Date of Report: October 8, 2009

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: Lily Lake

B. Fire Number: MT-BDF-000041

C. State: Montana

D. County: Beaverhead

E. Region: Northern

F. Forest: Beaverhead-Deerlodge

G. District: Wisdom

H. Fire Incident Job Code: P1E49W

I. Date Fire Started: 08/13/2009

J. Date Fire Contained:

K. Suppression Cost:

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline rehabilitated (miles):

2. Fireline seeded (miles): To be determined
3. Other (identify):___

M. Watershed Number:

N. Total Acres Burned: 2,000

NFS Acres (X) Other Federal () State (0) Private ()

O. Vegetation Types: Subalpine fir/spruce 10%; lodgepole pine 63%; white bark pine 25%; grassland 2%

P. Dominant Soils: Soil within the Lily Creek fire perimeter are derived mainly from granitic parent materials. The dominant soils are classified as Typic Eutrocryepts with sandy loam and loam surface textures.

Q. Geologic Types: -weathered and eroded granite and quartzite

R. Miles of Stream Channels by Order or Class: na

S. Transportation System

Trails: 3 miles Roads: 0 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 1,200 **(low)** 400**(moderate)** 200 **(high)**

B. Water-Repellent Soil (acres): 1300 acres (areas of moderate and high burn severity)

C. Soil Erosion Hazard Rating (acres): high on areas of high burn severity

D. Erosion Potential: 10.4 tons/acre the first year (based on calculations in ERMiT)

E. Sediment Potential: N/A

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 5

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

C. Equivalent Design Recurrence Interval, (years): 2 yr.

D. Design Storm Duration, (hours): .5

E. Design Storm Magnitude, (inches): 0.5" in 30 min.

F. Design Flow, (cubic feet / second/ square mile): 40

G. Estimated Reduction in Infiltration, (percent): 30% (short term~2 years)

H. Adjusted Design Flow, (cfs per square mile): 80 (short term~2 years)

This part of the report was not completed since watershed emergency conditions for the Lily fire did not occur. Overall the watershed impacts of the Lily Lake fire are very minor since the fire has only a few areas of high intensity burn generally upslope from perennial streams or lakes. Within the estimated 2000 acres fire perimeter, the fire was judged to be about 10% high intensity burn, 20% moderate intensity burn, and 70% low intensity or unburned. Most of the fire is likely low severity burn with perhaps a few acres of moderate burn severity within the high burn intensity areas. The Watershed emergency was limited to trail drainage, hazard tree removal along trails, and weed monitoring and treatments.

PART IV - HYDROLOGIC DESIGN FACTORS

None needed for trail waterbar construction/reconstruction or weed control.

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

No heritage resources are at risk in this area. There are no risks to fisheries treatable by BAER.

Trails: Within the Lily Lake fire perimeter, 3.0 miles of NFS system trails have been burned over with low to high intensity wildfire. The trail system provides access for year around recreation opportunities, cattle allotments, hunting opportunities, fire suppression, wildlife surveys, and culturally significant sites.

Some of these trail miles occur on side slopes that are susceptible to erosion events during normal runoff years. A fire event such as the Lily fire makes the trails system susceptible to washouts, gullying, and rilling during the upcoming fall and spring runoff events. The increased erosion associated with the fire event will the trail resource within the fire area.

Noxious weeds/invasive plants: Noxious weeds/invasive plant species pose a threat to the composition, structure, and function of native plant communities. Depending on burn severity and site potential, fire as a disturbance process has the potential to greatly exacerbate infestations of certain noxious weed species. Soil disturbances resulting from all levels of burn intensities in a wildfire incident and fire suppression related activities (hand lines, structure protection, drop spots, camps, etc.) that cause vegetation and soil alteration provide the optimum conditions for noxious weed invasion. Trail corridors are vulnerable to noxious weed invasion. Burning removes existing vegetation, increasing the prevalence and spread of existing weed populations.

The potential is moderate for accelerated expansion of noxious weed species within the fire perimeter, especially along trails. Moderate to high intensity burn acres provide ideal seedbeds for noxious weed establishment.

Hazard Trees: Hazard trees occur on the 3 miles of system trail within the Lily Lake fire. Pre-fire density of stems was high and many areas are now unsafe as a result.

B. Emergency Treatment Objectives:

Land Treatment:

Trail Treatments - Objective of the trail treatments is to protect these travel routes from the consequences of post-fire flow events likely in the first two years after the fire. Without treatment, these sites and routes will be at increased risk of washing out, compromising the investment in the travel route. The detrimental post-fire effects on the trails system can be mitigated with the proposed installation of drainage structures (i.e water bars and drain dips).

Invasive Plant Species: Assess and treat the fire effects to the forest vegetation resource, including sensitive plant species, and identify values at risk associated with vegetation changes and losses. Determine rehabilitation and monitoring needs supported by specifications to aid in vegetative recovery and watershed stabilization efforts. Provide management recommendations to assist in vegetative recovery, prevent noxious weed spread into burned areas, and protect or restore species of concern.

Hazard Trees: Protect the BAER workers from dangerous trees near trails or roads on which they are working. Only trees presenting clear and present danger will be removed.

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

Land **na** % Channel ___ % Roads/Trails **80** % Protection/Safety **80** %

D. Probability of Treatment Success: na

G. Skills Represented on Burned-Area Survey Team on 10/2/2009

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

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H. **Treatment Narrative:**

Land Treatments:

Trail Treatments: Trail drainage installation will be in accordance with EM-7720-102 standard specification for construction of trails. Three miles of Trail #3380 within the Lily Lake fire perimeter will be treated.

Noxious Weed Detection and Treatment: Treat noxious weed/invasive species infestation sites within the burned area to reduce the population and help prevent the expansion of weeds into newly disturbed sites. Chemical methods will be used to help prevent the spread and establishment of noxious weeds, especially within the moderate- to high-intensity burn areas. The main focus will be the 3 miles of Trail #3380 within the Lily Lake fire perimeter.

Protection/Safety Treatments: The removal of hazard trees on 3 miles of Trail #3380 within the Lily Lake fire perimeter will be treated to provide a safe working environment for BAER trail drainage and weed implementation crews.

I. **Monitoring Narrative: na**

Part VI – Emergency Stabilization Treatments and Source of Funds Initial Request

			NFS Lands				Other Lands			All
		Unit	# of		Other	# of	Fed	# of	on Fe	Total
Line Items	**Units**	**Cost**	**Units**	**BAER $**	**$**	**units**	**$**	**Units**	**$**	**$**
A. Land Treatments										
Noxious Weeds Detection &Treatments	acres	500	9	$4,500	$0		$0		$0	
Subtotal Land Treatments				$4,500	$0		$0		$0	
B. Channel Treatments										
Insert new items above this line!				$0	$0		$0		$0	
Subtotal Channel Treat.				$0	$0		$0		$0	
C. Road and Trails										
Trail drainage improvements	miles	1333.3	3	$8,000			$0		$0	
Insert new items above this line!				$0	$0		$0		$0	
Subtotal Road & Trails				$8,000	$0		$0		$0	
D. Protection/Safety										
Trailhead warning signs	ea	250	2	$500						
Insert new items above this line!				$0	$0		$0		$0	
Subtotal Structures				$500	$0		$0		$0	
E. BAER Evaluation										
Team evaluation	ea	5,000	1	$5,000	$5,000		$0		$0	
Lily Fire BAER adminstration	ea	2000	1	$2,000						
	EA			---	$0					
Insert new items above this line!				---	$0		$0		$0	
Subtotal Evaluation				$7,000	$5,000		$0		$0	
F. Monitoring										
Insert new items above this line!				$0	$0		$0		$0	
Subtotal Monitoring				$0	$0		$0		$0	
G. Totals				$20,000	$5,000		**$0**		**$0**	
Previously approved										
Total for this request				**$20,000**						

PART VII - APPROVALS

1. _____ _____
   Forest Supervisor (signature) Date

2. _____ _____
   Regional Forester (signature) Date