USDA-FOREST SERVICE FS-2500-8 (6/06)

Date of Report: 7/25/2008

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

[X] 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 DESCRIPTION

A. Fire Name: Yuba River Complex

B. Fire Number: CA-TNF-001015

C. State: California

D. County: Sierra and Nevada

E. Region: Pacific Southwest Region (R5)

F. Forest: Tahoe

G. District: Yuba River

H. Fire Incident Job Code: P5D8MT

I. Date Fire Started: 6/21/2008

J. Date Fire Contained: 7/15/2008

K. Suppression Cost: est. $9,000,000

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 11.25 miles Dozerlines, 17.5 miles Handlines
2. Fireline seeded (miles): 0
3. Other (identify):

M. Watershed Number: **25 Fire**: 1802012501 (Upper North Yuba River),
Celina Fire: 1802012503 (Middle Yuba River),
Scotchman and **Fall Fires**: 1802012504 (South Yuba River).

N. Total Acres Burned: 4,235 (excludes 19 acres of miscellaneous burn areas)
Total Complex: NFS Acres(2,378) Other Federal (N/A) State (N/A) Private (1,857)
25 Fire: Total Acres (189) NFS Acres(189) Private (0)
Celina Fire: Total Acres (397) NFS Acres(211) Private (186)
Fall Fire: Total Acres (2,420) NFS Acres(1,400) Private (1,020)
Scotchman Fire: Total Acres (1,229) NFS Acres(578) Private (651)

O. Vegetation Types: Mixed Conifer , Mixed hardwoods, Mixed Brush series

P. Dominant Soils:

25: MAG-Mariposa-Jocal Complex, 30 to 75% slopes, JYE- Jocal-Sites-Mariposa Complex, 2-30% slopes

Celina*:* HUG- Hulburt-Deadwood-Rock outcrop, 30-75% slopes, DEG-Deadwood-Hurlbut rock outcrop complex, 30-75% slopes

Fall: DEG-Deadwood-Hurlbut rock outcrop complex, 30-75% slopes, MCE- McCarthy-Ledmount-Crozier Complex, 2-30% slopes and HSE

Scotchman: JZG-Jocal Varient-Cryumbrempts, wet complex, 50-75% slopes, DEG-Deadwood-Hurlbut rock outcrop complex, HUG3-Hurlbut, thin surface-Deadwood rock outcrop, severely eroded

Q. Geologic Types:Glacial Deposits (QG); Paleozoic Shoo fly complex); Bowman Lake Granodiorite and Mezozoic Metasedimentary rocks

R. Miles of Stream Channels by Order or Class: Perennial: 3.9 miles; Intermittent: 3.4 miles

S. Transportation System:

Trails: 1.7 miles Roads: 5.9 miles

PART III - WATERSHED CONDITION

A. Soil Burn Severity (acres): 3,253 (77%) (low) 769 (18%) (moderate) 213 (5%) (high)

B. Water-Repellent Soil (acres): 213

C. Soil Erosion Hazard Rating (acres):
0 (low) 400 (moderate) 3,835 (high)

D. Erosion Potential: 10 tons/acre

E. Sediment Potential: 3200 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): 2

D. Design Storm Duration, (hours): 24

E. Design Storm Magnitude, (inches): 5.5

F. Design Flow, (cubic feet / second/ square mile): 25

G. Estimated Reduction in Infiltration, (percent): 5

H. Adjusted Design Flow, (cfs per square mile): 26

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

1. **Threats to Human Life/Property** – The Yuba River Complex is comprised of 56% NFS land and 44% privately owned land. There are no known year-round residents within the Yuba River Complex burn perimeters. There is, however, human activity in and around the burned areas including: travel routes through the burned areas, recreational users, private industrial timber land and other private landowners, AT&T telephone lines, PG&E powerlines, and Nevada Irrigation District (NID) Bowman-Spaulding Canal and associated structures. The threat to human life comes from the potential unstable slopes above the waterways, travel routes, recreation trails, telephone lines, powerlines, and water facilities caused by the fires and the potential for rock slides and other falling debris. The BAER team did not find any emergency situations in need of treatment.

2. **Threats to Non Forest Service Facilities** – The **Fall Fire** is the only fire within the Yuba River Complex where non Forest Service Facilities were identified as potentially at-risk. There a Pacific Gas & Electric (PG&E) power transmission line which runs through the eastern portion of the burned area. Portions of the powerline right-of-way was used for fire suppression activities and is currently being rehabed under suppression repair. There is no BAER treatments prescribed for the right-of-way or for the power poles. A telephone line runs along Bowman Road and is attached to trees rather than telephone poles. There is no BAER treatments prescribed for the telephone lines. The NID water transportation canal (Bowman-Spaulding Canal) and the facility at the Clear Creek Tunnel does not appear to have been impacted by the fire and is not in need of BAER treatments.

3. **Threats to Roads** – Sierra County Road 490 (25 Fire) has two main stream crossings, Wet Ravine and an unnamed intermittent stream, and several smaller stream crossings which were impacted by the **25 Fire**. The BAER team road engineer assessed the stream crossings and determined the existing crossings would be capable of handling any increase flow due to the burned area above.
   No threats to the road system within and adjacent to the **Celina Fire** exists.
   There exists several roads affected by the **Fall Fire** including FS Road 18 (Bowman Road) and numerous tributary roads to the Bowman Road. Many of these roads access both National Forest lands and privately owned lands, along with access to telephone lines, powerlines, and water conveyance facilities. FS Road 18-14 accesses NFS land and private land owned by PG&E and SPI. Two culverts, 42" and 48" CMP, are located on road 18-14 directly below the highest concentration of high soil burn severity land. PG&E and SPI are in the process of starting fire salvage logging operations. There is an existing gate on FS Road 18-14 which will need to be closed prior to the rainy season but no later than November 15th. PG&E (Willie Whittlesey) and SPI (Robert Ingram) were contacted concerning the status of the 18-14 road and the two stream crossings. Mr. Whittlesey stated that PG&E will inspect the culverts and the road and insure the gate is closed prior to the rainy season.
   The FS sysyem roads (approximately 0.5 miles on NFS land) within and adjacent to the **Scotchman Fire** are mainly on ridge tops and are not expected to be affected by the fire.
   The BAER engineer assessed the stream crossings for all the fires comprising the Yuba River Complex and determined a low threat to the infrastructure except for the two crossings on the Fall fire mentioned above.

4. **Threats to Water Quality** – There will be a short-term threat to water quality in the main drainages within the burn area including South Yuba River, Canyon Creek, Clear Creek, Scotchman Creek and Fiddle Creek. Canyon Creek is part of the public water system suppling piped water
   for the town of Washington. Ash and debris are expected to be mobilized off the steeper slopes during the first significant precipitation event. These areas will have an increased potential for storm water runoff and erosion, especially downslope/downstream from areas of high burn severity. The main short-term threat to water quality will be from ash and fine, suspended sediment. There is a potential for an increase in the pH of the post-fire runoff water due to the increase of ash deposition. The Lower Canyon Creek subwatershed (6,155 acres) had 81.6% of its area outside the burn perimeter and within the burn

perimeter, 16.5% of the subwatershed was classified as low/unburned. 1.8% of the subwatershed was moderate soil burn severity and the remaining 0.1% was a high soil burn severity.

The Bowman-Spaulding Canal transports water from the Nevada Irrigation District (NID) Mountain Division reservoirs to Lake Spaulding. The canal is operated by the NID and supplies water to Nevada County and Placer County for domestic use along with irrigation needs. The soil burn severity upslope of the section of canal inside the Fall Fire perimeter ranged from unburned to moderate severity. No treatments are prescribed for the area upslope of the canal.

5. **Threats to Long Term Soil Productivity** – The risk of excessive soil erosion attributed to the Yuba River Complex does not pose a threat to long-term soil productivity.

6. **Threats of Noxious and Invasive Weeds** – It is unknown whether or not all fire suppression and rehabilitation equipment used on the Yuba River Complex was weed-free prior to arrival at the incident. Equipment such as trucks, passenger vehicles, heavy equipment, and engines; and foot traffic have the potential to introduce seeds and reproductive propagules of non-native plant species to areas of fire suppression activities. Prior to the fire, the area of the Yuba River Complex Incident was relatively free of non-native invasive plant species, so the introduction of invasive species, specifically noxious weeds, can be devastating to the local ecosystem. Many invasive plant species are adapted to soil disturbance and therefore stimulated by heat, charrate (burned vegetation), and ash; and the removal of competition from established vegetation. The removal of established vegetation, either by a catastrophic event such as a fire or deliberate means such as a dozer creating a fire line, can create the optimum situation for invasive plant establishment. With early detection, the cost to eradicate noxious and invasive non-native species is greatly reduced.

7. **Threats to Wildlife Resources** – There are no known Threatened and Endangered wildlife resources within or influenced by the Yuba River Complex.

8. **Threats to Botanical Resources** – There are no known Threatened and Endangered botanical resources within or influenced by the Yuba River Complex.

9. **Threats to Cultural Resources** –There are no proposed BAER treatments for any of the known cultural resources within the fire perimeters of the Yuba River Complex. There are no ground distubing activities proposed by the BAER Team for the burned area.

B. Emergency Treatment Objectives:

1. **Threats of Noxious and Invasive Weeds -** To determine if the fire has enabled the establishment and spread of noxious weeds, and to detect such establishment and spread as early as possible, the BAER team recommends noxious weed detection surveys be conducted. Early detection dramatically increases the likelihood of successful treatment.

   No other BAER treatments are prescribed for the Yuba River Complex.

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

Land 0 % Channel N/A % Roads/Trails N/A % Protection/Safety N/A %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	90%	N/A	N/A
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): N/A

F. Cost of Selected Alternative (Including Loss): N/A

G. Skills Represented on Burned-Area Survey Team:

[X] Hydrology [X] Soils [ ] Geology [ ] Range
[X] Forestry [X] Wildlife [ ] Fire Mgmt. [X] Engineering
[ ] Contracting [ ] Ecology [X] Botany [X] Archaeology
[X] Fisheries [ ] Research [ ] Landscape Arch [X] GIS

Team Leader: Tim Biddinger

Email: tbiddinger@fs.fed.us Phone: 530-478-6249 FAX:

Core BAER Team
Rick Weaver (Team Leader, Hydrologist) Tahoe NF
Tim Biddinger (Team Leader,Hydrologist) Tahoe NF
Clarence Draper (Engineering) (T) Tahoe NF
Extended BAER Team
Marilyn Tierney (Biologist) Tahoe NF
Bill Slater (Archaeologist) Tahoe NF
Karen Wiese (Botanist) Tahoe NF
John Babin (GIS) Tahoe NF
Carol Kennedy (Soil Scientist) Tahoe NF
Adjunct BAER Team
Terri Walsh (Silviculturist) Tahoe NF

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: To determine if the fire has enabled the establishment and spread of noxious and invasive non-native species, and to detect such establishment and spread as early as possible, the BAER team recommends noxious and invasive non-native species detection surveys be conducted. Early detection dramatically increases the likelihood of successful treatment. A detailed noxious and invasive non-native species detection survey plan is found in Appendix B attached. The total cost for the noxious and invasive non-native species detection survey will be **$2,625** for the first year after the fire.

Channel Treatments: N/A

Roads and Trail Treatments: N/A

Protection/Safety Treatments: N/A

I. **Monitoring Narrative:** N/A

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

			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 Surveys				$0	$0			$0		$0	$0
Salaries	days	400	6	$2,400	$0			$0		$0	$2,400
Vehicle	miles	0.5	450	$225	$0			$0		$0	$225
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Land Treatments				$2,625	$0			$0		$0	$2,625
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
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Structures				$0	$0			$0		$0	$0
E. BAER Evaluation											
Salaries	days	600	20		$12,000						$12,000
Vehicles	miles	0.5	500	---	$250			$0		$0	$250
Insert new items above this line!				---	$0			$0		$0	$0
Subtotal Evaluation				---	$12,250			$0		$0	$12,250
F. Monitoring											
				$0	$0			$0		$0	$0
Insert new items above this line!				$0	$0			$0		$0	$0
Subtotal Monitoring				$0	$0			$0		$0	$0
G. Totals				$2,625	$12,250			**$0**		**$0**	**$14,875**
Previously approved											
Total for this request				**$2,625**							

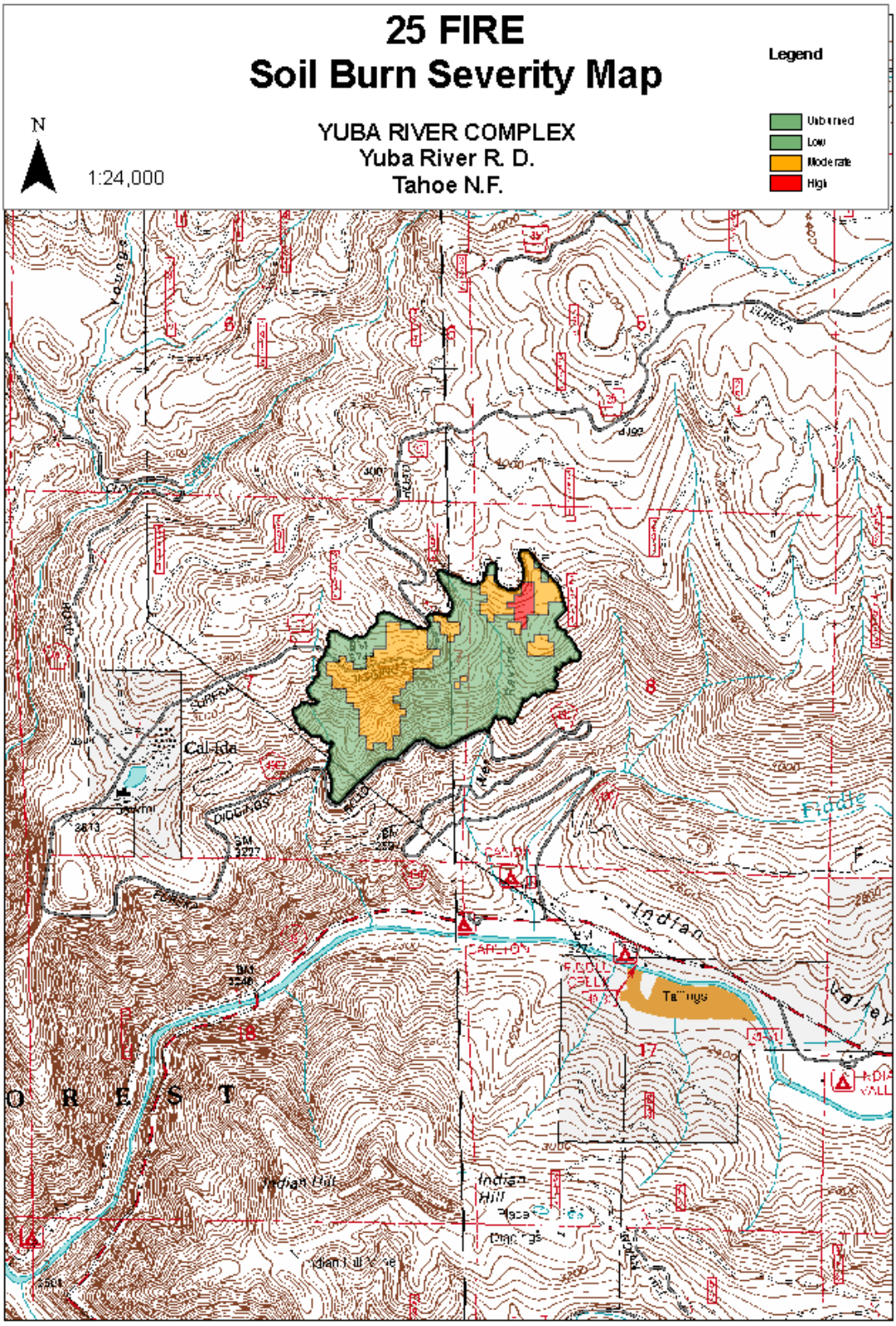
PART VII - APPROVALS

1. /s/ Judie L. Tartaglia — 7/25/2008
   Forest Supervisor (signature) — Date

2. */s/ James M. Peña (for)* — *8/5/2008*
   Regional Forester (signature) — Date

APPENDIX A

YUBA RIVER COMPLEX Soil Burn Severity Maps



CELINA FIRE
Soil Burn Severity Map

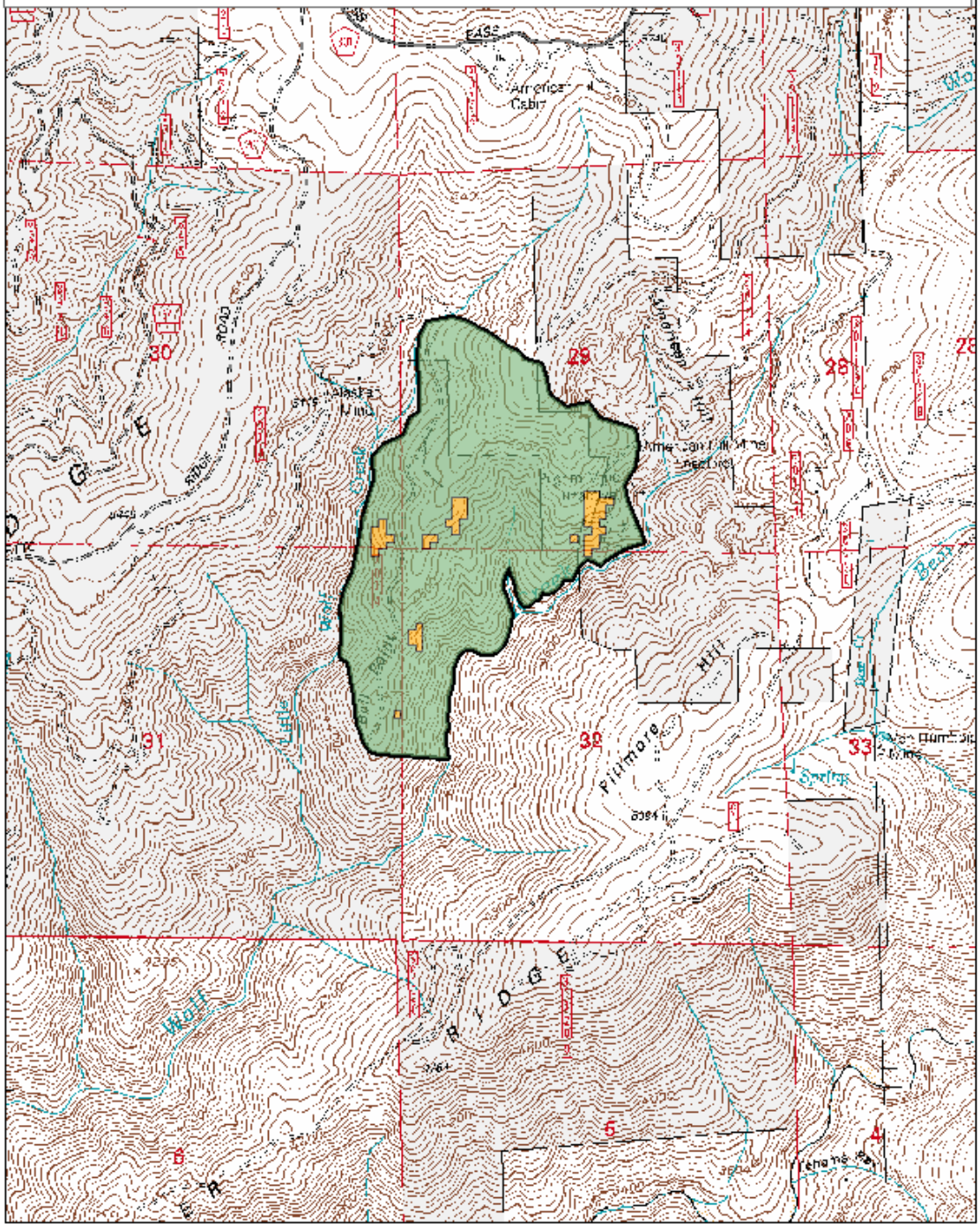
N

1:24,000

YUBA RIVER COMPLEX
Yuba River R. D.
Tahoe N.F.

Legend

- Unburned
- Low
- Moderate
- High



SCOTCHMAN FIRE
Soil Burn Severity Map

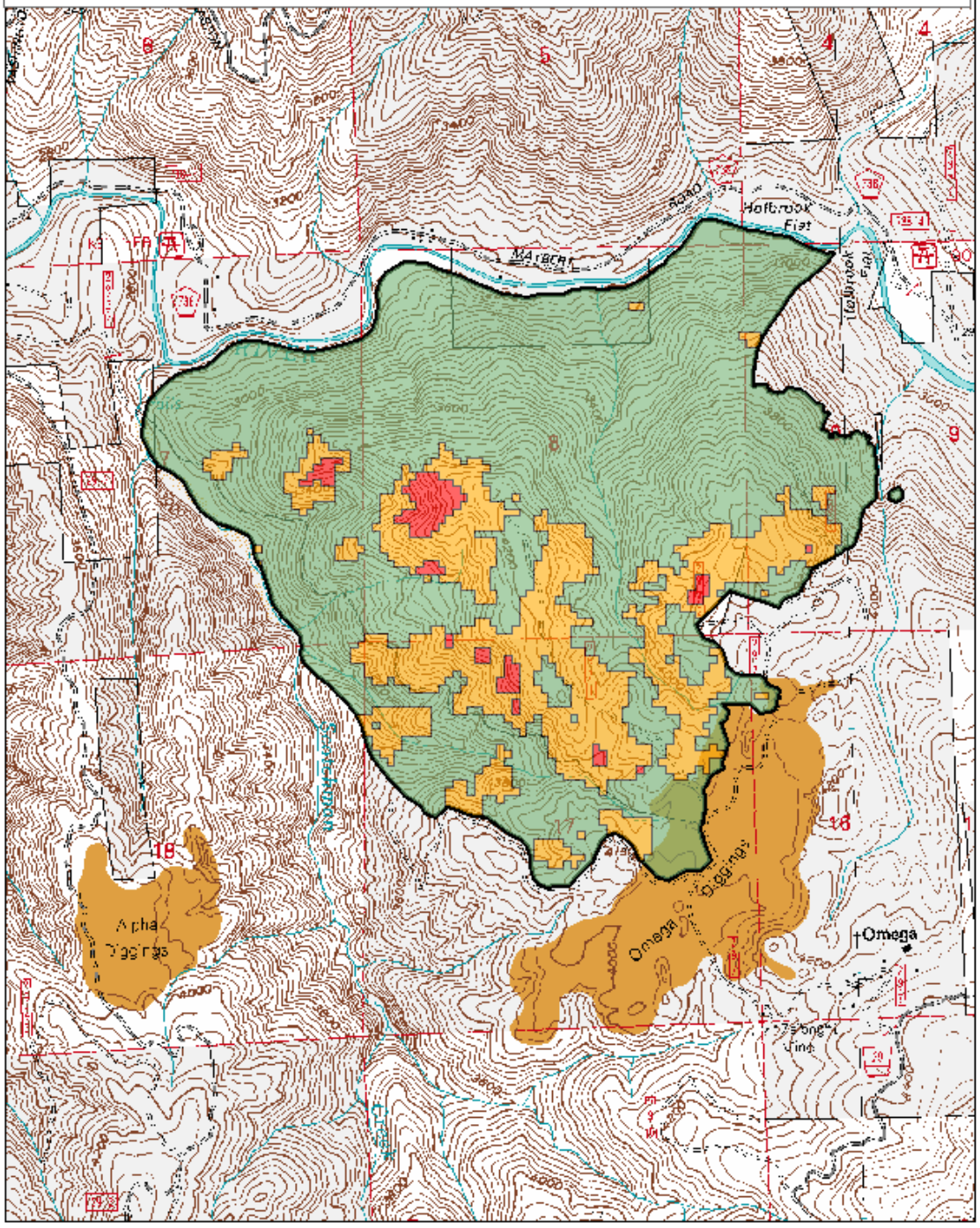
N

1:24,000

YUBA RIVER COMPLEX
Yuba River R. D.
Tahoe N.F.

Legend

- Unburned
- Low
- Moderate
- High



FALL FIRE
Soil Burn Severity Map

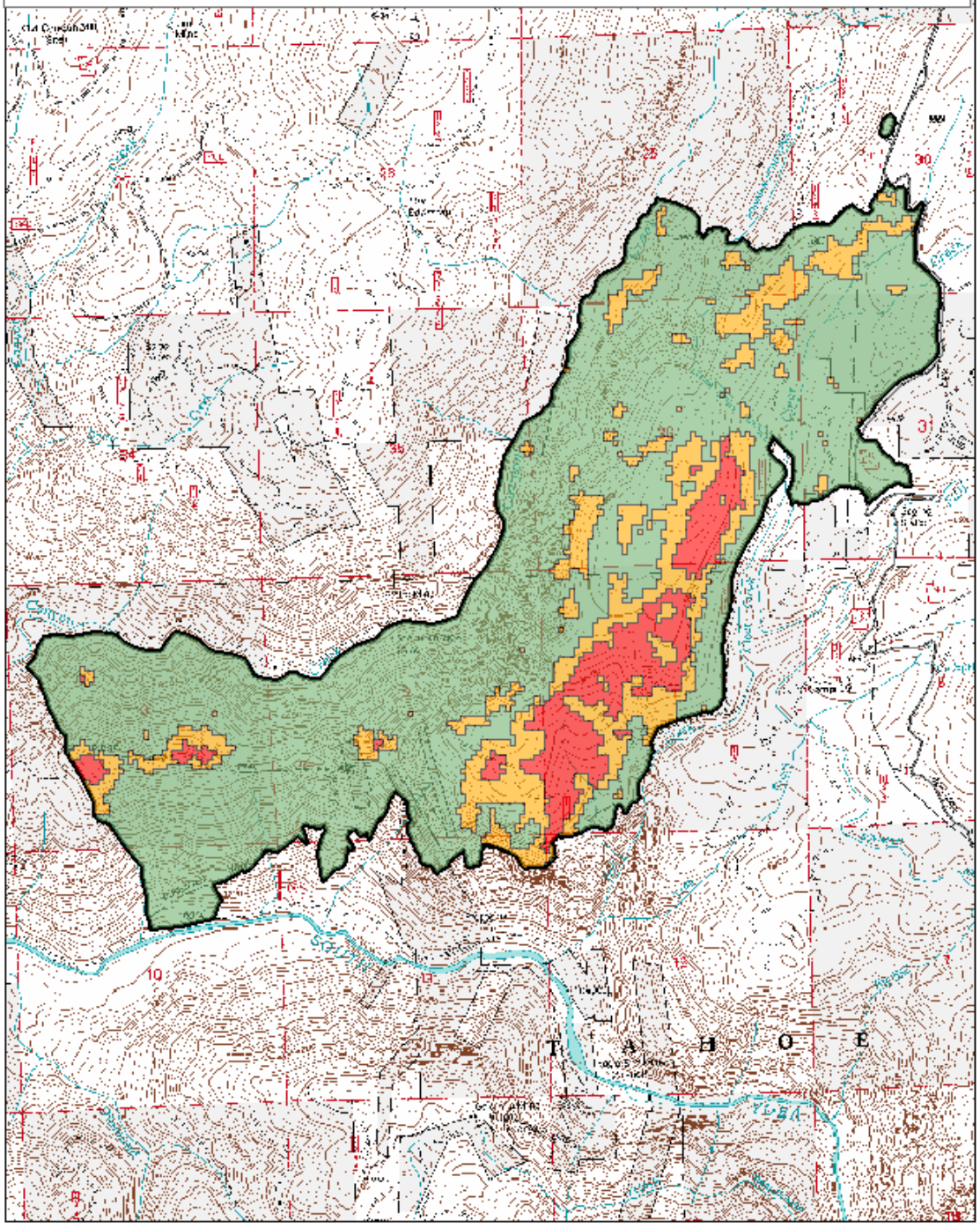
N

1:36,000

YUBA RIVER COMPLEX
Yuba River R. D.
Tahoe N.F.

Legend

- Unburned
- Low
- Moderate
- High



APPENDIX B
YUBA RIVER COMPLEX Noxious and Invasive Non-native Species Report

Fire Name: Yuba River Complex Month/Year: July/2008
Author Name: Karen Wiese
Author Title: Minerals Officer, Botanist
Author Duty Station: Tahoe National Forest, Yuba River Ranger District

I. Resource Condition Assessment

A. Initial Concerns

It is unknown whether or not all fire suppression and rehabilitation equipment used on the Yuba River Complex was weed-free prior to arrival at the incident. Equipment such as trucks, passenger vehicles, heavy equipment, and engines; and foot traffic has the potential to introduce seeds and reproductive propagules of non-native plant species to areas of fire suppression activities. Prior to the fire, the area of the Yuba River Complex Incident had isolated areas of non-native invasive plant species, so the introduction of additional invasive species, specifically noxious weeds, can be devastating to the local ecosystem. Many invasive plant species are adapted to soil disturbance and therefore stimulated by heat, charrate (burned vegetation), and ash; and the removal of competition from established vegetation. The removal of established vegetation, either by a catastrophic event such as a fire or deliberate means such as a dozer creating a fuel break, can create the optimum situation for invasive plant establishment. With early detection, the cost to eradicate noxious and invasive non-native species is greatly reduced.

B. Findings Of The On-The-Ground Survey

1. Summary of findings

Concurrent with the Fire Suppression Repair Phase of the Yuba River Complex Incident, areas where fire suppression equipment was used and staged, as well as areas cleared by hand crews and areas used to convey vehicles, were surveyed for potential weed risk. Areas of soil disturbance, where plants could become estabilished, were also noted. No noxious weed species were observed, however, if dormant seeds of other noxious weeds (previously undetected) are present it is possible that fire effects to soils and ground cover could promote post-fire germination. Several species of non-native invasive species were noted: cheatgrass (*Bromus tectorum*); Scotch broom (*Cytisus scoparius*); Klamath weed (*Hypericum perforatum)*; Yellow star-thistle *(Centaurea solstitialis)*; and Skeleton weed *(Chondrilla juncea)*. It must be noted that the surveys were cursory and not conducted during the optimum time for detection for many invasive species.

2. Additional Information

Vehicles and equipment used at the Yuba River Complex Incident were mobilized from many parts of the country, specifically the western United States. These areas have noxious and non-native invasive plant species that could have been inadvertantly introduced. The seeds and vegetative propagules of existing non-native invasive species may have been transported throughout the Yuba River Complex Incident area by heavy foot and vehicular traffic.

II. Emergency Determination

A potential emergency may be caused by the Yuba River Complex in relation to the introduction and/or spread of noxious and non-native invasive plant species.

III. Treatments to Mitigate the Emergency

A. Treatment Type: Detection surveys for invasive and noxious plant species. Surveillance of known populations of invasive species within the fire incident area.

B. Treatment Objective: To locate any new occurrences of noxious and invasive non-native plant species and to record the post-fire response of the existing invasive species.

C. Treatment Description: GPS/mapping of any noxious and non-native plant infestations species occurrences, concentrating efforts along travel routes, dozer lines, and areas where equipment was used. Submit report to Regional BAER Coordinator and evaluate the need for further action.

D. Treatment Cost:

Fiscal Year 2009

GS-11 Biologist: $400/day x 6 person days = $2,400

Mileage:75 miles/trip X 6 trips @ $0.50/mile = $ 225

Total for first year survey: $2,625

Fiscal Year 2010
(similar expected costs to FY2009)

III. Discussion/Summary/Recommendations

It is the intent of the Forest Service to prevent or minimize the establishment of noxious weeds and non-native invasive plant species within the Yuba River Complex burned area and adjacent land. It is necessary to conduct detection surveys along an estimated 11.25 miles of dozer lines and 17.5 miles of handlines to evaluate the potential spread and/or introduction of noxious weeds and non-native invasive plants for approximately 2 years to determine the fire's potential impact on invasive plant species. If the surveys show an increase in non-native invasive plant species or detects noxious species as a result of the Yuba River Complex, there may be the need for the control and eradication of target invasive plant species.