

Date of Report: 5-03-05

**BURNED-AREA REPORT**

(Reference FSH 2509.13)

**PART I - TYPE OF REQUEST****A. Type of Report**

- ☐ 1. Funding request for estimated WFSU-SULT funds
- ☒ 2. Accomplishment Report
- ☐ 3. No Treatment Recommendation

**B. Type of Action**

- ☐ 1. Initial Request (Best estimate of funds needed to complete eligible rehabilitation 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: TuolumneB. Fire Number: CA-STF-002191C. State: CAD. County: TuolumneE. Region: 5F. Forest: StanislausG. District: GrovelandH. Date Fire Started: 9/12/04I. Date Fire Contained: 9/17/04J. Suppression Cost: \$1.9 mm

K. Fire Suppression Damages Repaired with Suppression Funds

- 1. Fireline waterbarred (miles): 3
- 2. Fireline seeded (miles): 0
- 3. Other (identify):

L. Watershed Number: 6<sup>th</sup> Field HUC: 180400090702 (Tuolumne River-Jawbone Creek)M. Total Acres Burned: 722

NFS Acres (692) Other Federal ( ) State ( ) Private (30)

N. Vegetation Types: Ponderosa pine, mixed oak, mixed chaparralO. Dominant Soils: Holland, moderately deep and deep, Pinole, Red Bluff, Lithic XerumbreptsP. Geologic Types: Granodiorite; alluvial gravels from Eureka Valley formation

Q. Miles of Stream Channels by Order or Class: Perennial: 0.6; Intermittent: 1.6; Ephemeral: 5.2.

R. Transportation System

Trails: 0 miles      Roads: 3.5 miles

### **PART III - WATERSHED CONDITION**

A. Burn Severity (acres): 117 (low) 240 (moderate) 365 (high)

B. Water-Repellent Soil (acres): 102

C. Soil Erosion Hazard Rating (acres):  
310 (low) 172 (moderate) 240 (high)

D. Erosion Potential: 12 tons/acre (1<sup>st</sup> year erosion)

E. Sediment Potential: 3840 cubic yards / square mile

### **PART IV - HYDROLOGIC DESIGN FACTORS**

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

B. Design Chance of Success, (percent): 90

C. Equivalent Design Recurrence Interval, (years): 25

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 2.4

F. Design Flow, (cubic feet / second/ square mile): 20

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

H. Adjusted Design Flow, (cfs per square mile): 25

### **PART V - SUMMARY OF ANALYSIS**

A. Describe Watershed Emergency:

Threat to Life – Rockfall along forest road 1N10 (Lumsden Road) as well as flooding from severely burned portions of the watershed above constitute a threat of injury or death to travelers along this road. The Lumsden road is the main access to the Tuolumne Wild and Scenic River for fishing, camping and river rafting (the Tuolumne River is a renowned Class 5 rafting experience). Within the Tuolumne fire the Lumsden Road is subject to road washouts at stream crossings during winter storms as well as rockfall from steep unstable slopes above the road, both of which could endanger user safety.

Property – Flooding is likely to washout several road crossings on the Lumsden Rd and Road 1S58 during winter storms due to post-fire flows exceeding capacities of existing culverts, eroding ditchlines and gullyng-out road sections. Road 1S58 is in upper Drew Creek.

Resources – Noxious weed invasion is likely. The fire area is located at the fringe of a spreading yellow star thistle infestation. The Groveland Ranger District has been prioritizing this area for treatment and containment in order to maintain native plant communities and mule deer forage insofar as this is designated critical winter range. Although weed wash stations were established at the fire camp for this incident, numerous vehicles were used within the fire without first being cleaned. This included initial attack dozers and support trucks. Some vehicles were observed driving toward the incident with yellow star thistle under the carriage prior to weed wash station set-up, and one vehicle was observed on the fire line with yellow star-thistle under the carriage after going through the weed wash. Firefighters may also have had weed seeds on themselves prior to entering and working within the fire area.

**B. Emergency Treatment Objectives:**

Prevent loss of life, maintain servcability of roads, and prevent invasion of noxious weeds to help maintain the native plant community and forage in critical deer winter range .

**C. Probability of Completing Treatment Prior to First Major Damage-Producing Storm:**

Land NA %    Channel NA %    Roads 90 %    Other NA %

**D. Probability of Treatment Success**

	Years after Treatment		
	1	3	5
Land	NA		
Channel	NA		
Roads	90	100	100
Other	NA		

**E. Cost of No-Action (Including Loss):** \$100,063

**F. Cost of Selected Alternative (Including Loss):** \$80,051

**G. Skills Represented on Burned-Area Survey Team:**

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

Team Leader: Jim Frazier

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Phone: 209-532-3671

FAX: 209-533-1890

#### 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:

None

##### Channel Treatments:

None

##### Roads and Trail Treatments:

Forest Road 1N10 (Lumsden Road)

- Utilize existing Lumsden Road gate closures several miles west and east of the fire area to prevent winter access to the fire area in order to mitigate the threat to life by road users during the wet season (November-April). (No cost to BAER).
- Install two hazard warning signs, one each just outside the west and east fire boundary. These signs are intended to warn users of hazard potential in the fire area once the Lumsden Road is opened at the end of April for fishing and rafting season.
- Install informational signs at the existing western and eastern closures on Lumsden Road. These will let users know that a hazard area exists several miles ahead so they can choose not to proceed down into the canyon if desired.
- Install three rock-armored low water crossings along the Lumsden road within the fire area where these at-risk drainages cross the road. Remove the existing undersized culverts at two of these sites (they are likely to fail even if metal end sections were installed) and install the third armored crossing at the remaining drainage, where no water passage feature currently exists.
- Restore drainage function (ditchline and cross drains) along road as needed.
- Conduct road patrol as needed during the wet season to observe and make minor repairs if needed.

**The existing Lumsden Road gate closures were utilized. Also, boulders were placed to prevent users from going around the locked gate. Hazard warning signs were installed. Informational signs were also placed at the appropriate locations. Two rock-armored crossings were installed where debris flows occurred. An asphalt berm was constructed at the third crossing to protect the archaeological significance of the rockwalled culvert. Drainage function was restored along the road as needed. Road patrol was conducted as needed.**

Forest Road 1S58

- Replace two damaged culverts to allow passage of post-fire streamflows. One culvert is partially collapsed and the other has a crushed inlet. Both are very old flat-iron pipes with rockwall inlets (the pipe type, condition and small size of each makes attaching metal end sections impractical). Both culvert locations will need an archeological evaluation as part of the replacement project.
- Repair ditch line gullyng. Further gullyng could severely damage the road.
- Restore drainage function (ditchline and cross drains) along road as needed.
- Conduct road patrol as needed during the wet season to observe and make minor repairs if needed.

**Replaced one antique pipe with a new culvert and end-section. The second pipe was functioning fine. The gully ditch was repaired with rip-rap. Drainage function was restored on 1S58 by "pulling the ditch", placing rip-rap at two fills and cross drainages, and building one rock dip.**

**The road patrol was conducted as needed during the wet season. The cost of road treatments for the two roads was \$55,310.**

Structures:

None

#### H. 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:

**Monitoring Need:** The burned area has provided an opportunity for nearby invasive plants to become established because of disturbed soil, release of nutrients, lack of competition, and from the possibility of introduction from fire suppression activities. If noxious weeds become established and spread they will compromise the native plant community as well as forage quality and quantity for deer in this critical winter range, which in time could result in a significant impact to the local mule deer population. It is a high forest priority to keep weeds out of this area.

**Monitoring Protocol:** Search for California State noxious weeds ([www.cdfa.ca.gov/weedhome](http://www.cdfa.ca.gov/weedhome)), especially yellow star thistle. Survey within 100 feet of the 3 miles of dozer lines and the 3.5 miles of roads in the fire, and along the first 200 feet of hand lines (approx. 150 acres). Survey twice during appropriate periods in 2005. To detect weeds emerging in the first growth period of the year, survey about mid June, and survey again about late July for plants missed or later developing. Surveyors will be trained in weed identification, removal and disposal procedures. If noxious weeds are detected, the surveyors will GPS the locations for mapping in the Forest GIS layer, fill out a weed location form, and then if there are just a few plants, they will remove the plants at that time by their roots, place them in a plastic bag, double-bag, and dispose of them in an approved manner. If large infestations are found, the District Botanist will be consulted and the appropriate control actions will be planned.

##### Monitoring Costs:

Item	Rate	Cost
Pair of field technicians	\$200 / day for 10 days	\$ 2,000
Support -GIS/GPS, vehicles	\$100 / day for 10 days	\$ 1,000
GS-9/11 botanist – project supervision, training, quality control and reporting	\$250 / day for 6 days	\$ 1,500
Total		\$ 4,500

**Noxious weed monitoring will begin in mid June this year. The A status interim report will be submitted in September or sooner. The cost is expected to be the full amount of \$4,500.**

**Part VI – Emergency Rehabilitation Treatments and Source of Funds by Land Ownership**

			NFS Lands				Other Lands			All	
		Unit	# of	WFSU	Other		# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	SULT \$	\$		units	\$	Units	\$	\$
A. Land Treatments											
				\$0				\$0		\$0	\$0
Subtotal Land Treatments				\$0				\$0		\$0	\$0
B. Channel Treatments											\$0
								\$0		\$0	
				\$0				\$0		\$0	\$0
Subtotal Channel Treat.				\$0				\$0		\$0	\$0
C. Road and Trails											\$0
1N10-Remove Culvert	ea	868	2	\$1,736				\$0		\$0	\$1,736
1N10-Riprap drainage	ea	3617	3	\$10,851				\$0		\$0	\$10,851
1N10-warning signs	ea	1085	2	\$2,170				\$0		\$0	\$2,170
1N10-restore function	mi	1500	1	\$1,500							\$2,170
1N10-road patrol	days	2170	5	\$10,850				\$0		\$0	\$10,850
1S58-Replace culvert	ea	11907	2	\$23,814				\$0			\$23,814
1S58-Restore function	mi	2170	1	\$2,170				\$0			\$2,170
1S58-Ditchline repair	tons	43.5	350	\$15,225				\$0			\$15,225
1S58-Road Patrol	days	1447	5	\$7,235				\$0			\$7,235
Subtotal Road & Trails				\$75,551				\$0		\$0	\$75,551
D. Structures											\$0
				\$0				\$0		\$0	\$0
				\$0				\$0		\$0	\$0
				\$0				\$0		\$0	\$0
				\$0				\$0		\$0	\$0
Subtotal Structures				\$0				\$0		\$0	\$0
E. BAER Evaluation											\$0
Salary and travel	ls			\$17,050				\$0		\$0	\$17,050
				\$0				\$0		\$0	\$0
G. Monitoring Cost								\$0		\$0	\$0
Noxious Weeds	ac	30	150	\$4,500							\$4,500
H. Totals				\$97,101				\$0		\$0	\$97,101

**PART VII - APPROVALS**

1. \_\_\_\_\_  
Forest Supervisor (signature)

\_\_\_\_\_  
Date

2. \_\_\_\_\_  
Regional Forester (signature)

\_\_\_\_\_  
Date