

Long Term Analysis

Papoose Fire

ID-SCF -013120

07/22/2013



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INTRODUCTION

This long-term planning analysis is a guide and uses current available information and current available technology to look at the fires potential, emerging approaches to risk management, and strategic planning which will help in management of the Papoose fire. The fire is located within an area where values to be protected are high. Updating of this plan is dependent upon fire movement over the duration of the incident. Agency Administrators and Incident Management personnel should continue to assess the effectiveness of the plan and the actions being employed.

Fire Name	Papoose
Location	Salmon-Challis National Forest Middle Fork of the Salmon River
Start Date/Time	07/08/2013 – 20:04
Cause	Lighting
Geographic Area	Eastern Great Basin
Administrative Unit	Salmon-Challis National Forest Salmon-Cobalt Ranger District
Fire Number	ID-SCF-013120

Current fire situation

The Papoose fire was reported on July 8th, 2013 in the Papoose drainage and initial attacked by forest personnel on July 9th. This fire is located approximately 40 miles West of Salmon, ID. The area is remote and rugged and has a history of rapidly growing fires and extreme fire behavior. The fire is primarily driven by wind alignment, slope and fuels. The fire is currently managed under a value driven suppression strategy utilizing a mix of direct, indirect and point protection tactics when and where there is a high probability of success and firefighter exposure is commensurate with the values at risk.

Incident Management Objectives

Incident Objectives identify critical values at risk, while considering the amount of firefighter exposure and probability of success. Current management direction is point protection for the identified values in the area of the fire with established Management Action Points. These values include river camps, historic structures, infrastructure (bridges), and private lands. This decision is based on inaccessibility of the area, the extremely rugged terrain, and threats to firefighter safety.

FIRE BEHAVIOR ASSESSMENT (Long Term)

Fire Behavior Summary

The Papoose fire grew to 371 acres in the first couple of shifts through roll out and short runs in grass and where a litter layer is present. Fire continued to spread over the following days laterally along the Middle Fork. On sheltered slopes and areas where surface fuel loading is discontinuous the fire has struggled to spread. Movement in the upper half of the slope has been limited due to high fuel moistures and other factors making fuels unavailable. By the end of the burn period on July 15th the fire had grown to 3,507. Precipitation associated with thunderstorms on the 16th and 17th moderated fire behavior resulting in less growth but a warming and drying trend has once again lead to increased size.

Expected fire behavior will continue to be driven by fuels availability with lower elevation fuels carrying fire and higher elevation fuels slowly curing over the coming weeks resulting in greater spread upslope into more timbered fuel types. As these fuels become available expect to see a slow, methodical spread of fire into higher elevations with occasional runs of short duration that would be supported by wind alignment and on days with particularly hot and dry conditions.

To date fire behavior has been largely two-dimensional with minimal torching and spotting. This is likely to change as live fuel moisture values drop through the fire season and the fire begins to encounter more timbered fuel types. This increase in vertical fire behavior will also lead to the potential for more spotting, the potential for short crown runs and an overall greater resistance to control.

Fuels Conditions

a. Current Fuels Conditions

Fuel moisture values for lower elevations are tracking 2-3 weeks ahead of historical averages, particularly the fine fuels where grasses and other forbs are beginning to reach the level of being considered dead fuel. At higher elevations the fuel moistures are high enough to make them unavailable for fire but these areas are ahead of normal drying and will likely be available in the coming weeks. Current fuel moisture values and ERC values are shown in the tables found in the "Weather Outlook and RAWs Data".

Live fuel moisture conditions are high enough to act as a fire sink, especially live woody fuels. This is exemplified in observed fire behavior with minimal torching and scorch being observed unless assisted by heavier surface fuel loading, steep slopes and/or wind alignment. Live herbaceous moisture values have been on a steady decline since the

beginning of June with live woody moistures not showing a reduction in moisture to date. At higher elevations these live fuels have been drying approximately two weeks and will likely remain high enough to impede fire spread for another two weeks while they continue to dry. Exhibited fire behavior will be a good sign of changes in fuel moisture at higher elevation; as more torching and consumption of live surface fuels occurs parallels could be drawn without actual data gathering.

Dead fuel moistures in lower elevations have started to plateau after a consistent decline since late spring with 1000-hr values registering near 7%. At higher elevations these values have begun the curing process and are still two weeks behind the lower elevation fuel moistures. Larger diameter fuels, particularly on sheltered slopes, have been observed to only have received charring with minimal consumption which may be used into the future for gauging changes in fuel moisture as a correlation to consumption.

Table 1: Fuel Moisture Values as of 7/15/13.

	Live Woody	Live Herb.	1000-hr	10-hr
High Elevation (>5,500')	137.1	129.1	14.8	9.0
Low Elevation (<5,500')	143.8	88.4	6.7	6.0

b. Predicted Fuel Conditions

It is still in the early stages of the fire season and fuel conditions will continue to deteriorate over the coming weeks as fuels dry. Although fuels at lower elevations are largely available, fire managers can expect to see fire activity in higher elevation sites become more responsive with time.

The Papoose fire will likely have several miles of open fire perimeter slowly spreading upslope as these fuels dry with sheltered aspects and heavier timbered areas being the last to come available. Long term forecasts and historic climatology indicates continued drying with what will likely be a rapid decrease in fuel moisture values where live fuels and higher elevation dead fuels still retain moisture. The 1000-hr fuel moisture and ERC graphs found in "Weather Outlook and RAWs Data" can be used to gain insight on historic norms and the relationship to years with significant fire events.

Predictive Services Products (Eastern Great Basin)

a. 30 Day (July – August) & 90 Day (July – September) Predicted Precipitation & Temperature

For areas not highlighted, there are equal chances for below, near, and above-median total precipitation and temperature. During the next 1-3 months, the trend in central Idaho suggests that this area will be experiencing temperatures above normal. The chance of having above normal temperatures appears to extend westward across the state when comparing the 1- to 3-month outlook, suggesting that even into August and September, temperatures will be above normal. The precipitation outlook is suggesting precipitation having equal chance of below or above precipitation for both the 1- and 3-month outlook.

*Figure 1: One Month Outlook for Temperature from July through August 2013.
(National Weather Service, Climate Prediction Center)*

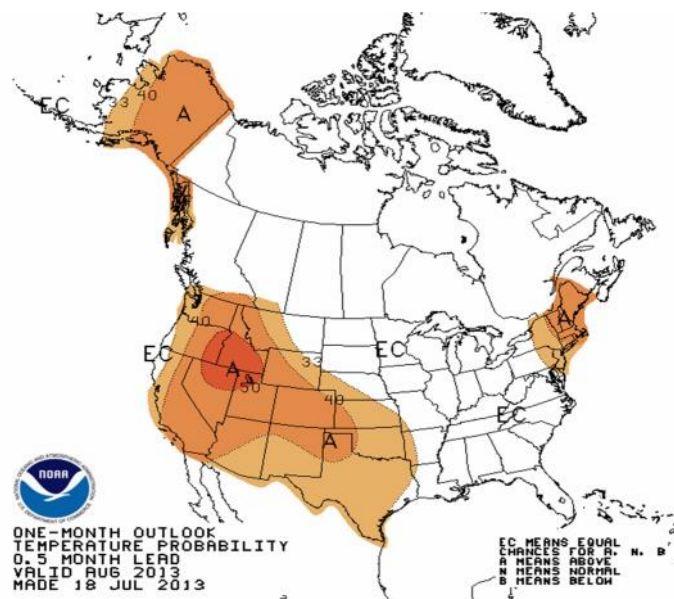


Figure 2: Three Month Outlook for Temperature From July Through September 2013.
(National Weather Service, Climate Prediction Center)

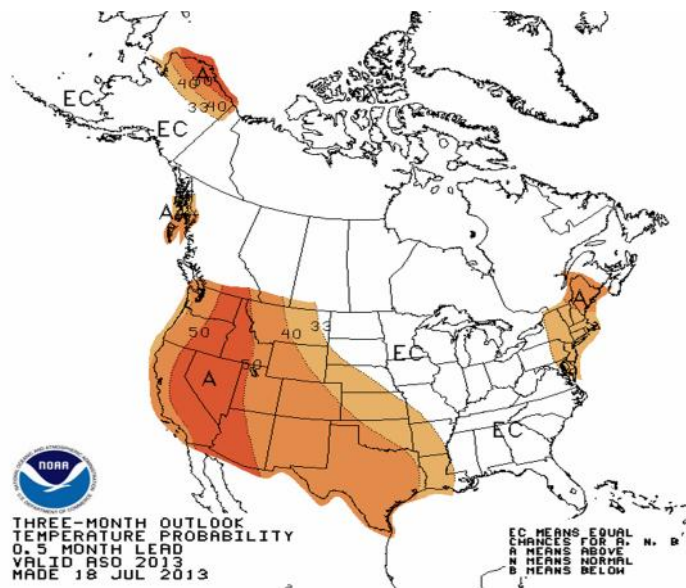


Figure 3: One Month Outlook for Precipitation From July Through August 2013.
(National Weather Service, Climate Prediction Center)

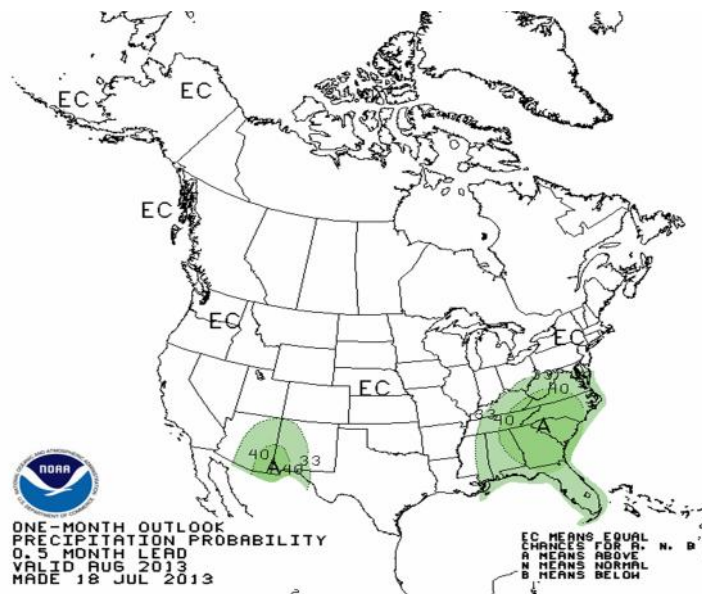
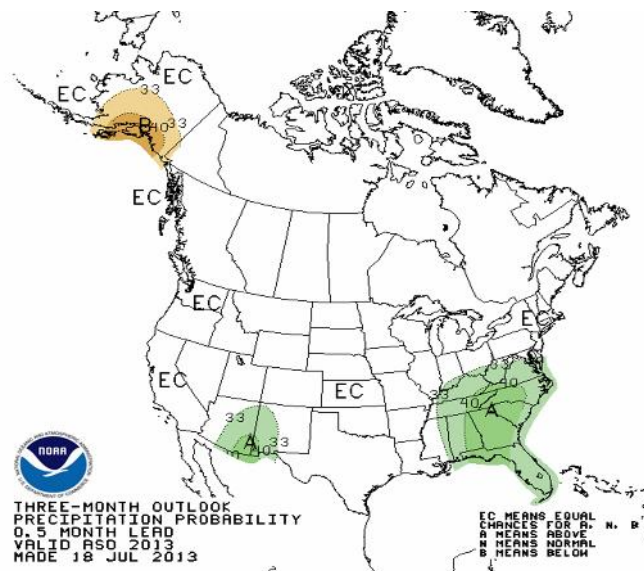


Figure 4: Three Month Outlook for Precipitation From July Through September 2013.
(National Weather Service, Climate Prediction Center)



b. **Fuel Complex Dryness and Potential Fire Intensity**

June was a fairly wet month for the western and central Idaho Mountains with one and a half to three inches of rain reported during the month. The low elevations of southwest Idaho have been dry all spring until very recently. This has left sagebrush fuel moisture values below normal; therefore, fire potential is expected to be above normal in this region. Fuels across western and central Idaho, including the higher elevations, are expected to have dried sufficiently during July to produce above normal fire potential for the month of August. Early fall weather outlooks suggest a normal fall like pattern will settle into the area by mid-September for normal fire potential Area-wide.

Figure 5: Wildland Fire Potential Outlook for the Month of July, Issued July 1st, Showing Normal Fire Potential in Central Idaho (Predictive Services).

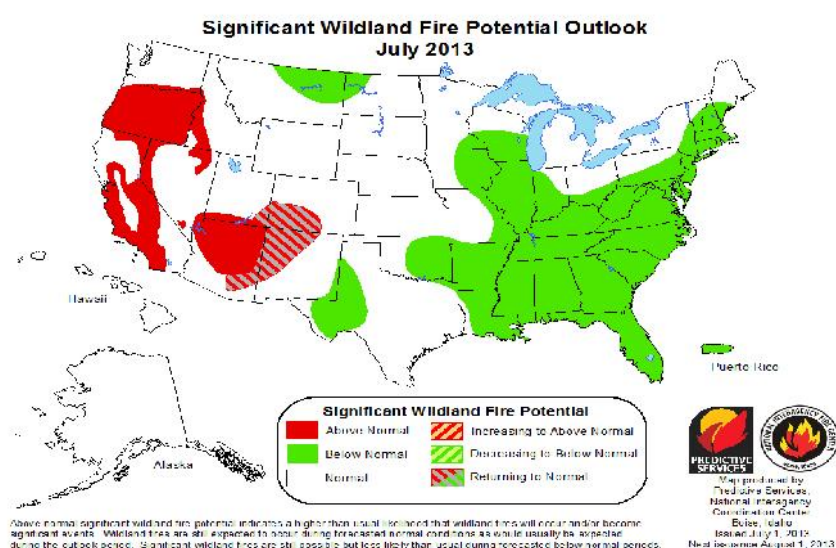


Figure 6: Wildland Fire Potential Outlook for the Month of August, Issued July 1st, Showing Above Normal Fire Potential in Central Idaho (Predictive Services).

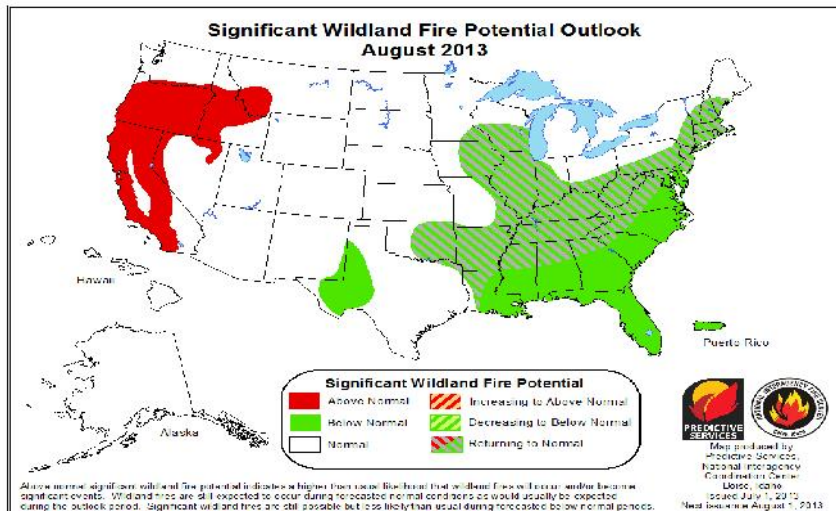
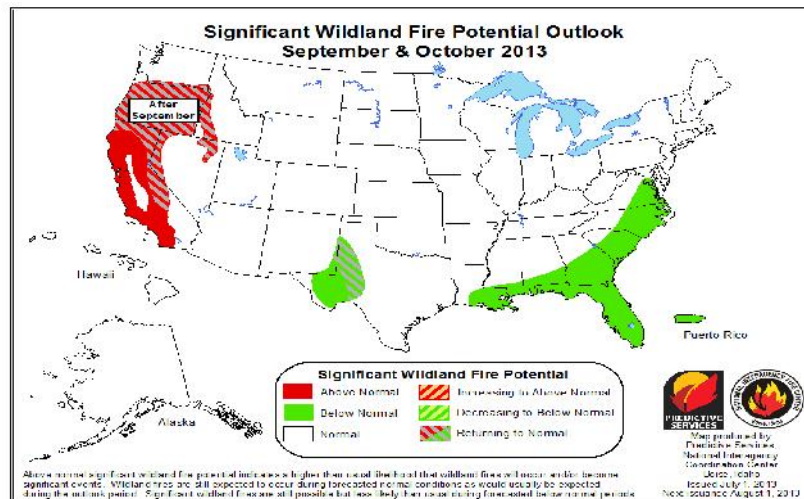


Figure 7: Wildland Fire Potential Outlook for the Months of September and October, Issued July 1st, Showing Normal Fire Potential in Central Idaho (Predictive Services).



Weather Observations and RAWS Data

a. Weather Observations

Planning efforts included observations from nearby RAWS stations including Skull Gulch, Taylor Ranch, Little Creek, Lodgepole, Indianola, Kriley Creek and portable RAWS deployed in the fire area. Observations from this station helped to inform modeling efforts and for weather forecasting.

b. RAWS Data

Special Interest Group (SIGs) were created in Fire Family Plus to track indices and to construct a TERM file. Two SIGs were created; a group of stations for early season before higher elevation fuels were available and a late season grouping that included these high elevation locations. The early season SIG included RAWS located at Taylor Ranch and Skull Gulch that were weighted evenly. The late season SIG added the Lodgepole RAWS with even weighting between all three stations. ERC graphs have been provided below for comparison with years with significant fire events as well as the ERC graph from the PSA SIG (EB02) for contrast over a larger area.

Figure 8: ERC Graph from the Papoose Early SIG.

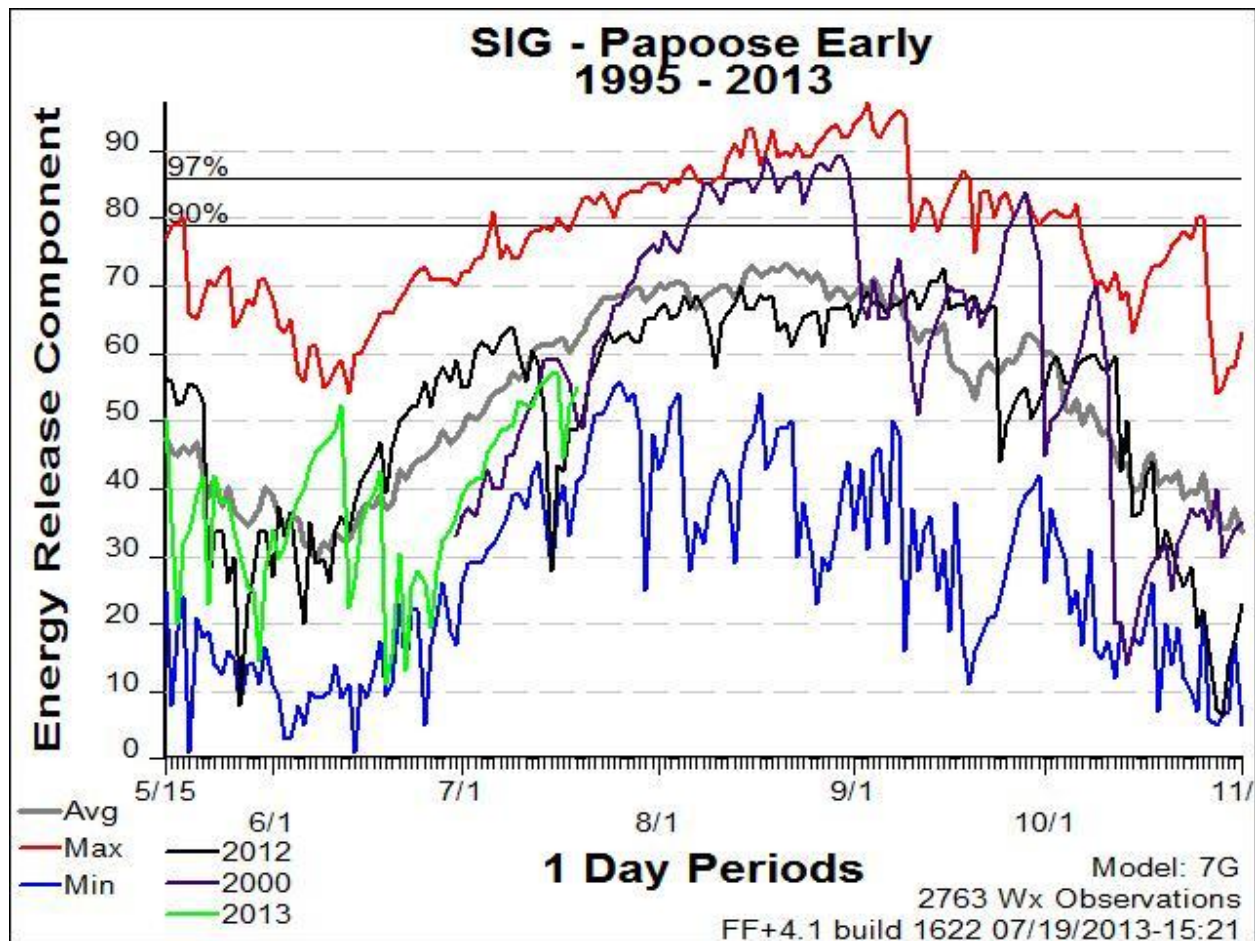


Figure 9: ERC Graph from the Papoose Late SIG.

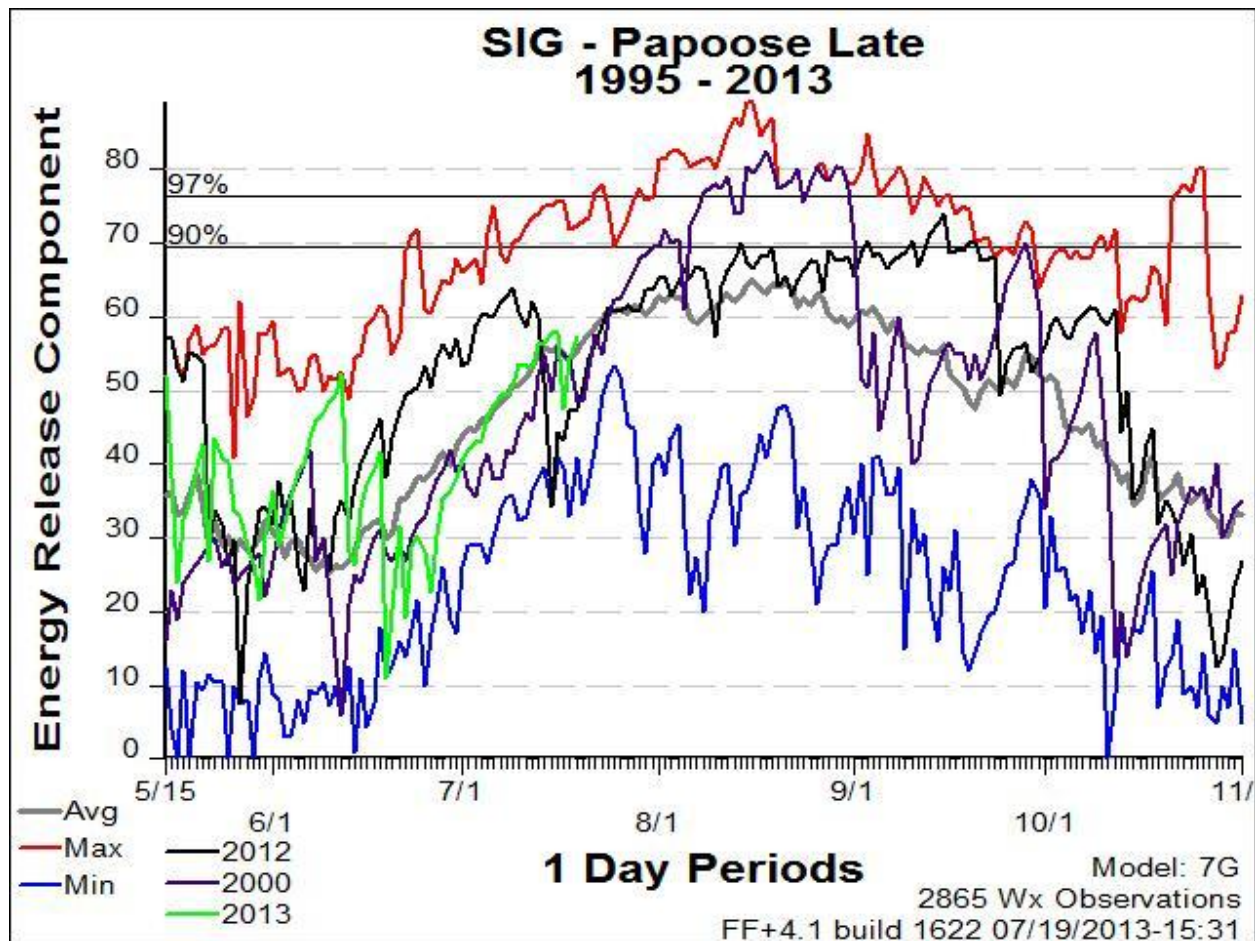
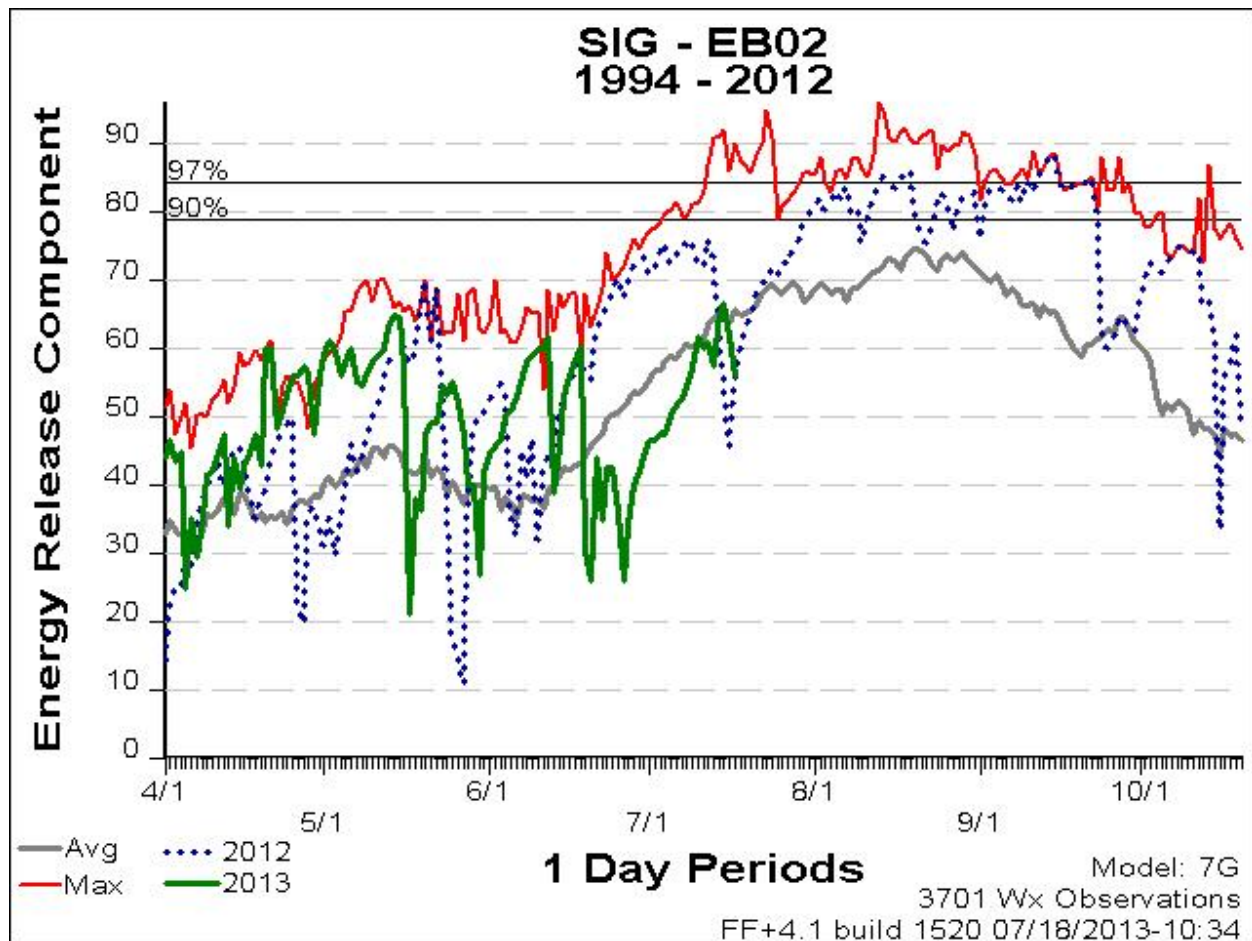
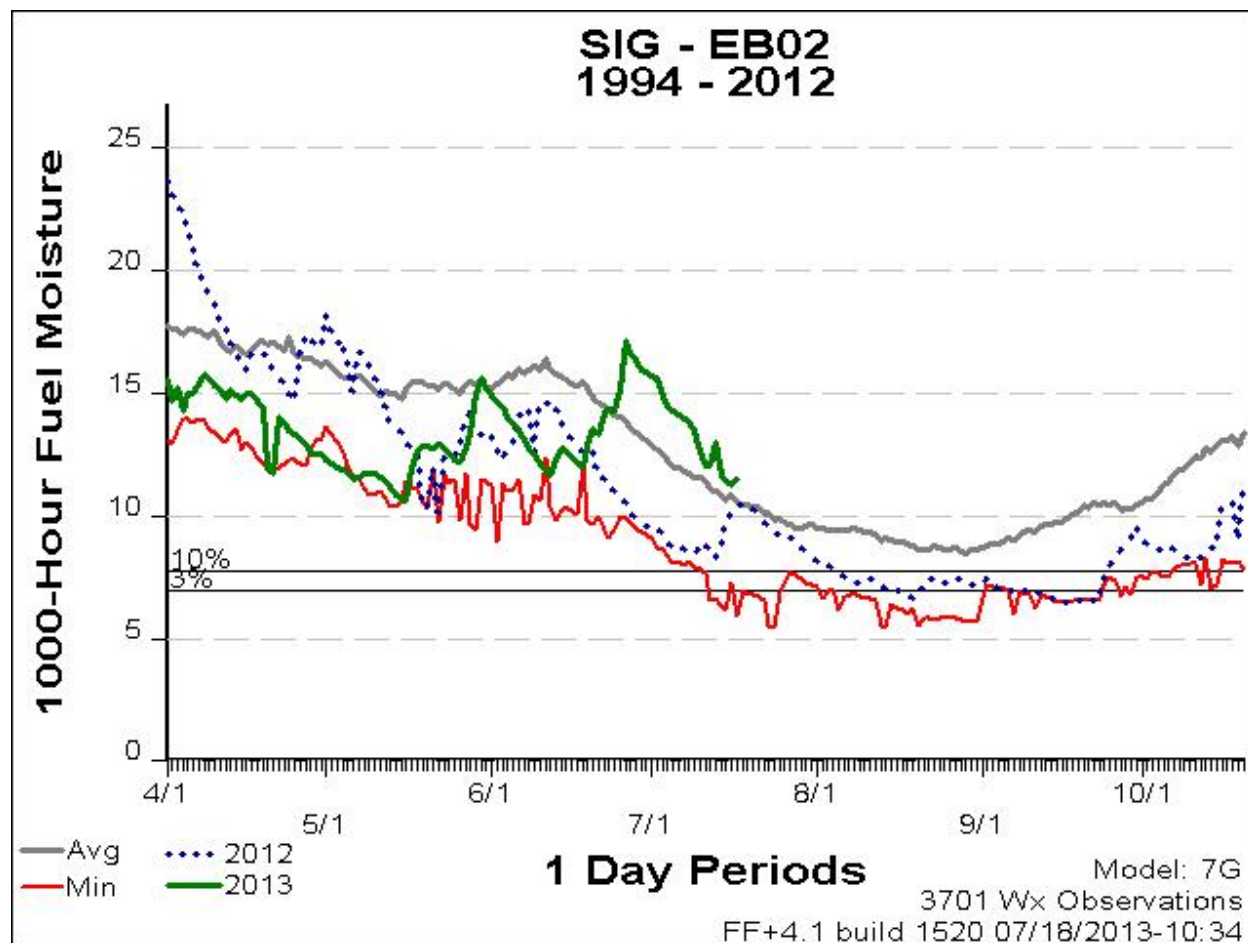


Figure 10: ERC Graph from the PSA EB02.



The 1000-hr fuel moisture values are noted in the Current Fuels Condition section. The graph below represents 1000-hr fuel moisture values for the PSA and provides a historical average to compare observations made during the fire season.

Figure 11: 1000-hr Graph From the PSA EB02.



Fire Environment Events for Large Fire Growth

a. High Haines Index

The Haines Index has a strong correlation historically to acres burned in central Idaho. A Haines Index of 5 or 6 general is related to the potential for significant fire spread events. Any time this is indicated in the forecast it should warrant a check of the fire perimeter for areas that may be prone to spread (continuous fuels, fire position on slope, etc.) and the capability of the current organization to handle the probable complexity added to the incident.

b. High Winds/Frontal Passage

Significant fire spread events have occurred under high winds (sustained 20' winds over 15 mph), specifically associated with a frontal passage. Dry cold front passage represents a significant concern because the winds are not followed by precipitation and as the winds move to from a south-southwesterly flow to a more northerly

influence fire spread can occur on multiple fronts. This is typical late in the fire season leading up to a season slowing or ending event. Any time a frontal passage or a cut-off low is forecasted fire growth should be expected and appropriate measures taken.

c. Active Fire on Both Sides of the River

In narrow drainages such as the Middle Fork fire behavior can be elevated when fire is actively burning on both sides of the river causing convective forces to increase fire intensity exponentially. If this occurs when a high Haines Index or high winds/frontal passage is forecasted this will be even more critical. Care should be given when this occurs when considering operational activities, closures for public safety and protection of values at risk.

d. Killing Frost Event

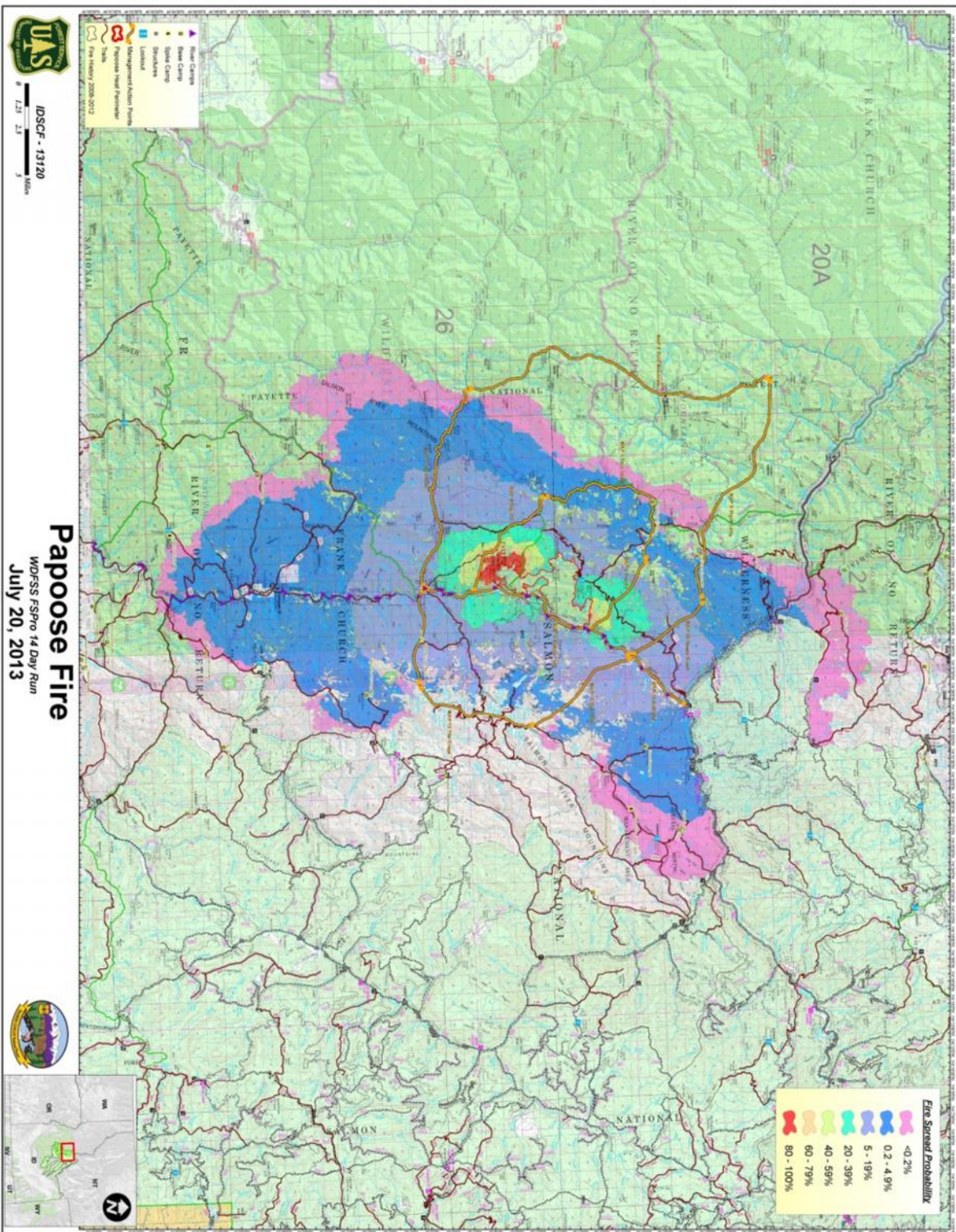
A killing frost event followed by warmer and drier conditions that would increase the fine fuel load. There is greater potential for the fire to advance several miles in one day after a killing frost. Incident personnel must monitor both the upper and lower RAWS and note when low temperatures are at 28 degrees or below for more than an hour. This will kill live fuels.

Fire Spread Probability (FSPro)

FSPro runs have been made to analyze the likelihood of spread towards values at risk. The ERC stream was calculated from the Taylor Ranch RAWS to align with the fire activity occurring in the lower half of the Middle Fork drainage. The Kriley Creek RAWS was used for the wind modeling because it's predominate wind pattern is for a north/south flow, similar to how the drainage is oriented in that section. As the fire spreads across the landscape future FSPro runs may need to utilize other RAWS. Specifically, the ERC values may be better represented by a station at higher elevation such as Skull Gulch or Lodgepole and winds may no longer be well represented by the north/south influence found at the Kriley RAWS.

The following map depicts the probability of fire spread over a 14 day period beginning on July 20th assuming no suppression action is taken on the fire and no manually created barriers exist (previous runs had used barriers along the Middle Fork and main stem of the Salmon River).

Figure 13: A 14 Day FSPro Analysis for the Papoose Fire (7/20/2013).



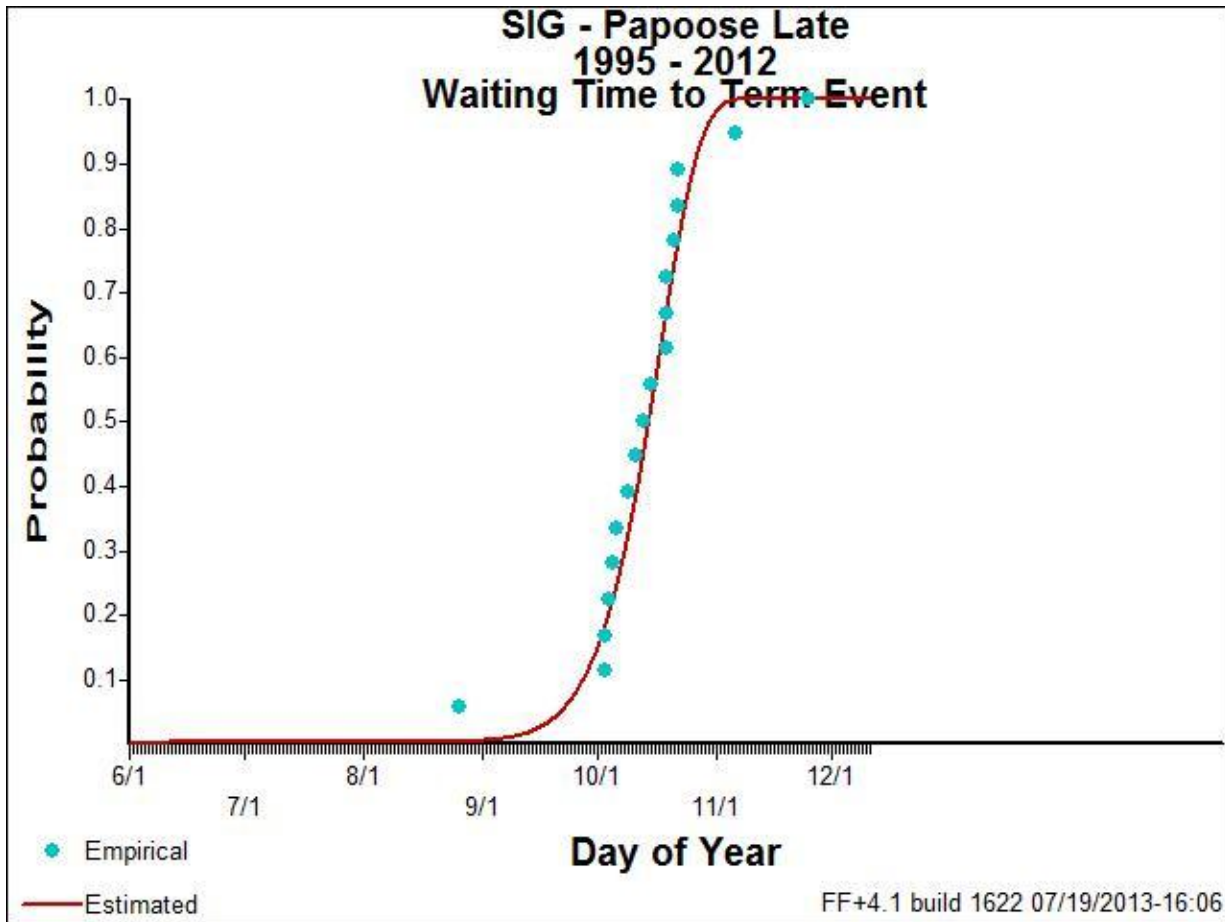
Predicted Season Ending Event (TERM File)

To determine the likelihood of a weather event occurring that will effectively halt the spread of fire from which the environment will not recovery until after the fire is declared out data was analyzed from nearby RAWS utilizing Fire Family Plus. The SIG was created for late season burning conditions that consisted of the Lodgepole, Taylor Ranch and Skull Gulch RAWS. A TERM analysis was conducted using the event locator and TERM calculator. The value used to determine the season ending event was the ERC value being reduced to a value less than 28 for a period of 5 days after August 15th. The TERM calculation has an alpha of 14.122, a Beta of 0.007 and an R-Squared of 0.983. The following table and graph shows the probability by date of the fire experiencing this season ending event.

Table 2: Probability of a Season Ending Event Occurring in the Fire Area.

Date	Probability
Oct. 7 th	25%
Oct. 15 th	50%
Oct. 22 nd	75%
Oct. 27 th	90%
Nov. 3 rd	99%

Figure 12: Graphical Representation of Waiting Time to the TERM Event.



MANAGEMENT ACTIONS / VALUES ASSESSMENT

Organizational Needs as Complexity Changes

The long term analysis of the Papoose fire indicates a high probability that long term management of the papoose fire will be needed (up to 90 days) to protect values at risk and provide for public safety. Trigger points listed below should be utilized to guide Fire managers and agency administrators on the level of Incident Command structure.

Adding Complexity

- **Black Lake MAP 9** would trigger the potential threat of the values identified on the main Salmon and additional values identified on the Payette NF. An increase in resources would be required if MAP 9 was breached.
- **Reese Creek MAP 10** would trigger a potential threat to the main Salmon with the values associated to both the main Salmon and Middle Fork river corridors.
- **Middle Fork MAP 6** and **Goat Mtn MAP 11** would increase the incident complexity as fire would be established on both sides of the Middle Fork of the Salmon. This complexity is increased due to a high level of recreational use, private land (MAP11), and infrastructure within and adjacent to the Bighorn Crag area.
- **Implementation of Multiple MAP's** within 3 operational shifts.

Complexity Minimized

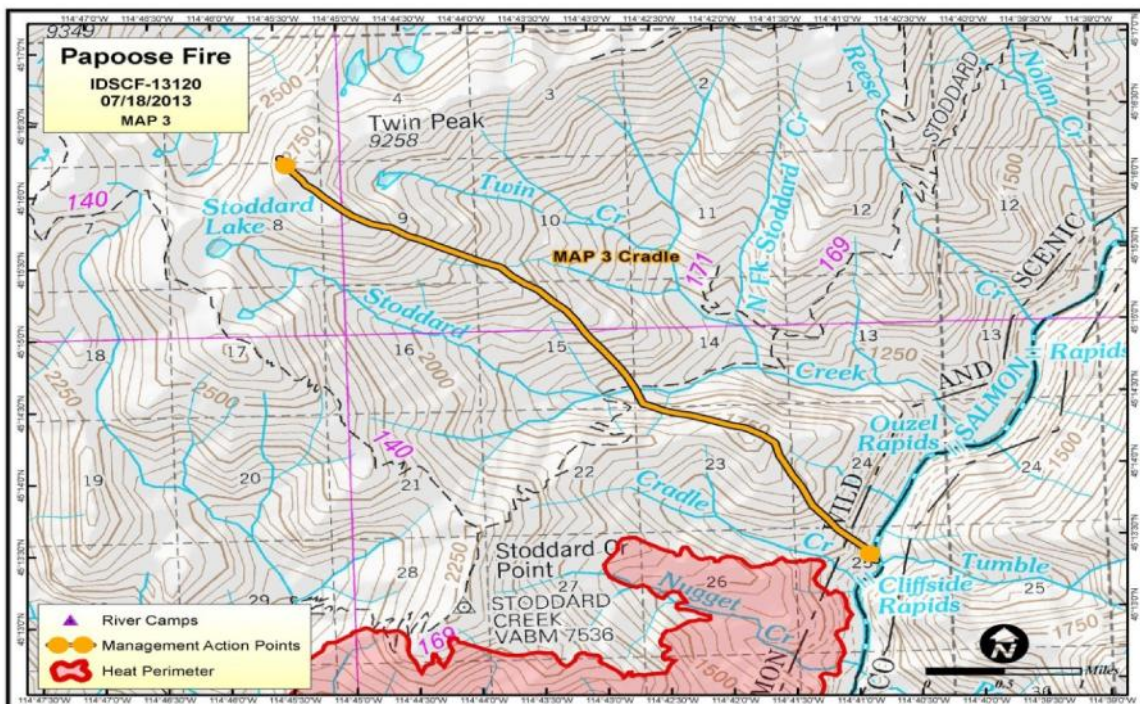
- When Energy Release Component (ERC) value drops to 25 or below for “Papoose-Late” Special Interest Group or (SIG). Fire behavior and spread would be minimal with an ERC value of 25 or below. Consider the use of an ICT4 or lower.

Daily variations in ERC are due to changes in moisture content of the various fuels present, both live and dead. The ERC is a cumulative or “build- up” type of index. As live fuels cure and dead fuels dry, the ERC values get higher thus providing a good reflection of drought conditions.

Management Action Points

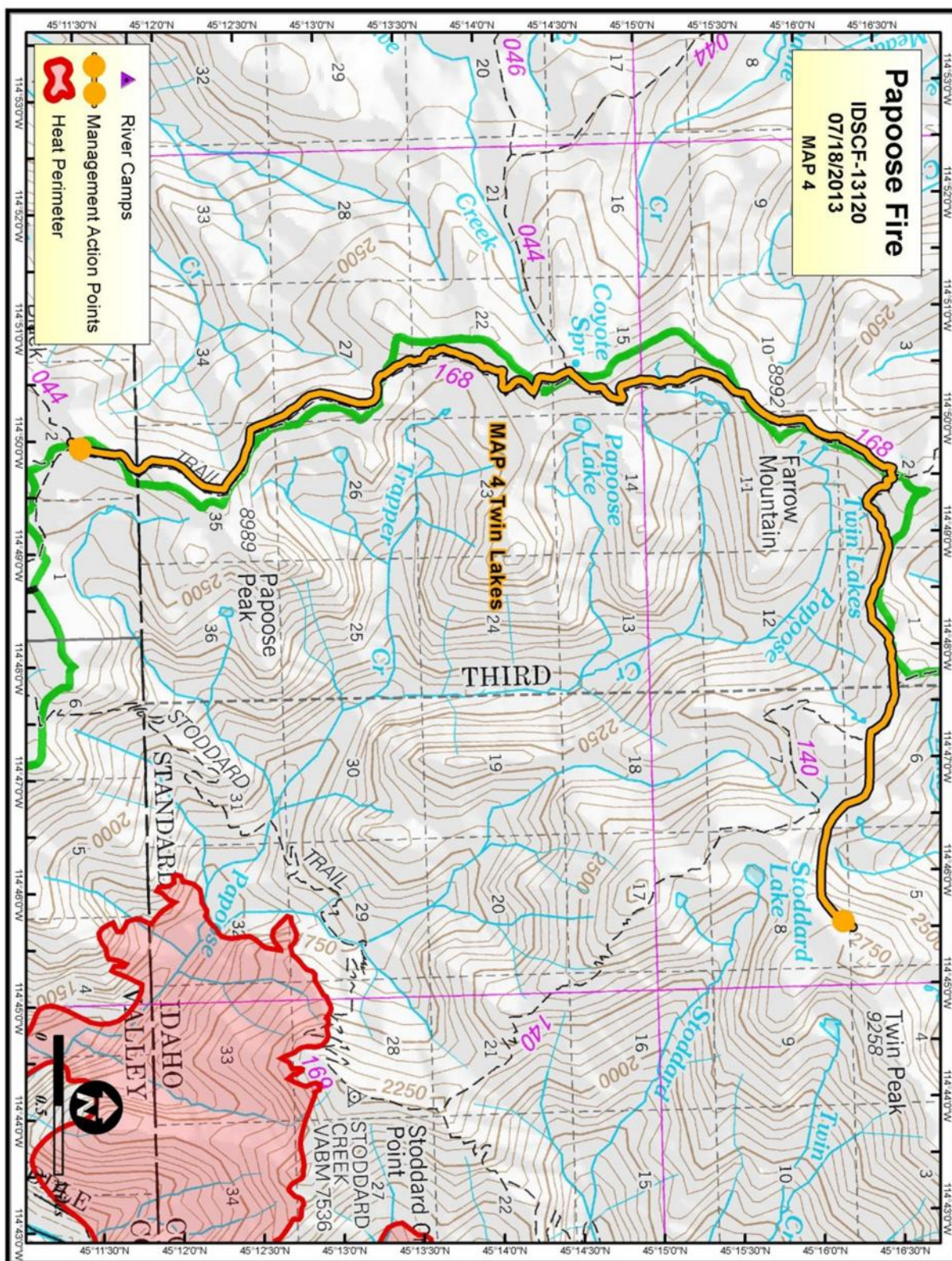
MAP 3 Cradle Creek

Condition	If the fire reaches or is predicted to reach MAP within 24 hours
Action	<ul style="list-style-type: none"> Consider temporary reassignments of Cliffside, Stoddard Bar, Ouzel and Otter Bar river camps Consider assessing and prepping Salmon River Lodge, Butts Creek Lookout Distribute reassignment information to Flying B lodge, Boundary Cr boat launch and Indian Cr cabin Helicopter assess river camps for fire behavior at Tumble Cr, Cradle Cr, Parrot Cabin, Parrot Placer, Lighting Strike, Ship Island, Papoose River Patrol will assess river camps at Tumble Cr, Cradle Cr, Parrot Cabin, Parrot Placer, Lighting Strike, Ship Island, Papoose River patrol will attempt to mitigate hazards to the camps listed for public safety Reassess the area/trail closure and planning area for potential extension Contact Salmon River Lodge for potential impacts to Kitchen Creek and Fern Creek outfitter camps
Resources	<ul style="list-style-type: none"> Qualified Boat crew Helicopter for camp assessments/area closure sweeps/transportation Squad of Firefighters for lookout assessment/prep PIO for distributing fire information to lodges District/Forest Special Uses coordinator for outfitter communication



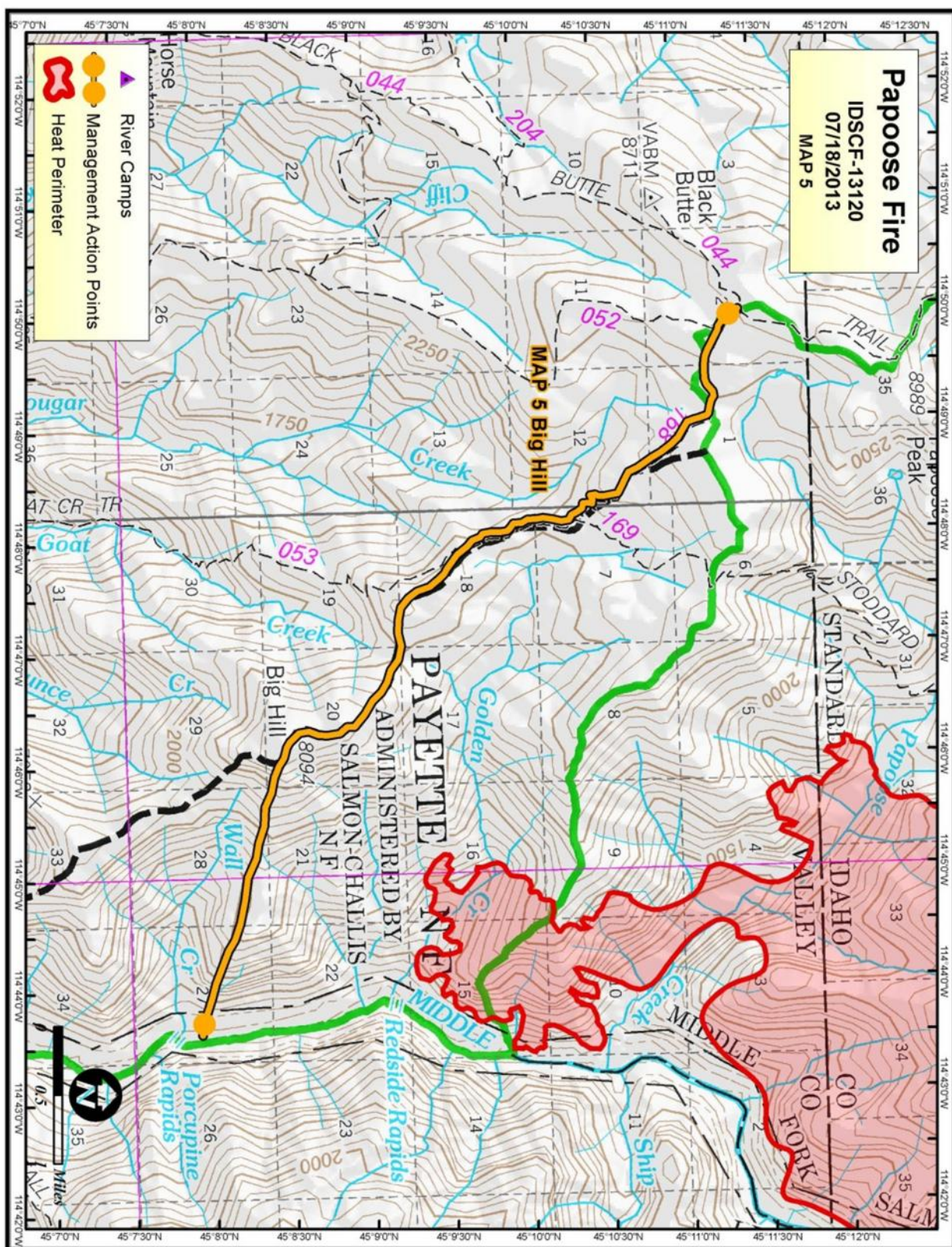
MAP 4 Twin Lakes

Condition	If the fire reaches or is predicted to reach this MAP within 24 hours.
Action	<ul style="list-style-type: none"> • Consider implementing Cold Meadows Guard Station structure protection plan • Consider implementing Root Ranch structure protection plan • Consider implementing Cabin Creek structure protection plan • Consider assessing/prepping Butts Creek Lookout • Contact Salmon River Lodge for potential impact to Kitchen Creek, Twin Lakes and Fern Creek outfitter camps • Reassess the area/trail closure and planning area for potential extension • Consider joint delegation to Incident Commander and daily communication/updates with the Payette National Forest • Contact Salmon River Lodge for potential impacts to Kitchen Creek and Fern Creek outfitter camps
Resources	<ul style="list-style-type: none"> • Helicopter for area closure sweeps/transportation • PIO for distributing fire information to lodges • District/Forest Special Uses coordinator for outfitter communication <p>Cabin Creek Resources</p> <ul style="list-style-type: none"> • DIVS or TFLD • 1 squad • ** See Cabin Creek structure protection plan for more details <p>Root Ranch Resources</p> <ul style="list-style-type: none"> • DIVS or TFLD • 1 20-person crew (T1 or T2) • ** See Root Ranch structure protection plan for more details <p>Cold Meadows</p> <ul style="list-style-type: none"> • DIVS or TFLD • 10 firefighters • ** See Cold Meadows structure protection equipment list for more details <p>Butts Creek Lookout</p> <ul style="list-style-type: none"> • Squad of Firefighters for lookout assessment/prep



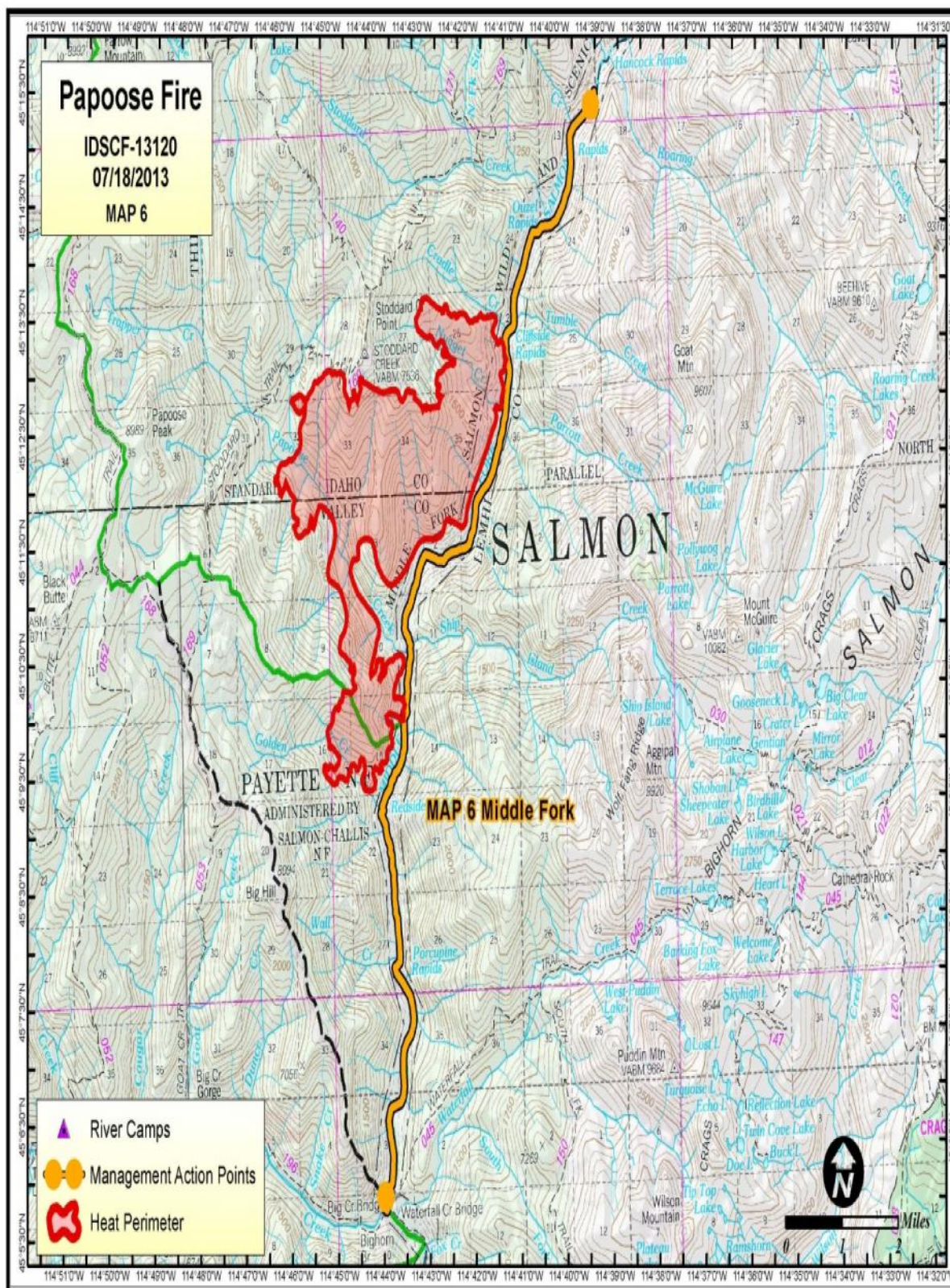
MAP 5 Big Hill

Condition	If the fire reaches or is predicted to reach within 24 hours
Action	<ul style="list-style-type: none"> • Assess opportunities to use air resources to check fire spread to the south • Continue to assess opportunities to hold fire north of trail 196 on Big Creek • Consider Implementing structure protection plan for Taylor Ranch • Consider Middle Fork river camp temporary reassignments for Love Bar, Elk Bar, Big Pine, Cutthroat Cove, Pinebluff, Last Chance, Big Creek, Redside • Consider Assessing/Prepping Rush Point Lookout • Consider implementing Cabin Creek structure protection plan • Consider assessing/prepping Cave Creek Bridge • Distribute reassignment information to Flying B lodge, Boundary Cr boat launch and Indian Cr cabin • Helicopter assess river camps for fire behavior at Redside, Papoose, Ship Island, Lightning Strike, Parrot Placer • River Patrol will assess river camps at Redside, Papoose, Ship Island, Lightning Strike, Parrot Placer • River patrol will attempt to mitigate hazards to the camps listed for public safety • Reassess the area/trail closure and planning area for potential extension
Resources	<ul style="list-style-type: none"> • Qualified Boat crew • Helicopter for camp assessments/area closure sweeps/transportation • PIO for distributing fire information to lodges • District/Forest Special Uses coordinator for outfitter communication <p>Cabin Creek Resources</p> <ul style="list-style-type: none"> • DIVS or TFLD • 1 squad • ** See Cabin Creek structure protection plan for more details <p>Taylor Ranch Resources</p> <ul style="list-style-type: none"> • DIVS or TFLD • 1 20-person crew (T1 or T2) • ** See Taylor Ranch structure protection plan for more details <p>Rush Creek Lookout</p> <ul style="list-style-type: none"> • Squad of Firefighters for lookout assessment/prep



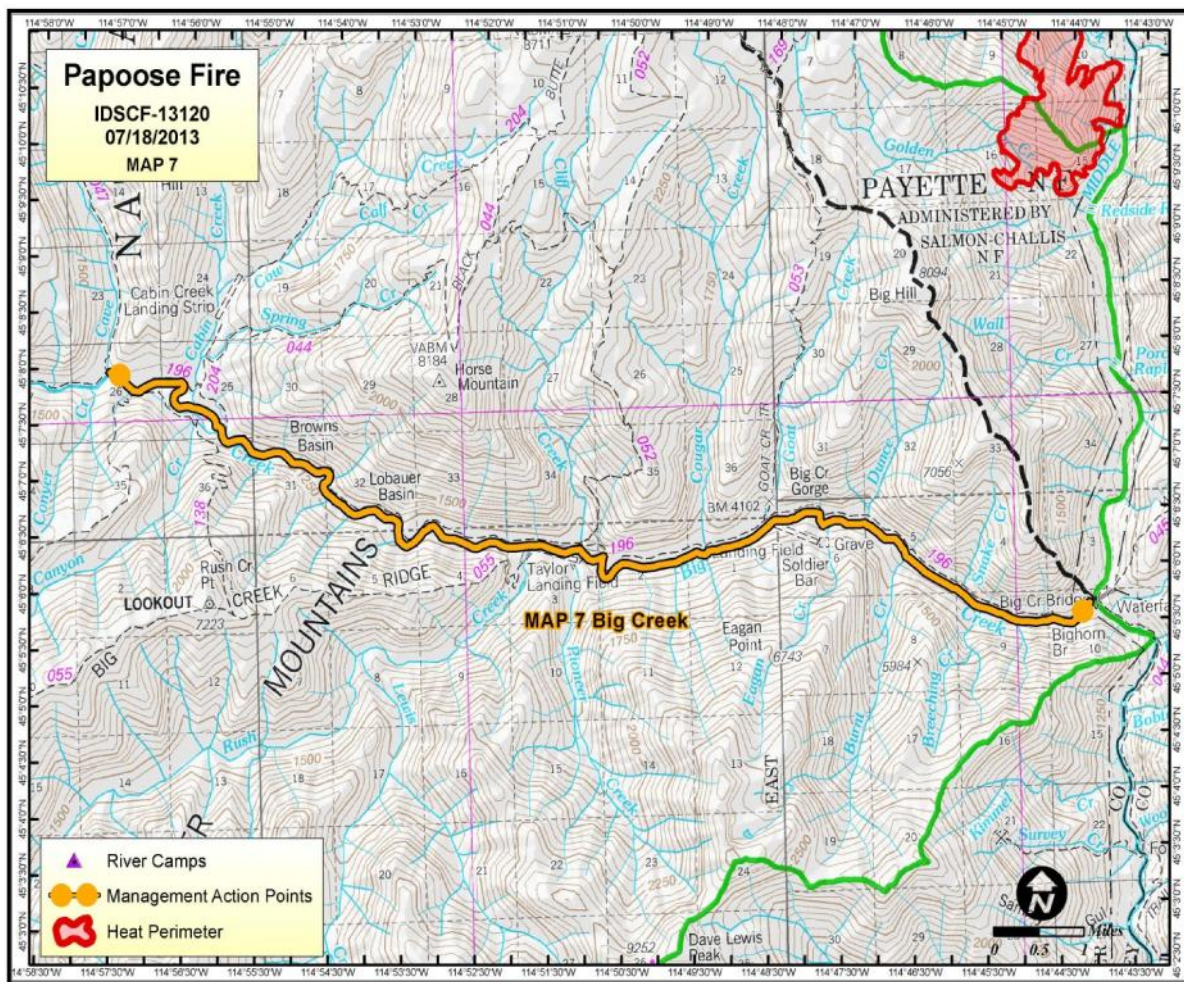
MAP 6 Middle Fork

Condition	If the fire crosses the Middle Fork and gets established on East side of river (Weather conditions of Haines level 6 and fire established in timber adjacent to the Middle Fork river, would increase the probability of triggering this MAP)
Action	<ul style="list-style-type: none"> • Assess level of Incident Management Organization to meet the complexity • Consider temporary river camp reassignments to Tumble Cr, Cradle Cr, Parrot Cabin, Parrot Placer, Lightning Strike, Ship Island, Papoose, Solitude, Goat Creek • Helicopter assess river camps for fire behavior at Tumble Creek, Cradle Creek, Parrott Cabin, Parrott Placer, Lightning Strike, Ship Island, Papoose, Redside • River Patrol will assess river camps at Tumble Creek, Cradle Creek, Parrott Cabin, Parrott Placer, Lightning Strike, Ship Island, Papoose, Redside • Consider extend planning area in WFDSS and publish new decision • Implement area or trail closures on east side of Middle Fork • Contact Bighorn Outfitters for potential impacts to Waterfall outfitter camp
Resources	<ul style="list-style-type: none"> • Incident Management team that meets appropriate complexity • Helicopter for river assessments, area/trail closure sweeps • Qualified Boat Crew • District/Forest Special Uses coordinator for outfitter communication



MAP 7 Big Creek

Condition	If the fire is predicted to reach MAP within 24 hours
Actions	<ul style="list-style-type: none"> Assess opportunities to use air resources to check fire spread to the south Continue to assess opportunities to hold fire north of trail 196 on Big Creek Consider assessing/prepping Monumental Ranch Consider assessing/prepping Monumental Bridge Implement area/trail closure for Big Creek Helicopter sweep trail system for hikers/campers that may be at risk based on current and expected fire behavior Consider daily communication/updates with the Payette National Forest
Resources	<ul style="list-style-type: none"> Type 1 or Type 2 IA crew (1) Type 3 Helicopter (1)



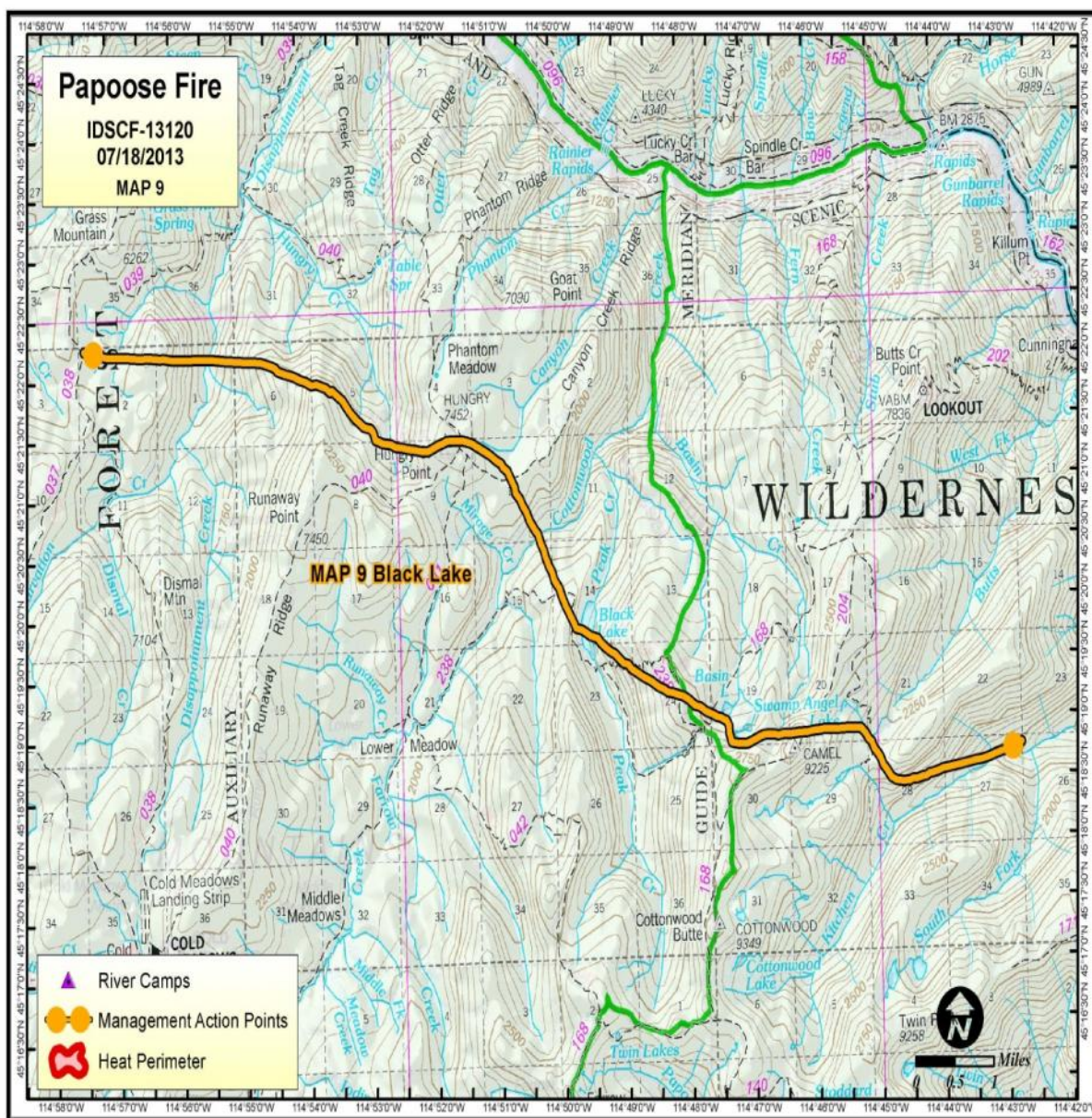
MAP 8 Cold Meadows

Condition	If the fire reaches or is predicted to reach MAP within 24 hours
Actions	<ul style="list-style-type: none"> • Look for opportunities to slow/check fire spread where appropriate • Consider assessing/prepping Monumental Bridge • Consider assessing/prepping McCalla Bridge • Consider assessing/prepping Artic Point Lookout • Consider assessing/prepping Artic Lodge • Consider assessing/prepping Smith Gulch • Consider assessing/prepping Blackie Foster Cabin • Contact Salmon River Lodge for potential impacts to outfitter/guide operations (Payette NF) • Contact Flying Resort Ranches (Root Ranch) for potential impacts to outfitter/guide operations (Payette NF) • Contact Mile High Outfitters for potential impacts to outfitter/guide operations (Payette NF) • Continue daily communication/updates with the Payette National Forest
Resources	<ul style="list-style-type: none"> • Type 1 or 2 IA crew (2) • Type 3 Helicopter (1) • District/Forest Special Uses coordinator for outfitter communication (Payette NF)



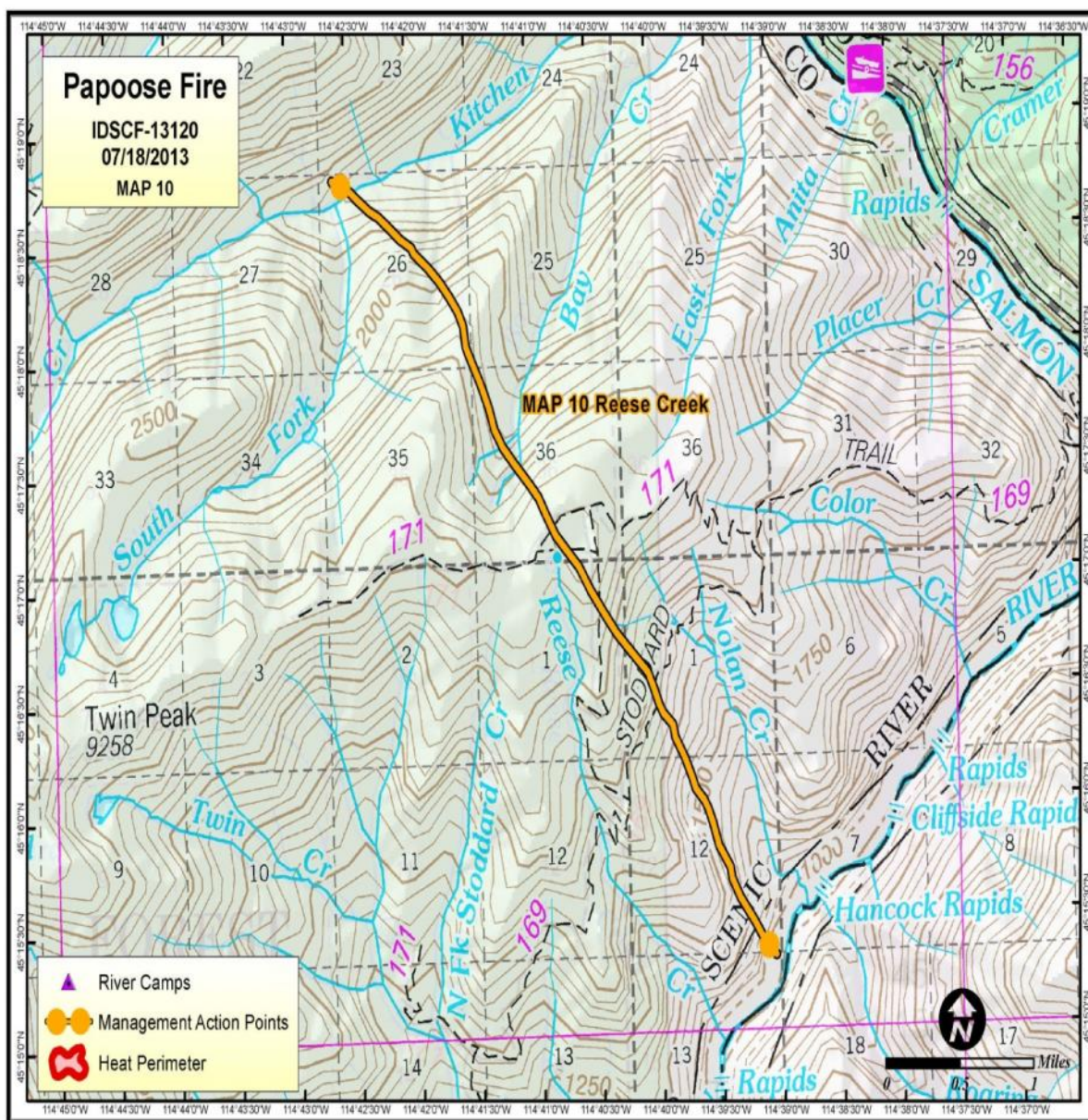
MAP 9 Black Lake

Condition	If the fire reaches or is predicted to reach MAP within 24 hours
Actions	<ul style="list-style-type: none"> • Assess level of Incident Management Organization to meet the complexity • Look for opportunities to slow/check fire spread towards the main fork of the Salmon River • Consider temporary reassignments to Lunch Bar, Horse Creek, Lower Horse Creek, Legend Creek, Spindle Creek, Phantom Creek and Bridge Piling river camps • Assess/prepare Cache bar boat ramp and infrastructure • Assess/prepare Corn Creek Campground and boat ramp • Assess/prepare Corn Creek American Indian Village, remains • Assess opportunities for potential firing operations around Salmon River Lodge • Assess/prepare Lantz Bar and Historic Orchard • Assess/prepare Stub Creek Infrastructures • Consider assessing/prepping Artic Point Lookout • Consider assessing/prepping Artic Lodge • Consider assessing/prepping Smith Gulch • Consider assessing/prepping Blackie Foster Cabin • Consider helicopter assessing river camps for fire behavior before re-assigning to Lunch Bar, Horse Creek, Lower Horse Creek, Legend Creek, Spindle Creek, Phantom Creek and Bridge Piling • Consider having River Patrol assess river camps and attempt to mitigate hazards for public safety • Reassess the area/trail closure and planning area for potential extension • Contact Salmon River Lodge for potential impacts to Disappointment outfitter camp • Distribute reassignment information to Corn Creek river checkers • Continue daily communication/updates with the Payette National Forest
Resources	<ul style="list-style-type: none"> • Incident Management team that meets appropriate complexity • DIVS (1) • Type 1 or 2 IA crew (2) • Type 4 engine (1) • Qualified Boat crew • Helicopter for camp assessments/area closure sweeps/transportation • PIO for distributing fire information/closure information



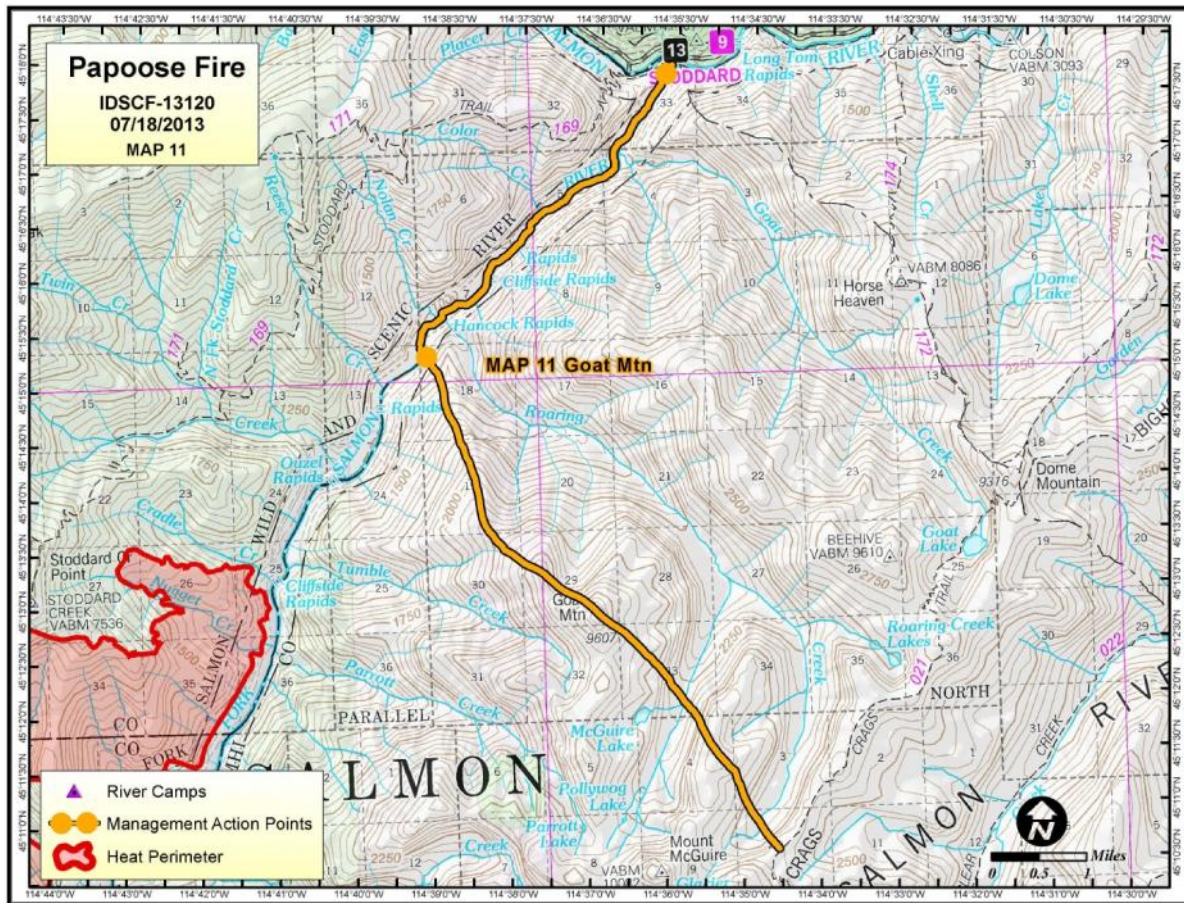
MAP 10 Reese Creek

Condition	If the fire reaches or is predicted to reach MAP within 24 hours
Actions	<ul style="list-style-type: none"> • Assess level of Incident Management Organization to meet the complexity • Look for opportunities to slow/check fire spread towards the main fork of the Salmon River • Assess/prepare Corn Creek Campground and boat ramp • Assess/prepare Stoddard pack bridge • Assess/prepare Stoddard trailhead • Assess opportunities for potential firing operations around Salmon River Lodge • Assess opportunities for potential firing operations around Sergeant Cabin • Once structures in the river corridor have been prepped and triaged, burnout opportunities may present themselves to bring fire down the mountain to square the fire off as it burns towards the Main Fork of the Salmon River • Consider temporary reassignments at Solitude and Goat Creek river camps • Helicopter assess river camps for fire behavior at Otter Bar, Stoddard Camp, Cliffside Camp and Ouzel • River Patrol will assess river camps at Otter Bar, Stoddard Camp, Cliffside Camp and Ouzel for public safety • Distribute reassignment information to Corn Creek river checkers • Reassess the area/trail closure and planning area for potential extension
Resources	<ul style="list-style-type: none"> • Incident Management team that meets appropriate complexity • DIVS (1) • Type 1 or Type 2 IA crews (1) • Type 4 engine (1) • Type 3 Helicopter (1) • Qualified Boat crew • PIO for distributing fire information • ** Refer to Confluence Complex Structure Assessment (Lower Panther Creek to Corn Creek Boat Launch) for detailed descriptions of values at risk within the Main Fork corridor



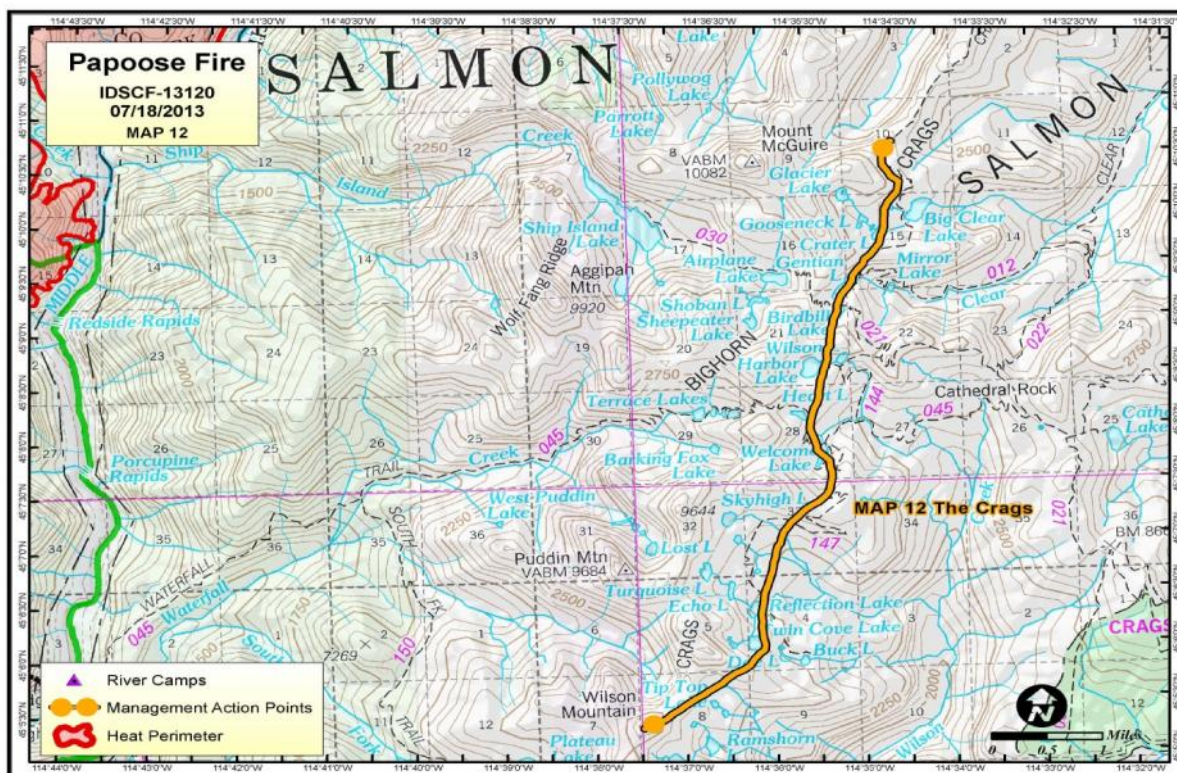
MAP 11 Goat Mountain

Condition	<p>If the fire reaches or is predicted to reach MAP within 24 hours (For the northern portion of MAP 11, Weather conditions of Haines level 6 and fire established in timber adjacent to the Middle Fork river, would increase the probability of triggering this MAP)</p>
Actions	<ul style="list-style-type: none"> • Assess level of Incident Management Organization to meet the complexity • Continue to look for opportunities to slow/check fire spread towards the Main Fork of the Salmon River • Provide point protection for values along the river corridor • Consider assessing/prepping Sagebrush Lookout • Once structures in the river corridor have been prepped and triaged, burnout opportunities may present themselves to bring fire down the mountain to square the fire off as it burns towards the Main Fork of the Salmon River • Helicopter sweep trail system for hikers/campers that may be at risk based on current and expected fire behavior • Consider area/trail closures extending east to Panther Creek Road and north to the Main Fork of the Salmon River • Consider temporary reassignments of Solitude and Goat Creek river camps • Helicopter assess Otter Bar, Stoddard Bar, Cliffside, Tumble Creek, Craddle Creek river camps for fire behavior • River patrol will assess river camps at Otter Bar, Stoddard Bar, Cliffside, Tumble Creek, Craddle Creek river camps for public safety • Contact Bighorn Outfitters for potential impacts to Horse Heaven, Corral Flat, Dome Mountain Spike, Deadhorse and Indian Point outfitter camps
Resources	<ul style="list-style-type: none"> • Incident Management team that meets appropriate complexity • DIVS (1) • Type 1 crew (4) • Type 2 IA crew (2) • Type 4 engine (4) • Type 6 engine (3) • Fixed wing ATGS platform (1) • Type 1 Helicopter (2) • Type 3 Helicopter (1) • PIO for distributing fire information • District/Forest Special Uses coordinator for outfitter communication • ** Refer to Confluence Complex Structure Assessment (Lower Panther Creek to Corn Creek Boat Launch) for detailed descriptions of values at risk within the Main Fork corridor



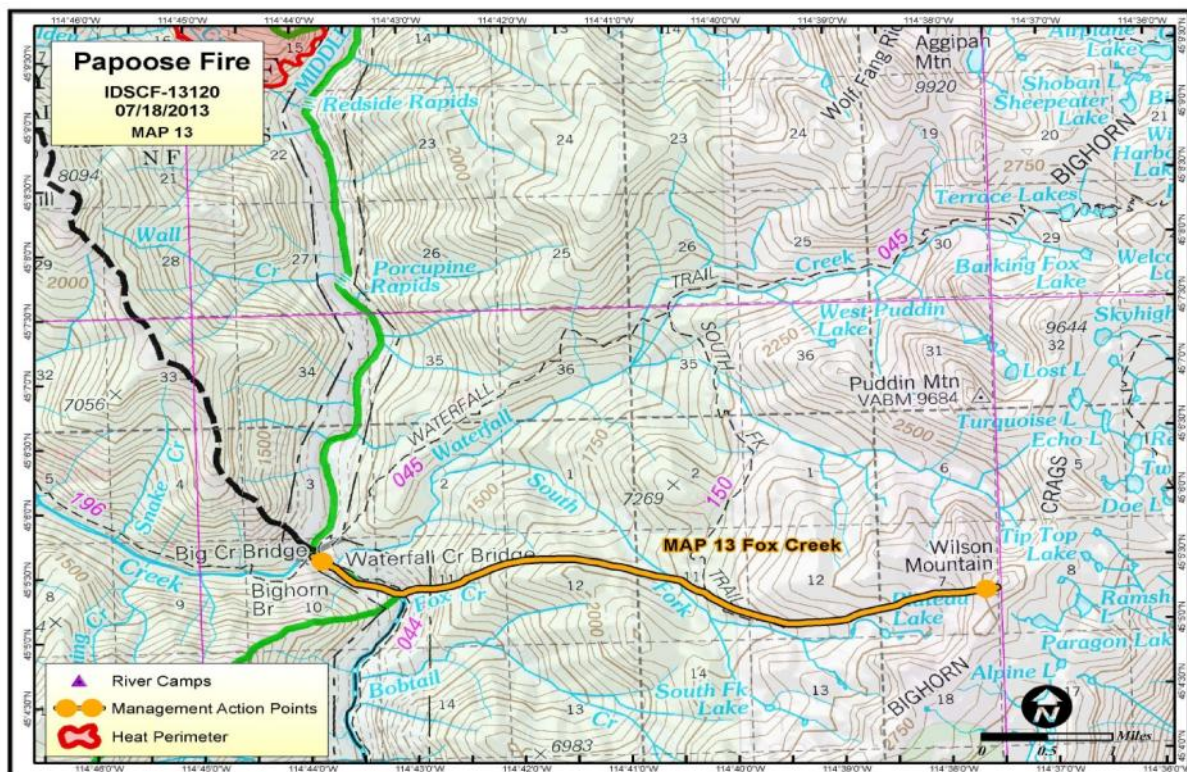
MAP 12 the Crags

Condition	If the fire reaches or is predicted to reach MAP within 24 hours
Actions	<ul style="list-style-type: none"> Assess/prepare Crags Campground/trailhead Assess/prepare Yellow jacket Lake Campground/trailhead Consider area/trail closures extending east encompassing Yellow Jacket Lake and Crags campgrounds/trailheads Consider assessing/prepping recreation improvements (toilets) at Gentian Lake, Bird bill Lake, Big Clear Lake and Terrace Lake Consider contacting Formation Capital mine for potential impacts to mining operations Helicopter sweep trail system for hikers/campers that may be at risk based on current and expected fire behavior Contact Bighorn Outfitters for potential impacts to Bighorn Base Camp and Wilson Creek outfitter camps Consider closing Porphyry Creek Road (Forest Road 112)
Resources	<ul style="list-style-type: none"> Type 1 or 2 IA crew (1) Type 3 Helicopter (1) PIO for distributing fire information District/Forest Special Uses coordinator for outfitter communication PIO for distributing fire information



MAP 13 Fox Creek

Condition	If the fire reaches or is predicted to reach MAP within 24 hours
Actions	<ul style="list-style-type: none"> Consider temporary reassignments of Fly Camp, Woolard Creek, Survey Creek, Grassy Flat II, Grassy Flat I and Wilson Creek River Camps Helicopter assess Fish Camp, Big Creek, Last Chance, Pine Bluff, Cutthroat Cove, Big Pine, Elk Bar and Love Bar river camps for fire behavior River patrol will assess river camps at Fish Camp, Big Creek, Last Chance, Pine Bluff, Cutthroat Cove, Big Pine, Elk Bar and Love Bar river camps for public safety Helicopter sweep trail system for hikers/campers that may be at risk based on current and expected fire behavior Consider area/trail closures extending east encompassing Yellow Jacket Lake and Crags campgrounds/trailheads Contact Bighorn Outfitters for potential impacts to Bighorn Base Camp and Wilson Creek outfitter camps
Resources	<ul style="list-style-type: none"> Type 3 Helicopter (1) PIO for distributing fire information to lodges District/Forest Special Uses coordinator for outfitter communication



Critical Values at Risk

Map 3 Cradle Creek

Name of Value	Description	Action Taken	Date of Action
Cliffside river camp	Dominated by large pine, sand and gravel bar (river right).		
Stoddard Bar	Large sagebrush bench with small trees and shrubs (river left).		
Ouzel	Small sandy beach (river left).		
Otter Bar	Long beach and sand bar (river right).		
Papoose	Situated at the mouth of Papoose Creek (river left).		
Ship Island	Rocky narrow tree-lined shore (river left).		
Lighting Strike	Small beach camp (river left).		
Parrott Placer	Large sandy beach surrounded by brush and trees (river right).		
Parrott Cabin	Cabin just below the mouth of Nugget Creek (river left).		
Cradle creek	On a bench some tree cover (river right).		
Tumble creek	High grassy bench at the mouth of tumble Creek (river right).		
Butts Creek Lookout	1934: L-4 cab on log crib.		
Salmon River Lodge	Kitchen Creek, Twin Lakes and Fern Creek outfitter camps.		

Map 4 Twin Lakes

Name of Value	Description	Action Taken	Date of Action
Cold Mountain Lookout	1934: 72 foot steel Aermotor tower.		
Cold Meadows Guard Station	USFS compound w/ multiple structures, outhouse and sign board, airstrip, windsock, rubber water bars		
Root Ranch Structure			
Cabin Creek Structure	USFS compound w/ 2 structures, 3 sided outhouse and sign board, airstrip and windsock		
Butts Creek Lookout	1934: L-4 cab on log crib.		
Salmon River Lodge	Kitchen Creek, Twin Lakes and Fern Creek outfitter camps.		

Map 5 Big Hill

Name of Value	Description	Action Taken	Date of Action
Love Bar	Small sandbar camp (river left).		
Elk Bar	Large sandbar (river left).		
Big Pine	Sandbar grading into timber (river right).		
Pine Bluff	Small sandy camp on a timbered site (river left).		
Last Chance	Narrow bench with sand, grass boulders (river right).		
Big Creek	Small brushy camp upstream from the mouth of Big Creek (river left).		
Redside	Small camp on a high bench with scattered timber (river left).		
Cutthroat Cove	Small camp backed by rock and brush (river left).		
Rush point Lookout	1935: L-4 cab.		
Cabin Creek Structures	USFS compound w/ 2 structures, 3 sided outhouse and sign board, airstrip and windsock		
Cave Creek Bridge			

Map 6 Middle Fork

Name of Value	Description	Action Taken	Date of Action
Redside	Small camp on a high bench with scattered timber (river left).		
Papoose	Situated at the mouth of Papoose Creek (river left).		
Ship Island	Rocky narrow tree-lined shore (river left).		
Lighting Strike	Small beach camp (river left).		
Parrott Placer	Large sandy beach surrounded by brush and trees (river right).		
Parrott Cabin	Cabin just below the mouth of Nugget Creek (river left).		
Cradle creek	On a bench some tree cover (river right).		
Tumble creek	High grassy bench at the mouth of tumble Creek (river right).		

Map 7 Big Creek

Name of Value	Description	Action Taken	Date of Action
Monumental Ranch			
Monumental Bridge			

Map 8 Cold Meadows

Name of Value	Description	Action Taken	Date of Action
Monumental Bridge			
Artic point lookout	72' steel Aerometer tower and accompanying log cabin living quarters, built in 1934		
Artic Lodge			
McCalla Bridge			
Smith Gulch			
Blacky Foster Cabin	1930: The building is constructed of three horizontal courses of large-diameter logs, topped by short vertical log sections forming the upper walls and gables.		

Map 9 Black Lake

Name of Value	Description	Action Taken	Date of Action
Cache bar boat ramp	Concrete ramp, picnic tables, toilets and changing room.		
Corn Creek campground	Boat ramp, toilets and trailers.		
Corn Creek American Indian Village Remains.	Dwellings.		
Salmon River Lodge	Kitchen Creek, Twin Lakes and Fern Creek outfitter camps.		
Butts Creek and Cunningham bar	Mining equipment		
Lunch Bar	10 person camp		
Horse Creek	30 person camp		
Lower Horse Creek	30 person camp		
Legend Creek	20 person camp		
Spindle Creek	10 person camp		
Phantom	20 person camp		
Bridge Piling	20 person camp		
Stud Creek	3 special use permit structures.		
Artic point lookout	72' steel Aermotor tower and accompanying log cabin living quarters, built in 1934		
Artic Lodge			
Smith Gulch			
Blacky Foster Cabin	1930: The building is constructed of three horizontal courses of large-diameter logs, topped by short vertical log sections forming the upper walls and gables.		

Map 10 Reese Creek

Name of Value	Description	Action Taken	Date of Action
Stoddard Pack Bridge	Cable suspended bridge.		
Stoddard trailhead	Gravel ramp, toilets and concrete rigging pad.		
Cache bar boat ramp	Concrete ramp, picnic tables, toilets and changing room.		
Corn Creek campground	Boat ramp, toilets and trailers.		
Corn Creek American Indian Village Remains.	Dwellings.		
Salmon River Lodge	Kitchen Creek, Twin Lakes and Fern Creek outfitter camps.		
Sergeant Cabin			
Butts Creek and Cunningham bar	Mining equipment		
Ouzel	Small sandy beach (river left).		
Cliffside river camp	Dominated by large pine, sand and gravel bar (river right).		
Stoddard Bar	Large sagebrush bench with small trees and shrubs (river left).		
Otter Bar	Long beach and sand bar (river right).		
Solitude Camp	10 person camp		
Goat Creek Camp	10 person camp		

Map 11 Goat Creek

Name of Value	Description	Action Taken	Date of Action
Stoddard Pack Bridge	Cable suspended bridge.		
Stoddard trailhead	Gravel ramp, toilets and concrete rigging pad.		
Solitude	10 person camp		
Goat Creek	10 person camp		
Cliffside river camp	Dominated by large pine, sand and gravel bar (river right).		
Stoddard Bar	Large sagebrush bench with small trees and shrubs (river left).		
Otter Bar	Long beach and sand bar (river right).		
Cradle creek	On a bench some tree cover (river right).		
Tumble creek	High grassy bench at the mouth of tumble Creek (river right).		
Sagebrush Lookout	R-4 14x14' cab, built in the 1930s		

Map 12 The Crag

Name of Value	Description	Action Taken	Date of Action
Yellow Jacket lake	Campground with Outhouse		
Crag Campground	A-Fame Cabin, Campground with outhouse		
Hoodoo Meadows	Campground		

Map 13 Fox Creek

Name of Value	Description	Action Taken	Date of Action
Gentian Lake	Outhouse		
Bird Bill Lake	Outhouse		
Terrace Lake	Outhouse		
Fly camp	Small sandy beach large rocks and short trees (river right).		
Woolard Creek	Large grassy bench (river right).		
Survey Creek	Cobble and sand beach good timber cover (river left).		
Grassy Flat II	Small bench with trees (river left).		
Grassy Flat I	Large open bench (river left).		
Wilson Creek River Camps	Sandy with scattered brush and one large Ponderosa tree (river right).		
Fish Camp	Very small rocky camp (river left).		
Cove	10 person camp		
Big Creek	Small brushy camp upstream from the mouth of Big Creek (river left).		
Last Chance	Narrow bench with sand, grass boulders (river right).		
Pine Bluff	Small sandy camp on a timbered site (river left).		
Cutthroat cove	Small camp backed by rock and brush (river left).		
Big Pine	Sandbar grading into timber (river right).		
Elk Bar	Large sandbar (river left).		
Love Bar	Small sandbar camp (river left).		
Formation Capital Mine			