

BURNED-AREA REPORT
(Reference FSH 2509.13)**Cache Creek Fire****2012 Initial Report****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: **Cache Creek Fire**B. Fire Number: OR-WWF-742C. State: OregonD. County: WallowaE. Region: 06F. Forest: Wallowa Whitman National ForestG. District: 04-(HCNRA)H. Fire Incident Job Code: P6GE60I. Date Fire Started: 8/20/2012 @1940J. Date Fire Contained: 10/3/2012K. Suppression Cost: \$11,000,000L. Fire Suppression Damages Repaired with Suppression Funds:

1. Fireline (miles): 6.75 miles hand line; 19.8 miles dozer line
2. Fireline seeded (miles): 0 mile (hand line)
3. Other (identify): 20.2 miles uncontrolled fire edge

M. Watershed Numbers: 1706010103 (Wolf Creek-Snake River), 1706010205 (Lower Imnaha River), 1706010607 (Lower Grande Ronde River), 1706010301 (Cherry Creek-Snake River), and 1706010606 (Lower Joseph Creek).

N. Total Acres Burned: 73,484

NFS Acres (56,747) Other Federal: BLM (4,163); DOE (745). WA State (6,007). Private (5,822)
(RSAC BARC acres = 72,748)

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 grass communities, primarily bluebunch wheatgrass and Idaho fescue plant associations with inclusions of three awn, sand dropseed, Sandberg's bluegrass, and prairie junegrass. In the areas with less slope that have been degraded by past land use activities there is a stronger presence of cheatgrass and other brome species, ventenata, medusahead rye, and other invasive annual species. Shrublands exist in draws, previously burned slopes, mesic bench groves and along riparian areas. Shrub stands include sumac, snowberry, rose, bitterbrush, ninebark hawthorn, rocky mountain maple, poison ivy, elderberry, and hackberry.

P. Dominant Soils: (soils that occupy over 2,000 acres of the burnt area): Clovercreek-rock outcrop (60-90%), Rock outcrop-Anatone-Imnaha (60-90%), Bocker-Clearline-Rock outcrop (60-90%), Rock outcrop, Gwinly-Mallory-Rock outcrop (40-90%), Gwinly-Kettenbach-Mallory-Rock outcrop (60-90%), Bocker-Imnaha-Rock outcrop (30-60%), Rock outcrop-Anatone-Cherrycreek (60-90%), Cabincreek-Cookcreek-Rock outcrop (60-90%), Cookcreek-Clovercreek-rock outcrop (30-60%). These soils are very stony ashy silt loams, extremely cobbly ashy silt loams, gravelly ashy loams, silt loams and sandy loams. Steep slopes and rock outcrops are present in almost all soil types.

Q. Geologic Types: Predominately Columbia layered basalt with a mixed ash mantle; some meta-volcanic, meta-sedimentary and serpentine bedrock in select areas.

R. Miles of Stream Channels by Order or Class: 53 miles of Perennially flowing streams (Class 1&3) and 333 miles of Intermittently flowing streams (Class 4). (Note: NHD crenulations in GIS are notorious for grossly overestimating intermittent stream length in northeast Oregon. Actual miles are estimated to be half of GIS values based on local knowledge and professional judgment; therefore GIS measured miles of Class 4 = 665 miles and actual length is estimated to be 333 miles.)

S. Transportation System: Trails: 63 miles within the burn perimeter, 15 miles in moderate severity and the remaining in low severity. Roads: 51 miles.

PART III - WATERSHED CONDITION

A. Burn Severity Acres: 65,439 (90%) low/unburned; 7,309 (10%) moderate; 0 (0%) high
Calculations based on IR data. The majority of the moderate to high severity acres were on steep slopes in the timber stringers where there were accumulations of more fuel and longer burning fuel. This is especially evident when comparing the aerial imagery to the moderate to high intensity data. This was ground truthed by Resource Advisors on the ground.

B. Water-Repellent Soil (acres): 1,827 (For water repellent soil estimate, use all high severity acres+1/4 moderate ac.)

C. Soil Erosion Hazard Rating (acres):
65,439 (low & no hazard); 7,309 (moderate) 0 (high)
(90% low & no hazard) (10% moderate) (0% high)

D. Erosion Potential: 6.4 tons/acre (moderate to severe burn areas only)

E. Sediment Potential: 0.01 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 3 for grasslands (about 80% of area); 10 for timber ground (20% of area)

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

C. Equivalent Design Recurrence Interval, (years):	<u>5</u>
D. Design Storm Duration, (hours):	<u>6</u>
E. Design Storm Magnitude, (inches):	<u>1.25</u>
F. Design Flow, (cfs, Cache Creek @ mouth): <u>equations Haris and Hubbard, 1983)</u>	<u>Q5=98; Q100=293 (regional flood</u>
G. Estimated Reduction in Infiltration, (percent): <u>with water repellent soils)</u>	<u>13% (Total mod/hi burned severity acres</u>
H. Adjusted Design Flow, (cfs per square mile):	<u>26 (assume 50% bulking flows)</u>

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

The following is a brief description of the values at risk and threats to them.

HCNRA Overview

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 burned down to the Snake River from the mouth of the Imnaha River down to the mouth of the Grande Ronde River (Scenic designation) and approached the lower Imnaha River below the mouth of Cow Creek (Scenic designation).

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 rare combinations of outstanding and diverse ecosystems. 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. 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 Cache Creek Administrative Site is an old ranch acquired by the USFS. Cultural significance is rated very high due to Historic, pre-historic and human remains components. The site exists on an alluvial fan of Cache Creek just above the junction w/ the Snake River. Existing anthropogenic channel features (dam, culverts, pond) all exist with the cultural site.

Watershed/Roads

The Cache Creek Fire burned through 5 watersheds that drain a number of tributaries to both the Snake River in Hells Canyon and the Grande Ronde River. Each drainage will vary considerably in hydrologic response depending on the spatial extent of moderately-burned soils, which generally were areas with timber stringers in north and east-facing draws. The Fire burned a little in one other Watershed – Chesnimnus Creek – but burn severities were low-to-nonexistent and acreage was minimal (47 acres).

Wolf Creek-Snake River (1706010103) – The Fire burned approximately 5,855 acres through 5 small watersheds that drain into the Hells Canyon portion of the Snake River from the Oregon side of the River. Knight Creek and Eureka Creek experienced moderate burn severities in their headwaters – mostly on the treed north slopes – and because of that, they may experience an increase in runoff and/or sediment over the next few years, which would likely affect the Snake River. There is no risk to life or property from a potential increase in runoff and/or sediment from this watershed.

Cherry Creek-Snake River (1706010301) – The Fire burned approximately 44,132 acres through 11 small watersheds that drain trellis-like into the Hells Canyon portion of the Snake River. Cherry, Cook, Cache, Bear and Shovel Creeks experienced moderate burn severities in their headwaters – mostly on the treed north slopes – and because of that, they may experience an increase in runoff and/or sediment over the next few years, which would likely affect the Snake River. There is no risk to life or property from increased runoff and sediment that might come from most of these drainages, with the exception of Cache Creek, which has a ranch at the mouth of the river at its confluence with the Snake River. The Creek may overwhelm a culvert near the mouth and flow towards public toilets near the boat ramp.

Lower Grande Ronde River (1706010607) – The Fire burned only 943 acres at the mouth of this watershed, and all of it was a low severity burn. No increase in runoff or sediment is expected from this minimal disturbance, and there is no risk to life or property from the burned areas in this watershed.

Lower Imnaha River (1706010205) – The Fire burned approximately 6,901 acres through 6 small watersheds that drain into the Imnaha River. The burned area was predominantly low-to-very low severity and very little increase in runoff or sediment is expected. There is little risk to life or property from increased runoff and sediment that might drain from these drainages. A road forms the downstream edge of part of the burned area, so if a downpour occurs before grasses can re-grow, parts of the road may wash out as well as part of the Imnaha River Road below that. This is a fairly unlikely occurrence.

Lower Joseph Creek (1706010606) – The Fire burned approximately 14,928 acres through this watershed. The drainages most affected by moderate burn severities include Cabin Creek, Cold Spring Creek, and Road Gulch, all of which are tributaries to Horse Creek. A separate drainage Green Gulch also experienced moderate burn severities. These watersheds will likely move some sediment through them and contribute that sediment to Joseph Creek which runs along the NW edge of the fire perimeter. There is little-to-no risk to life or property from increased runoff and sediment from these drainages.

Fisheries

Grande Ronde River

Horse Creek - SR steelhead spawning & rearing habitat.

Snake River

Cache Creek – Historic SR steelhead spawning/rearing habitat. Access currently blocked at mouth from 1 (maybe 2) culverts.

Garden Creek – SR steelhead spawning/rearing habitat. Use has not been verified

Jim Creek – Barrier below the ranch. WWNF indicates fish use from mouth to forks at ranch. Fish presence/use has not been verified.

Cook Creek – Barrier near mouth. SR steelhead spawning & rearing habitat up to this point. Above the barrier is an isolated and genetically unique resident redband trout population.

Cherry Creek – Barrier near mouth. SR steelhead spawning & rearing habitat up to this point. Above the barrier is an isolated and genetically unique resident redband trout population.

Imnaha River

Imnaha River – Migration habitat for SR steelhead, CR bull trout and SR spring Chinook salmon. Spawning habitat for SR fall Chinook salmon in the lower river (6 miles of habitat adjacent to burned area).

Impacts from the Cache Creek Fire on fish populations are ranked as follows: 1) redband populations in Cook and Cherry creeks are the primary concern. These populations are isolated by natural barriers from the Snake River and are genetically unique from SR steelhead; 2) impacts to spawning areas for SR fall Chinook salmon in the lower Imnaha River from the increased sedimentation; 3) impacts to spawning and rearing habitat for SR steelhead in streams originating in the fire area (Cache Creek, Garden Creek, Horse Creek); 4) impacts to migration habitat in the lower Imnaha River for SR steelhead, SR spring Chinook salmon, and CR bull trout; and 5) impacts to migration habitat in the Snake River for SR steelhead, SR Chinook salmon (all stocks), SR sockeye salmon, and CR bull trout.

Impacts to fish populations will occur as a result of increases in runoff and erosion rates in the fire area. The higher runoff and erosion rates will lead to an increase in fine sediment in stream reaches that provide spawning and rearing habitat for ESA-listed and Region 6 sensitive fish species. These increases are expected to be short-term (up to 5 years).

The Snake River Hells Canyon Subbasin Assessment (2004) identifies resident redband trout in Hells Canyon as a focal species. Redband trout in the Snake Hells Canyon Subbasin are considered to have special ecological significance because of their potentially limited distribution and relative abundance and their locally adapted life history. There are four resident redband populations in Hells Canyon, all in Oregon and two of which are present in the cache Creek Fire area. These two populations are present in Cook and Cherry creeks. They are isolated from the SR steelhead anadromous population by physical barriers near the confluences with the Snake River.

The areas of moderate severity fire are very low for both the Cook Creek and Cherry Creek drainages (Table 1). There is one area of concentrated moderate severity fire in the headwaters of Cherry Creek, about 75 acres. Based on ground observations the burn severity of the soils would be classified as moderate with large amounts of LWD present both on the hillsides and in the drainage bottom. In the Cook Creek drainage, moderate severity burn areas are widely scattered with that largest patch less than 9 acres in size.

Table 1. Miles of fish habitat, drainage area, acres of high severity burn, and fish presence by drainage area in the Cache Creek Fire area. Mileages reflect miles on NFS lands.

Drainage	Miles of Fish Habitat	Drainage Area (Acres)	Acres High Severity	Fish Presence
Cache Cr	1.5	3574	9.7	SR steelhead
Garden Cr	0.5	1974	0.0	SR steelhead
Jim Cr	1.0	3610	0.0	Fish use unknown
Cook Cr	16.1	17851	52.3	Isolated redband
Cherry Cr	10.3	12377	114.2	Isolated redband
Horse Cr	3.0	12308	204.6	SR steelhead
Imnaha R*	6.0	8461	1.2	SR fall Chinook

*Includes only drainage area north of Imnaha River influenced by fire

Overall the Cache Creek Fire is expected to have localized impacts to fish population in or adjacent to the Cache Creek Fire area. Impacts will result from increases in erosion rates in the burned area. Impacts will be highest in concentrated areas of that burned at moderate severity. The moderate severity burn area in the headwaters of Cabin Creek would be a candidate for treatments to reduce surface erosion from this area.

Heritage Resources

The primary areas of concern for heritage resources are at stream confluences downstream of the moderate severity burn areas. Based on lessons learned from past fires in this area (Jim Creek fire and Teepee Butte Fire), the possibility of post-fire erosional forces exposing, altering, or destroying sensitive cultural resources is high. Specifically, human remains have eroded out of cut-banks in Mazama Ash deposits as a result of post-fire weather events. These burials are often near village/pit house sites. In this part of the forest, the village/pit house sites are often on alluvial fans at stream confluences. Heritage proposes to conduct intensive cultural

resource inventories at these confluences now that the blackberries are burned back and ground visibility is relatively high. If additional resources are located in hazard areas, Heritage will coordinate with Soils, Hydrology, and Fisheries to determine if additional protection measures are required. If so, Heritage resources will request supplemental BAER funds to accomplish the work.

Threatened, Endangered, and Sensitive Plant Species

Nine occurrences of Spalding's Catchfly (*Silene spaldingii*) was burned. Within the fire perimeter Green-band Mariposa lily (*Calochortus macrocarpus* var. *maculosus*) and nut sedge (*Cyperus lupulinus*) both occur, both sensitive but not believed impacted by fire. These T, E, S plants are known to occur in close proximity to weed infestations and are at risk due to weed expansion. Also burned within the Cache Creek Fire perimeter were Regions Six Forest Service Sensitive plant species: one occurrence of *Allium geyeri* S var. *geyeri* along the lower Imnaha River; one occurrence of *Phacelia minutissima* in the headwaters of Cheery creek; and one occurrence of *Erigeron engelmannii* var. *davisii* along the Cold Springs Road. Monitoring Catchfly and Allium sites for survival, soil impacts, and enhanced competitive impacts from nonnative plant neighbors is deemed appropriate.

Range/Noxious weeds/Invasive plants

The Cache Creek Fire burned within four livestock grazing allotments. The forage was burnt in several pastures in the Cold Springs Allotment, including the North Cold Springs, Horse Creek, Cook Creek, and Road Holding pastures. The most affected allotment was a winter allotment, the Toomey Allotment, where the Upper and Lower Spain Saddles, Johnson Canyon (partial) and Toomey pastures burnt. This allotment also includes private land that was mostly burnt in the fire. The Rhodes creek pasture of the Rhodes Creek Allotment was burnt, as it is east of the Imnaha River (the rest of the allotment is west of the Imnaha River). The Dodson-Haas allotment, also grazed in the winter, was burnt in the Thorn Creek Breaks pasture, and a small portion of the Upper Maggie Beacher pasture.

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. In addition the Pacific Northwest Regional Invasive Plant EIS, May 2005, provides direction for the prevention and management strategies while the Wallowa Whitman National Forest Invasive Plant Treatment Project EIS (April 2010) provides treatment guidance.

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 Cactus Mountain Fire 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 they are visible or "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 Cache Creek Fire area are located in burn areas of low severity. This is 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, rhizominous plants or extensive seed banks.

A pending noxious weed treatment plan has been put together for 2012-2013 based on area, weed species, treatment window, and need for resources to complete the treatment. Areas to focus on include Jack Lowry Drainage, Cache Creek Roadside, Cache Creek Hayfields, Garden Creek / Baldwin, Coon Hollow, Jim Creek to Downey Saddle area, Snake River bars, Cold Spring and Jim Creek Butte Ridges (Dozer lines), Cherry Creek Ranch, Lower Imnaha (near Powerline Road), and Tulley Creek Aerial Treatment. The Wallowa County Noxious Weed Plan has been utilized along with USFS guidance and direction to create that plan. The plan is available upon request with more specifics as to which weed species is in which treatment area, the timeline for treating, and the method of treatment.

Wallowa County Noxious Weed Control Rating System

The Wallowa Mountain Zone Noxious Weeds Program, including the Hells Canyon NRA, works with the partners in Wallowa County continually to treat weeds on the zone. As a result the Wallowa County Noxious Weed Plan is a focal point for noxious weed treatment and treatment planning. Wallowa County has a weed designation system, noxious weeds are designated “A” or “B” and may be given the additional designation of “T” according to Wallowa County’s Weed Board’s Noxious Weed Classification System.

- “A” Designated Weed – a weed of known economic importance which occurs in the county in small enough infestations to make eradication or containment possible; or is not known to occur, but its presence in neighboring counties make future occurrence in Wallowa County seem imminent (Table 1).

Recommended action: Infestations are subject to eradication or intensive control when and where found.

- “B” Designated Weed – a weed of economic importance which is regionally abundant, but which may have limited distribution in some areas (Table 2).

Recommended action: Limited to intensive control at the county or region, or landownership level as determined on a site specific, case-by-case basis. Where implementation of a fully integrated county wide management plan is not feasible, biological control (when available) shall be the primary control method.

For this proposal there are not weeds on the “T” list

Documented within the Cache Creek Fire fire area, are 18 species of noxious weeds (proposing to treat 13 species) and their classification:

The Wallowa County A priority weeds include:

Yellow Starthistle (*Centaurea solstitialis*)– in two main areas within the fire area with satellite populations, averaging 40 infested acres all together, there is one large site in the Tulley Creek Drainage that will be treated outside of this proposal due to the terrain associated with the site and the resultant proposed method of treatment (aerial). There will also be a need for additional environmental analysis (as required by the WWNF Noxious Weed Treatment EIS) due to the site spread since the EIS was written. Not being able to treat the Tulley Creek drainage site (due to terrain, unsafe for ground based treatment) and seeing the resulting spread, stresses the importance of treating yellow starthistle as soon as possible post fire.

Sulfur Cinquefoil(*Potentilla recta*)- scattered throughout the fire in areas of past disturbance, particularly along drainages, averaging 39 infested acres

Whitetop (*Cradaria draba*) Small infestations, averaging 18 infested acres

Medusahead Rye (*Taeniatherum caput medusa*) –infestations scattered in the fire area, averaging 10 infested acres, there is a need for additional survey for this species.

Rush Skeletonweed (*Chondrilla juncea*)- small infestations, averaging 16 infested acres; this plant has high spread potential due to wind dispersal.

Common Crupina (*Crupina vulgaris*) – infestations mainly along river within fire area, average 31 infested acres

Japanese Knotweed (*Polygonum cuspidatum*) – infestation at Jim Creek Ranch, but only small amount affected by burn, averaging 1 acre

Scotch Thistle (*Onopordum acanthuim*)- scattered infestations within the fire area, averaging 49 infested acres

Puncturvine (*Tribulus terrestris*)- heavy infestations along roads and disturbed sites, averaging 5 acres

Jointed Goatgrass (*Aegilops cylindrical*)- one small infestation, averaging 1 acre

The Wallowa County B priority weeds include, and our rationale for including in BAER proposed treatment:

Spotted Knapweed (*Centaurea maculosa*) and **Diffuse Knapweed** (*Centaurea diffusa*) – small infestations within the fire area, averaging 5 infested acres. These infestations have been dramatically reduced by previous treatment efforts, and have a large potential to spread between the fire and the proximity of the sites to roads. Although this is a B listed weed, it is limited in this area, and is important to treat.

Himalayan Blackberry (*Rubis concolor*) –infestations located in draws within the fire area, Cache Creek has the largest infestation, averaging 15 acres. Thorn Creek has isolated infestations within the burnt area,. The proposal includes treating blackberry in Cache Creek to prevent spread of that infestation. It has completely choked out vegetation along Cache Creek in several areas and overtaken the riparian vegetation; the fire has provided an opportunity for access to effectively treat the blackberry. Although there is blackberry in several drainages many river miles up the Snake River, this infestation is unique to the area, and will continue to be a big seed source if it spreads more. It is also noteable that this is the water source for Cache Creek Ranch, which houses year round volunteers to run the visitor center and river permits program.

Dalmatian Toadflax, Meadow Hawkweed, Canada thistle, and Russian Knapweed have been documented sites within the burn area but have been reduced by previous treatments, or are not planned for treatment within this proposed BAER plan.

In comparison to much of the other land within the Hells Canyon National Recreation Area (NRA), the Cache Creek fire area is lower in the number and size of infestations. There is an exception of the yellow starthistle site in the Tulley Creek drainage, which will be treated outside of this proposed BAER plan. Most of the known infestations are associated with old homesteads, farm fields, roads, or drainages that received a high amount of historical disturbance. As a result there is more emphasis from the unit on ensuring that the known weed sites do not spread into the less disturbed areas that have intact bunchgrass communities the NRA is valued for. The second part is to survey areas where it is uncertain whether there are weeds present or not, and be able to respond appropriately quickly after the Cache Creek Fire. The land within the Cache Creek fire area, in context with the rest of the NRA, receives less traffic from known and potential weed vectors; there is simply less human presence (past and present) than other areas to the east, for instance the Imnaha River Corridor. Since the Cache Creek fire area doesn't receive the same level of traffic from land use activities, mostly as a result of access, it is crucial to treat weeds early before they spread.

These weed species occupy over 910 acres (pre-fire) of terrain. These acreages are scattered across the fire area, primarily in previously disturbed areas (homesteads, recreation sites) and along roads. Numerous other

noxious weed patches are known to occur in close proximity to the Cache Creek Fire as previously discussed. The treatments proposed in this BAER plan does not cover all the weed sites, or weed species within the fire area, just the most pressing threats to the Hells Canyon NRA values that are at risk post Cache Creek Fire.

Trails

Trails within areas mapped as moderate burn severity incurred impacts to their function and integrity (see map). 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 in Cook Creek and Dry Creek. Of the total number of trails within the burned area, approximately 3.5 miles within moderate burn severity areas were prioritized for emergency treatment.

Threats to Human Life and Safety

One structural value-at-risk downstream of the burned area is an undersized culvert on Cache Creek at the Cache Creek Administration Site. Some potential to threaten human life and safety exists as the site is occupied year-around.

B. Emergency Treatment Objectives:

Trails:

Treatment is recommended for treating sections of major trails that burned within areas of moderate burn severity. Emergency funding is requested for maintenance treatments for 3.5 miles of trails w/in moderate severity burn areas (see map) to prevent further deterioration of the trail, soil, and water quality resources. The objectives for treating trails are to reduce the risk of excessive surface erosion due to lack of adequate drainage, and reduce the risk of sediment generated from trails from reaching streams.

Noxious Weeds:

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.

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. No aerial treatment is proposed, only ground treatments.

Watershed/Roads:

The objectives aim to reduce erosion/sedimentation risk associated with inadequate drainage features on FSR 4680 and FSR 4680-500 (Horse Creek and Cache Creek). This will be accomplished by installing five rolling dips in FSR 4680 and three on FSR 4680-500. Road segments identified for treatments are within areas of moderate burn severity as shown on map. No hillslope treatments are planned, as fall rains have precluded treatment opportunities due to wet soil conditions. No culvert replacements or removal are planned for the Cache Creek Administration Site. No site surveys are planned at the Cache Creek Administration Site either.

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

Land NA % Channel NA % Roads/Trails 60 % Protection/Safety NA %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	NA	NA	NA
Channel	NA	NA	NA
Trails	80%	50%	20%
Roads	90%	70%	60%
Noxious Weeds	See below		

This reflects % of treatment effectiveness after one year post fire. Seeds will continue to germinate for several years and thus require follow up treatments.

	Years after Treatment		
	1	2	3
Land (Weeds)			
Dalmatian Toadflax	90		
Knapweed	80		
Yellow Starthistle	80		
Rush Skeletonweed	70		
Scotch and Canada Thistle	80		
*Whitetop	80		
Medusahead	70		
Common Crupina	90		
Italian Thistle	70		
Sulfur Cinquefoil	80		

Japanese Knotweed	70			Chemical treatment followed by seeding
Himalayan Blackberry	70			Chemical treatment followed by seeding
Puncture vine	70			Chemical treatment followed by seeding
Common bugloss	80			Chemical treatment followed by seeding
Jointed goatgrass	80			Chemical treatment followed by seeding

E. Cost of No-Action (Including Loss): \$1,500,000

Biodiversity/upland habitat impacts/cultural/roads/aquatic habitat/administrative site: 1,500,000

Trails:

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 could be at risk without treatment. Inaction may also cause trail segments to slough away, leading to costly reconstruction.

Noxious Weeds:

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.

Heritage Resources:

Difficult to assign a cost figure to the loss or degradation of heritage sites, as any loss/degradation is considered irretrievable/irreplaceable.

Roads:

Not treating will greatly increase of loss of road prism (mainly surface).

Administrative Site:

Risk of loss or damage of certain features within the site (access driveways, toilets, buildings). The cost or value of biodiversity, habitat and cultural is nearly incalculable.

F. Cost of Selected Alternative (Including Loss): \$300,000

Noxious Weeds:

Probability of Damage or Loss: Likely - likely occurrence (>50% to < 90%)

Magnitude of Consequences: Moderate - Injury or illness to humans; moderate property damage; damage to critical natural or cultural resources resulting in considerable or long term effects.

Risk: High

Road Treatments:

Probability of Damage or Loss: Likely - likely occurrence (>50% to < 90%)

Magnitude of Consequences: Moderate - Injury or illness to humans; moderate property damage; damage to critical natural or cultural resources resulting in considerable or long term effects.

Risk: High

Trail Treatments:

Probability of Damage or Loss: Likely - likely occurrence (>50% to < 90%)

Magnitude of Consequences: Moderate - Injury or illness to humans; moderate property damage; damage to critical natural or cultural resources resulting in considerable or long term effects.

Risk: High

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input checked="" 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.)

Introduction: The fire area is located primarily in a remote setting with few access roads. Much of the access from the Snake River part of the fire perimeter (east side) is reasonably accessible only by boat. The costs for all treatments are higher due to the complex nature of being able to access steep terrain with few vehicle access points.

Trails (Class 2):

Erosion control on approximately 3 miles of trail associated with moderate burn severity located upslope of trail. Treatments 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 moderate burn severity areas only. Stabilization work will only focus on repair of existing or installation of new drainage structures. Felling of danger snags for crew safety while performing erosion control work is included in this treatment and fund request. Emphasis areas are near stream crossings or drainage bottoms that drain into streams.

Heritage Resources:

No treatments identified at this time.

Land Treatments:

No other treatments besides noxious weeds.

Road Treatments:

3 rolling dips need to be constructed on the Cache Creek road (FSR 4680-600) to prevent damage to the road from expected increases in runoff, and 3 rolling dips need to be constructed on FSR 4680-000 that runs along Horse Creek to handle increased runoff and avoid stream capture. Material will need to be imported for the Cache Creek road. Hazard tree removal is included with this fund request.

Noxious Weeds- Weed Detection Surveys: This area has been inventoried for various projects and has received treatments in past years. However, fire has been documented to affect weed site density and spread. Therefore, follow up weed detection surveys will be completed within the first year following the fire containment date (10-3-2012). Surveys will be conducted to determine fire effects and how much to

treat during the first year in order to finalize our treatment strategy. Ground surveys will be conducted in the fall and late winter/early spring growing seasons.

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.

Noxious Weeds-Treatment (Chemical, Biological, and Manual): Accomplish via force account crews, partners, private landowners, and contracts all within the Wallowa Canyonlands Cooperative Weed Management Area. 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.

Seeding: In addition, seeding of native grasses will be applied post chemical treatment at several of the medusahead sites (+/- 40 acres total) in an effort to out-compete this species to reduce its spread and reestablishment.

Channel Treatments:

None proposed at this time.

April 1 Interim request: This reflects additional costs for treating roads not recognized earlier during the initial assessment process. These roads exist in a very remote section of our forest, which did not get accounted for during our initial BAER request. Road materials to perform needed treatments are far removed from the treatment areas, raising costs of delivery. Contract help needed to execute the treatments must also factor in the remote nature of the treatment area. Those needed additional costs not fully accounted for during the initial request total \$6,600.

The roads we wish to treat represent important access routes for our forest in the Hells Canyon National Recreation Area. The Cold Springs Road (FR 4680) ties in with a county road, while the Cache Creek Road (FR 4680-500) provides access to the Cache Creek Ranch Administration Site. As discussed in the initial 2500-8, the post-fire condition of these roads represent increased risks to soil, water, and aquatic resources

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.)

Noxious Weed Monitoring:

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.

Listed Plant Monitoring. Listed plant sites are revisited once this fall and once next spring to check for re-emergence of listed plants and the establishment of weed species within the site.

Road Treatments: The Horse Creek and Cache Creek road treatments will be evaluated for implementaton after some rain has fallen in the spring of 2013.

Initial Report, Funding Request for FY 2011

Part VI – Emergency Stabilization Treatments and Source of Funds

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Appendix A - Detailed work description for C2 above.
(completed in FY 08)

ITEM NO.	SITE(S)	DESCRIPTION	PAY UNIT	EST. QTY	UNIT PRICE (\$)	TOTAL PRICE (\$)
				Subtotal→		
			Overhead = 10%			
			Contingencies = % 10 →			
					Total→	