century (increased vegetation growth), and federal agency management activities (such as logging with insufficient fuel cleanup and silviculture practices), have contributed to the increased fire risk and damage in our forests. A major heavy snow/wind storm in the winter of 1996 exacerbated the heavy fuels condition by breaking out the tops of trees and knocking trees over throughout the watershed. Previous years of drought and overstocking have also resulted in areas of heavy mortality. The conditions and threats in the watershed mandate that we identify needs and prioritize and complete projects in a timely manner to protect life, property, and this unique ecosystem. We must also reintroduce a natural fire regime to the Salmon River watershed. Suppression and fuels reduction activities are currently being used in the watershed. There is a critical need for more fuel reduction. As we look at the range of conditions and concerns, we can begin to piece together a cohesive strategy that will detail specific areas that need specific treatments or other protective measures. The identification of priority areas will include the influence of these areas on each other and on adjacent areas – this will allow us to treat smaller areas that will have an impact on the larger landscapes in the basin.

Project Background

In 2001, the Salmon River Fire Safe Council (FSC) received a BLM grant from the Sacramento Regional Foundation. This grant calls for development of detailed fire and fuel management plans on three separate properties in the Salmon River watershed, and performance of some recommended fuel reduction activities on the project properties.

Butler Property Historical and Current Background

The Butler property is an 87-acre parcel that is jointly owned by numerous people, formed as the Butler Creek Community

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Corporation. The property has 8 designated home sites, currently 6 of these sites are distinct residential high value areas. Other valued features include a community water system with 5 fire hydrants, a potential helispot and community safety area, and well-maintained access roads. No fires have burned on the Butler Creek property boundary since 1911, but the 1977 Hog fire burned within ½ mile to the east and south of the property, and the 1987 fire burned within ½ mile to the northeast of the property. The property is surrounded by publicly owned land, and on the north side, a 14-acre private parcel, and a 4-acre private parcel. There is 0.5 acre in-holding near the northeast corner of the Butler Creek property (the Davis cemetery). A number of clear cuts were created in 1980 on the public land in the Butler Creek watershed. The Butler Creek property was logged in the 1950's.

Emergency Response

In terms of emergency fire response, the Forest Service station at Oak Bottom has a 300 gallon tanker that can respond within 15-20 minutes. Orleans Fire and Rescue has a 2000+ gallon water tender that can respond within 30 minutes. The Salmon River Volunteer Fire & Rescue has a 800 gallon tanker and a 1700 gallon water tender that can respond within 30 minutes.

Methods

The purpose of the Butler Fire Safe Plan is to guide fuel reduction activities designed to create a future condition that will minimize the risk of loss of life, property, and resources from fire. This Desired Future Condition will mimic the historic fire regime while protecting high value residential and resource areas from future fires. The Plan is being developed using the Fire Plan Framework created by the Salmon River Fire Safe Council. This framework identifies these planning steps:

1. Identify existing information:
 - a. Identify Fuel Modification Zones
 - b. Evacuation Plan (Emergency Access)
 - i. Notification Procedures
 - ii. Guidelines for evacuation
 - iii. Office of Emergency Services
 - iv. High risk individuals
 - v. Location of Helicopter landings
 - vi. Location of Safe Areas in Neighborhoods
2. Identify High Risk Areas (also identify low and medium risk areas)
3. Identify defensible High Risk Areas (Opportunities)
4. Identify Water Sources for fire protection efforts

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5. Update Pre-Fire Plan (Residential Risk Assessment)
6. Identify Resource Values and Prioritize (Assets at Risk)
 - a. Manmade
 - b. Cultural
 - c. Natural

A Fuel Modification Zone (FMZ) is any area being assessed for the benefit of reducing fire risk, actions within a FMZ can include anything from no action, to shaded fuel breaks, to areas cleared to bare ground. The SRFSC's fuel reduction prescription policy was used to prescribe ground fuel reduction activities; this prescription policy recommends distances and types of fuel reduction activities that need to occur in different areas.

The Butler Creek property generally has slopes less than 60%, so the techniques mainly call for a standard Shaded Fuel Break that breaks up fuel continuity and the fuel ladder and leaves at least 60-100% canopy cover (if available). The theory of a Shaded Fuel Break is that thinning out flammable and overstocked vegetation as well as dead and down fuel will reduce a future fire's ability to move through the forest with high (and destructive) flame lengths. It must be understood that a Shaded Fuel Break will not stop a fire, but will give suppression forces and landowners extra time for safely fighting the fire and accessing or evacuating the fire area. The trimming of the branches for 6-8 feet up the stem of the remaining trees will reduce a future fire's ability to climb the "Fuel Ladder" and burn the crowns of the remaining trees. Other variations on the standard Shaded Fuel Break will be used in some areas of the property.

The above steps are being accomplished by:

1. Creating a GIS (Geographical Information System) of Butler Flat that will identify steps 1, 2, 3, 4, and 6 above.
2. Conducting a field visit with a planning team. The planning team consists of: Jim Villeponteaux, FSC Facilitator; Jim Bennett, Volunteer Fire and Rescue Fire Chief; Slate Boykin, Butler Resident; Ted Tsudama, CDF Siskiyou unit Vegetation Management Coordinator; Bill Tripp, Karuk Tribe Fuel Specialist; Stan Pfister, US Forest Service Fuel Specialist; Karuna Greenberg, Salmon River Restoration Council (SRRC) GIS Technician; and Robert Will, Salmon River Restoration Council (SRRC) GPS Technician. Other Butler

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Landowners were in email contact regarding the team visit – Slate Boykin (resident) and Willis Conrad (local) were able to attend. We will be meeting with the landowners this summer to go over the draft plan in person.

3. The field team looked over the Butler Property and made recommendations for what should be done to protect the high value areas and reduce fuels in the high-risk areas. The team also discussed recommendations for landowners' maintenance of their defensible spaces. The surrounding public property was discussed and recommendations were made for fuel reduction projects and fuel break construction on the public property portion of the Butler creek watershed.

Risks and Mitigation Measures

What are the specific risks affecting the Butler Creek property and community?

1. **Risk:** There are numerous stacked residences and bungalows with potential ignition sources. These ignition sources include, indoor and outdoor cooking facilities, wood burning fireplaces, kerosene lamps, and generators. These structures are constructed of wood with metal roofing for the most part. Many of the structures have wooden decks around them. These ignition sources also have the potential to threaten public property.
Mitigation Measures: With only a few minor exceptions, the residential and high value areas are very well maintained. Structures have expansive open, green areas surrounding them wherever possible, and grass is kept relatively short. Trees within the vicinity are limbed and spaced. Most generators are in fire resistant generator sheds. Wooden decks could be replaced with non-flammable materials. The underside of balconies and above ground decks should be enclosed with fire resistant materials. It is recommended that any future building projects rely on fire resistant materials where practicable. A quick fuels cleanup should be conducted within 75ft of the structures, especially those structures that have encroachment around them, removing any dead and flammable debris that have accumulated. The proposed 150' shaded fuel break to the south of residential areas and upper road could help reduce the risk of a fire moving from private to public lands. New residents and visitors should be briefed on fire safe practices.
2. **Risk:** The Butler Creek property has heavy occupancy during fire season.

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Mitigation Measures: Most residents are fire aware and are conscientious with their actions. Residents should have an emergency fire plan including suppression and evacuation plans in place. New residents and visitors should be briefed on fire safe practices.

3. **Risk:** The grassy meadow areas contain highly combustible, flashy fuels in fire season.
Mitigation Measures: Meadows need to be mowed and/or kept wet to reduce the chance of carrying fire. At minimum, cleared, cut, or greened buffers along the roads adjacent to the grassy meadow areas would greatly reduce the risk of road related fire starts. The common meadow area can serve as a safety zone for the residents and as a potential, emergency helicopter-landing site if the fuels are kept at a reasonable level during the dry season.

4. **Risk:** The water line is exposed and at times precarious from its source/intake on the public property, to the property line. In the event of a fire above the Butler Creek property, fire, rolling logs, branches, and rocks would easily break the water line (if the fire didn't melt the line directly), leading to complete water loss on the property.
Mitigation Measures: Replace the unburied portion of the PVC pipe (on public land) with more durable pipe (such as steel pipe, or high density polyurethane pipe), and/or bury where possible. Fuels reduction should be conducted buffering the waterline to reduce the possibility of fire reaching the line and to increase easy accessibility. Water storage should be increased within the system or at individual residences for use upon water system failure (see Risk 6, below).

5. **Risk:** There is a lack of functioning water storage on the property. There is one small cistern/spring-box at a spring above site # 8. In the event of a water system failure for above-mentioned and/or other reasons, the Butler Creek property and its residences would only have this water source. There is an approximately 15,000+ gallon metal tank set alongside the upper road, above the lower residential areas. This tank has not been plumbed and is not currently attached to a water source.
Mitigation Measures: With a few preparations the 15,000+ gallon tank could serve as a fire/emergency water source for structures as well as a first response tanker fill site for protection of the Butler creek property and nearby areas.

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This large tank should not be incorporated into the main water system, but rather should be filled by the main system and sit as fire reserve water. Separate lines could be made from this tank to the road (20' away) and to site #'s 7 and 8 for fire suppression systems (sprinklers, eve-misters, etc). Individual and/or shared water storage tanks of at least 2,500 gallons per residence could potentially reduce the risk of structure loss in the case of fire. These tanks should have their own lines into the residential areas and ideally would be situated for gravity feed. If the community wanted to create an in-line reserve system, a large potable water tank could be placed above the residences, that could then run the existing system for a length of time.

6. **Risk:** There is a recreational facility (changing station and parking lot) directly (50-75') below the northern boundary. The area between the recreational facility and the property is composed of highly flammable fuels.
Mitigation Measures: It is recommended that the Forest Service perform fuel reduction activities in and around the facility.

7. **Risk:** The property is surrounded by densely forested National Forest lands. There is a patch of dead timber located at the County Road disposal site outside of the northeast property corner.
Mitigation Measures: USFS Orleans Ranger District personnel have indicated that they are interested in looking at fuels reduction activities in the area. Specifically, the team recommended a 300' shaded fuel break as a buffer surrounding the private property, and fire lines on the ridges surrounding the watershed. The Team also encourages cooperation with the Orleans/Ukonom Ranger District on projects affecting the Butler Creek watershed.

8. **Risk:** There is only one emergency access &/or egress route. The road access comes in from the north and circles through the residential areas forming a loop within the property boundaries.
Mitigation Measures: This main road system is in good condition. It is regularly maintained, wide enough for tanker access, and has several pullouts. It has been suggested that a one-way traffic system be created, signed, and implemented in emergency situations, especially fire. If the 15,000 gal tank is put into use as an on-site tanker-fill-site, a turnaround

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large enough for fire tankers should be created just beyond it.

Planning Areas - Areas of Increased Consideration

High Value Areas

The areas we identified as high value fell into several categories:

1. residence areas – we identified 6 active residential areas within the property boundary (see map)
2. community safety areas – one large meadow area is identified on map; there are several other smaller areas
3. small cemetery area – the Davis cemetery is a separate parcel within the Butler parcel (see map)
4. community water system

Emergency Access and Egress Routes

Safe access to the property by emergency personnel, as well as egress by residents and other individuals, is a high priority for fire planning. The main county road (2B01) is also an emergency access route. Somes Bar and Highway 96 are downriver (northeast) of Butler Creek; Etna, Callahan, and Highway 3 are upriver (southeast), via the North Fork or South Fork Salmon River. We have identified the primary access road into the property and to the individual living areas (see map) as Emergency Access routes.

High Risk Areas

Fire risk is defined as the fuel loading in an area combined with other factors (i.e. ignition sources, slope, aspect, and elevation). We identified areas with various levels of fire risk. These areas are identified on the GIS map as colored polygons. Each polygon is numbered and has a team-assigned priority. These areas overlap with other area types as fuel reduction and/or maintenance activities will be performed on most of these areas (residential, water system, and safety zone).

Plan Recommendations

Suppression, Prevention, and Maintenance Recommendations

Reducing fuels within the property will help protect structures from burning when a fire comes onto the property, but fire can still threaten your yard and house. There are many things you can do to reduce the risk of your buildings catching fire. Here are some suggestions on how you can make your home fire safe:

- keep grass short in meadows and community safety areas
- store sufficient water for house protection in case of community water system failure

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- roads should be wide enough to accommodate firefighting equipment, have turnouts for traffic, be well maintained; i.e.: clear of rocks and other obstacles; and road sides should be clear and free of highly combustible fuels
- plan for one way traffic in an emergency situation – have a plan, map, and signs ready in advance
- consider annual fire drills so everyone knows what to do in an emergency – this may also provide indications of areas that need work
- buildings should be made of fire-resistant materials
- structures should be 30-50 feet from flammable tree species
- create residential risk assessment
- install sprinkler systems to protect houses in case of fire. These systems would ideally come from a water storage system to insure protection even if the main water system fails
- cover eaves, leaving only a few well screened ventilation openings, to prevent embers from lodging there in a fire
- select fire-resistant vegetation for landscaping, and keep the ground 30-50' from structures clear or green
- maintain the grassy and landscaped areas on an annual basis to refresh their fire-resistant properties
- water system – upgrade exposed PVC pipe to metal or High Density Polyethylene pipe to prevent breakage and melting, and clear hazard trees and branches that could fall on line

Other suggestions for making your home fire safe are listed in the CDF Brochure: *"Fire Safe, California"*.

A USFS Fire Prevention Specialist would be glad to personally visit the property and give specific recommendations for fire safe building, fuel storage, water storage, and landscaping.

Risk Area Priorities and Recommendations

The field planning team identified specific locations and made recommendations intended to decrease the risk of future fires destroying homes and other high value areas. The Priority map shows areas within the property that have been prioritized by the team.

1. The red-shaded areas are the #1 priority (highest). They are around the residences on the property. The landowners' keep these areas relatively fire safe, but they are the highest risk areas on the property (due to value and occupancy factors). The ground 30-50' from structures needs to be clear or kept well watered and green. In other areas of the 1st priority polygons modified shaded fuel breaks will be used. These fuel breaks will

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- be more open and interspersed with the existing landscaping. These areas will also be kept well watered and green.
2. The mango colored-shaded areas on the map are the second priority. These areas include a 150' standard shaded fuel break above the upper road from the west end of the property to the County road on the east end (polygons 7-12, and 46) and the grassy meadow areas containing flashy fuels in fire season needs to be mowed and/or wet to reduce the chance of carrying fire (polygons 30-32). An area on private land, below the access road (north end) is also considered the second priority (polygon 25), as are polygons 44 and 45, located on public property in a highly used recreation area. These areas should be treated as a standard shaded fuel break along with the removal of black berries.
 3. The yucca yellow-shaded areas are the third priority. These include areas adjacent to first priority residential areas (polygons 15, 16, 24, and 25) and a 50' standard shaded fuel break above the lower road (polygon 13). The community water system is partially unburied outside of the property and needs at least a 30' standard shaded fuel break buffer on either side (polygons 40-41). Landowners' need to realize this will not stop debris from rolling downhill and breaking the line. Replacing the unburied portion of the pipe (on public land) with steel or High Density Polyethylene pipe would greatly reduce the risk of water loss in the case of a fire or other storm events. A high fuel area adjacent to the 150' shaded fuel break was also identified as the third priority (polygon 20).
 4. The powder blue-shaded areas are the fourth priority. These include areas close to the well-used residential area (polygons 14, 22-23, and 29). The separate private property cemetery (polygon 33) and surrounding Butler Creek property adjacent to the County road and the cemetery (polygon 17) are also fourth priority. We recommend using a standard shaded fuel break technique for these areas.
 5. The apple dust green-shaded areas are the fifth priority. These include areas upslope from the 150' shaded fuel break (polygons 19-21), a small polygon near the entrance (polygon 29), and an area on the north side of the creek (polygon 18). We recommend using a standard shaded fuel break technique for these areas.
 6. The fern green-shaded area is the sixth priority (polygon 26). This area is located on the south slope of the property above the 150' shaded fuel break and adjacent polygons. We recommend using a standard shaded fuel break technique for these areas.
 7. The seventh priority is the Butler creek area within the private property (polygon 43). This area needs to be looked at to see if

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there is any need to remove anything from the riparian area.
The technique used will depend on a field evaluation.

On the public property, the Forest Service fuel specialist suggested a series of Fuel Modification Zones along ridges forming the perimeter of the Butler watershed. The team also discussed the value of a 300' shaded fuel break surrounding the Butler Creek property.

Maintenance

The Butler Creek Landowners need to consider a maintenance schedule for any fuel reduction activities completed on the property. These maintenance activities may include annual fire safe landscaping near residence areas, annual grassy meadow cutting and/or greening, ongoing water system maintenance and upgrade, and periodic maintenance of standard shaded fuel breaks. The standard shaded fuel breaks can be kept up with an annual maintenance, but there will probably be a need for more labor intensive maintenance every 5 years. Funding may be available for the 5 year maintenance activities. We encourage the landowners to stay involved with the Salmon River Fire Safe Council for upcoming information and opportunities.

Conclusion

In conclusion, the defensible space on the Butler Creek property can be improved with fuel reduction, maintenance, the use of fire-resistant building materials, and water improvement/storage. There is also a good opportunity for coordination between the landowners and the Forest Service on mutually beneficial activities. Landowners' are encouraged to update this plan every 5 years for changes and accomplishments.

To add: Cultural burning for tanoaks; tanoak reserves
Two kinds of prescriptions: exclusion and bringing back fire
Fire sheds: what to do in them specifically and using multiple actions, fuels reduction/trimming brushing now, maintenance, how is fire coming back and when...
Bring back fire as a major component
More specific actions