Date of Report: 11/11/2007

BURNED-AREA REPORT
(Reference FSH 2509.13)
Last edited D. Kennell 11/11/07

PART I - TYPE OF REQUEST

A. Type of Report

[X] 1. Funding request for estimated emergency stabilization funds.
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[X] 1. Initial Request. This is the first complete BAER Assessment associated with the 300,000 acre plus East Zone Complex Fires on the Payette NF. This BAER Assessment addresses threats to life and property along with specific recommendations for land, channel, road, trail, and protection and safety treatments.

The 08/26/2007 Exigency request dealt only with the urgent need to replace culverts and timber lag walls along the damaged portion of the *SFSR Road.* The 10/02/2007 Exigency request dealt primarily with the high threat risk to life and property at Trail End Subdivision and moderate risk to the public water system at the Copenhaven Subdivision. BAER Reports #1 and #2 and approvals are shown in blue and Font 10.

BAER accomplishments to date are shown in bold highlighted in yellow.

[X] 2. Interim Report # 3
[ ] Updating the initial funding request based on more accurate site data or design analysis
[X] Status of accomplishments to date

[ ] 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: East Zone Complex

B. Fire Number: ID-PAF-007071

C. State: Idaho

D. County: Valley and Idaho

E. Region: R4

F. Forest: Payette NF

G. District: Krassel RD and McCall RD

H. Fire Incident Job Code: P4DP22

I. Date Fire Started: July 7, 2007

J. Date Fire Contained: October 26, 2007

K. Suppression Cost: *$20 million 8/26/07* - $32 million 9/26/07

L. Fire Suppression Damages Repaired with Suppression Funds

1. **Fireline waterbarred (miles):** 4.5
2. **Fireline seeded (miles):** 0
3. **Other (identify):** Duff and organic litter pulled back onto fireline.

M. Watershed Number: 17060207 (Middle Salmon-Chamberlain Subbasin), 17060208 (SFSR Subbasin), 17060209 (Lower Salmon River Subbasin),

N. Total Acres Burned: 300,022 acres plus
NFS Acres Other Federal (**99%**) State **(<1%)** Private **(<1%**)

O. Vegetation Types: The fire burned through a variety of forest types, including ponderosa pine (*Pinus ponderosa*) forest and plantations, Douglas fir (*Psuedotsuga menziesii*), western larch (*Larix occidentalis*), and grand fir (*Abies grandis*) at intermediate elevations (the so-called mixed conifer association), alpine fir (*A. lasiocarpa*) and Englemann spruce (*Picea englemanni*) at higher elevations (the spruce-fir association), and lodgepole pine (*P. contorta*) scattered throughout in suitable locations. Shrubby streamside vegetation includes alder (*Alnus sinuata*), willow (*Salix spp.*), and aspen (*Populus tremuloides*), while thimbleberry (*Rubus parviflorus*) and gooseberry (*Ribes sp*.). Stream sides also naturally support various sedges (*Carex spp.*) and grasses. Elk sedge (*C. geyeri*) and pinegrass (*Calamgrostis rubescens*) occur in the higher upland locations.

P. Dominant Soils: The subbasin is highly dissected with very high relief. Soils are typically shallow and erode readily. Examples include: Typic and Lithic Cryochrepts, Cryorthents and Cryumbrepts Xeropsamments.

Q. Geologic Types: The SFSR subbasin comprises approximately 812,750 acres, primarily in the granitic Idaho Batholith but with some other geologic formations, including Challis Volcanics, near the headwaters of the EFSFSR.

R. Miles of Stream Channels by Order or Class: NA

S. Transportation System

Trails: 233.5 miles **Roads:** 75 miles

PART III - WATERSHED CONDITION

A. Burn Severity (percent): 16% - (non-burned) 19% - (low) 27% - (moderate) 38% - (high)

B. Water-Repellent Soil (acres): unknown

C. Soil Erosion Hazard Rating (percent):
15% (low) 33% (moderate) 52% (high)

D. Erosion Potential: 3.2 tons/acre

E. Sediment Potential: 20 to 10,000 w/ debris flow cubic yards / square mile

The following table summarizes the erosion rating, burn intensity rating, and BAER threat or risk rating for resources or property values that were analyzed. BAER risk rating considers the location of the property in relationship to the floodplain or potential debris torrent path.

Property At Risk	Name of Subwatershed	Total Acres	Mod-High Erosion Rating (%)	Mod-High Burn Intensity (%)	BAER Risk Rating
Lower SFSR					
Trails End Subdivision	No Name Creek	431	93%	58%	High
Trails End Subdivision	Mid Trails End	159	65%	37%	Mod
Trails End Subdivision	Pony Creek	11155	88%	39%	Low
Trails End Water Systems	Pony Creek	11155	88%	39%	High
Copenhaver Water System	Copenhaver	273	82%	13%	Mod
Hettinger Ranch	Smith Creek	3739	99%	7%	Low
Jack Badley Ranch	Carlson Creek	1605	98%	24%	Mod
Old Badley Ranch	Mill Creek	3137	97%	16%	Low
Elk Creek Ranch	Elk Creek	28022	88%	5%	Low
Yellow Jacket Ranch	Yellow Jacket	340	82%	6%	Low
Willey Ranch	Willey Ranch	521	70%	40%	High
Willey Ranch	S. Fk. Sheep Creek	5525	99%	41%	High
Willey Ranch	Willey Creek	1553	89%	23%	Low
Fritser Ranch	Fritser Creek	2082	79%	7%	Low
South Fork Guard Station	SFK Guard Station	58	37%	16%	Low
Secesh River					
Zena Creek Guest Ranch	Zena Creek	7036	99%	41%	High
Secesh Meadows Subdivision	Fernan Creek	831	73%	55%	Mod
Secesh Meadows Subdivision	Piah Creek	2393	98%	57%	Mod
Secesh Meadows Subdivision	Warm Spring Creek	1936	98%	55%	Mod
Chinook Campground	Unnamed Chinook Cr	681	98%	48%	Mod
Long Gulch Residence	Long Gulch	2999	94%	74%	Low
Long Gulch Culvert	Long Gulch, main stem	1443	88%	61%	Low
No. Fk. Long Gulch Culvert	NF Long Gulch	1556	99%	97%	High
EF SF Salmon River					
Eiguren Ranch	Eiguren	980	74%	6%	Low
Eiguren Water System	Parks Creek	4828	92%	7%	Low
Reegan Creek Culvert	Reegan Creek	5185	100%	16%	Low
Deadman Creek Culvert	Deadman Creek	1492	99%	92%	High
Upper SF Salmon River					
Krassel Work Center and GS	Indian Creek	1803	93%	51%	Low
Indian Creek Culvert	Indian Creek	1803	93%	51%	Mod
Buckhorn Bar Culvert	Buckhorn Bar Creek	444	92%	5%	Low
Phoebe Creek Culvert	Phoebe Creek	4587	96%	65%	High
Warren Creek					
Town of Warren	Upper Warren Creek	3274	41%	48%	Low
Warren Domestic Water	Slaughter Creek	5686	92%	29%	Moderate
Warren Domestic Water	Bemis Creek	736	98%	7%	Low
Rescue Mine	Rescue Mine Area	555	90%	70%	High
Warren Meadow Subdivision	Thomas Creek	2258	88%	50%	Low
Stratton Creek Culvert	Stratton Creek	6446	95%	72%	
Arlise Gulch Culvert	Arlise Gulch	472	100%	100%	High
Mayflower Creek Culvert	Mayflower Ck	1954	94%	57%	Low
North Fork Payette River					
City of McCall Water Supply	Camp Creek	1896	87%	13%	Low
City of McCall Water Supply	Cougar Creek	1828	100%	4%	Low
City of McCall Water Supply	Deep Creek	2853	94%	9%	Low
City of McCall Water Supply	Ef Lake - Fisher Ck	2096	74%	11%	Low

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 2-5

B. Design Chance of Success, (percent): 80

C. Equivalent Design Recurrence Interval, (years): 10

D. Design Storm Duration, (hours): 6 hr 2 hr

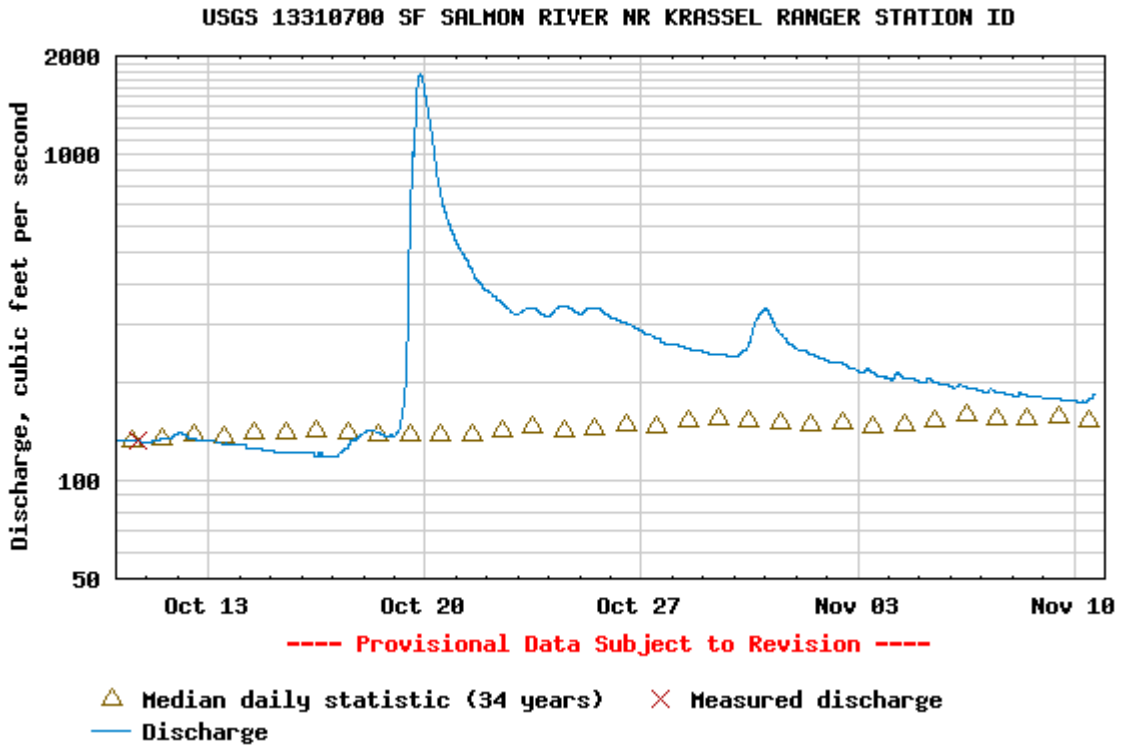
E. Design Storm Magnitude, (inches): 1.8 in 1.2 in

F. Design Flow, (cubic feet / second/ square mile): 24.2

G. Estimated Reduction in Infiltration, (percent): 20

H. Adjusted Design Flow, (cfs per square mile): 29.1

Example Of Post-Fire Increased Peak Flows Following 1-Day Rain Event On Oct. 19, 2007



PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

EAST ZONE COMPLEX

The East Zone Complex inititally consisted of three large fires: Loon Fire, Zena Fire, and Raines Fire that started on on July 7, 2007. The Loon, Zena, and Raines Fires later merged in August to form one large Complex over 200,000 acres in size. On August 1, 2007 the Horton Fire started in the North Fork Payette Subbasin was included in the East Zone Complex. On September 3, 2007 the Profile Fire started in the Upper EFSFSR watershed and was included in the East Zone Complex. In the end the East Zone Complex burned over 300,000 acres on the McCall and Krassel Ranger Districts and the Frank Church River of No Return (FCRNR) Wilderness (~42,000 acres). By October 26, 2007 the last of the fires were called controlled due to weekly precipitation and snow events.

THREATS TO COMMUNITIES, SUBDIVISIONS, RANCHES, PRIVATE RESIDENCES, FS ADMIN SITES AND ASSOCIATED PUBLIC AND DOMESTIC WATER SUPPLIES.

The East Zone Complex directly affected communities, subdivisions, ranches, private residences, and Forest Administrative sites. The Complex resulted in the reported fire loss of 6 residences and 9 outbuildings. The major BAER concern on the East Zone Complex are threats to life and property, water systems, and transportation infrastructure. A total of 31 separate communities, ranches, and administrative sites were assessed. The following is a narrative summary for each of these properties.

Lower South Fork Salmon River (5th HUC #1706020806)

1. Trails End Subdivision (High Risk – Exigency, Approved 2nd Report): The fire burned above and around the Trails End Subdivision in mid-September. Trails End Subdivision, a private in-holding of about 170 acres, is located on the Lower South Fork Salmon River and includes approximately 20 private residences, numerous additional out-buildings, an airstrip, and 3 separate water systems. Access to Trails End is via Pony Creek Road (FR #340) from Warren Summit. Pony Creek Road is a single lane road that starts at an elevation of 6974 ft and travels down to the South Fork Salmon River at an elevation of 3000 ft where the subdivision is located. Trails End is dissected by three drainages: Pony Creek is the largest subwatershed and is located on the southern portion of the subdivision. Several smaller ephemeral drainages flow through the middle section of the subdivision. The northern section is dissected by No Name Creek - a 590 acre intermittent drainage. The risk assessment divided the Trails End Subdivision into three categories. The Northern Section (No Name Creek) of the subdivision was rated **high**, the Middle Section rated **moderate**, and the Southern Section (Pony Creek) of the subdivision was rated **low** due to location of the structures. Pony Creek itself is rated **high**.

A high percentage of the land above the Trails End Subdivision is characterized by land types that exhibit both moderate to high inherent erosion hazards; 88% of the Southern Section, 65% of the Middle Section, and 93 percent of the Northern (No Name Creek) Section. Three land types possess the highest potential for surface erosion in the SFSR: 1) 120b-Moderately Dissected Mountain Slope Land, 2) 120c-1-Strongly Dissected Mountain Slope Land, and 3) 122-Oversteepened Canyon Land. Surface erosion hazards for road cuts and fills are moderately high and high.

A dozen residences are located within the northern**, high risk portion of the subdivision. Most of these homes are located directly on the alluvial fan feature situated at the bottom of No Name Creek along the SFSR.** No Name Creek consists of a 590 acre watershed where over 85% of landtypes have *moderate* to *high* inherent erosion hazard ratings. Within the No Name Creek subwatershed, two channels, one perennial and one ephemeral, have *high* burn severity ratings. Imminent threats come from two separate types of events: **1) Flooding and debris flows down No Name Creek directly threatening homes and property** and 2) Rockfall from steep hillsides directly above selected homes. One house has already been struck by a large rock (2 feet in diameter).

Within the Middle Section of the subdivision, two steep ephemeral draws burned with moderate intensity. Back-burns occurred in this area in 1994 during the Chicken Fire and again in 2007. Two houses are located at the bottom of these steep drainages. FS Road #340 switchbacks twice above these private residences.

Within the Southern Section of the subdivision, 6 homes and the airstrip are located on either side of Pony Creek on the main SFSR terrace. Pony Creek is incised through this terrace and flooding should not pose a threat to the residences. Pony Creek itself has a high risk of flooding. Two water diversions are located in Pony Creek along with the main bridge across the bottom of the stream. These water developments were severely damaged and replaced after the 1997 New Years Flood. Treatments that distribute mulch off of FSR#340 may reduce the risk of road failure within the 11,170-acre Pony Creek watershed. However, debris slides are expected in the numerous drainages within the watershed.

BAER Treatments above Trails End Subdivision were assessed in the 2nd 10/02/2007 Exigency Report.

In October 2007, approximately 110 acres were aerial mulched with Ag straw above Trails End Subdivision.

2. Copenhaver Subdivision (Moderate Risk-Exigency, Approved 2nd Report): There are 10 private residences within this private 200 acre subdivision located along the Lower SFSR within the Frank Church – River of No Return (FC-RNR) Wilderness. Improvements on the private property include: private homes, storage sheds, airstrip, outbuildings, water developments, and a cable car across the river. Three structures in the area were lost as a result of the fire (2 homes and a generator shed). A spring development that supplies the domestic water for the subdivision is located in the Cherry Springs Creek drainage (intermittent) at the Forest boundary.

The 200-acre subwatershed above Copenhaver Subdivision is made up of 5 separate ephemeral draws. The dominant landtype is Oversteeped Canyon Land-122. These lands are among the most geological unstable lands on the Forest. The fire intensity within the subwatershed is primarily low to moderate. Most of the moderate intensity occurred in Cherry Springs Creek at the water development.

The primary threat is small landslides and debris flows in the Cherry Springs drainage located at or below the spring development site. Minor threats include rock fall from steep slopes directly above the remaining homes. The home at greatest risk is located at the far south end of the subdivision since it is directly located at the toe of the slope (past rock fall is evident). Duane Smith (president of homeowners association) was contacted on-site.

BAER Treatments were assessed in the 10/02/2007 Exigency request and approved by the RO.

BAER Treatment complete: Silt fence and Ag and Wood Fiber Mulch were applied directly above Copenhaver's domestic water development.

3. Hettinger Ranch, a.k.a. South Fork Ranch (Low Risk): Hettinger Ranch, also known as South Fork Ranch, is owned by Mackay Bar Corporation and managed by Tim and Judy Hull (year round residents). The ranch area located on the west side of the SFSR is about 110 acres in size. The ranch water system and hydro power plant are under special use authorization and located in Smith Creek. The water system was affected by the 1997 rain/snow event. The 2007 fire burned 56% of the 3739 acre Smith Creek Watershed with mostly low intensity. Only 7% burned with moderate to high intensity (located in high elevation area). Buildings and improvements in this watershed are at **low risk** from post fire response.

Hettinger Ranch is accessed along the Forest Road #337. This road is mostly located on erodible fluvial landtypes have surface erosion hazard ratings of *moderate* to *high*. The fire intensity was *high* along a couple miles of road in the K Creek drainage (Sections 34 and 27), which flows into the SFSR. The erosion control vegetation along the cut and fill slopes here was totally consumed. A total of 27 timbers were destroyed in one timber lag wall which secures the toe slope of one large cutslope. Risk from post fire responses such as flooding, debris torrents and landslides in this area is **high. Proposed BAER treatments include replacement of 27 lag wall timbers to stabilize cutslopes; and hydroseeding and mulching on cut and fill slopes along FR #337.**

4. Jack Badley Ranch (Moderate Risk): This year-round residence is a private ranch on the Lower South Fork Salmon River adjacent to the Frank Church – River of No Return Wilderness. The 240 acre property is accessed by a non-motorized trail from Mackay Bar (Trail 122) and a bridge across

the SFSR. The ranch consists of two cabins, a barn (tack storage), horse corral, farm implements, and an airstrip. The bridge and ranch were not damaged by the fire. The ranch is situated at the toe of a 1605 acre watershed that includes Carlson Creek and a small drainage to the south. A special use authorization is issued for a water system providing irrigation and domestic water from Carlson Creek. No damage occurred to the water system.

The fire burned 73% of the watershed. About 58% was burned with *low* intensity, and 24% was burned with *moderate* to *high* intensity. These lands are among the most geological unstable lands on the Forest, with inherent erosion hazard ratings of *moderate* to *high*. The primary threats are from increased peak flows and debris torrents in the Carlson Creek drainage above the water diversion site. Overall risk rating is **moderate**. **No BAER Treatment on NFS lands is recommended, because treatment is unlikely to be effective. The best prevention here is making sure the landowners understand the risk and do what they can to prevent damage to the water system.**

5. Old (Jerry) Badley Ranch (Low Risk): This 60 acre unoccupied historic ranch is situated at the confluence of Mill Creek and the SFSR on River Terrace Land. Approximately 8 structures burned down during the fire, including old cabins and outbuildings. The ranch is located just north of Jack Badley Ranch and shares the same access. Landtypes are similar to the Jack Badley Ranch. About 97% of the landtypes in the large, 3137 acre Mill Creek watershed have *moderate* to *high* inherent erosion hazard ratings. About 73% of the watershed burned – Only 16% burned with *moderate* to *high* intensity. Post-fire risk is **low**. **No BAER Treatment on NFS lands recommended because ranch is unoccupied, low burn intensity, and all the buildings and improvements were destroyed by the fire.**

6. Elk Creek Ranch (Moderate Risk): Elk Creek Ranch (85 acres) is located on an alluvial fan at the mouth of Elk Creek on the SFSR. A private bridge across Elk Creek accesses the property. The ranch pumps water from Elk Creek to a storage tank. The pumphouse and ranch buildings (two cabins and a barn) are located on a SFSR terrace and Elk Creek alluvial fan. The buildings and improvements were not burned. About 88% of the Elk Creek Watershed is composed of landtypes with *moderate* to *high* inherent erosion hazard ratings. Elk Creek burned extensively in the Savage Creek Fire of 1985 and again in the Chicken Fire in 1994. Elk Creek flooded in August 1995 and New Years 1997. No damage to the ranch occurred. About 6000 acres burned this year. Only 5% of the watershed burned with *moderate* to *high* intensity. Risks from pre-fire and post fire response to Elk Creek Ranch is **moderate,** due to the location on the alluvial fan. **No BAER Treatment on NFS lands recommended because only a small proportion of the watershed burned.**

7. Yellow Jacket Ranch (Low Risk): Yellow Jacket Ranch is located 2 miles up Elk Creek. This 160 acre private ranch is situated on a sloping terrace above Elk Creek, well outside of any flood prone areas. There are three residences, several out-buildings, and an airstrip located on the property. One residence and one shop are located in the bottom of an ephemeral drainage. A domestic spring water system is located near the Forest boundary. None of these structures burned. About 84% of the lands here are steep-sloped fluvial landtypes: The fire burned the entire 160 Forest acres directly above the ranch with *low* intensity. Risks to Yellow Jacket Ranch from post fire responses are **low, hence no BAER treatments are recommended.**

8. Willey (Davis) Ranch (Moderate Risk): This 220 acre private ranch is located on a sloping terrace above the SFSR. About 40% of the 541 acre watershed encompassing the ranch buildings burned with *moderate* to *high* intensity. About 70% of the landtypes composing the watershed are fluvial lands with *moderate* to *moderate high* inherent erosion hazard ratings. The dominant landtypes are Moderately Dissected Mountain Slope Land (120b) and Oversteepened Canyon Land (122).

One wooden building, a number of large storage bins, a trailer, large-sized equipment, and an airstrip are located on the property directly below or adjacent to steep intermittent/ephemeral drainages. The north end the drainage near the airstrip was mostly unburned, and risk to the airstrip is rated low. Two drainages to the south are intermittent/ephemeral channels. The first channel burned with *low* to *moderate* intensity. A trailer and the old house foundation are located at the base of this channel. The

second channel burned with *moderate* to *high* intensity. A wooden building and a number of cargo containers are located at the base of this channel. Risk from post fire debris slides is **moderate.**

The fire burned with *high* intensity on the south end of the property which is located on a bench above Sheep Creek. An unauthorized water diversion was likely affected by the fire. **No BAER actions are recommended at this time because of lack of effectiveness hillslope treatments on NFS lands. The best prevention here is making sure the landowners understand the risk**

9. Fritser Ranch (Low Risk): The 50 acre Fritser Ranch is located on a river terrace above the SFSR near the mouth of Fritser Creek. A cabin and storage building are located above the flood prone area and are not at risk. The Fritser Creek watershed is 2082 acres. The fire burned 41% of this drainage with 34% *low* intensity and 7% *moderate* to *high* intensity. Due to mostly *low* burn intensities in the drainage and the location of ranch structures, risk of post fire responses to Fritser Ranch is **low**. **No BAER treatment is recommended.**

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10. South Fork Guard Station (Low Risk): This Forest Service Guard Station is located on river terrace lands along the SFSR. There is one cabin and two out-buildings at the Administrative Site. Only 16 percent of the watershed above the Guard Station burned at moderate to high intensity. The station is located away from the drainages and risk is rated **low. No BAER treatment is recommended.**

Secesh River (5th HUC #17066020805)

11. Zena Creek Guest Ranch (High Risk): Zena Creek Guest Ranch is located on 80 acres owned by Jim and Jerry Atkins. The ranch includes one year-round residence, six guest cabins, six RV hookup sites, and other buildings and improvements. The ranch has a special use authorization for a water storage facility on Zena Creek and transmission for hydropower and irrigation uses. The buildings, improvements, and water facility did not burn during the fire.

The ranch is located at the mouth of the 7033 acre Zena Creek watershed. Landtypes possessing some of the highest inherent erosion risk ratings in the SFSR compose 99% of this watershed. Some of these landtypes are: Moderately Dissected Mountain Slope Land (120b), Moderately Dissected Thin Mantled Mountain Slope Land (120b-1), and Strongly Dissected Mountain Slope Land (120C-1).

The Zena Creek area, which includes adjacent Deep Creek and Oompaul Creek drainages has been heavily logged and roaded. A 1969 report on the Zena Creek area described the impacts of past management*: "the past and probable future occurrence of mass failure, and the inevitable continuation of excessive surface erosion for many years to come in the Zena Creek area merely constitute one of the a growing number of examples of inadequate planning and management situations, not only on public lands, but universally. Whether resulting from ignorance, malfeasance, or nonfeasance, such mistakes should not be tolerated in the future." (Gardener and Gonsior, Intermountain Forest and Range Experiment Station, MSU, 1969).*

About 95% of the Zena Creek drainage was burned. Fire intensity burned a mosaic of *low* (54%), *moderate* (31%), and *high* (10%) intensity within the subwatershed. The combination of impacts of past management in the Zena Creek drainage (logging, 16 miles of roads), highly erodible landtypes (99% with *moderate* to *high* inherent erosion hazard ratings), and fire (41% *moderate* to *high* intensity) warrants a *high* risk rating for flooding, debris flows, and mass wasting. The PNF 2004 Zena Road Inventory assessed 24 miles of abandoned/closed roads and 30 culverts in Zena Ck, Oompaul Ck, and Deep Ck. The BAER team rated the risk to life and property in Zena Creek **high**. **Jim Atkins has been contacted directly by the BAER Team.**

The BAER Team recommends road drainage and channel treatments above the Zena Creek Guest Ranch and water/hydropower storage facility to reduce risk of mass failure of man-placed fill in drainages along abandoned roads and reduce risk of erosion and therefore streambed fines delivered to Secesh River and SFSR to protect valuable listed T&E fish habitat. **Threat risk from impaired**

watershed conditions to Zena Creek Guest Ranch is considered high based 95% watershed burning, 99% moderate-high erosion hazard, 41% with moderate-high burn intensity, history of mass failures and debris flows, and location of the Zena Creek Guest Ranch and water impoundment.

12. Community of Secesh Meadows (Moderate Risk): Secesh River flows through Secesh Meadows, which has over 100 assessed lots. The community is growing with several new homes currently under construction. Watersheds here include Fernan Creek, Warm Spring Creek, Piah Creek, and about 6 smaller channels. About 60% to 100% of each watershed was burned. The fire burned with *moderate* to *high* intensity in 32% to 66% of each watershed. Landtypes with *moderate* to *high* inherent erosion ratings composed 63% to100% of each watershed. Seven authorized Forest special use permits for water diversions are located in Secesh Meadows. The water systems are spring developments and provide water to private property for domestic use.

Road FH214700 Area: A large number of homes are located on the east side of the Secesh River along Road FH214700, which weaves in and out of Forest land. Four of the seven authorized water systems are located here in a small 635 acre watershed (in Sections 14 and 24), which was 80% burned: 49% *low* burn intensity and 32% *moderate* to *high* burn intensity. Although fire burned near these water systems, spring boxes and diversion points were undamaged except for a section of overflow pipe that melted in the Dennis Wyatt water system. Risk from post fire responses to these water systems is rated **low.**

At mile 0.1 from the Secesh River bridge, an undersized culvert is blocked with sediment. A house is located directly below this culvert which drains a small ephemeral/intermittent channel that has been burned with *high* intensity. Risk here is **moderate**.

Another area of concern was noted at the Warm Spring Creek road crossing. A number of houses are located here within, or just above, the floodplain of Warm Spring Creek and Secesh River. The large culvert at the road-stream crossing is located on private land. It is expected that there will be post-fire sediment yield and peak flow will increase because fire intensity is *moderate* to *high* in 54% of the Warm Spring Creek watershed. The risk for post-fire responses to the road and structures located in flood prone areas near Warm Springs Creek is **moderate.**

North end of Secesh Meadows: Three authorized special use water diversions are located in the north end of Secesh Meadows on the west side of Secesh River (Hardy, Smith, and Titus water systems). The Titus system includes buried pipe through a burned meadow (*low* intensity) into a cistern in the forest. The pipes were not affected by the fire and the cistern was unburned. The underground spring box of the Hardy system was unaffected by the fire. These two water systems are located in a small watershed north of Fernan Creek that burned with *low* intensity. Risk from post-fire affects is **low.**

The fire burned with *high* intensity at the Smith water diversion and over the pipes to the residence. The diversion is an open intake and was likely affected by the fire. The pipes are buried and are likely unaffected by the fire. The 610 acre watershed here is about 60% *moderate* to *high* burn intensity. The residence, located on glacial outwash land (103), was unburned. About 57% of the landtypes here have *moderate* to *high* inherent erosion hazard ratings. Risk of post fire responses to the water system and residence is **low to moderate.**

Secesh Area Unauthorized Roads: **The BAER team recommends decommission of 8 miles of unclassified road to increase infiltration, reduce post-fire groundwater intercept and peak flows, and reduce post-fire risk of increased erosion and sediment directly threatens homes in Secesh Meadows and wild Chinook spawning in the Secesh River**. These unauthorized roads with associated drainage fill and culverts are not maintained. Increased runoff and cutslope groundwater intercept is expected, leading to increased peak flows and erosion.

Lower East Fork South Fork Salmon River (5th HUC #1706020806)

13. Eiguren Ranch Subdivision (Low Risk): Eiguren Ranch includes several landowners and improvements, and 3 authorized water systems. These developments are located in a small 980 acre watershed. Slopes are steep and erosion and stability hazards are moderately high. These lands produce considerable amounts of sediment to the streams from natural geologic erosion. The watershed above Eiguren property was 65% unburned and 20% low, 10% moderate, and 5% high intensity. Risk is rated **low. No BAER treatment is recommended.**

14. Community of Yellow Pine (Moderate Risk): Yellow Pine is a 247-acre community on the East Fork of the South Fork of the Salmon River. The population of Yellow Pine varies from 60 to 80 people. The 2007 East Zone Complex fire bumped into the 2006 Van Meter Fire, which burned in the Boulder Creek drainage. The 645 acre Boulder Creek watershed is the Municipal Watershed for the town of Yellow Pine. The Yellow Pine water intake and sand filtration plant is located at the bottom of the drainage at the Forest boundary. The 2006 Van Meter (South Fork Complex) remains the concern for the municipal watershed. Due to smoke and fire activities in 2007, the PNF was unable to conduct on-the-ground effectiveness monitoring of the decision made in 2006 for "no treatment". **The combined post-fire risk from the 2006 and 2007 fires is moderate and the BAER team recommendation is "no treatment" but to monitor the fire effects within the municipal watershed.**

Upper South Fork Salmon River (5th HUC #1706020801)

15. Krassel Guard Station and Work Center: (Low to High Risk): Krassel Guard Station and Work Center is located along the SFSR on an alluvial fan. A number of structures, a few roads, and an airstrip are located here. Indian Creek flows through the south side of the site and provides surface water for the guard station. About 93% of the 1800 acre Indian Creek watershed is composed of fluvial and periglacial landtypes. The fluvial landforms are Strongly Dissected Mountain Slope Lands (120c) and Oversteepened Canyon Land (122). These lands are among the most geological unstable lands on the Forest, with inherent erosion hazard ratings of *moderate* to *high*. The fire burned with *moderate* to *high* intensity in the headwaters of Indian Creek in 51% of the watershed. Structures at the guard station were not burned. Buildings, roads and the airstrip located on the terrace above the river. Risk rating is **low** here.

A few buildings and the water system are located below ("downstairs") near the SFSR road and Indian Creek. The primary threat is small landslides and debris flows in Indian Creek. Risk rating is **moderate to high.** The water system in Indian Creek is expected to be affected by post fire responses, and has been affected by sediment from upstream erodible landforms in the past. **The Forest has removed pumps to the water system this year. No BAER treatment is recommended.**

Warren Creek Watershed (5th HUC #1706020709)

16. Warren Meadows (Low Risk): Several private landowners are located north of Warren in Warren Meadows. Tom and Faye Kerr own two lots (10 acres) in Warren Meadows. Their cabin on the property was destroyed by the fire in August. Mike and Judy Wallace own 7 acres in Warren Meadows, the cabin on the property was also destroyed by the fire. Dave and Sharon Crosby own the vacant 51 acres adjacent to Tom Kerr.

The Kerr and Wallace cabin sites are located in the 2258 acre Thomas Creek drainage. Over 60% of this drainage burned, and 50% burned with *moderate-high* intensity. The lands here are almost 90% landtypes with inherent erosion ratings of *moderate-high*. The Kerr and Wallace cabins were located on Meadow Land (101-3 Landtype), which has a *low* inherent erosion hazard rating.

The cabins were located on a small hill above the floodplain and were not affected by the stream channel. The fire intensity in this area was *high*, thus the loss of two homes. The risk to private property is **low** due to the location of the homes. Risk of erosion and sedimentation to Warren Creek and several tributaries is **high** due the high percentage of fire intensity and fluvial granitics. **The**

BAER team recommends decommissioning 3.5 miles of unauthorized roads to protect bull trout habitat.

17. Northwest Warren (Low Risk): Warren consists of over 100 assessed lots, a couple of dozen homes, an airstrip and 2 authorized water systems. The two FS special use authorizations for water systems are located in the north end of Warren: Mark Darling has a spring development which provides water for domestic use; and the Warren Heights Homeowners development provides water for fire protection for several residences as well as domestic use. These water systems, number of structures, and the airstrip are located within a small watershed (137 acres) northwest of Bemis Creek, which was unburned during the 2007 fires. The risk to life and property was rated **low** in this portion of the watershed and **no BAER treatment is recommended**.

18. Bemis Creek Public Watershed (Low Risk): Bemis Creek flows through the main part of Warren. A number of structures (8-10) have been built within the riparian area and floodplain of Bemis Creek. These structures include the historic Warren dancehall and tavern buildings, and residences and outbuildings located upstream along Bemis Creek behind these old buildings. Approximately 60% of the Bemis Creek watershed was burned, but only 7% was burned with *moderate to high* intensity. Although these structures are at risk from flooding due to their location within the floodplain, the risk assessment from fire effects is **low, hence no treatment is recommended.**

19. Slaughter Gulch Public Supply Watershed (Moderate Risk): A number of residences are located near the mouth of Slaughter Creek. Slaughter Gulch is used as a surface Public Water Supply for several homes in Warren. Slaughter Creek is a large (5686 acre) watershed. About 65% of the watershed was burned, 15% with *high* intensity, 14% with *moderate* intensity, and 36% *low* intensity. Landtypes are fluvial and periglacial, with 92% *moderate-high* inherent erosion hazard ratings. Risk assessment rated three structures located within the floodplain of Slaughter Creek **moderate** risk. In the headwaters of Slaughter Creek, in the moderate-high burn area, are a number of wooden culverts and erosion problems located on Road 503555000**.** The post-fire impaired watershed condition will result in increased peak flows and erosion associated with the unauthorized and wood culverts and associated fill on top higher risk of post-fire failure and sediment delivery. **The BAER team is recommending removal of the wood culverts and reducing the increased post-fire risk of peak flow and erosion from the unauthorized road. In addition to reduction of peak flow and erosion to protect downstream homes and public surface water supply – Slaughter Gulch contains listed T&E bull trout.**

20. Rescue Mine (High Risk): The Rescue Mine operates on Forest lands and is located in a small watershed (555 acres) between Smith Creek and Warren Creek. Almost 90% of the Rescue watershed burned. About 70% burned with *moderate* to *high* intensity. Inherent erosion hazard ratings are *moderate* to *high* in 90% of the landtypes. The roads associated with the Rescue Mine are located on highly erodible fluvial land (120b). Burn intensity here was *high*. The roads do not have culverts. Three stream-connected erosion problems were identified here**. The Rescue Mine operators will enlarge the holding pond that filters water from an adit in expectation of higher flows due to the fire.** The mine operation plan should be amended and culverts should be placed at the road/stream intersects. **No BAER treatment is recommended.**

21. Warren Guard Station and Work Center (Low Risk): The Warren Guard Station located in the south end of Warren, was assessed a **low risk**. The small drainage above the guard station was mostly unburned. **No BAER treatment is recommended.**

22. Romine Ranch (Low Risk): This historic Romine Ranch was recently acquired by the Forest Service. The main house and barn survived the fire. The chicken coop and a shop burned. The site includes a ditch which diverted water from Warren Creek and a domestic water diversion. The water system is not being used. The ranch is at **low risk** from post-fire runoff events. **No BAER treatment is recommended.**

Middle Salmon-Chamberlain (5th HUC #17020607-07/08)

Numerous private properties are all located within the Main Salmon River Wild and Scenic corridor that extends upslope a quarter mile on either side of the river. The Nez Perce NF BAER Team led by Marci Gerhardt took the lead in the BAER assessment and provided the initial contact with private landowners. The Nez Perce and Payette National Forest met at MacKay Bar from September 16-18 2007 to share information and coordinate the BAER assessments and address watersheds on the PNF above the corridor within the FC-RONR Wilderness.

No BAER hillslope treatment is recommended at this time above private in-holdings in the Salmon River corridor. The slopes that burned hot above in-holdings such as Lemhi Creek, Fivemile Creek, and Mackay Bar are all within the FC-RONR Wilderness. The best prevention of loss of life and protection of property in this case is the awareness of landowners of approaching intense storm cells that are identified on Doplar Radar. The Nez Perce NF BAER team hydrologist will work with the landowners and the National Weather Service to help develop a network for storm warnings to key in on specific areas on the Salmon River for storm tracking.

Another identified risk is the spread of noxious weeds along the Main Salmon River corridor. This risk will be addressed and treated by the Nez Perce NF under the guidance of the FC-RONR Wilderness Noxious and Invasive Weed EIS and Record of Decision. The FC-RONR Wilderness weed management program includes an active program on the Salmon River with private landowners cooperating to control existing and new weed invasions..

23. Campbell's Ferry (Low Risk): The 2007 Raines Fire burned into the 2006 Trout Creek at Campbell's Ferry. No private residences or private facilities are threatened. The Ranch is located on the Main Salmon River terrace. The airstrip is located between the toe of the steep 122 Land Type - River Breaks and the Ranch. Risk to the ranch home, outbuildings or water systems on Trout Creek are **low. No BAER treatment is recommended.**

24. China Bar/Lemhi Creek (High Risk): The two lower tributaries of Lemhi Creek as well as the lower main Lemhi Creek, burned at high severity. This poses a threat to their diversion dam and large water diversion pipe where it is close to the creek. The potential risk of a debris torrent was discussed with the caretaker. The landowner plans to remove the pipe in the creek and shut down the water system if there is a storm. There is a new cabin at the mouth of the creek that has a potential for risk if a flood or debris torrent occurs. There is a lodge also close to the mouth of the creek, but it is at low risk as it is located least 15 feet above the creek. **No BAER Treatment (except weeds) on NFS lands recommended**. **The best prevention here is making sure the landowners understand the risk and do what they can to prevent damage to the water system.**

25. Painter Mine: There are two buildings and a water tank at this site. The site was protected and wrapped during the fire and there was no apparent damage and a **low risk** of threat from future erosion events or debris flows. **No BAER Treatment (except weeds) on NFS lands recommended**.

26. Fivemile Bar: There is a hydro plant on the creek that is the water source for the homes. Much of Fivemile Creek burned at high severity. The creek is fairly wide and low gradient, but has rubble in the stream that shows a history of some events moving large rocks down toward the mouth. The Nez Perce NF BAER Team talked to the homeowners here about the **moderate risk** of a debris torrent event. There is debris torrent rubble on the east side of the canyon. The homeowner at the mouth of the creek plans to build a diversion wall to protect the house. This house is close to Fivemile Creek, a few feet above the creek, but definitely in the floodplain. The homeowners want information on the National Weather Service early warning forecasts. There is potential for rocks to roll down on buildings from the steep slopes above the houses. **No BAER Treatment (except weeds) on NFS lands recommended**. **The best prevention here is making sure the landowners understand the risk and do what they can to prevent damage to the water system.**

27. Ludwig Bar: Two cabins burned down here during the fire. This is a weed treatment site that will be included in the weed assessment. The creek runs through this site, but there are no water systems. **No BAER Treatment (except weeds) on NFS lands recommended**.

28. Mackay Bar: The site consists of the main Mackay Bar Lodge, guest cabins, outbuildings and airstrip, also several private houses located along the slope next to the airstrip, and a large house on the terrace up above the bar that is privately owned. The structures were risk rated, depending on the risk of rock rolling on the cabin or debris torrent/ debris flow hitting the cabins and houses. The water system for the lodge and guest cabins, private homes along the airstrip, and private home located on the terrace above Mackay Bar is located in Mackay Creek. Mackay Creek upper watershed burned hot above the diversion on Mackay Creek. There is a risk of a debris torrent effect taking out their water system that is located directly in the creek and some of the pipe that is close to the creek. The owners are aware of the potential for debris torrent risk. The slope above the lodge and cabin have moderate to high risk of rolling rock and one steep draw behind the Elkhorn Cabin has potential for debris torrents. The risk of rolling rock is lower for the houses toward the end of the airstrip that sit below the terrace, instead of the long steep slope behind the lodge **No BAER Treatment (except weeds) on NFS lands is recommended**. **The best prevention here is making sure the landowners understand the risk and do what they can to prevent damage to the water system.**

29. James Ranch: The James Ranch had a moderate debris flow in 2006. The water system has been rebuilt. The event delivered sand and gravel flows to the airstrip from the creek. This drainage burned mostly in 2000. **No BAER Treatment (except weeds) on NFS lands recommended**.

30. Polly Bemis Ranch: The site was largely unburned and the water system in Polly Bemis Creek was assessed and will be at low risk because the creek burned only in small spots in the watershed. The area around the spring that is used for domestic water burned in 2002 in the Tomato Point fire and 2700 feet of plastic pipe was lost. This was all replaced and none was lost in the 2007 fires. The ranch and spring is at **low** risk.

Upper North Fork Payette River (5th HUC #1705012301)

31. City of McCall - Public Surface Water Supply Watershed (Low Risk): The Horton Fire was located in the municipal watershed of the town of McCall. The fire burned in the Camp Creek and Cougar Creek drainages which flow into Upper Payette Lake; and in the Deep Creek and Fisher Creek drainages which flow into the North Fork Payette River. Mass stability hazards are *low* to *moderate low*.

The fire burned 4%-9% of the Cougar and Deep Creek drainages with *moderate* to *high* intensity; and 11% *moderate* to *high* intensity in the Fisher Creek and Camp Creek drainages. Due to the low numbers of burned acres and landtypes with *low* mass stability hazard ratings, risk to the municipal watershed of McCall is **low.** A small nutrient flush from ash is expected next spring. **No BAER Treatment is recommended at this time.**

South Fork Salmon River (SFSR) Road (East Zone Complex- Approved 1st Report)

The Exigency BAER request is based only on fire damage assessment associated with the East Zone Complex on the Payette National Forest, along approximately 30 miles of the SFSR Road. The Forest requests immediate approval of exigency work associated with the need to protect life and road infrastructure associated with erosion control and water management structures that were damaged or destroyed by the Fire. In addition to providing the only road access in the winter to the community of Yellow Pine, controlling erosion and mass failures along the road protects ESA listed spawning habitat in the SFSR for Chinook salmon, Steelhead, and Bull Trout.

In fiscal year 1989 Appropriation Bill (H.R. 4867), Congress directed that the SFSR Road be paved and erosion be controlled through a line item appropriation of 8 million dollars. The SFSR Road begins at the Warm Lake Highway and continues parallel along the SFSR for approximately 31 miles. The two primary objectives of this project are to: 1) Reduce long-term sediment delivery to the SFSR, and 2) Maintain motorized access on the SFSR Road and provide the only winter access to the community of Yellow Pine.

Threat to life and the SFSR Road Infrastructure

The Fires burned several critical road infrastructure water management and erosion components. It is critical that these structures be replaced or repaired to allow safe public and administrative travel along the road. The following is a short summary of the damage and associated critical values and specific threats:

1. HDPE Culverts:

A total of 8 plastic culverts were destroyed or severely damaged by the fire. The plastic culverts that caught fire on the outlet side were totally consumed due to the chimney effect of the pipe. Pipes size range from 18 inches to 24 inches. Function ranges from inslope ditch cross drains to intermittent stream channels. The concerns range from road surface collapse under passing vehicles to saturation of entire road fill and mass failure of road sections at the culvert locations. The SFSR Road is the only winter access to the community of Yellow Pine. The SFSR Road will remain closed until repair is completed.

All eight destoyed HDPE along the north end of the SFSR have been replaced.

2. Timber Lag Retaining Walls:

Several timber lag retaining walls were burned by the fire. A total of 250, 20 foot long pressure treated timber beams need to be replaced. There are over a thousand timber beams that act as cutslope erosion control structures along the SFSR Road. These retaining walls are critical to stabilize the cutslope. Erosion actions ranging from dry ravel to mass failure onto the road will occur if these structures are not repaired. Drainage features would be comprised. Potentially fill and road prism failures could result. This could close the SFSR Road for a extended time period.

56 additional 20-foot long pressure treated 6x6 inch lag wall timbers burned along the SFSR Road (24), Hettinger Ranch Road FS #337 (27), and the Trails End Subdivion Road FS#340 (5) and require replacement.

Treated timbers have been purchased and delivered but have not yet been installed.

3. Cut and Fill Slope Erosion Vegetative Erosion Control:

Originally nearly one half million dollars of vegetative erosion control was used on the SFSR Road cut and fill slopes. It is estimated that approximately 10 acres need retreated due to the severity of the burn on these slopes due to accumulated jack piles and heavy fuels. Several of these sites that need treatment are directly above perennial and ephemeral stream culverts or inslope ditch relief culverts. Failure to stabilize these slopes may result in culverts being plugged. The Forest plans to use the Forest Watershed Crew and Forest Hydroseeder to apply erosion control grass seed, mulch, and fertilizer to a total of 10 acres along the 10 miles of cut and fill slopes.

SFSR road cut and fill slopes have been hydroseeded and fertilized, however, Ag/Wood mulch has not yet been applied.

4. Rock Rollout and Fallen Snags:

The fire on steep slopes have caused both rocks, granitic sand, and burnt snags to fall onto the road, inslope ditches, culvert inlets, and cutslopes. These hazards need to be stabilized or removed.

The initial hazard removal to allow for BAER treatment crew and contractors, has been implemented.

5. Monitoring Patrols:

It is expected that rollout and debris will continue to fall onto the road, inslope ditches, culvert inlet, and cutslopes throughout the winter requiring ongoing hazard removal. Removal of debris will protect public safety and maintain drainage features.

NFS Trails & Bridges

Within the Complex's fire perimeter there are 233.5 miles of system trail & 13 major trail bridges.

Values at risk include the trail infrastructure, water quality and fish habitat due to the change in runoff and the expectation of an increase in flows associated with fire effects. It is anticipated that trail rilling and erosion, along with cut slope and fill slope failures, will substantially increase. In addition to the resource degradation the trail is likely to become difficult or dangerous for travel, or in some cases become totally impassable, completely losing functionality.

The SFSR drainage is a listed 303(d) water quality limited segment with a TMDL requiring the Forest to reduce sediment from man-caused activities (road and trails). In addition, the SFSR is listed as critical habitat for 3 listed aquatic species where sediment from roads and trails has been identified as a limiting factor.

On-the-ground assessments of all trail miles has not been possible, however based on the approximately 36.5 miles that have been visited, it is evident that a high percentage (~85%) of the trail miles within the burned area have BAER needs. The drainage in place at the time of the fire is generally inadequate to process the increase in flows and run-off. In addition many of the existing drainage structures and minor trail facilities (such as corduroys or small bridges) were damaged or destroyed by fire. Many miles of trail have been destabilized due to removal of brush, roots and logs. Other trail segments have been rendered essentially impassable, or dangerous to travel due to downfall, debris blockages or cut slope & fill slope failures.

Damage to the trail system associated with direct impacts from the fire and the increased runoff erosion will be inevitable. Although spring runoff is a concern, the majority of the anticipated trail damage is likely to occur in the summer resulting from thunderstorms. There are opportunities to limit or mitigate these fire related impacts by maintaining, repairing or installing drainage structures, and conducting critical trail work this fall or as early next work season as possible.

The major trail bridges within the fire perimeter all received protection during the fire event and only two were identified as needing immediate work to protect the infrastructure investment.

Recreation Site Developments & Facilities

There are eight developed / fee campgrounds & eight small interpretative / information sites within the East Zone fire perimeter. On-the-ground assessments indicate that generally protection efforts were successful and the direct loss of facilities was minimal.

The current threat to facilities is the potential for loss of site integrity and function. As a result of the fire there will be an expected increase in surface erosion or destabilization of potentially damaging trees and rocks.

Based on site inspections, several locations were identified as needing some degree of BAER work to protect the infrastructure investment or address public safety concerns.

Non-native Invasive Plant Species

The *Payette National Forest Noxious Weed and Poisonous Plant Control Program EA and Decision Notice* (1997) and *SFSR Weed EIS* (2006) provide for weed treatment in the burned area. A major goal of the noxious weed environmental analyses is to reduce the size of large infestations and prevent or limit the spread of noxious weeds. Weed inventories and control was being implemented before the East Zone fire to control Idaho invasive and noxious weeds; spotted knapweed *(Centaurea maculosa)*, rush skeletonweed (*Chondrilla juncea),* yellow toadflax *(Linaria vulgaris),* Canada thistle *(Cirsium arvense)*, sulphur cinquefoil (*Potentilla recta*), and common St. Johnswort (*Hypericum perforatum)*.

Noxious weeds were observed during the BAER review. Spotted knapweed and rush skeleton weed can respond vigorously to fire and fire suppression activities. Transportation routes, staging areas, spike camps and fire lines should all be inventoried and monitored for 2 years to prevent increased infestations. The moderate climate at the lower elevations and travel corridors increase the risk of noxious weed invasion. Susceptible lands risk loss of ecological integrity from the spread of non-native invasive plant species. The high degree of patchiness in some areas and the low to moderate burn intensities should ameliorate the effects of the fire on vegetation recovery and reduce the risk of rapid invasion into the uplands. However, the lack of ground cover and increase in exposed mineral

soils in some areas could provide habitat for noxious and invasive species that can quickly colonize and crowd out native species.

Surveys noted that the fire either burned into or close to infestations or susceptible lands. Most grasses and shrubs in or near infested sites should regenerate because roots and crowns remain intact. However, hot spots and exposed mineral soils along roads, fire lines, dozer lines, trails and landings will provide sites for noxious weed invasion. Early treatment of small infestations is cost effective in preventing the exponential expansion of noxious weeds.

Previous inventories along the South Fork road and Main Salmon River were used to tabulate the acres of infestations within the fire perimeter. Most infestations are along travel corrridors that could allow infestations to spread.

Fisheries Resources

The Main Salmon, South Fork Salmon River (SFSR) and their tributaries supports three Salmonoid species listed as **Threatened** under the Endangered Species Act of 1969 (ESA, 16 USC 1531 *et seq*.): Chinook salmon (*Oncorhynchus tshawytscha*), Snake River steelhead (*O. mykiss*), and Columbia River bull trout (*Salvelinus confluentus*); the last is designated a "Management Indicator Species" (MIS) under the PNF Land and Resource Management Plan (LRMP). Salmonoid species that also occur but are not listed under ESA include redband trout (the resident form of *O. mykiss*), westslope cutthroat trout (*O. clarkii lewisi*), a species designated as "Sensitive" by the Intermountain Regional Forester, and Eastern brook trout (*S. fontinalis*), a widely distributed naturalized species native to eastern North America.

The principal streams in the Upper SFSR involved in the East Zone Complex include Buckhorn Creek, Fitsum Creek, Phoebe Creek, and Indian Creek on both sides of the SFSR, and the mainstem SFSR itself. According to Platts et al. (1989), about 75% of the Chinook salmon that spawn in the SFSR spawn in the upper 31 miles of the river. Two of the largest spawning areas for anadromous fish, the Oxbow and Glory Hole spawning areas, are inside the fire perimeter. The SFSR is used for Chinook salmon broodstock for the McCall Hatchery as part of the Idaho Supplementation Study, and the Idaho Department of Fish and Game (IDFG) has been implementing a sport fishery for surplus adult steelhead for the past several years.

The Secesh River supports the same assemblage of fish as the upper SFSR. Chinook salmon and steelhead spawn in the mainstem Secesh River in the vicinity of Secesh Meadows Subdivision and in Grouse Creek, an important tributary. Bull trout occur in the mainstem but are only known in the area from Grouse Creek, Ruby Creek (neither of which were much involved in the fire), Lick Creek, and Zena Creek.

The EFSFSR supports the same assemblage of fish as the upper SFSR. Chinook salmon and steelhead spawn in the EFSFSR. Bull trout use the EFSFSR as a migration corridor in summer and spawn in several of the principal tributaries (Hogen and Scarnecchia 2006).

The Lower SFSR has the same fish assemblage as farther up in the drainage, though there are probably some warmer water species of no particular interest to this assessment in the lower portions. There may be fall Chinook salmon spawning areas in the mainstem Salmon River. but the lower SFSR is primarily a migration corridor for anadromous species. Bull trout occur in the tributaries.

Warren Creek does not support anadromous species, except near the mouth up to the vicinity of Romine Ranch. Bull trout are widely distributed in several tributaries of Warren Creek, including Mayflower Creek and Slaughter Creek in the fire area.

The potential effects on the fisheries resource varies somewhat by watershed because there are different aspects to the fisheries: anadromous species primarily spawn in certain, well defined areas

that clearly need to be protected from excess sediment delivery to avoid problems such as those that occurred in the SFSR in 1964-65; larger portions of the SFSR downstream of the Secesh River are primarily migration corridors for bull trout and migration corridors and rearing areas for anadromous fish; and most bull trout are mainly resident fish in the tributary streams. Threats by burn area, approximately stated in order of priority, are categorized as follows:

- Upper SFSR: Anadromous fish spawning and downstream rearing and bull trout spawning and rearing.
- Upper Secesh River: Anadromous fish spawning and downstream rearing.
- EFSFSR: Anadromous fish spawning and downstream rearing.
- Warren Creek: Bull trout spawning and rearing and downstream anadromous fish spawning and rearing.
- Main Salmon Tribs: Bull trout spawning and rearing and downstream anadromous fish spawning and rearing.
- Lower Secesh River: Anadromous fish rearing.
- Lower SFSR: Anadromous fish rearing.

Several culverts have been modeled for post-fire flow and design capacity and identified as needing upgrade in size. Culvert upgrades to reduce for threats to life, property, or valuable Forest infrastructure will be replaced in accordance with the Payette NF Land and Resource Management Plan (*i.e.*, SWST08). There are also culverts that exist on unclassified or closed roads that should be removed. These fill failures in T&E fish habitat, would produce unacceptable amounts of sediment in spawning areas and downstream rearing areas for bull trout and anadromous fish.

B. Emergency Treatment Objectives:

LAND TREATMENTS

1. Hillslope Mulch Objectives: Mitigate the impaired watershed conditions by providing immediate ground cover to reduce erosion, prevent loss of nutrients, and reduce sediment delivered to streams. Reduce the imminent threat to life and property from flooding, debris slides, and rock fall above Trails End Subdivision. Reduce the risk of erosion, mass failure, and sediment from road cut and fill slopes in areas of high severity burns.

a) Reduce the peak flows, risk of flooding, debris flows, and small landslides directly on top of the domestic water system located in the bottom of No Name Creek.

b) Reduce the peak flows, erosion, and risk of debris flows to 2 homes within the Middle Section of Trails End Subdivision, located at the bottom of two steep ephemeral draws.

c) Reduce the peak flows, risk of flooding and debris flows to 12 homes within the Northern Section of Trails End Subdivision, located on the alluvial fan of No Name Creek.

d) Reduce the peak flows, risk of erosion and debris slides in the Pony Creek drainage to protect two additional domestic water diversions and the Pony Creek Bridge.

e) Reduce the risk of erosion and therefore the streambed fines delivered to streams to protect T&E listed fish habitat.

In October 2007, approximately 110 acres were aerial mulched with Ag straw above Trails End Subdivision. Approved BAER Exigency Report #2.

2. Cut and Fill Slope Mulch Objectives: Reduce the risk of erosion, mass failure, and sediment from road cut and fill slopes in areas of high severity burns. Stabilize the road and cut slopes to provide public safety, safety to BAER implementation crews, and the only access to communities such as Yellow Pine, Big Creek, Warren, several subdivisions, numerous private ranches, and 3 Forest Service Guard Stations.

a) Reduce the risk of erosion, mass failure, and sediment from road cut and fill slopes in areas of high severity burns on the SFSR Road, Warren Wagon Road, FR#340, and FS#337 access to communities such as Yellow Pine, Big Creek, Warren, Trails End Subdivision, and numerous private ranches.

b) Protect road infrastructure from further post-fire losses.

c) Hydroseed and/or mulch to provide for slope stability and reduce erosion on several sections of FS roadway, cut slopes, and fill slopes.

d) Reduce the risk of failure to the cross drain and ephemeral draw culverts by reducing cutslope erosion.

e) Reduce the risk of erosion and therefore the streambed fines delivered to streams to protect T&E listed fish habitat.

3. Treatment on Abandoned and Unauthorized Road Objectives: Reduce the post-fire watershed impairment resulting in increased risk of erosion, mass failure, and sediment from abandoned roads in areas of moderate and high severity burns where risk to life and property and other high downstream values are present. Provide adequate out slope drainage to prevent erosion and reduce sedimentation. Remove culverts and the risk of man-placed fill failure in natural drainages. Increase infiltration and ground cover to reduce erosion as a result of uphill increases in surface runoff. Increase infiltration, reduce cut slope groundwater interception and surface channelization to reduce downstream peak flows. Minimize the risk of mass failures that could trigger debris flows.

a) Treat 3.1 miles of abandoned road in the Zena Creek subwatershed to reduce threats of erosion and landslides directly above the Zena Creek Guest Ranch and water impoundment.

b) Treat approximately 8 miles of unauthorized roads in the Secesh River – Grouse Creek subwatershed to reduce erosion and sedimentation to the Secesh River Subdivision, water systems, and wild Chinook salmon spawning areas.

c) Treat 2.8 miles of unauthorized road leading to an abandoned mine in the Slaughter Gulch above the Town of Warren to protect the public surface water supply and bull trout habitat.

d) Treat 3.5 miles of unauthorized road in the Warren Creek drainage to protect bull trout habitat from increase risk of post-fire erosion and sediment delivery.

e) All identified treatments will reduce the increases in post-fire risk of erosion and sediment in subwatersheds with spawning and rearing habitat for listed T&E fish.

4. Noxious Weeds Objectives: Prevent identified weed species from encroaching into the burned area by:

a) Treating known weed infested sites to prevent invasion into the burned area.
b) Reducing the amount of weed seed in the area and treating new populations.
c) Allowing existing plant communities time to recover with less competition from invasive plants.

CHANNEL TREATMENTS

1. Culvert and Fill Removal Objectives: The culvert and fill removal is designed to reduce the risk of erosion, mass failure, and sediment from man-placed fills that exist in natural drainages. All culverts and drainage fill to be removed are on abandoned, unauthorized, or closed roads. Many of culverts are currently inaccessible and clearing and maintenance is prohibitive. Risk of culvert and fill failure is much higher in the post-fire era. Implementation would minimize the risk of mass failures that could trigger debris flows. Removal is the cheapest (versus upgrades) and the most effective (no risk of

failure) treatment. This BAER treatment reduces the risk and threats to several high value downstream properties and resources, including the following:

a) Reduce the risk of culvert failure and sedimentation to the Zena Creek Guest Ranch and water/hydropower storage facility by removing a total of 18 culverts in Zena Creek drainage above the ranch. Zena Creek also contains listed T&E bull trout and Chinook Salmon and stealhead are present immediately downstream.
b) Reduce the risk of failure and sedimentation to Secesh Meadows Subdivision by removing a total of 3 culverts in tributaries to the Secesh River above the subdivision. The Secesh River at Secesh Meadows is a critical spawning area for wild Chinook salmon. (No hatchery supplement in the Secesh River).
c) Reduce the risk of failure and sedimentation to Slaughter Gulch and the Warren Surface Public Water Supply by removing a total of 3 wooden culverts above the town of Warren. Slaughter Gulch is important occupied habitat for listed T&E bull trout.
d) Reduce the risk of mass failure of man-placed fill in drainages on abandoned roads upstream to Warren Meadows Subdivision. Warren Creek and its tributaries are important occupied habitat for bull trout.
e) All treatment are in streams that support listed T&E aquatic species and would protect valuable fish habitat.

ROAD AND TRAIL TREATMENT

1. Replacement of Fire Damaged Culverts and Erosion Structures Objectives: (1st and 2nd Exigency Reports). Replace fire damaged culverts and erosion control structures to protect the road investment. Provide clear and safe vehicular travel along roads that provide the only access to several communities. The SFSR Road provides the only vehicular access in winter to the community of Yellow Pine. Warren Wagon Road FH #21 provides the only access to the town of Warren. After reaching Warren – FR #340 and FR #337 provide the only access to Trails End Subdivision and Hettinger Ranch.

a) Provide clear and safe passage for vehicles along the road and to the community of Yellow Pine, Warren, several subdivisions, numerous ranches, and 3 Forest Service Guard Stations.
b) Replace 8 burned plastic culverts with metal culverts to establish safe travel way prism.
c) Replace 306 pressure treated timber beams to repair retaining walls to prevent cutslope erosion and mass failures.
d) Treat cut and fill slope by blowing wood fiber mulch, Ag. straw mulch, and hydroseeding on 10 acres of cut and fill slopes to reduce erosion.
e) Reduce imminent hazards by removing hazardous downfall and rocks along road inslope ditch, and cutslopes of the SFSR Road.
f) Patrol and monitor the road for expected rollout and removal of hazards throughout the winter

2. Storm Inspection and Response Objectives: Provide an efficient measure to protect the road transportation infrastructure from storm damaging events by:

a) Inspecting the 75 miles of Forest Service road within the East Zone Complex. Most of these roads will be inspected once in the spring immediately after snowmelt and again when damaging storm events are reported.
b) Clear debris and sediment from in-slope ditches and culverts as material accumulates.
c) To ensure storm inspection and BAER treatment access, remove hazard trees and rocks that fall onto the road as the result of the wildfire.

3. Trail Treatment Objectives: Mitigate the impaired watershed and trail conditions to reduce erosion, impacts to water quality and listed T&E fish habitat, while protecting the trail infrastructure investment and providing for clear and safe use of the trail system by BAER treatment crews.

a) Clean existing and undamaged drainage structures to ensure capacity to respond to increased runoff patterns.

b) Replace damaged log waterbars to provide adequate water management to reduce trail erosion and sediment delivery.
c) Install additional drainage structures, in areas of moderate to high burn intensity to manage increased runoff patterns to reduce trail erosion and sediment delivery. .
d) Remove slumps, slides & sloughs that result in water/drainage management problems or safety problems for BAER treatment crews.
e) Stabilize post-fire induced cut slopes & fill slope failures to protect trail infrastructure.
f) Ensure damaged or destroyed trail facility is not creating additional resource damage or presenting a hazardous condition to BAER treatment crews.

PROTECTION AND SAFETY TREATMENTS

Treatments to protect life, safety, and public health that results from fire created hazards.

1. Public Water Supply Protection Objectives: Protect public and domestic water supply from further degradation to provide for public health and safety.

a) Reduce the risk of sheet erosion and sediment deposit directly on the Copenhaver domestic water spring development. Prevent potential erosion and sedimentation from covering the access to the cistern and water system values. (Second Exigency – Approved)

BAER Treatment complete: Silt fence and Ag and Wood Fiber Mulch were applied directly above Copenhaver's domestic water development.

b) Additional peak flow, erosion and sediment reduction BAER treatments to protect domestic and public surface water supplies are accounted in fore mentioned land, channel, and road treatments for Secesh Meadows and Warren (Slaughter Gulch).

c) Effectiveness monitoring (no action) of erosion in the Yellow Pine Municipal Watershed (Boulder Creek) is recommended.

2. Recreation Site Protection Objectives: Reduce the risk of damage or loss to the NFS recreation infrastructure within the East Zone Complex fire perimeter that could be triggered fire related impacts. Treatments are meant to protect public health from sanitation concerns, protect campground water systems, and remove hazardous trees at the following locations:

a) Deadman CG – Outhouse Mitigation: the fire burned one of the two pit toilets located at this site, as a result the pit was exposed. Treatment will mitigate this sanitation and safety hazard.
b) Buckhorn CG water system – open the water system diversion ditch to protect the spring development from an increase in runoff.
c) Ponderosa CG water system – open water system diversion ditch to protect the spring development and repair/replace the damaged valve box to protect the infrastructure and public health.
d) Water Stop – 1. Clean and re-establish water system diversion ditch to protect the spring development; 2. Clean up & protect the burned over water stop heritage interpretation feature (pit house).
e) Chinook CG – Protect two campsites from expected increases in high water that will overtop Chinook CG Creek and spill into the campsites.

3. Bridge Safety and Resource Protection Objectives: Protect public safety by repairing the fire damaged guard rails on the EFSRSR Bridge and removal of hazards from two damaged trail bridges. Stabilize vertical streambanks where the abutments were destroyed.

a) EFSFSR Bridge Guard Rails: The guards rails on the EFFSR bridge were partially destroyed by the fire. This bridge is located on the only vehicular access to the town of Yellow Pine. Rails need to be repaired to ensure public and Forest personnel safety.
b) North Fork of Fitsum Creek – this was a treated material road bridge that had been converted to serve non-motorized trail traffic. The chemically treated wooden debris from the bridge needs to be removed from the creek to protect water quality. Damaged and burnt bridge abutments needs to be removed and the vertical back fill needs to be pulled back to prevent chemical and sediment from going into important Chinook salmon and bull trout habitat.
c) Krassel Pack Bridge – this is a cable suspension pack bridge that provides a crossing of the South Fork. The bridge itself was undamaged, however the fire on the west side of the South Fork has destabilized the slope above the bridge tower and increased the potential for damage to the structure. Four hazard trees will need to be removed that may fall against the cable. Slope stabilization at the bridge tower is needed to reduce erosion and the potential tower failure and damage to this major infrastructure improvement.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:

Land **70** % Channel **90** % Roads/Trails **80** % Protection/Safety **95** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	70	80	90
Channel	90	95	95
Roads/Trails	80	90	95
Protection/Safety	95	95	95

E. Cost of No-Action (Including Loss): $16,080,000

F. Cost of Selected Alternative (Including Loss): $6,320,000

TOTAL = [(C + D) * A] + [(C + E) * B]

A = 80%, probability of success of primary treatment;
B = 20%, probability of failure of primary treatment;
C = $2,0000,000, primary treatment cost;
D = $ 400,000.00, potential resource value loss if primary treatment succeeds; and
E = $20,000,000.00, potential resource value loss if primary treatment fails.

Selected Alternative = [(2,000,000+400,000) * .80] + [(2,0000,000 + 20,000,000) * .20] = $6,320,000
No Action Alternative = [(0+400,000.) * .20] + [(0)+ 20,000,000) * .80]= $16,080,000

G. Skills Represented on Burned-Area Survey Team:

[X] Hydrology	[X] Soils	[ ] Geology	[ ] Range
[ ] Forestry	[ ] Wildlife	[ ] Fire Mgmt.	[X] Engineering
[ ] Contracting	[ ] Ecology	[X] Botany	[X] Archaeology
[X] Fisheries	[ ] Research	[ ] Landscape Arch	[X] GIS

Team Leader: David Kennell
Email: dkennell@fs.fed.us Phone: (208) 634-0793 FAX: (208) 634-0477

H. Treatment Narrative:

LAND TREATMENTS

1. Hillslope Mulch (Second Exigency –Approved)

Description of Emergency Treatments: In second Exigency BAER Report the Forest requested and received authorization to apply mulch to a total of 112 acres. The 112 acre approval included aerial application, blown or hand placed mulch above Trails End Subdivision. The primary threat is to homes located at the bottom of Pony Creek and No Name Creek at Trails End Subdivision along the LSFSR. The objective is to reduce erosion and provide for increased slope stability by providing an immediate ground cover until native ground cover vegetation is adequately established within 2-5 years.

Where Treatment is Applied: Treatments will be done on the PNF in the Pony Creek and No Name Creek subwatersheds above Trails End Subdivision.

How Treatment is Applied: Ag Straw and Wood Fiber Mulch will be directly blown or hand placed off of the FS Roads #337 and #340. Mulch can be blown approximately 100 feet (depending on wind and slope) on either side of the road.

Aerial Mulching of Ag Straw will be directly on the high intensity burn in Pony Creek and No Name Creek subwatershed. The Forest used Price Valley Helitack and extended the contract on the Bell 212. Ag straw was delivered and placed into the net by contract.

Purpose of Treatment: The Mulching Land Treatment will mitigate the risk and reduce the threats to several values and resources, including the following:

a) Reduce the risk of flooding and debris flows to 12 homes within the Northern Section of Trails End Subdivision, located on the alluvial fan of No Name Creek.

b) Reduce the risk of flooding, debris flows, and small landslides directly on top of the water development located in the bottom of No Name Creek.

c) Reduce the risk of debris flows, erosion, and rock fall to 2 homes within the Middle Section of Trails End Subdivision, located at the bottom of two steep ephemeral draws.

d) Reduce the risk of failure to the culvert at the bottom of No Name Creek and the along the Middle Section of Trails End Subdivision. (preferred alternative to upsizing)

e) Reduce the erosion and debris slides in the Pony Creek drainage to protect two additional domestic water diversions and the Pony Creek Bridge.

f) Reduce the risk of erosion and therefore the streambed fines delivered to streams to protect T&E listed fish habitat.

Appropriately 110 acres of aerial Ag straw mulch has been implemented in Pony Creek and No Name Creek above the threatened homes and water systems in Trails End Subdivision.

Appropriately 2 acres of hand placed wood mulch has been implemented on the switchbacks directly above the threatened homes in Trails End Subdivision.

2. Cut and Fill Slope Mulch

Description of Emergency Treatments: In the first Exigency BAER Report the Forest requested and received authorization to apply hillslope mulch to a total of 30 acres. The 30 acre approval included application of Ag straw, wood fiber and hydromulching on cut and fill slopes along the SFSR Road. The primary objective is to reduce erosion and provide for increased slope stability by providing an immediate ground cover until native ground cover vegetation is adequately established within 2-5 years.

SFSR road cut and fill slopes have been hydroseeded and fertilized, however, Ag/Wood mulch has not yet been applied.

Additional mulch treatments is required on cut and fill slopes along FH 21 to Warren, FR#340 to the South Fork Guard Station and private homes and ranches in the LSFSR, and FR#337 to the historic Hays Station Guard Station and South Fork Ranch.

Where Treatment is Applied: An additional 35 acres of blown or hand placed mulching will be applied primarily in areas of high intensity burns on cut and fill slopes directly adjacent to the roads. The Forest plans to add the following cut and fill slope treatment:

a) 10 acres in the Lower SFSR subwatershed above Trails End Subdivision along FR #340.

b) 15 acres in the Lower SFSR subwatershed above Hettinger and South Fork Ranch along FR #337.

c) 10 acres in the Sesech River and Warren Creek subwatershed along Steamboat Summit on FH#21 on the route to Warren.

How Treatment is Applied: On the Warren Wagon Road FH#21, Hettinger Ranch Road FR#337 road cut and fills with high intensity burns will be hydroseeded and fertilized. Then covered with blown or hand placed Ag and/or wood mulch. On Pony Creek/Trails End Subdivision Road FR#340 water is limited and the cut and fill slopes will only be blown or hand placed mulch. The Forest will apply all treatments using the Forest hydroseeder, blower, and force account crews.

Purpose of Treatment: The cut and fill slope treatment will mitigate the risk and reduce the threats to several values and resources, including the following:

a) Reduce the risk of cut and fill slope failure along the SFSR Road and ensure adjudicated winter access to community of Yellow Pine.

b) Reduce the risk of cut and fill slope failure along FR #340 above 12 homes within the Northern Section of Trails End Subdivision.

c) Reduce the risk of cut and fill slope failure along FR #340 to domestic water diversions located in Pony Creek and in No Name Creek.

d) Reduce the risk of cut and fill slope failure along FR #340 to 2 homes within the Middle Section of Trails End Subdivision, located at the bottom of two steep ephemeral draws.

e) Reduce the risk of cut and fill slope failure on several sections of FS road cut and fill slopes along FR#337 to Hettinger Ranch.

f) Reduce the risk of cut and fill slope failure on several sections of road cut and fill slopes along FH #21 to town of Warren.

g) All cut and fill mulch treatments will reduce erosion and sedimentation in watersheds that are occupied by listed T&E Chinook salmon, steelhead, and/or bulltrout.

3. Reduce Erosion and Restore Hydrologic Function on Abandoned Roads.

Description of Emergency Treatments: Treat 19.3 miles of abandoned and unauthorized road to reduce expected post-fire increase in erosion and sediment delivery. These roads will be decommissioned to reduce post-fire increases in erosion, sediment, and risk of mass failures to protect high value downstream property, water system, and listed T&E aquatic habitat

Where Treatment is Applied: All treatments will be done in subwatersheds with a high percentage of moderate to high intensity burns. All treatments will be done in subwatersheds where the direct threat is life and property or high resource values:

Zena Creek Guest Ranch: Treat approximately 5 miles of abandoned road in the Secesh- Zena Creek subwatershed above the Zena Creek Guest Ranch. There is a hydropower/irrigation impoundment under FS special use permit directly above the ranch on Zena Creek. A primary residence, guest cottages and several outbuildings are located on the Zena Creek alluvial fan at the confluence with the Secesh River. The watershed contains listed T&E fish habitat.

Secesh Subdivision: Treat approximately 8 miles of unauthorized roads in the Secesh River – Grouse Creek subwatershed directly above the Secesh River Subdivision. Several of these roads are located immediately adjacent to FS permitted domestic water systems. The Secesh River and Grouse Creek are critical spawning habitat for wild Chinook salmon.

Town of Warren: Treat 2.8 miles of unauthorized road leading to an abandoned mine in the Slaughter Gulch subwatershed above the Town of Warren. There are 3 wooden culverts that are degrading and need to be removed. Slaughter Gulch is a Public Surface Water Supply for parts of the town. There are several homes located along the Slaughter Gulch floodplain above the confluence within Warren Creek. Slaughter Gulch contains critical habitat for bull trout.

Warren Meadows: Treat 3.5 miles of unauthorized roads in the Warren Creek drainage. Two homes in Warren Meadows were destroyed by high intensity fire. Bull trout are widely distributed in several tributaries of Warren Creek.

How Treatment is Applied: Treatment may include one or more of the following: a) Reestablishing former drainage patterns, stabilizing slopes, and establishing erosion control vegetation; b) Blocking the entrance to a road and installing waterbars; c) Removing culverts, reestablishing drainage ways, removing unstable fills, pulling back road shoulders, and scattering slash on the inactive roadbed; d) Restoring natural contours and slopes. The Forest will use a track excavator and Forest wage grade operator. Supervision will be done by a Forest watershed restoration crew leader. New disturbance will be dry seeded and mulched.

Purpose of Treatment: Purpose of treatment is to reduce the post-fire watershed impairment resulting in increased surface runoff, erosion, mass failure, and sediment from abandoned roads in areas of moderate and high severity burns where risk to life and property and other high downstream values are present. Provide adequate out slope drainage to prevent erosion and reduce sedimentation. Remove culverts and the risk of man-placed fill failure in natural drainages. Increase infiltration and ground cover to reduce erosion as a result of uphill increases in surface runoff. Increase infiltration and reduce cut slope groundwater interception and surface channelization to reduce downstream peak flows. Minimize the risk of mass failures that could trigger debris flows. The channel treatments are designed to mitigate the risk and reduce the threats to several values and resources, including the following:

a) Reduce the extent on erosion and sediment in the Secesh-Zena subwatershed above the Zena Creek Guest Ranch and hydropower/irrigation impoundment.
b) Reduce the extent on erosion and sediment in the Secesh River – Grouse Creek subwatershed directly above the Secesh River subdivision and their water systems.
c) Reduce the extent on erosion and sediment in the Slaughter Gulch above the Town of Warren to protect the public surface water supply and bull trout habitat.
d) Reduce the extent on erosion and sediment above Warren Meadows to protect bull trout habitat in Warren Creek and several tributaries
e) Reduce the risk of erosion mass failure of road fill along abandoned roads.
f) Close out all temporary routes used for BAER channel treatment application where abandoned culverts and fill and drainages are removed.
g) Eliminate the potential of these roads being used and established as unauthorized ATV and other motorized access routes in an area closed to motorized cross-country travel.
h) Reduce the erosion and therefore the streambed fines delivered to the Salmon River and SFSR tributaries to protect valuable T&E listed fish habitat.

4. Noxious Weed Treatment

Description of Emergency Treatments: Treat known sites (~719 acres) of weed infestations with herbicides or mechanically within the burn perimeter and adjacent to the fires along well established road and trail vectors.

Where Treatment is Applied: Treatment will be done on inventoried weed infestations identified for treatment within or immediately adjacent to the 300,022 acre East Zone Fire Complex fire perimeter. The following table specifically identifies noxious weed species and existing known infestation sites.

Wilderness Locations	Weed Species	Acres
Romine Ranch	Rush Skeletonweed	26
	Spotted Knapweed	31
	Canada Thistle	1
Lower South Fork	Spotted Knapweed	1
	Rush Skeletonweed	67
Red Top Meadows	Canada Thistle	20
Total		146

Krassel RD Non-Wilderness Locations	Weed Species	Acres
Profile Road	Canada Thistle	1
East Fork Road	Rush Skeletonweed	2
	Spotted Knapweed	6
	Canada Thistle	2
South Fork Road	Rush Skeletonweed	6
	Spotted Knapweed	4
	Canada Thistle	2
Lick Creek Road	Rush Skeletonweed	2
	Spotted knapweed	5
	Canada Thistle	2
3 Mile Road	Rush Skeletonweed	8
Lower South Fork West – Warren, upper Secesh, Pony Creek & Smith Creek areas	Rush Skeletonweed	263
	Spotted Knapweed	14
	Canada Thistle	1
		318

McCall RD Non-Wilderness Locations	Weed Species	Acres
Lower South Fork East - Elk Creek	Rush Skeletonweed	253
	Spotted Knapweed	2
		255

How Treatment is Applied: Herbicide treatment will follow the direction of the ROD for the SFSR WEED FEIS. Herbicide treatment will be done with backpack sprayers or pickup bed spray units using chemicals and guidelines approved in the SFSR Weed EIS ROD (USDA, 2006). Treatment near waterways will require hand removal of infestations to prevent water contamination.

Purpose of Treatment: The purpose of the treatment is to maintain existing ecosystem vegetation composition by treating known weed infested sites to prevent invasion into the burned area. By reducing the amount of weed seed in the area and treating new populations, native plant communities can have time to recover with less competition from non-native invasive plants. There is a favorable cost/benefit ratio for treating known weed sites in order to prevent expansion into the burned-area.

CHANNEL TREATMENTS

1. Remove Culverts and Fill within Road Drainages.

Description of Emergency Treatments: Remove a total of 29 culverts and fill within drainages on abandoned, unauthorized, or closed system roads. The culverts and fill have a high probability of failure. Risk is to high value downstream private property and T&E listed fish habitat.

Where Treatment is Applied: All treatments will be done in subwatersheds with a high percentage of moderate to high intensity burns. All treatments will be done in subwatersheds where the direct threat is to following high resource values: 1) Zena Creek Guest Ranch, 2) Secesh Meadows Subdivision, and Town of Warren.

Secesh-Zena Creek Subwatershed: Remove 12 culverts on 2 miles closed road. This road was closed in the early 1970's. The 2003 Forest Plan Management Prescription for this area is watershed and fish habitat restoration. There are no plans to use the road. Remove an additional 11 culverts along 5 miles of abandoned and unauthorized roads within the subwatershed. There is a hydropower/irrigation impoundment under FS special use permit directly above the ranch on Zena Creek. A primary residence, guest cottages and several outbuildings are located on the Zena Creek alluvial fan at the confluence with the Secesh River. The watershed contains listed T&E fish habitat.

Secesh Subdivision: Remove 3 culverts on unauthorized road immediately adjacent to Secesh Meadows Subdivision. Several of these roads are located immediately adjacent to FS permitted domestic water systems. The Secesh River and Grouse Creek are critical spawning habitat for wild Chinook salmon.

Town of Warren: Remove 3 wooden culverts that are degrading and need to be removed. Slaughter Gulch is a Public Surface Water Supply for parts of the town. There are several homes located along the Slaughter Gulch floodplain. Bull trout are widely distributed in Slaughter Creek, one of several tributaries of Warren Creek.

How Treatment is Applied: From the end of the road the culverts and fill will be removed using a track excavator. Fill will be removed to natural pre-road level. The fill will be placed outside the drainages along the existing cutslope slopes of the road prism. The stream channel will be designed to mimic the natural channel and stabilized with rocks and logs. Seed and mulch will be placed on all new disturbances.

Purpose of Treatment: The Culvert and Fill Removal and Channel Treatment are designed to mitigate the risk and reduce the threats to several values and resources, including the following:

a) Reduce the extent on erosion and sediment in the Secesh-Zena subwatershed above the Zena Creek Guest Ranch and hydropower/irrigation impoundment.
b) Reduce the extent on erosion and sediment in the Secesh River – Grouse Creek subwatershed directly above the Secesh River subdivision and their water systems.
c) Reduce the extent of erosion and sediment in the Slaughter Gulch (surface public water) above the Town of Warren.
d) Reduce the risk of erosion mass failure of road fill along abandoned roads.
e) Reduce the erosion and therefore the streambed fines delivered to the Salmon River and SFSR tributaries to protect valuable T&E listed fish habitat.

Roads and Trail Treatments:

1. South Fork Salmon River (SFSR) Road Treatments (First Exegency – Approved)

1. HDPE Culverts:

Replace 3 plastic culverts with metal culverts that were destroyed or severely damaged by the fire. Manage water if present. Cut blacktop and concrete treated base. Excavate fill and remove any remaining culvert. Place new metal culverts. Fill and compact. Patch blacktop. Reconstruct inlet and outlet controls. The plastic culverts that caught fire on the outlet side were totally consumed due to the chimney effect of the pipe. The concern is that the road surface will collapse under a passing vehicle at the culvert locations. The subsequent accident could be fatal. The SFSR Road will remain closed until work is completed. Five additional HDPE culverts burned along 6 miles of the SFSR Road in September and require replacement.

All eight damaged HPDE culverts have been replaced.

2. Timber Lag Retaining Walls:

Repair several timber lag retaining walls burned by the fire. Remove damaged timbers and fill material. Install 250 new timbers. Refill and compact fill behind timbers. Purchase new timbers. Haul to site. Excavate if necessary fill behind timbers to be replaced. Revegetate by hydroseed/mulch where disturbance occurs. These retaining walls are critical to stabilize the cutslope. Erosion actions ranging from dry ravel to mass failure onto the road will occur if these structures are not repaired. Drainage features would be comprised. Potentially fill and road prism failures could result. This could close the SFSR Road for a extended time period. The SFSR Road will remain closed until work is completed. 56 additional - 20-foot long pressure treated 6x6 inch lag wall timbers burned along the SFSR Road (24), Hettinger Ranch Road FS #337 (27), and the Trails End Subdivion Road FS#340 (5) and require replacement.

Treated timbers have been purchased and delivered but have not yet been installed.

3. Cut and Fill Slope Erosion Vegetative Erosion Control:

Hydroseed/mulch approximately 10 acres to retreat cut and fill slopes due the severity of the burn. The Forest plans to use the Forest Watershed Crew and Forest Hydroseeder to apply erosion control grass seed, mulch, and fertilizer to a total of 10 acres along the 10 miles of cut and fill slopes within the Cougar Fire perimeter. If these sites are not stabilized, surface erosion and potential mass failure will compromise the SFSR water management features.

Road cut and fill slopes have been hydroseeded and fertilized, however, Ag/Wood mulch has not yet been applied.

4. Rock Rollout and Fallen Snags Hazards:

Remove rocks, granitic sand, and burnt snag that fell onto the road, inslope ditches, culvert inlet, and cutslopes. Use backhoe/loader and dump truck to haul to designated diposal site.

Road maintenance is needed along 8 miles of FSR#340 and 11 miles of FSR#337 to remove rocks, debris, and burnt snags that fell onto the road. Inslope ditches and culvert inlets need to be cleaned out this fall. The Forest will use a backhoe/loader and dump truck to haul to designated diposal site.

The initial hazard removal patrol has been implemented.

5. Monitoring Patrols:

Maintain regular patrol to monitor and remove hazards that will continue to fall onto the road, inslope ditches, culvert inlet, and cutslopes throughout the winter.

2. Culvert Upgrades

Description of Emergency Treatments: Treatment involves upgrades to culvert size to accommodate increased flow and/or debris expected as a result of the post-fire impaired watershed conditions. Action to upgrade culvert size is taken to protect the road infrastructure and to ensure Forest and public access and safety.

Where Treatment is Applied: Upgrading of culvert size will be conducted on Forest roads where post-fire modeling has shown that the expected post-fire flow and debris can no longer be accommodated for the design flow and risk probability. The following table provides specific information on road and stream location, critical access, current flow capacity, post-fire flow requirements, type of needed design and cost.

Road Number	Stream Name	Community Access	Drainage Area (square miles)	Percent Moderate - High Burn Intensity	Current Flow Capacity (cfs) and Design	Bankfull Width (Feet)	Post-fire Flow (cfs) & Design	Cost of Treatment
SFSR Road FR#50674	Phoebe Creek	Yellow Pine and Big Creek	6.9	65	100 cfs Twin 36" diameter round cmps	12	443 cfs Open bottom, 14 ft. concrete	$130,000
SFSR Road FR#50674	Indian Creek	Yellow Pine and Big Creek	2.8	51	50 cfsone 36" diameter round HDPE	6	220 cfsOpen bottom, 8 ft. concrete	$120,000
Warren Wagon Road FH#21	N.Fk. Long Gulch	Warren, Trails End, and Hettinger	2.4	90	100 cfs 54" damaged round cmp	8	225 cfs Open bottom, 10 ft. concrete	$120,000*
Warren Wagon Road FH#21	Slaughter Creek	Warren, Trails End, and Hettinger	8.9	29	350 cfs 8' squashed cmp	8	300 cfs No Action	**No BAER Action.** NFN3 Fish Passage
Warren Wagon Road FH#21	Hoodoo Gulch	Warren, Trails End, and Hettinger	1.1	85	50 cfs 36" round cmp	4	125 cfs 8 ft. cmp buried invert	$20,000*
Warren Wagon Road FH#21	Mayflower Creek	Trails End, and Hettinger	2.9	57	225 cfs 78" x 60" squashed cmp	8	221 cfs No Action	**No BAER Action.** NFN3 Fish Passage
EFSFSR Road FH#48	Deadman Creek	Yellow Pine and Big Creek	2.3	91	175 cfs 60" round cmp	8	226 cfs Open bottom, 12 ft. concrete	$130,000*
EFSFSR Road FH#48	Reegan Creek	Yellow Pine and Big Creek	8.1	17	250 cfs 72" round cmp	16	450 cfs Bridge or Open bottom, 20 ft. concrete	$300,000*
Chinook CG Road	Chinnok CG Creek	Chinook Campground	1.04	47	35 cfs 36" round cmp	5	88 cfs 8 ft. cmp Buried invert	$20,000
Steamboat Road	Arlise Gulch	Private inholding and mining claim.	1.0	100	30 cfs 48" squash cmp	5	90 cfs 6 ft. cmp Buried invert	$20,000
Total of 8 Upgraded Culverts					**$860,000 or $105,000 each**			

** Requires coordination with either Idaho or Valley County under cost share agreements.*

How Treatment is Applied: Culverts determined to be undersized and at risk of failure to the road are removed to prevent excessive erosion to the roadway and fillslopes and replaced with larger culverts able to handle the increased flows. Culvert work will include setting up traffic control and/or road closure signs, excavating and removing the existing culvert, and hauling away excavated material to an approved waste site,. Replacement of culverts shall be per the design and specifications written for each site. Upgrades will be compatible with road management plans that provide fish passage where listed T&E aquatic species are present. Contract specifications shall conform to Forest Service Supplements and the designated sections in the *FP03-Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects*. Culvert inlets and/or outlets will be armored, as necessary, to protect the drainage feature.

Purpose of Treatments: These treatments will increase culvert capacities to accommodate increased water flows and associated bedload and debris. The objectives for accommodating increased flows are to:

1. Stabilize and protect the existing transportation facilities.
2. Decrease the chances of washing road fill into adjacent streams.
3. Minimize road failure induced flooding that could impact critical ecosystem values such as listed T&E species in the Salmon River Basin.
4. The crossings identified for replacement have been determined to be necessary to support immediate and long-term administrative uses including protection of critical habitat, patrols for drainage cleaning to prevent road failure and infrastructure loss, and to support the Districts short-term program of work.

3. Storm Response Treatments

Description of Emergency Treatments: Provide an efficient measure to protect the road transportation infrastructure from storm damaging events by: a) Routinely inspecting the 75 miles of Forest Service road within the East Zone Complex after each major damaging storm event; b) Clear debris and sediment from in-slope ditches and culverts as material accumulates; and c) Remove hazard trees and rocks that fall onto the road as the result of the wildfire.

Where Treatment is Applied: on 75 miles of FS roads within the East Zone Complex perimeter.

How Treatment is Applied: The Forest Road or County Road Crew (under cost share agreements) will patrol FS roads after each major storm damaging event. Clear of road, ditch lines and culvert inlets will be done with the Forest grader and backhoe.

Purpose of Treatment: Provide an efficient measure to protect the road transportation infrastructure from storm damaging events by:

a) Inspecting the 75 miles of Forest Service road within the East Zone Complex. Most of these roads will be inspected by a road crew once in the spring immediately after snowmelt and again when damaging storm events are reported.

b) Clear debris and sediment from in-slope ditches and culverts as material accumulates.

c) To ensure storm inspection and BAER treatment access, remove hazard trees and rocks that fall onto the road as the result of the wildfire.

4. Trail and Bridge Treatments

Description of Emergency Treatments: There is a need to remove rocks, debris slides, and burnt snags that have fallen onto or across trails to allow access for BAER treatment crews. The

Forest must provide clear and safe passage to BAER trail treatment sites. Over 80 percent of the Complex area has high erosion hazard risk. Based on the 36.5 miles of trail inspected to date, it is estimated that ~85% of the trail mileage within the fire perimeter will need BAER work. Crews will reestablish proper drainage and water management structures to prevent further loss to the trail transportation infrastructure. The crews will maintain, repair, rebuild and add new water management structures where needed to deal with expected increase of surface runoff and control erosion. Trail treatments includes:

- Cleaning of existing and undamaged drainage structures to ensure capacity to respond to increased runoff patterns
- Repair or replace damaged water drainage structures.
- Install additional drainage structures as necessary to increase the ability to respond to increased runoff patterns.
- Remove / repair areas of slumping, sliding & sloughing occurrences. Stabilize the cut and fill slopes as needed and feasible to avoid reoccurrence.
- Remove down logs, rock fall, and debris that may cause additional erosion to the trail, may create hazardous conditions for use for BAER treatment crews and which could further destabilize the trail and create new and additional sources of sediment introduction.
- Stabilize, repair or reconstruct tread as necessary to limit erosion potential and to ensure safe use and travel on the trail for BAER treatment crews.
- Post *Information / Hazard* Signs on trailhead informational kiosks.

For two trail bridges the following site specific work is needed:

- North Fork of Fitsum Creek – this was a treated material road bridge that had been converted to serve non-motorized trail traffic. The chemically treated wooden debris from the bridge needs to be removed from the creek to protect water quality. Damaged and burnt bridge abutments needs to be removed and the vertical back fill needs to be pulled back to prevent chemical and sediment from going into important Chinook salmon and bull trout habitat.

- Krassel Pack Bridge – this is a cable suspension pack bridge that provides a crossing of the South Fork. The bridge itself was undamaged, however the fire on the west side of the South Fork has destabilized the slope above the bridge tower and increased the potential for damage to the structure. Four hazard trees will need to be removed that may fall against the cable. Slope stabilization at the bridge tower is needed to reduce erosion and the potential tower failure and damage to this major infrastructure improvement.

Wilderness (Raines Fire)

Trail Name	Miles Affected	Mod-High Fire Intensity
➢ Horse Heaven #018	8.5	88%
➢ Rim Cr/Hen Cr #020	6.5	97%
➢ James Ranch #132	3	10%
➢ Warren Cr #139	2	40%
➢ Nelson Pt #127	3	57%
➢ Slaughter Gulch #126	6	58%
➢ Raines Cr #112	5	64%
➢ So Fk Salmon River #122	5	37%
➢ Porphyry #125	6	100%
➢ Mosquito Rdg #003	12.5	85%
➢ Lemhi #023	2	66%
➢ Three Blaze #017	3	20%
➢ So Fk Chamberlain Cr #019	9	85%
Total trail miles	***71.5***	

Trail Bridges

➢ South Fork @ Badley Ranch	No action needed
➢ Chicken – SFK trail	No Action needed
➢ Rooster – S Fk trail	No Action needed

Krassel Ranger District Non-Wilderness

Trail Name	Miles Affected	Motorized	Mod-High Fire Intensity
➢ Secesh #080	12	Yes	62%
➢ Zena Cr #294	1.5	Yes	37%
➢ Tailholt #079	12	Yes	58%
➢ Williams Pk # 073	8	No	91%
➢ Deadman #075	2	No	81%
➢ Cow Cr #300	10	Yes	36%
➢ Fitsum #087	5	Yes	81%
➢ So Fk Fitsum Cr #088	2.5	Yes	28%
➢ Krassel Knob/ NF Buckhorn #089	5	Yes	58%
➢ Six Mile Rdg #088	4.5	No	58%
➢ W Fk Buckhorn #094	1.5	No	43%
➢ Rainbow Rdg #070	5.5	No	83%
➢ So Fk Salmon River (E) #076	7.5	Yes	37%
➢ So Fk Salmon River (W) #077	3	Yes	28%
➢ Sheep Cr # 071	15	No	66%
➢ Buckhorn #096	2	Yes	8%
➢ Indian Rdg #090	6	Yes	71%
➢ Phoebe Mdws #291	1.5	Yes	74%
➢ Split Cr #081	7.5	No	81%
➢ Split Cr LO #083	1	No	30%
Total trail miles	***113***		

Trail Bridges

➢ N Fk Fitsum Cr (“converted” road)	Destroyed – action necessary
➢ Four Teapot ATV bridges	No action needed
➢ Krassel Pack Bridge	Remove hazard trees, stabilize W bank

McCall Ranger District Non-Wilderness

Trail Name	Miles Affected	Motorized	Mod-High Fire Intensity
➢ Split Cr #081	6	No	73%
➢ Secesh #080	7	Yes	93%
➢ #084	5.5	No	45%
➢ Victor Creek #117	2	Yes	60%
➢ Grimmet Ck #129	6.5	Yes	80%
➢ Tailholt #079	2	Yes	20%
➢ Steamboat Ck #128	2	No	88%
➢ Willow Basket #141	2.5	Yes	88%
➢ Slaughter Gulch #126	5	No	87%
➢ Warren Cr #139	4	No	70%
➢ Republican Flats #132	3	Yes	100%
➢ Thomas Ck #130	2.5	No	89%
➢ Schissler Creek	1	Yes	84%
Total trail miles	***49***		
Trail Bridges			
➢ Lower Secesh Bridge	No Action needed		
➢ U Secesh Bridge @ChinookCg	No Action needed		

How Treatment is Applied: One time trail maintenance effort on these trails during the spring / summer of 2008 should meet the need for reducing hazards & user risks and re-establishing drainage features. Forest Service trail crews, or contracted maintenance personnel or available cooperative crews, will be used to remove rock and debris hazards on the cutslopes and travelway, clean out existing culverts, to reestablish and maintain drainage features. Damaged log waterbars need to be replaced, drainage structures need to be cleaned, and numerous slumps and slides need to be removed on all trail miles to reduce erosion and prevent further loss of trail infrastructure.

Purpose of Treatment: Trail maintenance is needed to provide for maximum effectiveness of existing water bars to efficiently route water and sediment from the trails, thereby preventing erosion of trail surface and minimizing impacts to water quality and fish habitat. Protect trail infrastructure. Reduce adverse effects to listed threatened anadromous fish.

1. Provide clear and safe passage for FS crews along NFS Trails to emergency BAER treatment sites.
2. Reduce the risk of additional loss and damage to the NFS trail infrastructure within the fires perimeter by maintaining and repairing damaged water management features such as burned log waterbars.
3. Remove downed logs, rock fall, and debris that may cause additional erosion to the trail system as a result of increased runoff.
4. Clean current drainage structures to ensure increased runoff and erosion do not cause additional erosion and loss of trail tread.
5. Reduce trail erosion and streambed fines delivered to the Main Salmon River, the South Fork Salmon River and their tributaries to protect critical T&E listed anadromous fish habitat.

PROTECTION and SAFETY TREATMENT

1. Copenhaver Subdivision Domestic Water Supply (Second Exigency – Approved)

Description of Emergency Treatments: Reduce the risk of erosion and sediment deposit on top of the spring development used for the domestic water for 10 homes in Copenhaver Subdivision.

Where Treatment is Applied: Treatment is applied directly above and adjacent to the domestic water spring development located in Cherry Springs Creek.

How Treatment is Applied: A small straw bale check dam will be placed in the bottom of the drainage directly above the spring. Silt fence will be placed on the side slopes directly adjacent to the spring. Mulch will be hand placed on about one acre of area of moderately burned, directly above and adjacent to the spring.

Purpose of Treatment: Reduce the risk of sheet erosion and sediment deposit directly on the domestic water spring development. Prevent potential erosion and sedimentation from covering the access to the cistern and water system values.

BAER Treatment complete: Silt fence and Ag and Wood Fiber Mulch were applied directly above Copenhaver's domestic water development.

2. Recreation Site Developments & Facilities

Description of Emergency Treatments: Maintain or repair water management features, or install additional water erosion features where needed to process increase in flows and run off. Provide limited land treatment to reduce surface erosion and protect infrastructure. Remove destabilized trees or other feature where failure could present a public hazard or cause damage to the recreation facilities and improvements.

Where Treatment is Applied: Recreation Sites & Facilities within the East Zone Complex Fire Perimeter:

Developed Recreation Sites – Krassel RD	**Notes**
➢ Ponderosa Cmpg	Protect water system
➢ Secesh Cmpg	No work needed
➢ Indian Point Rec Site	No work needed
➢ Split Cr Rec Site	No work needed
➢ Buckhorn Bar Cmpg	Protect spring development
➢ Deadman Rec Site	Toilet burned – work needed
➢ Camp Cr Cmpg	No work needed
Interpretive Sites – Krassel RD	
➢ Confluence	No work needed
➢ Water Stop/Pit House	1. Protect water system; 2.Cleanup pit house of burned materials
➢ Krassel	No work needed
➢ Peeled Tree	No work needed
Developed Recreation Sites – McCall RD	
➢ Chinook Cmpg	Berm to protect two campsites.
Interpretive Sites – McCall RD	
➢ Warren Cemetery	No work needed
➢ Loon Lake	No work needed
➢ Hays Station	No work needed
➢ Warren Guard Station	No work needed

How Treatment is Applied: Work will be accomplished using hand tools, utilizing Forest Service crews. Identified site specific work includes:

a) Deadman CG – Outhouse Mitigation: the fire burned one of the two pit toilets located at this site, as a result the pit was exposed. Treatment will mitigate this sanitation and safety hazard.
b) Buckhorn CG water system – open the water system diversion ditch to protect the spring development from an increase in runoff.

c) Ponderosa CG water system – open water system diversion ditch to protect the spring development and repair / replace the valve box to protect the infrastructure.
d) Water Stop – 1. Clean and re-establish water system diversion ditch to protect the spring development; 2. Clean up & protect the burned over water stop heritage interpretation feature (pit house).
e) Chinook CG – Chinook Creek Berm: the fire burned high intensity in the majority of the Chinook Creek subwatershed. This stream runs adjacent to 2 campground sites. High water is expected to overflow the streambank and spill into the campsites. It is proposed to excavate a shallow swale between the stream and the campsites and use the material to build a small berm to divert expected water away from the two campsites.

Purpose of Treatment: Provide for public health and safety concerns that could result from fire created hazards (e.g. hazard trees, water system impacts). Reduce the risk of additional loss, damage or loss of function to the NFS recreation infrastructure within the East Zone Complex fire perimeter that could be triggered by or associated with, fire related impacts or damage.

- Protect the recreation infrastructure investment (protection of facilities).
- Provide for safe use of NFS recreation facilities (public safety).

3. Bridge Safety and Resource Protection Objectives: Protect public safety by repairing the fire damaged guard rails on the EFSRSR Bridge and removal of hazards from two damaged trail bridges. Stabilze vertical streambanks where the abutments were destroyed.

a) EFSFSR Bridge Guard Rails: The guard rails on the EFFSR bridge were partially destroyed by the fire. This bridge is located on the only vehicular access to the town of Yellow Pine. Rails need to be repaired to ensure public and Forest personnel safety. 10,500 bd treated Douglas Fir @ 1.60/BF = $16,800 plus 16,800 labor = $33,000.
b) North Fork of Fitsum Creek – this was a treated material road bridge that had been converted to serve motorized trail traffic. The debris from the bridge needs to be removed from the creek, the remaining abutments removed and the back fill pulled back to rehabilitate and restore the site.
c) Krassel Pack Bridge – this is a cable suspension pack bridge that provides a crossing of the South Fork. The bridge itself was undamaged, however the fire on the west side of the South Fork has further destabilized the slope above the bridge tower and increased the potential for damage to the structure. Four hazard trees will need to be removed and the slope stabilized with rock cribbing to reduce the potential for damage to this major infrastructure improvement.

I. Monitoring Narrative:

1. Noxious Weeds

Monitor and inventory for noxious weed invasion and the effectiveness of treatments. Monitoring would be done to assess BAER weed treatments and recovery of the burned sites. It would evaluate the success or failure of treatment, recommend adjustments to treatment and report the findings to management. Monitoring will involve primarily inventory of susceptible lands within the burn perimeter for noxious weeds. Monitoring will be required on the approximately 719 acres of treatment sites, within, and adjacent to fires of the East Zone Complex on the Payette NF.

a) Monitor the effectiveness of weed treatment.

b) Monitor the suspected infestations or invasive plants that might increase due to fire disturbance conditions

c) Monitor/treat **RNA's** and **rare plant** sites for invasive and noxious weed invasion.

2. Yellow Pine Municipal Watershed

The Forest will monitor the effectiveness of the Alternative A (No Land Treatment) for the Yellow Pine Municipal Watershed. Monitoring will involve an on-the-ground assessment vegetation recovery, rill erosion, and channel stability in areas of high severity burns on NFS lands within the upper portion of the Boulder Creek drainage (Yellow Pine Municipal Watershed). This will be accomplished by on-the-ground inspection of the Upper Boulder Creek watershed once later in the summer. This will require one helicopter flights into the H4 helispot. The Forest will establish photo points and note evidence of erosion, rilling, and channel changes.

This was approved for the 2006 South Fork Complex was was not implemented due to fire closures and flight restrictions. The 2007 East Fire burned into the 2006 fire Boulder Creek – Yellow Pine Municipal Watershed.

Part VI – Emergency Stabilization Treatments and Source of Funds Report #3 – Full Initial

			NFS Lands				Other Lands				All
		Unit	# of		Other		# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER $	$		units	$	Units	$	$
A. Land Treatments											
Lower SFSR Mulch	*acres*	*2000*	*112*	*$224,000*	*$0*			*$0*		*$0*	*$224,000*
SFSR Road Mulch	*acres*	*1500*	*30*	*$45,000*	*$0*			*$0*		*$0*	*$45,000*
Subtotal Approved Land Treatments				*$269,000*	*$0*			*$0*		*$0*	*$269,000*
Cut and Fill Slope Mulch	acres	1000	35	$35,000	$0			$0		$0	$35,000
Abondoned RD Drainage	miles	7000	19.3	$135,100	$0			$0		$0	$135,100
Wilderness Nx Weeds	acres	350	146	$51,100	$0			$0		$0	$51,100
Krassel RD Nx Weeds	acres	175	318	$55,650	$0			$0		$0	$55,650
McCall RD Nx Weeds	acres	175	255	$44,625	$0			$0		$0	$44,625
Subtotal New Land Treatments				$321,475	$0			$0		$0	$321,475
Subtotal Approved and New Land Treatments				$590,475							$590,475
B. Channel Treatments											
Culvert/fill removal	*each*	*4000*	*1*	*$4,000*	*$0*			*$0*		*$0*	*$4,000*
Subtotal Approved Channel Treatments				*$4,000*							*$4,000*
Culvert/fill removal	each	2000	29	$58,000	$0			$0		$0	$58,000
Subtotal New Channel Treatments				$58,000							$58,000
Subtotal Approved and New Channel Treatments				$62,000	$0			$0		$0	$62,000
C. Road and Trail											
Culvert Replace	*each*	*3322*	*8*	*$26,576*	*$0*			*$0*		*$0*	*$26,576*
Timbers for Walls	*each*	*500*	*306*	*$153,000*	*$0*						*$153,000*
Approved Road Hazards	*miles*	*1000*	*30*	*$30,000*	*$0*			*$0*		*$0*	*$30,000*
Subtotal Approved Road Treatments				*$209,576*	*$0*			*$0*		*$0*	*$209,576*
Upgraded Culverts	each	107500	8	$860,000	$0						$860,000
Storm Response	miles	800	75	$60,000	$0			$0		$0	$60,000
Wilderness Trails	miles	1500	71.5	$107,250	$0			$0		$0	$107,250
Krassel RD Trails	miles	1500	113	$169,500	$0			$0		$0	$169,500
McCall RD Trails	miles	1500	49	$73,500	$0			$0		$0	$73,500
Subtotal New Road and Trails				$1,270,250	$0			$0		$0	$1,270,250
Subtotal Approved and New Roads and Trails				$1,479,826							$1,479,826
D. Protection/Safety											
Copenhaver Water	*site*	*1000*	*1*	*$1,000*	*$0*			*$0*		*$0*	*$1,000*
Subtotal Approved Protection/Safety Treatments				*$1,000*	*$0*			*$0*		*$0*	*$1,000*
Rec Sites	site	1000	5	$5,000	$0			$0		$0	$5,000
EFSFSR Bridge Guard Rail	site	33000	1	$33,000	$0			$0		$0	$33,000
Trail Bridges	site	1000	2	$2,000	$0			$0		$0	$2,000
Subtotal New Protection and Safety				$40,000							$40,000
Subtotal Approved and New Channel Treatments				$41,000	$0			$0		$0	$41,000
E. BAER Evaluation											
Survey (1st Exigency)	*days*	*2000*	*1*	*$0*	*$2,000*			*$0*		*$0*	*$2,000*
Survey(2nd Exigency)	*days*	*2000*	*8*	*$0*	*$16,000*			*$0*		*$0*	*$16,000*
Full Survey (3rd Report)	days	2500	10	$0	$25,000						$25,000
Insert new items above this line!				---	$0			$0		$0	$0
Subtotal Evaluation				---	$43,000			$0		$0	$43,000
F. Monitoring											
Wilderness Nx Weeds	days	400	20	$8,000				$0		$0	$8,000
Krassel RD Weeds	days	400	20	$8,000				$0		$0	$8,000
McCall RD Weeds	days	400	20	$8,000				$0		$0	$8,000
Yellow Pine Muni Water	flight/day	2000	1	$2,000							
Subtotal Monitoring				$26,000	$0			$0		$0	$24,000
G. Totals				**$2,199,301**	$43,000						**$2,197,301**
Previously approved				$483,576	$18,000						$482,576
Total for this request				**$1,715,725**	**$25,000**						**$1,714,725**

Note: This request highlighted in pink

PART VII - APPROVALS

1. */s/ Gary R. Brown for Suzanne C. Rainville* 11/13/2007
   Payette NF, Forest Supervisor (signature) Date

2. _____ _____
   R4, Regional Forester (signature) Date