Date of Report: Oct. 01, 2015

BURNED-AREA REPORT
(Reference FSH 2509.13)

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 (Best estimate of funds needed to complete eligible stabilization measures)

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

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

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: National Creek Complex

B. Fire Number: OR-RSF-000836

C. State: Oregon

D. County: Douglas Co.; Klamath Co.

E. Region: R6

F. Forest: Rogue River-Siskiyou NF; Umpqua NF

G. District: High Cascades; Diamond Lake

H. Fire Incident Job Code: P6J0SB15 0610

I. Date Fire Started: 08/01/2015

J. Date Fire Contained: Est. Season-ending event

K. Suppression Cost: 21 million as of 9/24/2015

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 16
2. Fireline seeded (miles): 3
3. Other (identify): 17 drop points and pushout repaired and seeded, 5 acres

M. Watershed Number: Headwaters Rogue River (1710030701) and Diamond Lake (1710030101)

6th Field Watersheds within Burned Area

6th field watershed	HUC	Total Acres	Acres Burned	Percent Burned
Pumice Desert	171003010101	21,260	1,038	4.9%
Silent Creek	171003010102	8,225	2,059	25.0%
Minnehaha Creek-Rogue River	171003070101	22,307	7,441	33.4%
Muir Creek	171003070102	13,159	18	0.1%
National Creek-Rogue River	171003070103	16,601	1,865	11.2%

N. Total Acres Burned: 21,132

NFS Acres(6,527) Other Federal (14,605) State (0) Private (0)

There are approximately 4,375 acres on the Rogue River NF, and 2,152 acres on the Umpqua NF. Other federal acres are NPS - Crater Lake National Park.

Agency	Unburned Acres (%)	Low Severity Acres (%)	Moderate Severity Acres (%)	High Severity Acres (%)	Total Acres (%)
NPS	5,678 (39%)	4,806 (33%)	3,321 (23%)	800 (5%)	14,605 (100%)
USFS	3,034 (46%)	2,076 (32%)	1,203 (18%)	214 (3%)	6,527 (100%)
Total Acres	8,712 (41%)	6,882 (33%)	4,524 (21%)	1014 (5%)	21,132 (100%)

O. Vegetation Types: Shasta Red fir series, Mountain Hemlock series, and Lodgepole Pine series (primarily on pumice flats). Plant Associations found include: White-fir-Shasta red fir/Common prince's-pine-Threeleaf anemone; White-fir-Shasta red fir/Vanillaleaf; Shasta red fir-Mountain hemlock/Pinemat manzanita/Common prince's-pine; Mountian hemlock/Grouse huckleberry/Common prince's-pine; Mountian hemlock-Shasta red fir/thin-leaved huckleberry/Common prince's-pine; Lodgepole pine-Mountain hemlock/Depauperate.

P. Dominant Soils: Rogue River NF: the western side of the fire, associated with the National Creek and Minnehaha Creek drainages, is dominated by very cobbly to gravelly sandy loams from glacial till. The northern side of the fire, associated with the headwaters of the Rogue River, is dominated by sandy loams from flow pumice. Umpqua NF: dominated by loamy sands from flow pumice, and some cinder.

Q. Geologic Types: Underlying andesites and basalts, with glacially carved slopes and associated till, ground morraine and glacial outwash. Lower glacial surfaces subsequently overtopped with flow pumice and ash deposits from the eruption of Mt. Mazama tens to hundreds of feet thick, with subsequent carving down through the deep pumice deposits by stream systems.

R. Miles of Stream Channels by Order or Class:

Forest	Class 1 (mi.)	Class 2 (mi.)	Class 3 (mi.)	Class 4 (mi.)
Rogue River NF	11.5	1.2	1.5	10.7
Umpqua NF	0	0	0.6	4.2

S. Transportation System

Trails: Rogue River NF: 18.7 miles; Umpqua NF: 0.8 mile

Roads:

Forest	ML 2	ML 3	State Hwy
Rogue River NF	8.52	4.7	5.24
Umpqua NF	0.82	0	0.35

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 6,882 (low) 4,524 (moderate) 1,014 (high)

Burn Severity by HUC6 – All Ownerships, including NPS

6th field watershed	Unburned Acres (%)	Low Acres (%)	Moderate Acres (%)	High Acres (%)
Pumice Desert	20,222 (95.1%)	900 (4.2%)	130 (0.6%)	8 (0.0%)
Silent Creek	6,166 (75.0%)	986 (12.0%)	983 (12.0%)	90 (1.1%)
Minnehaha Creek-Rogue River	14,866 (66.6%)	3,947 (17.7%)	2,723 (12.2%)	771 (3.5%)
Muir Creek	13,141 (99.9%)	14 (0.1%)	4 (0.0%)	0 (0.0%)
National Creek-Rogue River	14,736 (88.8%)	1,035 (6.2%)	685 (4.1%)	145 (0.9%)

Burn Severity by HUC6 – USFS - Rogue River-Siskiyou NF

6th field watershed	Low Acres (%)	Moderate Acres (%)	High Acres (%)
Silent Creek	0 (0.0%)	1 (0.0%)	0 (0.0%)
Minnehaha Creek-Rogue River	1,322 (5.9%)	770 (3.5%)	179 (0.8%)
Muir Creek	14 (0.1%)	4 (0.0%)	0 (0.0%)
National Creek-Rogue River	166 (1.0%)	97 (0.6%)	19 (0.1%)

Burn Severity by HUC6 – USFS – Umpqua NF

6th field watershed	Low Acres (%)	Moderate Acres (%)	High Acres (%)
Pumice Desert	51 (0.2%)	17 (0.1%)	3 (0.0%)
Silent Creek	411 (5.0%)	271 (3.3%)	15 (0.2%)
Minnehaha Creek-Rogue River	77 (0.3%)	13 (0.1%)	2 (0.0%)

B. Water-Repellent Soil (acres): 1417 acres

Natural strong but shallow hydrophobicity was found at the soil surface in all tested unburned areas, on pumice and glacial till-derived soils. In moderate and high burn severity areas, strong to moderate water repellency was found to be consistently driven approximately 2 to 4 inches into the soil surface, with loss of soil structure above the repellent layer, across both major soil types. Over 48 hours between 9/16-9/17, the fire area received between 1.16 (west side) and 0.65 (east side) inches of rain. Field observations on 9/18 in moderate and high severity areas were of the top 2-4 iches of loose soil at saturation, with soil water perched above strongly hydrophobic, dry soils. On some steeper slopes, some rilling was becoming evident.

C. Soil Erosion Hazard Rating (acres): Note all Umpqua NF acres are have a Low rating.

5,825 (low) 465 (moderate) 237 (high)

D. Erosion Potential: Rogue River drainage: 0.05 to 21 tons/acre
Mazama Ck drainage: 0.03 to 7 tons/acre
Trib. Minnehaha Ck drainage: 0.03 to 3 tons/acre

E. Sediment Potential: Rogue River drainage: 4 to 1612 cubic yards / square mile
Mazama Ck drainage: 3 to 522 cubic yards / square mile
Trib. Minnehaha Ck. Drainage: 2 to 230 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 5-15

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

C. Equivalent Design Recurrence Interval, (years): 25

D. Design Storm Duration, (hours): 1

E. Design Storm Magnitude, (inches): 1.2

F. Design Flow, (cubic feet / second/ square mile): 7

G. Estimated Reduction in Infiltration, (percent): 25

H. Adjusted Design Flow, (cfs per square mile): 54

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Human Life and Safety:

Forest roads and trails within the burn perimeter have the greatest concern for human life and safety from snags, rolling debris and soil sloughing. NFSR 6530 is a maintenance level 3 road that was heavily utilized during fire suppression. Eminent snag hazards were removed but steep destabilized slopes from moderate and high burn severity, and fire-killed trees along and uphill of the road remain. NFSR 6530760 is a maintenance level 2 road, as well as a designated snowmobile trail. Many eminent snag and downed wood hazards have been removed during suppression repair, but large sections of the route pass through moderate and high severity burn with safety concerns regarding snag hazards, and rolling debris and soil sloughing. There is a *Possible* probability of damage or loss, and a *Major* magnitude of consequences if someone were to be killed or injured, resulting in a *High* risk. **Treatments recommended – Burned Area Warning signs at strategic locations entering the burned area.**

Two hiking trails are within the burn perimeter. The Upper Rogue River National RecreationTrail (1034) and the Boundary Springs Trail (1057) are popular hiking trails along the Wild and Scenic Rogue River. The Boundary Springs Trail accesses the headwaters of the Rogue River and is co-located within Crater Lake National Park and the Rogue River – Siskiyou National Forest. Both trails are located adjacent to the river and contour moderate to steep side slopes along stretches of the river.

The Boundary Springs Trail on NFS starts at the Mazama Viewpoint on Hwy 230 and traverses forested areas comprised of mixed conifer and stands of lodgepole pine. The grades are predominantly low (< 5%) to moderate (5-10%) with some short steeper pitches. Side slopes adjacent to the trail average 20-50%. The trail is classified as Class 4 – Highly Developed with a designed use for hiker/pedestrian. The NFS portion of the Boundary Springs Trail is predominantly in areas of low burn severity, and where slopes are more moderate. However, short segments of the trail are in areas of moderate to high severity, on steeper slopes. Trail tread in the moderate to high severity burn areas where steeper side slopes occur experienced some trail sloughing and minor collapsing of the trail tread. Down logs that are side slope above the trail are common in the higher severity burn areas. Additionally some fire killed trees had fallen across the trail with fire killed standing dead remaining in the higher severity burn areas. The NPS portion of the trail experienced significant damage and loss, warrenting a trail closure for that portion of the trail. On the NFS portion, there is a *Possible* probability of injury, and a *Major* magnitude of consequences if someone were to be killed or injured, resulting in a *High* risk. **Treatments recommended – Trail closure order and signs at strategic trail access locations, in collaboration with NPS trail closure.**

The secondary trailhead for Boundary Springs Trail on NFSR 6530760 is in a moderate to high severity burned area and is surrounded by fire-killed snags. There is a *Very Likely* probability of damage or loss, and a *Major* magnitude of consequences if someone or a parked vehicle were to be struck by a falling snag, resulting in *Very High* risk. **Treatments recommended – Trailhead closure order and sign.**

The Upper Rogue National Recreation Trail, also starting at the Mazama Viewpoint, picks up the river approximately .5 miles from the trailhead and follows the river for approximately 5 miles through the fire area. The trail is classified as a Class 4 – Highly Developed with a designed use for hiker/pedestrian. The Upper Rogue River Trail passes through stands of mixed conifer characterized by trees ranging in size from 10-12"dbh to over 40" dbh. Approximately 1.6 miles of the 6 mile length of the trail within the fire perimeter occur in moderate to high severity burn areas. Along areas of the trail that contour the side slope, sloughing is occurring onto the trail, numerous snags and downfall are present, along with stump and root burnout into the trail causing stump holes and trail collapse. Along flatter areas of the trail within the moderate to high severity burn areas, the trail tread is indistinguishable along segments due to downfall, rain on hydrophobic soils, needle cast and stump hole burnout. The length of trail estimated to occur along side slopes within moderate to high severity burn is approximately 1 mile. One short (5' long- 2 logs wide) foot bridge crossing a steep incised drainage was damaged by the fire and the throughway beneath is clogged from erosion from the recent

rain on bare soil event. There is a *Likely* probability of someone getting injured or killed, and a *Moderate to Major* magnitude of consequences, resulting in *High to Very High* risk. **Treatments recommended – Trail closure order and signs at strategic trail access locations.**

The Lake West Snow Shelter serves as a warming shelter for snow mobile users along the Lake West snow mobile trail on NFSR 6530760. Fire severity at and in the vicinity of the now shelter was a low severity underburn through lodgepole pine. Suppression repair crews surveyed and felled any imminent hazard trees, including one tree that had fallen on the roof resulting in minor damage. There is an *Unlikely* probability of damage or loss, though *Major* magnitude of consequences if someone were to be struck by a falling tree, resulting in *Intermediate* risk. **No Treatments Recommended.**

Property:

National Forest System Roads (NFSR) within the fire perimeter and which have sections which traverse through areas of moderate and high severity burn which have the potential to damage the road through rolling debris, debris flows, erosion and sedimentation into ditchlines and plugging crossdrains include NFSR 6530, NFSR 6530752, and NFSR 6530760. On NFSR 6530, 3.9 miles of road is threatened, On NFSR 6530752, 0.7 miles of road is threatened, and on NFSR 6530760, 5.8 miles of road is threatened. There is a *Likely* probability of damage or loss in the moderate and high burn severity areas, and a *Moderate to Major* magnitude of consequences, resulting in a *High to Very High* risk. **Treatments recommended – sediment control at culverts and cross ditches, ditch cleanout, improvement of road prism and shoulder drainage to handle increased runoff, and storm patrol, on sections of road impacted by moderate and high severity burn.**

In addition, there are three road-stream crossings that have been identified as a concern:
The headwaters of the Rogue River stream crossing on NFSR 6530760, which consists of a 10 foot squash pipe; Mazama Creek stream crossing on NFSR 6530760, which consists of a 24 inch diameter culvert; and an unnamed tributary to Minnehaha Creek on NFSR 6530, which consists of two small and adjacent drainages comprised of an 18 inch and 24 inch diameter culverts. Post-fire watershed modelling indicates that flows can increase by approximately 8 times at the Rogue River crossing, 5 times at the Mazama Creek crossing, and by 11 and 22 times at the unnamed tributary to Minnehaha Creek crossings. Increased flows and associated debris have the potential to wash out crossings, resulting in loss of the road infrastructure at these locations, as well as down the grade of the road where plugged or blown out culverts at the NFSR 6530 crossings could cause water to become diverted and channelized down the road prism. There is a *Possible to Likely* probability of damage or loss, and a *Moderate to Major* magnitude of consequences, resulting in an *Intermediate to Very High* risk. **Treatments recommended – culvert cleanout and storm patrol, installation of hardened overflow rolling dips on NFSR 6530 at the unnamed trib to Minnehaha Creek crossings.**

The Boundary Springs Trail traverses forested areas comprised of mixed conifer and stands of lodgepole pine. The grades are predominantly low (< 5%) to moderate (5-10%) with some short steeper pitches. Side slopes adjacent to the trail average 20-50%. The NFS portion of the Boundary Springs Trail is predominantly in areas of low burn severity. However, short segments of the trail were in areas characterized by moderate to high severity. These areas were also on steeper slopes. Trail tread in the moderate to high severity burn areas where steeper side slopes occur are beginning to experience trail sloughing and minor collapsing of the trail tread with minor precipitation received to date, and are threatened with complete tread loss without drainage improvments to handle increased hillslope runoff. If work to shore up and protect these sections of trail can be completed, then the NFS section of the trail would be ready to re-open when the NPS section of trail is rebuilt and ready to re-open, which is a high priority for the NPS. There is a *Possible to Likely* probability of damage or loss, and a *Moderate* magnitude of consequence, resulting in *Intermediate to High* risk. **Treatments recommended – trail drainage improvments in moderate and high burn severity areas to protect tread loss from increased overland flows and erosion.**

The Lake West Snow Shelter serves as a warming shelter for snow mobile users along the Lake West snow mobile trail on NFSR 6530760. The shelter is log constructed with a wooden floor, metal roof, and wood stove with stove pipe. The structure was built in 1984 and maintained through local partner groups. Fire severity at and in the vicinity of the now shelter was a low severity underburn through lodgepole pine. Suppression repair

crews surveyed and felled any imminent hazard trees, including one tree that had fallen on the roof resulting in minor damage. There is an *Unlikely* probability of damage or loss, and *Minor* magnitude of consequences if the shelter were damaged by a falling tree, resulting in *Very Low* risk. **No Treatments Recommended.**

The Upper Rogue National Recreation Trail, also starting at the Mazama Viewpoint, picks up the river approximately .5 miles from the trailhead and follows the river for approximately 5 miles through the fire area. The trail is classified as a Class 4 – Highly Developed with a designed use for hiker/pedestrian. The Upper Rogue River Trail passes through stands of mixed conifer characterized by trees ranging in size from 10-12"dbh to over 40" dbh. Approximately 1.6 miles of the 6 mile length of the trail within the fire perimeter occur in moderate to high severity burn areas. The length of trail estimated to occur along side slopes within moderate to high severity burn is approximately 1 mile. Along areas of the trail that contour the side slope, sloughing is occurring onto the trail, numerous snags and downfall are present, along with stump and root burnout into the trail causing stump holes and trail collapse. Along flatter areas of the trail within the moderate to high severity burn areas, the trail tread is indistinguishable along segments due to downfall, rain on hydrophobic soils, needle cast and stump hole burnout. Within these areas there are sections of tread that are still present and viable, but are threatened with complete tread loss without drainage improvements to handle increased hillslope runoff. Trail erosion has the potential to reach the Wild and Scenic Rogue River. There is a *Likely* probability of further damage or loss, and a *Moderate* magnitude of consequences, resulting in *High* risk. **Treatments recommended – Trail drainage improvements in moderate to high burn severity areas where the tread is still intact but threatened by expected increased overland flows and erosion.**

Natural Resources:

- *Waters with special Federal or State designations on NFS lands.* The headwaters of the Rogue River are designated Wild and Scenic. The National Creek complex was a lightening caused wildfire that resulted in an overall mosaic of burn severity within the Wild and Scenic cooridor, which poses no threat to the Wild and Scenic designation. The probability of damage or loss is *Unlikely* and the magnitude of consequences is *Minor*, resulting in *Very Low* risk. **No Treatments Recommended.**

- *Soil productivity and hydrologic function on NFS lands.* After a fire there is the potential threat of increased soil erosion affecting site productivity, and ash flows and increased peak flows that could cause streambank erosion in the headwaters of the Rogue River, Mazama Creek, and unnamed tributarires to Minnehaha Creek. The majority of soils in the fire perimeter have a low erosion potential rating, though soil testing revealed strong to moderate hydrophobic conditions typically 1 to 2 inches below the soil surface, with loss of soil structure due to burned organics, within moderate and high burn severity areas. Approximately 26 percent of the fire area burned at moderate to high severity (including NPS lands, which are upstream from NFS lands). There is a risk for loss of long term soil productivity, but soil movement is tempered by needle cast in low and moderate severity areas, uneven terrain on many slopes, and gentle terrain where the fire occurred on the broad pumice plain. The probability of damage or loss is *Possible* and the magnitude of consequence would be *Minor to Moderate* depending on the size of individual areas of concern, resulting in *Low to Intermediate* risk. **No Treatments Recommended.**

- *Critical habitat or suitable occupied habitat for federally listed threatened or endangered terrestrial, aquatic animal, or plant species on NFS lands.*
  - The burned area included portions of four subwatersheds that contain fish bearing habitat. These subwatersheds are: Minnehaha Creek-Rogue River, National Creek-Rogue River, Silent Creek, and Muir Creek. Fish bearing streams within these subwatersheds are occupied by resident trout, primarily rainbow trout and brook trout within the Rogue River basin, and Rainbow Trout in the Umpqua Basin. Fish bearing streams within or proximally adjacent to the burned area include: Rogue River, Mazama Creek, Minnehaha Creek, Hamaker Creek, Hurryon Creek, National Creek, and Silent Creek. The burned area does not contain critical habitat or occupied habitat for any federally listed threatened or endangered aquatic animals or aquatic species listed on the USFS R6 Regional Forester's Sensitive Species list. **No Treatments Recommended.**

- The National Creek Complex is located within 1,351 acres of northern spotted owl designated critical habitat unit 10 Klamath East, subunit 4 (KLE-4). This subunit encompasses approximately 255,665 total acres. Table 1 displays the acres of burn severity for suitable spotted owl habitat within the fire area. Critical habitat subunit KLW-2 includes approximately 191,667 acres of nesting, roosting foraging (NRF) habitat and 39,812 acres of dispersal habitat. High burn severity occurred within approximately less than 1% of suitable NRF, and less than 1% of dispersal habitat within KLE-4.

Table 1. Acres of Suitable Northern Spotted Owl Habitat Burned in the National Creek Complex		
Burn Severity	**Nesting, Roosting, Foraging**	**Dispersal**
High	252	790
Moderate	95	415
Low	18	70
Total Habitat	**365**	**1275**

Based on historic and recent owl surveys, suitable habitat within the fire area is considered occupied by northern spotted owls. Three spotted owl home ranges (1.2 mi radius), 2 core areas (0.5 mi radius), and 2 nest patches (300 meter radius) overlap the fire area. Three home ranges, two core areas, and two nest patches were affected by moderate to high severity burning (Table 2).

Table 2. Percent area moderate to high severity burned within Spotted Owl activity centers			
Owl Location	**Nest (300 m radius)**	**Core (0.5 mi radius)**	**Home Range (1.2 mi radius)**
Soda Springs	1%	<1%	7%
Park Meadow	14%	22%	24%
National (Tan)			1%

Based on the analysis presented above, the probability of damage or loss of habitat within high burn severity is *Very Likely*. The probability within areas of moderate severity is *Possible*. The magnitude of consequences to northern spotted owl habitat is considered *Moderate*, where damage by the fire will result in long-term loss of suitable habitat which is considerable for two owl core areas and two home ranges. **No Treatments Recommended.**

- *Native or naturalized communities on NFS lands where invasive species or noxious weeds are absent or present in only minor amounts.* NFS lands within the fire perimeter support native flora and plant communities where invasive species or noxious weeds are absent or present in only minor amounts. In particular, NFS lands adjacent to Crater Lake National Park, and the Upper Rogue River Wild and Scenic River Corridor are areas where noxious weeds are especially discouraged. Noxious weeds (invasive species) designated by the Oregon Department of Agriculture within or immediately adjacent to the National Fire include: Spotted knapweed, Dyer's woad, Tansy ragwort, and St John's wort. There also may be bull thistle and mullein plants that personnel at Crater Lake National Park are concerned about moving into the park. Where these invasive plant species are found at present are along roads or previously disturbed areas.

The threat is the invasion of non-native invasive plant species (especially noxious weeds designated by the Oregon Department of Agriculture) into moderate and high severity burned areas. The probability of damage from the increase of invasive plants is *likely to very likely* depending on where invasive species currently exist, the amount of burned area, and the intactness of the native plant community. The magnitude of consequences would be *moderate to major* depending on the more natural the ecosystem is and absence of past disturbance. The BAER risk to intact native plant communities would be *high to very high* depending on the intactness of the native plant community combined with fire effects and nearness of invasive species infestations. **Treatments Recommended – Noxious weed/Invasive species early detection and rapid response.**

Cultural and Heritage Resources:
NFSR 6530760 (RR-310, Old Diamond Lake Road) is a Class I Heritage Resource Site, eligible to the National Register of Historic Places. The Old Diamond Lake Road was built as early as 1853 originating in Jacksonville, Oregon. The road was intended to link Southern Oregon and Northern California with new gold discoveries in John Day and mines in Idaho. In 1863 a group of Jacksonville merchants formed the "John Day Wagon Road Committee". This committee completed improvements to the road which were completed by the summer of 1864. The road was used as a major route for supplies, travelers and livestock drives. A reference in the Oregon Reporter describes a traveler's report concerning camping at Mazama Creek along the Rogue River-John Day Road in 1865. This location is located within the fire perimeter.

The road declined in used by the late 19th century. This decline is most likely due to the completion of the Southern Pacific Railroad line in 1887. In the early 20th century the road increased in importance as an access road to Diamond Lake. A 1925 road report suggests the pumice powder was hub deep and hindered the bearing of the early automobiles. Also the log pole pine was suggested to almost touch the hubs of the vehicles. By the late 1920s and early 1930s the Diamond Lake Road was relocated to the north side of the Rogue River. The Old Diamond Lake Road was incorporated into FSR 281 and later renumbered to FSR 760.

The road consists of the road prism, constructed road features, a telegraphic line and the historic setting. Erosion can impact the integrity of the road prism and displace artifacts. The replacement of the historic road prism and the replica wooden features would adversely impact the historic property. The removal of large quantities of trees, both living and dead, would impact the integrity of the road. The fire could have exposed artifacts deposed along the road. The initial inventory of the burned section of the Old Diamond Lake Road did not observe many artifacts, dumps or historic campsites. However, this does not mean these features, or individual artifacts, do not exist along the historic road.

The primary concern of any BAER treatment will be the alteration of the integrity of the historic road. The historic culverts have been removed but the maintaining of the newer culverts is important to allow the flow of large volumes of water and mud. However, the replacement of the reconstructed wooden ditches would be an adverse effect. These features should be left intact and cleaned out to allow proper movement of water. It is understood that these features would not handle a large mud flow. The removal of these features; realignment of the road; installation of new culverts; or the clear cutting of timber will require consultation with the NHPA. **No Treatments Recommended. Assure BAER Treatments on NFSR 6530760 avoid adverse effects to the historic property unless approved by the Rogue River-Siskiyou National Forest Heritage Program Lead following emergency consultation with SHPO and the ACHP.**

B. Emergency Treatment Objectives:
The primary objectives of the burned area emergency treatments are to:

- Minimize the threats to health and human safety from snag hazards, rolling debris and compromised road and trail prisms from increased runoff effects.
- Minimize damage and loss to remaining infrastructure from increased post-burn runoff, erosion, and sedimentation.
- Minimize the increased potential for the spread of invasive and noxious weeds into previously uninfested habitats in the burn area, including Crater Lake National Park and the Upper Rogue River Wild and Scenic River Corridor.
- Meet the legal obligation of the Forest Service as defined in the NHPA and 36 CFR 800.6 and 12, pertaining to any BAER treatments on NFSR 6530760, a Class I Heritage Resource Site.

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

Land 80 % Channel n/a % Roads/Trails 80 % Protection/Safety 90 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	70	80	80
Channel	n/a	n/a	n/a
Roads/Trails	80	90	90
Protection/Safety			
Warning signs	90	90	90
Trail closures	90	n/a	n/a

Assuming trails are re-openned before year 3.

E. Cost of No-Action (Including Loss): $10,637,000
This is putting the value on human life and safety at 10M, when it is really priceless.

F. Cost of Selected Alternative (Including Loss):$1,623,316

G. Skills Represented on Burned-Area Survey Team:
The NFS Team worked closely with the NPS Team during field surveys to verify burn severity and assess mutual VARs, and in particular the NFS team received assistance with hydrologic modelling for VARs, as well as close collaboration with botany, recreation, and cultural resources.

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

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H. **Treatment Narrative:**

(Describe the emergency treatments, where and how they will be applied, and what they are intended to do. This information helps to determine qualifying treatments for the appropriate funding authorities. For seeding treatments, include species, application rates and species selection rationale.)

Land Treatments:
Invasive plant early detection surveys by 2 personnel in late spring/early summer 2016 along travel routes and trails within the fire perimeter, focusing in moderate and high burn severity areas, extending into the burned area 200 feet. Early detection surveys within moderate and high burn severity areas within proximity of spread from known populations. If new infestations of invasive weeds are detected, funding for treating will be requested in summer of 2016 to be implemented the same summer.

Channel Treatments: None proposed.

Roads and Trail Treatments:
NFSR 6530, milepost 9.0 to 12.9: storm proofing ditch, shoulder, and 10 culvert crossdrains to prepare for increased runoff and sediment. Installation of two hardened high flow overflow dips at the two culvert crossings for the unnamed tributary to Minnehaha Creek. Storm patrol to assure debris and sediment does not plug drainage features.

NFSR 6530752, milepost 0.05 to 0.76: storm proofing ditch, shoulder, and 4 culvert crossdrains and 4 drain dips. Storm patrol to assure debris and sediment does not plug drainage features.

NFSR 6530760, milepost 0.0 to 5.82: storm proofing ditch, shoulder, 8 drain dips, 3 wooden historic cross drains, 2 stream culvert crossings (Rogue River and Mazama Creek). Storm patrol to assure debris and sediment does not plug drainage features. The treatment of NFSR 6530760 will be limited to general maintenance to avoid an adverse effect to the historic property unless approved by the Rogue-River Siskiyou National Forest Heritage Program Lead following consultation with SHPO and the ACHP. If the road prism is to be altered or the features are to be removed the proposed treatment will involve emergency consultation as defined in 36 CFR Part 800. The historic drains should be cleaned out and storm patrolled over the next few months to remove debris after periodic rain events.

Boundary Springs Trail (1057) and Upper Rogue National Recreation Trail (1034), combined total of 1.6 miles: stabilizing and storm proofing trail tread in moderate and high severity burn areas where the potential to lose the tread from increased runoff, erosion and sedimentation is high and would be more costly to re-construct. Reduce the potential for trail tread erosion on the Upper Rogue Trail to reach the Wild and Scenic Rogue River, through cleanout of existing drainage features, installation of additional drainage features, and strengthening of trail tread.

Protection/Safety Treatments:
Install Burned Area Hazard signs at all road entrances into the National Creek fire area to notify users of increased hazards from falling burned trees, rolling debris, erosion and flooding. Roads where signs would be placed are also high use winter snowmobile trails; therefore, a second set of hazard warning signs would be installed at an elevated height above ave. snowpack depth, as ave. snowpack would bury road height signs. These locations include: at the Rogue River-Siskiyou NF boundary, westbound on NFSR 6530760; NFSR 6530 at milepost 8.5; and NFSR 6530 at milepost 15.35. Signs would consist of reflectorized aluminum backed signs with letter size according to USFS handbook specs mounted on 4"x4"x8' posts at heights and distances mandated in USFS Handbook.

Issue Trail Closure orders for the Boundary Springs Trail and the Upper Rogue River Trail. Post trail hazard closure signs at the following trailhead access points: Mazama Overlook Trailhead, Hamaker Meadows, and the secondary Boundary Springs Trailhead at NFSR 6530760. Signs would consist of reflectorized aluminum backed signs with letter size according to USFS Handbook specs mounted on 4"x4"x8' posts at heights and distances mandated in USFS Handbook.

I. **Monitoring Narrative:**
(Describe the monitoring needs, what treatments will be monitored, how they will be monitored, and when monitoring will occur. A detailed monitoring plan must be submitted as a separate document to the Regional BAER coordinator.)

Part VI – Rogue River NF - Emergency Stabilization Treatments and Source of Funds **Interim #**

			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										
Invasive plant detectio	Acres	30	90	$2,700	$0		$0		$0	$2,700
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$2,700	$0		$0		$0	$2,700
B. Channel Treatments										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Channel Treat.				$0	$0		$0		$0	$0
C. Road and Trails										
Trail drainage treatmer	Miles	5993	1.6	$9,589	$0		$0		$0	$9,589
Road treatments/storm	Miles	1272	10	$12,720	$0		$0		$0	$12,720
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$22,309	$0		$0		$0	$22,309
D. Protection/Safety										
Hazard Warning signs	each	337	6	$2,022	$0		$0		$0	$2,022
Trail closure hazard si	each	245	3	$735	$0		$0		$0	$735
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$2,757	$0		$0		$0	$2,757
E. BAER Evaluation										
Assessment Team	report			---	$28,225		$0		$0	$28,225
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				---	$28,225		$0		$0	$28,225
F. Monitoring										
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$0	$0		$0		$0	$0
G. Totals				$27,766	$28,225		**$0**		**$0**	**$55,991**
Previously approved										
Total for this request				**$27,766**						

Part VI – Umpqua NF - Emergency Stabilization Treatments and Source of Funds **Interim #**

This initial burned area assessment included a review of Umpqua National Forest potential VARs and burned area affects. No treatment needs were identified with this initial assessment.

PART VII - APPROVALS

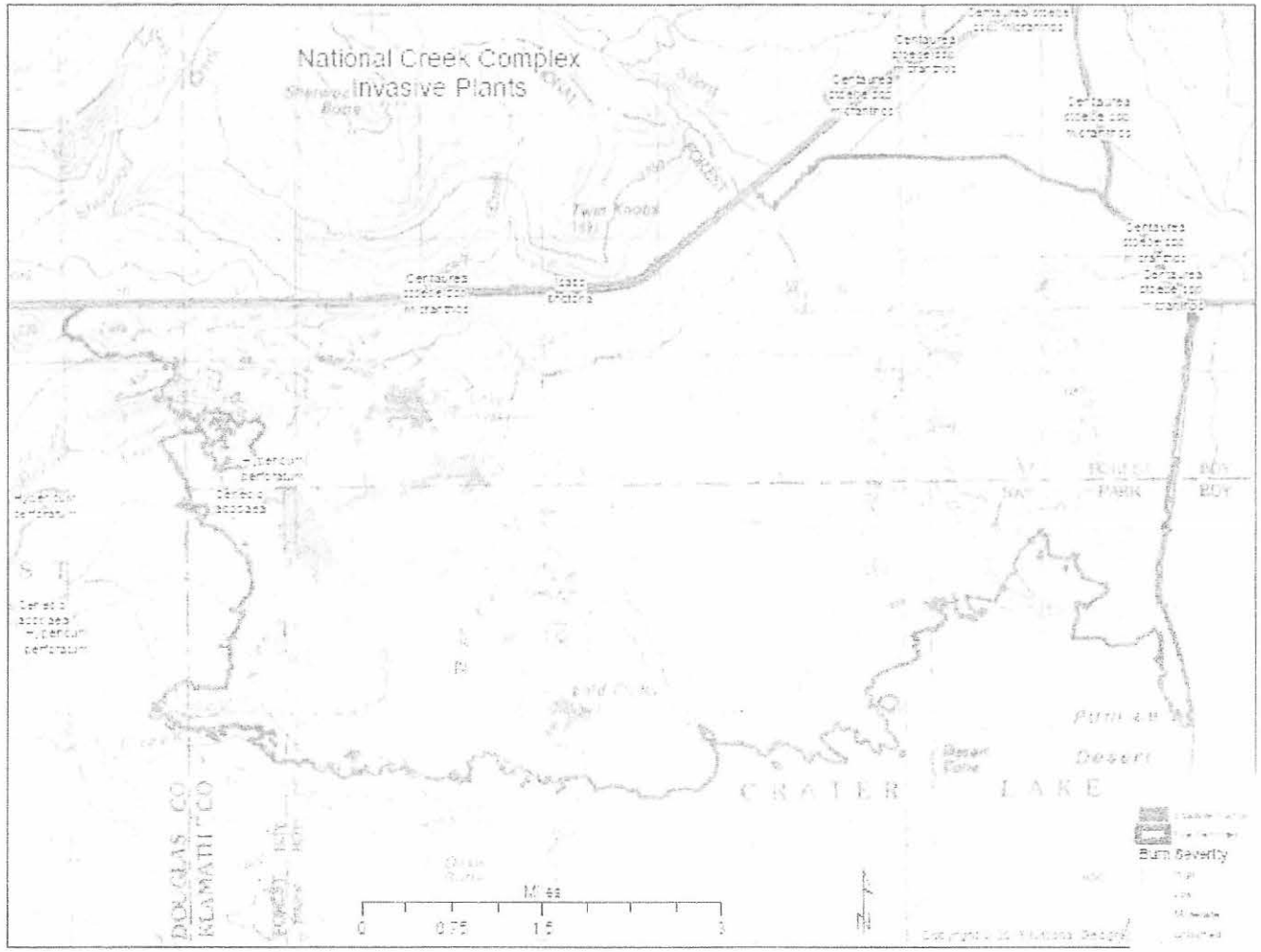
1. _____ 10/2/15
Forest Supervisor (signature) Date
Rogue River-Siskiyou N.F.

_____ 10/7/15
Forest Supervisor (signature) Date
Umpqua N.F.

2. _____ 9 Oct 15
Regional Forester (signature) Date

Appendix A

Map: Known weed populations in relation to the burn area. Note that this base map has an old NPS boundary labelled. Current NPS boundary is at the dash lines a section and ½ to the north (see Final Burn Severity Map). Rogue River Wild and Scenic corridor is along the entire length of the Rogue River.



Appendix B
Map: Trail and Facility Location Relative to Burn Intensity Areas