

**Butler Fire**

CA-SRF-1388

# **Strategic Operations Plan**

as of 08/10/13



### **Introduction**

The Butler Fire is currently burning on the Ukonom and Salmon Districts of the Klamath National Forest. The Ukonom District, where the fire originated is managed/administrated by the Six Rivers NF. This document is a strategic operating plan for long-term management of the Butler Fire. For stakeholders in the management of the Butler fire, this document can help define where we are now, where we may want to be and how we can get there. Finally, by tracking real actions against this planning document, it can help us measure our progress in reaching our goals.

More specifically, this plan defines about a dozen specific locations where it is reasonably likely the fire could spread. For each place this plan identifies strategic goals and objectives for managing the fire. The plan also recommends specific tactical goals and objectives to attempt to meet the goals and objectives identified. Finally, the plan is self-evaluating. If this plan is largely followed and objectives are met, the planning process worked. This is useful to know for future fires.

On the Ukonom and Salmon Forest districts where the Butler fire continues to burn, a total of six fires started on July 31, 2013. Three of the fires were contained within a couple days. Ten days later, the other three fires are still actively burning. The Boulder and Shellyfires on the Salmon District are being managed as the Salmon River Complex, for which there is a separate strategic operating plan. This document addresses the sixth of the ignitions, the Butler fire.

The Butler fire is likely to continue to grow for another couple months. The reasons the fire can't reasonably be extinguished sooner (and is not going to go out on its own) include steep, rugged and largely inaccessible terrain coupled with current and expected weather and fire behavior. Finally, the forest vegetation on all sides of the fire provides ample fuel for continued burning. Past experiences and climatology records for the Salmon River drainage suggest that it will be many weeks before the weather becomes sufficiently damp and cool to stop the Butler fire.

Current fire suppression efforts include a combination of direct, indirect and point suppression tactics to take advantage of opportunities that provide for a high probability of success. The fire is utilizing a full suppression strategy. The intent of the strategic operating plan is to further build on opportunities that will provide for the highest probability of success for the duration of this incident.

To successfully manage and communicate the long-term objectives, the CA Interagency Incident Management Team – Team 1 developed the strategic operating plan. This tool can be used to assist in implementing and informing ongoing suppression efforts as well as used as a communication tool for agency administrators, public information, and incoming incident management teams.

## **Objectives**

Provide a strategic operating plan to assist in the short-term and long-term management of the Butler Fire.

The plan is highly specific because it is based on robust knowledge about the area in and near the Butler Fire.

The plan is expected to help incident managers and agency administrators to make decisions because it addresses both strategy and operations.

The plan may help managers communicate the fire management concept of the right plan, in the right place, at the right time, with the right assets, and for the right duration.

## **Management Action Points**

Management Action Points (MAPs) are places the fire's leading edge may reach and where fire's arrival indicates the likely need for action. Specific suppression actions taken when the fire reaches an MAP are anticipated to limit fire spread in a certain direction and thereby protect values at risk. There are people who need to know when the fire reaches a MAP, so this document lists people to notify for each. Each MAP's description also recommends the number and kinds of operational resources needed to accomplish the mitigation.

MAPs can be implemented sequentially or simultaneously, allowing for better utilization of resources. MAP actions may be initiated at the discretion of an incident management organization. Implementation *should not* occur without consideration of current and predicted weather and fire behavior, and of other factors influencing the Butler Fire fires and their management. These factors will determine the need for implementation of the management actions as well as drive the specific location, urgency, and intensity of the actions.

All firefighting resources listed in MAP descriptions should be considered as recommendations only. In order to be safe and effective, Incident Commanders and other fire managers need the flexibility to use any tactical resources needed to meet the objectives of managing these fires. They should give careful consideration to geographic area preparedness levels and draw-down levels. **All fire management actions must be based on current and expected fire behavior, including in light of the time of year and season.**

As needed in response to the changing fire situation, it is important to update the plans in this document. The Butler Fire will grow in size and/or complexity during the rest of the fire

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season. New fires may start. The Boulder and Shelly fires a few miles east of the Butler fire are likely to continue to spread. Any of these fires may influence each other. In response to all of these changes, fire managers should reassess this document's contingency plans. Each day's operational priorities and planned strategic and tactical actions should be assessed in light of the location of fire's leading edge relative to MAPs. Add new MAP's or change existing ones as needed.

## Management Action Point **20: Somes Mountain to Butler Flat**

### **Physical Location of MAP:**

**North** of the fire's current perimeter

The ridgeline starting at Somes Mountain and ending at the main stem Salmon River

**Condition:** Fire is well established on the banks of Butler Creek.

This MAP has already been reached. Therefore the suppression actions listed below for this MAP already are being implemented. The Somes Mountain to Butler Flat MAP is currently the primary containment line to limit the Butler fire's movement to the north.

### **Values to Protect:**

Structures, private property and infrastructure, primarily in the Butler Flat area.

Community water source for Butler Flat. Potential degradation after a fire includes heavy silt entering filtration plants that purify domestic-use water.

Related to the Salmon River,

Loss of recreation opportunities, especially rafting, due to closures

Long-term loss of visual beauty. The Salmon River is designated as national Recreational river.

Habitat for Coho salmon and other sensitive aquatic species, which could be degraded by increased siltation and turbidity, warmer water due to lost streamside vegetation, and changed water chemistry.

Campground improvements, and shorter-term loss of recreational camping opportunities due to closures

Northern Spotted Owl and Goshawk habitat

In Inventoried Roadless Areas, land minimally sullied by human disturbance. The Wilderness values in roadless areas are especially threatened by dozer line construction.

Extensive sensitive cultural sites. Numerous specific locations and general areas within the landscape that this document addresses have a variety of special significances in the context of tribal awareness of the land. These sites may be sacred and/or have important utilitarian values. Fire suppression actions may compromise these values. Information about where and what importance each location has is highly sensitive and in general may not be shared publicly. Therefore this document merely alludes to their existence. However, the area around the current fires' locations has a high concentration of sensitive sites, both by number and importance.

### **Actions:**

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Construct fireline on this ridge system and prepare structures in the Butler Flat area.

*Notes common to all firelines recommended in this document:*

The lines will be ineffective if they are not burned out as needed; Firing is presumed as part of line construction and should be coordinated with the Agency Administrator and resource advisors.

Coordinate with resource advisors before building dozer line in released roadless areas.

Completed actions also include providing structure protection and following structure protection and evacuation plans as needed.

Extinguish any spot fires or slopovers as quickly as feasible.

Consider road and trail closures and public notifications

**Probability of Success:** Moderate to High. The area north of this MAP burned during the 2006 Somes Fire and still serves as a moderately effective barrier to fire spread. Lighter fuels that are due to the Somes Fire are likely to allow firefighters to more easily pick up spot fires and slop-overs. However, the area is steep enough to both limit and slow safe firefighter access.

### **Consequences of Not Taking Action:**

A much larger and more expensive fire

Likely private property damage and loss of structures, and fire could spread into additional community areas such as Somes Bar.

Increased threat to natural, historic, and cultural resources

Longer period of poor air quality

**Responsibility** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

### **Notifications:**

Agency Administrator

Forest fire duty officer

Designated Karuk Tribal Government Representative

Siskiyou Sheriff's Office

California Highway Patrol

Community liaison

Orleans / Somes Bar Fire Safe Council Chairperson

Community of Butler Flat. A public meeting should be considered.

### **Resources:**

4 strike teams of engines

8 hand crews

3 dozers

4 water tenders

4 pairs of fallers

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1 type 1 helicopter  
2 type 2 helicopters  
1 division supervisor  
1 task force leader  
1 line safety officer  
2 Resource Advisors  
Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## Management Action Point 21: Main Stem of Salmon River from Butler Flat to Somes Bar (River proper)

### Physical Location of MAP:

**North** of the fire's current perimeter

The main stem of the Salmon River from Butler Flat to Somes' Bar.

**Condition:** Fire crosses the MAP that extends from Somes Mountain to the main stem Salmon River, and is likely to not be contained by direct attack within one burning period.

### Values to Protect:

Structures, private property and infrastructure, primarily along the river corridor. Risks include temporary closure of, or damage to, the Salmon River Road. For local traffic the road is a core ingress and egress route.

Community water source for Somes Bar, Butler Flat and scattered residences.

Related to the River,

Loss of recreation opportunities, especially rafting, due to closures

Long-term loss of visual beauty. The Salmon River is designated as Recreational river.

Habitat for Coho salmon and other sensitive aquatic species, which could be degraded by increased siltation and turbidity, warmer water due to lost streamside vegetation, and changed water chemistry.

Campground improvements and shorter-term loss of recreational camping opportunities due to closures

Northern Spotted Owl and goshawk habitat

Wilderness values in inventoried roadless areas.

Extensive sensitive cultural sites

Communication towers, and Somes RAWs.

### Actions:

Institute patrol for traffic safety on the river road.

Extinguish any spot fires or slopovers as quickly as feasible.

Provide structure protection and follow structure protection and evacuation plans as needed.

Consider road and trail closures and public notifications

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**Probability of Success:** High. This area burned during the 2006 Somes Fire so fire is expected to spread here more slowly and a lower intensity than adjacent fuels. The changed fuels also make it only moderately likely the fire will spot across river.

**Consequences of Not Taking Action:**

- A much larger and more expensive fire
- Increased threat to natural, historic, and cultural resources
- Infrastructure and structures in communities and campgrounds.
- Longer period of poor air quality

**Responsibility** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

**Notifications:**

- Agency Administrator
- Forest fire duty officer
- Resource advisors
- Sheriff's Office
- California Highway Patrol
- Community liaison and fire safe councils
- Community of Somes Bar and outlying structures. A public meeting should be considered.

**Resources:**

- 4 strike teams of engines
- 2 hand crews
- 4 water tenders
- 2 pairs of fallers
- 1 type 1 helicopter
- 2 type 2 helicopters
- 1 division supervisor
- 1 task force leader
- 1 line safety officer
- 2 Resource Advisors
- Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## Management Action Point **22: Orleans Mountain to Somes Bar**

### **Physical Location of MAP:**

**West** of the fire's current perimeter

The ridgeline from Orleans Mountain to Somes Bar.

**Condition:** If fire crosses this ridge initiate MAP 23.

### **Values to Protect:**

Dispersed Campgrounds

Trail system on ridgeline

Water source for river communities

Related to the River,

Loss of recreation opportunities, especially rafting, due to closures

Long-term loss of visual beauty. The Salmon River is designated as Recreational river.

Habitat for Coho salmon and other sensitive aquatic species, which could be degraded by increased siltation and turbidity, warmer water due to lost streamside vegetation, and changed water chemistry.

Campground improvements and shorter-term loss of recreational camping opportunities due to closures

Northern Spotted Owl and Goshawk habitat

Extensive sensitive cultural sites

Orleans Mountain Historic Lookout Historical site and radio vault

Radio repeater site (owner unknown) 1 mile due west of Somes Mountain between Perch and Whitmore Creeks.

### **Actions:**

Do not construct line from Somes Mountain to Somes Bar.

Evaluate any spot fires or slop-overs for potential suppression action consistent with tribal values in the area.

Provide a structure assessment and plan for the protection of Orleans Mountain lookout and communication towers.

In order to track the urgency of implementing the actions in MAP 23, closely track the effectiveness of the ridgeline from Orleans Mountain to Somes Bar in slowing fire spread.

Do a thorough structure assessment of private property farther to the southwest (Red Cap / Ferris Ranch Road). This is also an indication it is especially important to

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consider the addition of MAPs to address further future spread of the fire. The wooden lookout is a registered Historic Site and a new metal radio vault is there. The solar panels have already been wrapped.

Consider road and trail closures and public notifications

**Probability of Success:** High to moderate. This is a dominant ridge system with the majority of it burning during the 2006 Somes Fire. Spot fires are a concern with the area being remote, steep and rugged.

**Consequences of Not Taking Action:**

- A much larger and more expensive fire
- Increased threat to natural, historic, and cultural resources
- Infrastructure and structures including the Some Lookout may be compromised.
- Longer period of poor air quality.

**Responsibility** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

**Notifications:**

- Agency Administrator
- Forest fire duty officer
- Resource advisors
- Community liaison and fire safe councils
- Somes Mountain Lookout (if staffed)

**Resources:**

- 2 Strike team engines
- 5 hand crews
- 2 water tenders
- 3 pairs of fallers
- 1 type 1 helicopter
- 2 type 2 helicopters
- 1 division supervisor
- 1 task force leader
- 1 line safety officer
- 2 Resource Advisors
- Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## Management Action Point 23: Orleans Mountain Down Antennae Ridge to Somes Bar

### Physical Location of MAP:

**West** of the fire's current perimeter

The ridgeline from Orleans Mountain down Antennae Ridge to Perch Creek Campground; then heading north to Somes Bar, following the boundary of private property and Forest System Lands.

**Condition:** Fire has established to the west of Orleans Mountain to Somes Bar Ridgeline.

### Values to Protect:

The communities of Orleans and Somes Bar.

The Bigfoot Scenic Byway, and National Scenic Byway (which is on highway 96 from Somes Bar to Orleans).

Dispersed campgrounds

Trail system on ridgeline

Water source for river communities

Related to the River,

Loss of recreation opportunities, especially rafting, due to closures

Long-term loss of visual beauty. The Salmon River is designated as Recreational river.

Habitat for Coho salmon and other sensitive aquatic species, which could be degraded by increased siltation and turbidity, warmer water due to lost streamside vegetation, and changed water chemistry.

Campground improvements and shorter-term loss of recreational camping opportunities due to closures

Northern Spotted Owl and goshawk habitat

Extensive sensitive cultural sites

### Actions:

Construct fireline from Orleans Mountain down Antennae Ridge, continuing along the private land and Forest System Land boundary.

Extinguish any spot fires or slop-overs as quickly as feasible.

Provide a structure protection plan and evacuation plan for the protection of the communities of Orleans and Somes Bar.

Consider road and trail closures and public notifications

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**Probability of Success:** High to moderate. This is a dominant ridge system. The majority of the area burning during the 2006 Somes Fire. The area south of Antennae Ridge has not burned in recent years. It is a significant concern if fire gets established in this area.

**Consequences of Not Taking Action:**

A much larger and more expensive fire  
Increased threat to natural, historic, and cultural resources  
Infrastructure and structures particularly in Orleans and Somes Bar.  
Longer period of poor air quality.

**Responsibility** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

**Notifications:**

Agency Administrator  
Forest fire duty officer  
Siskiyou Sheriff's Office  
Resource advisors  
Community liaison and fire safe councils  
Somes Mountain Lookout (if staffed)

**Resources:**

6 Strike team engines  
8 hand crews  
6 water tenders  
6 pairs of fallers  
4 Dozers  
3 type 1 helicopter  
2 type 2 helicopters  
1 division supervisor  
1 task force leader  
1 line safety officer  
2 Resource Advisors  
Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## Management Action Point **24: Orleans Mountain to Salmon Summit.**

### **Physical Location of MAP:**

**West** of the fire's current perimeter

The dominant ridgeline from Orleans Mountain to Salmon Summit.

**Condition:** Fire is established south of Hammel Creek. This has occurred.

### **Values to Protect:**

Trail system on ridgeline

Wilderness values and recreational opportunities

Municipal watershed for river communities

Spotted Owl habitat

Cultural sensitive sites. Some of the most important cultural sites in the fire area are here, particularly south of Whitey's Peak

Ferris Cabin Traditional Cultural Property (TCP), one mile west of Indian Rocks

Coho salmon and sensitive aquatic species in Salmon River and Nordheimer Creek. This area is already over the threshold for cumulative watershed effects.

Highly valued plantations

### **Actions:**

Construct fireline from Orleans Mountain to Salmon Summit has begun. This line is currently being utilized as a main contingency line to contain the fire from moving to the west.

Dozers are permitted between Orleans Mountain to Whitey's Peak. Dozers are *not* permitted from Whitey's Peak to Salmon Summit.

Extinguish any spot fires or slop-overs as quickly as feasible.

Use strategic ignitions to slow fire spread. This will enhance firefighter safety and minimize undesired high severity fire effects.

Consider road and trail closures and public notifications

**Probability of Success:** Moderate. The Hog Fire in 1977 and Megram Fire in 1999 resulted in thick stands of young trees in this area. The tree regeneration could support rapid

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uphill runs, which may compromise both the ridge system's fireline and firefighter safety.

### **Consequences of Not Taking Action:**

- A much larger and more expensive fire
- Increased threat to natural, historic, and cultural resources
- Increased probability of long-term cumulative watershed effects
- Longer period of poor air quality

**Responsibility** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

### **Notifications:**

- Agency Administrator
- Forest fire duty officer
- Resource advisors
- Orleans Somes Bar Firesafe Council Chairperson

### **Resources:**

- 8 hand crews
- 6 pairs of fallers
- 4 Dozers
- 3 type 1 helicopter
- 3 type 2 helicopters
- 2 division supervisor
- 2 task force leader
- 2 line safety officer
- 2 Resource Advisors
- 4 Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## Management Action Point **25: Ridgeline South of Boise Creek to Klamath River**

### **Physical Location of MAP:**

**West** of the fire's current perimeter

The main ridge line south of Boise Creek to the Klamath River.

**Condition:** Fire becomes established in Boise Creek Drainage.

### **Values to Protect:**

Trail system on ridgeline

Private property

Wilderness values and recreational opportunities

Northern Spotted Owl and Goshawk habitat

Cultural sensitive sites

Community watershed

### **Actions:**

Slow fire spread using natural barriers and logical holding features to delay fire until season slowing and season ending event.

Minimize damage to natural and cultural resources.

Provide point protection for structures and private inholdings.

Consider road and trail closures and public notifications

**Probability of Success:** Low to Moderate. Boise Creek is inaccessible, steep and rugged terrain. There are some logical holding features that may delay fire spread; however, full containment would be difficult until a season ending event occurs.

### **Consequences of Not Taking Action:**

A much larger and more expensive fire

Increased threat to natural, historic, and cultural resources

Potential for private property damage and/or loss of structures or inholdings.

Longer period of poor air quality.

**Responsibility** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

### **Notifications:**

Agency Administrator

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Forest fire duty officer  
Resource advisors  
Community liaison and fire safe councils

### **Resources:**

6 hand crews  
2 Strike team engines  
3 Wildland fire modules  
3 pairs of fallers  
2 Dozers  
3 type 1 helicopter  
3 type 2 helicopters  
2 division supervisor  
2 task force leader  
2 line safety officer  
2 Resource Advisors  
4 Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## Management Action Point **26: Salmon Summit down Backbone Ridge to One Mile Camp**

### **Physical Location of MAP:**

**Southwest** of the fire's current perimeter  
The backbone ridge system

**Condition:** Fire is established south of MAP 25 (LePerron Peak) and west of MAP 24

### **Values to Protect:**

Trail system on ridgeline  
Private property  
Ferris Tribal Cultural Property (TCP)  
Wilderness values and recreational opportunities  
Northern Spotted Owl and Goshawk habitat  
Extensive sensitive cultural sites  
Community water source

### **Actions:**

Slow fire spread using natural barriers and logical holding features (existing old firelines and dozer lines) to delay fire until season slowing and season ending event.  
Scout road system to evaluate opportunities to delay fire spread to the west.  
Minimize damage to natural and cultural resources.  
Consider road and trail closures and public notifications

**Probability of Success:** Low to Moderate. This area is inaccessible, steep and rugged terrain. The Megram Fire of 1999 left fuels conditions that are in early seral stages and very dense. There are some logical holding features that may delay fire spread; however, full containment would be difficult until a season ending event occurs.

### **Consequences of Not Taking Action:**

A much larger and more expensive fire  
Increased threat to natural, historic, and cultural resources  
Potential for private property damage and/or loss of structures or inholdings.  
Longer period of poor air quality.

**Responsibility** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

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### **Notifications:**

- Agency Administrator
- Forest fire duty officer
- Resource advisors
- Community liaison and fire safe councils
- Hoopla Indian Reservation
- Shasta-Trinity Forest

### **Resources:**

- 6 hand crews
- 3 Wildland fire modules
- 3 pairs of fallers
- 2 Dozers
- 3 type 1 helicopter
- 3 type 2 helicopters
- 2 division supervisor
- 2 task force leader
- 2 line safety officer
- 2 Resource Advisors
- Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## Management Action Point 27: Salmon Summit to Hoteling Ridge to South Fork Salmon River

### Physical Location of MAP:

**South** of the fire's current perimeter

From Salmon Summit along wilderness boundary to Hoteling Ridge; then down to South Fork Salmon River. (12W02 trail until it intersects with trail 6138, then north to road 39N32 then continues to Hoteling Ridge).

**Condition:** Fire gets established in the upper third of the north or northwest of the West Fork of Knownothing Creek.

### Values to Protect:

Trail systems

Campgrounds (dispersed)

Wilderness values and recreational opportunities

Northern Spotted Owl and Goshawk habitat

Cultural sensitive sites

Active mines (Gilta Mine, Hansen Mine, Knownothing mine, Wolverine Mine, and Barton Cabin. Other mines likely exist in the area).

Progeny sites

### Actions:

Slow fire spread using natural barriers and logical holding features to delay fire until season slowing and season ending event.

Scout road system to evaluate opportunities to delay fire spread to the west.

Minimize damage to natural and cultural resources.

Protect mines and notify permit holders.

Consider road and trail closures and public notifications

**Probability of Success:** Low to Moderate. This area is inaccessible, steep and rugged terrain. There are some logical holding features that may delay fire spread; however, full containment would be difficult until a season ending event occurs.

### Consequences of Not Taking Action:

A much larger and more expensive fire

Increased threat to natural, historic, and cultural resources

Potential for damage to mining structures

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Longer period of poor air quality.

Responsibility [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

### **Notifications:**

Agency Administrator  
Forest fire duty officer  
Resource advisors  
Community liaison and fire safe councils  
Hoopa Indian Reservation  
Mine permit holders  
Shasta-Trinity Forest

### **Resources:**

6 hand crews  
3 Wildland fire modules  
3 pairs of fallers  
2 Dozers  
3 type 1 helicopter  
3 type 2 helicopters  
2 division supervisor  
2 task force leader  
2 line safety officer  
2 Resource Advisors  
Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## Management Action Point **28: Salmon Summit to One Mile South of Horn Creek Gap**

### **Physical Location of MAP:**

**South** of the fire's current perimeter

From Salmon Summit head down the 10N04 Road to one mile south of Horn Creek Gap.

**Condition:** Fire becomes established south of the junctions of Nordheimer, Granite, and Lunch Creeks.

### **Values to Protect:**

Trail and Road systems

Plantations

Ecological Integrity of watershed with extreme cumulative watershed damage

Campgrounds (dispersed)

Recreational opportunities

Main access point to the wilderness (High Point trailhead)

Spotted Owl and Goshawk habitat

Cultural sensitive sites

Active mines (Gilta Mine, Hansen Mine, Knownothing mine, Wolverine Mine, and Barton Cabin. Other mines likely exist in the area).

Progeny sites

Coho habitat and sensitive aquatic species

Sensitive plant species

Peregrine Falcon activity center

### **Actions:**

Prepare 10N04 Road as fireline

Extinguish any spot fires or slop-overs as quickly as possible.

Slow fire spread to provide firefighter safety and prevent undesired high severity fire effects

Consider road and trail closures and public notifications

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**Probability of Success:** Low to Moderate. This area is inaccessible, steep and rugged terrain. There are some logical holding features that may delay fire spread; however, full containment would be difficult until a season ending event occurs.

### **Consequences of Not Taking Action:**

**Probability of Success:** Moderate. The Hog Fire of 1977 and Megram Fire of 1999 has left fuels conditions that are in early seral stages and very dense. However, this line did hold during the Hog Fire. This could promote rapid uphill runs which may compromise the ridge system fireline and firefighter safety.

**Responsibility** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

### **Notifications:**

- Agency Administrator
- Forest fire duty officer
- Resource advisors
- Community liaison and fire safe councils

### **Resources:**

- 8 hand crews
- 6 pairs of fallers
- 4 Dozers
- 3 type 1 helicopter
- 3 type 2 helicopters
- 2 division supervisor
- 2 task force leader
- 2 line safety officer
- 2 Resource Advisors
- Tribal Cultural Heritage Advisors

Cost [to be completed later, for each recommended action]:

## **Management Action Point 29: Area 29A; One mile south of Horn Creek Gap to Forks of Salmon and second line Area 29B; South of McNeal Creek to Salmon River Road.**

### **Physical Location of MAP:**

**29A: South** of the fire's current perimeter

One mile South of Horn Creek, down ridgeline east to Forks of the Salmon.

**29B: South** of the fire's current perimeter

From the ridge south of McNeal Creek go down ridge to Salmon River Road, this line is south of and parallel to 29A.

### **Condition:**

29A: If the fire reaches 29A, it triggers the implementation of 29B

### **Values to Protect:**

Trail and Road systems

Plantations

Ecological Integrity of watershed with extreme cumulative watershed damage

Campgrounds (dispersed)

Recreational opportunities

Spotted Owl habitat

Cultural sensitive sites

Coho habitat and sensitive aquatic species

Sensitive plant species

Active mines

Peregrine Falcon activity center

### **Actions 29A:**

Delay fire spread South with aviation assets

Ensure the road system SE of 29A are open

Utilize the road system to delay fire spread to the South

Begin implementing holding plan off 29B.

### **Actions 29B:**

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Utilize network of roads from Bowerman Peak North to Hotelling to retard/contain/control fire spread

### **Actions for both:**

Prepare 10N04 Road as fireline

Extinguish any spot fires or slop-overs as quickly as possible.

Slow fire spread to provide firefighter safety and prevent undesired high severity fire effects.

Implement Structure and Evacuation Plans

**Probability of Success:** Moderate. The fire modeling shows a direct flow path which may cause concern for spot fires, however this is a dominant ridge system with road network which would increase the chances for success.

### **Consequences of Not Taking Action:**

Threat to the communities of Forks of Salmon, Godfrey Ranch, Blueridge Ranch, and other structures and private in-holdings in the area.

Will effect major egress and ingress to the area and main evacuation route.

**Responsibility** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

### **Notifications:**

Forks of Salmon community members and other Private landowners (Godfrey Ranch, Blueridge Ranch, etc)

Agency Administrator

Forest fire duty officer

Resource advisors

Community liaison and fire safe councils

### **Resources:**

6 hand crews

3 Wildland fire modules

3 pairs of fallers

2 Dozers

3 type 1 helicopter

3 type 2 helicopters

2 division supervisor

2 task force leader

2 line safety officer

2 Resource Advisors

Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## **Management Action Point 30: Butler Flat to Knownothing Creek.**

### **Physical Location of MAP:**

**East** of the fire's current perimeter

Starting at Butler Flat, South along Salmon River Road continuing along the south fork of Salmon River to Knownothing Creek.

### **Condition:**

This Management Action Point is currently in part been implemented. If holding actions fail and the fire crosses East and North of Salmon River Road then we being to implement actions east. This can be found in the Salmon River Complex Strategic Operations Plan.

### **Values to Protect:**

Trail and Road systems

Plantations

Ecological Integrity of watershed with extreme cumulative watershed damage

Campgrounds (dispersed)

Recreational opportunities

Spotted Owl and Goshawk habitat

Extensive sensitive cultural sites

Coho habitat and sensitive aquatic species

Sensitive plant species

Active mines

Peregrine Falcon activity center

Private structures

### **Actions:**

Extinguish any spot fires or slop-overs as quickly as possible.

Slow fire spread to provide firefighter safety and prevent undesired high severity fire effects.

Implement Structure and Evacuation Plans

Utilize fish screens when drafting from water sources; avoid using the identified locations along the Salmon River and tributary junctions: there are deep pools utilized by spring Chinook

Patrol the road system

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Prevent spread of Spotted Knapweed and Oblong Spurge by limiting and minimizing activity and disturbance. Consider mobile weed-wash stations.

Consider road and trail closures and public notifications

**Probability of Success:** Moderate. The fire modeling is showing a direct flow path which may cause concern for spot fires, however this is a dominant ridge system with road network which would increase the chances for success. The 2008 Jake and Ukonom fires reduced fuels in this MAP area, which could lower fire intensity if this area reburned this year.

### **Consequences of Not Taking Action:**

Threat to the communities of Forks of Salmon, Godfrey Ranch, Blueridge Ranch, and other structures and private in-holdings in the area.

Will effect major egress and ingress to the area and main evacuation route.

**Responsibility:** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

### **Notifications:**

Forks of Salmon community members and other Private landowners (Godfrey Ranch, Blueridge Ranch, etc)

Agency Administrator

Forest fire duty officer

Resource advisors

Community liaison and fire safe councils

### **Resources:**

6 hand crews

3 Wildland fire modules

3 pairs of fallers

2 Dozers

3 type 1 helicopter

3 type 2 helicopters

2 division supervisor

2 task force leader

2 line safety officer

2 Resource Advisors

Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## Management Action Point 31: Tripp Point to Portuguese Peak to Portuguese Peak Trailhead.

### Physical Location of MAP:

**Northeast** of the fire's current perimeter

The ridgeline that begins Southeast of Tripp Point to Portuguese Peak; then the ridge from Portuguese Peak to the Portuguese Peak trailhead which goes through Tom Payne Peak.

### Condition:

The fire crosses the Main Salmon River and is established and not able to be contained within one operational period.

### Values to Protect:

Trail and Road systems, including the main access route of Salmon River Road.

Campgrounds (dispersed)

Wilderness and river recreational opportunities

Spotted Owl habitat

Cornwell Microhydro powerplant

Cultural sensitive sites, including Native American Cultural Use Area.

Coho habitat and sensitive aquatic species

Sensitive plant species

Peregrine Falcon in Tom Payne area.

### Actions:

Construct handline on ridge system

Provide structure protection and follow evacuation plan

Provide point protection for power plant and communication tower, make contact

Work closely in consultation with tribal liaison

Utilize minimum impact suppression techniques within wilderness area where feasible;  
locate new spots staging areas and spike cams outside of wilderness

Consider road and trail closures and public notifications

**Probability of Success:** Moderate. This area was burned during the 2008 Ukonom Complex and still has moderate barriers to fire spread. Access to water resources for suppression efforts for both aviation and ground increase the probability for success. The area is steep and rugged and in alignment with south and west slopes increasing the potential for fire spread, leading to a moderate ranking.

**Consequences of Not Taking Action:**

- Fire could negatively affect cultural use areas.
- Potential closure of major egress and ingress to the area and main evacuation route.
- Reduce recreational opportunities, both river and wilderness experiences.
- Potential degradation of fisheries due to increased sedimentation and changed runoff patterns.

**Responsibility** [name of role responsible for each action, such as Incident Commander or Agency Administrator. To be completed later.]

**Notifications:**

- Agency Administrator
- Forest fire duty officer
- Resource advisors; including tribal
- Powerplant (PGE)
- Community liaison and fire safe councils

**Resources:**

- 6 hand crews
- 2 strike team engines
- 3 pairs of fallers
- 2 type 1 helicopter
- 2 type 2 helicopters
- 2 division supervisor
- 2 task force leader
- 2 line safety officer
- 2 Resource Advisors
- Tribal Cultural Heritage Advisors

**Cost** [to be completed later, for each recommended action]:

## Data Appendices

**Butler Fire – Future Management Considerations (attached)**

**DRAFT 2013 Karuk Ceremonial Dates (attached)**

**Management Action Points (attached)**

**Fire Modeling and Other Considerations**

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### **Fire Modeling Introduction:**

Fire modeling supported the development the strategic operation plan. A short term (2 days), near term (4 days) and long term (7 day) Fire Spread Probability (FSPro) analysis was conducted. The intent of the modeling was assist identification of management action points and determine probability of success. Fire modeling helps identify vulnerable suppression strategies and tactics areas based on fuels and weather conditions in which fire may spread more easily. Noting these weak points can also provide the decision makers with recommended actions to mitigate such areas.

An additional analysis was completed for the “what if” scenario. Specific fire behavior characteristics were derived in areas where there was potential for spot fires to cross MAPs. This exercise helped determine if these spots had the fire behavior potential thus triggering additional management actions.

### **Other Considerations:**

The steep and complex landscape of the Salmon River Drainage creates a unique interaction with fire weather and elevation during the hot, dry summers when high pressure prevails and smoke does not dissipate; this often results in temperature inversions. While these inversions can lead to benign fire behavior, they can also create public health issues and concerns: high densities of smoke particulates, large coverage areas and persistence for many days. When the temperature inversions are broken by high winds or a changing air mass, fire behavior can increase significantly, resulting in large areas of high-severity fire. In addition, as the fires move into higher elevations, they burn above the inversion layer thus supporting a longer burning period.

Experience has shown the elevation of the inversion layer averages around 4,300 feet above ground level. This assessment should be taken into consideration when undertaking fire modeling or implementing management actions.

Fire effects of management actions should always be considered. Actions should be planned and communicated before implementing in areas where there is potential of severe fire effects. In some areas, promoting low severity fire can benefit the landscape in the long-term.

## **WFDSS – FSPro Probability (attached)**

## **WFDSS – Near-Term Fire Behavior Analysis (attached)**

## **WFDSS – Short-Term Fire Behavior Analysis (attached)**

## **Wind Roses**

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The wind rose is a tool to display historical wind observations. It is useful for highlighting winds that may be problematic for the Butler Fire. The analysis below shows the likely duration remaining for the Shelly and Boulder fires and how wind typically shifts as autumn progresses.

Directions for reading a wind rose follows.<sup>1</sup>

- The wind rose shows directional origin of wind for the period of historical data it displays. North is up, south down, etc...
- Wind observation data is binned into directional angles. For each direction, the portion of time the winds come from that direction is highlighted by the total length of the bar on the graphic.
- Within each directional bar the color coding indicates the distribution of wind speeds. Both the relative proportion of time when each wind speed category occurred, and the absolute percentage of observations for each wind speed and directional bin is shown.

### **Analysis:**

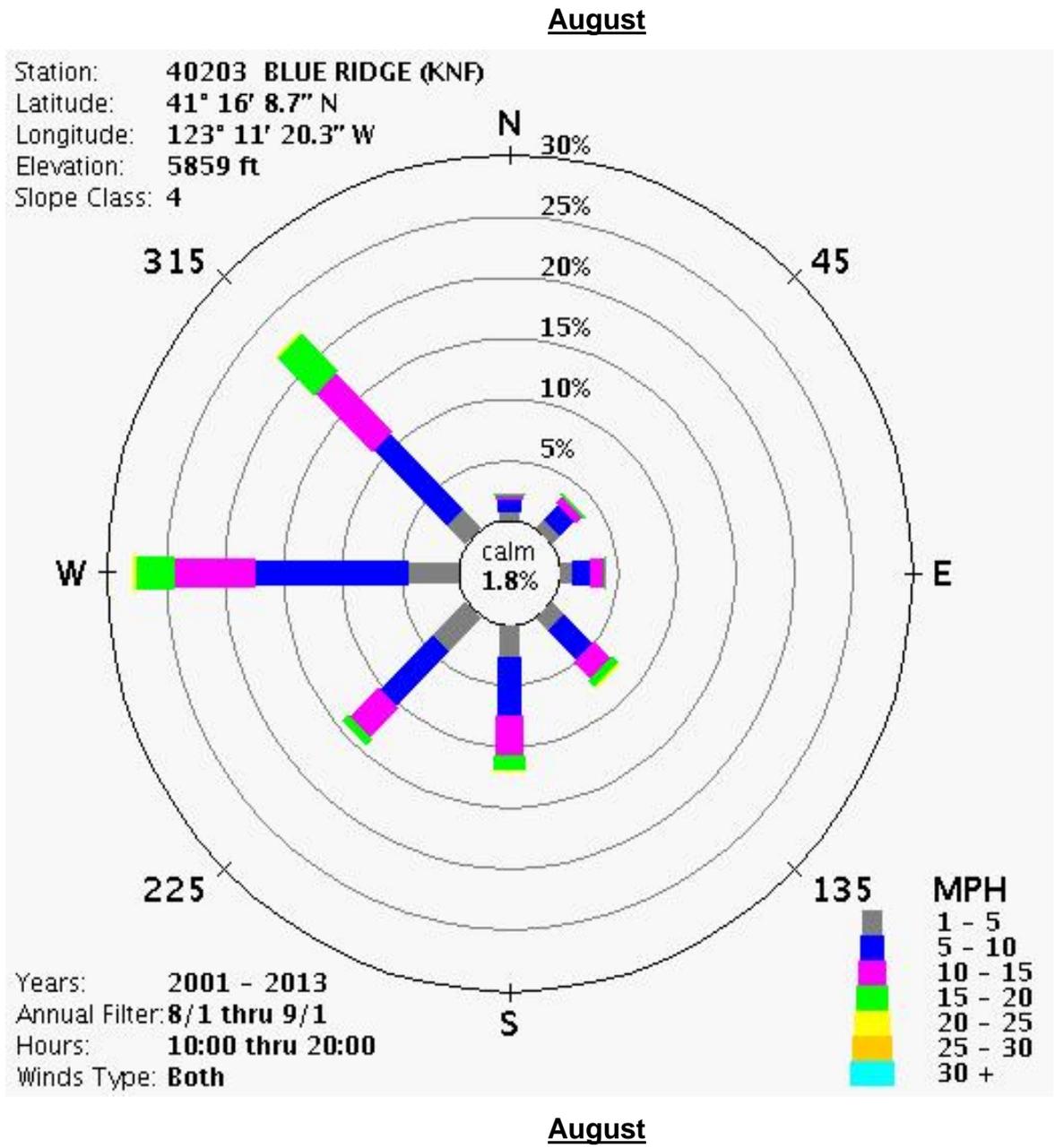
Three time periods August, September and October were selected to display the predominant winds and problematic winds for the Butler Fire. Blue Ridge RAWs was used for this analysis. The predominant and strongest winds in August are out of the west and northwest followed by a lesser amount from the south and southwest. Smaller percentages of wind occur in all other directions. September winds are nearly identical to the August wind patterns. Since September was so similar to the August wind rose, only August is displayed.

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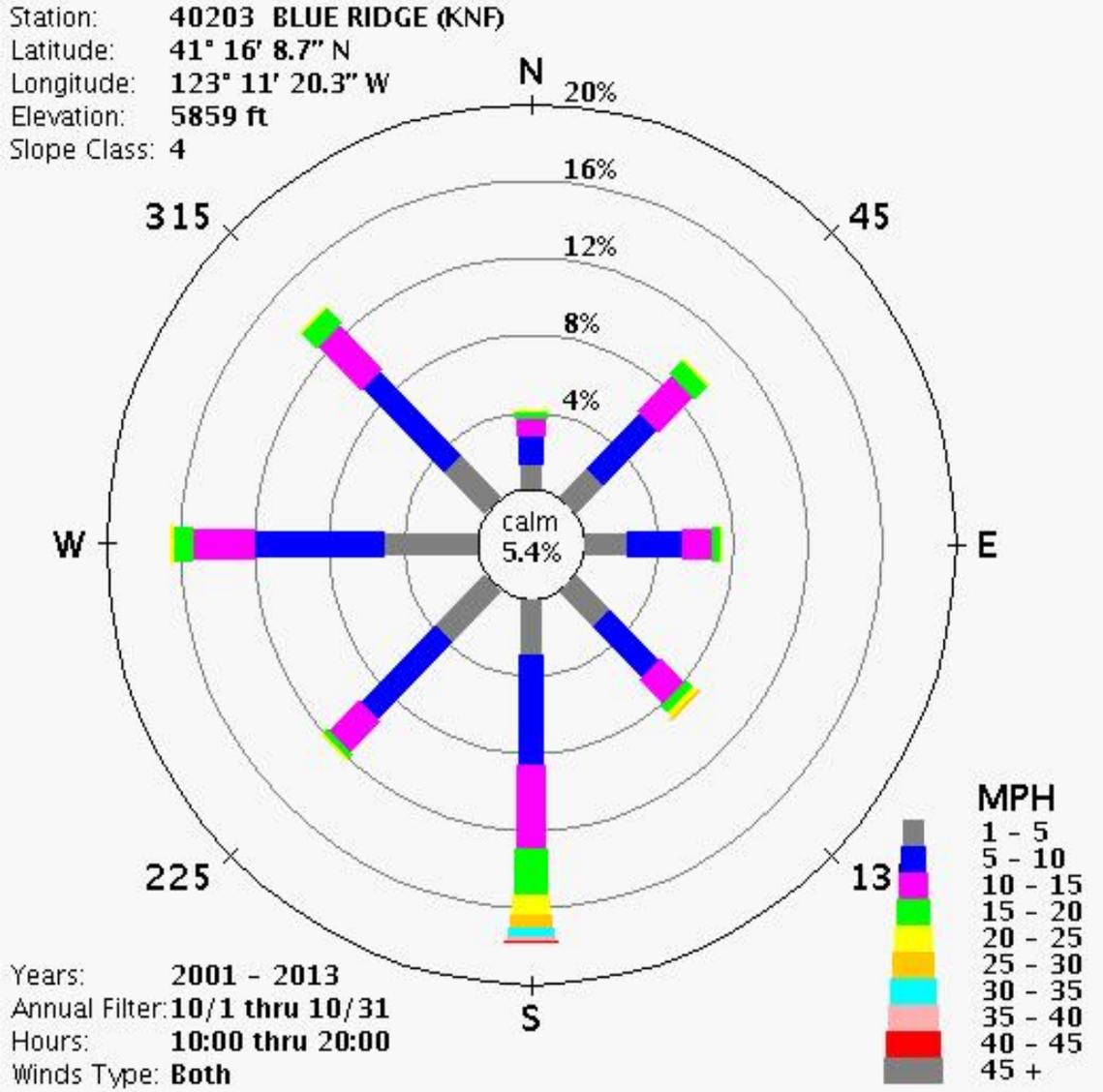
<sup>1</sup> Derived from <http://plone.airfire.org/wfdss-aq/help/raws-wind-roses>.

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There is a noteworthy change in wind rose in the October analysis. The main highlight is an increased chance of wind speeds in nearly all directions. But the probability is low for significant winds (35mph+) out of the south. This relatively rare wind event has contributed to large fire growth in the past.



October



October

## Season End

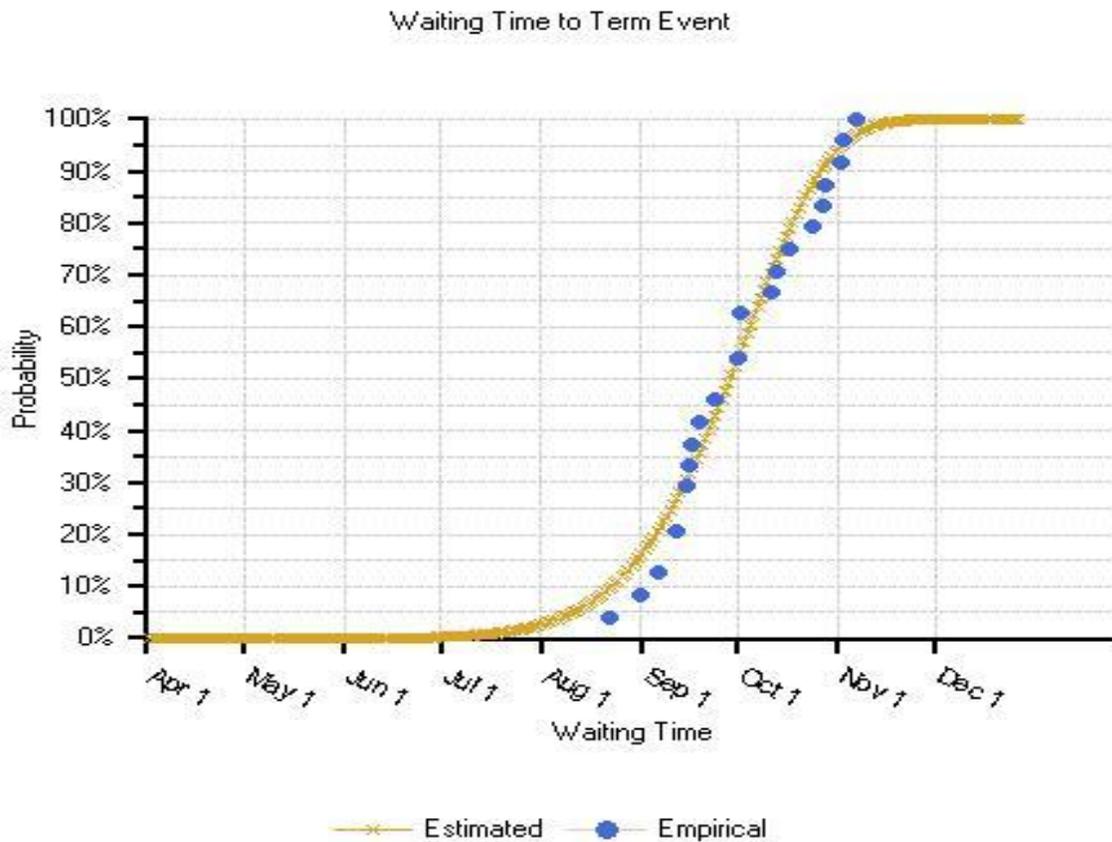
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Fire season commonly ends with a large scale rain event in the Klamath Mountains, but they can also end with the onset of shorter days and cooler/moister conditions. Often, a fire season fades away due to a combination of scattered, smaller precipitation events and changing day length and sun angle which, in turn, translates into lower maximum temperature, higher relative humidity, and a shorter burn period. Energy release component (ERC)<sup>2</sup> can serve as an integrator of all these factors.

We developed criteria for estimating the end of fire season by talking with fire managers at the Klamath National Forest. The criteria selected included ½ inch of rain over a five day period, throughout which the ERC never climbed above 50. Using the dates from this analysis we developed a Term file for the probability of season-ending dates displayed in the graphic below.

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<sup>2</sup> Energy release component (ERC) is a National Fire Danger Rating System (NFDRS) index related to how hot a fire could burn. It is derived from daily weather records and is associated with the worst case 24-hour potential energy at the flaming front of a given fire. This index tracks well with warming and drying as the season progresses and with the eventual cooling and lower fire potential as the season winds down. As the fuels dry through the season and become available to burn, adding to the potential energy, the ERC rises. As the days get shorter, temperatures fall, and nighttime humidity rises, the ERC falls.



## Fire Slowing Event

Along with season ending events, there is a possibility of fire-slowng precipitation events prior to the end of the fire season. Precipitation of at least 0.25 inches in a day might be expected to at least slow fire spread for two or three days, while greater amounts of rain (over 0.5 inches) could slow or check fire spread for several days. The probability of receiving greater than 0.25 inches of rain in one day was derived using the Blue Ridge RAWS. The likelihood of such events increases significantly in the latter part of September with the return of frontal systems moving in off the Pacific Ocean.

Time Period	Total Number of Days Recieving >0.25 inches of Rain 1961-1979 & 1999-2010 Blue Ridge RAWS	Probability of Having at Least One Fire Slowing Event During this Time Period
Late August	12	39%

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Early September	6	19%
Late September	23	74%
Early October	24	77%