

Date of Report: 10/17/2018

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

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: Stewart Creek

B. Fire Number: ID-STF-000306

C. State: Idaho

D. County: Camas

E. Region: 4

F. Forest: Sawtooth NF

G. District: Fairfield RD

H. Fire Incident Job Code: P4L3T318/0414

I. Date Fire Started: August 20, 2018

J. Date Fire Contained: October 15, 2018

K. Suppression Cost: Last report the total was above \$11.2 million.

L. Fire Suppression Damages Repaired with Suppression Funds

 1. Fireline waterbarred (miles): Handline: 3, Dozer Line: 1.5 (*All Distances Located on FS Land*)
 2. Fireline seeded (miles): 1.5
 3. Other (identify):

M. Watershed Number:

Subwatershed Name	Subwatershed #	Total Acres	Acres Burned	% HUC Burned
Upper South Fork Lime Creek	170501130603	12,256.68	5,380.27	43.90%
Corral Creek	170402200204	16,576.64	23.98	0.14%
Middle Fork Lime Creek	170501130602	11,006.49	742.56	6.75%

N. Total Acres Burned: 6,147

NFS Acres (4,780) Other Federal (1,016) State (351) Private (0)

O. Vegetation Types:

Vegetation Type	Burn Severity	Acres
Alpine Vegetation	Unburned/Very Low	22
Aspen	Unburned/Very Low	102
Aspen/Conifer	Unburned/Very Low	46
Barren/Sparse Vegetation	Unburned/Very Low	6
Conifer/Aspen	Unburned/Very Low	180
Douglas-fir	Unburned/Very Low	1021
Forest Shrubland	Unburned/Very Low	31
Grassland	Unburned/Very Low	12
Lodgepole Pine	Unburned/Very Low	17
Mountain Big Sagebrush	Unburned/Very Low	426
Mountain Shrubland	Unburned/Very Low	67
Riparian Woody	Unburned/Very Low	22
Alpine Vegetation	Low	4
Aspen	Low	168
Aspen/Conifer	Low	63
Conifer/Aspen	Low	126
Douglas-fir	Low	911
Forest Shrubland	Low	55
Grassland	Low	3
Lodgepole Pine	Low	1
Mountain Big Sagebrush	Low	560
Mountain Shrubland	Low	172
Riparian Woody	Low	24
Aspen	Moderate	99
Aspen/Conifer	Moderate	31
Conifer/Aspen	Moderate	35
Douglas-fir	Moderate	242
Forest Shrubland	Moderate	64
Mountain Big Sagebrush	Moderate	213
Mountain Shrubland	Moderate	126
Riparian Woody	Moderate	6
Aspen	High	1
Douglas-fir	High	2
Forest Shrubland	High	1

P. Dominant Soils: Soils in the Stewart Creek burn perimeter typically have weathered, fractured, and eroded to form well-drained, non-cohesive soils with little soil horizon development, and moderate to low fertility. The soils range from 20 to 60 inches deep, with sandy loam or loamy sandy surface soil textures having 15 to 35 percent gravel. Soil textures and coarse fragments contribute to moderately high infiltration rates with low to moderate runoff potential when undisturbed; inherent soil erosion hazards for the soil map units represented range from low to high. Cool, moist, moderately deep sandy loam soils occupy north and east aspects and support forest vegetation. Batholith soils on south-facing slopes are typically, single-grain, coarse sandy soils that are mostly dry and sparsely vegetated. Soils that have developed over the glacial alluvial deposits are

more developed sandy loam or loamy soils with high coarse rock contents. One factor limiting soil productivity is lack of available moisture during the growing season.

Q. Geologic Types: The burned area is located in Soldier Mountain range that defines the southern boundary of the Idaho Batholith, a major uplift of granitic intrusive material. The geology consists of quartz monzonite and granodiorite derived from the igneous granitics. Glaciation and fluvial actions are the geomorphic processes that shaped the current landscape (Wertz and Arnold 1972).

The topography is characterized by V-shaped drainages with steep-side slopes adjacent to narrow valley bottom troughs. Elevations in the burned area range from 6,500 feet to 8,000 feet at the high peaks. Mountain slopes range from 20 to over 65 percent; valley bottom gradients average 2-6 percent and can be as much as 15 percent at channel initiation points in the headwater source areas.

Debris avalanches are common in all lithologies and dangerous on slopes at upper elevations and in narrow tributary valleys. Surficial deposits in general are mainly the result of active slope processes, including landslides, that tend to thicken toward the valley fill, and active river-channel processes that redistribute gravel and sand.

R. Miles of Stream Channels by Order or Class:

Perennial: 13.12 miles

Intermittent: 18.70 miles

S. Transportation System (within the fire perimeter)

Trails: 12.16 miles

Roads: 1.50 miles

PART III - WATERSHED CONDITION

- A. Burn Severity (acres): 3,147 (low) 1,226 (moderate) 3 (high) 487 (unburned within the Fire perimeter)
- B. Water-Repellent Soil (acres): None/low 10% Medium 15% Strong 75%
- C. Soil Erosion Hazard Rating (acres): 3,610 (low) 32 (moderate) 1,224 (high)
- D. Erosion Potential (tons/acre): not calculated
- E. Sediment Potential: not calculated

PART IV - HYDROLOGIC DESIGN FACTORS

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

Grass/Forbs	1-3 yrs
Shrubs	8-10 yrs
Conifers	20
- B. Design Chance of Success, (percent):
- C. Equivalent Design Recurrence Interval, (years): 10 yr

- D. Design Storm Duration, (hours): 1 hr
- E. Design Storm Magnitude, (inches): 0.78
- F. Design Flow, (cubic feet / second/ square mile): 0.52
- G. Estimated Reduction in Infiltration, (percent):
- H. Adjusted Design Flow, (cfs per square mile): 22.4

PART V - SUMMARY OF ANALYSIS

Background: The Stewart Creek Fire burned a total of 6,147 acres between August 20, 2018 and October 15, 2018. Of that total, 4,780 acres was on National Forest System Land. The lightning caused fire originally started approximately eighteen miles north and west of Fairfield, Idaho on land administered by the Fairfield Ranger District. The fire moved south and east onto BLM, State and Private land.

- A. Describe Critical Values/Resources and Threats:

Summary of Issues to Critical Values:

1) Human Life and Safety:

Post-fire conditions threaten the life and safety of visitors using the Forest Service roads and trails within a fire perimeter. There are portions of roads and trails which do pass through moderate to low severity burned areas within the Stewart Creek Fire perimeter. Normal storm frequencies and magnitudes within the burn area typically bring isolated showers and windy conditions. These isolated showers can cause increased overland flows which have the ability to transport rock and debris from the upper slopes onto the transportation routes. The winds also can cause the now dying trees to fall across the roads and trails creating a possibility of hazard trees falling on or trapping visitors who are on these transportation systems.

There are segments Forest Service roads and trails within the fire perimeter that lie at the bottom of drainages which, after storms pass through, create a threat to the safety of those individuals caught on these routes during one of these typical isolated storm and/or wind events.

Possible Probability of Damage or Loss (Likely) /Magnitude of Consequences (Moderate): Risk Assessment = High

2) Property:

The property types within the fire perimeter include system roads and trails and are further shown in the following table:

Trail or Road Number	Mileage
Coyote Trail (#7046)	1.11
Bremner Cr. Trail (#7055)	3.37
Roanhide Trail (#7056)	0.28
South Fork Lime Creek Trail (#7057)	2.58
Boardman Driveway Trail (#7058)	2.94
Front Trail West Jeep Trail (#7630)	1.48

Most of these assets are located in unburned to low intensity burned severity areas which typically would result in a lower chance of needing to make costly repairs. The potential to have damage occur due to being heavily eroded due to increase in runoff is intermediate if the storm event is very isolated.

Possible Probability of Damage or Loss (Possible) /Magnitude of Consequences (Moderate):
Risk Assessment = Intermediate

3) Native or Naturalized Plant Communities:

Threat due to Noxious Weeds – Based on information received from the SNF from pre-fire treatments and inventories, the Stewart Creek Fire area and adjacent lands contained 5 noxious Idaho plant species and 4 non-native invasive plant species (Table 2).

Table 2. Existing noxious and non-native invasive plant species on public and private lands

Species	Status
Rush skeletonweed (<i>Chondrilla juncea</i>)	Idaho noxious species
Canada thistle (<i>Cirsium arvense</i>)	Idaho noxious species
Spotted knapweed (<i>Centaurea stoebe</i>)	Idaho noxious species
Diffuse Knapweed (<i>Centaurea diffusa</i>)	Idaho noxious species
Leafy Spurge (<i>Euphorbia esula</i>)	Idaho noxious species
Bull thistle (<i>Cirsium vulgare</i>)	Non-native invasive
Common tansy (<i>Tanacetum vulgare</i>)	Non-native invasive
Cheatgrass (<i>Bromus tectorum</i>)	Non-native invasive
Mullein (<i>Verbascum thapsus</i>)	Non-native invasive

A major vegetation issue identified post fire included threats to the ecological integrity native plant communities from the introduction and expansion of noxious and invasive plant species. The burned area, now lacking desired vegetation that can normally compete with invasive species, is vulnerable to the spread of existing noxious and non-native seed sources (cheatgrass). Even in the low intensity and SBS areas, it will take as a minimum one growing season for native vegetation can reestablish and compete with invasive species. The probability of loss of native plant community diversity due to noxious and invasive species is very likely and the magnitude of the consequences is moderate. Therefore, the risk is very high to potentially adversely affect hundreds of acres of public lands if they are not monitored and treated effectively.

Spotted knapweed, rush skeletonweed, Canada thistle, and cheatgrass are the most widespread species in the area, and highest risk of potential spread into the burn area. Other noxious weeds known to occur on SNF, state and private lands listed in Table 2, are also very aggressive and would require immediate attention if identified in the burn or suppression activity areas.

The native plant communities and soil productivity can be severely impacted in a fire due to the spread of non-native and noxious weeds from existing populations and the introduction of new species. The presence of non-native invasive species may prevent establishment of desirable perennial grasses and can increase future fire hazards. Fire suppression resources may have been a vector for introduction and/or spread of existing populations. High probability areas of spread and introduction of noxious weeds, include where soil was disturbed during suppression efforts, and where people and equipment staged. Fire resources may have spread noxious species during suppression activities into new areas within the fire perimeter.

Noxious and non native invasive species are likely to establish at a much faster rate, further impacting emerging natives. Keeping new or expanding noxious and non-native plant species from becoming established is a high priority across federal, state, and private lands ownership boundaries. Non-native invasive species often either have rhizomatous root structures, or produce abundant seed coupled with high germination rates enabling seedlings to establish rapidly following fire. The presence of non-native invasive species may prevent establishment of desirable perennial grasses and can increase future fire hazards. Prevention and treatment of invasive species prior to populations becoming established and expanded is a key point in restoring desired native vegetation within the burn area and reducing long-term cost of containment,

control and eradication. An aggressive monitoring and treatment program is needed to deal with noxious and non-native invasive plants. This effort is expected to be a short, mid, and long-term process.

major vegetation issue identified post fire included threats to the ecological integrity native plant communities from the introduction and expansion of noxious and invasive plant species. The burned area, now lacking desired vegetation that can normally compete with invasive species, is vulnerable to the spread of existing noxious and non-native seed sources (cheatgrass). Even in the low intensity and SBS areas, it will take as a minimum one growing season for native vegetation can reestablish and compete with invasive species. Therefore, the risk is very high to potentially adversely affect hundreds of acres of public lands if they are not monitored and treated effectively.

**Possible Probability of Damage or Loss (Very Likely) /Magnitude of Consequences (Moderate):
Risk Assessment = Very High**

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 using the existing transportation systems.
- Prevent the spread of invasive plant species into new locations.

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

Land N/A % Channel N/A % Roads/Trails N/A % Protection/Safety 100 %

D. Probability of Treatment Success

Treatment	Years after Treatment		
	1	3	5
Land	--	--	--
Channel	--	--	--
Roads/Trails	--	--	--
Protection/Safety	80	70	60

Initially, visitors will heed the warning signs. Complacency is expected after the initial year unless there is a damaging event.

E. Cost of No-Action (Including Loss): \$12,000

The values at risk directly lost through No-Action includes: damage to water quality, loss of soil productivity (as impacted by noxious weed potential and erosion), recreational opportunities, and trail surfacing and cross section.

F. Cost of Selected Alternative (Including Loss): (Not Estimated)

It was assumed the primary treatments (noxious weed treatment and road) would be successful in reducing resource values lost through No-Action by 80 percent. The remaining resource values lost (as a factor of success) were added to the cost of the primary land treatment.

G. Skills Represented on Burned-Area Survey Team:

<input checked="" type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input type="checkbox"/> Range	<input checked="" type="checkbox"/> Recreation
<input type="checkbox"/> Forestry	<input type="checkbox"/> Wildlife	<input type="checkbox"/> Fire Mgmt.	<input checked="" type="checkbox"/> Engineering	<input type="checkbox"/>
<input type="checkbox"/> Contracting	<input type="checkbox"/> Ecology	<input checked="" type="checkbox"/> Botany	<input type="checkbox"/> Archaeology	<input type="checkbox"/>
<input type="checkbox"/> Fisheries	<input type="checkbox"/> Research	<input type="checkbox"/> Landscape Arch	<input type="checkbox"/> GIS	

Team Leader: **Shawn Robnett, Sawtooth NF Forest Engineer**

Email: **srobbnett@fs.fed.us**

Phone: **208-423-7551**

FAX:

Team Members:

Thom Stewart, Ecologist, Soils/Botany, Sawtooth National Forest

Mark Dallon, Hydrologist, Sawtooth National Forest

Steve Frost, Recreation, Sawtooth National Forest

Brandt Hines, GIS Specialist, Sawtooth National Forest

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:

Noxious Weeds -

Purpose of Treatment: To identify new infestations of noxious weeds in burned areas. Effectively treat noxious species and reduce the spread within the Stewart Creek fire area. The spread of noxious and non-native plant species could result in a reduction in the diversity of the native plant communities, and loss of soil productivity that would affect forage for wildlife and livestock in the area, and overall recreational experiences. EDRR treatment implemented within the next growing season could reduce the risk of introduction and spread of noxious species in the burned area and areas disturbed by fire suppression activities.

General Description: Forest Service treatment efforts will continue in the area and include an emphasis on managing the potential for introduction and spread of noxious weed species in the burned area, and rehabilitated suppression activity areas. EDRR for the burned area would be an integral part of the SNF weed management program. EDRR treatments would be annual spring/summer treatments with follow up in the fall. This treatment will take place in accordance with the Forest Noxious Weed Management Plan.

Location (Suitable) Sites: EDRR treatment will be focused on monitoring suppression activities areas.

Suppression Activities EDRR	Miles	Acreage
Dozer Line	2	10
Hand Line	1.5	6
11 helispots		22
Suppression Activities EDRR TOTAL	3.5	38

Design/Construction Specifications: The SNF program management personnel will conduct systematic EDRR surveys of the dozer and hand lines, helispots, drop points, camps, staging areas, cross country travel areas associated with suppression activities, and sage-grouse habitat. Surveys would be done by vehicle, ATV and foot. The personnel will select herbicide, application rate, and application timing based

on specific weed species found. EDRR treatments would be annual spring/summer treatments with follow up in the fall

Channel Treatments:

There are no recommended treatments to any of the channels that reside within the fire perimeter.

Roads and Trail Treatments:

There are no recommended treatments to any roads or trails within the fire perimeter.

Protection/Safety Treatments:

Hazard Warning Signs -

Purpose of Treatment: The purpose of "Hazard Warning" signs is to reduce the risks to human life and safety by warning all users of existing threats while traveling the authorized routes within the areas susceptible to flooding, debris flows, hazards trees, and all other risks attributable to post fire events on the landscape.

General Description: This treatment is for installation of "Entering Burned Area" warning signs where the one road and trails access the Stewart Creek Fire perimeter.

Location (Suitable) Sites: The proposed location of the hazard warning signs for the trails and road, listed in the table below, will be placed at the Forest Boundary where each route crosses onto the forest and except for the road the other location of the signs will be placed where the specified route crosses the fire perimeter.

Route Name and Number	Total Number of Signs
Roanhise Trail (#7056)	2
South Fork Lime Creek Trail (#7057)	2
Boardman Driveway Trail (#7058)	2
Front Trail West Jeep Trail (#7630)	2
Coyote Trail (#7046)	2
Bremner Cr. Trail (#7055)	2

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.)

Road and Trail Hazard Warning Signs: Regularly inspect the warning signs for visibility and when able ask visitors if they saw signs and if they understood the warnings listed.

Noxious Weeds: The Sawtooth NF weed management program personnel would monitor noxious weed infestations treated with herbicide. Field personnel will GPS occurrences and size of areas of infestation, photo points, and use transect protocols to record relative abundance or coverage to build species trend (stable, increasing) data for area.

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

Line Items	Units	Cost	NFS Lands		Other	Other Lands		# of Units	\$	All Total
			Unit	# of Units		BAER \$	Fed \$			
A. Land Treatments										
Noxious Weeds	Acres	\$50.84	38	\$1,932	\$0		\$0		\$0	\$1,932
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>										
<i>Subtotal Land Treatments</i>				\$1,932	\$0		\$0		\$0	\$1,932
B. Channel Treatments										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>										
<i>Subtotal Channel Treat.</i>				\$0	\$0		\$0		\$0	\$0
C. Road and Trails										
Road&Trail Stabilizatio	Miles			\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>										
<i>Subtotal Road & Trails</i>				\$0	\$0		\$0		\$0	\$0
D. Protection/Safety										
Hazard Warning Signs	Each	159.5	12	\$1,914	\$0		\$0		\$0	\$1,914
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>										
<i>Subtotal Structures</i>				\$1,914	\$0		\$0		\$0	\$1,914
E. BAER Evaluation										
				---			\$0		\$0	\$0
<i>Insert new items above this line!</i>										
<i>Subtotal Evaluation</i>				---	\$0		\$0		\$0	\$0
F. Monitoring										
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>										
<i>Subtotal Monitoring</i>				\$0	\$0		\$0		\$0	\$0
G. Totals										
Previously approved				\$3,846	\$0		\$0		\$0	\$3,846
Total for this request				\$3,846						

PART VII - APPROVALS

1.



Forest Supervisor (signature)

14/19/18
Date

2.

Regional Forester (signature)

Date

