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

[X] 1. Funding request for estimated emergency stabilization funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

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

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

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

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Holland Peak

B. Fire Number: Mt FNF 000072

C. State: Montana

D. County: Missoula

E. Region: 1

F. Forest: Flathead

G. District Swan Lake

H. Fire Incident Job Code: P1C4TV

I. Date Fire Started:

J. Date Fire Contained: not yet

K. Suppression Cost: $1,340,000 as of 9/16/2006

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 1.84
2. Fireline seeded (miles): 0
3. Other (identify):

M. Watershed Number: 1701021101

N. Total Acres Burned: 1840
NFS Acres(X) Other Federal ( ) State ( ) Private ( )

O. Vegetation Types: SubAlpine fir and spruce on cool Moist Northeast aspects and on warm moist southwest aspects

P. Dominant Soils: Andeptic Cryoboralfs forming in ash over glacial till

Q. Geologic Types: Siyeh Limestone

R. Miles of Stream Channels by Order or Class: Class 1;2¾ miles Class 2; 3 ¾

S. Transportation System

Trails: 3 miles Roads:5 miles all below the fire

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 736 (low) 450 (moderate) 654 (high)

B. Water-Repellent Soil (acres): 500

C. Soil Erosion Hazard Rating (acres):
800 (low) 1000 (moderate) 40 (high)

D. Erosion Potential: 3.4 tons/acre

E. Sediment Potential: 1.6 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

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

C. Equivalent Design Recurrence Interval, (years): 100

D. Design Storm Duration, (hours): 2

E. Design Storm Magnitude, (inches):

F. Design Flow, (cubic feet / second/ square mile): 36 - 47

G. Estimated Reduction in Infiltration, (percent): 40

H. Adjusted Design Flow, (cfs per square mile): 70 - 88

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

It is predicted that throughout most of the area, increased side slope soil erosion and deposition of such materials into stream channels (sedimentation) will be low. Sediment that enters a stream will not likely degrade fisheries habitat due to the abundance of A2 and A3 channel types present. Removal of the soil surface organic matter layer by the fire has resulted in a decreased capacity for surface soil moisture storage throughout the burn area. This reduction is significant on areas that received high and moderated burn intensities; consequently, increased peak stream flows are predicted from such areas until sites are revegetated and soil organic layers are re-established. In general, the magnitude of predicted increased flow due to the fire across the study area is not a major concern. As was the

case for sediment, increased flows will most likely create few instream channel problems throughout the burn area due to the predominance of A2 and A3 channel types.

- Threats to Long-term Soil Productivity and Ecosystem Integrity

  Field observations of the Holland Peak Fire Area revealed that the burn severity was primarily within a low to moderate range, with concentrated areas of high burn severity. The fire pattern was mixed across the area reflecting no strong relation to particular landform setting.

  Low soil burn severity sites will re-vegetate rapidly and have very low potential for soil erosion. Most of the moderate and high burn severity sites occurred in multi-storied stands and stands with shrubby undergrowth. Most moderate soil burn severity sites are expected to re-vegetate though it may take two growing seasons to achieve 50% effective ground cover (the point at which surface erosion begins to be reduced). High soil burn severity sites will be the slowest to re-vegetate.

  Soils representative of all soil burn severity classes were examined in the field to assess post-fire hydrophobic (water-repellent) conditions. Field observations showed that post-fire hydrophobic conditions were slight on low soil burn severity and unburned areas.

  Bare soil within the burned area and fire suppression activities has provided a natural avenue of ingress to a host of noxious weed species that are currently found in moderate to heavy populations on the road system that crosses below the burned area in the Flathead National Forest.

  The spread of noxious weeds is expected to increase within the fire area, especially along roads and trails, moderate and sever burned areas or where fire suppression activities disturbed the existing weed seed bank and opened uninfested lands to invasion by adjacent weed populations. A great degree of concern regarding potential noxious weed spread is shared by all land managers/owners involved including Flathead Forest, Missoula County and private landowners. Those species of greatest concern include spotted knapweed (Centaurea maculosa), St. Johns wort/Goatweed (Hypericum perforatum), Orange hawkweed (Hieracium aurantiacum) and Canada thistle (Circium arvense). All are Montana State and Flathead County listed noxious weed species. There are isolated infestations of Common tansy (tanacetum vulgare) as well. Tansy ragwort (Senecio jacobaea) has been located in the adjacent Moose fire area. The Kootenai and Flathead National Forests have spent many dollars trying to control tansy that was introduced into this area by the Little Wolf Fire in 1994. Existing NEPA documents have assessed these actions and RODs are in place.

- Threats to Life and Property

  Field review within the burn area confirm that there is asafety risk from hazard trees along Trail 192 within the fire area. Trail integrity was affected by the fire and also poses a threat to users.

  The existing road systems that lies below the burned area has three stream crossings that have been affected by the fire. Field investigations and calculations of expected stream flows indicate that these culverts have small risk to life or property. The culvert on Buck Creek has a slightly higher risk than others because more of its drainage basin burned. However, this culvert will be removed in amid-October by another project. The culverts associated with South Fork Rumble and “Deer” Creeks have a small portion of their basins burned with moderate and high intensity. In addition, both these drainages are on the edge of the fire and for the most part only one half of the drainage burned.

B. Emergency Treatment Objectives:

- Mitigate effects on long-term soil productivity and ecosystem function/integrity by spraying existing noxious weed infestations,
- Provide for public health and safety by removing hazard trees along trail 192 and by restoring the integrity of trail 192.

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

Land 100 % Channel ___ % Roads/Trails 80___ % Protection/Safety 80___ %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80		
Channel			
Roads/Trails			
Protection/Safety			

E. Cost of No-Action (Including Loss): **$150000**

F. Cost of Selected Alternative (Including Loss): **$12285**

G. Skills Represented on Burned-Area Survey Team:

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

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H. **Treatment Narrative:**

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

Land Treatments:

Weed Treatment

Treat existing populations of noxious weeds (mostly spotted knapweed and St. Johnswort) to prevent their spread into adjacent burned areas. Experience in the Swan Valley has shown that the risk of weed spread is high. We would use BAER fumds to treat only the

Channel Treatments:

No Channel Treatements are proposed at this time.

Roads and Trail Treatments:

Trails
There is a need for rehabilitation and hazard mitigation activities on the Foothills Trail as a result of the Holland Peak Fire. Trail 192 passes through the burn area in a north to south alignment generally following a contour from Cooney Lookout south to the Holland Lake area. The trail is popular with hikers, equestrian people and mountain bikers. Investigation indicates that trail drainage structures burned in the fire and there is inadequate drainage to handle post fire runoff.

The proposed treatments would replace burned drainage structures and increase the number of drainage structures in response to expected increased runoff. The trail system crosses streams that are potential bulltrout habitat.

Trail Hazard Tree Treatment
In order to provide for human health and safety we are proposing to treat 200 hazard trees along 3 miles of trail.

Roads

None identified

Structures:

No treatments are proposed at this time.

Channel Treatments:

None identified

Protection/Safety Treatments: Numerous trees pose a hazard for trail hikers. We plan to cut 200 hazard trees along the trail to reduce the hazard to users.

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

Monitor known and high potential infestation sites for noxious weed species in the burned area; determine need and extent of control treatments required. Scout all fire suppression related disturbance as well as areas of high burn severity (as specified in the weed monitoring specification) where weed invasion potential is substantial and control treatments may be required; accurately map treated and new noxious weed populations using GPS and GIS. In addition, monitor the effectiveness of any treatments we are approved for. Establish photo plots for documentation.

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

			NFS Lands				Other Lands			All
		Unit	# of		Other	# of	Fed	# of	Non Fed	Total
Line Items	**Units**	**Cost**	**Units**	**BAER $**	**$**	**units**	**$**	**Units**	**$**	**$**
A. Land Treatments										
Noxious weed treatment	5	127	5	$635	$0		$0		$0	$635
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$635	$0		$0		$0	$635
B. Channel Treatments										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Channel Treat.				$0	$0		$0		$0	$0
C. Road and Trails										
Trail drainage	miles	2000	3	$6,000	$0		$0		$0	$6,000
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$6,000	$0		$0		$0	$6,000
D. Protection/Safety										
Trail Hazard Tree Removal	trees	20	200	$4,000	$0		$0		$0	$4,000
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$4,000	$0		$0		$0	$4,000
E. BAER Evaluation										
				---			$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				---	$0		$0		$0	$0
F. Monitoring (weeds)										
Monitor 5 acres treated	5	30	5	$150	$0		$0		$0	$150
Monitor 30 acres distrurbed	50	30	50	$1,500			$0		$0	$1,500
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$1,650	$0		$0		$0	$1,650
G. Totals				$12,285	$0		**$0**		**$0**	**$12,285**
Previously approved										

PART VII - APPROVALS

1. _____ _____
Forest Supervisor (signature) Date

2. _____ _____
Regional Forester (signature) Date