Date of Report: September 18, 2007

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: Pattengail Creek

B. Fire Number: MT-BDF-048

C. State: Montana

D. County: Beaverhead

E. Region: Northern

F. Forest: Beaverhead-Deerlodge

G. District: Wise River, Wisdom

H. Fire Incident Job Code: P1DQA4

I. Date Fire Started: 07/13/2007

J. Date Fire Contained: 35% as of Sept 9

K. Suppression Cost: $3.5 mm

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline rehabilitated (miles): In progress (3.7 miles total)

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

M. Watershed Number: 100200040604, 100200040606, 100200040608, 100200040806, 100200040905, 100200040906, 100200040907

N. Total Acres Burned:
NFS Acres (15,307) Other Federal () State () Private ()

O. Vegetation Types: Subalpine fir/spruce (26%); lodgepole pine forest (33%); mixed subalpine conifer (28%); other forested (23%).

P. Dominant Soils: Soils within the Pattengail fire perimeter are derived mainly from granitic and quartzite parent materials. The dominant soils are classified as Typic Eutrocryepts and Dystrocryepts 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: 1st: 23 miles; 2n:d 9 miles; 3rd:3 miles

S. Transportation System

Trails: 16 miles Roads: 0 miles

PART III - WATERSHED CONDITION

A. Burn Intensity____ Burn Intensity rates the effect of fire on vegetation

Ownership	Class 1 - Unburned	Class 2 - Low	Class 3 - Moderate	Class 4 - High	Grand Total
Beaverhead-Deerlodge National Forest	5,734	1,328	3,782	4,463	15,307
Total	5,734	1,328	3,782	4,463	15,307
%	38	9	25	28	100

Burn Severity (acres): All soils are rated at "Low" soil burn severity for the Rat Creek Fire.

B. Water-Repellent Soil (acres):15,307 (all soils within the perimeter are water repellent, either due to fire or drought).

C. Soil Erosion Hazard Rating (acres): 1,268 acres (low) 3,287 acres (moderate and high)

D. Erosion Potential: 7.6 tons/ac on the average

E. Sediment Potential: 0.04 tons/acre

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 2 grass shrub, 20-50 conifers

B. Design Chance of Success, (percent): 90

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

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 1.3

F. Design Flow, (cubic feet/second/square mile): 15

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

H. Adjusted Design Flow, (cfs per square mile): 30

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Trails: Within the Pattengail fire perimeter, five miles of NFS system trails have been burned over by a moderate to high intensity wildfire. This is out of a total of 16 miles. The trail system provides access for year around recreation opportunities, cattle allotments, hunting opportunities, fire suppression, wildlife surveys, and culturally significant sites.

These trail segments occur on steep side slopes that are susceptible to erosion events during normal runoff years. A large fire event such as the Pattengail 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 increase the risk to ecological health, the trail resource, and stream sedimentation within the fire area. Only trails with steeper slopes (>20%), and high fire intensity are candidates for emergency treatment. Other trails may be at risk of later failure, but they are addressed in longer-term forest restoration activities.

Noxious weeds/invasive plants: Noxious weeds/invasive plant species pose a serious 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. Road and trail corridors, as well as trailheads and campgrounds, are extremely vulnerable to noxious weed invasion. Burning removes existing vegetation, increasing the prevalence and spread of existing weed populations.

The potential for accelerated expansion of noxious weed species within the fire perimeter, especially along roads is high. Moderate to high intensity and severity burn acres provide ideal seedbeds for noxious weed establishment with little competition from native vegetation.

Other: Range allotments are not at risk. There are no roads in this wildfire nor are any at risk outside its perimeter. There are no known weed infestations in the burned area. No heritage resources are at risk in this burned area. There are no risks to fisheries that are treatable by BAER.

Hazard Trees: There are hazard trees on this fire. Pre-fire density of stems was high and many areas are now unsafe as a result of stand-replacing burn intensity.

B. Emergency Treatment Objectives:

Trails: Protect travel routes and downstream aquatic systems 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 risk of washing out, losing the investment in the travel route while also contributing sediment to the aquatic ecosystem. The detrimental post-fire effects on the trails system can be mitigated by installing drainage structures (i.e water bars and drain dips).

Land Treatment:

Noxious Weed/Invasive Species Detection: Monitor noxious weed treatment, as described in the specification sheet, in the first year following chemical or biological treatment to determine success of weed control. Monitoring would also include looking for new weed infestations and prescribing appropriate treatments. Though there are no known infestations now, fire fighting activities and increases in ATV use through burning of natural barriers could easily spread weeds; hence the monitoring proposal.

Hazard Trees: The objective of the hazard tree treatments is to protect the BAER workers from dangerous trees near trails 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 **80** % Channel ___ % Roads/Trails **80** % Protection/Safety **90** %

D. Probability of Treatment Success:

	Years after Treatment		
	1	3	5
Land	**80**	**90**	
Channel			
Roads/Trails	**8**	**90**	
Protection/Safety	**95**	**100**	

E. Cost of No-Action (Including Loss): Because of low treatment totals, no formal economic analysis was completed. However, it is likely that all treatments are highly justified.

F. Cost of Selected Alternative (Including Loss):

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Henry Shovic

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H. **Treatment Narrative: See the BAER Treatment map for locations of treatments.**

Land Treatments:

Trail Treatments: The installation will be in accordance with EM-7720-102 standard specification for construction of trails. An average of four waterbars will be constructed per mile on the affected trails.

Noxious Weed/Invasive Species Detection: Monitor noxious weed treatment, as described in the specification sheet, in the first year following chemical treatment to determine success of weed control. Monitoring would also include looking for new weed infestations and prescribing appropriate treatments.

Protection/Safety Treatments: The removal of hazard trees on all associated miles of trails is required to provide a safe working environment for BAER crews if they are to accomplish the work necessary to mitigate post-fire erosion.

I. **Monitoring Narrative:**

The monitoring specified is to be completed by a three-individual team of resource specialists for a one day review. Its purpose is to determine treatment completion and effectiveness.

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

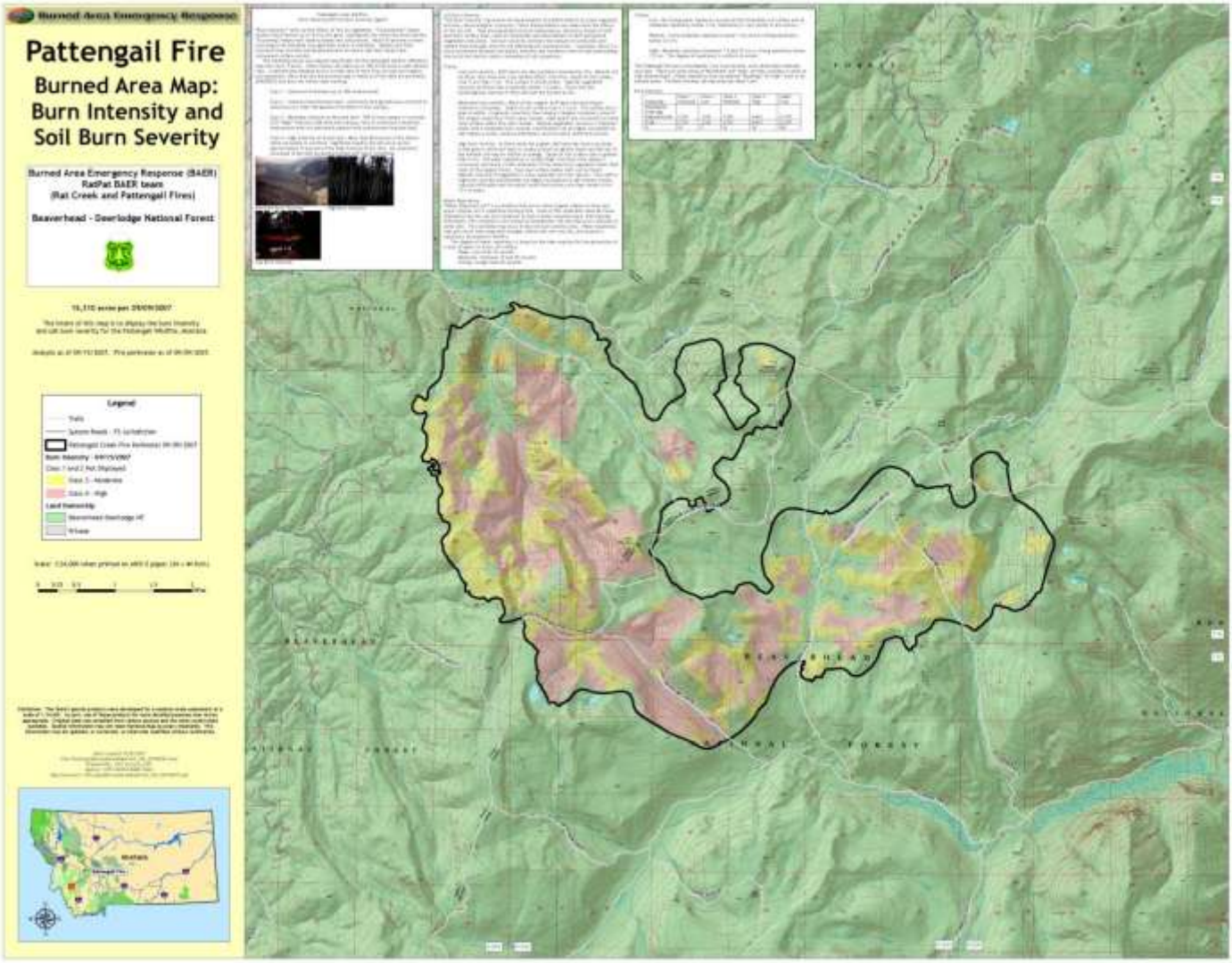
			NFS Lands				Other Lands			All
		Unit	# of		Other	# of	Fed	# of	Non Fed	Total
Line Items	**Units**	**Cost**	**Units**	**BAER $**	**$**	**units**	**$**	**Units**	**$**	**$**
A. Land Treatments										
				$0	$0		$0		$0	
Noxious Weeds/Invasive Detection	acres	215	10	$2,150	$0		$0		$0	
Subtotal Land Treatments				$2,150	$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 head caution signs	ea	240	8	$1,000			$0		$0	
Trail drainage improvements	miles	400	5	$2,000			$0		$0	
				$0			$0		$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	
Subtotal Road & Trails				$3,000	$0		$0		$0	
D. Protection/Safety										
Hazard Tree Treatments	miles	1000	5	$5,000						
Insert new items above this line!				$0	$0		$0		$0	
Subtotal Structures				$5,000	$0		$0		$0	
E. BAER Evaluation										
Team evaluation	ea	1	7100	$7,100	$7,100		$0		$0	
	EA			---	$0					
Insert new items above this line!				---	$0		$0		$0	
Subtotal Evaluation				$7,100	$7,100		$0		$0	
F. Monitoring										
Local Review of treatments 5 specialists	LS	1	3000	$3,000						
Insert new items above this line!				$0	$0		$0		$0	
Subtotal Monitoring				$3,000	$0		$0		$0	
G. Totals				$20,250	$7,100		**$0**		**$0**	
Previously approved										
Total for this request				**$20,250**						

PART VII - APPROVALS

1. /s/ Peri R. Suenram (for) September 19, 2007
Forest Supervisor (signature) Date

2. _____ _____
Regional Forester (signature) Date

Map


Burned Area Emergency Response
Pattengail Fire
Burned Area Map:
Burn Intensity and
Soil Burn Severity
Burned Area Emergency Response (BAER)
RatPat BAER team
(Rat Creek and Pattengail Fires)
Beaverhead - Deerlodge National Forest
Legend