

Halstead Fire

Long Term Strategic Analysis



Salmon-Challis National Forest
Sawtooth National Recreational Area
August 25, 2012

Content	Page #
Executive Summary	3
Introduction	4
Incident Information	4
Agency Administrator Expectations	5
Current Fire Situation	5
Management Objective	5
Fire Behavior and Fuels	5
Fire Behavior	6
Fuels	7
Photos of representative fuel models and fire behavior	8
Live Fuel Index	11
Weather Conditions and Drought Prognosis	12
Historical Fire Weather	12
Weather Outlook	12
Seasonal Outlook	12
Forecasted Fire Potential	13
Long Range Weather Outlook	14
Drought Prognosis	15
Long-term Risk Assessment	18
Weather Stations	18
Fuel Models	18
Seasonal Trend	19
Seasonal Comparison	20
Changing Day Lengths and Sun Angles	21
Probability of Season Ending Event	21
Large Fire Growth Event	22
WFDSS – Near Term Fire Behavior Analysis (NTFB)	23
WFDSS – FS Pro Analysis	25
Fuels & Fire Behavior Advisory	28
Salmon-Challis N.F., Mountain Pocket Card	29
Sawtooth National Recreation Area, STF North Pocket Card	30
Long Term Analysis Members	31
Appendix A - Season Ending Term File	32
Appendix B - Halstead Management Action Points (MAP's)	34

Executive Summary

The 2012 season for the fire area started with slightly below normal snowpack and near normal total precipitation. Fire indices from the Stanley and Bearskin RAWs stations have been showing a drier than normal fire season since early June, however all Long Term Models indicates that in early September there will be some fire slowing events that will drastic reduce the fire spread and growth rates.

Halstead Fire is over 100,000 acres in size and is a long duration event. It started on July 27th and has the potential to persistent into November. It is burning in rugged terrain and is predominately fuels driven; burning intensely and spotting in areas of beetle killed mixed conifer and slowing considerable in the sagebrush-grassland fuel types due to higher fuel moistures. Because of the fuels and dry conditions, fire spread was observed to be up to 3 miles per a day.

Large fire growth on the fire is usually associated with hot, dry, unstable atmosphere coupled with light winds, temperatures > 80°, relative humidity < 20%, and ERC > 66 and a BI > 70. Haines climatology indicates September should experience at least one day of Haines 6 and 1-2 days of Haines 5 or 6.

Warm and dry conditions will persist through August. Daily fire growth is expected to range from 1000 acres to 3000 acres. Depending on winds and fuels, growth can be in multiple areas on the fire or in one or two areas. The 8-14 day weather forecast shows temperature and relative humidity moderating to seasonal norms. Long term climate projections from the Climate Prediction Center suggest a high probability of above projections continue to show a normal level of precipitation for September. Given the short-term weather forecast and uncertainty in September weather, the primary concern is not how long the fire will persistent, but when will burning conditions moderate and reduce risk to values and lower incident complexity.

This long term assessment will estimate risk to values at risk in and around the Halstead Fire area. We define risk as the probability multiplied by consequence, and the assessment provides agency administrators and the incident management team with the necessary information to assist with mitigating risk while meeting incident objectives. In other words, informs decisions on the “Right place, right time, right resource”.

The long term strategic assessment team’s observations include:

- The fire will continue to have active burning days up to 1000-3000 acres into the first week of September.
- Fire behavior will moderate after September 8 and continue to decrease until the season ending event.
- Even under moderate conditions there is potential for a few growth days up to 1000 acres on BI days greater than 70.
- Historic data suggests the fire ending event will not occur until late October or early November.

INTRODUCTION

This long-term strategic analysis was developed because the Halstead Fire is a long duration event, as determined locally and compared to historic fire potential and durations. This plan is a guide and uses current available information and policy interpretations as well as application of current available technology to look at the fires potential, emerging approaches to risk management, and strategic planning which will help in management of the fire. The fire is located within an area where values to be protected are high. As of August 25, National preparedness level is 4 while the Regional preparedness level is 3. National fire activity is currently high and resource availability is poor at this time.

Updating of this plan will be 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.

Incident Information

Fire Name	Halstead
Location	Salmon-Challis National Forest Middle Fork Ranger District And Sawtooth National Recreational Area Stanley Ranger District
Start Date/Time	07/27/2012
Size	100,187 acres (as of 8/25/12)
Cause	Lightning
Geographic Area	Eastern Great Basin
Administrative Unit	Salmon-Challis National Forest- Middle Fork Ranger District, Sawtooth National Recreational Area – Stanley Ranger District
Fire Number	ID-SCF-012151
Involved Cooperators	Custer County, Idaho State Police, Custer County Sheriff, Boise County Sheriff, Valley County Sheriff, Town of Stanley, Sho-Ban Tribe, Idaho DOT, Salmon River Electric Co-op, Idaho Fish & Game, Stanley Fire Dept., Clayton Fire Dept., North Custer Dept., Stanley Ambulance, and Idaho State Parks

Fire Management Units	
IDBOF	1 - Resource Benefit
IDIFD	CHALLIS
IDIFD	EAST FORK
IDSCF	01 - Frank Church River of No Return Wilderness
IDSCF	01.2 - Frank Church River of No Return Wilderness - Challis
IDSCF	02 - Suppression Wildland Urban Interface
IDSCF	03 - Suppression Non-WUI
IDSTF	10 - Sawtooth Wilderness
IDSTF	11 - Upper Salmon River Valley
IDSTF	12 - White Cloud - Boulder
IDSTF	13 - East Fork Salmon River
IDSTF	6 - Big Wood River
IDTFD	SNF6

Agency Administrator Expectations

The priorities and expectations given by the Agency Administrator are:

- To protect human life;
- Protect values at risk;
- Create a strategy to assist in the management of the fire until a season ending event;
- Provide for timely and accurate fire information;
- And contain costs commensurate with values at risk.

This is a value driven suppression strategy with limited perimeter control 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 identified value at risk

Current fire situation

The Halstead fire was reported on Friday, July 27th, 2012, in the Halstead drainage approximately 16 miles Northeast of Stanley, ID. This area has a history of rapidly growing fires and extreme fire behavior. The fire has been primarily a fuels driven event. The fire will be 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. In other words, the strategy is predicated on the "Right Place, Right Time, Right Resource".

On August 1st, 2012 Bob Houseman NEMO Type I team took over management of the fire from a local type 3 team. Fire behavior at that time was very active with rapid surface and crown fire spread. Spotting was observed to be about 1 mile with the extreme fire behavior days. Main carrier of fire spread was in timber litter, bug kill timber, along with heavy down and dead fuels. Flame lengths were approximately two

to four feet in the surface fuels and 50 to 150 feet associated with crown fire activity. Heavy smoke was generated during the major fire runs.

MANAGEMENT OBJECTIVES AND REQUIREMENTS

Objectives

Strategic objectives and management requirements are from the Fire Management Units (FMU's) located within the planning area in WFDSS. General overall objectives/requirements that are in WFDSS are common to all fires on the Forest. Incident Objectives were derived from District resource specialists, Fire Management and Local Line Officers. The following are the Forest Incident Management objectives.

Incident Management Objectives

- Incorporate sound risk management principals during decision processes in order to provide for firefighter & public safety.
- Ensure timely and accurate information is distributed to interested parties. Keep the Agency Administrator informed of public meetings and media contacts. Maintain contact with the local Public Affairs Officer to ensure you can build on our existing relationships, contacts and key messages.
- Identify and execute the options that balance safety with the highest probability of success to reduce the risk of fire spreading to private land, Agency infrastructure, and historic structures.
- Minimize economic and social impacts affecting the Middle Fork River corridor, Sawtooth Valley, and the Custer Motorway, Highway 21, and Highway 75 Corridors.
- Be proactive in monitoring, developing and implementing MAP's.

Strategic Objectives:

The Halstead fire has numerous strategic objectives. These objectives are clearly articulated in the WFDSS decision document.

Fire Behavior and Fuels

Halstead Fire Behavior Summary

The Halstead Fire was started by lightning on July 27th, 2012 in the Halstead Drainage on the Middle Fork R.D., Salmon Challis N.F.. Fire behavior at that time was very active with rapid rates of surface fire spread and active crown fire. Spotting was observed to be about 1 mile. The main carrier of the fire was timber litter, bug kill timber along with heavy down and dead fuels. Observed flame lengths were approximately two to four feet in the surface fuels and 50 to 150 feet associated with crown fire activity.

Fuels

The major fuel types in the fire area include mixed conifer (lodgepole pine, spruce, sub-alpine fir), with large areas of bug kill (fine fuels intact on branches), scattered pockets of dense understory fir saplings, and some open meadows in the upper-elevations. The lower-elevations contain more patchy timber types (depending on aspect) and open areas of grass/sage. The following section gives a summary of these fuels, associated fuel models, and moisture content estimates.

The fire is predominately fuels driven and tends to follow continuous beetle kill timber and areas of heavy surface fuels. The primary fuel models for the timber types as identified in the Landfire Refresh 2008 1.1.0b include TU5, TL8, and TL3. Grass and grass/shrub models include GR1, GR2, GS1 and GS2. The grass/shrub areas have only burned sporadically thus far into the incident. However, as freezing temperatures occur in the late season, grass and shrub may become more available for fire spread. Other fuel types exist on the landscape but in lower abundance.

The Halstead fire has exhibited high fire intensity in the beetle killed timber. This is primarily due to the very dry, standing dead fuels that quickly transition a surface fire into the aerial fuels. Abundant spotting, both short and long range, caused by passive and active crowning has resulted in significant fire spread.

Vegetation Type	Scott & Burgan Fuel Models	Local Moisture Sampling	Landscape Calibration Notes
Mixed conifer (Subalpine fir, Lodgepole pine, Douglas fir)	TU5, TL3, TL8	ABLA = 106% PICO = 120% PSME = 112% <i>*taken 8/16/12 between 7500' and 8400'</i>	Extremely dry conditions in this fuel type compared to past historical moisture conditions. Beetle kill fuels have be key to fire intensity and spread.
Grass/Shrub	GR1, GR2, GS1, GS2	Live herbaceous = 36% Live woody = 70% <i>*Stanley RAWS NFDRS</i>	Grass fuels green in drainages and in understory areas. Sage and other shrub fuels still flowering in places.
Dead fuel moisture – Stanley RAWS 8/22/12			
1 hr fuels		4%	
10 hr fuels		5%	
100 hr fuel		11%	
1000 hr fuel		9%	

Table 1 - Shows fuel types and approximate moisture percentages within the fire area.

The following photos are representative of the fuel models and fire behavior:



Photo 1- Fire behavior in beetle killed mixed conifer fuel type. Areas of patchy timber and open break up the continuity of continuous mixed conifer fuels.



Photo 2 – Fire Behavior in beetle kill timber areas.



Photo 3 – Fire behavior in patchy timber fuels/open grass shrub.



Photo 4 – 2006 Potato Fire has limited fire growth on east side of Halstead Fire.



Photo 5 – Patchy mixed conifer/beetle kill fuels and grass/sage along ID 75 corridor/Salmon River drainage.

Live Fuel Index

The Live Fuel Index (LFI) is a bioclimatic index of plant activity and it relates to the state of live vegetation. It is a relative index of plant functioning and can show events like green up and senescence of foliage as well as curing of herbaceous fuels. The following graph shows the index for the Halstead Fire area.

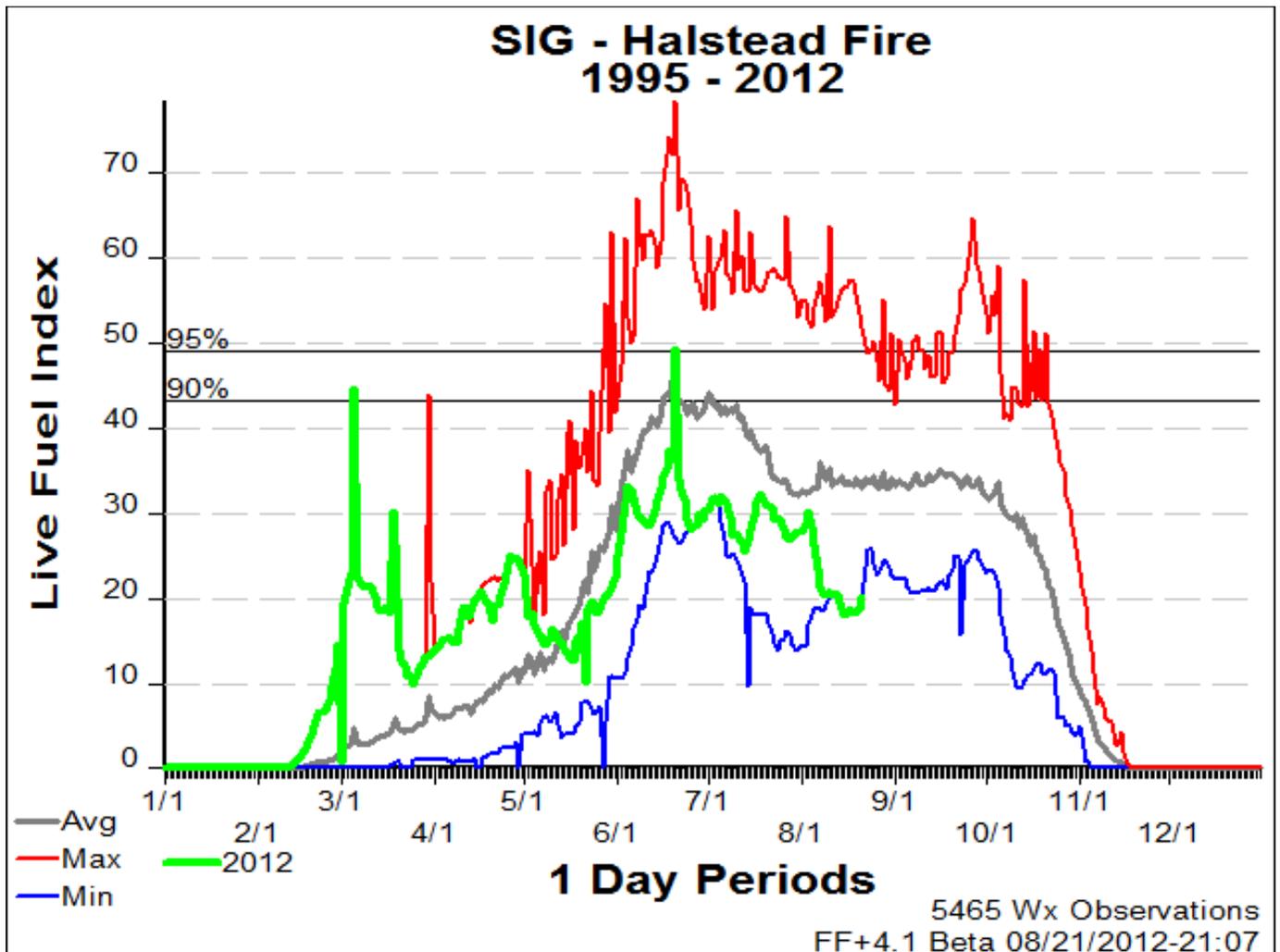


Figure 1: Stanley and Bearskin RAWs stations Live Fuel Index showing at or breaking new lows.

The current index level is well below the historical normal level for this time of year. This year's index peaked June 20th at 50 which is right at the 95th percentile level and then it took a steep decline to the current level. If persistence continues to follow historical norms the Live Fuel Index should have a slight recovery and then continue to drop throughout the rest of the year.

Weather Conditions and Drought Prognosis

Historical Fire Weather

High pressure aloft settled over the central and western U.S. in July, bringing unusually hot weather to much of the central and eastern states. Meanwhile, a series of lows moved into the West while a persistent monsoon surged into the Southwest, keeping temperatures cooler than normal along the West coast and across the southwest deserts.

Temperatures soared to six to ten degrees above normal over much of the central and northern plains and the mid and upper Mississippi Valley. Overall, most of the country experienced above normal temperatures except along the west coast, the far southwest and along the western Gulf coast, where temperatures were generally two to four degrees below normal.

Precipitation anomalies were largely driven by the persistent monsoon in the southwest where Arizona, southern Nevada, Utah, and western Colorado received 150 to 400 percent of normal rainfall. Also in the west, much of eastern Washington and north central Oregon recorded over 200 percent of normal precipitation. In the east, the Gulf coast from central Texas to Mississippi as well as the Tennessee Valley and the Appalachians received 150 to 300 percent of normal rainfall.

Few areas of the country escaped some level of drought, including the northwest and far northern Rockies, the Gulf coastal region, the mid-Atlantic coast, far northern New England, and the northern Great Lakes region. The rest of the nation experienced worsening drought conditions with portions of at least 34 states in severe to exceptional drought.

Weather Outlook

Gusty west winds will move into the east central Idaho Mountains today and spread throughout Idaho and western Wyoming on Friday as a trough of low pressure tracks along the Canadian border. Temperatures will drop across the north for Friday (near 80 in Boise), but any moisture stays well north of the area and RH's will be low enough to create a critical fire weather environment, especially for ongoing fires.

Warm, unstable conditions return to central Idaho on Sunday/Monday as the ridge rebuilds across the four corners areas. The ridge weakens some for the second half of next week as the low off the Pac NW coast looks to lift out and into southern Canada.

Seasonal Outlook

Rising sea surface temperatures in the equatorial Pacific Ocean and other oceanic indicators continue to point to El Niño conditions developing by late summer. However, it is likely that atmospheric effects of El Niño will not be felt across the U.S. until this fall or winter.

Current climate projections by the Climate Prediction Center continue to trend toward a neutral but transitioning state as summer ends and fall begins. For August, this would suggest a very high probability of above normal temperatures over most of the U.S. except the southwest, along the Gulf coast, and along the Oregon, Washington and southern Alaska coasts. Precipitation projections for August indicate a high likelihood of below median precipitation for the northwest and the mid and upper Mississippi Valley with an elevated likelihood of above median precipitation in the Four Corners region and for northern Alaska.

For September through November, climate projections suggest a continuation of the above normal temperatures for much of the eastern two-thirds of the nation and for northern Alaska. Precipitation projections continue to favor a likelihood of above median precipitation for the southwest and northern Alaska and also the Gulf Coast region. Below median precipitation is likely for the Northwest and the southern Alaska coast.

Forecasted Fire Potential Outlook

The threat for new large fires has decreased over the past week with cooler, more stable conditions across Idaho. Ongoing large fires will still see significant growth potential for the next week or so as wind and an unstable atmosphere remain in the forecast.

New fire activity across Idaho is expected to be low as lightning activity will be very minimal for the next week and more resources are becoming available for IA.

Below normal live and dead fuel moistures, and above normal Energy Release Components (ERCs), especially in the fine fuels, stretch across much of the central western U.S. from the southern California mountains east through Nevada; southeast Oregon; southern Idaho; northwest Utah; southern Montana; Wyoming; and northwest Colorado.

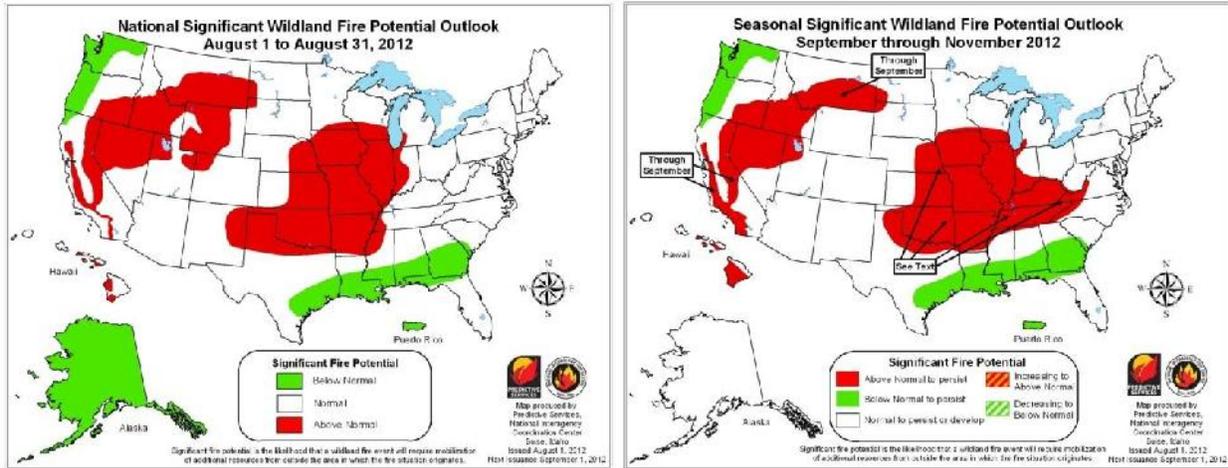
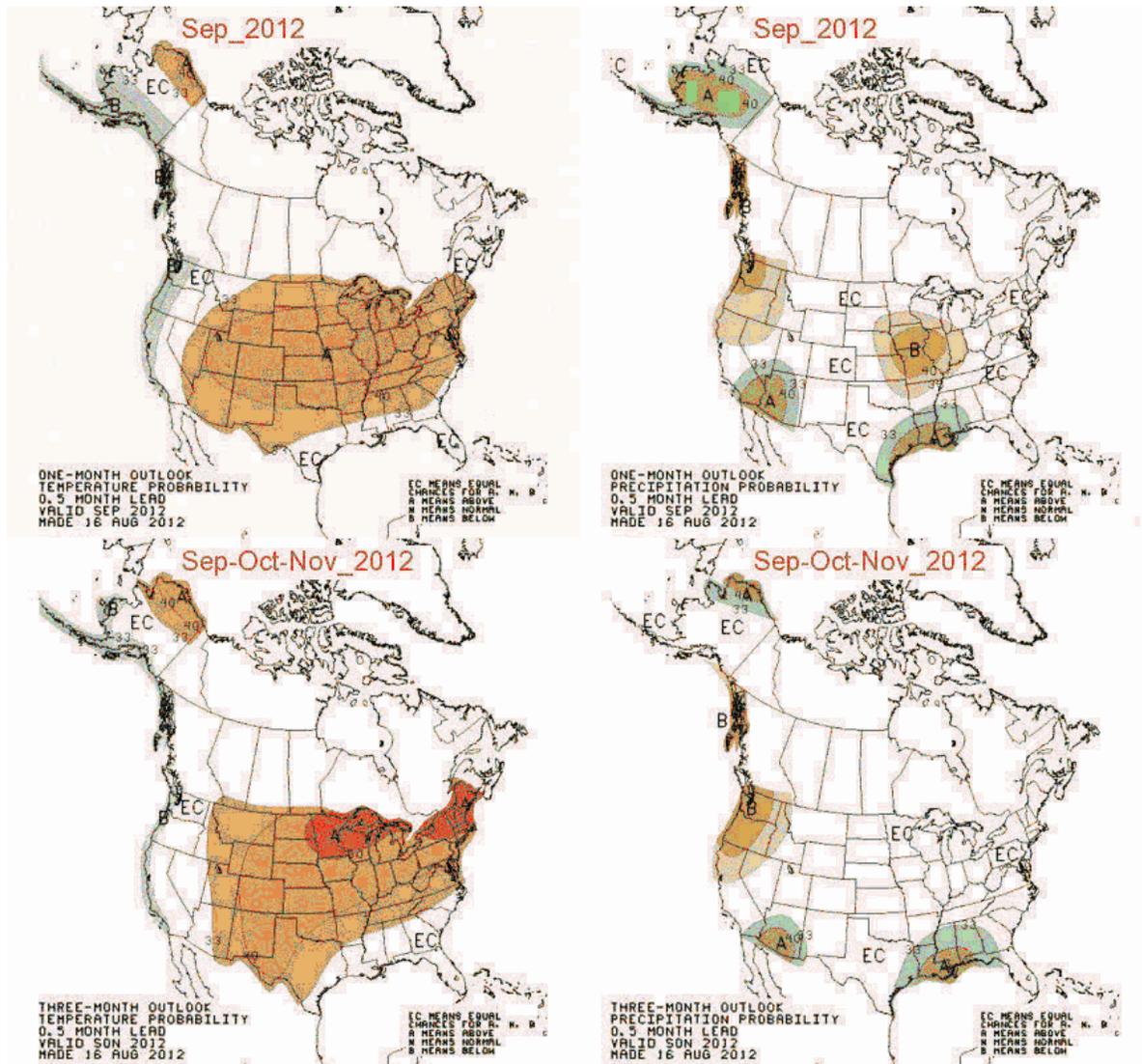


Figure 2: Forecasted above normal significant fire potential within the fire area for the rest of the fire season. **Note:** Significant fire potential is defined as the likelihood that a wildland fire event will require mobilization of additional resources from outside the area in which the fire situation originates.

Long Range Weather Outlook



A = Above normal, B = Below normal, N = Normal, EC = Equal Chances of Above/Below/Normal.

Figure 3: Top row: One-month (Sept) outlook for temperature (left) and precipitation (right). Bottom row: Three month (Sept - Nov) outlook for temperatures (left) and precipitation (right). (From Climate Prediction Center/NOAA) Outlook for the next three months show above normal temperatures and below normal precipitation.

Drought Prognosis

U.S. Drought Monitor

Idaho

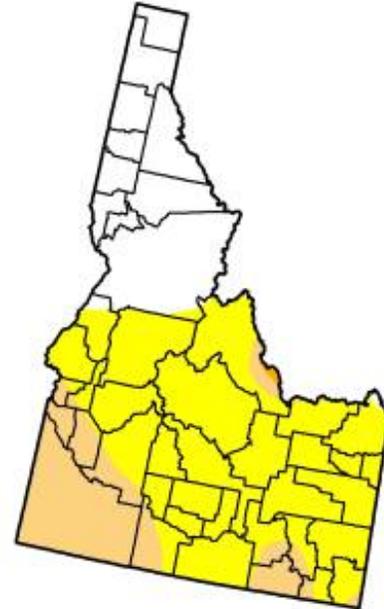
August 14, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	25.77	74.23	17.86	0.18	0.00	0.00
Last Week (08/07/2012 map)	38.72	61.28	13.91	0.18	0.00	0.00
3 Months Ago (05/15/2012 map)	87.02	12.98	0.00	0.00	0.00	0.00
Start of Calendar Year (12/27/2011 map)	48.90	51.10	0.00	0.00	0.00	0.00
Start of Water Year (09/27/2011 map)	86.56	13.44	0.00	0.00	0.00	0.00
One Year Ago (08/09/2011 map)	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>



Released Thursday, August 16, 2012
Michael Brewer, National Climatic Data Center, NOAA

Figure 4: The current US Drought Monitor shows abnormally dry drought conditions around the fire area.

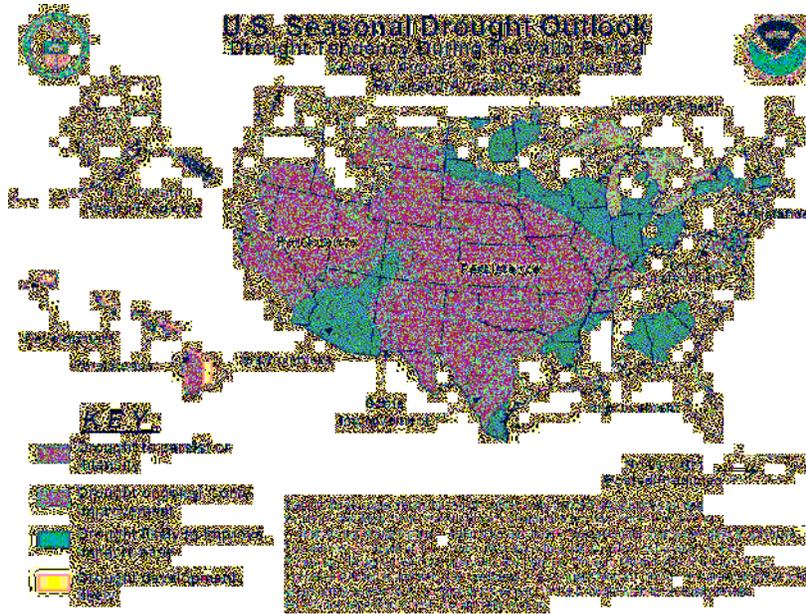


Figure 5: U.S. Seasonal Drought Outlook shows no Drought posted / predicted around the fire area.

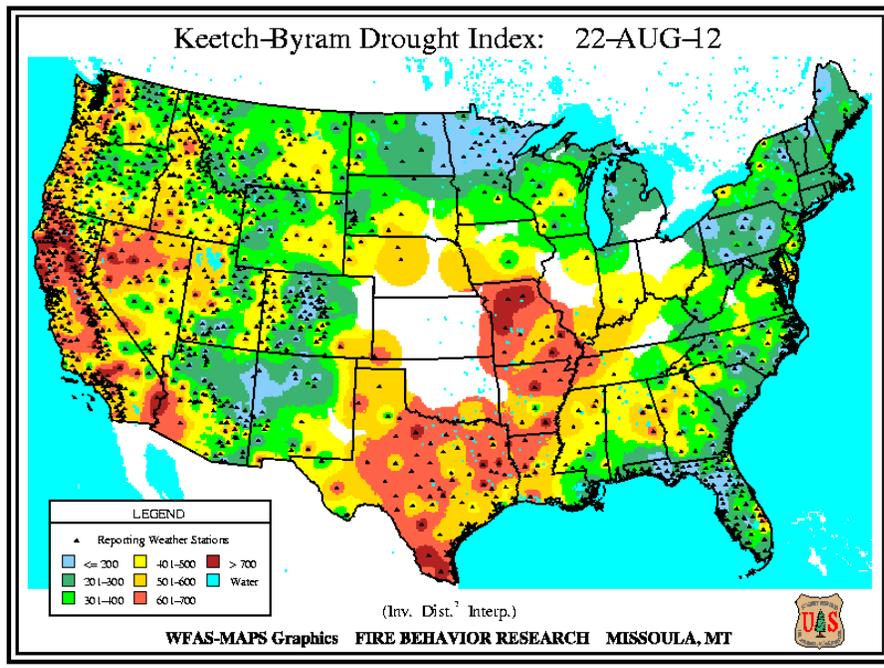


Figure 6: Keetch-Byram Drought Index shows no Drought posted / predicted around the fire area.

The KBDI is currently 501 to 600 in the fire area and typical of late summer, early fall. Lower litter heavier fuel layers will contribute to extreme fire intensity and will burn actively.

Long Term Analysis

Tools used in this analysis include the WFDSS - Near Term Analysis (NTFB), weather analysis in Fire Family Plus, and Fire Spread Probability (FSPro). The products derived from these tools were more focused on the fire spread potential in one - two weeks. Each analysis tool and the associated results are discussed in more detail below. Other data sources used for the analysis include the U.S. Drought Monitor, the National Climatic Data Center, Western Regional Climate Center, and Eastern Great Basin Geographic Area Coordination Center Predictive Services, local fire managers and field observations.

There are limitations to all of the long-term decision support models. All of these models are based on historical weather records and standardized fuel model mapping. Although expert opinion is used in making adjustments in much of this information, there is a lot of variability in natural systems that cannot be modeled. There are assumptions within the fire spread models that also need to be considered. The results from these models are based on the best available current data, models and information but are also limited by this same information.

Weather Stations

The Halstead Fire is located in Fire Weather Zone IDZ 476:

The Bearskin and Stanley RAWS, located west and south of the fire, has worked quite well for fire behavior analyses to date.

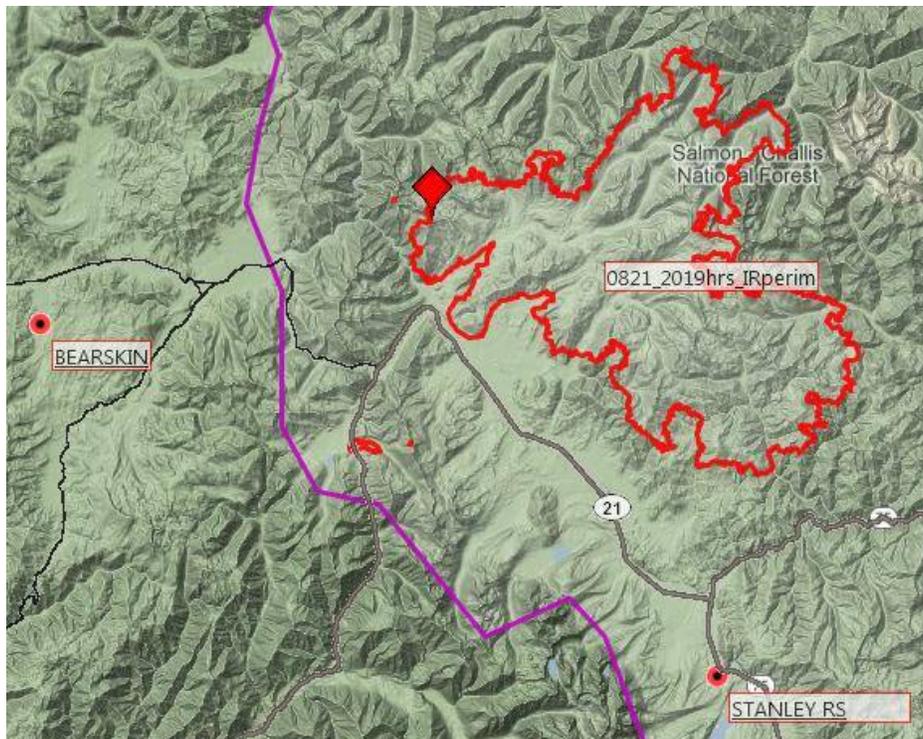


Figure 7: Stanley & Bearskin RAWs locations around the fire area.

Fuel Models

LANDFIRE data from the Landscape Fire and Resource Management Planning Tools Project was used as the base using the Scott and Burgan (2005) 40 fuel models and adjustments were made according to site specific conditions. The same adjustments were applied to the data for all of the modeling tools used in the assessment.

Seasonal Trends

Energy Release Component (ERC) is an index related to the potential energy of a fire at the flaming front and is generated from weather and fuels inputs. It is considered a good measure for seasonal dryness trends in large fuels, making this a good indicator for fire potential on the Halstead Fire. ERC is most often used with Fuel Models G and H which represent dense conifer stands with heavy accumulation of litter and downed woody material.

ERC values in Fuel Model G (Short Needle Heavy Dead) at Stanley and Bearskin RAWs through August 22th are tracking above the 97th percentile levels as compared to historical records. The Stanley and Bearskin RAWs were combined to form a Special Interest Group (SIG) data set which incorporates 16 years of data with the current year shown. The reason these station were utilized is due to its close proximity to the fire and it reflects similar trends as observed. The average yearly data set shows under normal conditions that the season peaked on approximately August 14th and then started to drop for the rest of the fire season. The current reading is running at or above the historical maximum level and is above the 97th percentile.

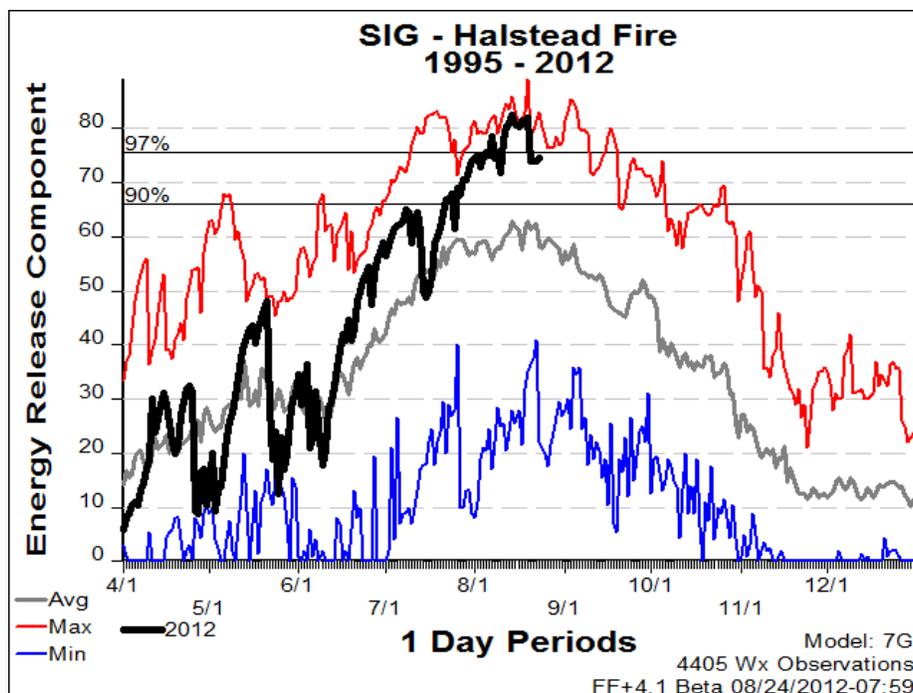


Figure 8: Average and maximum ERC values for the Stanley and Bearskin RAWs for the period 1995 -2012 with the current year overlain.

Seasonal Comparison

A seasonal comparison of two years with seasonal patterns most similar to the current year trends was conducted.

ERC – is a good indicator of seasonal warming and drying. The current year pattern of ERC at Stanley and Bearskin RAWs have been very similar to 2000, 2002, 2006, 2007 and 2008.

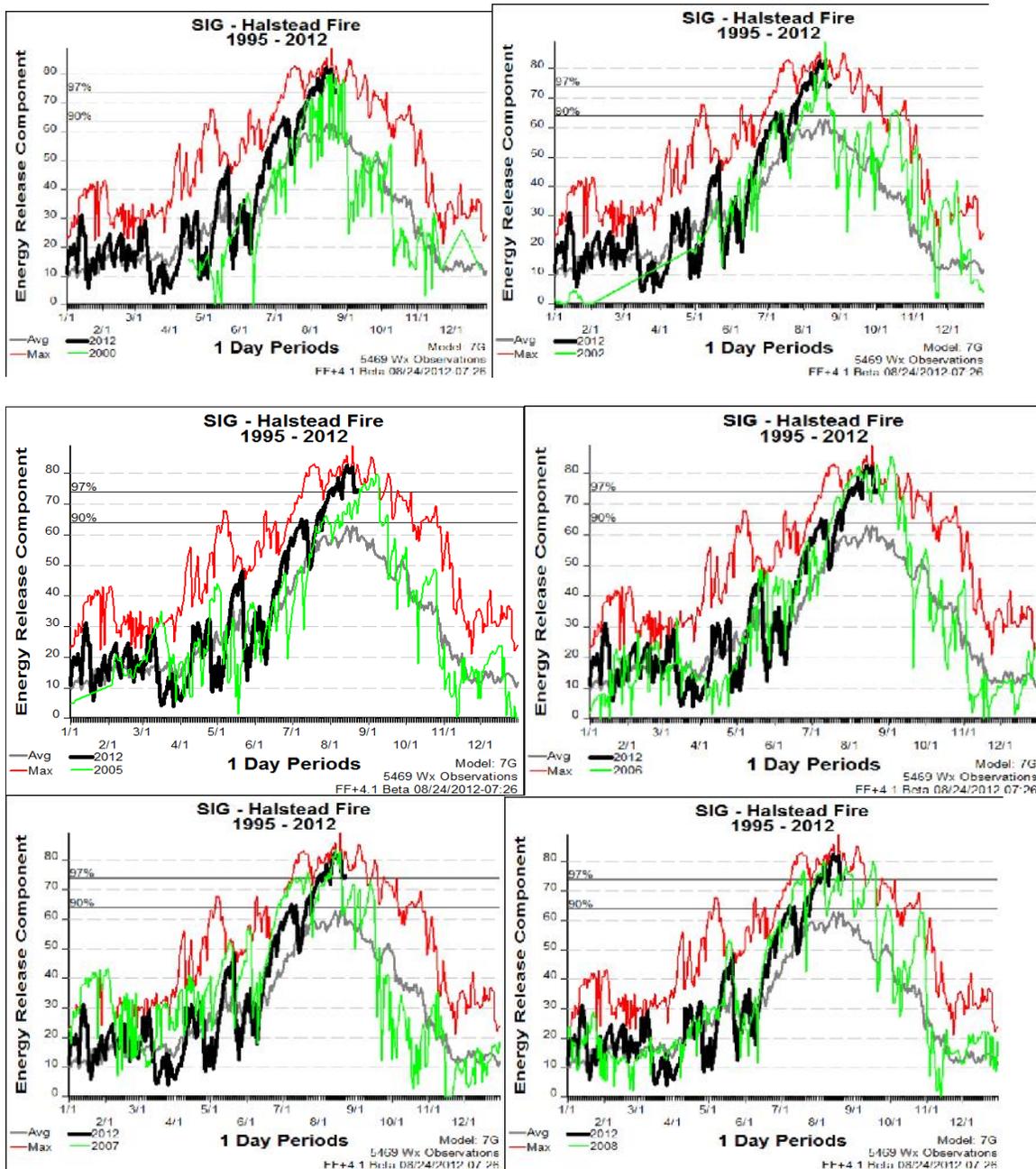


Figure 9: 2012 ERC compared to comparable reference year 2000, 2002, 2005, 2006, 2007 and 2008.

At the Stanley and Bearskin RAWs the current year is most similar to 2000, 2002, 2005, 2006, 2007 and 2008. In all of those years the ERC followed a similar path as this year. The ERC level for all years climbed sharply until August 18th to Sept 16th where they all peaked. In all years the ERC stayed above the 97th percentile for approximately one month and in some cases building new ERC highs. After each year peaked the ERC level shows a fairly drastic downward trend for the remaining fire season. The downward trend could be contributed to a weather pattern change, changing day lengths and sun angles.

Changing Day Lengths and Sun Angles: Changing day lengths and sun angles start to have a noticeable effect on the burning period and rate of recovery after even very slight rain events on the different aspects and topographic locations. Between September 15 and November 1st, this part of Idaho loses 139 minutes or slightly less than 3 minutes per day, mostly in the evening. The maximum sun angle decreases from about 47° to 31°, or 16° lower in the sky, affecting the amount of radiant heating each day. Both sunrise and sunset shift to further south as well. North and east aspects are affected more by these changes than south and west aspects. Positions on the lower third of the slope are more affected than those on the upper third. After even slight rains, fuels on the lower third of a north or east aspect may not dry sufficiently to carry fire after about September 15. The narrower the drainage, the higher up on the slope this type of impact occurs, particularly for drainages oriented toward the north, northeast, and east.

Probability of Season Ending Event

Season end is analyzed to aid strategic decision making. Experience in the Halstead Fire area has shown that the fire season does often end with a well-defined precipitation event. Usually fire season fades away due to a combination of precipitation events, cooler temperatures, higher RH's and day lengths. Energy release component can also serve as an integrator of these factors (see seasonal trends above).

To determine the likely date of occurrence and probability of a season ending event for the Halstead Fire, historical data from the Stanley and Bearskin (1995-2012) NWS RAWs was analyzed at the advice of local fire managers. Consultation with local fire personnel, review of recent fire events, and consideration of the available fuels on this fire indicates that an ERC index of 27 and precipitation of 0.65 for five days or longer represent a season ending event. Fire Family Plus was used to locate the events in question and used to determine the probability and date of the season ending event.

The following chart show the probability and dates of the fire season ending event.

Stanley and Bearskin RAWs Station Analysis

Probability Percentage	Date
0.25	September 27
0.50	October 15
0.75	November 01
0.90	November 14
0.99	December 06

Table 2 - shows the probability of a season ending event using the Stanley and Bearskin RAWs station data.

Large Fire Growth Event: The risk of a large fire growth event is important in developing strategies and tactics, managing safety risks, and determining when a smoke event is likely to occur. Large fire growth events are generally associated with critical fire weather parameters, dry fuels, and when fires are aligned with topography and/or volatile fuel types. For the Halstead Fire, most days had at least 1000 acres of growth during the first three weeks of August. In order to identify the parameters associated with significant daily growth; the daily acreages of the fire were analyzed. Daily growth ranged from 266 to 10,000 acres with 14 of the 22 days analyzed being over 3000 acres. Therefore, 3000 acres per day was used to determine common parameters for large fire growth.

After analyzing weather observations from local weather stations and consultation with local expertise, a large fire growth day was defined as one with a maximum temperature 80 degrees or greater, minimum relative humidity of 20% or less, wind speed of 6 mph or greater, Energy Release Component (ERC) at or above the 90th percentile and Burning Index (BI) at or above the 85 percentile (BI 70). All values together indicate warm, dry, windy conditions (Red Flag Conditions). Using the event locator tool in Fire Family Plus, a search of records between August 21st and October 31th for events in the past 17 years working set (1995 – 2012) that met various weather combinations was evaluated. For the late season time period being assessed, it was determined that BI was a good indicator for events that will have hot dry wind events that could indicate rapid rates of fire spread large fire growth. BI is derived from a combination of Spread Component (how fast it will spread) and Energy Release Component (how much energy will be produced). In this way, it is related to flame length, which, in the Fire Behavior Prediction System, is based on rate of spread and heat per unit area. The following chart indicates probability for a BI of 70 or high occurring within the time periods indicated below.

BI Percentiles

Criteria	August 24-31 Probability	September 1-8 Probability	September 9-30 Probability	October – Season End
BI Percentile	10%	6%	3%	0%

Table 3 - shows the probabilities of a large fire growth event using BI as an indicator for dry, high wind events occurring August 24 – Season end.

It should be noted that while the above parameters were associated with large fire growth days, not all the factors have to be present to support large fire growth. Any type of wind event (cold front, thunderstorm downdrafts, etc) as well as high Haines index easily encourages increased fire growth in the absence of low humidity, high temperature, and/or high ERCs. It should also be noted that the fire has been primarily fuels driven in stands of beetle kill timber. This in itself lends to anomalies in fire behavior and length of season by providing unusual dead to live fuel ratios, vertically oriented dead fuels, and increased solar heating of surface fuels caused by loss of canopy.

WFDSS - NEAR TERM FIRE BEHAVIOR ANALYSIS (NTFB)

The assumptions that supported the FSPRO, WFDSS- Near Term Analysis (NTFB) and Fire Family Plus analyses are subject to change as conditions change. The models are only valid for the fuel and weather conditions for which they were run and for the timeframe for which they represent. Major wind or precipitation events may occur and alter the predicted spread rates. The head of the fire may move to new and unpredicted locations. Live fuel moisture's may change dramatically. As the fire season progresses, the decision environment will also change. Such changes and others may invalidate the assumptions underlying the initial analyses. As a result, previous risk estimates will no longer be accurate. Over time, it is essential that the assumptions underlying the risk estimates are periodically revalidated and that the simulations are re-run accordingly.

What is NTFB?

- NTFB – Fire Area Simulator models fire perimeters and associated fire behavior (rate of spread, flame length, etc.) for a specific ignition during a user-defined time period where weather, winds, and fuel moistures are dynamic. NTFB is unique in that it incorporates the timing of fire spread across the landscape.

What does NTFB do?

- NTFB simulates fire spread across a landscape using complex interactions of surface fuels, canopy fuels, topography, fuel moisture, and weather.
- NTFB simulates a single fire event where weather, wind, and fuel moisture are dynamic.
- NTFB does not simulate fire spread through rolling material and does not simulate diurnal, terrain-influenced winds.
- NTFB can simulate spotting fire behavior; therefore, a different perimeter can be expected for each NTFB run.

How does NTFB help decision-making?

- Managers can understand what portions of a fire may grow under a variety of wind and weather scenarios (dry cold front passage v. moderate weather).
- Managers can see what day a fire may potentially breach a Management Action Point or how long it might take to get there.

- Managers can see if a Management Action Point breach is by surface fire or spotting.
- If point protection is an objective, managers can see the fire behavior expected around that point and design appropriate mitigations to protect assets.

When should NTFB be used?

- If there is a time element needed for decision-making, NTFB is an appropriate tool. Unlike other fire spread predictive models, NTFB does not output a probability of an event occurring (FSPro), but tells a manager the outcome of a specific scenario over time.
- If a manager wants to understand what the fire might do under a specific weather scenario, such as if the forecasted dry cold front materializes, NTFB is the most appropriate tool.

NTFB Assumptions Used for the Halstead Fire:

- Numerous landscape edits were made to calibrate the prediction model to observed fire growth. These edits included altering fuel models to either speed up or slow down runs, ensuring that non-burnable areas were masked properly (rock), and increasing crown fire potential by lowering crown base heights. All landscape edits are available in the report for each completed Near Term run. Notes included within each run also capture details of that specific run.
- The run is using intense heat areas obtained from an IR flight on August 25 as an ignition file. It is possible that areas of scattered heat or low intensity heat along the perimeter not detected by the IR flight could begin to actively spread during the project time. If this occurs, it is recommended to rerun the model with updated ignition data.
- Weather and wind streams generally used default values unless noted in the run documentation.
- Default fuel moisture values were used unless noted otherwise.
- Probability of spotting was set at 0.05%.
- Foliar moisture was set at 70%, unless otherwise noted.
- Stanley RAWS was chosen because it is the most representative and closest station to the fire location.
- Finney crown fire method was chosen because it best modeled observed fire spread and worked well with Refresh 2008.

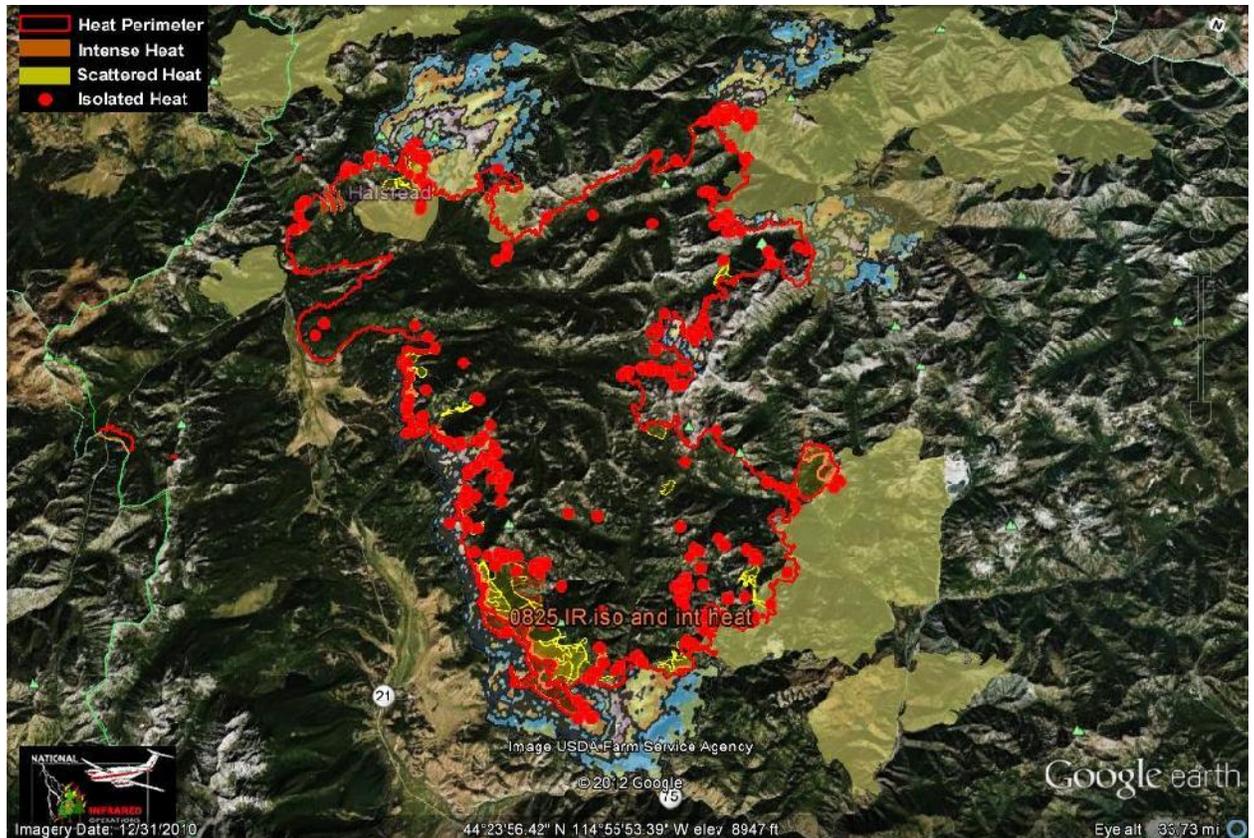


Figure 10: NTFB - Fire spread probabilities for the Halstead Fire from 8/25-29. Tan colored areas indicate past fires in the area.

WFDSS - FSPro – Fire Spread Probability Model

What is FSPro?

- WFDSS-FSPro is a spatial model that calculates and maps the probability of fire spread, in the absence of suppression, from a current fire perimeter or ignition point for a specified time period.

What does FSPro do?

- WFDSS-FSPro combines data layers including, the standard fuel models (13 or 40), current weather projections, historical weather scenarios, fuel moisture classifications, and wind speed and direction,
- FSPro can project probabilities of fire spread in specified increments up to 30 days,
- FSPro is a probabilistic model that calculates the probability of the fire getting into certain areas during a set amount of time. It does not predict actual perimeters after a certain amount of time like Near Term.

How does FSPro help decision-making?

- The model helps to assess a fire's growth potential by visually indicating the highest probability for spatial spread,
- Managers can develop appropriate strategies and tactics to meet objectives consistent with resource allocations,
- The model identifies probabilities of fire spread which potentially will provide managers a sound basis for prioritizing firefighting resources,
- It can also aid in communications with affected partners, the media, and the public.

FSPro Assumptions:

A 14 day run was made for August 25th to September 7th using the Stanley RAWS as the most representative for fuels/ERC calculations and winds.

LANDFIRE Refresh 08 1.1.0b landscape data was used for this analysis. The LANDFIRE fuels layer is based on satellite imagery from 2000/2001 that was updated to reflect changes to the landscape such as recent bug kill, management activities or fires that have occurred up to 2008. After review of the data the following changes were made to the LANDFIRE data.

The run is using intense and isolated heat areas obtained from an IR flight on August 25 at 0255 hours as an ignition file. It is possible that areas of scattered heat or low intensity heat along the perimeter not detected by the IR flight could begin to actively spread during the project time. If this occurs, it is recommended to rerun the model with updated ignition data.

FSPro Modeling Results for Halstead Fire

The burn probabilities are under the assumption that no fire suppression actions are taken and they do not represent actual fire perimeters. The colored burn probabilities are areas of equal probability that could be burned during the analysis period. For display purposes the burn probability areas are displayed in concentric rings of probability, starting with the inner ring that is greater than 80%. The outer ring represents the less-than a 0.2% probability in the given time period. The 0.2% area represents the rare event (1:5000) and indicates that such an event has occurred in the historical record. It is important to remember that the probabilities presented could be reached at any time during the simulation period. While a legend is displayed indicating acres associated with various burn probabilities, these are only the sum of the area within these zones and do not reflect an actual or final fire size.

FSPro fire growth probability projections for 14 days starting August 25, 2012 are below.

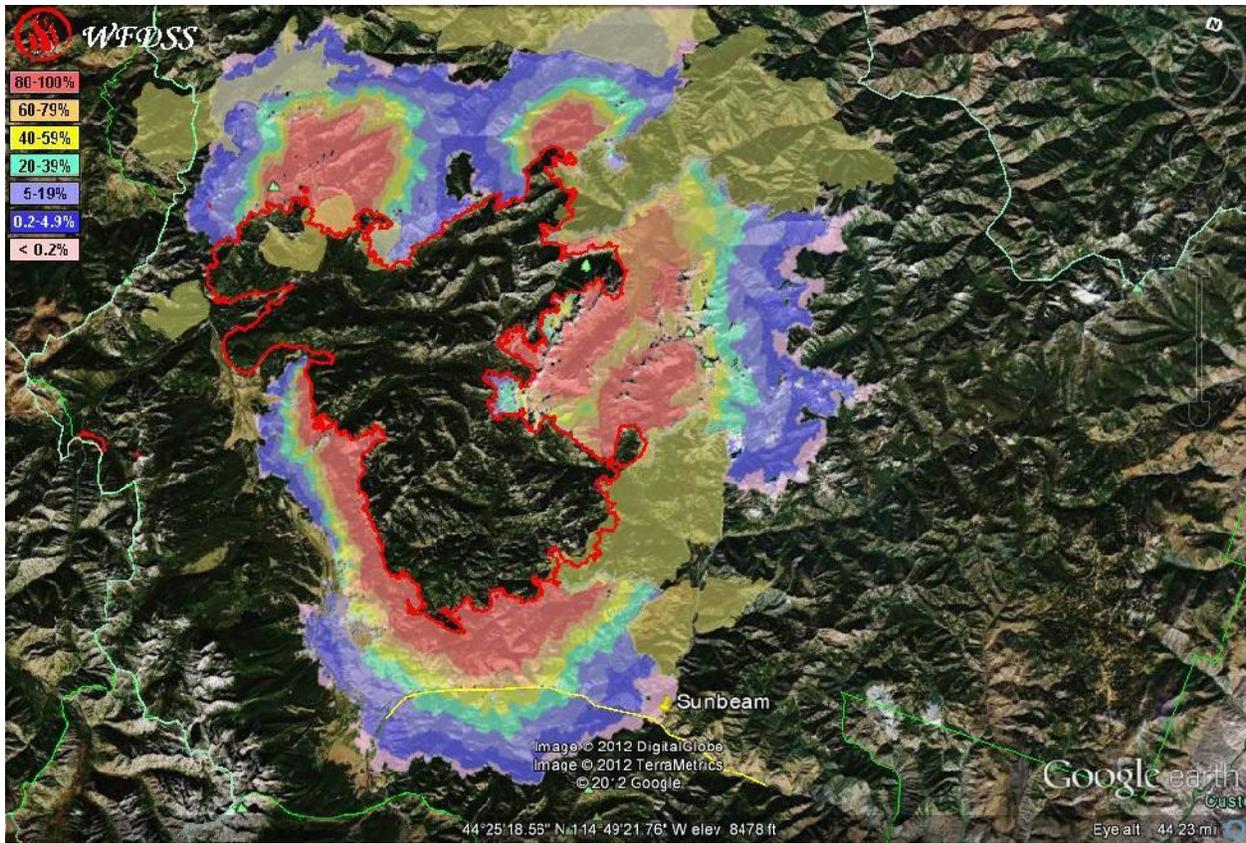


Figure 11: 14 day FSPro - Fire spread probabilities for the Halstead fire from 8/25/2012. Tan colored areas are showing past fires.

Eastern Great Basin Fuel and Fire Behavior Advisory

Issued August 15, 2012

Subject: Very hot and dry summertime weather has led to near record fire danger indices across the state of Idaho and western Wyoming. Sagebrush live fuel moistures are near historic lows and current large fires across the east and central Idaho Mountains have moved into beetle killed stands further intensifying fire behavior.

Discussion: The months of June and July were very warm across much of Idaho and western Wyoming and set the stage for increased significant fire potential going into August. Fire Danger indices are near record levels and are tracking close to 2007 values. Live and dead fuel moistures are also very low with 1000-hr values near 5-8% where normally closer to 15% would be expected for this time of year. Sagebrush values across southern Idaho are at least 50% below normal generating very rapid fire spread. Rapid rates of spread and intense fire behavior are intensified by heavier and more continuous fine fuel loading resulting from residual fine fuel crops from previous seasons remaining on the landscape with the current season's fine fuels. Widespread beetle kill across the central and eastern Idaho Mountains and mountains of western Wyoming has further increased the potential for significant fires and extreme fire behavior. The recent weather pattern has generated very hot, dry and unstable days leading to plume dominated fire behavior on the existing large fires. These conditions are likely to continue through August. The moderating effects of monsoonal moisture in Wyoming in late July have been offset by a persistent warm, dry weather pattern in August.

Concerns to Firefighters and the Public:

- Increased probability of ignition due to receptive/available fuels.
- Increased fire behavior and rates of spread.
- Prolific and long range spotting due to abnormally dry fuel conditions in surface and aerial fuel types.
- Increased control problems and potential for reburn.
- Fires may burn with more intensity during the night time hours due to poor relative humidity recovery.
- Snags, widow makers and other above ground fuel hazards may be an issue as they are more receptive to fire brands and/or becoming an overhead safety hazard.

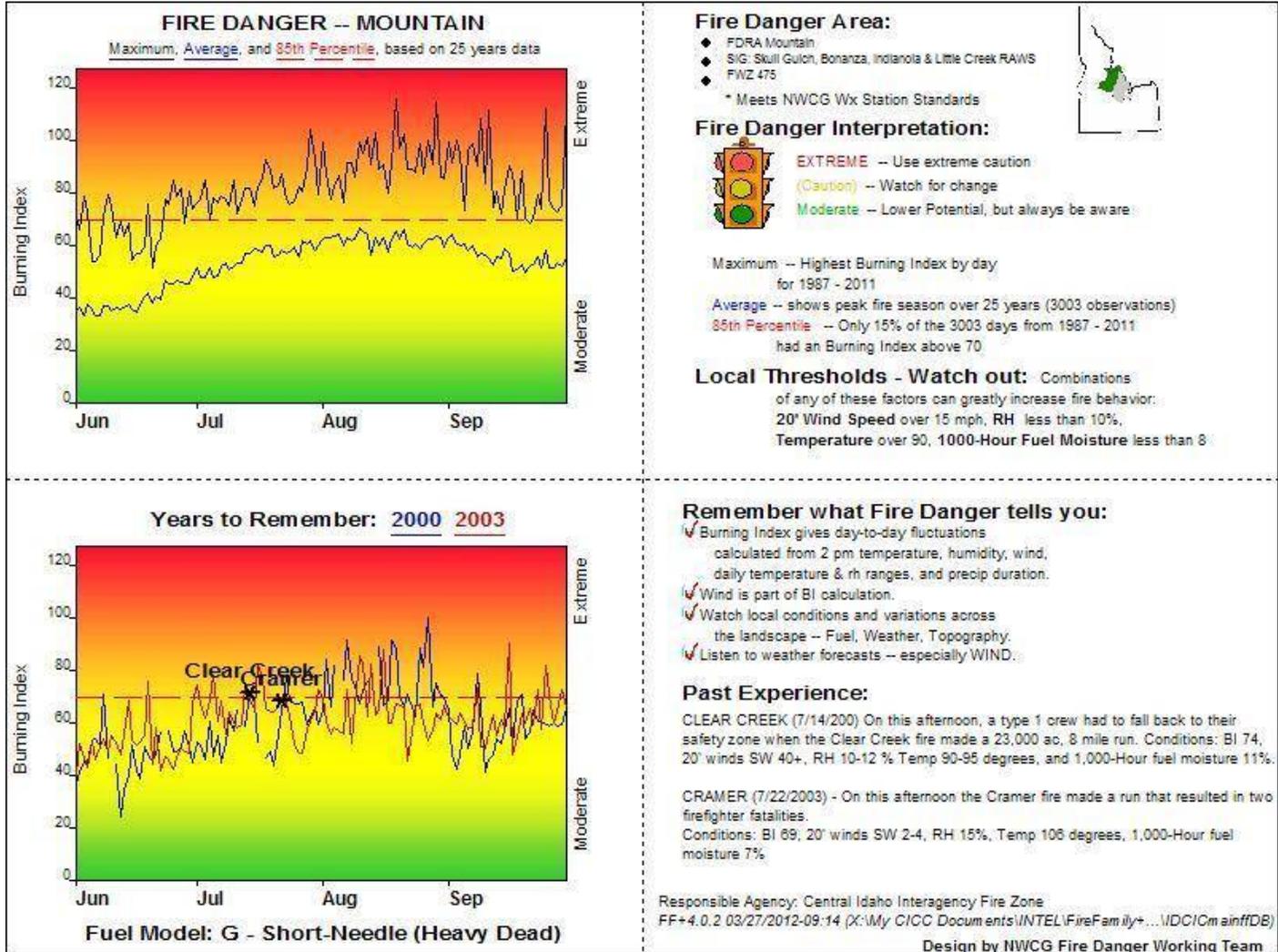
Mitigation Measures:

- Ensure that non-local resources are thoroughly briefed on abnormal fuel conditions and potential fire behavior.
- Be aware that all fuels (surface and aerial) are available and susceptible to ignition.
- Always be aware of anticipated changes in fire danger and fire weather:
<http://gacc.nifc.gov/egbc/>

Area of Concern:

- All of Idaho and the mountains of western Wyoming.

Salmon-Challis N.F., Challis / Yankee Fork Ranger District Pocket Card



Sawtooth N.F., Stanley (SNRA) Ranger District Pocket Card

<p>FIRE DANGER -- STF NORTH Maximum, Average, and 90th Percentile, based on 30 years data</p> <p>Energy Release Component</p> <p>Extreme</p> <p>Moderate</p> <p>Jun Jul Aug Sep Oct</p>	<p>Fire Danger Area:</p> <ul style="list-style-type: none"> ◆ KETCHUM, FAIRFIELD, SNRA ◆ ZONE 477 ◆ StanleyHortonFleckNFork * Meets NWCG Wx Station Standards <p>Fire Danger Interpretation:</p> <ul style="list-style-type: none"> EXTREME -- Use extreme caution (Caution) -- Watch for change Moderate -- Lower Potential, but always be aware <p>Maximum -- Highest Energy Release Component by day for 1982 - 2011 Average -- shows peak fire season over 30 years (4282 observations) 90th Percentile -- Only 10% of the 4282 days from 1982 - 2011 had an Energy Release Component above 72</p> <p>Local Thresholds - Watch out: Combinations of any of these factors can greatly increase fire behavior: 20' Wind Speed over 12 mph, RH less than 15%, Temperature over 80</p>
<p>Years to Remember: 2007 2008</p> <p>Energy Release Component</p> <p>Extreme</p> <p>Moderate</p> <p>Jun Jul Aug Sep Oct</p> <p>Fuel Model: G - Short-Needle (Heavy Dead)</p>	<p>Remember what Fire Danger tells you:</p> <ul style="list-style-type: none"> ✓ Energy Release Component gives seasonal trends calculated from 2 pm temperature, humidity, daily temperature & rh ranges, and precip duration. ✓ Wind is NOT part of ERC calculation. ✓ Watch local conditions and variations across the landscape -- Fuel, Weather, Topography. ✓ Listen to weather forecasts -- especially WIND. <p>Past Experience:</p> <p>South Barker - started on 8/7/08 and burned 31,744 acres. Made significant runs 8/27-28. Max temps 77, min RH 14, Winds 12 mph, ERC 88.</p> <p>Castle Rock - started on 8/16/07 and burned 48,250 acres. Max temp 93, Min RH 8, Wind 7 mph, ERC 93.</p> <p>Effective Date of this Pocket Card 6/1/12.</p> <p>Responsible Agency: USFS - Sawtooth National Forest FF+4.0 08/01/2012-13:23 (W:\m\idsh3ds\1\st\users\wilson\My Documents\Pock...2012 STF) Design by NWCG Fire Danger Working Team</p>

Long Term Analysis Team Members

Kim Soper	SOPL / LTAN
Nathan Benson	SOPL
Cody Wienk	LTAN
Todd Rankin	LTAN (t)
Chris Ferner	GIS Specialist
Jarl Moreland	GIS Specialist
Lasheena Nieves	GIS Specialist
Ken Rodgers	FBAN

Appendix A

Season Ending Term File

FireFamily Plus Term Report

Station: SIG - Halstead Fire

Term Name: Halstead Term

Season Start Day: 7\1

Data Years: 1995 - 2011

Alpha: 4.703601

Beta: 0.008785

R-Squared: 0.974068

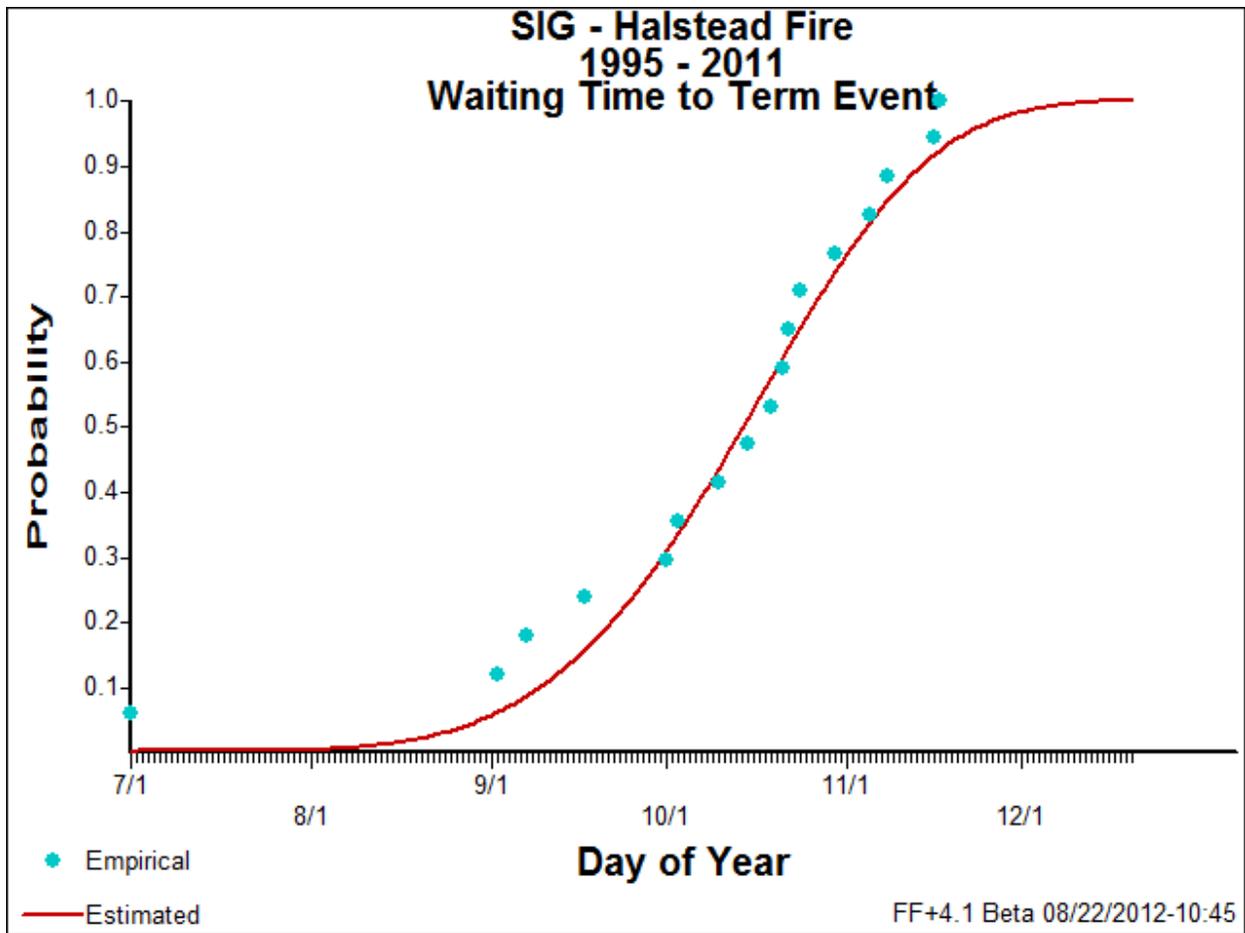
Comment: This term run used 0.65 precip and 27 ERC for five days.

Term Dates

Year	Day	#Days	Comment
1995	11/ 5	127	
1996	11/15	138	
1997	9/ 7	68	
1998	7/ 1	0	
1999	10/24	115	
2000	9/ 1	63	
2001	10/19	110	
2002	11/17	139	
2003	11/ 8	130	
2004	10/20	112	
2005	9/17	78	
2006	10/ 3	94	
2007	10/15	106	
2008	10/29	121	
2009	10/10	101	
2010	10/22	113	
2011	10/ 1	92	

Key Probabilities

Probability	Date
0.25	September 27
0.50	October 15
0.75	November 01
0.90	November 14
0.99	December 06



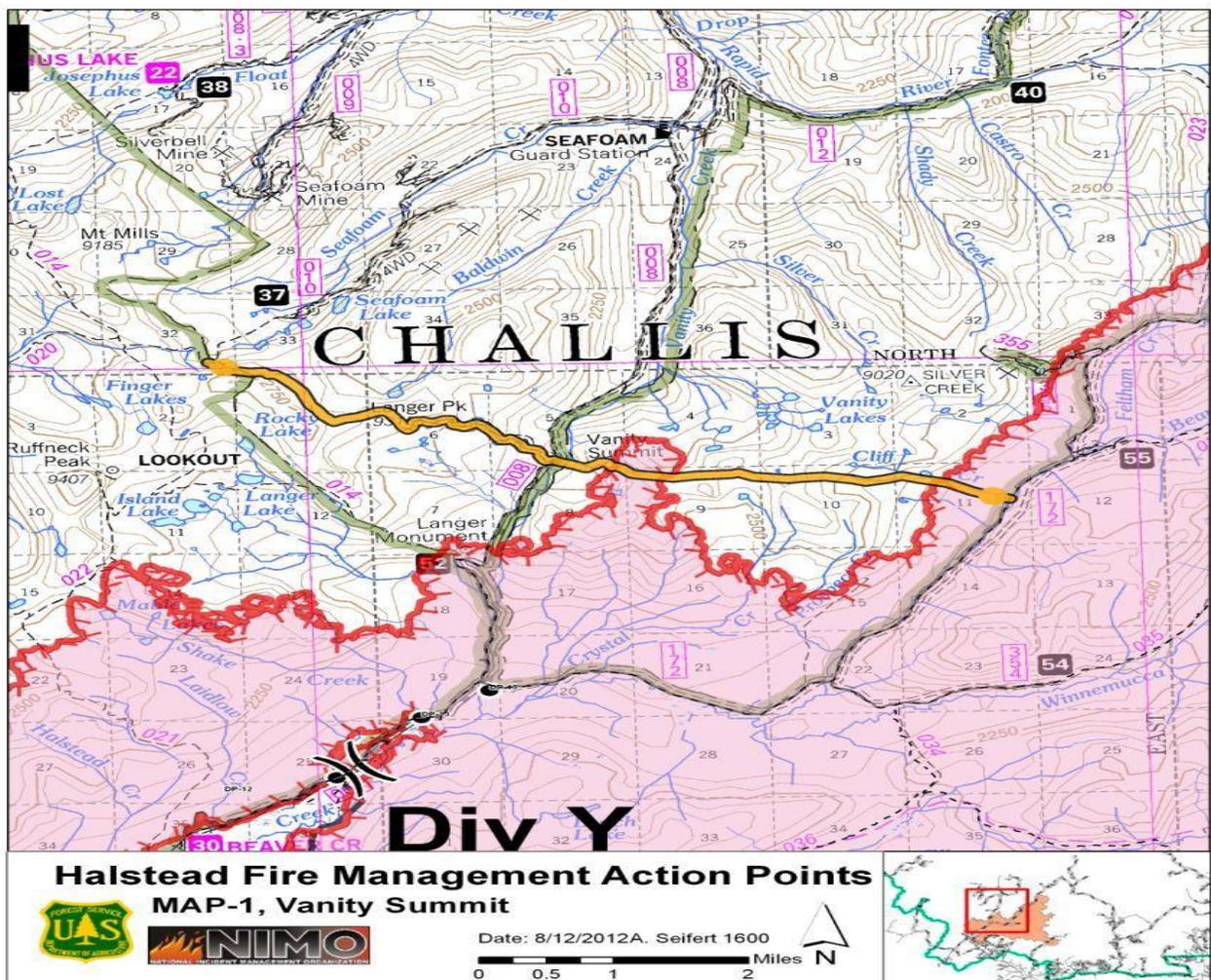
Halstead Fire

Management Action Points

8/23/12

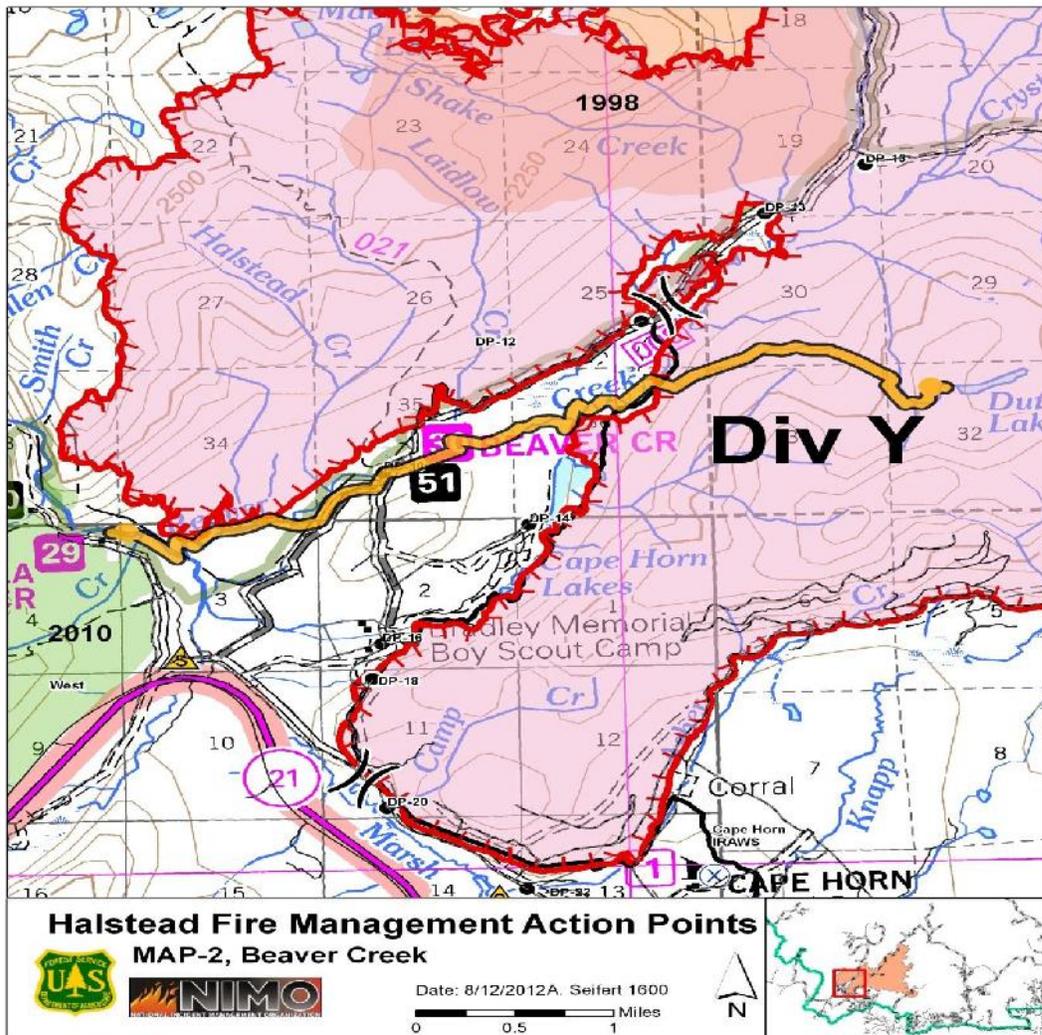
MAP 1 Vanity Summit

<p>Condition</p>	<p>Values at Risk - Fire impacting Seafoam Area. Intent of MAP - Evaluate and implement actions to protect the Seafoam Bubble Area Trigger Condition – If the fire reaches this MAP.</p>
<p>Actions</p>	<p>Stop all actions in the Seafoam Bubble and will need to extract any resources from that area.</p>
<p>Resources</p>	<p>Operations and Type 3 Helicopter</p>



MAP 2 Beaver Creek

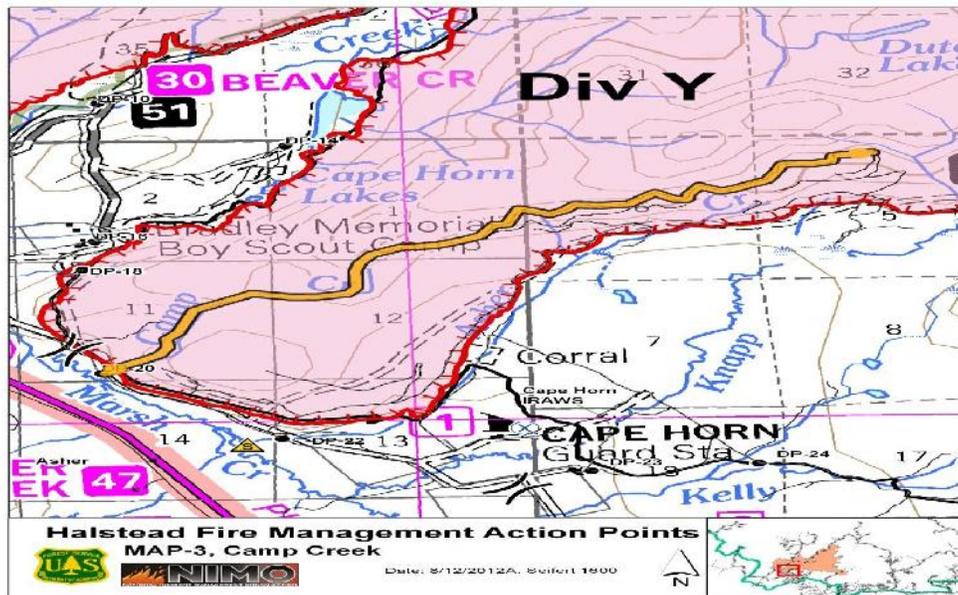
Condition	Values at Risk – Salmon River Electric Power lines, and Boy Scout Camp. Intent of MAP - Evaluate and implement actions to protect Power lines and Boy Scout Camp. Consider Area Closure and Planning Area expansion. Trigger Condition – When the fire reaches MAP.
Action	<ul style="list-style-type: none">• Contact Salmon River Electric on potential threat to power line.• Assess Boy Scout camp and implement tactics that minimize threat to private land values.• Reassess Area Closure and Planning Area for possible extension.
Resources	TFLD and 3 - Engines



MAP 3 Camp Creek

<p>Condition</p>	<p>Values at Risk – Salmon River Electric Power Lines; Capehorn Public and Private infrastructures; Thatcher Cr., Vader Cr., Trap Cr. Campgrounds; and Public Safety on Hwy 21.</p> <p>Intent of MAP - Evaluate and implement actions to protect Salmon River Electric Power Lines; Capehorn Public and Private infrastructures; Thatcher Cr., Vader Cr., Trap Cr. Campgrounds. Consider Hwy 21 and Area closures.</p> <p>Trigger Condition – When the fire reaches MAP.</p>
-------------------------	---

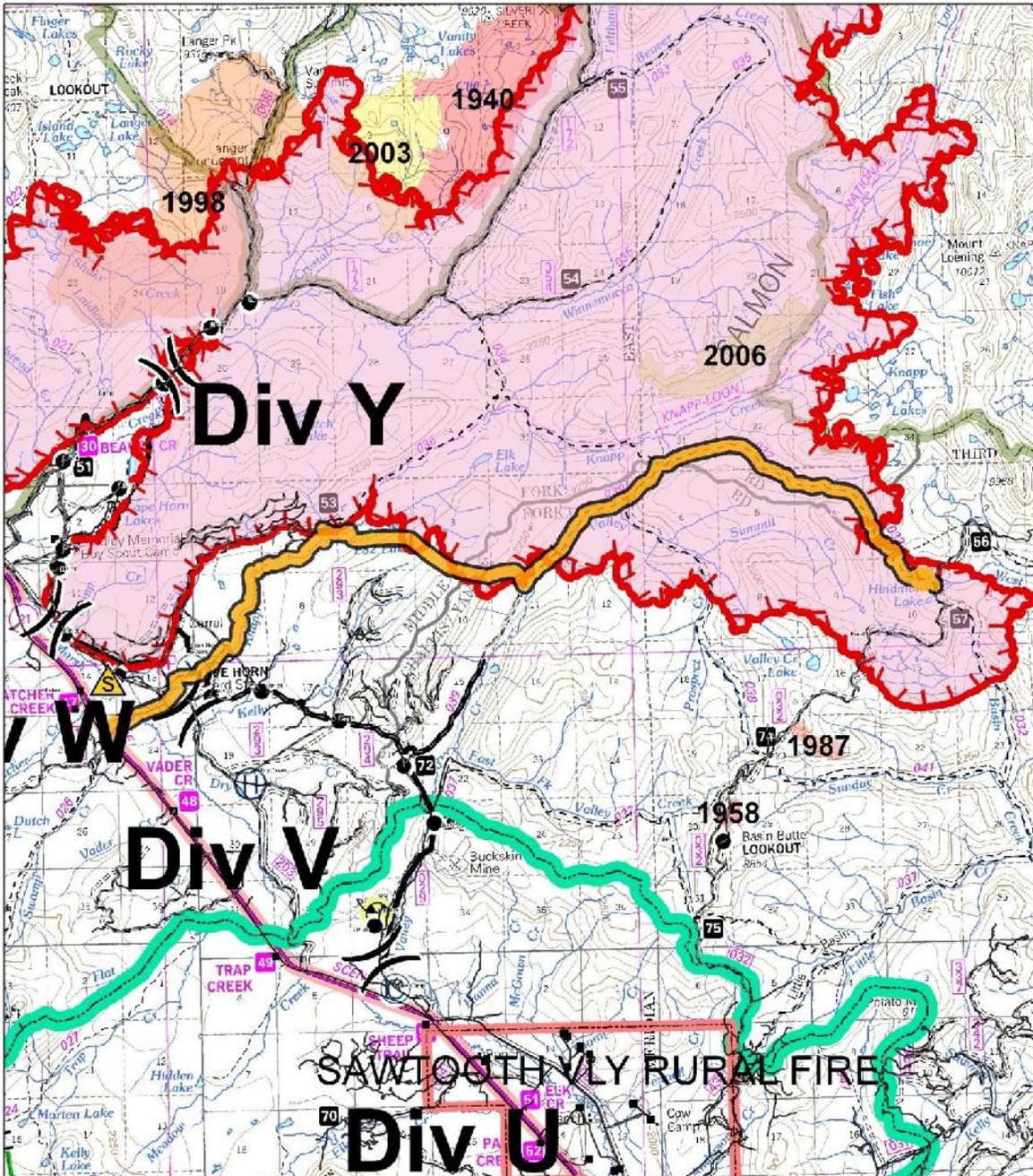
Action	<ul style="list-style-type: none"> • Contact Salmon River Electric on potential threat to power line. • Assess Capehorn Public and Private Infrastructures and implement tactics that minimize threat to land values. • Reassess Area Closure and Planning Area for possible extension. • Sawtooth NF engaging with a delegation letter to the IMT and the SCNF Agency Administrator on managing the Halstead Fire. • Assess Thatcher Cr., Vader Cr., Trap Cr. Campgrounds and implement tactics that minimize threat to values. • Consider Closing Hwy 21 for firefighter and public safety. • Sawtooth NF would provide input on potential area closure.
Resources	<ul style="list-style-type: none"> • Salmon River Electric Action will involve Operations and the power company. • Cape Horn would involve TFLD, 1- Crew, and 3- Engines. • Sawtooth delegation letter would involve Agency Administrators from both Forests and the IC. • Campground's will involve TFLD, 1- Crew and strike team of Engines • Hwy closure would involve Operations, Idaho DOT, and Sherriff LEO.



MAP 4a Knapp Creek

Condition	<p>Values at Risk – Three Blind Timber Sale, Cow Camp, Kelly Cr. Cabin, and Basin Butte Lookout. Wilson, Piva and Welp allotments.</p> <p>Intent of MAP - Evaluate and implement actions to protect Three Blind Timber Sale, Cow Camp, Kelly Cr. Cabin, and Basin Butte Lookout. Consideration of Hwy 21 and Area closures. Actions needed on the Wilson, Piva and Welp allotments.</p> <p>Trigger Condition – If the fire is predicted to reach this MAP within 24 hours.</p>
------------------	---

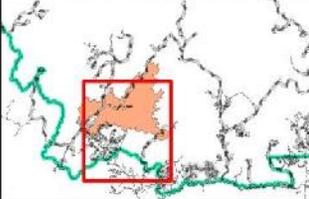
Action	<ul style="list-style-type: none"> • Contact Sale Administrator and Purchaser for the Three Blind Timber Sale and consider having them stop operations and move equipment out. • Prepare Basin Butte L.O. and radio infrastructure for fire. • Consider assessing and implementing tactics on private land values off of Cow camp to minimize the impacts. • Consider Closing Hwy 21 if fire crosses the Southern end of MAP 4 for Firefighter and Public Safety. • Assess and implement tactics on Cow Camp, and historic cabin on Kelley Cr. (South of Potato Mtn). • Contact Sawtooth NF on potential threat to grazing allotment with Wilson, Piva, and Welp. • Consider a combined area closure with the Sawtooth and the Salmon Challis NF. • Consider movement of Base Camp at Valley Cr. if the fire crosses the southern end of MAP 4.
Resources	<ul style="list-style-type: none"> • Timber Sale Operations would involve Operations, Purchaser, and Sale Administrator. • Basin Butte LO would involve 6-Rappelers. • Wilson, Cow Camp, Elk Cr., and Trap Cr. and Cabin (south of Potato Mtn) would involve Structure Group Supervisor with 1-TFLD, 2-Crews, 1- Strike Team of Engines. • Movement of Base Camp would involve Logistics, Safety, Operations and Resource Advisor.



Halstead Fire Management Action Points
MAP-4, Knapp Creek



Date: 8/12/2012A. Seifert 1600

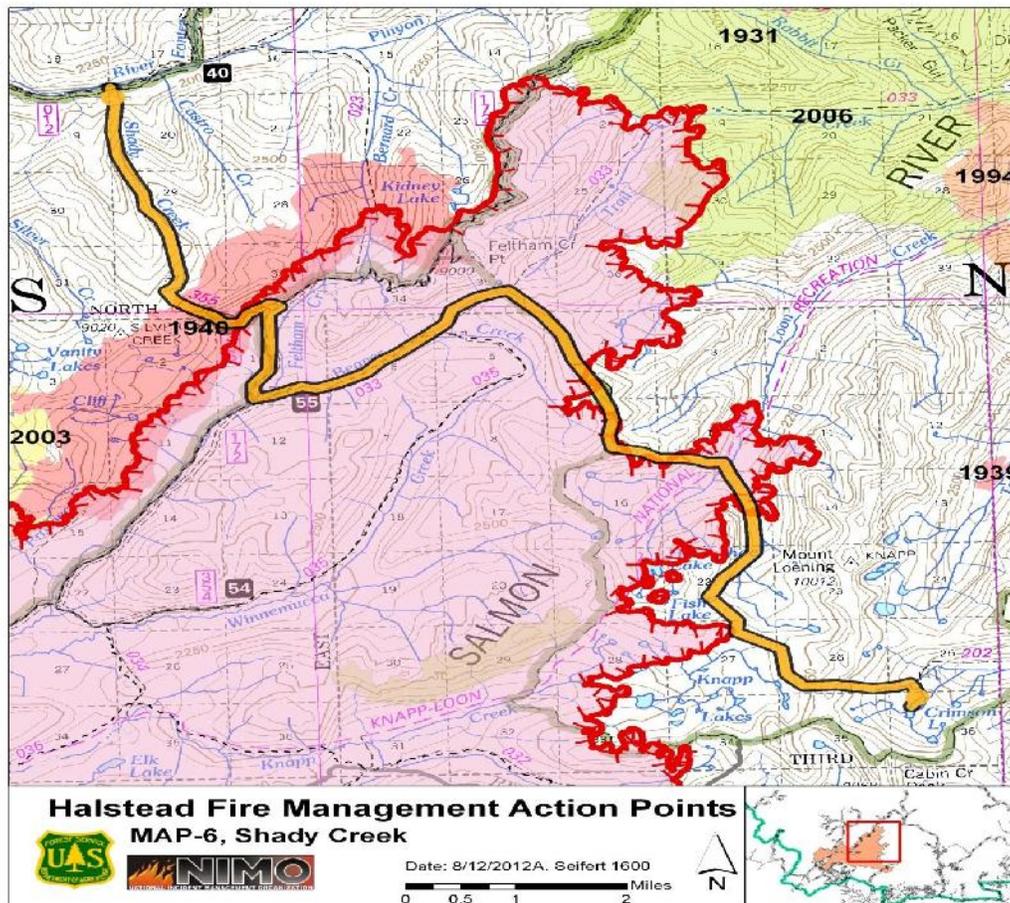


MAP 5 Salmon

<p>Condition</p>	<p>Values at Risk – Dagger Falls, Boundary Cr. and Big Soldier Lookout infrastructures; Fir Cr. and Bull Trout Campgrounds.</p> <p>Intent of MAP - Evaluate and implement actions to protect Dagger Falls, Boundary Cr. and Big Soldier Lookout infrastructures; Fir Cr. and Bull Trout Campgrounds. Consider Hwy 21 and FS road # 579, 568, and 551 for closures</p> <p>Trigger Condition – If the fire is predicted to reach this MAP within 24 hours.</p>
<p>Action</p>	<ul style="list-style-type: none"> • **If the Fire spots across the Southern end of this MAP west of Marsh Cr. It will be treated like an Initial Attack incident and resources will respond managing risk.** • Consider Closing Hwy 21 if the southern end of this MAP is crossed. • Assess and implement tactics to minimize fire threat to Dagger Falls, Boundary Cr., and Big Soldier LO infrastructures. • Consider Closure of Middle Fork Launch site at Boundary Cr.. • Contact Boise National Forest of potential fire movement towards their values. • Consider Closure on FS road 579 from Hwy 21 to Bruce Meadows and continuing closure on 568/551 all the way to Boundary Cr.. • Consider Camp Ground closure in Fir Creek, Bull Trout with possibility of extending area closure on the Boise with coordination with the Boise NF.
<p>Resources</p>	<ul style="list-style-type: none"> • Spots west of Marsh Cr. utilize available aviation and closest ground resources to respond. All the infrastructures Around Dagger and Boundary Cr. and the Listed Boise NF Campgrounds will involve Structure Group Supervisor, TFLD, 2-Crews, and Strike Team of Engines. • Road and Area Closures will involve coordination with the Boise NF, Salmon Challis NF, and IMT.

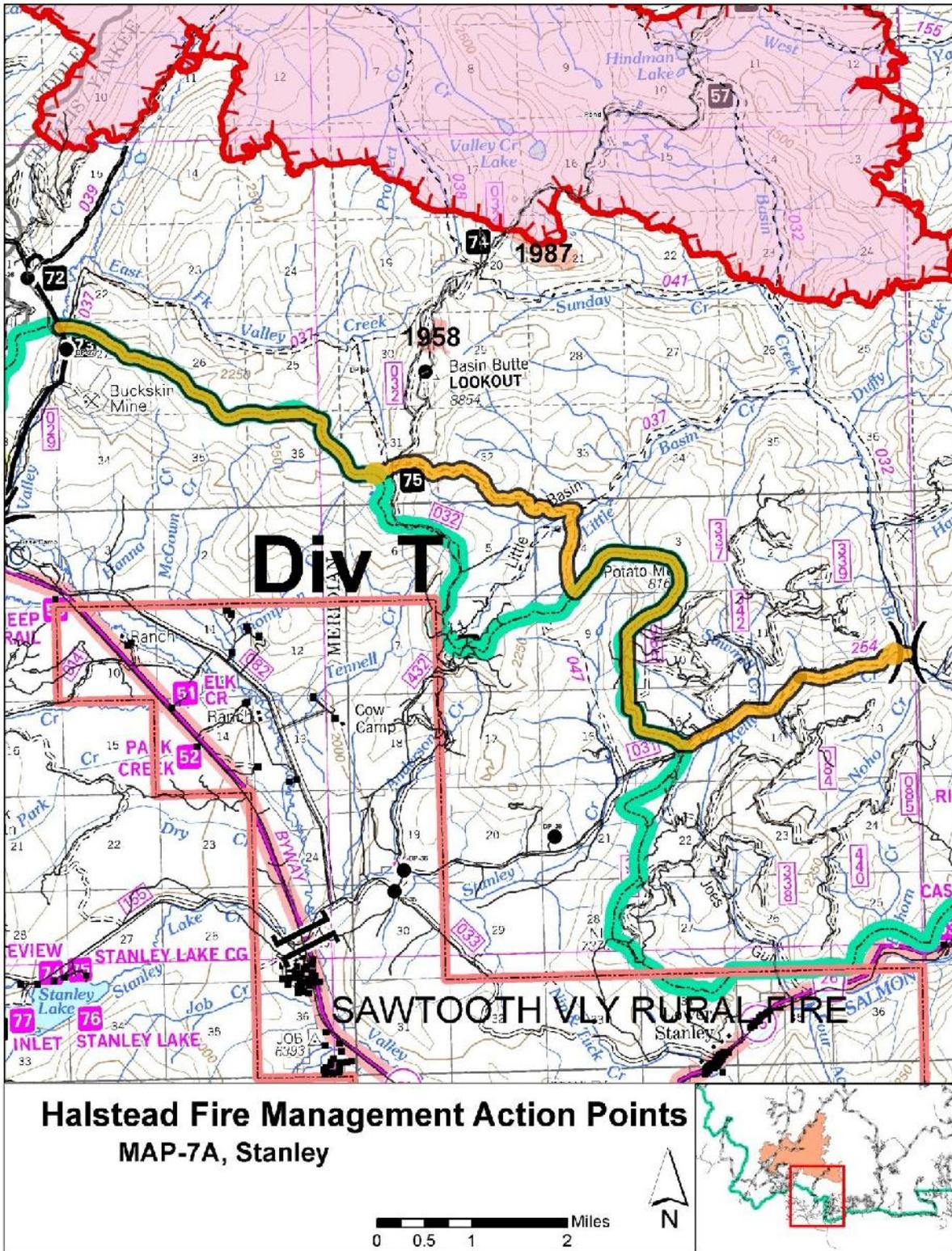
MAP 6 Shady Creek

<p>Condition</p>	<p>Values at Risk – Diamond D Ranch, Loon Cr. Guard Station, Tin Cup and Pinion Peak Lookouts, and Indian Spring’s Campgrounds.</p> <p>Intent of MAP - Evaluate and implement actions to protect Diamond D Ranch, Loon Cr. Guard Station, Tin Cup and Pinion Peak Lookouts, and Indian Spring’s Campgrounds. Consider Area Closure and Planning Area expansions.</p> <p>Trigger Condition – If the fire reaches this MAP.</p>
<p>Action</p>	<ul style="list-style-type: none"> • Assess and consider implementing tactics at Diamond D Ranch, Loon Cr. Guard Station, Tin Cup, Pinion Peak LO and Indian spring’s campground to protect values. • Reassess the Area Closure and Planning area for potential expansion.
<p>Resources</p>	<ul style="list-style-type: none"> • 1 – Branch Director • 3 - Engine's • 1 - Crew



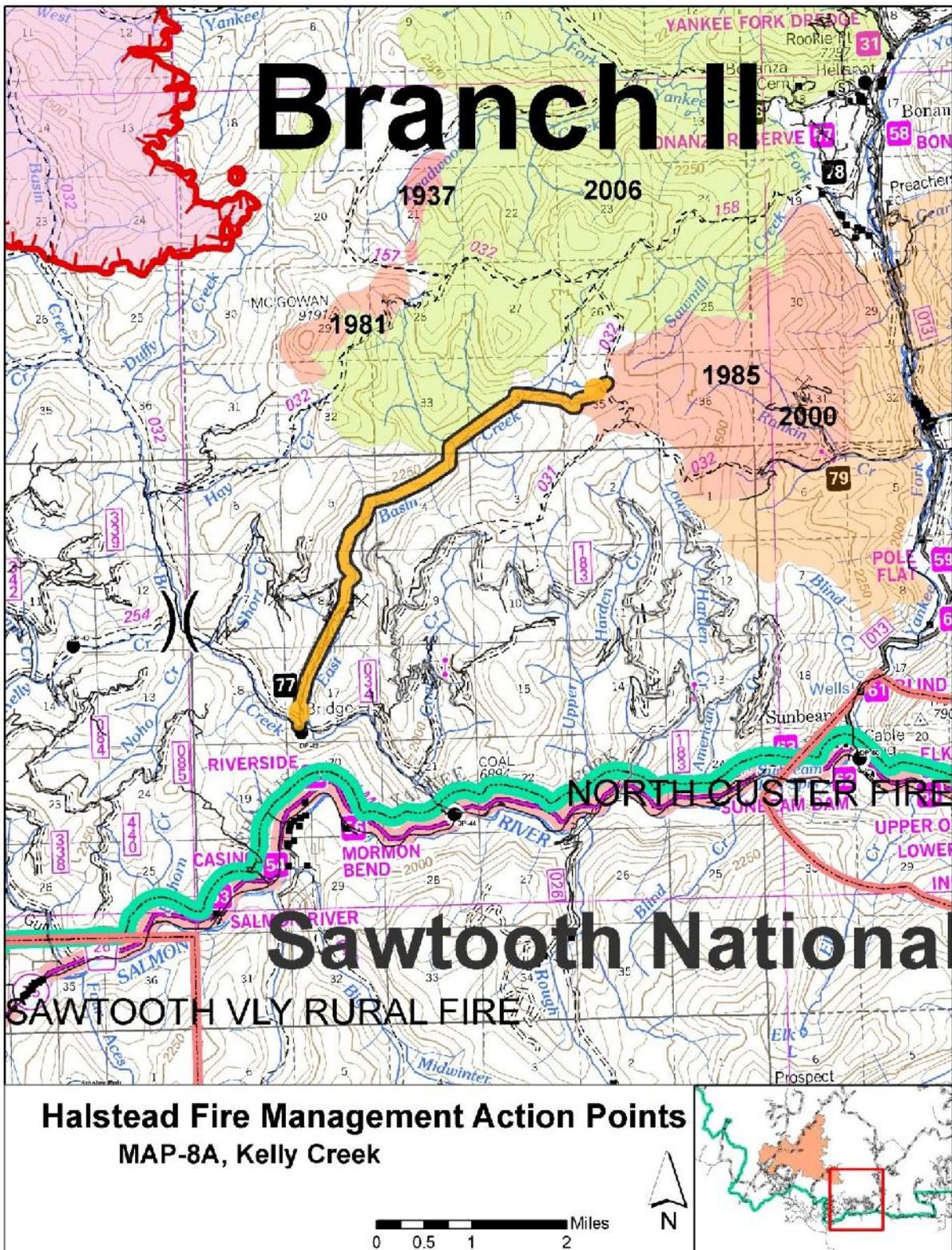
MAP 7A Stanley

<p>Condition</p>	<p>Values at Risk - Fire impacting Stanley Area, Trap Cr. Campground to Sunbeam corridor, Hwy 21 and 75.</p> <p>Intent of MAP - Evaluate and implement actions to protect Stanley and the Hwy corridor from Trap Cr. Campground to Sunbeam. Coordinate with Local Law Enforcement and Fire Department on evacuation preparation. Work with ID-DOT on Hwy 75 & 21 on public safety considerations. Consider Area and Planning Area expansions.</p> <p>Trigger Condition - 24 hours of the fire reaching the MAP.</p>
<p>Action</p>	<ul style="list-style-type: none"> • Contact and recommend to Local Law Enforcement and Fire Department on potential evacuations around Stanley area. • Discuss the command structure. • Consider implementing evacuations in campgrounds from Trap Cr. Campground to Sunbeam. • Implement tactics in and around the Upper and Lower Stanley to minimize fire threat to private land values. • Reassess Area Closure and planning area with the SCNF and Sawtooth NF Agency Administrators. • Assess the threat of fire and rolling material on Hwy 75 and 21 and contact ID-DOT on public safety concerns. • Consider evacuations from Lower Stanley to Sunbeam.
<p>Resources</p>	<ul style="list-style-type: none"> • Contacting LEO's will require Liaison, and Operations. • Establishing the agreed upon command structure would involve IC, Operations, and Local Cooperators. • Working with ID-DOT would involve Operations, liaison, and ID-DOT. • List of <u>3 Critical Resource needs</u> that are commensurate with the values at risk is listed below. <ol style="list-style-type: none"> 1. Structure Group Supervisor 2. 3 -Strike Teams of Engines 3. 3 -Water Tenders 4. 1- Type 1 Crew



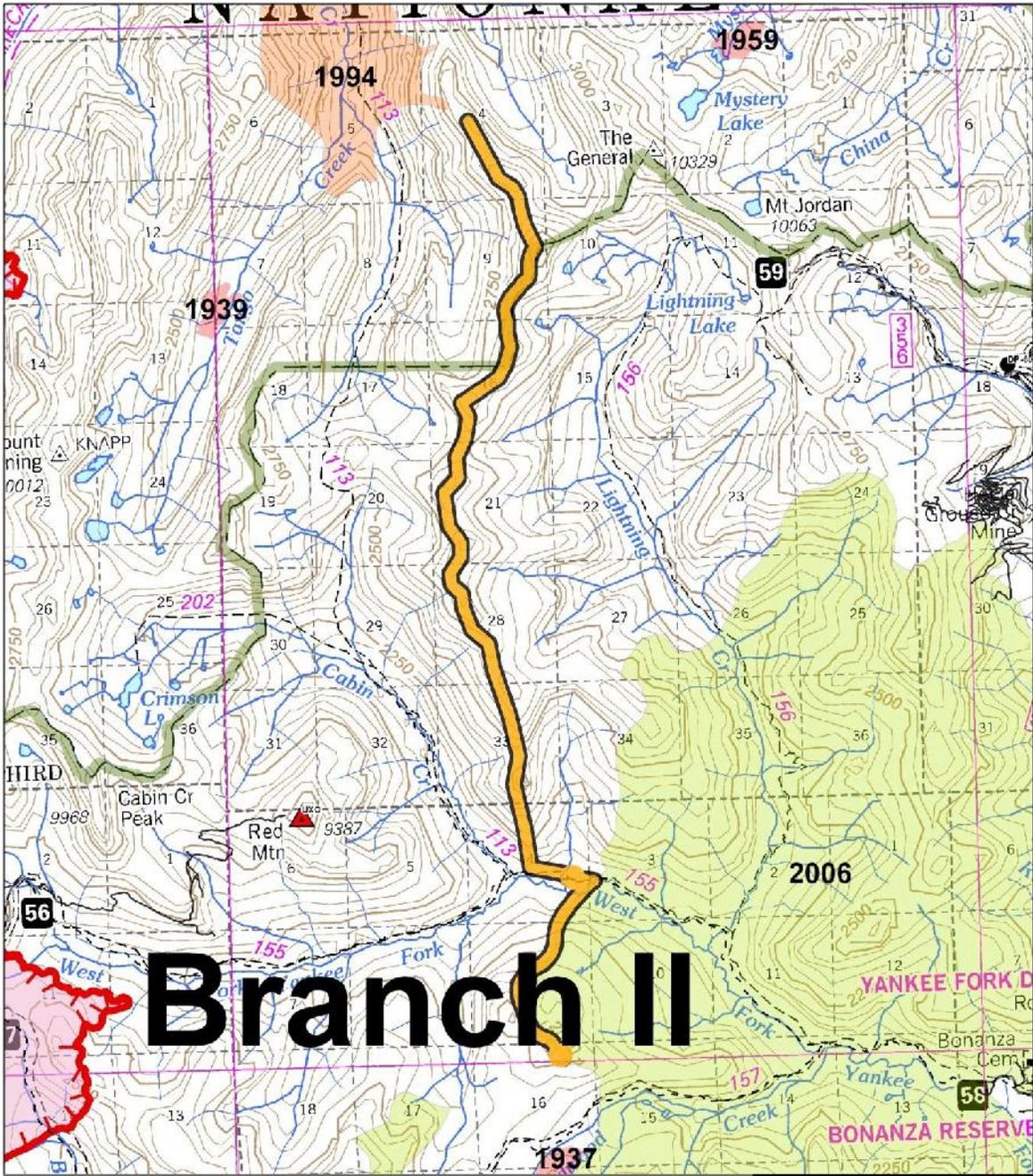
MAP 8A Kelly Cr.

<p>Condition</p>	<p>Values at Risk - Fire impacting Sunbeam Area, Campgrounds from Lower Stanley to Torrey's Hole, Hwy 21 and 75.</p> <p>Intent of MAP - Evaluate and implement actions to protect Hwy corridor from Lower Stanley to Torrey's Hole add the Sunbeam Area. Coordinate with local Law Enforcement and Fire Department on potential evacuations. Reassessment of Area closure and Planning Area expansions. Coordination with ID-DOT on Hwy 21 and 75 Public and Fire Fighter safety considerations.</p> <p>Trigger Condition - 24 hours of the fire reaching the MAP.</p>
<p>Action</p>	<ul style="list-style-type: none"> • Contact Local Law Enforcement and Fire Department on potential evacuation's around the Sunbeam area. • Discuss the command structure. • Implement tactics in and around the Sunbeam area to minimize fire threat to private land values. • Consider implementing evacuations in campgrounds from Lower Stanley to Torrey's Hole. • Reassess Area Closure and planning area with the SCNF and Sawtooth NF Agency Administrators. • Work with ID-DOT on Public and Firefighter Safety on Hwy 21 and 75. • Consider evacuations from Sunbeam to Thompson Cr..
<p>Resources</p>	<ul style="list-style-type: none"> • Contacting LEO's will require Liaison, and Operations. • Establishing the agreed upon command structure would involve the IC, Operations, and Local Cooperators. • ID-DOT would involve Operations, Liaison, and ID-DOT. • List of <u>3 Critical Resource needs</u> that are commensurate with the values at risk is listed below. <ol style="list-style-type: none"> 1. Structure Group Supervisor 2. 3- Strike Teams of Engines 3. 3- Water Tenders 4. 1 -Type 1 Crew



MAP 9 Lightning

<p>Condition</p>	<p>Values at Risk - Fire impacting Grouse Cr. Mine, Bonanza and Custer infrastructures, Diamond D Ranch.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Grouse Cr. Mine, Bonanza and Custer Infrastructures, Diamond D Ranch. Coordinate with local Law Enforcement and Fire Department on potential evacuations. Reassessment of area closure and planning area expansions. Coordination with ID-Dot on Hwy 75 Public and Fire Fighter safety considerations. Consider coordination with the Sho-Ban Tribe on fish trap activity. Work with ID – DEQ on smoke monitoring.</p> <p>Trigger Condition - 24 hours of the fire reaching the MAP.</p>
<p>Action</p>	<ul style="list-style-type: none"> • Contact local Law Enforcement and Fire Department on potential evacuations. • Assess needs and implement tactic in and around the Grouse Cr. Mine, Bonanza and the Custer infrastructures to minimize fire threat to public and private land values. • Consider closure of road system north of Bonanza and East on FS rd 70 to Mill Cr. Summit and with the additional actions consider evacuating Diamond D Ranch guests. • Reassess the Area Closure and Planning area for potential extension. • Implement Communications actions for Yankee Fork Drainage (Custer/Bonanza). • Consider Closing Hwy 75 if fire crosses the Southern end of MAP 9 for Firefighter and Public Safety. • Contact Sho-Ban Tribe on fish trap in the Yankee Fork. • Contact ID-DEQ when air monitors are 90% of PM 2-5 NAAQS.
<p>Resources</p>	<ul style="list-style-type: none"> • Remove historic items from Custer will require 2- large moving vans. ***Recommend ordering these vans if fire Crosses MAP. *** • Implementing work around Mine, Bonanza and Custer with require Structure Group Supervisor, 1- Type 1 - Crew, 1- Strike team of Engines. • Closures will include LEO, Agency Administrator from SCNF, and Operations. • Implementing Communications actions will require the PIO and local forest assistance. • Contact ID-DEQ would involve air quality specialist

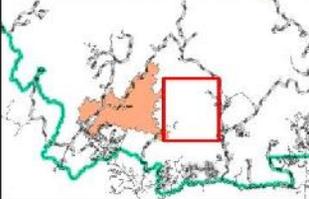


Branch II

Halstead Fire Management Action Points MAP-9, Lightning

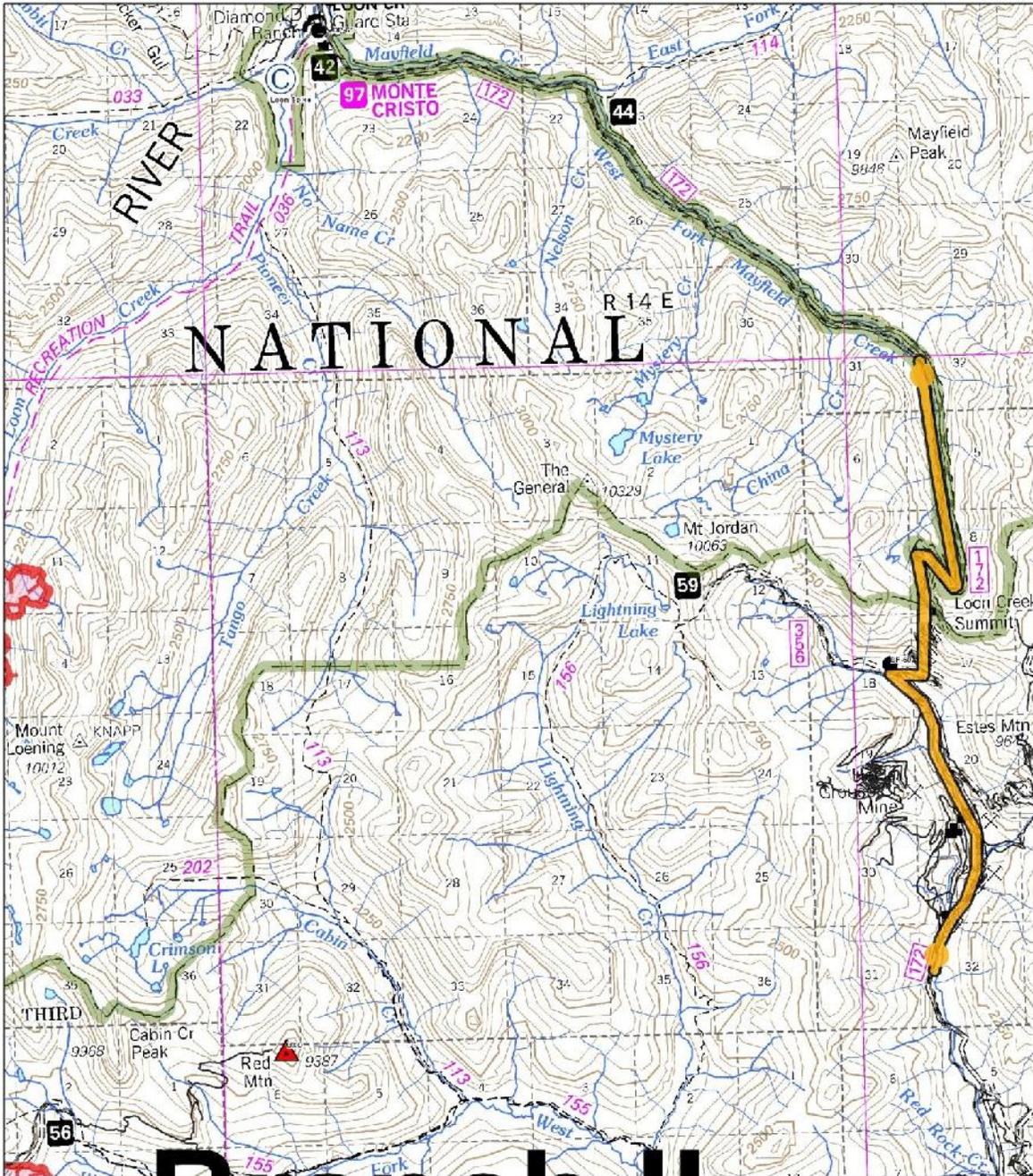


Date: 8/12/2012A. Seifert 1600



MAP 10 Jordan

<p>Condition</p>	<p>Values at Risk - Fire impacting Custer Museum, 8 Mile Campground, 11 Mile Cabin, Homestead Cabin, Custer Bridge and Interpretive Signs, and Mid Cottonwood Point Lookout.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Custer Museum, 8 Mile Campground, 11 Mile Cabin, Homestead Cabin, Custer Bridge and Interpretive Signs, and Mid Cottonwood Point Lookout. Coordinate with local Law Enforcement and Fire Department on potential evacuations. Reassessment of area closure and planning area expansions.</p> <p>Trigger Condition - If the fire crosses or is predicted to cross this MAP within 24 hours and a North wind is predicted.</p>
<p>Action</p>	<ul style="list-style-type: none"> • If the fire crosses any portion of the road from Sunbeam North to Loon Cr. guard station consider expanding incident organization to the east. • Consider removing historic items (furniture, etc.) from the Custer Museum if the fire crosses the 172 rd south of Loon Cr. Summit. • Contact local Law Enforcement on potential evacuations. • Consider assessing and preparing 8 mile campground. • Consider assessing and preparing 11 mile cabin, Homestead cabin, bridges and interpretive signs up the Custer. • Reassess area closure and planning area for potential extension. • Close road system north of Bonanza on FS 172 and East on FS Rd 70 to Mill Cr. Summit • Consider assessing and preparing Mid Cottonwood Point L.O. for fire threat.
<p>Resources</p>	<ul style="list-style-type: none"> • Preparing Mid Cottonwood Point LO will require Local Type 3 Helicopter with 3-Helitack. • Evacuations will require LEO, Operations, and Agency Administrator. • List of Critical Resource needs that are commensurate with the values at risk around Custer and Bonanza are listed below. <ol style="list-style-type: none"> 1. Structure Group Supervisor 2. 3- Strike Teams of Engine 3. 2 -Type 1 Crew

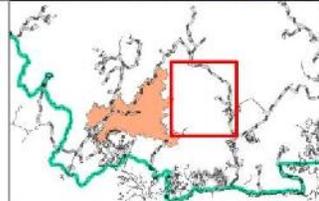


Halstead Fire Management Action Points

MAP-10, Jordan

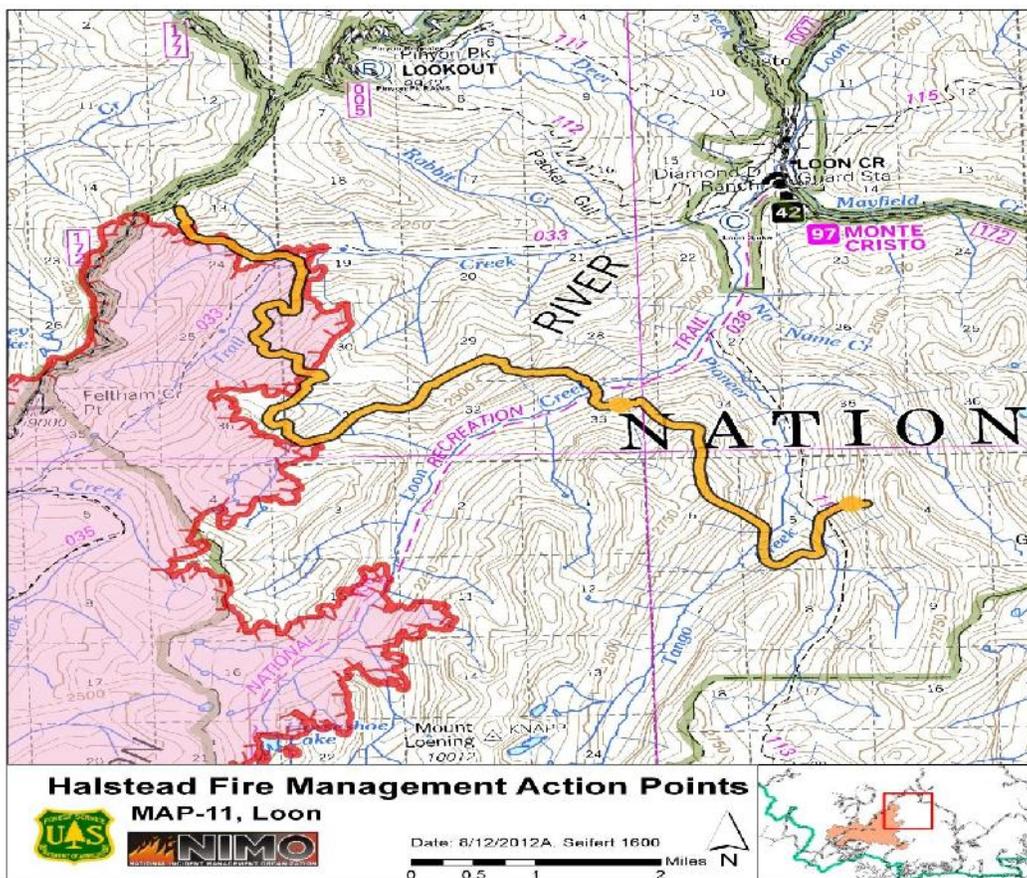


Date: 8/12/2012A. Seifert 1600



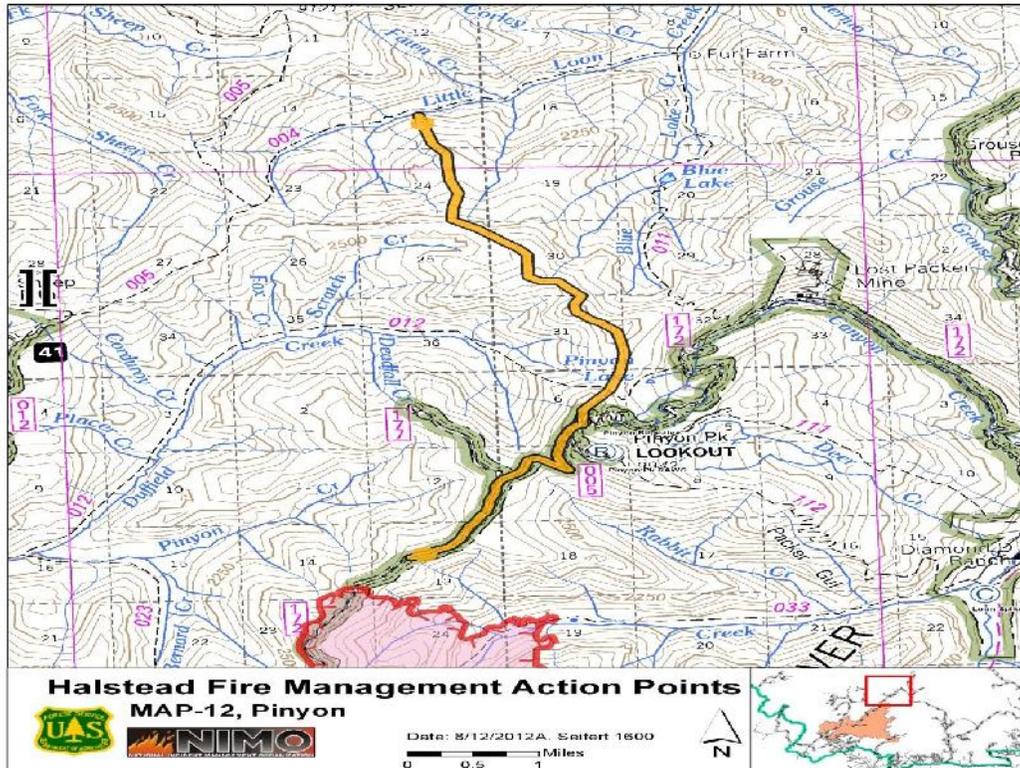
MAP 11 Loon

Condition	<p>Values at Risk - Fire impacting Diamond D Ranch and Road 172.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Diamond D Ranch and consider closure of Road 172. Coordination with ID-DEQ on smoke monitoring.</p> <p>Trigger Condition - If the fire reaches the MAP.</p>
Action	<ul style="list-style-type: none"> • Consider evacuating Diamond D Ranch guests. • Consider road closure on Rd 172 from Loon Cr. Summit North. • Contact ID-DEQ when air monitors are 90% of PM 2-5 NAAQS.
Resources	<ul style="list-style-type: none"> • For evacuation and rd closure will involve operations, and LEO. • Contact ID-DEQ would involve air quality specialist.



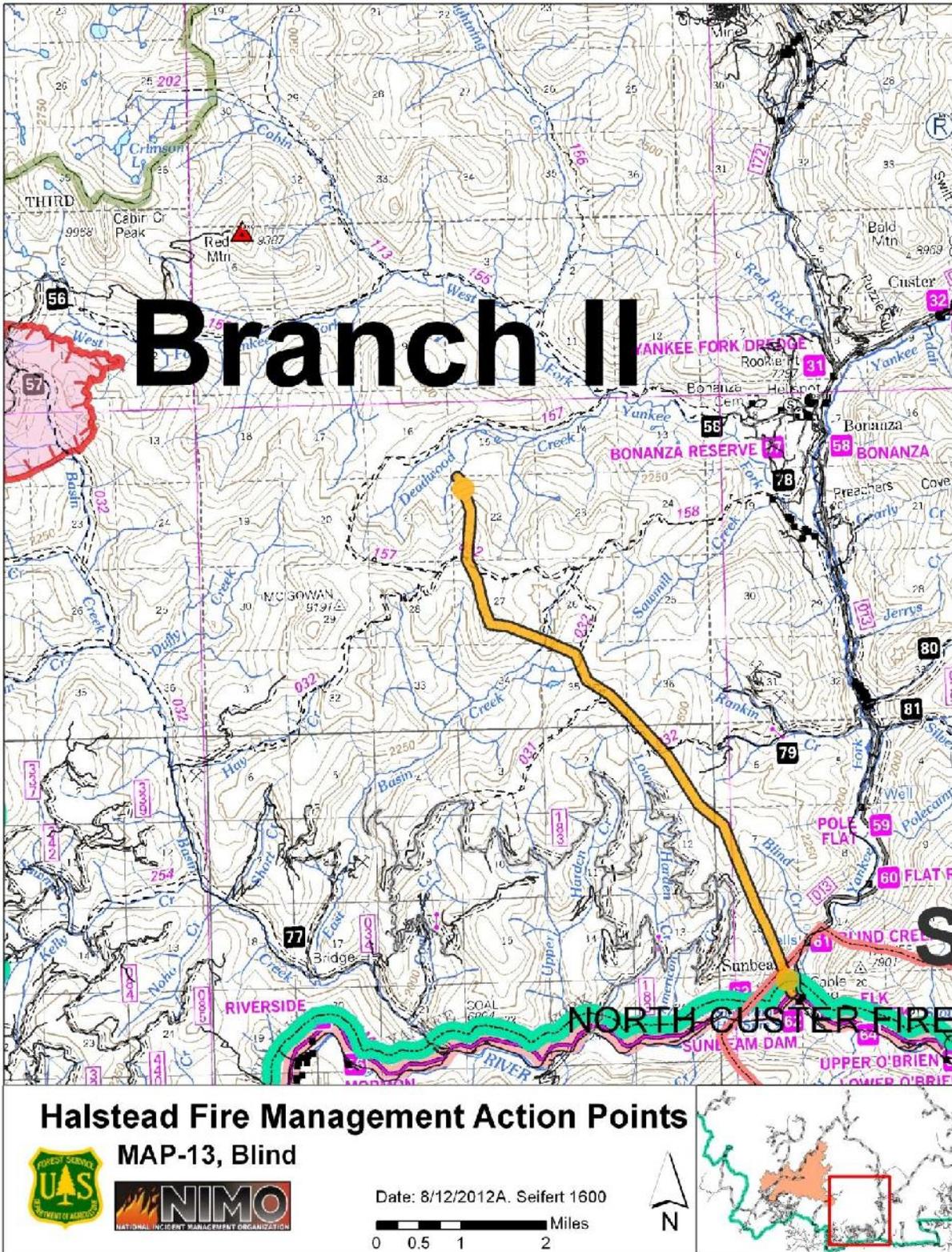
MAP 12 Pinyon

Condition	<p>Values at Risk - Fire impacting Little Cr. and Cougar Cr. Ranch.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Little Cr. and Cougar Cr. Ranch. Consider road closures of FS Rd 172. Coordination with ID-DEQ on smoke monitoring.</p> <p>Trigger Condition - If the fire reaches the MAP.</p>
Action	<ul style="list-style-type: none"> • Consider assessing and preparing Little Cr. guard Station for fire threat. • Consider to assess and prepare Cougar Cr. Ranch to minimize fire threat to private land values. • Reassess Area Closure and planning area for possible extension. • Consider road closure on Rd 172 from Loon Cr. Summit North. • Contact ID-DEQ when air monitors are 90% of PM 2-5 NAAQS.
Resources	<ul style="list-style-type: none"> • Little Cr. would involve TFLD, 10 person Crew • Cougar Ranch would involve TFLD, 10 person Crew • Road Closure would involve LEO, and Operations. • Contact ID-DEQ would involve air quality specialist.



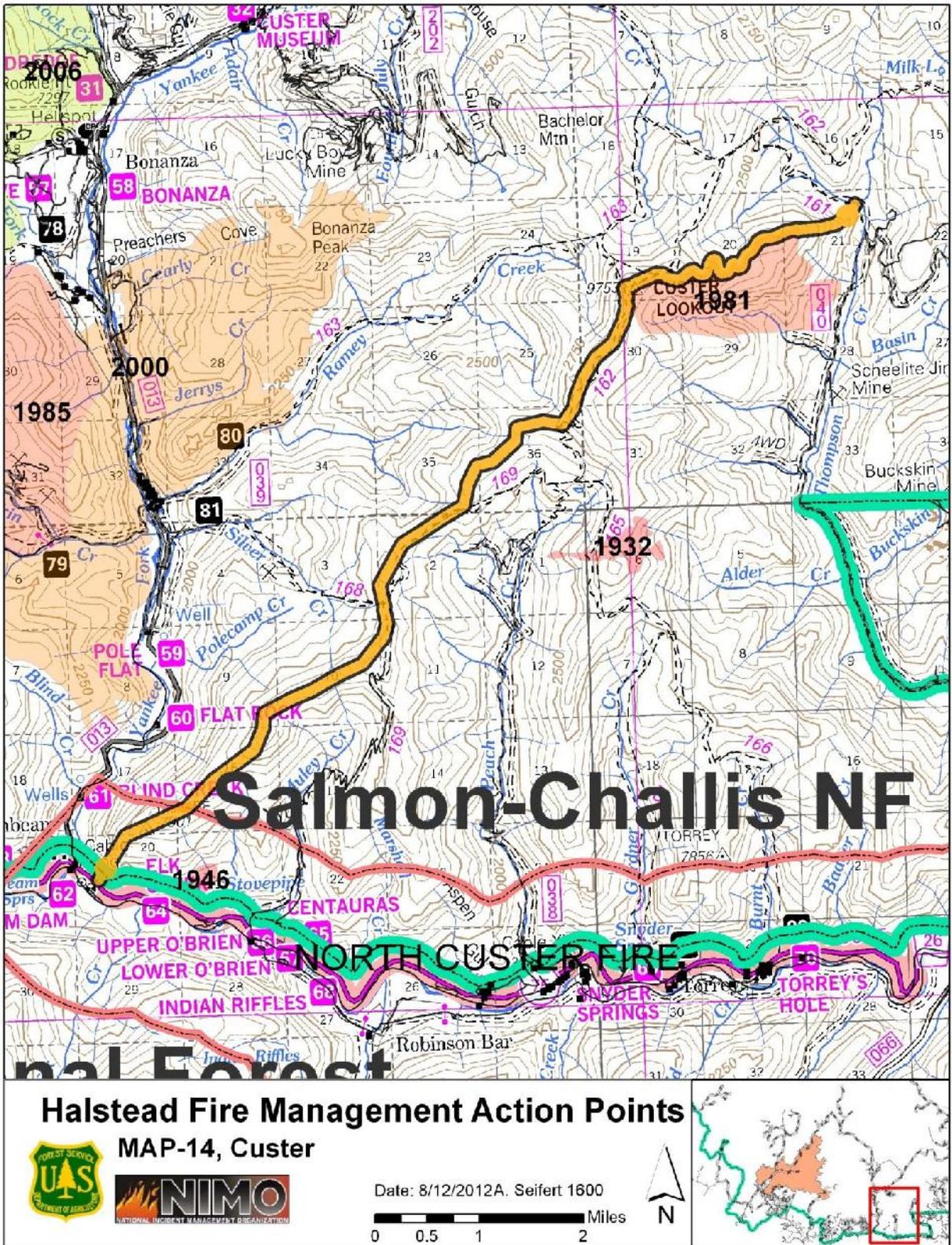
MAP 13 Blind

<p>Condition</p>	<p>Values at Risk - Fire impacting Grouse Cr. Mine, Bonanza and Custer Infrastructures, Salmon River Electric Power Lines, and Sho-Ban Fish Traps.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Grouse Cr. Mine, Bonanza and Custer Infrastructures, Salmon River Electric Power Lines, and Sho-Ban Fish Traps. Consideration of Incident Organization expansion. Coordination with possible fire on BLM.</p> <p>Trigger Condition - If the fire is predicted to cross this MAP within 48 hours.</p>
<p>Action</p>	<p>If not already implemented in MAP 9:</p> <p>Assess needs and implement tactic in and around the Grouse Cr. Mine, Bonanza and the Custer infrastructures to minimize fire threat to public and private land values.</p> <p>If fire crosses the MAP contact Local Law Enforcement and Fire Department on potential Evacuations.</p> <ul style="list-style-type: none"> • If the fire crosses any portion of the road from Sunbeam North to Loon Cr. guard station consider expanding incident organization to the east. • If the fire moves within 48 hours of reaching the southern portion of the MAP contact local Law Enforcement and Fire Department on potential evacuations. • Remove historic items from Custer will require 2 large moving vans. ***Recommend ordering these if MAP 8 or 9 is crossed. *** • Consider Closing Hwy 75 if fire crosses the Southern end of MAP 13 for Firefighter and Public Safety. • Implement Communications actions for Yankee Fork Drainage (Custer/Bonanza). • Contact Salmon River Electric on potential threat to power line. • Contact Sho-Ban Tribe on fish trap in the Yankee Fork. • Communications about Unified Command and Cost Share would be developed. • If there are plans on implementing tactics on BLM ownership. Inform the BLM and they will issue a delegation letter to the IMT and engage a resource advisor.
<p>Resources</p>	<p>List of <u><i>Critical Resource needs</i></u> that are commensurate with the values at risk around Custer and Bonanza are listed below.</p> <ol style="list-style-type: none"> 1. Structure Group Supervisor 2. 3- Strike Teams of Engine 3. 2- Type 1 Crew 4. Closure of road will involve LEO, Idaho DOT, and Operations. 5. Communication actions will involve local forest resources and PIO. 6. BLM delegation will involve IC, SCNF and BLM agency administrators. 7. Ordering 2- Moving Vans will be handled by the local forest.



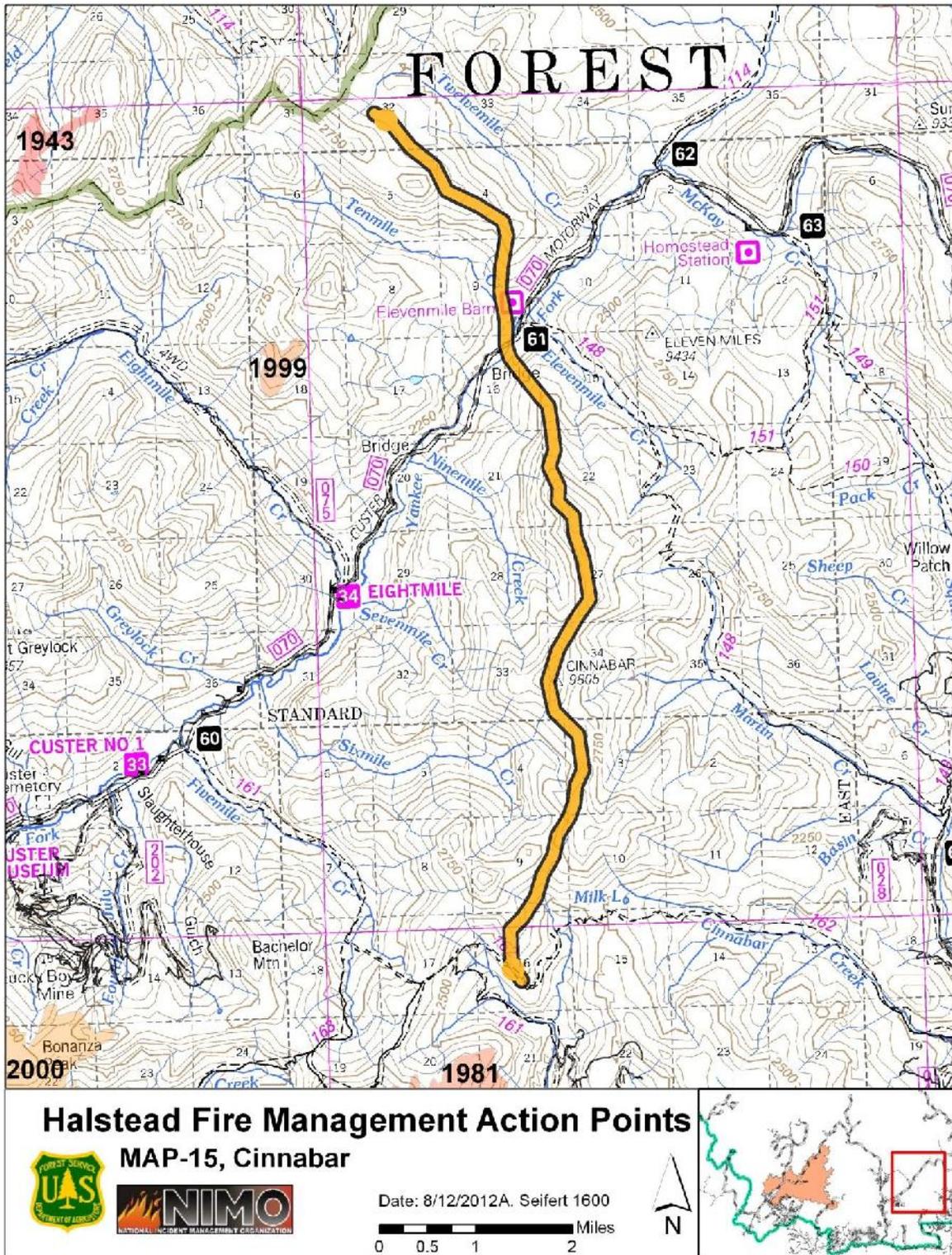
MAP 14 Custer

<p>Condition</p>	<p>Values at Risk - Fire impacting Thomson Cr. Mine Infrastructures, Hwy 75, Private and Public Values between Sunbeam to Yankee Fork Work Station, Salmon River Electric Power Lines. Also consideration of impacts to Squaw Cr., Garden, and Challis Cr. Grazing Allotments.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Thomson Cr. Mine Infrastructures, Hwy 75 corridor, Private and Public Values between Sunbeam to Yankee Fork Work Station, and Salmon River Electric Power Lines. Coordinate with local Law Enforcement and Fire Department on potential evacuations. Reassessment of Area closure and Planning Area expansions. Coordination with ID-Dot on Hwy 75 Public and Fire Fighter safety considerations. Consideration of Unified Command and Cost Share development</p> <p>Trigger Condition - If the fire is predicted to cross this MAP within 24 hours.</p>
<p>Action</p>	<ul style="list-style-type: none"> • If not implemented in 13 or 15. • BLM will issue a delegation letter to the IMT and engage a resource advisor to work with the IMT. • Assess needs and implement tactic in and around the Thomson Cr. Mine infrastructures to minimize fire threat to private land values. • Consider Closing Hwy 75 if fire crosses the Southern end of MAP 14 for Firefighter and Public Safety. • Assess and implement tactics to prevent fire threat to private and public land values on the Salmon River from Sunbeam to the Yankee Fork work station • Contact Salmon Challis NF on potential threat to grazing allotment within Squaw Cr., Garden and Challis Cr.. • Contact Salmon River Electric on potential threat to power line. • Reassess the Area Closure and Planning area for potential extension. • Consider assessing and preparing Mid Cottonwood Point L.O. for fire threat. • If fire crosses the MAP contact Local Law Enforcement and Fire Department on potential Evacuations. • Communications about Unified Command and Cost Share would be developed.
<p>Resources</p>	<p>List of <i>Critical Resource needs</i> that are commensurate with the values at risk around Thomson Cr. Mine and infrastructures on the Salmon River from Sunbeam to Yankee Fork work station are listed below.</p> <ol style="list-style-type: none"> 1. Structure Group Supervisor 2. 3- Strike Teams of Engine 3. 2- Type 1 Crew 4. Closure of road will involve Idaho DOT, LEO, Operations. 5. Communication Actions will involve local forest resources and PIO. 6. BLM delegation will involve IC, SCNF and BLM agency administrators.



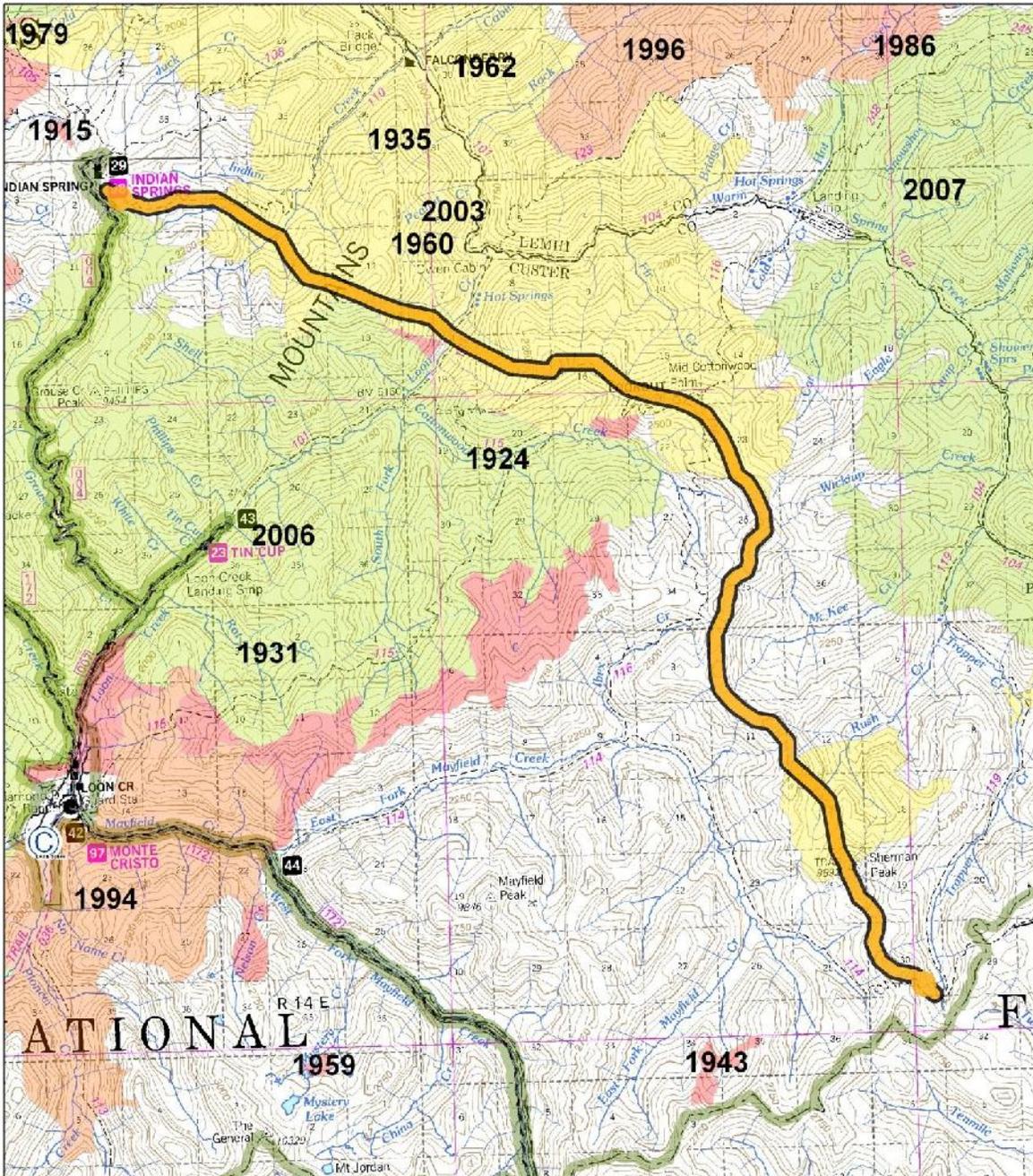
MAP 15 Cinnabar

<p>Condition</p>	<p>Values at Risk - Fire impacting Bayhorse Lake and Little Bayhorse Campground, Historic Bayhorse Lake State Parks and Rec Area, Keystone Mine Infrastructures, Mosquito Flats infrastructures. Also consider impacts to Garden Cr. Watershed and Squaw Cr., Garden and Challis Cr. grazing allotments.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Thompson Cr. Mine Infrastructures, Hwy 75 Corridor, Private and Public Values between Sunbeam to Yankee Fork Work Station, Salmon River Electric Power Lines. Coordinate with local Law Enforcement and Fire Department on potential evacuations. Reassessment of Area closure and Planning Area expansions. Coordination with ID-Dot on Hwy 75 Public and Fire Fighter safety considerations. Consideration of Unified Command and Cost Share development</p> <p>Trigger Condition - If the fire is predicted to cross this MAP within 24 hours.</p>
<p>Action</p>	<ul style="list-style-type: none"> • If not implemented in MAP 13 of 14. BLM will issue a delegation letter to the IMT and engage a Resource Advisor to work with the IMT. • Assess needs and implement tactic in and around the Bayhorse Lake and Little Bayhorse Campground. • Assess needs and implement tactics in and around Historic Bayhorse State Parks and Rec area and Keystone mine infrastructures to minimize fire threat to public and private land values. • Assess needs and implement tactics in and around Mosquito flats infrastructures to minimize fire threat to public and private land values. • Consider assessing incident objectives with the potential threat to Garden Cr. Watershed. • Contact Salmon Challis NF on potential threat to grazing allotment with Squaw Cr., Garden and Challis Cr.. • Reassess area closure and planning area for potential extension. • If fire crosses the MAP contact Local Law Enforcement and Fire Department on potential Evacuations. • Communications about Unified Command and Cost Share would be developed.
<p>Resources</p>	<p>List of <u><i>Critical Resource needs</i></u> that are commensurate with the values at risk around Bayhorse, Mosquito flats, and the mine infrastructures are listed below.</p> <ol style="list-style-type: none"> 1. Structure Group Supervisor 2. 3- Strike Teams of Engine 3. 1- Type 1 Crews 4. Closure of road will involve LEO, and Operations. 5. Communications Protocol will involve local forest resources and PIO. 6. BLM delegation will involve IC, SCNF and BLM agency administrators.



MAP 16 Cottonwood

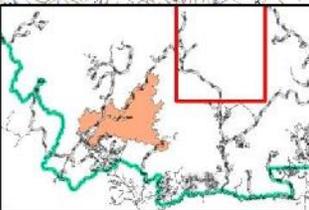
<p>Condition</p>	<p>Values at Risk - Fire impacting Myers Cove, Triple Cr. Ranch, Falconberry G.S., Camas Cr. infrastructures, Sleeping Deer Lookout and Middle Fork Outfitters camps. Consider Loon Cr. Trail, Bennett Cr. Falconberry Pack, Rock Cr. Pack, Lower Loon Cr. and White Cr. Bridges.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Myers Cove, Triple Cr. Ranch, Falconberry G.S., Camas Cr. infrastructures, Sleeping Deer Lookout and Middle Fork Outfitters camps. Consider Loon Cr. Trail, Bennett Cr. Falconberry Pack, Rock Cr. Pack, Lower Loon Cr. and White Cr. Bridges. Reassessment of area closure and planning area expansions. Coordinate with Lemhi and Valley County on possible fire reaching county lines.</p> <p>Trigger Condition - If the conditions show that past fires are not a barrier implement when the MAP is reached.</p>
<p>Action</p>	<ul style="list-style-type: none"> • Reassess area closure and planning area for potential extension. • Consider assessing incident objectives with the potential threat to Garden Cr. Watershed. • Consider Assessing and implementing tactics in Meyers Cove, Triple Cr. Ranch (WarmSprings Drainage), Falconberry G.S. and Camas Cr. infrastructures to minimize fire threat to public and private land values. • Consider Assessing and implementing tactics on the following bridges along the Loon Cr. Trail: Bennett Cr. Bridge, Falconberry Pack Bridge, and the Rock Cr. Pack Bridge. In addition on the Middle Fork River there are bridges at Lower Loon Cr. and White Cr.. • Consider River Operations group to assist in river camp assessments for public safety on the Middle Fork of the Salmon. • Contact Lemhi and Valley County on potential of fire reaching there county line. • Consider assessing and preparing Sleeping Deer L.O. for fire threat.
<p>Resources</p>	<ul style="list-style-type: none"> • Camas Cr. and Meyer's cove would involve 1- type 2 IA Crew. • Falconberry and the bridges would involve 1- type 2 IA Crew. • River Operations would involve rafts with qualified boatman and squad of firefighters.



Halstead Fire Management Action Points
MAP-16, Cottonwood

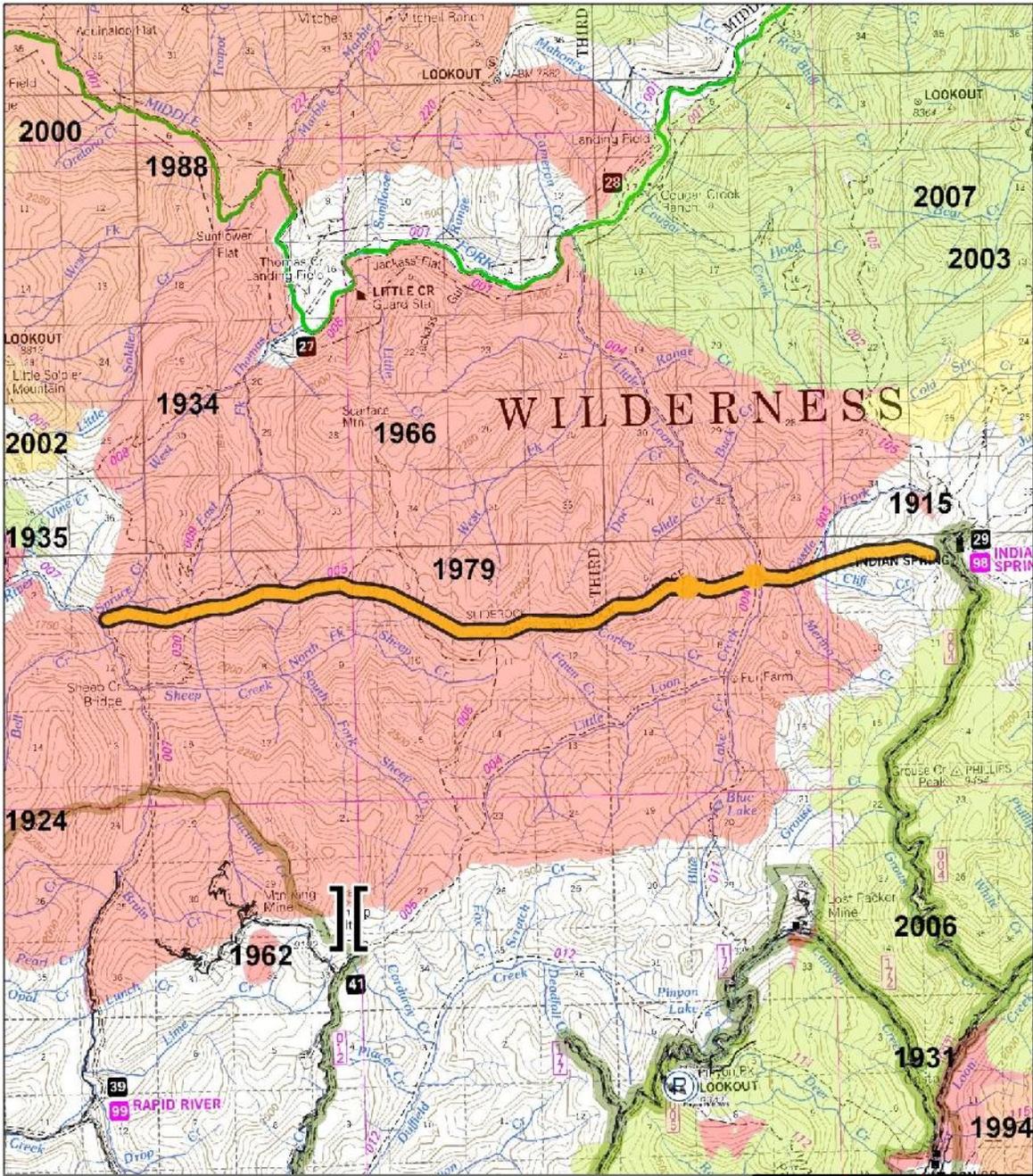


Date: 8/12/2012A. Seifert 1600
 0 0.5 1 2 3 Miles



MAP 17 Slide Rock

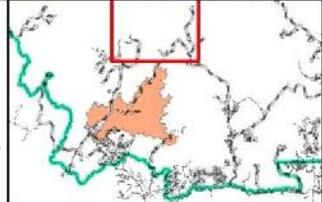
<p>Condition</p>	<p>Values at Risk - Fire impacting Middle Fork Outfitters Camps, Cougar Ranch infrastructures, Simplot Property, Middle Fork Lodge, Indian Cr and Little Cr. infrastructures, Fir Farms and Sleeping Deer Lookout. Consider Indian Cr., Little Cr., and White Cr Bridges.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Myers Cove, Triple Cr. Ranch, Falconberry G.S., Camas Cr. infrastructures, Sleeping Deer Lookout and Middle Fork Outfitters camps. Consider Loon Cr. Trail, Bennett Cr., Falconberry Pack, Rock Cr. Pack, Lower Loon Cr. and White Cr. Bridges. Coordination with Valley County on possibility fire moving into their County.</p> <p>Trigger Condition - If the fire reaches the MAP.</p>
<p>Action</p>	<ul style="list-style-type: none"> • Consider River Operations group to assist in river camp assessments for public safety on the Middle Fork of the Salmon. • Reassess area closure and planning area for potential extension. • Consider assessing and preparing infrastructures at Cougar Ranch, Simplot Property, Middle Fork Lodge, Indian Cr., Little Cr. and Fir Farm to protect public and private land values for fire threat. • Consider assessing and preparing bridges at Indian Cr., Little Cr., and White Cr.. • Contact Valley County on potential of fire reaching their county line. • Consider assessing and preparing Sleeping Deer L.O. for fire threat.
<p>Resources</p>	<ul style="list-style-type: none"> • Infrastructures on the Middle Fork River from Indian Cr. to Cougar Ranch would involve 2 - type 2 IA Crews. • River Operations would involve rafts with qualified boatman and squad of firefighters.



Halstead Fire Management Action Points
MAP-17, Slide Rock

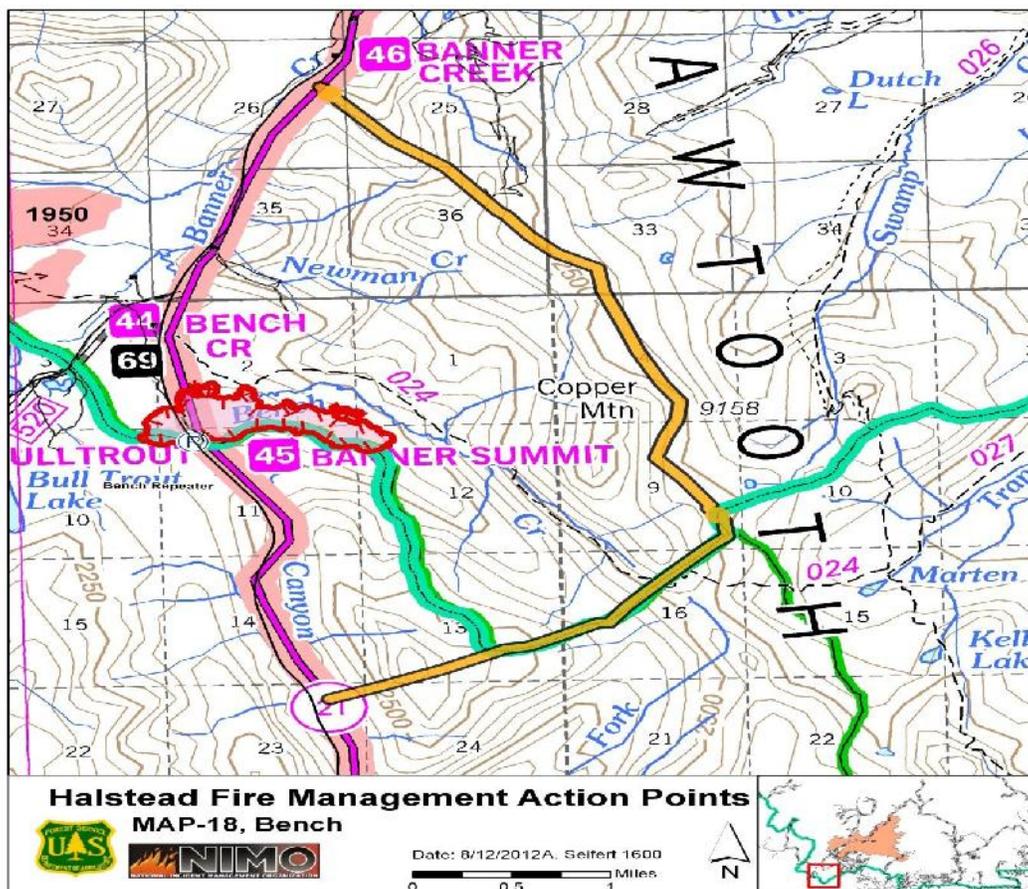


Date: 8/12/2012A. Seifert 1600



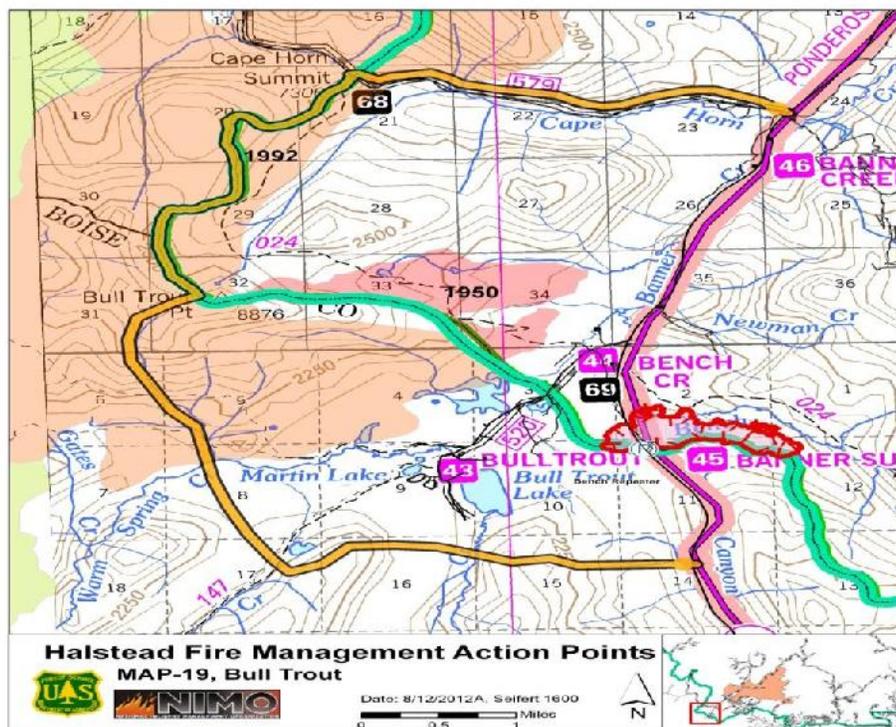
MAP 18 Bench

<p>Condition</p>	<p>Values at Risk - Fire impacting Bench, Thatcher, and Banner Campgrounds.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Bench, Thatcher, and Banner Campgrounds. Consideration of Base Camp safety. Coordination of possible Hwy 21 closure.</p> <p>Trigger Condition - If the fire reaches the MAP.</p>
<p>Action</p>	<ul style="list-style-type: none"> • Assess Base Camp safety and consider evacuating Base Camp. • Reassess area closure and planning area with the Boise, Sawtooth and the Salmon • Challis NF for potential extension. • Assess and implement tactics to minimize fire threat to the following campgrounds at Bench, Thatcher, and Banner. • Consider Closing Hwy 21 if the northern or Southern edge of this MAP is crossed.
<p>Resources</p>	<ul style="list-style-type: none"> • Campground prep would involve 2- Engines. • Closing Hwy will involve ID-DOT, and Operations • Base Camp evacuation would involve Logistics, Safety, and Operations.



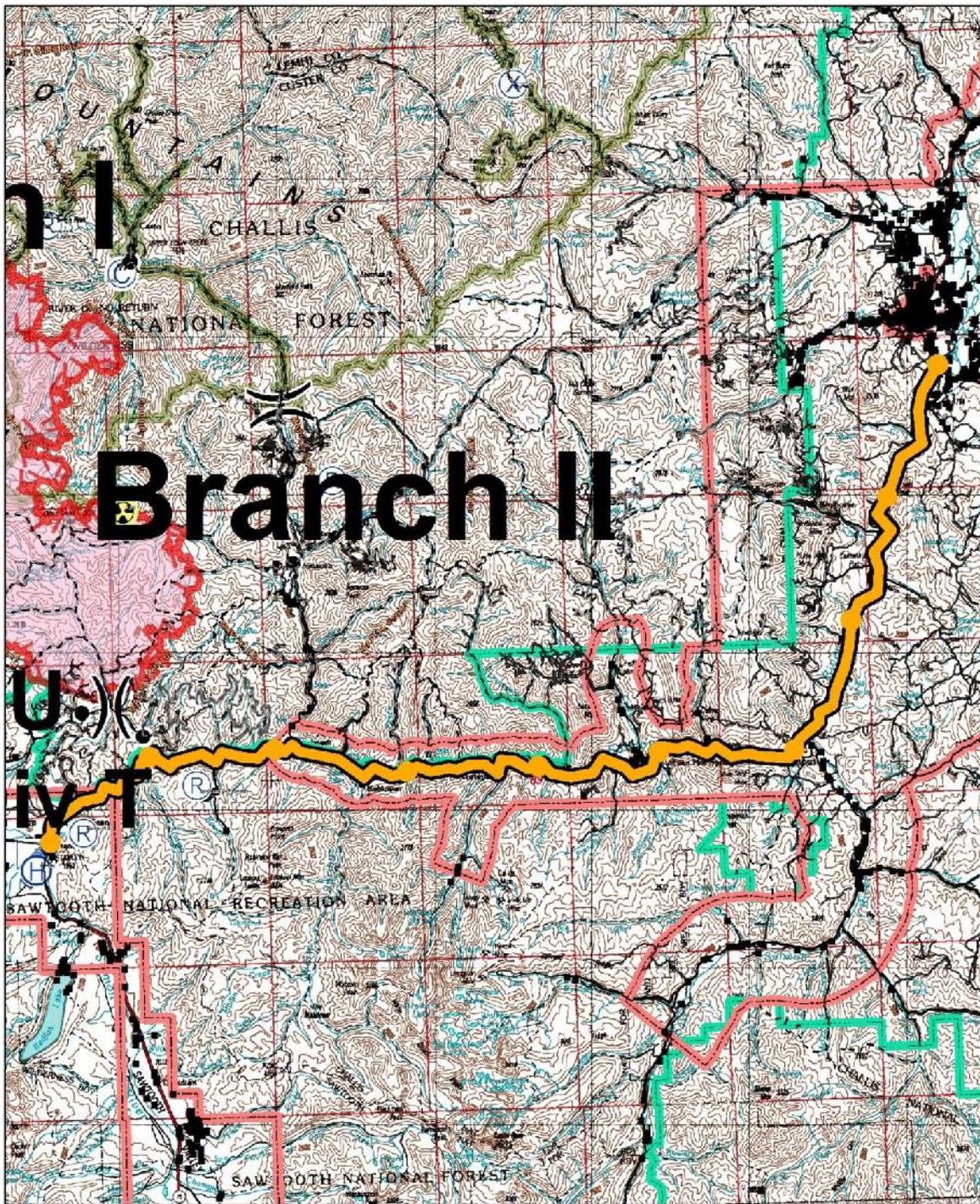
MAP 19 Bull Trout

<p>Condition</p>	<p>Values at Risk - Fire impacting Elk Cr. Guard Station; Bench, Fir Cr. Bull Trout, and Banner Campgrounds.</p> <p>Intent of MAP - Evaluate and implement actions to protect Fire impacting Elk Cr. Guard Station; Bench, Fir Cr. Bull Trout, and Banner Campgrounds. Consideration expansion of Planning area. Coordination of possible Hwy 21 closure. Possible coordination with Valley County on fire threat.</p> <p>Trigger Condition - If the fire reaches the MAP.</p>
<p>Action</p>	<ul style="list-style-type: none"> • Reassess area closure and planning area with the Boise, Sawtooth and the Salmon • Challis NF for potential extension. • Assess and implement tactics to minimize fire threat to the following campgrounds at Bench, Fir Cr., Bull Trout and Banner. • Assess and implement tactics to minimize fire threat to Elk Cr. Guard Station. • Consider Closing Hwy 21 if the northern or Southern edge of this MAP is crossed. • Contact Valley County on potential of fire reaching their county line.
<p>Resources</p>	<ul style="list-style-type: none"> • Campground prep and Guard Station would involve TFLD, and 3- Engines. • Closing Hwy will involve ID-DOT, and Operations.



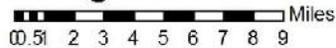
MAP 20 SNRA

<p>Condition</p>	<p>MAP Description - Trigger point line starting at Stanley and moving east following Salmon River to intersection with Hwy 93.</p> <p>Values at Risk - see Appendix A (p.36-40) - Sawtooth NRA/NF Values at Risk for State Highway 75 Corridor - Evaluate all values at risk listed in the above document that could be threatened by probable or forecasted fire spread and begin development of pre-planned response for values to be protected commensurate with values at risk. (Values are basically private property and developments along the river corridor).</p> <p style="text-align: center;"><u>Management Priorities for Values at Risks:</u></p> <ol style="list-style-type: none"> 1. Bridges 2. Private Structures 3. Lookouts 4. Other Values at Risk <p>Trigger Condition - 48 hours or anticipated spotting across the river.</p>
<p>Action</p>	<p>Management Action Considerations:</p> <ul style="list-style-type: none"> • Evaluate and develop pre-plans for all possible threatened values at risk • Assess and implement tactics that will protect threatened values at risk that are determined to be in imminent threat from fire. These values will be identified by Forest Administrators. • Reassess and implement area closures. • Discuss command structure including operations oversight. • Contact local Law Enforcement and Fire Department regarding potential evacuations. • Implement Halstead Communication Actions for the area south of Stanley. • Follow NRA Fire Suppression Guidelines.



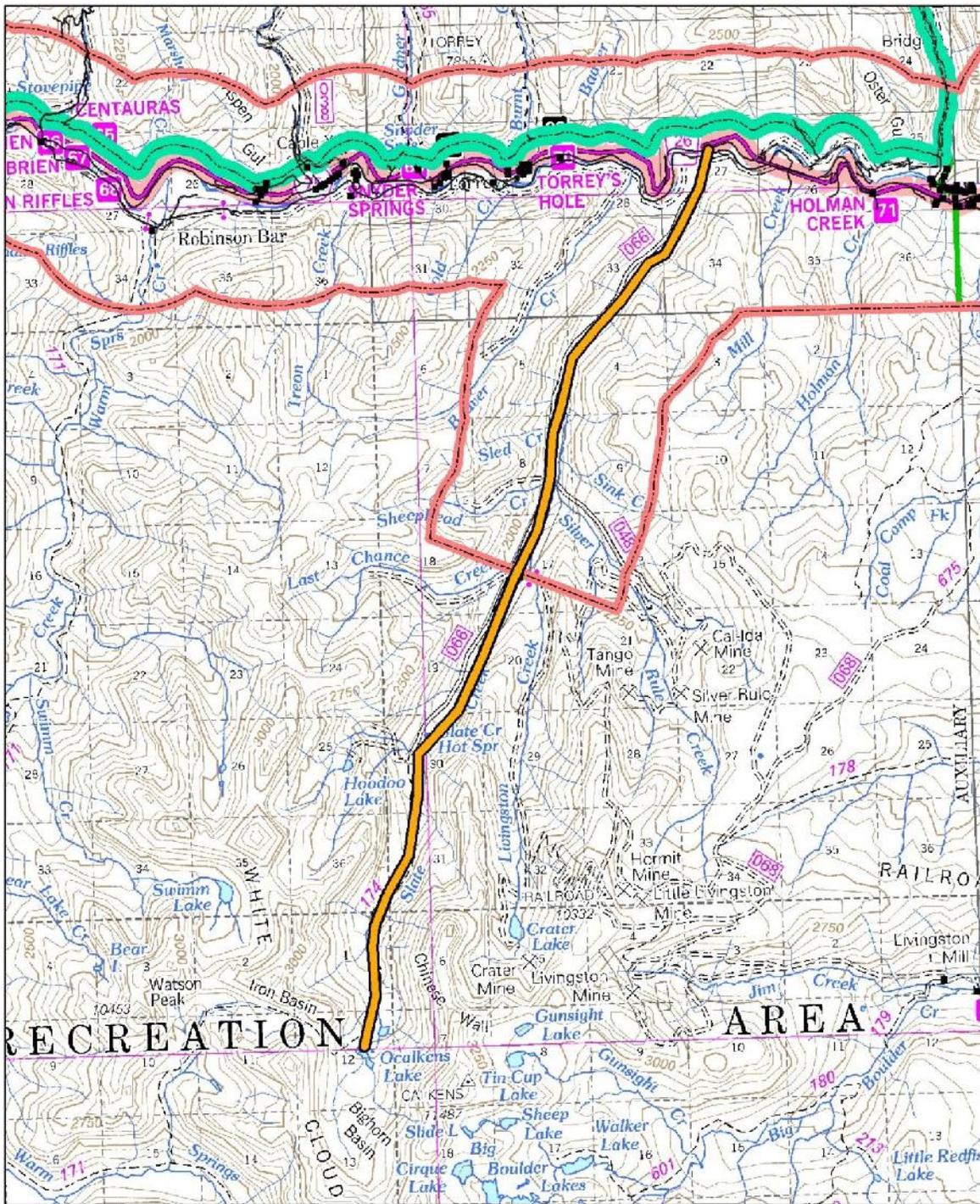
Halstead Fire Management Point 20 - SNRA

Date: 8/19/2012



MAP 21 Slade Cr.

<p>Condition</p>	<p>MAP Description - Trigger point line starting at Salmon River and Hwy 75 and moving south following Slate Creek Drainage.</p> <p>Values at Risk - Fire impacting BLM administered Lands.</p> <p>Intent of MAP - Evaluate the probability of the fire reaching the Forest and BLM boundary and notify the BLM.</p> <p>Trigger Condition - 24 hours of the fire reaching the MAP.</p>
<p>Action</p>	<p>Management Action Considerations:</p> <ul style="list-style-type: none"> • Inform and brief the BLM of impending threat of the fire reaching their boundary. • Communications about Unified Command and Cost Share development. • Work with BLM Administrators on delegation letter. • Evaluate and develop pre-plans for all possible threatened values at risk on BLM lands. • Assess and implement tactics that will protect threatened values at risk that are determined to be in imminent threat from fire. These values will be identified by BLM Administrators. • Reassess and implement area closures. • Discuss command structure including operations oversight. • Implement Halstead Communication Actions for the BLM lands.
<p>Resources</p>	<p>Resources Recommended for Values Protection</p> <ul style="list-style-type: none"> • BLM delegation will involve IC, SCNF Administrators, SNRA Administrators, and BLM Agency Administrators. • Communications Actions will involve local BLM resources and PIO.



Halstead Fire Management Point 21 - Slate Creek

Date: 8/18/2012



APPENDIX A

Sawtooth NRA/NF Values at Risk for State Highway 75 Corridor

Lower Stanley east to Yankee Fork Road along State Highway 75

Priority	Value	Description	Location	Evacuation Process & Other Info	Who takes action
1	Casino Creek Bridge	Steel and wood bridge	HWY 75, Mile marker 194.9		NIMO Team
1	Casino Creek Campground	1 fee tube, 15 +/- road & regulation signs, 1 3-panel fee station kiosk, log worm fence, 19 fire rings, 21 tables, 1 hand pump, 19 site number signs & posts, 2 vault toilets, 5 hitching posts, 1 loading dock	HWY 75	FPO implement - allow for 4-6 hours for evacuation (notify early – 24 hrs in advance)	FPO implement - allow for 24 hours for evacuation (notify early – 48 hrs in advance) MAP 7A
1	Private Lands – Casino Creek	Multiple structures. High value.	South side of Hwy 75.	Perm and seasonal occupied residences. Follow County protocol. This area NOT under rural protection.	Heads up early from District. Sheriff protocol
1	Riverside Campground	2 fee tubes, 11 +/- road & regulation signs, 2 fee station kiosks, 2 CXT vault toilets, 2 hand pumps, 2 gates (1 single, 1 dbl) 17 fire rings, 17 tables, 17 site number signs & posts	HWY 75	Scheduled to be fairly fully occupied over August	FPO implement - allow for 4-6 hours for evacuation (notify early – 24 hrs in advance)
1	Mormon Bend Campground	1 fee tube, 17 +/- road & regulation signs, 2 entrance signs, 1 3-panel fee station kiosk, 2 info boards, 2 CXT vault toilets, 60 l.f. log worm fence, 1 hand pump, 11 curb stops, 1 dbl arm gate, 16 fire rings, 16 tables, 1 host sewer vault, 17 site number signs & posts, 1 float boat rigging area	HWY 75	FPO implement - allow for 4-6 hours for evacuation (notify early – 24 hrs in advance)	FPO implement - allow for 24 hours for evacuation (notify early – 48 hrs in advance) MAP 7A
1	Cove Hot Springs	CXT toilet, picnic tables	Milepost 197.8	Protect toilet facilities as possible	NIMO team
1	Rough Creek Bridge	Steel and wood	Milepost 199 South of Hwy 75 crossing the Salmon River	Protect as possible	NIMO team
1	Lookout Mountain Lookout	CCC restored lookout	T10 R 14S13 Trail 647	Protect facilities as possible	NIMO team
1	Sunbeam Hot	Toilet, historic bathhouse	Milepost 201.5	Protect facilities as possible	NIMO team

Priority	Value	Description	Location	Evacuation Process & Other Info	Who takes action
	Springs	listed on national register		possible	
1	Sunbeam Dam	CXT Toilet, interpretive signing, dumpsters, fencing, paved parking	Milepost 202.4	Protect facilities as possible	NIMO team
1	Sunbeam Resort and White Otter Outfitters	Numerous building used by White Otter Rafting Company and customers of Sunbeam Resort. Concentrated public use in this area. Hotel is historic building	T11N, R15E, S25 Lower Salmon, north side of Hwy 75	Sawtooth NRA contacts with lead time. Structure protection needed.	Sawtooth NRA personnel makes initial contact NIMO Team
1	Sunbeam Boat Ramp	Wood boat ramp, wooden, outhouse, info signs	T11N, R15E, S25 South side of Hwy 75 at junction of Salmon River and Yankee Fork	Protect facilities as possible	NIMO team
2	Hwy 75 Milepost 194.3 Toilet	Toilet	Milepost194.3		NIMO team
3	Casino Creek Patented Mining Claims (Giant Spar, Giant Spar No. 3, Metallic No.2)	Three patented claims, approx.. 50 acres We don't think there are structures but unconfirmed. No name registered with the recorders office.	South of Hwy 75, mile marker 194.9	Notify claimant (not local) – 4-5 days in advance.	FPO implement - allow for 24 hours for evacuation (notify early – 48 hrs in advance) MAP 7A
3	Casino Creek Unpatented mining claim (Last Chance)	Adjacent to Giant Spar Unauthorized structures: 1 cabin, 1 storage shed, 2 old outhouses 1 adit on hill 150 feet above cabin, unsecured other than door.Structures are unoccupied.	South of Hwy 75, mile marker 194.9 South side of Little Casino Creek and Trail	Contact daughter of Marvin Haynes (Elizabeth Redick, 208-733-6965)	FPO implement - allow for 24 hours for evacuation (notify early – 48 hrs in advance) MAP 7A
3	Casino Ck Trailhead	Information boards and trail signs	South of Hwy 75, mile marker 194.9		FPO implement - allow for 24 hours for evacuation (notify 48 h in advance) MAP 7A
3	Various developed-dispersed campsites	58 fire pits and various toilets	Downriver from junction Hwy 21 and 75	Do not protect	NIMO team

Yankee Fork East along State Highway 75 to eastern boundary (Thompson Creek) of Sawtooth NRA

Priority	Value	Description	Location	Evacuation Process & Other Info	Who takes action
1	Elk Creek Boat Ramp	Wooden boat ramp, information board; 1 Sawtooth type o/h	South of Hwy 75 mile marker 203.3		NIMO team
1	Robinson Bar Bridge – access O’Brien Campground	Steel and wood	South of Hwy 75 crossing the Salmon River	Protect as possible	NIMO team
1	Upper and Lower O’Brien Campgrounds	20 +/- road & regulation signs, 2 fee tubes, 2 entrance signs, 2 3 panel fee stations, 2 old vault o/h’s, 2 hand pumps, 1 dbl arm gate, 19 fire rings, 29 tables, 29 fire rings, 19 site #'s & posts	Milepost 204.5 south Salmon River		NIMO team
1	Robinson Bar Ranch	Multiple structures. High value and high political sensitivity.	South of Hwy 75 just past O’Brien Campgrounds	Perm and seasonal occupied residences. Follow County protocol. This area under North Custer rural fire protection.	Heads up early from District. Sheriff protocol
1	Private Lands - Peach Creek	Multiple structures. High value.	South side of Hwy 75.	Perm and seasonal occupied residences. Follow County protocol. This area under North Custer rural fire protection.	Heads up early from District. Sheriff protocol
1	Snyder Springs Boat Ramp	New float boat ramp; railing; info board	Mile marker 208.9 south of Hwy 75		NIMO team
1	Private Lands - Gardner Creek	Multiple structures. High value.	South side of Hwy 75.	Perm and seasonal occupied residences. Follow County protocol. This area under North Custer rural fire protection.	Heads up early from District. Sheriff protocol
1	Private Lands – Torrey’s	Multiple structures. High value.	South side of Hwy 75.	Perm and seasonal occupied residences. Follow County protocol. This area under North Custer	Heads up early from District. Sheriff protocol

Priority	Value	Description	Location	Evacuation Process & Other Info	Who takes action
				rural fire protection.	
1	Torreys Boat Ramp	CXT o/h; fence; info board; paved parking lot; float boat take out	Mile marker 210.7 south of Hwy 75		NIMO team
1	Private Lands – Slate Creek	Multiple structures. High value.	South side of Hwy 75.	Perm and seasonal occupied residences. Follow County protocol. This area under North Custer rural fire protection.	Heads up early from District. Sheriff protocol
1	Holman Creek Campground	1 fee tube; 1 entrance sign; 4 +/- road & regulation signs; 1 3-panel fee info board; 1 CXT o/h; 30 lf log worm fence; 3 footbridges; 1 single arm metal gate; 10 fire rings; 10 tables; 10 site number signs & posts	Mile marker 214.8 south		FPO implement - allow for 24 hours for evacuation (notify early – 48 hrs in advance) MAP 7A
1	Private Lands – Thompson Creek	Multiple structures. High value.	Eastern boundary of Sawtooth NRA South side of Hwy 75.	Perm and seasonal occupied residences. Follow County protocol. This area under North Custer rural fire protection.	Heads up early from District. Sheriff protocol
2	Whiskey Flats Campground	1 fee tube; 1 2 panel info/fee board; 4 picnic tables; 4 fire rings; 4 trash cans; 4 +/- road & regulation signs; 1 entrance sign; 4 unit number signs & posts	Mile marker 213.7 north		FPO implement - allow for 24 hours for evacuation (notify early – 48 hrs in advance) MAP 7A
2	Indian Riffles	Fence; 1 info board; 3 (?) interpretive signs; 1 Sawtooth type o/h; 1 large picnic table; 1 bench	South side of Hwy 75. Mile marker 205.3		Sawtooth NRA personnel
2	Snyder Springs Picnic Area	2 large picnic tables; 1 info board; fence; 1 bridge; 1 old o/h	Mile marker 208.9 north		NIMO team
2	Thompson Creek Barn	Historic structure	Eastern boundary of Sawtooth NRA	Unsound structure - may not be defensible – hazardous to firefighter safety	NIMO team Sawtooth READ notified before action
3	Elkhorn Tramway	Cable car crossing Salmon River for private landowners.	T11N, R15E, S25, NE1/4	Sawtooth NRA contacts with lead	Sawtooth NRA personnel

Priority	Value	Description	Location	Evacuation Process & Other Info	Who takes action
			South side of Hwy 75, mile marker 194.9	time. No protection.	

State Highway 75 South of Stanley to the Fish Hatchery

Priority	Value	Description	Location	Evacuation Process & Other Info	Who takes action
1	Stanley Ranger Station and Compound	No Info	No Info	No Info	No Info