

A. Fire Name: Tank Fire

B. Fire Number: AZ-KNF-000698

C. State: AZ

D. County: Coconino

E. Region: 03

F. Forest: Kaibab (0307)

G. District: 3

H. Fire Incident Job Code: P3G22U

I. Date Fire Started: 07/21/2012

J. Date Fire Contained: 07/26/2012

K. Suppression Cost: \$175,000.00

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): 0

2. Fireline seeded (miles): 0

3. Other (identify):

M. Watershed Number: 150100030906 (2,440 ac.), 150100030706 (71 ac.), 1501000

N. Total Acres Burned: 2,546

NFS Acres(X) Other Federal () State () Private ()

O. Vegetation Types: Utah juniper, pinyon pine, grasslands

P. Dominant Soils: Lithic Ustochrepts (2,127 ac.), Typic Ustochrepts (418 ac.)

Q. Geologic Types: Permian sedimentary rocks. Gray to tan, cherty limestone of Kaibab and Toroweap Formations, and underlying white to tan, fine-grained Coconino Sandstone (gypsum; mudstone; dolomite; orthoquartzite)

R. Miles of Stream Channels by Order or Class: 6.5 miles of 1st order streams and 3.8 miles of 2nd order streams

S. Transportation System

Trails: 0 miles Roads: 8.08 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 999 (unburned/very low) 902 (low) 588 (moderate) 60 (high)

B. Water-Repellent Soil (acres): approximately 30 percent of high severity burn acres (i.e., 20 ac.)

C. Soil Erosion Hazard Rating (acres):
212 (low) 1,071 (moderate) 1,263 (high)

D. Erosion Potential: 12.5 tons/acre

E. Sediment Potential: 9,600 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

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

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

C. Equivalent Design Recurrence Interval, (years): 10

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

E. Design Storm Magnitude, (inches): 1.25 in.

F. Design Flow, (cubic feet / second/ square mile): 950

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

H. Adjusted Design Flow, (cfs per square mile): 30

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

There are known populations of cheatgrass and Russian thistle adjacent to the fire perimeter. These invasive and noxious weeds have been recently treated with herbicides, but the potential exists for these weeds to invade burned areas.

Approximately 10 archaeological sites within fire perimeter are at risk of erosion, damage from falling trees (i.e. site disturbance caused by wind-throw that uproots trees), or human disturbance.

There is a potential for loss of soil productivity and sediment delivery to an ephemeral drainage as a result of sheet, rill and gully erosion. This ephemeral drainage is a tributary to Kanab Creek.

B. Emergency Treatment Objectives:

- Protect at-risk soils and watershed resources from degradation as a result of post-fire effects by preventing soil loss and sediment delivery to a streamcourse that is a tributary of Kanab Creek.
- Protect archaeological/heritage resources from erosion, disturbance by Forest visitors, or damage from falling trees by seeding archaeological sites to provide protective vegetative cover and removal of burned trees around at-risk sites.
- Noxious weeds detection and treatment (i.e., cheatgrass, Russian thistle, and Scotch thistle) into and within the fire perimeter.

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

Land 70 % Channel % Roads/Trails % Protection/Safety %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	85	90
Channel	N/A	N/A	N/A
Roads/Trails	N/A	N/A	N/A
Protection/Safety	N/A	N/A	N/A

E. Cost of No-Action (Including Loss): Based on a commercial value of \$50.00 per cubic yard for topsoil and a potential soil loss rate of 12.5 tons per acre, the cost of the No Action Alternative would be approximately \$15,625.00 in areas proposed for treatment. The No Action alternative would also result in degradation of surface water quality in Kanab Creek, a tributary to the Colorado River as a result of sediment delivery and increased surface water turbidity. Topsoil loss would reduce long-term grazing capacity and forage production for wildlife, particularly mule deer. Finally, the opportunity to gain information on the lives of indigenous people within the fire affected area would be lost if archaeological/heritage resources are not protected.

F. Cost of Selected Alternative (Including Loss): \$23,400.00

G. Skills Represented on Burned-Area Survey Team:

<input type="checkbox"/> Hydrology	<input checked="" type="checkbox"/> Soils	<input type="checkbox"/> Geology	<input checked="" type="checkbox"/> Range
<input checked="" type="checkbox"/> Forestry	<input checked="" type="checkbox"/> Wildlife	<input checked="" type="checkbox"/> Fire Mgmt.	<input type="checkbox"/> Engineering
<input type="checkbox"/> Contracting	<input checked="" type="checkbox"/> Ecology	<input type="checkbox"/> Botany	<input checked="" type="checkbox"/> Archaeology
<input type="checkbox"/> Fisheries	<input type="checkbox"/> Research	<input type="checkbox"/> Landscape Arch	<input checked="" type="checkbox"/> GIS

Team Leader: Kit MacDonald

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Phone: (928) 635-8354

FAX: (928) 635-8208

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: Drill seed approximately 20 acres of highly erodible soils with severe on moderate slopes and along two drainages within the fire perimeter that burned at moderate and high severity to prevent sheet and rill erosion and to serve as a filter strip to capture sediments that could otherwise be transported to Kanab Creek. Estimated cost - \$9,000.000

Noxious weeds detection and treatment on an estimated 30 acres (cheatgrass, Russian thistle and Scotch thistle) within the fire perimeter to prevent spread of these weeds into burned areas. Estimated cost - \$3,000.00

Remove sediment from an existing sediment basin and restore the breached detention levee that was installed after the Bridger Knoll Fire. Estimated cost - \$8,000.00

Remove trees surrounding approximately 10 archaeological sites that are at imminent risk of falling, causing damage to cultural and historic resources. Apply native seed to these sites (approximately 1-2 acres total for all sites). Estimated cost – \$2,000.00.

Conduct invasive and noxious weeds monitoring (4 days at \$350.00 per day).

Channel Treatments: N/A

Roads and Trail Treatments: N/A

Protection/Safety Treatments: N/A

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.)

NOXIOUSWEED DETECTION /MONITORING

The purpose of weed detection and treatment is to identify the spread of noxious weeds from any currently known locations of noxious weeds. Noxious weed species generally will be treated at the same time they are discovered. The North Kaibab Ranger District Range Specialist will implement the monitoring strategy. This treatment includes reconnaissance for any new individuals of noxious weeds within and adjacent to the fire perimeter and along roads used for fire suppression activities. Noxious weeds will be sprayed with herbicide as they are discovered. New weed locations will be documented with GPS positions and photographed when possible. The weed surveys will occur four times during the growing season, preferably monthly from May through August. This frequency should allow weeds to be detected and treated before they reach full maturity and set seed.

Part VI – Emergency Stabilization Treatments and Source of Funds
Interim #

			NFS Lands				Other Lands			All
		Unit	# of		Other		Fed	# of	Non Fed	
Line Items	Units	Cost	Units	BAER \$	\$		\$	Units	\$	Total
A. Land Treatments										
Drill seeding	acre	450	20	\$9,000	\$0		\$0		\$0	\$9,000
Restore sediment trap	each	8,000	1	\$8,000	\$0		\$0		\$0	\$8,000
Archaeological site	site	200	10	\$2,000						\$2,000
Weed detection & treat	acre	146.66	30	\$4,400	\$0		\$0		\$0	\$4,400
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Land Treatments				\$23,400	\$0		\$0		\$0	\$23,400
B. Channel Treatments										
				\$0	\$0		\$0		\$0	\$0
				\$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										
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
				\$0	\$0		\$0		\$0	\$0
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
				\$0	\$0		\$0		\$0	\$0
				\$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										
				\$1,600			\$0		\$0	\$0
Insert new items above this line!				---	\$0		\$0		\$0	\$0
Subtotal Evaluation				---	\$0		\$0		\$0	\$0
F. Monitoring										
							\$0		\$0	\$0
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Monitoring				\$0	\$0		\$0		\$0	\$0
G. Totals				\$23,400	\$0		\$0		\$0	\$23,400
Previously approved										

PART VII - APPROVALS

1. /s/ Stuart M. Lovejoy (for) 8/10/12
Forest Supervisor (signature) Date

2. /s/ C. L. Newman, Jr. 8/14/12
Regional Forester (signature) Date