Date of Report: 08/26/2013

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: Millville Fire

B. Fire Number: UT - BR 5-0006B

C. State: Utah

D. County: Cache

E. Region: R4

F. Forest: UWC

G. District: Logan RD

H. Fire Incident Job Code: PNHU2Y

I. Date Fire Started: 11 August 2013

J. Date Fire Contained: Not contained

K. Suppression Cost: $ 2.1 Million

L. Fire Suppression Damages Repaired with Suppression Funds
1. **Fireline waterbarred (miles)**: 0.25
2. **Fireline seeded (miles):** 0
3. **Other (identify):** N/A

M. Watershed Number: 160102030209 Millville Canyon - Blacksmiths Fork

N. Total Acres Burned:
[829] NFS Acres [] Other Federal [1983] State [36] Private

O. Vegetation Types:
Mixed conifers consisting of Sub-alpine and Douglas fir were present on the higher elevation north aspects with a few aspen stringers present on the Millville Canyon side of the fire; scattered maple and juniper occurred at the lower elevations or upon the warmer south and west facing aspects with small amounts of both mountain big sagebrush and curlleaf mountain-mahogany intermixed throughout the burned-area. Cheat-grass was dominant throughout the lower elevations of the burn. Due to the elevation gradient, the vegetation transition changes rapidly and is broken up by rock outcroppings. Elevation gradient is steep, gaining nearly 3500 feet in under 1 mile with 60-80% slopes.

Table 1. Shows the known infestations of noxious weeds in Blacksmiths Fork Canyon. Of these Scotch Thistle and Saltcedar are very aggressive and are considered a high priority for treatment. Burdock, Canada thistle and Dyers woad are opportunistic and thrive in disturbed areas.

NRCS Plant Code	Scientific Name	Common Name	Infested Acres
ARMI2	Arctium minus	lesser burdock	5.45
CIAR4	Cirsium arvense	Canada thistle	78.98
ISTI	Isatis tinctoria	Dyer's woad	223.56
ONAC	Onopordum acanthium	Scotch cottonthistle	0.10
TARA	Tamarix ramosissima	saltcedar	0.10

P. Dominant Soils:
R64 – BEZZANT FAMILY-ROCK OUTCROP-RUBBLE LAND COMPLEX — Found on mountain slopes which range from 50-80%. Soils formed from colluvium from limestone. Soils have cobbly loam textures at the surface and gravelly to extremely gravelly loam textures in the subsurface. Soils are moderately deep (20-40 inches). Soil erosion hazard is high. Soil loss tolerance (T-factor) is 5 tons/acre/yr. Of the complex, 60% is Bezzant Family and 35% is Rock Outcrop.

ABG2 – Agassiz-Bradshaw Association, Eroded – Found on mountain slopes at about 5,200 to 8,500 feet elevation. Slopes range from 30-70%. Soils formed from residuum weathered from limestone parent material. Soils are very cobbly silt loam and are shallow to bedrock (18 inches). Soil erosion hazard is moderate on the lower angle slopes and high on the higher angle slopes. Soil loss tolerance (T-factor) is 1 ton/acre/yr.

BSG2 – Bradshaw-Agassiz Association, Eroded – Found on mountain slopes at about 5,200 to 8,500 feet elevation. Slopes range from 30-60%. Soils formed from colluvium derived from limestone. Soils have a surface texture of silt loam and cobbly loam subsurface texture. Soils are moderately deep with a C-horizon at about 27 inches. Soil loss tolerance is 3 tons/acre/yr.

RO – Rock Outcrop –dominant cliff and rock outcrop structure with little soil development. Slopes range from 60 - 80%.

Q. **Geologic Types**: Geology in the area is primarily sedimentary limestone.
R. **Miles of Stream Channels by Order or Class**: XXX

S. **Transportation System**

Trails: 0 **miles** **Roads:** 0 **miles**

PART III - WATERSHED CONDITION

A. **Burn Severity (acres)**: 814 **(low)** 0 **(moderate)** 15 **(high)**

B. **Water-Repellent Soil (acres)**: 15

C. **Soil Erosion Hazard Rating (acres)**: 814 **(low)** 0 **(moderate)** 15 **(high)**

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

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

PART IV - HYDROLOGIC DESIGN FACTORS

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

B. **Design Chance of Success, (percent):** XXX

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

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

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

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

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

H. **Adjusted Design Flow, (cfs per square mile):** XXX [j1]

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats (narrative):

The BAER ID team assessed several values at risk and threats on National Forest lands. These were power lines, Blacksmith Fork road, and Blacksmith Fork River and the result of the assessment is shown in Table 2.

Table 2. BAER Risk Assessment.

Critical Value/Resource and Threats	Probability of Damage or Loss	Magnitude of Consequences	Risk Assessment
Power lines	Unlikely	Minor	Very Low
Blacksmith Fork Road	Unlikely	Minor	Very Low
Blacksmith Fork River	Unlikely	Minor	Very Low
Noxious Weeds	Likely	Moderate	High

The Millville Fire burned approximately 2848 acres. 829 acres were located on NFS lands within the Logan Ranger District of the Uinta-Wasatch-Cache NF. The vast majority of soil burn severity on NFS Lands was classified as low to moderate, with approximately 15 acres High severity observed during reconnansaince flights. These 15 acres are located within the analysis subwatershed described below.

Resources at risk associated with FS lands would be two sets of power lines, Blacksmith Fork River and Blacksmiths Fork Road all in the bottom of Blacksmiths Fork Canyon.

There are small patches of high severity throughout the fire perimeter with a large polygon of timber that has visible indcators of a high severity burn. This is high in the watershed near the ridgeline. The potential resources at risk are at the bottom of the drainage with large amounts of unburned or patch burned vegetation or low severity burn between.

Soil Productivity: There is low risk to the ecological integrity and future soil productivity within the fire perimeter. Soils in the area in general have low productivity potential due to the steepness of the area and depth to bedrock. Soils are not well developed and easily erode. The fire appeared to be patchy and left a mosiac of vegetation. Although there is some loss of vegetation, the majority of the drainages have retained a mosiac of trees and grasses. These will provide a barrier to potential downslope soil movement. Low risk for increased soil movement from the Millville Fire in the form of debris flows or ravel to reach SR-101 or the Blacksmith Fork River.

Hydrology: Hydrologic impacts and design factors were analyzed for the only subwatershed with high soil burn severity that is located on NFS lands. This subwatershed is located on the North side of the Blacksmith Fork Canyon, and has very steep, rocky slopes. This watershed is approximately 301 acres in size. The design storm chosen for analysis was the 5 year, 60 minute storm. NOAA precipitation frequency data for this watershed indicates that this storm would produce 0.662 inches of precipitation. USGS regression equations within the USGS Stream Stats web interface model estimate 2 and 5 year flood events for this watershed would produce discharges of 8.3 and 20 cfs respectively. Based upon ther low amount of high soil burn severity (less than 7 percent) within the analyis subwatershed, measureable increases to runoff as a result of fire damage to soils and vegetation within the watershed would not be

realized. As such hillslope and channel treatments are not reccommended.

Noxious Weeds – Noxious Weeds in the Blacksmith Fork Canyon are Scotch Thistle and Saltcedar, are very aggressive and are considered a high priority for treatment. Burdock, Canada thistle and Dyers woad are opportunistic and thrive in disturbed areas. Early detection and rapid response are the method for controlling these species.

B. Emergency Treatment Objectives (narrative):The emergency treatment objective identified for the Millville Fire is monitoring and control of noxious weeds. The assessment revealed that for the other resources identified as being at risk that the probablility of an advese reaction is extremely low.

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

Land None **Channel** None **Roads/Trails** None **Protection/Safety** None

D. Probability of Treatment Success: N/A

E. Cost of No-Action (Including Loss): N/A

F. Cost of Selected Alternative (Including Loss): N/A[j2]

G. Skills Represented on Burned-Area Survey Team:

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

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H. Treatment Narrative:

No treatments are recommended to control runoff or sedimentation from the fire because the risk of damage to critical resources is very low. This is because the fire burn severity for most of the fire is low and treament of the small area of high severity would not result is measurable change in runoff conditions.

Noxious Weeds - Invasive/noxious weed invasion is an emergency situation caused by the Millville Fire. Treatments to mitigate the emergency on lands managed by the Uinta-Wasatch-Cache NF would be to implement "Early Detection and Rapid Response" for weeds. Since there is a high likelihood of expansion of noxious and invasive species post-fire, during the one-year emergency stabilization period, monitor the fire area to determine the presence of and spot-treat any small/isolated invading weed populations discovered within or near the fire area. Monitoring will be focused in (but not limited to) burned areas adjacent to existing known populations, in areas where fire containment activities occurred on NFS lands, and next to roads and/or trails.

Invasive plant EDRR will consist of visually observing the burned area over several weeks during the spring and summer of 2014 and will be focused in (but not limited to) burned areas adjacent to existing known populations, in areas where fire containment activities occurred on NFS Lands, and next to roads and/or trails.

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.)

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										
EDRR				$0	$0		$0		$0	$0
GS-5	days	150	20	$3,000	$0		$0		$0	$3,000
Chemicals/equipmen	Dollars	500	1	$500	$0		$0		$0	$500
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$3,500	$0		$0		$0	$3,500
B. Channel Treatments										
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Channel Treat.				$0	$0		$0		$0	$0
C. Road and Trails										
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$0	$0		$0		$0	$0
D. Protection/Safety										
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$0	$0		$0		$0	$0
E. BAER Evaluation										
				---			$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				---	$0		$0		$0	$0
F. Monitoring										
Insert new items above this line!										
Subtotal Monitoring										
G. Totals				$3,500						
Previously approved										
Total for this request										

PART VII - APPROVALS

1. _____ 8/29/17
Forest Supervisor (signature) Date

2. (FOR) _____ 9/11/2017
Regional Forester (signature) Date