

(Reference FSH 2509.13)

O. Vegetation Types: Sagebrush ecological sites on the south and southwest aspects and mixed conifer on the north and northeast aspects. Conifer species include lodgepole pine, Douglas fir, and Subalpine fir. Aspen is mixed in the conifers and also occupies the toeslopes and frost pockets in the sagebrush.

P. Dominant Soils: South aspects supporting sagebrush sites are a mix of lithic and moderately deep loam soils with mollic epipedons. Timbered north slopes are a mix of loamy-skeletal and fine loamy alfisols and mollisols. Soils on the bench on top of Table Mountain are fine-loamy and loamy skeletal mollisols and alfisols, and inclusions of heavy clay soils.

Q. Geologic Types: Sedimentary; dominantly sandstones, siltstones and limestones with some minor inclusions of conglomerates.

R. Miles of Stream Channels by Order or Class: By Order: 1st order = 8.2 miles; 2nd order = 1.8 miles; 3rd order = 4.2 miles. By Class: Ephemeral = unmapped (0 miles); Intermittent = 2.7 miles; Perennial = 11.5 miles. Note: Errors in stream class identification are known to be present in data.

S. Transportation System

Trails: 7 miles Roads: 0 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 250 (low) 1700 (moderate) 200 (high)

B. Water-Repellent Soil (acres): About 1900 acres are estimated to have moderate to high water repelancy in the upper 1.5 inches of mineral soil.

C. Soil Erosion Hazard Rating (acres):
0 (low) 950 (moderate) 950 (high)

D. Erosion Potential: About 4 to 8 tons/acre on the mountain benches, and about 8-10 on the steeper mountain sideslopes. This rate is expected to decrease rapidly in the first 5 years post-fire.

E. Sediment Potential: About 4400 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 2-3 years

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):

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

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

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

PART V - SUMMARY OF ANALYSIS

The Giraffe Fire started by lightning on August 22, 2010 in a relatively remote area near the ID/WY boundary. This fire was managed using very limited suppression and is expected to be contained by fall moisture. The fire burned against, and partially re-burned, the Elk Valley Fire of 2000. Areas of this older burned area are badly infested with Canada thistle. Since Canada thistle and other invasive species seed sources are present in the burned area and adjacent areas, and fire personnel have utilized Forest roads and trails in the vicinity to gain access to monitor the fire, there is a danger of invasive species invasion in some areas of this new disturbance.

A. Describe Critical Values/Resources and Threats:

- **Human Life and Safety:** No values-at-risk identified.
- **Property:** No values-at-risk identified.
- **Natural Resources:** Short-term increases in erosion and sedimentation are expected to be within the natural range of disturbance for this landscape, and no threats outside of this natural range were identified for soil productivity/hydrologic function, water supply/water use, or federally listed TES species. There are potential threats to native plant communities on NFS lands where invasive species or noxious weeds are absent or present in only minor amounts.

Access to the fire area is limited to foot and horse travel. Because of limited access and land management activities, noxious weeds are either absent or exist as single plants scattered along the authorized travel routes. Small communities of Canada thistle are present within the fire perimeter, and exist primarily along riparian areas and within old burn treatments. Infestations of leafy spurge, yellow toadflax, and dyer's woad have not been documented within the burn area, but are in close enough proximity to assume a potential for spread within the fire area. All of these species exist along the travel routes used to access the burned area.

About 15 miles of roads and trails within and around the fire area were used to access the burn area during monitoring/suppression efforts. Vehicles and firefighters traveled through areas known to have species of invasive weeds previously not existing within the burn area. This creates a serious potential for weed seeds to have traveled within, and adjacent to, the burn area, especially on the roads and trails and used during monitoring/suppression efforts. New infestations of weeds could be expected to occur along these traveled routes within the first year of the fire, and easily spread throughout the rest of the burn area within 2-3 years.

It is the Forest's expectation that there is a "Likely" (50-90 percent) chance for noxious weeds to invade areas where they did not previously exist; and "Moderate" consequences to the existing native vegetation if early detection and rapid response (EDRR) efforts are not pursued. This would equate to a "High" level risk based on the interim BAER direction. First year weed monitoring should include 25 feet on each side of the trails within the fire area and roads used to access the fire area. This would amount to roughly 90 acres of road and trail corridors.

- **Cultural and Heritage Resources:** No values-at-risk identified.

B. Emergency Treatment Objectives:

Prevent the spread of noxious plant species into previously unoccupied locations.

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

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

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land			
Channel	Does not apply		
Roads/Trails			
Protection/Safety			

E. Cost of No-Action (Including Loss): **\$47,000**

The values-at-risk with no action include potential loss of native communities and degraded ecological conditions that cause further departure from natural disturbance regimes, including loss of soil productivity over the long term. The effects of no action were determined by assuming fire monitoring/suppression activities would contribute to the invasion of noxious weed species into highly susceptible burned areas where they were absent or in minor amount prior to the fire. This is a reasonable assumption after observing the conditions of portions of the adjacent Elk Valley Fire of 2000.

If the invasive noxious weeds are not immediately controlled, these undesirable species could become established within 1 year. At least 2 years of additional treatments would be needed on the initial 90 acres identified, plus the potential for spread may infect an additional 100 acres if the initial invasion is not successfully controlled. The average cost to treat noxious plants that have become established is \$140/acre. Assuming the treatments are 80% effective, the total cost for control of newly established noxious weed infestations, including loss, is estimated to be \$47,000.

F. Cost of Selected Alternative (Including Loss): **\$13,320**

Degraded ecological status from the loss of native plant communities contributes to departure from natural disturbance regimes. These conditions can cause long-term loss of soil productivity as erosion rates are increased in sites dominated by noxious weeds and invasive species.

- The proposed Early Detection Rapid Response (EDRR) approach on 90 acres (burned road and trail corridors and those used to access the fire) is predicted to be 80 percent effective in treating the invasion of noxious weeds from disturbed sites, promoting recovery of native plant species and maintaining more natural erosion rates from the burned and disturbed areas in the short and long term. The EDRR would require less time and material costs in the initial emergency period compared to the costs for treating established noxious weed infestations. The estimated cost for EDRR on 90 acres at \$120/acre is \$10,800. Because the treatment will not be 100% effective, loss is estimated at \$2,520.
- Additional EDRR treatments will be needed in year 2 and 3 to increase the likelihood of achieving treatment objectives; however the treatments costs would be reduced. Most activity in years 2 and 3 would be monitoring and follow up treatments on the first years efforts. The cost of additional treatments would be approximately \$2000 a year. These treatments would be implemented using non-BAER funds.

G. Skills Represented on Burned-Area Survey Team:

☒ Hydrology ☒ Soils ☐ Geology ☒ Range
☒ Forestry ☒ Wildlife ☐ Fire Mgmt. ☐ Engineering

☐ Contracting ☐ Ecology ☐ Botany ☒ Archaeology
☒ Fisheries ☐ Research ☐ Landscape Arch ☐ GIS

Team Leader: Kara Green, Soil Scientist

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Team Members:

Ali Abusaidi, Archeologist, C-T NF
Wayne Beck, Silviculturist, C-T NF
Dave Fogle, Fisheries Biologist, Bridger-Teton NF
Devon Green, Wildlife Biologist, Soda Springs and Montpelier Ranger Districts, C-T NF
Jim Laprevote, Hydrologist, C-T NF
Dell Transtrum, Range Mngt Specialist, Soda Springs and Montpelier Ranger Districts, C-T NF

H. Treatment Narrative:

Land Treatments: None recommended.

Channel Treatments: None recommended.

Road and Trail Treatments: None recommended.

Protection/Safety Treatments: None recommended.

I. Monitoring Narrative:

- Purpose of Treatment: Reduce the potential for invasion of noxious weeds into burned areas using EDRR (Early Detection Rapid Response). Consultations with District specialists from both Forests indicate there is a high risk for noxious weed invasion. The threat is for spread of noxious weeds from existing populations along fire access routes in the vicinity to highly susceptible burned areas.
- General Description: Qualified District personnel will monitor and treat, as needed, approximately 90 acres susceptible to noxious weed invasion within and adjacent to the Giraffe Creek Fire that were directly impacted as a result of moderate to high burn severity or from monitoring/suppression activities and access points. Monitoring utilizing the Early Detection Rapid Response (EDRR) approach is proposed. Any noxious weed found as a result of monitoring will be immediately treated using appropriate application techniques and approved herbicides. All treatments will take place in accordance with the Caribou-Targhee Forest Noxious Weed Management Plan. Treatment of invasive noxious weeds will be based upon what is found during monitoring within 1 year after the fire. Three or more trips may be needed to adequately control the weeds given the variable life history characteristics of the noxious weeds in the area. The EDRR approach allows for the immediate treatment of known infestations at the appropriate life stage, which is considered to be the most effective eradication method.
- Location (Suitable) Sites: About 15 miles of roads and trails within and around the fire area were used to access the burn area during monitoring/suppression efforts. New infestations of weeds could be expected to occur along these traveled routes within the first year of the fire, and easily spread throughout the rest of the burn area within 2-3 years. First year weed monitoring should include 25 feet on each side of the trails within the fire area and roads used to access the fire area. This would amount to roughly 90 acres of road and trail corridors. Many treatment locations do not have motorized access and will require extra time for travel.
- Design/Construction Specifications: Select herbicide, application rate, and time of application based upon specific weeds being treated, and access to the location of the potential invasion.

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

Line Items	Units	Unit Cost	NFS Lands		Other \$	Other Lands				All Total \$
			# of Units	BAER \$		# of units	Fed \$	# of Units	Non Fed \$	
A. Land Treatments										
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				\$0	\$0		\$0		\$0	\$0
B. Channel Treatments										
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Channel Treat.</i>				\$0	\$0		\$0		\$0	\$0
C. Road and Trails										
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$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
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Structures</i>				\$0	\$0		\$0		\$0	\$0
E. BAER Evaluation				\$0	\$5,200					
				---			\$0		\$0	\$0
<i>Insert new items above this line!</i>				---	\$0		\$0		\$0	\$0
<i>Subtotal Evaluation</i>				---	\$0		\$0		\$0	\$0
F. Monitoring										
Noxious Weed EDRR	acres	120	90	\$10,800	\$0		\$0		\$0	\$10,800
Implimentation Plan/Map	days	350	2	\$700						\$700
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Monitoring</i>				\$11,500	\$0		\$0		\$0	\$11,500
G. Totals				\$11,500	\$0		\$0		\$0	\$11,500
Previously approved										
Total for this request				\$11,500						

PART VII - APPROVALS

1. Brent L. Larson
Forest Supervisor (signature)

October 22, 2010_
Date

2. /s/ Harv Forsgren
Regional Forester (signature)

11/4/2010
Date