

Date of Report: **04-05-2012****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 DESCRIPTIONA. Fire Name: **Apple Fire**B. Fire Number: **SD-BKF-120158**C. State: **SD**D. County: **Custer**E. Region: **R02**F. Forest: **Black Hills**G. District: **Hell Canyon**H. Fire Incident Job Codes: **P2GQJ6**I. Date Fire Started: **03-28-2012**J. Date Fire Contained: **04-01-2012**K. Suppression Cost: **\$558,179 (as of 04-01-12 - total not yet available at this time)**

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): **Dozer – 5.6 miles; Handline – 0 miles**
2. Fireline seeded (miles): **5.6 miles**
3. Other (identify): **Road damage, 3.6 miles**

Fire Suppression Repair - Line Type	Feet (miles)
Dozer Line (Rehab and Close)	29,466 (5.6)
Gravel Road (County, No Rehab Needed)	5,917 (1.1)
System Road (Rehab to Standard)	17,981 (3.4)
Gravel Road (Private. Rehab)	1,238 (0.2)
Total	54,603 (10.3)

M. Watershed Number:

HUC 12	Watershed Name	Watershed Acres	Acres Burned	Acres Unburned	Percent Burned (Fire)	Percent Unburned
101201090201	Upper Beaver Creek	22,753	262	22491	1	99
101201090202	Middle Beaver Creek	21,927	279	21648	1	99

**General watershed information obtained from <http://apps.fs.usda.gov/WCFmapviewer/>*

N. Total Acres Burned: **Approx. 541 acres**

Acres: NFS (~512) Other Federal NA State NA Private (~29)

**Information from InciWeb*



O. Vegetation Types: **Ponderosa pine (seedlings/saps), Grassland**



P. Dominant Soils:

Map Unit Legend (Apple Fire)

Custer and Pennington Counties Area, Black Hills Parts, South Dakota (SD607)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Q0001E	Buska-Mocmont-Rock outcrop complex, 10 to 40 percent slopes	291.7	53.9%
Q0005G	Mocmont-Rock outcrop complex, 40 to 80 percent slopes	220.3	40.7%
Q0300C	Bullflat-Cordeston, dry silt loams, high mica, 2 to 9 percent slopes	22.9	4.2%
Q0304D	Buska-Virkula, high mica loams, dry, 2 to 15 percent slopes	1.1	0.2%
Q0322D	Virkula-Pactola complex, dry, 2 to 15 percent slopes	5.1	0.9%
Totals for Area of Interest		541.1	100.0%



Q. Geologic Types:

R. Miles of Stream Channels by Order: **Stream Order 1 – 1.23 miles; Order 2 – 0.32 miles**

S. Transportation System: **Roads: 2.01 miles system, 1.65 miles non-system; 0.56 miles of other jurisdiction roads (County)**

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

The Apple Fire was generally a mosaic burn, dominated by low to moderate soil burn severity with scattered, limited isolated patches of high soil burn severity.

B. Water-Repellent Soil acres: **Estimated to be less than 5%.**

C. Soil Erosion Hazard Rating (acres):

Based on inherent soil properties, the NRCS erosion hazard ratings for soils within the Apple Fire are:

Slight = 29 acres

Moderate = 292 acres

Severe to Very Severe = 220 acres

*Erosion Hazard (Off-Road, Off-Trail) rating from NRCS Web Soil Survey was used. From Web Soil Survey: The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

D. Erosion Potential:

No modeling occurred for this fire based on limited size, critical values and hazards.

E. Sediment Potential: N/A cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

Since there were no values at risk, a detailed hydrologic analysis was not completed.

A. Estimated Vegetative Recovery Period (years):

Approximately 1-3 years for grass/forb communities; ponderosa pine will take longer based on life form and in association with the previous fire (1990 Cicero Peak Fire).

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

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

D. Design Storm Duration, (hours): NA

E. Design Storm Magnitude, (inches): NA

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

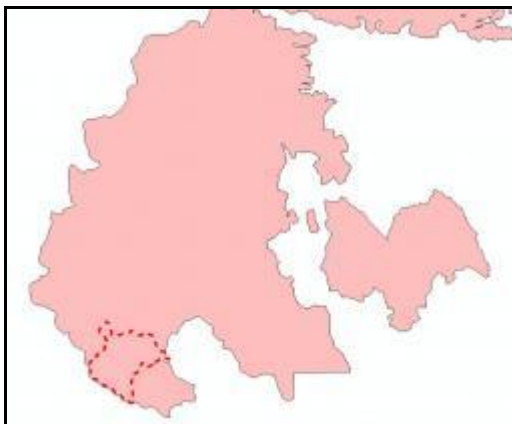
G. Estimated Reduction in Infiltration, (percent): <10%

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

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

The Apple Fire was located southeast of Custer, SD. Location was within the boundary of the Cicero Peak fire (1990).



1990 Cicero Peak Fire (pink fill) with dashed red line identifying the boundary of the 541 acre 2012 Apple Fire

The fire occurred on gentle to steep slopes. Elevations in the fire range from approximately 5,000 to 5600 feet.

Human Life and Safety:

The BAER Team did not identify emergency conditions for life/safety of Forest users due to increased runoff and erosion within and adjacent to the burned Forest Service lands. The only risk or threat to life is where roads cross drainage channels that now have a some level of potential for increased flash floods during short duration/high intensity precipitation events. However, it is expected that if sufficient precipitation is received in the next few weeks to support spring vegetation growth that this would be limited. Structurally compromised burned trees presenting an immediate threat to life/safety was identified by the Fire Resource Advisor as a safety issue. Complete review of the entire burned area for hazardous trees was not completed by the BAER Team.

Property:

Post wildfire threats to roads may be associated with some increased runoff and erosion within and adjacent to the burned Forest Service lands. The fire occurred just prior to spring vegetation growth and with fire severities of low to moderate it is generally expected that the site will revegetate well this spring if the area receives precipitation.

Natural Resources:

Water

No emergency conditions were identified for drinking water quality. No watersheds are known to be sources of surface drinking water in this area. Potential impact to springs was rated at a **Very Low Risk**.

Soil Productivity and Hydrologic Function

No emergency conditions were identified for changed hydrologic function, erosion or increased runoff. Overall, these resources were rated as **Low Risk**.

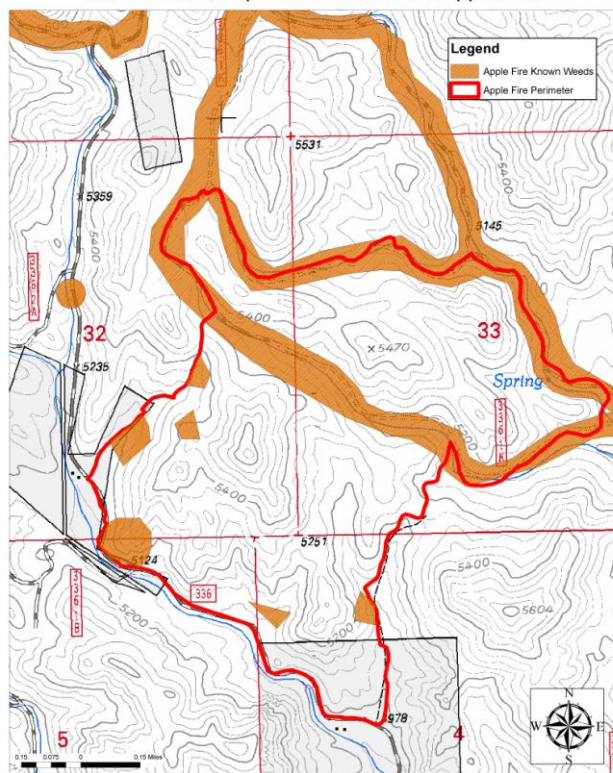
Threatened/Endangered Species

No Threatened and Endangered species are known to occur within the burned area.

Plant Communities

Some level of post wildfire threat of increased risk for spread and/or establishment of noxious weeds was identified. There are approximately 50 acres of known noxious weed infestation within the fire perimeter. An estimated additional 25 acres are threatened for noxious weed infestation associated with post-fire conditions and suppression activities. Plant communities on FS lands were rated as High Risk.

Known Weed Populations Within the Apple Fire



Cultural and Heritage

Very little to no threats were identified to FS eligible Archeology sites (per question to Forest Archeologist who had been in contact with District Archeologists that had been on the fire).

B. Emergency Treatment Objectives:

**The objective of implementing Noxious Weed Detection Surveys and Treatments is:
To provide for recovery of native vegetation by preventing the establishment and spread of noxious weeds in the recently burned area.**

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

Treating noxious weeds and detection survey will be ongoing this year. A damaging storm event does not apply to noxious weeds as it does to other treatments designed to minimize erosion and runoff from burned areas.

Land (weeds) N/A % Channel -- % Roads/Trails -- % Protection/Safety -- %

D. Probability of Treatment Success

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

E. Cost of No-Action (Including Loss)

F. Cost of Selected Alternative (Including Loss):

BAER Risk Assessment (based on probability and magnitude of consequences)

The BAER Team considered critical values and they are documented in a separate table located within the Apple Fire BAER electronic files.

Value At Risk	Probability	Mag. Consequences	Risk
Human Life and Safety (Apple Valley Ranch)	<i>Unlikely</i>	<i>Minor</i>	<i>Very Low</i>
Road (County)	<i>Unlikely</i>	<i>Minor</i>	<i>Very Low</i>
Nat.Resources: Water (Spring)	<i>Unlikely</i>	<i>Minor</i>	<i>Very Low</i>
Nat.Resources: Soil Productivity	<i>Possible</i>	<i>Minor</i>	<i>Low</i>
Nat.Resources: Grassland Plant Communities (Noxious Weeds)	<i>Likely</i>	<i>Moderate</i>	<i>High</i>
Cultural & Heritage Resources	<i>No Threats</i>		

G. Skills Represented on Burned-Area Survey Team:

☒ Hydrology ☒ Soils ☐ Geology ☒ Range (and Invasive Plants)
☐ Forestry ☐ Wildlife ☐ Fire Mgmt. ☐ Engineering
☐ Contracting ☐ Ecology ☒ Botany ☐ Archaeology
☐ Fisheries ☐ Research ☐ Landscape Arch ☒ GIS ☐ Other

On 03/30/2012, the Hell Canyon District Ranger determined that there was a need for a BAER Assessment (per voicemail left with Deanna Reyher, BKF BAER Coordinator). The fire exceeded 500 acres which triggered Forest Service Manual direction to complete an assessment.

Team Leader: Les Gonyer

Email: lgonyer@fs.fed.us

Phone: 605-716-1884

FAX:

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 Detection and Treatment

Detection surveys and treatment of known and new infestations within the Apple Fire is recommended. It is expected that it will be necessary to detect and treat weeds within the burned area, perhaps more than once during the year. Treatment method is ground application by spraying. Most of the spraying would generally be completed with Forest crews using a truck-mounted unit and where infestations are accessible.

Item	Cost
Noxious Weed Detection & Treatment	\$16,150
Total	\$16,150

**Treatment costs developed using the Forest KV Cost Guide (Effective December 2011)*

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.)

Monitoring on the Apple Fire would be the detection surveys for noxious weeds and effectiveness or treatment to determine any retreatment needs to occur within the twelve month period.

Part VI – Emergency Stabilization Treatments and Source of Funds

Line Items	Units	Unit Cost	# of Units	BAER \$	Other \$	# of units	Fed \$	# of Units	Non Fed \$	Total \$
A. Land Treatments										
Noxious Weed Treatment	Acres	202	75	\$15,150	\$0		\$0		\$0	\$15,150
Noxious Weed Detection Surveys		10	100	\$1,000	\$0		\$0		\$0	\$1,000
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				\$16,150	\$0		\$0		\$0	\$16,150
B. Channel Treatments				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Channel Treat.</i>				\$0	\$0		\$0		\$0	\$0
C. Road and Trails				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Road & Trails</i>				\$0	\$0		\$0		\$0	\$0
D. Protection/Safety				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
E. BAER Evaluation				---	\$1,500		\$0		\$0	\$1,500
				---	\$0		\$0		\$0	\$0
				---	\$1,500		\$0		\$0	\$1,500
<i>Subtotal Evaluation</i>										
F. Monitoring							\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Monitoring</i>				\$0	\$0		\$0		\$0	\$0
G. Totals				\$16,150	\$1,500		\$0		\$0	\$17,650
Previously approved										
Total for this request				\$16,150						

PART VII - APPROVALS

1. /s/ Dennis L. Jaeger
Forest Supervisor (signature)

4/6/12
Date

2. /s/ Brian Ferebee (for)
Regional Forester (signature)

April 12, 2012
Date