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

Date of Report: Nov 2, 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: Clear Sage (part of the Confluence Complex and Prior to that part of the Shower Bath Complex) B. Fire Number ID-SCF-007371

C. State: Idaho D. County: Lemhi

E. Region: Intermountain, R4 F. Forest: Salmon-Challis National Forest

G. District: North Fork and Salmon-Cobalt Districts H. Fire Incident Job Code: P4DQ29

I. Date Fire Started: July 14, 2007 J. Date Fire Contained: Projected containment mid-Nov.

K. Suppression Cost: $1,078,949 (complex costs as of 9/07/07)

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (one mile)
2. Fireline seeded (one mile):
3. Other (identify):

M. Watershed Number: 1706020312, 1706020313, 1706020610

N. Total Acres Burned: 20,566 as of 9/07/07
NFS Acres(20,506) Other Federal ( ) State ( ) Private (60)

O. Vegetation Types: Bunchgrass and sagebrush in the lower elevations with scattered Ponderosa Pine, Douglas Fir with bunchgrass or pine grass in the intermediate elevations and Lodgepole pine and subalpine fir in the upper elevations.

P. Dominant Soils:Sandy loam soils with 5-15% cobble and 20- 40% gravel in the quartzite landtypes and loamy sand soils with 0-5 %cobble and 30-40% gravel. In the Rocky, Steep Canyonland landtypes bareground, surface rock and rock outcrops may cover up to 35-60% of the slope.

Q. Geologic Types: Geologic types in the fire area include granite and quartzite. Predominate landtypes include Rocky, Steep Canyonlands along the Salmon River , and Moderately and Strongly Dissected Mountain Slopelands.

R. Miles of Stream Channels by Order or Class: 29 miles of perennial or intermittent stream , rest of streams in the fire area are ephemeral streams.

S. Transportation System

Trails: 24 miles Roads: 0 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 7,185 (low) 4,215 (moderate) 1,018 (high) 8,128 (unburned)

B. Water-Repellent Soil (acres): 509

C. Soil Erosion Hazard Rating (acres):
7,185 (low) 4,215 (moderate) 1,018 (high)

D. Erosion Potential: 15 to 20 tons/acre

E. Sediment Potential: 2500 to 3000 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 1 for grass, 2-5 for shrubs and 5 to 50 for conifers

B. Design Chance of Success, (percent): N/A

C. Equivalent Design Recurrence Interval, (years): N/A

D. Design Storm Duration, (hours): N/A

E. Design Storm Magnitude, (inches): N/A

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

G. Estimated Reduction in Infiltration, (percent): N/A

H. Adjusted Design Flow, (cfs per square mile): N/A

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Background: The Clear Sage Fire was part of the Confluence Complex and prior to that part of the Showerbath Complex. The Papoose Fire, that was also part of the Confluence Complex, was a Wildland Use Fire and is not included in this assessment.

The Clear Sage Fire was a suppression fire that was managed as a confine/contain fire since it was started by lightning on July 14, 2007. This fire is almost entirely within the Frank Church River of No Return Wilderness area. The confine and contain strategy for this fire was to keep the fire south of the main Salmon River and west of Panther Creek within the wilderness area. More aggressive suppression tactics were employed when the fire activity increased and it looked like the fire could spread north across the Salmon River and east across Panther Creek outside of the wilderness area. Values at risk outside of the wilderness included a high-use recreation corrider along the Salmon River, numerous homes, businesses and campgrounds along the Salmon River Road.

The Clear Sage Fire burned in the lower Panther Creek watershed and along the south side of the Salmon River from Panther Creek to the Middle Fork of the Salmon River. Major streams in the fire area include Clear Creek and Garden Creek in the Panther Creek drainage and Lake Creek and Shell Creek that are tributary to the main Salmon River. The fire also burned numerous small, named and unnamed ephemeral drainages. Many of these small drainages are steep, rocky drainages that drain into the Salmon River. These drainages are located in the Salmon River breaks and are characterized by steep, rugged topography with a high percentage (35 -60%) of rock outcrop. Parent materials in these drainages are both quartzite and granite. These drainages are prone to debris flows from high intensity storms due to the flashy runoff from the steep rocky slopes and the frequency of high intensity storms that track west to east along the Salmon River Canyon and lower Panther Creek.

The majority of the fire area burned within the perimeter of the Clear Creek Fire of 2000, the exception being the upper reaches of both Lake Creek and Shell Creek that did not burn in 2000. Where the fire burned in the Clear Creek Fire area the fire severity is mostly low. In these areas the fire spread rapidly through the grass and fine fuels, resulting in low mortality to the shrubs and trees. The areas of high severity fire are in the Lake Creek and Shell Creek drainages and several unnamed, ephemeral drainages between Shell Creek and the confluence of the Middle Fork of the Salmon River. The higher fire severity occurred in the heavier fuels comprised of Douglas Fir, Lodgepole Pine and Subalpine Fir located on the upper slopes of these drainages.

Summary of Issues:

1) Human Life and Safety

Within the fire area there are several private land inholdings with structures and outbuildings. There are several major trails within the burned area including the Clear Creek Trail, Garden Creek Trail, Dry Gulch Trail, Gant Ridge Trail and the Dome Lake Trail. These trails are open to both pedestrian and stock use. There are no developed recreation sites or trailhead facilities within the fire area.

- The risk of flooding and debris flows at Garden Creek, Lake Creek and Shell Creek properties has been evaluated. Both the Shell Creek and Lake Creek properties have an increased risk of post-fire flooding and/or debris flows that could threaten life if these sites were occupied during the event. Currently these properties are not occupied, however both are for sale so there is a potential for future occupancy.

- Trail hazards include the potential for injury to people and stock due to increased instability of the Dome Lake Trail in the area that burned at moderate to high severity. Trail hazards include downed trees, danger from snags, burned out tree roots and narrowed trail tread. Despite these hazards this trail is not needed for post-fire emergency response so no trail hazard treatments are proposed for the Clear Sage Fire.

2) Property

Property at risk in the fire area includes structures at the private land inholdings and trails in the fire area, particulary the Dome Lake Trail. There are no roads within the fire perimeter.

- Risk of post-fire flooding, debris flows and surface erosion on property located on private land at Shell Creek and Lake Creek. The risk of property damage at Garden Creek is not significantly changed from the existing condition.

- Fire effects on the Dome Lake trail includes the loss of trail tread width due to vegetation burning below the trail and the loss of water bar structures. There is a risk of losing trail infrastructure due to the slope steepness, the potential for increased erosion and the decrease in vegetative cover and root structure along a segment of this trail.

3) Critical Natural and Cultural Resources

Aquatic Resources: Aquatic resources of concern include Panther Creek and its tributaries, Clear Creek and Garden Creek. Panther Creek and its tributaries have populations of three Federally listed fish species including Bull Trout, Chinook salmon and Steelhead Trout. These streams also support Westslope Cutthroat, a Region 4 sensitive species. The main Salmon River also provides habitat for these species but the river reach adjacent to the fire area is primarily a migration corrider and does not contain spawning habitat.

Fire efffects on these aquatic resources include a potential for increased stream sedimentation from surface erosion in the fire area and from potential debris flows from burned watersheds. There is a low risk for increased sediment input to spawning areas in lower Panther Creek because of the low fire severity in Clear Creek and Garden Creek. No adverse impacts to aquatic resources are expected from fire effects in the Salmon River.

Soil Productivity and Water Quality: Fire effects include the potential for increased soil erosion and stream sedimentation until vegetative recovery has restored ground cover to pre-fire conditions. No slope treatments are proposed to mitigate these effects because they do not pose a level of risk sufficient to warrant slope treatments within the wilderness. Effective slope treatments, such as mulching or seeding have the potential for weeds or other non-native species to be introduced into the wilderness.

Native vegetation communities/weeds: Within the Clear Sage Fire area there are 104 known infestations of noxious weeds, ranging in size from 0.1 to 513 acres, for a total of 1,993 acres. Weed species include Spotted Knapweed, Rush Skeletonweed, Sulphur Cinquefoil, Hoary Alyssum, Canada Thistle, Leafy Spurge, and Houndstongue.

Prior to the Clear Creek Fire of 2000 the only known weed species present in the area was Spotted Knapweed. Weed inventories conducted between 2001 and 2006 have documented that Rush Skeletonweed rapidly colonized in the burned areas following the Clear Creek Fire. Virtually all of the rangeland plant communities burned in 2000 are still adversely affected by tumble mustard and cheatgrass. These sites remain at high risk for noxious weed invasion and establishment.

Weed vectors in the fire area include approximately 24 miles of trails, four outfitter camps and dispersed recreation sites. Vectors immediately adjacent to the fire area include the Salmon River and Panther Creek Roads, 2 trailheads and private land.

B. Emergency Treatment Objectives:

- Reduce the potential for expansion of noxious and invasive weed infestations into highly susceptible burned areas and prevent an increase in weed density and the growth of existing infesations.
- Implement aggressive Early Detection/Rapid Response (EDDR) measures to detect and eradicate new invaders and new infestations that appear after the fire. Rapid response to known small populations will reduce future costs to control rapidly expanding infestations due to fire-related causes.
- Alert private land owners of the increased risk of post-fire flooding at their properties.
- Protect trail infrastructure on the Dome Lake Trail.

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

Land 90 % Channel N/A % Roads/Trails 80 % Protection/Safety 90 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	60	50
Channel	N/A		
Roads/Trails	80	60	50
Protection/Safety	90	80	70

E. Cost of No-Action (Including Loss): **$550,000**

F. Cost of Selected Alternative (Including Loss): **$150,800**

G. Skills Represented on Burned-Area Survey Team:

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

Betsy Rieffenberger, Team Leader/Hydrology
Dave Deschaine, Hydrology/GIS
Diane Schuldt, Weeds Specialist
Cavan Fitzsimmons, Trails
Stacey Weems, Soils

Team Leader:Betsy Rieffenberger

Email: brieffenberger@fs.fed.us Phone: 208-756-5108 FAX:208-756-5151

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& Invasive Weed Treatment

Implement an aggressive Early Detection Rapid Response program (EDRR) and treat all known infestations of noxious and/or invasive weeds that burned.

Description:

- Chemically treat all known infestations which burned. Rapid response to known small populations will reduce the need and costs to control expanded populations due to fire. This is extremely important to promote reestablishment of healthy native plant communities.
- Implement an aggressive Early Detection Rapid Response program (EDRR) emphasizing the detection and treatment of new invaders targeting known weed spread vectors.

Design/Construction Specifications:

- Select herbicide, application rate, and application timing based in the specific weed being treated, and access to the location of the infestation.
- Consideration for TES species habitat and sensitivity when selecting appropriate herbicide.
- Prioritize areas of the fire where fire severity has been identified as moderate or high for reconnaissance and along travel routes where seed beds may have existed prior to disturbance.
- New infestations will be documented and the appropriate management response will be initiated as soon as possible to prevent establishment.

Purpose of Treatment:

- Reduce the potential for expansion of noxious and invasive weed infestations into highly susceptible burned areas, and prevent an increase in weed density and growth of existing infestations. Rapid response to fire affected weed populations is paramount to efficiently eradicate noxious and invasive species and maintain healthy native vegetative communities.

Roads and Trail Treatments:

Trail Erosion Control and Infrastructure Protection

Description:

- Install temporary grade dips and reinforce switchbacks along a segment of the Dome Lake Trail where the threat to trail infrastructure is greatest. Clean existing waterbars and dips before damaging storms to reduce erosion and protect trail infrastructure.

Location (Suitable) Sites:

- Trail sections within moderate - high severity burned areas that are greater than 5-8% grade and/or lie where existing erosion control features are not sufficient to handle increased runoff. These trail sections are located on the Dome Lake Trail.

Design/Construction Specifications:

- Install temporary grade dips or water bars on trails within high and moderate burn areas to ensure water is diverted to prevent erosion and to prevent failure of trail bed.
- Clean existing water bars.
- Reinforce switchbacks in locations that present a risk to trail infrastructure.
- According to USFS Trails Handbook 2309.18. Installation should be designed to last no more than 3 years. Permanent structures are not part of this treatment.

Purpose of Treatment:

- To ensure drainage structures are sufficient to divert water effectively given increased runoff and increased sediment movement.
- To protect property and trail infrastructure.

Treatment Effectiveness Monitoring:

- Inspect trails after major precipitation events, after spring runoff, and prior to snowfall to assess effectiveness of erosion control structures at diverting water from trail surface.

Protection/Safety Treatments:

Private Land Risk

Description:

- Three private land inholdings were evaluated during the field assessment: Garden Creek, Lake Creek and Shell Creek. Both the Lake Creek and Shell Creek properties are expected to have an increased risk of flooding post-fire due to increased runoff and the potential for debris flows.

Design/Construction Specifications:

- The recommendation is to send a letter to the land owners to alert them of the increased risk of post-fire flooding at their properties.

Purpose of Treatment:

- Alert private land owners of the increased risk of post-fire flooding at their properties.

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.)

Weed Monitoring

Description:

- Implement effectiveness monitoring of the EDRR program including changes in the composition of known infestations and the identification of new noxious weed species not known to exist in the area before the fire. An added benefit of this monitoring strategy is that it responds to the disturbances associated with fire, it identifies areas and/or sites needing restoration or rehabilitation efforts to establish a desirable plant community and it can be identified in a timely manner.

Location (Suitable) Sites:

- Monitoring areas include all sites in areas that burned at moderate to high severity near known infestations and areas disturbed by the fire suppression activities. All travel routes into and through the burned area should be monitored.

Design/Construction Specifications:

- 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. Initial monitoring will take place after the fire (beginning early Spring/Summer of 2008). Additional monitoring and treatment may be requested depending what is found within the burned area.
- Documented weed infestations include the species of Spotted Knapweed, Rush Skeletonweed, Hoary

Alyssum, Canada Thistle, Sulphur Cinquefoil, Leafy Spurge and Houndstonque.

Purpose of Treatment:

- The purpose of noxious weed monitoring is early detection of noxious weed introduction in the burned area. 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.

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										
Existing weed treatmer	acres	97	1200	$116,400	$0		$0		$0	$116,400
Weeds EDRR	days	450	70	$31,500	$0		$0		$0	$31,500
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$147,900	$0		$0		$0	$147,900
B. Channel Treatments										
				$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 protection (waterb	each	100	10	$1,000	$0		$0		$0	$1,000
Trail protection (switch	each	350	2	$700	$0		$0		$0	$700
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$1,700	$0		$0		$0	$1,700
D. Protection/Safety										
Flooding awareness	days	400	3	$1,200	$0		$0		$0	$1,200
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$1,200	$0		$0		$0	$1,200
E. BAER Evaluation										
Team	days	1250	5	$6,250			$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				---	$0		$0		$0	$0
F. Monitoring										
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$0	$0		$0		$0	$0
G. Totals				$150,800	$0		**$0**		**$0**	**$150,800**
Previously approved										
Total for this request				**$150,800**						

PART VII - APPROVALS

1. /s/William A. Wood_____ 11/08/2007___
   Forest Supervisor (signature) Date

2. /s/ Mary Wagner for_____ 11/16/2007_____
   Regional Forester (signature) Date