United States Department of Agriculture | Forest Service | Wallowa-Whitman National Forest | Supervisor's Office
1550 Dewey Avenue
Baker City, OR 97814

File Code: 2520 **Date:** September 06, 2006
Route To:

Subject: Jim Creek Fire BAER Report

To: Regional Forester, R6

Attached is the Burned Area Emergency Restoration request (FS-2500-8) for the Jim Creek Fire on the Hell's Canyon National Recreation Area. This request is for funding for the survey of known noxious weed sites within the fire area and for time spent by the BAER assessment team. If you have any questions about this report, contact Jerold Hustafa at 541-426-5576 or jhustafa@fs.fed.us.

/s/ Steve Ellis
STEVE ELLIS
Forest Supervisor

cc:
Steve Howes
Michael McNamara

USDA-FOREST SERVICE FS-2500-8 (7/00)

Date of Report: September 8, 2006

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[**X**] 1. Funding request for estimated WFSU-SULT funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[**X**] 1. Initial Request (Best estimate of funds needed to complete eligible rehabilitation 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: Jim Creek

B. Fire Number: OR-WWF-000660

C. State: Oregon

D. County: Wallowa

E. Region: 06

F. Forest: 16

G. District: 05

H. Date Fire Started: 8/24/2006

I. Date Fire Controlled: Contained on 8/31/06

J. Suppression Cost: $1,998,819

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 5 miles on the national forest
2. Fireline seeded (miles): 1 mile on the national forest
3. Other (identify): 2 Miles of pasture fence

L. Watershed Number: 1706010353

M. Total Acres Burned: 12,733

NFS Acres(12,733) Other Federal (0) State (0) Private 0

N. Vegetation Types: (General) Mixed conifer with Douglas fir and Ponderosa pine in forested stringers and grassland slopes and benches consisting of bluebunch wheatgrass and Idaho fescue plant associations which include Sandberg's bluegrass, prairie junegrass grassland species with interspersed cheatgrass. In addition there were also interspersed (or understory) shrublands including Sumac, snowberry, rose, bitterbrush, hackberry, ninebark and riparian areas of rocky mountain maple, poison ivy, elderberry, hackberry etc.

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

P. Geologic Types: Columbia layered basalt, limestone.

Q. Miles of Stream Channels by Order or Class: Class One: 4.5, Class Three: 3

R. Transportation System

Trails: 14 miles and, Roads: 17 miles of NFS road within fire perimeter.

PART III - WATERSHED CONDITION

A. Burn Severity (NF acres only): 60%, (low) 16% (moderate) 1% (high) (unburned) 23%

(percentages arrived at by combining remote sensing data, reconnaissance flights, field verification, and professional experience with fire impacts in low elevation grassland canyon environments.)

B. Water-Repellent Soil (acres): 0 – Water repellent soils are not an issue on this fire.

C. Soil Erosion Hazard Rating (acres):
70 (low) 30 (moderate) ___ (high)

D. Erosion Potential: 0.013 tons/acre

E. Sediment Potential: 9.9 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

No watershed erosion control treatments are recommended

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

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

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

D. Design Storm Duration, (hours): ___

E. Design Storm Magnitude, (inches):

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

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

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

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:
There is a watershed emergency with this fire due to expansion and spread of noxious weeds. There is not a watershed emergency with regard to soil erosion and sedimentation. The portion of the national forest that was burned is mostly grassland and timbered stringers. The topography is steep with soils of high rock content. Most of the burned area on the national forest is in the low burn severity classification and still has litter intact on the ground. Preliminary survey work estimates a very low probability that hydrophobic soils exist in any areas following the fire. In the low burn severity areas, and even in spots that burned moderate to high severity, due to limited extent of moderate and high severity areas, erosion rates should be nearly the same as before the fire. Soils on the portion of NFS lands that are in the moderate to high burn severities are very rocky and have a low erosion hazard or are on northerly slopes of deeper soils where the surviving fescue bunchgrasses still have root holding capacity. These areas create a discontinuous mosaic of fire effects. The amount of rock in the soils and on the soil surface will limit the amount of erosion and sediment yielded by these sites. There is a low risk of increased sediment and runoff in the first year following this fire.

The fire area is at an increased risk to federally listed noxious and invasive weed spread after fire disturbance. The fire burned directly through 70 known weed infestations creating opportune conditions for increasing the density of weeds (stems) at the sites and causing them to spread. NEPA has been completed at these sites for the treatment of noxious and invasive weeds. This potential to spread puts the surrounding native grasslands at risk of incurring habitat degradation and conversion to less productive,ecosystem potential. Even areas of low severity fire that has burned through or adjacent to the known noxious weed sites may stimulate increased germination while also reducing competition, exposing soil, and recycling nutrients from burned vegetation. The weeds that do germinate often grow larger and have more flower-heads the following season.

B. Values and type of risk:

1. Threat to Life: None

2. Threat to Private Property, State, City, County: There is no private land within the fire perimeter that would be threatened by increased erosion and weed spread from the fire.

3. Loss of Resources

Vegetation
According to Charlie Johnson's "Vegetation Response to Wildfires in National Forests of Northeastern Oregon, 1998), Ponderosa pine and mixed conifer series respond positively to light burns, but can be eliminated from the sites (or converted to shrublands) as a result of severe burn within the first five years following fire. Shrubland responses

are variable by species and site but in general respond negatively to severe burns (with the exception of a few species, such as ninebark in cool sites) in the first year after fire.

Light and moderate burns enhanced bluebunch and cheatgrass while severe burns affected these species negatively. Idaho fescue was found to have the greatest vulnerability to moderate (and severe) burns. While severe and moderate burns diminish litter and cryptograms, dead layers did provide protection to the soil from erosive agents. It is estimated that 99% of the fire within the burned area burned at low to moderate intensity. Therefore, loss of vegetative productivity overall within the Jim Creek due directly to the fire are low. Direction from the CMP states the Forest Service will manage grassland communities to attain their potential natural community recognizing their HRV.

T & E Plants and Fish

There is a low probability that negative effects to sensitive, and listed plants will occur as a direct result of the fire, as the majority of the burned area is low to moderate severity. However the fire area has potential to affect seven endemic plant species and at least 13 Region 6 sensitive plant species.

The HCNRA contains one of the largest contiguous areas of bunchgrass grasslands in the Western United States. Much of the fire area includes critical spring and winter range for Rocky mountain Big Horn Sheep, mule and whitetail deer, Rocky Mountain Elk as well as upland birds and non-game animal species

Jim Creek and Cache Creek and other streams within the fire area have resident redband trout. The little disturbance from the fire itself to national forest land will not adversely affect water quality in these streams.

Cultural Sites

There are no expected additional risks to cultural sites due to the Jim Creek fire.

Recreation

There are approximately 14 miles of system recreational trails within the fire area. These are used extensively by hunters, backpackers and horse groups.

Noxious Weeds

The Jim Creek fire lies within the Hells Canyon National Recreation Area. This area was established to assure that the natural beauty, and historical and archeological values of the Hells Canyon area together with portions of certain tributaries and adjacent lands, are preserved for this and future generations, and that the recreational and ecologic values and public enjoyment of the area are thereby enhanced. There are approximately 300 acres of known “A List” noxious weed sites within the Jim Creek fire. These species include Yellow starthistle, Scotch thistle and Dalmation toadflax, Common cruprina, Rush skeleton-weed, Knapweed, Leafy spurge, Japanese knotweed, and White-top - and need very little disturbance to spread and are very adapted to the Snake River Canyon area. Most of these species have seed that can remain viable for a minimum of 10 years in the soil. It is our experience that disturbance caused by the fire and suppression activities provide higher risk areas for weeds to become established or spread from existing populations, which would be detrimental for the Forest’s weed management efforts over the past years aimed at controlling these weeds. Often Bio

control agents on yellowstar thistle and toadflax can be detrimentally affected by the fire. Monitoring after the East side complex, the Lightning complex and the 2005 Tryon complex have shown us to expect existing weed populations to increase significantly after fire if not and treated. Loss of habitat to weeds threatens, wildlife and fisheries habitat, recreation values and overall ecosystem health. The CMP states the Forest Service will manage noxious weeds to reduce negative impacts to native plants, wildlife, and other resources. The values that the HCNRA have been set aside for are at an increased risk due wildfire and noxious weed response to this disturbance.

Livestock Grazing

The Jim Creek fir includes portions of 3 livestock allotments totaling approximately 8000 acres of grazing land. The Cache Creek allotment is closed, the Jim Creek allotment is currently an administrative horse pasture and the Cold Springs allotment is currently active. The Comprehensive Management Plan for the Hell's Canyon NRA states that after fire, an Interdisciplinary Team will determine when grazing activities will be resumed. Livestock grazing must be controlled in a manner after fire to allow natural recovery to occur.

C. Emergency Treatment Objectives:

There are no BAER land erosion control watershed treatments proposed. However, due to the populations of "A" list weeds and the risk of further establishment and spread, we are requesting funds for noxious weed surveys, treatments, and first year monitoring within the fire area. The application of the BAER treatments will assist in natural recovery and will minimize damage to values-at-risk. Proposed non-structural weed treatments will maintain post-fire site productivity and ecosystem potential by inhibiting weed establishment and spread. Integrated weed management that includes manual, biological, and chemical methods will be used. An invasive plant monitoring treatment will be applied to survey for expansion of populations, and monitoring will be conducted for effectiveness of first-year weed treatments.

C. Probability of Completing Treatment Prior to First Major Damage-Producing Storm:

Land __ % Channel __ % Roads __ % Other __ %

	1	3	5
Land			
Channel			
Roads			
Other			

E. Cost of No-Action (Including Loss):

F. Cost of Selected Alternative (Including Loss):

G. Skills Represented on Burned-Area Survey Team:

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

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H. **Treatment Narrative:**

Land Treatments:

Noxious Weeds:

Purpose Statement: To reduce the post fire potential for significant weed expansion in the burned area and hence encourage the recovery of natural vegetation.

Proposed Treatment: We are proposing that emergency BAER funding be provided for both weed treatment and monitoring starting the fall of 2006 and continuing through summer 2007. The suite of weed species within the fire area are such that (given the biology of their seeds and re-sprouting potential) some are best treated in the fall while others are best treated in the spring or summer. Some respond best to multiple treatments a season. Starting treatments this fall also provides the most flexibility to accomplish treatments given the FS contracting procedures, contractor obligations (capacity) and schedules and for balancing work priorities of FS crews. Treatment will vary depending on species and proximity to streams, but in general bio-control agents will be used as available, and /or in conjunction with NEPA-approved herbicide and manual treatments.

Priority Areas: Old homestead sites (Cache and Jim Creek “ranches”) and the transportation systems leading through the fire area (and to the ranches) are the main sources for noxious weed seeds. Many of these were burned over, and more importantly the adjacent areas are now very susceptible to weed spread. This area is popular for backcountry recreation including hunting, camping, and backpacking/horse-camping.

Known (A) weed species within the Jim Creek fire include Yellow starthistle, Scotch thistle Dalmatian toadflax, Common cruprina, Rush skeleton-weed, Knapweed, Leafy spurge, Japanese knotweed, and White-top, plus several list B noxious weeds.

Noxious weed surveys of terrain overlapping the Jim Creek fire were recently completed during the field seasons of 2005 & 2006. This work was competed through teamwork organized within the Wallowa Canyon lands Weed Management Area, here including Wallowa Resources (Digital aerial sketching), Oregon Department of Agriculture (Ground inventories) and Forest Service crews. As Jim Creek and Cache Creek are both FS administrative sites, FS crews are annually checking weed sites as part of our District weed treatment program. Thus the current status of the weed sites identified in this document is fairly well known. Our monitoring experience with weed site spread in the 2005 Tryon Complex confirmed both literature and conventional wisdom, in that we experienced changes in both stem density (some times up to 50% more stems per area) and changes in the area occupied (some sites increasing in area between 15 to 35 %). The results vary based on the weed species and site setting, but the same species are found with the Jim Creek fire as were found within the Tryon Complex.

Channel Treatments: n/a

Roads and Trail Treatments: n/a

Structures: n/a

H. **Monitoring Narrative:**

Monitoring will be done in the first year to determine post-fire presence in areas with expected introduction or expansion of weed species. Monitoring will include digital aerial sketch mapping to follow site spread (pattern and direction)and on the ground site specific monitoring (stem density or % cover). In treatment areas, monitoring will be conducted annually for 3 years after treatment to determine changes in weed density and area occupied (from fire) as well as treatment success (reductions from treatments, be it biological, mechanical or herbicide).

Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership

			NFS Lands				Other Lands			All
		Unit	# of	WFSU	Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	SULT $	$	units	$	Units	$	$
A. Land Treatments										
							$0		$0	$0
Noxious weed treatme	acres	250	350	$87,500			$0			$87,500
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Land Treatments				$87,500			$0		$0	$87,500
B. Channel Treatments										
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Channel Treat.				$0			$0		$0	$0
C. Road and Trails										
							$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Road & Trails				$0			$0		$0	$0
D. Structures										
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Structures				$0			$0		$0	$0
E. BAER Evaluation										
BAER Team	1	3000		$3,000			$0		$0	$3,000
				$3,000			$0		$0	$3,000
G. Monitoring Cost							$0		$0	
Monitor treatment/spre	acres	1000	0	$9,800						$9,800
H. Totals				**$103,300**			**$0**		**$0**	**$100,300**

PART VII - APPROVALS

1. /s/Steve Ellis — 8/29/05
   Forest Supervisor (signature) — Date

2. _____ — _____
   Regional Forester (signature) — Date