7-22-2007:

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: Salt Lick Fire

B. Fire Number: WY-BTF-0014

C. State: Wyoming

D. County: Sublette

E. Region: 4-Intermountain Region

F. Forest: Bridger Teton National Forest

G. District: Pinedale Ranger District

H. Fire Incident Job Code: P4DP26

I. Date Fire Started: 7-11-2007

J. Date Fire Contained: 7-18-2007

K. Suppression Cost: 1.5 Million on 7-18-2007

L. Fire Suppression Damages Repaired with Suppression Funds

Dozer line 0.75 miles of new line and the remainder existing old roads

1. Fireline waterbarred and ripped (miles): 0.25 miles
2. Fireline seeded (miles): NONE
3. Other (identify):

M. Watershed Number:
140401010204 – Gypsum Creek

N. Total Acres Burned: 2,483
NFS Acres (2,483) Other Federal (0) State (0) Private (0)

O. Dominant Vegetation Types within the fire perimeter: (source: Ecological Unit Inventory, Bridger National Forest, Eastern Part, 1997

Dominant PNV	Sum_ACRES
ABLA/ARCO9	35.2540
ABLA/CARO5	802.7090
ABLA/VASC	1414.1160
ARTRV2-ARTRS2	112.1070
DECE	63.5650
Rock Outcrop	22.2790
Rubbleland	23.7940
Talus Slopes	1.9190
Tundra	6.5020

P. Dominant Soils within the fire perimeter: (source: Ecological Unit Inventory, Bridger National Forest, Eastern Part, 1997):

Dominant Soil	Sum_ACRES
Cryoborolls	6.5020
Decram Family	112.1070
Donnelly Family	802.7090
Garlet Family	1119.6870
Hydric Borofibrists	4.4330
Jeru Family	294.4290
Keman Family	35.2540
Rock Outcrop	22.2790
Rubbleland	23.7940
Talus Slopes	1.9190
Wishard Family	59.1320

Q. Major Geologic Types by ecological map unit within the fire perimeter: (source: Ecological Unit Inventory, Bridger National Forest, Eastern Part, 1997):

Map Unit	Geology	ACRES
2861	Glacial Till - Granitic	23.7940
3646	Glacial Till - Granitic/Sedimentary	25.5390
3648	Glacial Till - Granitic/Sedimentary	35.2540
3649	Glacial Till - Granitic/Sedimentary	802.7090
3652	Glacial Till/Colluvium - Sedimentary	112.1070
3860	Residuum - sedimentary	6.5020
4111	Alluvium - mixed	4.4330
4511	Glacial Till/Alluvium - mixed	59.1320
4643	Glacial Till - Granitic	1030.5200
4644	Glacial Till - Granitic	63.6280
5741	Glacial Till - Granitic	294.4290
8003	Residuum - sedimentary	22.2790
8004	Colluvium - sedimentary	1.9190

R. Miles of Stream Channels by Order or Class:
Intermittent stream miles – 14.5 Perennial stream miles – 10.79

S. Transportation System

Trails: 2.5 miles Roads:1.0 miles (approximately 2 miles are closed)

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 553 (unburned) 582 (low) 1001 (moderate) 345 (high)

B. Water-Repellent Soil (acres):

National Forest	Private land
345 (14%)	0

C. Soil Erosion Hazard Rating (acres):

	Ownership Acres	
Soil Erosion Hazard Rating	National Forest	Private land
Low	64 (1%)	0
Moderate	2364 (99%)	0
High		0

Source: Ecological Unit Inventory, Bridger National Forest, Eastern Part, 1997

D. Erosion Potential: 2.0 tons/acre

E. Sediment Potential: 13.2 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 3-5

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

C. Equivalent Design Recurrence Interval, (years): 25 year

D. Design Storm Duration, (hours): 0.5 hrs

E. Design Storm Magnitude, (inches): 0.72 Inches

F. Design Flow, (cubic feet / second/ square mile): 46 csm

G. Estimated Reduction in Infiltration, (percent): 33%

H. Adjusted Design Flow, (cfs per square mile): 69csm

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

The Salt Lick Fire started on July 11, 2007 on the Pinedale Ranger District within Sublette County. The cause is still being investigated. The fire was contained on July 18, 2007 and the BAER team effort was initiated on July 20, 2007. The team conducted aerial reconnaissance and on the ground surveys within the burn assessing emergency threat to life, property, and resources. The following values and types of risks were evaluated:

Ecological Integrity:

Noxious weeds have been documented within the fire area. Canada Thistle (Cirsium arvense L.) was documented within the fire area The ability of noxious weeds to rapidly spread and threaten the continuity and

health of native plant communities increases within burned areas and areas impacted by suppression activities.

Water quality within and downstream of the burned area could be degraded from the increases in stream flow and soil erosion from thunderstorms and snow melt due to the loss of ground cover and altered soil properties.

None of the streams in the burn perimeter contain conservation populations of cutthroat trout, but do support a sport fishery for brook trout. The fire had a high impact to conifer vegetation and very little impact to riparian vegetation. Riparian vegetation and stream corridors remain in very good condition. A high number of beaver dams and healthy riparian areas will reduce and filter sediment and debris coming off the fire reducing downstream negative impacts to the fishery and aquatics.

Culverts on FSR 711 and at the highway and the main stem of Gypsum Creek were assessed and determined to be adequate to handle predicted storm events.

Transportation Infrastructure:

The Salt Lick fire and suppression efforts caused minor direct and indirect impacts to roads and trails within the affected area as follows:

1. **Dozer Extension Constructed off Forest Road 681A**: Road 681A, a short stub leading off of Road 681, is a designated motorized route in the Pinedale RD Travel Plan. Beyond the road closure for 681A, an old skid road is utilized as a hiking and horseback riding trail by locals in the area, although it is not a Forest System (maintained) Trail. At its designated motorized closure point, the non-motorized portion of this route was opened up by dozer approximately 0.75 miles in length, to serve as an indirect line early in the Salt Lick Fire suppression efforts. This route will be re-closed to motorized use and rehabilitated using Suppression funding. Monitoring of this route is recommended to determine the effectiveness of rehabilitation efforts, primarily focusing on illegal ATV trespass.

2. **Dozer Line Constructed off Forest Road 711**: This indirect line was constructed off Road 711, northwest toward South Fork Gypsum Creek approximately 1.25 miles in length. This entire route will be closed and rehabilitated using Suppression funding. Monitoring of this route is recommended to determine the effectiveness of rehabilitation efforts.

3. **South Fork Gypsum Creek Trail #7142**: This trail begins at the end of Forest Road 711, which is the origin of the Salt Lick Fire. The trail has officially been abandoned approximately 2.5 miles east of the trailhead to implement the BTNF Forest Plan and Bridger Wilderness Action Plan, which calls for no Forest System trails, signs, cairns, or other trail markers within DFC 6A. This trail continues to see light to visitor use and the trail tread is well-established for the first 2.5 miles of trail located outside Wilderness.

   Drainage structures are needed on this trail as the tread is already exhibiting erosion from fire effects. Erosion on this trail will be severe if drainage structures (primarily dips and waterbars) are not constructed, and this will lead to sediment delivery into the South Fork of Gypsum Creek in several areas along this 2.5 mile section of trail. Hazard tree removal will be necessary within heavily burned areas along this trail for crew safety while constructing waterbars. Down trees located across the trail that cannot be easily stepped over or impede runoff will need to be removed to prevent creation of multiple trails around down trees by Forest visitors and cattle.

   In addition to serving minor recreation use, the first portion of this trail is utilized by range permittees to facilitate cattle distribution within the Lower Pasture of the Upper Green Allotment. Two planks on the constructed bridge crossing the South Fork of Gypsum Creek at the beginning of Road 711 are damaged and need replacement utilizing project funds to minimize risk to hikers, horseback riders, and cattle.

4. **Noxious Weeds**: Canada Thistle (*Cirsium arvense* L.) was documented on July 20 on Forest Trail #7142 approximately 0.5 miles east of the trailhead. Noxious weed spread is often accelerated within

burn areas, threatening the continuity and health of native plant communities. Canada Thistle is also documented on Forest Roads 680 and 681, which were utilized by suppression forces to access this fire. The existing Canada Thistle patch documented on Trail #7142 will be chemically treated using project funds. Monitoring for invasive weed spread on the two indirect dozer lines, rehabilitated direct fire lines, and access trails is recommended to minimize the potential for invasive weed spread in this area.

5. **Forest Road 711**: This road was improved by dozer to facilitate access for engines and crew transportation. Road 711 will be rehabilitated with Suppression funds, including re-establishment of drainage structures and construction of ATV barriers at the north end of this road. However, monitoring to determine the effectiveness of rehabilitation efforts on this road is recommended to prevent water quality impairment from sediment delivery at stream crossings along this road.

B. Emergency Treatment Objectives:
Effectiveness Monitoring: Monitoring to determine effectiveness of rehabilitation efforts is recommended to prevent water quality impairment from sediment delivery at stream crossings along roads and trails. The objectives are to protect water quality, soil productivity, soil erosion, fisheries/aquatic impacts, native plant communities, and against the spread of noxious weed to an acceptable threshold level.

Noxious Weeds: The treatment and monitoring of noxious weeds is necessary to protect native vegetation composition in and around the fire area by treating the expansion of known populations into the fire area.

Drainage Structures: Construction of water bars, dips and barriers to keep sediment from eroding off the trail and into the stream.

Hazard Trees: The removal of hazard trees in the area where drainage structures will be constructed is necessary for crew safety during the construction process.

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

Land **80** % Channel ___ % Roads/Trails **90** % Protection/Safety **90** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	75	75	75
Channel			
Roads/Trails	80	75	75
Protection/Safety			

E. Cost of No-Action (Including Loss): $215,000

F. Cost of Selected Alternative (Including Loss): $61,270

G. Skills Represented on Burned-Area Survey Team:

[**X**] Hydrology [**X**] Soils [ ] Geology [**X**] Range & Weeds [ ]
[ ] Forestry [ ] Wildlife [ ] Fire Mgmt. [ ] Engineering [**X**] Recreation

[ ] Contracting [ ] Ecology [ ] Botany [ ] Archaeology [ ]
[**X**] Fisheries [ ] Research [ ] Landscape Arch [**X**] GIS

Team Leader: Eric Winthers, Soil and Water Program Manager, BTNF

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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:

No land treatments recommended

Channel Treatments:

No Channel Treatments Recommended

Roads and Trail Treatments:

Drainage structures. Construct drainage structures along the first 2.5 miles of main trail up the South Fork of Gypsum Creek. Primarily water bars, dips and check dams, leave step-over logs to prevent motorized intrusion.

Protection/Safety Treatments:

Hazard Tree Removal Hazard tree removal will be necessary within heavily burned areas along the first 2.5 miles up the south fork of Gypsum Creek for crew safety while constructing drainage structures.

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.)

Illegal OHV Closure Monitoring: During high use (fall hunting season) monitoring of road closure effectiveness will be conducted to ensure the protection of soil, water quality resources and preventing spread of noxious weeds during the emergency stabilization period (one year from containment). Monitoring may be conducted in conjunction with law enforcement patrol to education users of the importance of these closures and to ensure effectiveness.

Effectiveness Monitoring Monitoring to determine effectiveness of rehabilitation efforts completed as part of the suppression effort is recommended to prevent water quality impairment from sediment delivery at stream crossings along roads and trials.

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										
Noxious Weed Monitor/Treat	Days	360	5	$1,800	$0		$0		$0	$1,800
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$1,800	$0		$0		$0	$1,800
B. Channel Treatments										
				$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										
drainage structures	Each	130	20	$2,600	$0					$2,600
				$0	$0					$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$2,600	$0		$0		$0	$2,600
D. Protection/Safety										
Hazard Tree Removal				$2,600	$0		$0		$0	$2,600
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$2,600	$0		$0		$0	$2,600
E. BAER Evaluation										
				---	$8,000		$0		$0	$8,000
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				---	$8,000		$0		$0	$8,000
F. Monitoring										
Effectiveness Monitoring	Days	10	200	$2,000	$0		$0		$0	$2,000
Illegal OHV Closure Monitoring	Days	230	10	$2,300	$0		$0		$0	$2,300
				$0	$0		$0		$0	
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$4,300	$0		$0		$0	$2,300
G. Totals				$11,300	$8,000		**$0**		**$0**	**$17,300**
Previously approved										
Total for this request				**$11,300**						

PART VII - APPROVALS

1. /s/ Kniffy Hamilton 8/8/07
Kniffy Hamilton Date
Forest Supervisor (signature)

2. _____ _____
JacK Troyer Date
Regional Forester (signature)