United States Department of Agriculture | Forest Service | Nez Perce National Forest | 1005 Highway 13 Grangeville, ID 83530 208 983-1950

File Code: 2520-3 **Date:** September 27, 2006
Route To:

Subject: Burned Area Report - Meadow Fire

To: Regional Forester

Enclosed is the initial Meadow Fire Burned Area Report Funding request for estimated WFSU-SULT funds. The request for National Forest lands is $38,430 primarily for BAER evaluation, 6 culvert removals and one culvert upsize, 36 acres of weed treatments, 7 miles of trail postfire preventative maintenance: including water bars, drain dips, ditch cleaning, and a small weed spraying effectiveness monitoring component,.

Please contact Marci Nielsen-Gerhardt at 208-983-1950 if you have any questions or concerns regarding this matter. She will gladly assist you.

/s/ Jane L. Cottrell
JANE L. COTTRELL
Forest Supervisor

Enclosure

Cc:
Bruce Sims, Northern Regional Office
Marci Nielsen-Gerhardt, Nez Perce National Forest

USDA-FOREST SERVICE
FS-2500-8 (6/06)

Date of Report:

BURNED-AREA REPORT
(Reference FSH 2509.13)

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

[**X**] 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures)

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

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

PART II - BURNED-AREA DESCRIPTION

A. Fire Name**: Meadow Fire**

B. Fire Number**: IDP-NPF-200618**

C. State:**Idaho**

D. County**:Idaho**

E. Region :**1**

F. Forest**:Nez Perce**

G. District:**Red River Ranger District**

H. Fire Incident Job Code:**P1CSWV**

I. Date Fire Started:**9/3/2006**

J. Date Fire Contained**: 6/24/2006 – to date 60% contained**

K. Suppression Cost:to date-**9/21/2006 – $1,312,000**

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): **2 miles**
2. Fireline seeded (miles): **0**
3. Other (identify):**handline 2 miles**

M. Watershed Number: **17060305-04, 17060302-02**

N. Total Acres Burned**: 7200**
NFS Acres(**7200**) Other Federal ( ) State ( ) Private ( )

O. Vegetation Types**: Lodgepole pine and Engelmann Spruce-subalpine fire**

P. Dominant Soils**: Andic Cryochrepts and Entic Cryocrepts**

Q. Geologic Types**: Grandiorite**

R. Miles of Stream Channels by Order or Class:

S. Transportation System

Trails: **7.0** miles Roads:**8.6** miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): **1816 (23%)** (unburned) **1185(15%)** (low) **3855(47%)** (moderate) **904 (12%)** (high)

B. Water-Repellent Soil (**1903**):

C. Soil Erosion Hazard Rating (acres):
1568 (low**)** **5043** (moderate) **1148** (high)

D. Erosion Potential: **.10 tons/acre (67 tons/mi^2/yr)**

E. Sediment Potential**: 5.7 tons/mi^2/yr**

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): **2-3**

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

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

D. Design Storm Duration, (hours): **24**

E. Design Storm Magnitude, (inches): **2.7**

F. Design Flow, (cubic feet / second/ square mile): **23.1**

G. Estimated Reduction in Infiltration, (percent): **24**

H. Adjusted Design Flow, (cfs per square mile): **27.7**

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Threat to Ecosystem Integrity

Subbasin weed susceptibility models have identified HTG 2;moderately warm and dry Douglas-fir and grand fir habitats as moderately to highly susceptible to invasive weeds such as Spotted knapweed (*Centaurea maculosa*), and Canada thistle (*Cirsium arvense).* In addition Douglas-fir habitats that have greatly reduced tree canopies as a result of disturbance are also susceptible to invasive weeds.

Fire intensities were generally moderate to high in the Meadow fire. Highly susceptible habitat, existing infestations and exposed mineral soils along roads, trails, fire lines and camps greatly increase the risk of invasive weed spread as a result of fire disturbance. The risk of weed spread has increased within the roaded portion of the Meadow Fire due to the interaction of the weed expansion factors.

Most of the previously identified weed infested sites within the fire were either burned or occur adjacent to burned areas. The suseptable habitats within the Meadow fire contain known spot infestations of Spotted knapweed and Canada thistle. Small spot infestations of spotted knapweed are scattered along forest road # 1172 which runs along the fire perimeter. Other discrete or small populations were identified along forest roads 9540, 9541, and 9542 leading into the burned area. Spotted knapweed and Canada thistle are invasive weeds that can readily out compete native plants and dominate disturbed site. Trails, roads and firelines within and adjacent to the fire are corridors for weed dispersal. Habitats moderate to highly susceptible to weed invasion have burned within the roaded portion Meadow fire increasing the risk of weed spread. Without control, these satellite weed populations could spread throughout the fire area.

Threat to federal property:

Potential loss of trail tread or drainage structures due to increased runoff or sloughing. This risk is high along the 505 ATV trail due to extensive severe burn, and highly erodible granitic soils. Drainage dips/waterbars and ditches need to be repaired and cleaned along the trail within the burn area, for a distance of 7 miles. Steep slopes exist on portions of the trail where high severity burn above the trail has potential for increased runoff during fall and spring rains and snow melt that could potentially damage the trail further.

Threat to water quality deterioration:

The purpose of this set of treatments is to reduce the erosional effects of post-fire runoff on natural resources and facilities. There are several inadequately sized culverts downstream of burned areas that are at risk of overtopping or piping through the fill. There is one section of road where existing waterbars are partially functioning and additionally at risk due to increased post-fire runoff.

B. Emergency Treatment Objectives:

Weed Treatment

The purpose of this treatment is to maintain ecosystem integrity by treating sites where fire has exposed soil on burned areas and included nearby roads and ATV trails that act as vectors. Spotted knapweed, Canada thistle and small areas of hawkweed are located within the fire perimeter or close to disturbed areas on the fire such as drop points, helispots, roads and trails

Trail Treatment

The objective for trail treatment is to reduce postfire runoff and erosional event damage to federal trail facilities.

Culvert and Road Treatment:

The purpose of this set of treatments is to reduce the erosional effects of post-fire runoff on natural resources and facilities. There are several inadequately sized culverts downstream of burned areas that are at risk of overtopping or piping through the fill. There is one section of road where existing waterbars are partially functioning and additionally at risk due to increased post-fire runoff. Beneficial uses at risk downstream on Baston and Soda Creeks include resident and anadromous fisheries. Both are tributaries to Red River, which is an important spawning and rearing stream for spring chinook salmon, steelhead, westslope cutthroat and bull trout.

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

Land **90** % Channel ___ % Roads/Trails ___ % Protection/Safety ___ %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	**75**	**85**	**95**
Channel			
Roads/Trails	**85**	**95**	
Protection/Safety			

E. Cost of No-Action (Including Loss): **This would include loss of native plant communities to invasive weeds on up to 2000 acres on roads, trails and moderate-high severity burn areas. Weed treatment for one year if this occurred would be 250 per acre X 2000 acres = $50,000. If culverts were not upsized or removed, replacement would be 15,000 per culvert and road loss X 7 culverts = $105,000 . Total for No-Action would be $155,000.**

F. Cost of Selected Alternative (Including Loss):

G. Skills Represented on Burned-Area Survey Team:

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

Leader**: Marci Nielsen-Gerhardt**

Team Members-
Nick Gerhardt – Hydrology
Steve Armstrong – Archeology
Marci Gerhardt and Pat Green- Soils and Ecoolgy
Gary Loomis – Trails
John Warofka-Botany and Weeds

Email: **mgerhardt@fs.fed.us** Phone:**208-983-1950** **Ext** **4214**
FAX:

H. **Treatment Narrative:**

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

Land Treatments:

Invasive Plant Treatment

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Weed management strategy within the Clearwater River Basin Weed Management Area, an interagency cooperative, is currently in place. Concurrence of a BA for Noxious Weed Control has been received from Fish and Wildlife Service and is pending from National Marine Fisheries Service. Herbicide application will follow the requirements and mitigation outlined in the Biological Assessment.

Weed control with herbicides, monitoring of weed spread and effectiveness monitoring are recommended for the area affected by the Meadow fire.

- **Treat satellite infestations of spotted knapweed along Roads 9740, 9741, and 9742 leading into the \burned area, along with both Helispots used during the fire. The knapweed population along the road system is contributing a seed source and the road system is acting as a spread corridor for further expansion into the burned areas.**

- **Treat Drop Points 1, 2, & 6 which were used by heavy equipment during the fire and are adjacent to known populations of spotted knapweed and Canada thistle.**

- **Treat all new invasive weeds within and adjacent to the fire perimeter at trailheads and ATV access points.**

- **Monitor weed spread within the fire perimeters to determine if the combination of fire disturbance and susceptible habitat facilitates weed spread or increases weed densities.**

Roads and Trail Treatments:

Roads

Two inadequately-sized culverts on Road #1131 would be removed and replaced with larger culverts. Three culverts on Road #1131 would be removed and that section of road placed into road storage status. One installation of twin culverts on Baston Creek on Road #1131A would be removed and that section of road placed into road storage status. Existing waterbars would be improved on about ½ mile of spur #77266. Existing access into the area would be maintained as a result of the BAER treatments

Trails

Drainage dips and ditches will be repaired and cleaned along the 505 trail within the burn area, for a distance of 7 miles to prevent further damage from postfire runoff.

Protection/Safety Treatments:
none

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.)

Invasive Weed Spraying

Objective: Determine if spraying has been effective in reducing invasive weeds in areas within and tributary to the burns.

Methods: A two person crew will spend 2 field days fall FY2007 and summer 2007.

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

Line Items	Units	Cost	Units	$0	$		units	$	Units	$	$
A. Land Treatments											
				$0	$0			$0		$0	$0
Invasive Weed Trmt	acres	250	36	$9,000	$0			$0		$0	$9,000
				$0	$0			$0		$0	$0
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Land Treatments				$9,000	$0			$0		$0	$9,000
B. Channel Treatments											
				$0	$0			$0		$0	$0
				$0	$0			$0		$0	$0
				$0	$0			$0		$0	$0
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Channel Treat.				$0	$0			$0		$0	$0
C. Road and Trails											
Trail Drain Dips	each	85	30	$2,550	$0			$0		$0	$2,550
Trail Water Bars	each	85	48	$4,080	$0			$0		$0	$4,080
Culvert Removal	each	1700	6	$10,200							$10,200
Culvert Upsize	each	5000	1	$5,000	$0			$0		$0	$5,000
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Road & Trails				$21,630	$0			$0		$0	$21,630
D. Protection/Safety											
				$0	$0			$0		$0	$0
				$0	$0			$0		$0	$0
				$0	$0			$0		$0	$0
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Structures				$0	$0			$0		$0	$0
E. BAER Evaluation	day										
Baer Assessment		300	20		$6,000			$0		$0	$6,000
Insert new items above this line!				---	$0			$0		$0	$0
Subtotal Evaluation				---	$6,000			$0		$0	$6,000
F. Monitoring											
Weed spray Eff.	days	400	4	$1,600	$0			$0		$0	$1,600
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Monitoring				$1,600	$0			$0		$0	$1,600
G. Totals				$32,230	$6,000			**$0**		**$0**	**$38,430**
Previously approved											
Total for this request				**$32,430**							

PART VII - APPROVALS

1. _____ _____
Forest Supervisor (signature) Date

2. _____ _____
Regional Forester (signature) Date