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

Date of Report: 9-18-06

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 #1
[ ] 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: **Green Canyon Fire**

B. Fire Number: **IDEIS000044**

C. State: **Idaho**

D. County: **Power**

E. Region: **04 - Intermountain**

F. Forest: **14 - Sawtooth**

G. District: **01 Minidoka**

H. Fire Incident Job Code:**PNC5VP**

I. Date Fire Started: **September 3, 2006**

J. Date Fire Contained: **September 10, 2006**

K. Suppression Cost: **$1,439,000 (est.)**

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): **7 miles**
2. Fireline seeded (miles): **0 miles**
3. Other (identify): **8 miles dozer lines**

M. Watershed Number:

N. Total Acres Burned: **2828**
NFS Acres (**1915**) Other Federal (**107**) State ( ) Private (**806**)

O. Vegetation Types: **The burned area contains several vegetation types including: Cool dry Douglas-fir, Moist Douglas-fir with pinegrass and geyer's sedge understories, Juniper woodlands, and sage/grasslands dominated by mountain big sagebrush and montane shrub community. Pockets of aspen can be found scattered throughout the burned area.**

P. Dominant Soils: **NFS Lands: Depositional volcanic or limestone sediments, weakly dissected slopes with sagebrush and grass. Soil Association: fine loamy mixed Typic Argiborolls and coarse loamy mixed Lithic Argiborolls, 2 to 60 percent slopes; (45%) – Typic Argiborolls, fine loamy mixed (silt loam over gravelly silty clay loam); (20%) – Lithic Argiborolls, coarse loamy mixed (gravelly loam over gravelly clay loam); Depositional volcanic or limestone sediments, strongly dissected slopes with conifers. Soil Association: fine loamy mixed Argic Cryoborolls and fine loamy mixed frigid Typic Argiborolls, 10 to 60 percent slopes; (45%) – Argic Cryoborolls, fine loamy mixed (gravelly loam over very gravelly clay loam); (25%) – Typic Argiborolls, fine loamy mixed (silt loam over gravelly silty clay loam); BLM/Private Lands: (23%): Ricrest-Ridgecrest complex, very steep loam, (7%): Hymas-Wahtigup-Ridgecrest complex, very steep gravelly loam; (5%): Newdale silt loam, 12 to 20 percent slopes silt loam; (5%): Rexburg silt loam, 4 to 12 percent slopes silt loam**

Q. Geologic Types: **Starlight Formation: primarily volcanic ash (welded tuff) comprised of intrusive vitrophyre and silicic porphyry. Great Blue Limestone: developed from marine sediments.**

R. Miles of Stream Channels by Order or Class:
First Order: **2.75 miles** Second Order: **1.5 miles** Third Order: **0 miles**

S. Transportation System
Trails: **0** miles Roads: **3.3** miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): **1606** (low) **435**(moderate) **373** (high)

Burn Severity by Ownership					
	Low	Moderate	High	Unburned	Total
NFS	921	370	210	414	1,915
BLM	107	0	0	0	107
Private	578	65	163	0	806
Grand Total	1,606	435	373	414	2,828

B. Water-Repellent Soil (acres) : **576**

C. Soil Erosion Hazard Rating (acres): **307** (low) **2338** (moderate) **183** (high)

Soil Erosion Hazard Rating by Ownership			
	Low	Moderate	High
NFS	0	1,843	72
BLM	107	0	0
Private	200	495	111
Grand Total	307	2,338	183

D. Erosion Potential: **1** tons/acre

E. Sediment Potential: **774** cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

B. Design Chance of Success, (percent): **80-90**

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

D. Design Storm Duration, (hours): **1**

E. Design Storm Magnitude, (inches): **0.75**

F. Design Flow, (cubic feet / second/ square mile): **7.3**

G. Estimated Reduction in Infiltration, (percent): **13%**

H. Adjusted Design Flow, (cfs per square mile): **14**

PART V - SUMMARY OF ANALYSIS

Background: The Green Canyon Fire burned approximately 2,828 acres between September 5 and September 10, 2006. The fire started several airmiles south of Rockland, Idaho on the Minidoka Ranger District from human causes. Engines were dispatched to respond to the initial report and reported the fire to be 50 to 100 acres. Operational resources assigned included: 2 Type 1 crews, 1 Type 2 crew, 12 engines, 1 Type 1 helicopter, 1 Type 3 helicopter, 4 dozers, and miscellaneous overhead. On September 8, 2006 late afternoon thunderstorms developed over the fire and within the Sublett Division. Wetting rain was received on the fire. A 200-acre burnout was also used to secure the southwest flank of the fire.

A. Describe Critical Values/Resources and Threats:

Summary of Issues.

1) Human Life and Safety

   Post-fire watershed conditions threaten the life and safety of visitors using the Green Canyon Road (FR #569). This road is located in a narrow, canyon bottom adjacent to high and moderate severity burned slopes. Normal storm frequencies and magnitudes can more easily initiate rill and gully erosion on the severely burned, over-steepened slopes. These “minor” events can activate floods or debris flows in the smaller tributary drainages that intersect this road, putting the safety of users at risk.

2) Property

   Existing drainage structures in roads (rolling dips and ditches) are not currently designed to accommodate increased runoff and accelerated soil erosion. Failure of these facilities can increase the risk to human life and safety.

3) Critical Natural Resources

   Noxious Weeds - Known noxious weed populations (Canada thistle and Cheatgrass) occur within the burned area and along travel routes within and adjacent to the burned area. There is a high probability that noxious weed seeds were transported into the area via fire fighters, equipment, and vehicles that were used in other areas on wildfire suppression activity within known noxious weed locations. The burned area, now lacking desired vegetation that can normally out-compete noxious weeds, supports unfavorable conditions for expansion of nearby populations of noxious weeds and other invasive species (Cheatgrass).

B. Emergency Treatment Objectives:

The goal of the burned area emergency rehabilitation is to:

- Reduce threats to personal injury and/or human life of visitors.
- Prevent the spread of invasive plant species into new locations.

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

Land **NA** % Channel **NA** % Roads/Trails **100** % Protection/Safety **100** %

D. Probability of Treatment Success

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

E. Cost of No-Action (Including Loss): **$89,122**
The values at risk directly lost through No-Action include: Damage to 3.1 miles of the Green Canyon Road (FR #569) and loss of soil productivity (as impacted by noxious weeds expansion) in high severity burn (373 acres) areas.

F. Cost of Selected Alternative (Including Loss): **$14,879**

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: **John Chatel, Fisheries Biologist, Sawtooth National Forest**

Email:**jchatel@fs.fed.us** Phone:**208-737-3218** FAX: **208-737-3236**

Team Members:
Terry Hardy, Forest Soil Scientist, Boise National Forest
Kim Pierson, Forest Botanist, Sawtooth National Forest
Bill Goodman, Hydrologist, Dixie National Forest
Lucas Phillips, Range Staff, Minidoka Ranger District, Sawtooth National Forest
Shawn Robnett, Engineer, Sawtooth National Forest

H. **Treatment Narrative:**

Land Treatments:

Forest personnel will treat existing infestations of noxious weeds that have resprouted in the burned area. This allows for the immediate treatment and eradication (i.e. hand pulling, herbicide application, biological agent control) of known infestations.

Location (Suitable) Sites: Existing known weed infestations within and directly adjacent to the Green's Canyon burned area on Forest (specifically within riparian corridors including Green Canyon, Cliff Canyon, and Werner Canyon).

Design/Construction Specifications:

1) Select herbicide, application rate, and application timing based on specific weed being treated, and access to the location of the infestation.
2) Consideration for TES (listed species) habitat and sensitivity when selecting appropriate herbicide.

Purpose of Treatment: Prevent establishment of new infestations, prevent spread of existing infestations, and prevent increase in weed density in existing infestations.

Treatment areas are identified as:

- Treated areas of noxious weeds within Green Canyon Burned burned area
- Riparian coordiors within the Green Canyon Burned Area

Channel Treatments: None

Roads Treatments

Purpose of Treatment: The purpose of these treatments is to restore road drainage and decrease the chance of failure in a narrow canyon with no turnouts. Failure of this road will increase the risk to human life and safety.

General Description: The emergency stabilization recommendations for the section of Green Canyon Road located in the fire perimeter are as follows:

1) Reconstruct existing drain dips per standard.
2) Pull the berms located along the edge of the road back over the road surface.
3) Construct new drain dips down grade of each intersecting drainage.

Location (Suitable) Sites: The entire length of the Green Canyon Road located within the fire perimeter.

Design/Construction Specifications: Survey, design, and contract administration by USFS.

Protection/Safety Treatments:

Road Hazard Signs

Purpose of Treatment: Ensure maximum visibility and readability of signs warning visitors of the hazards to human life and safety that exist in burned area. Signs are intended to emphasize the increased hazards from falling burned trees, and potential for debris flows and flooding.

General Description: Install signs at all roads that enter or the burned area.

Location (Suitable) Sites: (see map in BAER report)

1) One hazard sign at Forest Boundary on Green Canyon Road that accesses the burned area.
2) One hazard sign at Forest Boundary on Warner Canyon Road that accesses the burned area

Design/Construction Specifications:

1) Road Signs: Reflectorized wood backed signs (2' x 2') with letter size according to USFS Handbook specifications mounted on 4" x 4"x 8' posts at heights and distances mandated in USFS Handbook.

I. **Monitoring Narrative:**

Road Storm Patrols - The purpose of the monitoring is to evaluate effectiveness of the emergency stabilization treatments completed on Green Canyon Road (FR #569) and to identify additional work needed to maintain and/or repair treatments. Engineering personnel will survey Green Canyon Road three times. Two trips will be during or after high intensity storm events and one trip after the start of spring snow melt along the entire length of the Green Canyon Road (3.1 miles) within the fire perimeter.

Noxious Weed Monitoring - The purpose of Noxious Weed Monitoring is early detection of noxious weed introduction in the burned area and suppression sites as a result of suppression or wildfire activity. Early detection of noxious weed infestations will minimize the spread and initiate rapid treatment to new infestations associated with fire suppression/fire effects. Noxious weed species and invasives found during the monitoring will be treated at time of identification.

Authorized individuals will conduct all monitoring to insure compliance with specific, detailed requirements (intensity, frequency, funding, timing, length of time, locations, etc). Monitoring will be conducted following established R4 Monitoring methods. Monitoring will be done at intensity and frequency to identify spread or occurrence of weed infestations following the fire event and recovery. Monitoring will be accomplished by a two person crew or contract crew over a three day period. Initial monitoring will take place after the fire (beginning late Summer/Fall of 2006). Additional monitoring may be requested depending what is found within the burned area.

Monitoring areas are identified as:

- Green Canyon, Warner Canyon, and Cliff Canyon Roads
- Drop points - 10, 20, 30, 40, 50, 60
- Dozer Lines

Part VI – Emergency Stabilization Treatments and Source of Funds Interim 1

			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	acres	125	10	$1,250	$0		$0		$0	$1,250
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$1,250	$0		$0		$0	$1,250
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										
Construct drain dip	each	180	15	$2,700	$0		$0		$0	$2,700
recontruct drain dip	each	57	4	$228	$0		$0		$0	$228
					$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$2,928	$0		$0		$0	$2,928
D. Protection/Safety										
Hazard Warning Signs	each	350	2	$700	$0		$0		$0	$700
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$700	$0		$0		$0	$700
E. BAER Evaluation										
Assessment Team	Report	7,478	1	---			$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				---	$0		$0		$0	$0
F. Monitoring										
Road Storm Patrols	each	700	3	$2,100	$0					$2,100
Noxious Weeds	acres	132	15	$1,980	$0		$0		$0	$1,980
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$4,080	$0		$0		$0	$4,080
G. Totals				$8,958	$0		**$0**		**$0**	**$8,958**
Previously approved										

PART VII - APPROVALS

1. /s/ Douglas E. Gochnour — 9/18/2006
   Forest Supervisor (signature) — Date

2. /s/ William P. LeVere for — 9/21/2006
   Regional Forester (signature) — Date