

BURNED-AREA REPORT
(Reference FSH 2509.13)**Battle Creek Fire Complex****PART I - TYPE OF REQUEST**

A. Type of Report

- ☒ 1. Funding request for estimated emergency stabilization funds
☐ 2. Accomplishment Report
☐ 3. No Treatment Recommendation

B. Type of Action

- ☒ 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 DESCRIPTIONA. Fire Name: **Battle Creek Complex**B. Fire Number: OR-WWF-376C. State: OregonD. County: WallowaE. Region: 06F. Forest: Wallowa Whitman National ForestG. District: 04-(HCNRA)H. Fire Incident Job Code: P6DQW6I. Date Fire Started: 07/14/2007 @ 1500J. Date Fire Contained: no estimated as of 08/28/2007K. Suppression Cost: \$ 14,514,877 as of 08/28/2007

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 25 hand line (including interior and perimeter – waterbarred (seeding and debris pull-back on the perimeter line to be done in the fall)
2. Fireline seeded (miles): 21 (hand line)
3. Other (identify): There was approximately 20 miles of fire line constructed along existing roads and less than 1 mile of off-road dozer line. The only part of this line to be rehabbed would be off road dozer line, constructed safety zones and 22 constructed turn-outs & parking/staging areas (plus 16 spike camps, fold-a-tank/pumpkin sites, drop points, & constructed heli-spots).

M. Watershed Numbers: 1706010102, 17060101, 170601107N. Total Acres Burned:

NFS Acres (79,299) (from ICS-209) Other Federal (0) State (0) Private (0)
(RSAC BARC acres = 80,499)

O. Vegetation Types: Forest stringers and north slopes are dominated by mixed conifer, Douglas fir and Ponderosa pine stands, and or shrub stands. The benches, lower slopes and south and east facing slopes are dominated by bluebunch wheatgrass and Idaho fescue grassland plant associations with inclusions of Sandberg's bluegrass, prairie junegrass - some areas are interspersed with cheatgrass. Shrublands exist in draws, previously burned slopes, mesic bench groves and along riparian areas. Shrub stands include sumac, snowberry, rose, bitterbrush, hackberry, ninebark hawthorn, rocky mountain maple, poison ivy, elderberry, and hackberry.

P. Dominant Soils: Gravelly loams and silt loams, volcanic ash inclusions

Q. Geologic Types: Columbia layered basalt, limestone

R. Miles of Stream Channels by Order or Class: Class one: 30 miles; Class three: 75 miles.

S. Transportation System

Trails: 59 miles within moderate intensity burn areas, and 7 miles in severely burned areas.

Roads: 20 miles (mostly near the burn perimeter)

PART III - WATERSHED CONDITION

A. Burn Severity acres 50,934.4 (low/no)(61%) 30,059.6 (moderate)(36%) 2,505 (high)(3%)
Calculations based on BARC image data which calculated approximately 83,499 acres of burn area as compared to the reported acres of 79,300 from form ICS-209 (based on early digitized boundary data).

B. Water-Repellent Soil (acres): 13,059 (For water repellent soil estimate, use all high severity acres+1/4 moderate ac. Only used 1/4 of moderate burned area because grassland was counted as moderate, and some mod is very rocky)

C. Soil Erosion Hazard Rating (acres):
73,480 (low & no hazard) 7,515 (moderate) 2,505 (high)

(88% low & no hazard) (9% moderate) (3% high)

D. Erosion Potential: 1 tons/acre (moderate to severe burn areas only)

E. Sediment Potential: 1,067 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 3

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

C. Equivalent Design Recurrence Interval, (years): 5

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 1

- F. Design Flow, (cubic feet / second, Temperance Ck example): 448 (regional flood equations Haris and Hubbard, 1983, 5 yr storm))
- G. Estimated Reduction in Infiltration, (percent): 13% (Total mod/hi burned severity acres with water repellent soils)
- H. Adjusted Design Flow, (cfs per square mile): 672 (assume 50% bulking flows)

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

The Battle Creek fire Complex is comprised of the Grizzly Ridge fire, the Battle Creek fire (both of these falling within the Hells Canyon National Recreation Area (HCNRA) and the Deep Creek fire. No BAER actions are anticipated for the Deep Creek fire. The following is a brief description of the values at risk and threats to them.

HCNRA

The fire area within the HCNRA is characterized by a rough, highly dissected landscape of extremely steep slopes breaking off into Hells Canyon, intermingled with mid-slope benches, and timbered ridge tops. The fire was also largely (95%) located within designated Wilderness, and much of the eastern fire perimeter is located within the Wild and Scenic Snake River Corridor.

The HCNRA comprises an exceptional richness, diversity, and productivity of vegetation that combines with unique geology (uplands, benchlands, canyonlands, and mountains) to support a diversity of fish and wildlife. It was designated especially for features and peculiarities believed to be biologically unique including, but not limited to, rare (USFWS Listed Threatened, USFS designated Sensitive) and endemic plant species, rare combinations of aquatic, terrestrial, and atmospheric habitats, and the rare combinations of outstanding and diverse ecosystems and parts of ecosystems associated therewith. HCNRA contains one of the largest contiguous areas of bunchgrass grasslands in the Western United States. Much of the fire area includes critical range for Rocky Mountain bighorn sheep, mountain goat, mule deer, Rocky Mountain elk as well as upland birds and non-game animal species. A peregrine nest site, the Saulsberry nest site, is also located in the fire area. Additionally the HCNRA also contains unique and valuable fish and wildlife habitats, as well as archeological and paleontology sites. The HCNRA is charged to provide for public recreation in a manner compatible with preservation of rare and endemic plant species, rare combinations of aquatic, terrestrial, and atmospheric habitats, and the rare combinations of outstanding and diverse ecosystems and parts of ecosystems.

The Battle creek complex burned onto 6 active allotments (Cayuse, Grizzly Ridge, Horse Creek, Snake River, Himmelwright, & saddle Creek) within this part of the HCNRA.

Watershed/Roads

The Battle Creek fire burned through several watersheds that drain through a number of tributaries to the Snake River in Hells Canyon. The 5th field HUC watersheds contain numerous smaller drainages. These smaller drainages will vary considerably in hydrologic response depending on fire soil severity spatial extent. Generally drainages with timber that burned have higher soil effects. The following is a discussion of soil and watershed effects determined through BAER surveys conducted August 10-12, & 15, 2007.

Snake River-Granite Creek Watershed (1706010101)- Fire burned through several small watersheds that drain into Snake River in Hells Canyon. These watersheds will contribute sediment to Snake River, and the amounts will be contingent on watershed and soil characteristics, and burn severity. There is little risk to lives and property from increased runoff and sediment that might drain from these drainages. An exception, however, is the Hells Canyon launch site below Hells Canyon Creek. Although only a small proportion of the watershed burned with high severity, enough of the watershed burned to increase the risk of increased streamflow and risk of debris flows to warrant a risk assessment to launch site infrastructure. The commercial jet boat launch site will be most affected by a debris flow. The culvert for Hells Canyon Creek would likely be plugged in a larger event, and runoff and debris would be routed onto the parking lot for the launch site. Unless the debris flow is quite large, it would not affect the floating dock or the mechanical lift for the launch. There is little risk to the visitor center and the upper parking lot, as they are high above the stream. No treatment is recommended for the upper watershed, however, it would be advisable to discontinue parking at the commercial jet boat launch until after next spring runoff. This increased risk will persist until vegetation and ground cover is re-established in

the upper watershed. A five-year event may be enough of an event to trigger a debris flow, so there is about a 20% chance that the culvert may experience plugging, and water and sediment will be routed onto the parking lot.

Snake River-Indian Creek Watershed (1705020107)- These drainages all flow into the Snake River Hells Canyon reservoir. Steamboat and Thirty-two Point Creeks have the highest burn severity. It is likely that these drainages will experience increased runoff and sediment as a result of the fires. This may increase sedimentation into the Hells Canyon reservoir. This increase will last until vegetation and ground cover is established in the upper watershed.

Snake River-Temperance Creek Watershed (1706010102)- About 40% of the Temperance Creek sub-watershed burned with moderate severity. During a ground survey, soils showed moderate to low amounts of water repellency. There is a moderate risk of increased flows downstream. If an event greater than a 5-year recurrence interval occurs in this drainage, increased streamflows may lead to a debris flow. Debris flows would remove riparian vegetation and large in channel wood, and flow downstream and deposit on the alluvial fan at the mouth of the stream and in the Snake River. A large alluvial fan is present at the mouth of Temperance Creek. The size of the fan indicates that large debris flows have occurred in the past. Currently, Temperance Creek splits into two channels as it passes over the alluvial fan before flowing into the Snake River. The main channel is located along the north side of the alluvial fan. There are at least three other former channels evident. During the 1997 flood event the main channel shifted about 20 feet to the south and downcut about 4 feet.

An assessment of relative risk to Temperance Creek Ranch was conducted on August 15. Temperance Creek Ranch is located at the mouth of the canyon where Temperance Creek flows into the Snake River. The ranch is owned by the Forest Service and is used by an outfitter under a special use permit. The ranch consists of nine buildings including a residence. Three historic structures (a standing cabin, a collapsed cabin, and an outhouse) are located on the alluvial fan at the mouth of the canyon. Due to their location on the alluvial fan these structures are at high risk of damage if a debris flow reaches the mouth of the canyon. The house and sheep barn are considered to be at low risk of damage due to their location on a terrace along the north side of the alluvial fan. These structures could be damaged if a debris dam forms that causes a debris flow to be diverted through the pasture to the north of the canyon mouth. This pasture does have a natural drainage pattern to the Snake River that may have been formed under a similar scenario.

A small cabin is located at the mouth of Sand Creek. The cabin is used by Idaho Department of Fish and Game, Oregon State Police and Oregon Department of Fish and Wildlife for administrative uses and is operated under a special use permit. The cabin is located on a high terrace on the south side of the stream is not at risk of damage should a debris flow occur. This watershed burned about 40% in moderate severity. An assessment needs to be made showing the proximity of the cabin to the stream channel, and likelihood of flooding affecting the cabin. There is a small risk to several of the other drainages in this watershed from flooding related to the fire. There are no other structures at risk in the other drainages.

Lower Imnaha River Watershed (1706010205)- A small portion (about 500 acres) of this watershed burned in the vicinity of the Hat Point Lookout. Majority of the area burned at a moderate fire severity. FSR 42403215 is located adjacent to the fire perimeter in this area. The road was surveyed on August 14 & 22. Based on the survey, 4 culverts need to be cleaned & the inlet and outlet to one needs reconstruction, 1/4 mile of ditchline needs to be reestablished or cleaned, 4 undersized culverts & one pipe-arch needs to be replaced, and 3 rolling dips need to be reconstructed to prevent damage to the road from expected increases in runoff. FSR 4240315 ranges from 15 to 50 feet from Lightning Creek, which provides spawning and rearing habitat for steelhead, spring Chinook salmon, and bull trout. Appendix A to this 2500-8 contains a detailed work itemization.

Fisheries

The Battle Creek Fire primarily impacted streams that drain into the Snake River. The Snake River in the vicinity of the Battle Creek Fire is a migration corridor for steelhead, spring Chinook salmon, and bull trout; all ESA-listed species. The Snake River in the vicinity of the Battle Creek Fire provides spawning habitat for fall Chinook; an ESA-listed species (Snake River ESU). The Battle Creek Fire burned down to the Snake River. There are eight fish bearing tributaries to the Snake River and one tributary to Imnaha River that are located within or adjacent to the Battle Creek Fire perimeter. These streams provide about 12 miles of spawning and rearing habitat for ESA-listed steelhead (Snake River ESU). Additionally, these streams provide habitat for resident redband trout: a Region 6 sensitive species.

The Grizzly Ridge Fire impacted streams that drain into the Imnaha River. The Imnaha River is a migration corridor for steelhead, spring Chinook salmon, and bull trout; all ESA-listed species. The Imnaha River in the vicinity of the Grizzly Ridge Fire provides spawning habitat for fall Chinook; an ESA-listed species (Snake River ESU). The Grizzly Ridge Fire burned down to the Imnaha River. There are two fish bearing tributaries to the Imnaha River located within or adjacent to the Grizzly fire perimeter. These streams provide about 6 miles of habitat for ESA-listed steelhead (Snake River ESU), and 4 miles of habitat for spring Chinook salmon (Snake River ESU). Additionally, these streams provide habitat for resident redband trout: a Region 6 sensitive species.

Mortality of fish in Temperance Creek likely occurred due to radiant heating of the stream. No fish were observed in the area upstream of Wisenor Cabin, where burn intensities were highest. Additionally, few macro invertebrates were observed in this reach of Temperance Creek. Spawning habitat will be impacted in streams within the fire areas due to increases in fine sediment. Elevated fine sediment levels will likely persist for 3 to 5 years following the fires. Spawning and rearing habitat in tributaries to the Snake River is at risk due to the potential for debris flows occurring. Impacts from debris flows would include alteration of stream habitat from scouring and/or burying of spawning areas, and filling of pools. Impacts from the alteration of stream habitat would likely persist from 5 to 10 years depending on the magnitude of the debris flow. Large debris flows would likely result in long-term impacts as evident following a debris flow that occurred in McCoy Creek in 1997. Debris flows in tributaries to the Snake River will likely result in the creation of passage barriers. Evidence from past debris flows in Snake River tributaries indicate that passage barriers can persist for long periods.

Archeology

Of the 315 recorded sites within the fire perimeter of the Battle Creek Fire, approximately 280 are adjacent to the Snake River and only about 35 have been identified along the benches above the river or close to Summit Ridge. Only three of the upland historic structures, of the approximately 13 previously documented, had survived fires prior to the Battle Creek Complex of 2007. The three included the cabin (little more than a tin shed) at the "Troughs" which burned during this fire, the Wisenor Place which was protected and saved and the Hat Point Tower which sustained damage to the viewing/interpretive platform. Additionally, the Hat Point Guard House roof suffered fire damage with the loss of about 20 square feet of shakes and slight charring to the roof boards along the peak. The approximately 22 prehistoric sites, consisting of lithic scatters, possible pit house depressions and cairns, are generally located in Pleistocene terraces above drainage flood plains or along ridges and in saddles, and should not incur significant effects as a consequence of the fire. None of the documented prehistoric sites is located immediately down slope or within drainages that experienced high severity burns. Hells Canyon has burned on a regular basis for several thousands of years and probably had numerous catastrophic rain-on-snow or major localized rain events subsequent to fires. Therefore, the documented prehistoric sites should experience little or no long term effects from this fire or reasonable future rain events and no BAER protective measures are currently required.

Noxious weeds / Invasive plants

Noxious weeds are legally designated noxious due to their potential for detrimental impacts to native ecosystems. "Invasive plant" is a broader category, which represents all nonnative species, including noxious weeds, that have the potential to negatively impact native ecosystems due to their generally aggressive, competitive, and invasive nature.

Long-term risks associated with the spread of noxious weeds may be the greatest threat to native plant communities (and associated wildlife and recreation values) of the HCNRA. Noxious weed management is required by various federal and state laws, and often by county ordinances. The WWNF *Integrated Noxious Weed Management Plan (INWM Plan)* (USDA 1992) directs prevention, restoration, and management efforts for integrated weed management activities within the HCNRA. Noxious weeds are cited in the Strategic Plan for FY 2004-2008 as one of the USFS Chief's four threats to conservation.

Habitat within the fire area is considered to be at an increased risk to noxious weed invasion and spread after fire disturbance. Extensive research has been done on the relationship between fire and the invasion of weedy species. The overall conclusion states that usually the underground seed bank and roots are unaffected by fire. This is especially true of light to medium intensity burns. The Battle Creek Fire Complex consists primarily of these lighter burn intensities. As a result, rhizomatous weeds tend to flourish post fire. The post fire conditions have the duff burned off exposing the soil surface. There is also a flush of nutrients, increased light and reduced shade. This results in near ideal noxious weed seed germination conditions and also releases a flush of rosettes from existing root stock. This condition has been verified and documented on other HCNRA BAER weed detection surveys. Previous post fire surveys in the fall and spring showed an increase in the density of rosettes and patch size spread from original site descriptions. We have also found that post fire conditions can be ideal for noxious weed inventories because the stick-out on the freshly burned landscape. As a result of past BAER work on noxious weed infestations we have also found increased treatment success, possibly due to the increased visibility of the weeds, in addition to making it easier to deliver chemical to the target species because of reduced interference from non target vegetation.

The majority of known weed sites in the Battle Creek complex fire area are located in burn areas of light intensity / low severity. This is not a frequent situation in predominantly canyon grassland fires where lower fuel loads dictate fire severity. Burns of low and medium severity are very conducive to the spread and expansion of weeds. These burns do not adversely affect the seed bank or rhizomes, and actually stimulate growth. Even areas of high burn intensity are often documented to only effect the upper 4 inches of soil therefore having little impact on deep rooted, rhizomous plants or extensive seed banks.

Documented within the Battle Creek Complex fire area, are 8 species of noxious weeds (Canada thistle, white top, knapweed, dalmatian toadflax, scotch thistle, rush skeletonweed, medusahead, and yellow starthistle) occupying approximately 180 - 200 acres (pre-fire) of terrain. These acreages are widely scattered across the fire area. Numerous other noxious weed patches are known from close proximity to the Battle Creek Complex.

Trails

Trails within the moderate and severely burned areas with the fire area have incurred impacts to their function and integrity. Several locations are poorly drained as a result of the burning of wooden water bars, dry soil/ash ravel filling the tread, stump holes burning under the trail and burned woody debris falling onto the tread, blocking passage and drainage. Where trails with compromised drainage structures intercept excess overland flow they will focus energy, eroding the trail and slope at the point of exiting the tread. Often this condition is now directing excess sediment into adjacent stream courses. This condition is especially acute in areas where the trails follow the bottom of drainages such as in Temperance creek, Saddle Creek, Battle Creek & portions of the Oregon Bench trail. Of the total number of trails within the burned area, 6 miles within severer burn intensity areas were prioritized for emergency treatment and 20 miles of trail with moderate burn intensity areas were prioritized for emergency treatment. This represents less than 35% of the total trail miles burned in the Battle Creek complex.

Threats to Human Life and Safety

Values at risk downstream include the Sand Creek Historical Cabin, the Temperance ranch house barn, and historical outbuildings, the Hells Canyon reservoir, and the Hells Canyon Snake River Launch site (river sports) and visitor center.

A discussion of the threats and risk to these assets is found above in the watershed section and in section B below.

B. Emergency Treatment Objectives:

No emergency funding is recommended for treating the soils in burned watersheds. However, there is about a 20% chance that increased flooding will occur in burned watersheds. Infrastructure, however, such as the commercial boat launch site at Hells Canyon Dam, is at about a 20% risk of flood events severe enough to affect portions of the launch area..

Emergency treatment funding is requested for culvert maintenance work in order to protect the roads listed above from washing out due to being plugged by extra debris loads.

The application of the BAER treatments assists natural recovery and minimizes on-site damage to values at risk. The non-structural land treatments proposed for weed control helps to maintain site productivity and ecosystem function by inhibiting weed establishment and spread. This is done by Integrated Weed Management that includes manual and chemical control methods on the National Forest. Emergency funding is requested for inventory for spread and treatment of noxious weed expansion. The objectives for this emergency funding request were to prevent the spread of noxious weeds in order to protect the HCNRA's ecological values. It is important to identify weeds during their seedling stage because they are especially vulnerable to control measures. Other periods of vulnerability for noxious weeds include the early bud and fall regrowth stages. Treatment during such periods with appropriate herbicides can kill the weed or greatly reduce its vigor through herbicide translocation to its roots. Taking advantage of these periods of vulnerability can significantly enhance management efforts. Treatment will include chemical, biological, and manual methods. The rugged terrain, limited access, and geographic complexity of the canyon contribute to the need for a variety of treatment methods as well as high costs. The optimum treatment window for most noxious weeds is fall during die back and the next spring and early summer.

Treatment is recommended for treating sections of major trails that burned with moderate or greater severity. Emergency funding is requested for trail maintenance treatments in select critical areas to prevent further deterioration of the trail, soil, and water quality resources. The objectives for treating trails are to reduce the

risk of water draining from trails and eroding hillslopes downstream, and reducing the risk of sediment generated from trails reaching streams.

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

Land NA % Channel NA % Roads/Trails 80 % Protection/Safety 90 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	NA	NA	NA
Channel	NA	NA	NA
Trails	80	90	90
Roads	90	95	95
Noxious Weeds	See below	See below	See below

	Years after Treatment		
	1	2	3
Land (Weeds)			
Dalmatian Toadflax	70	70	60
Knapweed	80	70	70
Yellow Starthistle	80	80	70
Rush Skeletonweed	70	60	60
Scotch and Canada Thistle	80	80	80
*Whitetop	50	60	70
Medusahead	60	60	60

Biological agents will be used in remote areas
Chemical treatment will be used in hi use areas
Chemical treat with manual treatment in riparian buffer

Biological agents will be used in remote areas
Chemical treatment will be used in hi use areas
Chemical treatment
Biological agents have proven ineffective

Chemical treatment

Chemical treatment
Biological agents have proven ineffective
Chemical treatment

*There is one species, Whitetop, that is known to spread by fire but presently the Wallowa-Whitman National Forest does not have an effective approved treatment method. The appropriate chemicals were approved by the Region in 2006 and the WWNF will complete a Forest EIS approving the use of these chemicals on Forest in the winter of 2007/2008. Whitetop can then be treated in the spring and up to the containment anniversary date of fire.

E. Cost of No-Action (Including Loss): \$3,320,793

Current Replacement Values (CRV) from Infra for various buildings:

Sand Creek Cabin = \$22,000
Temperance Creek Ranch House = \$145,560
Temperance Creek Bunkhouse = \$73,300
Temperance Creek Hanger = \$92,400
Temperance Creek Barn = \$787,170
Temperance Creek Lambing Shed = \$773,300
Temperance Creek Dog Kennel = \$9,900
Temperance Creek Log Cabin = \$29,420
Temperance Creek Tack = \$23,100
Temperance Creek Toilet \$5,200

Hells Canyon Creek Launch from best professional judgment (engineering and lands folks):

Raft Slide = \$15,000
Picnic Tables = \$1,000
Picnic Table Shelters = \$5,000
Culvert and Asphalt Road = \$75,000
Boat Dock = \$50,000
Staircase and Elevator to Boat Dock = \$125,000
CXT Toilets = \$36,000

Other Values at risk based on best available professional judgment.

Trails (59 mi) \$57,643
Biodiversity/habitat impacts (weeds) 1,000,000

By not treating trail drainage, there will be a higher potential for resource damage from trail runoff. It is difficult to assess the actual costs of loss of hillslope soils, stream habitat and aquatic productivity that might result from increased erosion and delivery to streams. However, habitat for critical species such as Steelhead Trout could be at risk without treatment.

The cost of not treating noxious weeds and allowing their spread is not consistent with national, regional or district guidelines. The loss of native vegetation and values such as wildlife forage and habitat, fisheries habitat, recreation experiences and scenic experiences are difficult to quantify. The cost of treating noxious weeds increases exponentially in relationship to spread of infested acres. Noxious weeds are estimated to spread at an annual rate of 10-13%. In 2000, the annual economic losses in Oregon were estimated to be \$83 million or about 3,329 jobs.

The cost or value of wilderness for recreation, habitat and spiritual utilization is nearly incalculable.

F. Cost of Selected Alternative (Including Loss): \$215,899

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input checked="" type="checkbox"/> Range
<input type="checkbox"/> Forestry	<input type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering
<input type="checkbox"/> Contracting	<input type="checkbox"/> Ecology	<input checked="" type="checkbox"/> Botany	<input checked="" type="checkbox"/> Archaeology
<input checked="" type="checkbox"/> Fisheries	<input type="checkbox"/> Research	<input type="checkbox"/> Landscape Arch	<input checked="" type="checkbox"/> 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.)

No emergency funding is recommended for treating the soils in burned watersheds.

The proposed land treatment objective is to reduce the post fire potential for significant invasive plant population increases in the burned area and hence to encourage recovery of natural vegetation. The Wallowa Whitman National Forest and their partners have already spent thousands of dollars to manage noxious weeds and preserve the native grasslands. Treatments are intended to maintain ecosystem health by reducing weed populations and preventing spread- thereby encouraging natural vegetation recovery. In order to be successful, populations need to be located and treated quickly to reduce or prevented their spread. Three years of effectiveness monitoring and maintenance of treatments will be necessary.

Land Treatments:

Treatment L1 - Weed Detection Surveys: Initial weed detection surveys will be completed within the first year following the fire containment date, - (no estimate as of Aug. 28, 2007. Surveys will be conducted to determine where and how much to treat during the first year in order to finalize our treatment strategy. Digital Aerial Sketch Mapping (DASM) of the project area and ground verification of will be included as part of the inventory methods. This has proven highly successful for surveying large areas. Ground surveys will be conducted in the fall and late winter/early spring growing seasons. The surveys conducted on the 2006 Foster Fire Complex, just south of the Battle Creek Fire Complex, showed widespread expansion of known sites.

Areas of focus will be terrain around known weed sites old homesteads and livestock operations and areas associated with suppression activities. Approximately 35% of the fire area is targeted for weed spread detection work.

Treatment L2- Weed Treatment (Chemical, Biological, and Manual): All sites with documented spread and/or increased density will receive a prescribed treatment. Biological agents will be utilized as appropriate on invasive plant species which have approved biological agents available. Biocontrol activities will focus on areas of remote and inaccessible terrain, and will be implemented by our partners from the Oregon Department of Agriculture.

Treatment L3 In addition, seeding of native grasses will be applied post chemical treatment at 2 medusahead sites (+/- 10 acres total) in an effort to out-compete this species to reduce its spread and reestablishment.

Channel Treatments:

NA

Roads and Trail Treatments:

Trails C1 - Erosion control on approximately 26 miles of trail will consist of constructing water bars at recommended intervals and outsloping trails where possible. Water will be routed away from sensitive areas and streams where possible. Stabilization of trail segments to reduce sedimentation delivery to streams is focused on the severe burn areas and a percentage of the moderate burn areas. Stabilization work will only focus on repair of existing or installation of new drainage structures. Emphasis areas are

near stream crossings or drainage bottoms that drain into streams. Additional areas are trail segments that exceed a 20 percent grade, with emphasis on those segments that are aligned with delivering sediment into a drainage or stream. The focus for fall work will be critical stream segments along trail segments in Temperance Creek, the lower elevations of Saddle Creek, and Battle Creek. In addition, the Oregon Bench trail has multiple stream crossings with Moderate Burn severity that require stabilization. Though fall rains pose a threat, they are generally less intense than spring rains, and at these trail elevations rain on snow events are common in late winter especially from the canyon rim down to the bench-lands in the middle of the fire area. Trail repair work would commence as soon as BAER funding becomes available.

Roads C2 - Based on the survey, 4 culverts need to be cleaned & the inlet and outlet to one needs reconstruction, 1/4 mile of ditchline needs to be reestablished or cleaned, 4 undersized culverts & one pipe-arch needs to be replaced, and 3 rolling dips need to be reconstructed to prevent damage to the road from expected increases in runoff. Appendix A to this 2500-8 contains a detailed work itemization.

Protection/Safety Treatments:

Warning signage D1 Install a flood warning sign at the parking area adjacent to the culvert over Hells canyon creek at the lower launch site of the Hells canyon boat launch facility. Additional information will be posted in the Hells Canyon launch visitor center.

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.)

Treatment L2

All treatment effectiveness monitoring will be done in compliance with the regional direction as outlined in the R6 EIS for Invasive Plant Program, Preventing and Managing Invasive Plants, Appendix M. As part of this monitoring, we will evaluate the changes in distribution or spread, and the reduction percentage of invasive plant infestation post treatment. It will also document the overall reduction in size of weed infestation

In order to accomplish these monitoring objectives, we will set up the monitoring plots and/or transects in select representative weed infestations. This monitoring will assist in detecting the increased density of weeds post fire. They also provided us a tool to detect weed spread. We will also use these plots for treatment effectiveness monitoring as well. They will provide data on changes of distribution, spread and density. They will also indicate the reduction in target weed population and the potential for the recovery of native vegetation.

Other weed sites will be monitored with ocular and photo documentation. This type of monitoring will be done on a larger scale and detect overall changes in infestation reduction and treatment effectiveness. The percentage of weeds killed and the remaining weeds will be documented. We will also document the overall percentage of native vegetation that could reseed in available niches.

The third form of monitoring will be based on the actual amount of chemical applied. This information will be documented via the applicator spray records. In addition, the Oregon Department of Agriculture will continue to monitor for the treatment effectiveness of biological control agents. This will be done by detecting the present of biological agents and the associated plant damage.

Treatment C2

The road and culvert treatments will be evaluated for effectiveness (correct sizing, proper installation and function, plugging) at the onset of the first significant rain event and or at the onset of snowfall and during spring thaw. Culverts will be re-cleaned as needed.

Part VI – Emergency Stabilization Treatments and Source of Funds
Interim #2

Line Items	Units	Unit Cost	NFS Lands		Other \$		Other Lands			All Total \$
			# of Units	BAER \$			# of units	Fed \$	# of Units Non Fed \$	
A. Land Treatments										
L1- Weed Detection	acres	\$2.00	40,000	\$80,000	\$0		\$0		\$0	\$80,000
L2- Weed Treatment	acres	\$350.00	170	\$59,500	\$0		\$0		\$0	\$59,500
L3 - CompetitiveSeed M	lbs/acre			\$5,000	\$0		\$0		\$0	\$5,000
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
Subtotal Land Treatments				\$144,500	\$0		\$0		\$0	\$144,500
B. Channel Treatments										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
Subtotal Channel Treat.				\$0	\$0		\$0		\$0	\$0
C. Road and Trails										
C1 Trail work	mi	\$977.00	27	\$26,379	\$0		\$0		\$0	\$26,379
C2 culvert & rd work				\$23,320	\$0		\$0		\$0	\$23,320
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
Subtotal Road & Trails				\$49,699	\$0		\$0		\$0	\$49,699
D. Protection/Safety										
D1 Warning sign				\$500	\$0		\$0		\$0	\$500
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
Subtotal Structures				\$500	\$0		\$0		\$0	\$500
E. BAER Evaluation										
team				\$11,600			\$0		\$0	\$0
<i>Insert new items above this line!</i>					\$0		\$0		\$0	\$0
Subtotal Evaluation				\$0	\$0		\$0		\$0	\$0
F. Monitoring										
weed Rx fx				\$20,000	\$0		\$0		\$0	\$20,000
culvert function				\$1,200						
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
Subtotal Monitoring				\$21,200	\$0		\$0		\$0	\$20,000
G. Totals				\$215,899	\$0		\$0		\$0	\$214,699
Previously approved										

**** Costs include overhead costs for vehicle and transportation costs, contract administration, and supplies.**

PART VII - APPROVALS

1. _____
Forest Supervisor (signature) _____
Date
2. _____
Regional Forester (signature) _____
Date

Appendix A - Detailed work description for C2 above.

ITEM NO.	SITE(S)	DESCRIPTION	PAY UNIT	EST. QTY	UNIT PRICE (\$)	TOTAL PRICE (\$)
1	All	Mobilization (10%)	LS	1	1,770	1,770
2a	315-2	Clean and Reshape Roadside Drainage Ditch	MI	0.25	400	100
3	315-1, 315-2, 315-4	Reconstruct Drain Dip, w/ pit run	EA	3	500	1,500
4	4240-1, 315-3, 315-6, 315-8	Machine Clean Culvert Inlet and Outlet	EA	4	100	400
5	335-1, 315-13, 315-5, 345-1, 315-7, 315-9	Remove and Stockpile Existing CMP's at Memaloose GS	EA	7	250	1,750
6	335-1	New 30"x25' CMP, Installed, Contractor Furnished Material	LF	20	50	1,000
7	315-13	New 24"x28' CMP, Installed, Contractor Furnished Material	LF	28	40	1,120
8	315-5	New 71"x47"x32' Pipe Arch, Installed, Contractor Furnished Material	LF	32	120	3,840
9	345-1	New 71"x47"x24' Pipe Arch, Installed, Contractor Furnished Material	LF	24	120	2,880
10	315-9	New 18"x36' CMP, Installed, Contractor Furnished Material	LF	36	30	1,080
11	335-1, 315-13, 315-5, 345-1, 315-7, 315-9	3/4" minus gravel surface (GFM from Monument Pit Stockpile)	CY	60	20	1,200
5d	315-5, 345-1	Machine Placed Riprap, Inlet and Outlet	CY	20	40	800
6	All	Contract Administration	LS	1	2,000	2,000
				Subtotal→		\$19,440
				Overhead = 10%		\$1,940
				Contingencies = % 10 →		\$1,940
					Total→	\$23,320