Date of Report: 10/30/2006

New Information is Highlighted in Yellow

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

[ ] 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures)

[X] 2. Interim Report # 1 .
[X] Updating the initial funding request based on more accurate site data or design analysis
[X] Status of accomplishments to date

[ ] 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Dog Valley

B. Fire Number: UT-FIF-000215

C. State: Utah

D. County: Millard

E. Region: 04

F. Forest: Fishlake National Forest

G. District: Fillmore

H. Fire Incident Job Code: P4CY5K

I. Date Fire Started: 16 July 2006

J. Date Fire Contained: 24 July 2006

K. Suppression Cost: $ 1,873,645 as of 27 July 2006.

L. Fire Suppression Damages Repaired with Suppression Funds
1. **Fireline waterbarred (miles)**: 3.5 miles of handline & 5 miles of dozer line
2. **Fireline seeded (miles):** 5 miles of dozer line
3. **Other (identify):** 4 of 9 miles of dozer line obliterated and seeded

M. Watershed Number: 1603000705 & 1603000801

N. Total Acres Burned: 28,665
[5,498] NFS Acres [14,918] BLM [6] Tribal [1,299] State [6,944] Private

O. Vegetation Types: Gambel Oak/Mountain Big Sagebrush (31%), P-J/Mountain Big Sagebrush (29%), Gambel Oak (21%), P-J/Curl-leaf Mohogany (6%), P-J/Birch-leaf Mohogany (6%), P-J/Gambel Oak (4%), Riparian (3%)

P. Dominant Soils: Typic Argiustolls and Pachic Argiustolls occur under the Gambel Oak and Mountain Big Sagebrush; Aridic Argiustolls and Aridic Haplustolls occur under the Pinyon-Juniper, Lithic Argiustolls and Lithic Haplustolls occur near the Curl-leaf Mountain-Mahogany; Typic Calciustolls occur under the Birch-leaf Mountain-Mahogany sites and Fluventic Haplustolls occur within the scattered riparian zone areas.

Q. Geologic Types: Most of the burned-area has a variety of soil resources that were derived from sedimentary rocks including limestone from the Park City and Bridal Veil Formations; sandstone from the Diamond Creek and Nugget Formations; metamorphosed sandstone in distinct areas of Tintic Quartzite – and, a few deposits of dolomite exist along the Forest boundary; dolomite is a secondary mineral very similar in composition to limestone. A small area of the burn has mixed volcanic rocks with rhyolite, latite, andesite and basalt occurring along the I-70 transportation corridor and the remainder of the burn has calcareous deposits of mixed alluvium occurring on fan terraces surrounding the the foothills.

R. Miles of Stream Channels by Order or Class:
1st Order: 12.9, 2nd Order: 6.4, 3rd Order: 0.0, 4th Order: 0.0, 5th Order: 0.0

S. Transportation System

Motorized Trails: 3.2 **miles** **Roads:** 7.0 **miles**

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 1,282 **(unburned)** 1,458 **(low)** 1,830 **(moderate)** 1,087 **(high)**

B. Water-Repellent Soil (acres): 1,980

C. Soil Erosion Hazard Rating (acres): 4,042 **(low)** 1,290 **(moderate)** 0 **(high)**

D. Erosion Potential: 16.2 **tons/acre**

E. Sediment Potential: 2,560 **cubic yards / square mile**

PART IV - HYDROLOGIC DESIGN FACTORS

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

B. Design Chance of Success, (percent): 60

C. Equivalent Design Recurrence Interval, (years): 2

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 1.34

F. Design Flow, (cubic feet / second/ square mile): 4.3

G. Estimated Reduction in Infiltration, (percent): 20

H. Adjusted Design Flow, (cfs per square mile): 103

PART V - SUMMARY OF ANALYSIS

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

Threats to Life and Property

Field reviews within the burned area and downstream of the wildfire confirm that threats to life are possible, but unlikely. There is an elevated flash flood risk on the Dog Valley Creek road that is built along the canyon bottom. Thousand Dollar Gulch, which is inherently debris flow prone, is even more susceptible now that roughly two-thirds of the basin area has burned with moderate to high severity. The public could be at risk if situated below this drainage during summer thunderstorms. Stormflow from the fire drains to a depression next to the I-15 that has no outlet and has more than adequate capacity to handle anticipated post-fire floods. A debris flow out of Thousand Dollar Gulch would have about 2.5 miles of runout through deposition areas before reaching I-15 so there is no threat from this type of event.

There is a very low risk of threats to property. There are stock ponds and two corrals below the forest boundary, but neither are at risk from post-fire conditions. Increased flows and sediment will likely fill ponds. However, the earthen dams are not high hazard and would not fail catastrophically. Forest Road 108 could concentrate and reroute intercepted surface flows, which would increase stormflow peaks and erosion potential. The increased runoff and erosion could also damage the road template. There are no at-risk stream crossings on National Forest Systems lands. A communications site below National Forest that was nearly consumed by the wildfire is not at risk from post-fire conditions because it is located at the top of a stable hill.

Threats to Long-Term Soil Productivity and Ecosystem Function

Field reviews indicate potential threats to long-term soil productivity and ecosystem function. Observations of the Dog Valley post-fire conditions suggest that if no action is taken, noxious weeds and cheatgrass will expand from existing locations on and off of the the forest. Areas invaded by noxious weeds can lead to a decline in effective ground cover. This could increase erosion and reduce soil productivity and desired ecosystem function, and could decrease the habitat value of the critical elk and deer winter range burned by the fire.

A comprehensive weed map and report of the Fishlake NF shows about 9,000 acres of lands infested with noxious weeds. Thus, the nearly 1.75 million acres administered by the Forest are 99.5% noxious weed-free. Generally, the Fishlake NF is considered to have an early detection rapid response noxious weed program. However, the southwest corner of the Fillmore Ranger District is the absolute center of noxious weed concerns on the Fishlake NF. Probably 25 to 30% of the acres of noxious weed infestations on the forest occur within five miles of the Dog Valley fire. The five noxious weed species present are

Scotch thistle, the most abundant noxious weed in the vicinity (Figures 1 and 2); squarrose knapweed; musk thistle; hoary cress; and field bindweed. In addition, three serious invasive species are present in the vicinity: cheatgrass (most abundant), black henbane, and houndstongue.

Threats to Water Quality

There are no perennial streams within the fire perimeter. Anticipated water and sediment from fire related flood events will be trapped in a closed depression adjacent to I-15. Therefore no threats to water quality exist.

B. Emergency Treatment Objectives (narrative):

The emergency treatment objectives are 1) to maintain soil productivity by preventing erosion and the expansion of noxious weeds and invasive plants in the burned area; 2) to maintain critical winter range for elk and mule deer; and 3) to reduce concentration of water and subsequent erosion on and below forest routes within the fire perimeter; 4) to encourage natural recovery and to protect emergency treatments from grazing by trespass livestock from private lands.

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

Land 60**%** **Channel** 60**%** **Roads/Trails** 60**%** **Protection/Safety** 60**%**

D. Probability of Treatment Success

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

E. Cost of No-Action (Including Loss): 848,000

F. Cost of Selected Alternative (Including Loss): 574,000

G. Skills Represented on Burned-Area Survey Team:

[X] Hydrology	**[X] Soils**	**[ ] Geology**	**[X] Range**
[ ] Forestry	**[X] Wildlife**	**[X] Fire Mgmt.**	**[ ] Engineering**
[ ] Contracting	**[X] Ecology**	**[X] Botany**	**[X] Archaeology**

[ ] Fisheries [ ] Research [ ] Landscape Arch [X] GIS

Team Leader: Dale Deiter

Email: ddeiter@fs.fed.us **Phone**: 435-896-1007 **FAX**: 435-896-9347

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:

- *Herbicide Application: This treatment was approved on the initial 2500-8. Work will begin next spring. No adjustment of costs or treatment acres are anticipated.*
- *Aerial Seeding: This treatment was approved on the initial 2500-8. The seed mix was adjusted to match the approval granted by the Regional Office in the edited 2500-8. The low-bid price for the fixed-wing contract came in about $3.13 per acre more than the initial cost estimate. This is the primary need for filing an interim 2500-8 at this time. The contract was awarded after consulting with the RO. We confirmed that there were enough funds in the job code to cover the cost increase until we could file an interim. A $1.50 per acre cost is also being added to cover the cost of contract administration and seed delivery from storage to the work site. This treatment will hopefully be completed by November 3, 2006.*

Channel Treatments: None

Roads and Trail Treatments: *The graded dips approved in the initial 2500-8 were installed and have been effective through post-fire storms that have generated floods.*

Protection/Safety Treatments: *The treatments consisting of temporary fencing and safety and protection signing were approved on the initial 2500-8. Bid for fencing supplies have been received and award will be made by October 31, 2006. The fence will be installed in the spring of 2007. Sign supplies have been ordered, but have not yet been delivered. No adjustment of costs, fence mileage, or number of signs is anticipated.*

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.)

Noxious Weed Monitoring: *This monitoring was approved in the initial 2500-8. Implementation will begin in the spring of 2007. No adjustment of costs or treatment acres is anticipated.*

Monitor Seeding Effectiveness:

The results from the aerial seeding towards establishing effective ground cover will be evaluated in Year 1. Effective ground cover will be assessed with regards to whether or not the seeding reduced or prevented expansion of noxious weeds and cheatgrass and if potential for erosion and runoff is reduced in the first year. *This monitoring was approved in*

the initial 2500-8, but the RO requested that the Fishlake develop a more rigorous monitoring of the seeding treatment. The forest is coordinating with the Dixie National Forest, that is conducting seeding treatments and monitoring on treatment areas with similar objectives for noxious weed and cheat grass control. Mark Madsen of the Dixie National Forest will install 2 monitoring sites on seeded areas and 2 on unseeded areas for control. Nested frequency plots will be used to monitor ground cover and species composition to determine if the seeding effectively reduced noxious weed and cheat grass invasions and potential for erosion. Additional cost to monitor and prepare the report is estimated to be $3,500.

Soil Erosion and Storm Flow Monitoring: *This monitoring was approved in the initial 2500-8. So far, precipitation data have been collected and erosion and storm flow from the first rainstorm was monitored. Fire induced flooding occurred, which filled a downstream pond with sediment and did minor damage to the Dog Valley Creek road before the roadwork was completed. No unanticipated impacts occurred from that or subsequent flooding.*

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										
Weed Monitoring	acres	$4.00	1,347	5,388.00	$0		$0		$0	5,388.00
Herbicide Application	acres	$80.00	145	11,600.00	$0		$0		$0	11,600.00
Aerial Seed Mix	acres	$35.38	4,146	146,685.48	$0		$0		$0	146,685.48
Fixed Wing Application	acres	$5.00	4,146	20,730.00	$0		$0		$0	20,730.00
Fixed Wing Supplemer	acres	$4.63	4,146	19,195.98	$0		$0		$0	19,195.98
				0.00	$0		$0		$0	0.00
				0.00	$0		$0		$0	0.00
Subtotal Land Treatments				203,599.46	$0		$0		$0	203,599.46
B. Channel Treatments										
N/A				0.00	$0		$0		$0	0.00
				0.00	$0		$0		$0	0.00
				0.00	$0		$0		$0	0.00
				0.00	$0		$0		$0	0.00
Subtotal Channel Treat.				0.00	$0		$0		$0	0.00
C. Road and Trails										
Install Graded Dips	each	$50.00	60	3,000.00	$0		$0		$0	3,000.00
				0.00	$0		$0		$0	0.00
				0.00	$0		$0		$0	0.00
				0.00	$0		$0		$0	0.00
Subtotal Road & Trails				3,000.00	$0		$0		$0	3,000.00
D. Protection/Safety										
Temporary Fencing	miles	$2,500.00	3.8	9,500.00	$0		$0		$0	9,500.00
Protection Signing	each	$400.00	2	800.00	$0		$0		$0	800.00
Safety Signing	each	$400.00	2	800.00	$0		$0		$0	800.00
				0.00	$0		$0		$0	0.00
				0.00	$0		$0		$0	0.00
				0.00	$0		$0		$0	0.00
Subtotal Structures				11,100.00	$0		$0		$0	11,100.00
E. BAER Evaluation										
BAER Team	each	$18,700.00	1	---	18700					
Supplies & Documents	each	$450.00	1	---	450					
BARC Image	each		1	---	0					

				---			$0		$0	0.00
				---	$0		$0		$0	0.00
Subtotal Evaluation				---	$19,150		$0		$0	19,150.00
F. Monitoring										
Year 1 + Report	each	$4,000.00	1	4,000.00	$0		$0		$0	4,000.00
Mark Madsen Supplem	each	$3,500.00	1	3,500.00	$0		$0		$0	3,500.00
Subtotal Monitoring				7,500.00	$0		$0		$0	7,500.00
G. Totals				225,199.46	$19,150		**$0**		**$0**	**244,349.46**
Previously approved				202,503.48						
Total for this request				**22,695.98**						

PART VII - APPROVALS

1. /s/ Mary C. Erickson — 10/30/2006
   Mary C. Erickson — Date
   Forest Supervisor (signature)

2. /s/ Jack G. Troyer for — 11/9/06
   Jack G. Troyer — Date
   Regional Forester (signature)