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

Date of Report: 8/11/2008

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: American River Complex

B. Fire Number: CA-TNF-001011

C. State: California

D. County: Placer

E. Region: Pacific Southwest Region (R5)

F. Forest: Tahoe

G. District: American River

H. Fire Incident Job Code: P5D8TS

I. Date Fire Started: 6/21/2008

J. Date Fire Contained: 7/30/2008

K. Suppression Cost: est. $24,000,000

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 28.9 miles Dozerlines, 2.7 miles Handlines
2. Fireline seeded (miles): 0
3. Other (identify): 20.0 miles of roads improved for firelines.

M. Watershed Number: 1802012803 (North Fork Middle Fork American River), 1802012805 (Upper North Fork American River).

N. Total Acres Burned: 20,541acres
Total Complex: NFS Acres(19,414) Other Federal (N/A) State (N/A) Private (1,137)
Gov't Springs/Westville Fire: Total Acres (19,990) NFS Acres(19,029) Private (971)
Peavine Fire: Total Acres (551) NFS Acres(385) Private (166)

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

P. Dominant Soils: **Peavine**: MAG: Mariposa-Jocal Complex, 30 to 75% slopes; HUG: Hurlbut-Deadwood-Rock outcrop, 30-75% slopes; HUE5: Hurlbut, thin surface-Hurlbut-Deadwood complex, 2-30% slopes; HUG5: Hurlbut, thin surface-Hurlbut-Deadwood complex, 30-75% slopes.

Gov't Springs/Westville*:* DDH: Rock outcrop-Deadwood association, 50 to 100% slopes; DEG: Deadwood-Hurlbut rock outcrop complex, 30-75% slopes; HUG- Hulburt-Deadwood-Rock outcrop, 30-75% slopes; HUG3: Hurlbut, thin surface-Deadwood-Rock outcrop complex, 30-75% slopes; JZG: Jocal Varient-Cryumbrempts, wet complex, 50-75% slopes; SMG: Smokey-Woodseye-Rock outcrop, 30 to 75% slopes; WOG: Woodseye-Rock outcrop- Smokey complex, 30 to 75% slopes.

Q. Geologic Types: Predominantly Shoo Fly Complex sandstone unit with lessor amounts of the chert and carbonate rock units (Pzsf), with Miocene-Pliocene volcanic rock composed of andesitic mudflows (MPv), and with minor amounts of Quaternary aged landslide (Qls), and glacial deposits (Qg).

R. Miles of Stream Channels by Order or Class: Perennial: 51.8 miles; Intermittent: 29.7 miles

S. Transportation System:

Trails: 23.0 miles Roads: 43.6 miles

PART III - WATERSHED CONDITION

A. Soil Burn Severity (acres): 12,834 (63%) (unburned/low), 5,229 (25%) (moderate), 2,478 (12%) (high)

B. Water-Repellent Soil (acres): 2,478

C. Soil Erosion Hazard Rating (acres):
0 (low) 515 (moderate) 20,026 (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): 5.93

F. Design Flow, (cubic feet / second/ square mile): 32

G. Estimated Reduction in Infiltration, (percent): 12

H. Adjusted Design Flow, (cfs per square mile): 62

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

1. **Threats to Human Life/Property** –

a. Human Life - There are no known year-round residents within the American River Complex burn perimeters. There is, however, human activity in and around the burned areas including: travel routes through the burned areas, recreational trail users, private industrial timber land and other private landowners. The threat to human life comes from the potential unstable slopes and vegetation adjacent to the waterways, travel routes, and recreation trails caused by the fire. Access to the roads and trails within the fire perimeter are closed by snow during the late fall, early winter. Only the over-the-snow trails are accessible after the snow fall.

b. Threats to Trails– The Government Springs/Westville Fire is the only fire within the American River Complex where recreational motorized and non-motorized trails were identified within the burn perimeter. There are 23 miles of recreational trails within the burn perimeter, 1.8 miles of motorized trails, 8.2 miles of over-the-snow trails, and 13 miles of hiking, non-motorized trails.
The non-motorized trails include the Mumford Bar Trail (12E18), Beacroft Trail (13E27), The Sailor Flat Trail (13E30), and the North Fork American River Trail (13E26).

c. Threats to Roads – There are 43.6 miles of roads within the perimeter of both fires comprising the American River Complex. Placer County Road 88, 3.6 miles, is a paved road located along the southern boundary of the Gov't Springs/Westville fire perimeter. All other roads are native surfaced. The southern portion of the Gov't Springs/Westville fire has 12.7 miles of native surfaced roads. There is three culverts on the Placer Co. Road 88 where Secret Canyon, Skunk Spring, and a spring at Secret House crosses under the road. Jim Helling from the Placer County Road Department in Foresthill The northern portion of the Gov't Springs/Westville fire has 23.0 miles of native surfaced roads. The northern portion of the Gov't Springs/Westville fire roads are located mainly on ridge tops. There are several stream crossings including Road 19-16, Burnett Canyon near Dawson Springs; and Roads 19-9 and 19-10, Andrew Gray, Harvey Gray and Cody Creeks. The Peavine Fire has 4.3 miles of native surfaced roads. 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 the structures.

2. **Threats to Water Quality** – There will be a short-term threat to water quality in the main drainages within the burn area including North Fork American River, Burnett Canyon, Tadpole Creek, New York Canyon, Big Valley Canyon, and Secret Canyon (tributary to the Middle Fork American River). The North Fork American River and Middle Fork American River both empty into Folsom Lake. 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.

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

4. **Threats of Noxious and Invasive Weeds** – It is unknown whether or not all fire suppression and repair equipment used on the American River Complex Incident 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. In addition, the Mill Site Base Camp is heavily infested with yellow star thistle (*Centaurea solstitialis*), a noxious weed that spreads rapidly by seed. Prior to the fire, the area of the American 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 by a fire 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.

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

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

7. **Threats to Cultural Resources** – This area is known through historical records and heritage resource reconnaissance to contain prehistoric and historical era cultural resources. Prehistoric resources include chipped-stone lithic scatters and food processing stations. Historic resources in the area include mining era sites such as placer and lode mines, habitation areas, mining ditches, railroad grades, and trails. There is no emergency to heritage resources in the American River Complex from potential watershed erosion and soil loss.There are no proposed BAER treatments for any of the known cultural resources within the fire perimeters of the American River Complex. There are no ground distubing activities proposed by the BAER Team for the burned area except to install trail closure signs.

B. Emergency Treatment Objectives:

1. **Threats to Human Life/Property -** To protect life and property associated with the non-motorized trails including the Mumford Bar Trail (12E18), Beacroft Trail (13E27), The Sailor Flat Trail (13E30), and the North Fork American River Trail (13E26)., the BAER Asssessment Team recommends the closure of all four trails and the installation of signs informing the public of the temporary closures. Emergency closures are currently in place. Administrative closures will be necessary for the trails until the existing hazards have been fully assessed and the threat to the public no longer exist. A bulletin board will be installed at the over-the-snow trail head at China Wall to inform the public of the potential hazard tree situation and

2. **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 control.

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

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

Land 0 % Channel N/A % Roads/Trails N/A % Protection/Safety 100 %

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	99%	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: Rick Weaver Email: rweaver@fs.fed.us Phone: 530-478-6241

Core BAER Team
Rick Weaver (Team Leader, Hydrologist) Tahoe NF
Tim Biddinger (Team Leader,Hydrologist) Tahoe NF
Extended BAER Team
Scott Husmann (Engineering) (T) Tahoe NF
Kalie Crews (Archaeologist) Tahoe NF
Matt Triggs (Biologist) Tahoe NF
Karen Wiese (Botanist) Tahoe NF
John Babin (GIS) Tahoe NF
Carol Kennedy (Soil Scientist) Tahoe NF
Adjunct BAER Team
Carla Kempen (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. The total cost for the noxious and invasive non-native species detection survey is **$3,600** for the first year after the fire. We anticipate a subsequent year of detection surveys will be required since some plant species take two years to germenate.

Channel Treatments: N/A

Roads and Trail Treatments: N/A

Protection/Safety Treatments: Replace the current emergency closure of trails with an administrative closure for all North Fork American River trails and trailheads affected by the American River Complex. Administratively close all the non-motorized trails include the Mumford Bar Trail (12E18), Beacroft Trail (13E27), The Sailor Flat Trail (13E30), and the North Fork American River Trail (13E26) until one full winter and spring period has past. The existing hazards will be fully assessed the following spring after the snow melts.
The non-motorized trails will be closed at their trailhead except for the Sailor Flat trail which will be closed at the intersection of road 0088-45 and 0088-45-5. The 0088-45 road becomes steep, the surface is extremely deteriorated, and there is a logical turn around spot north of intersection.
For the Over-the-Snow trails post and maintain warning signs on covered and locked bulletin board located at the China Wall staging area to address the hazards and to advise people of the ungroomed Tadpole Loop. The total trail closure cost of **$7,552** includes signs, hardware, and posts; personnel costs including assembly, installation, and removal of the signs; and motor vehicle costs.

I. **Monitoring Narrative:** The trail closure area is a popular hiking and over-the-snow destination for locals and recreationists from the adjacent areas. Monitoring of the closure signs and information boards should occur on two occasions before the snow closes the hiking trails for the winter. Signs will be replaced as needed. Estimated cost for monitoring is **$780**.

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

Line Items	Units	Unit Cost	# of Units	BAER $	Other $	# of units	Fed $	# of Units	Non Fed $	Total $
A. Land Treatments										
Weed Surveys				$0	$0		$0		$0	$0
Salaries	days	400	8	$3,200	$0		$0		$0	$3,200
Vehicle	miles	0.5	800	$400	$0		$0		$0	$400
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$3,600	$0		$0		$0	$3,600
B. Channel Treatments										
				$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
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
Personnel	days	300	8.5	$2,550	$0		$0		$0	$2,550
Closure Signs	signs	137	24	$3,288	$0		$0		$0	$3,288
Install Signs	days	300	2	$600	$0		$0		$0	$600
Bulletin Board	unit	650	1	$650	$0		$0		$0	$650
Vehicles	miles	0.45	1030	$464	$0		$0		$0	$464
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$7,552	$0		$0		$0	$7,552
E. BAER Evaluation										
Salaries	days	600	20		$12,000					$12,000
Vehicles	miles	0.5	500	---	$250		$0		$0	$250
Supplies	unit	1	225		$225					$225
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				---	$12,475		$0		$0	$12,475
F. Monitoring										
Personnel	days	300	2	$600	$0		$0		$0	$600
Vehicles	miles	0.45	400	$180						
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$780	$0		$0		$0	$600
G. Totals				$11,932	$12,475		**$0**		**$0**	**$24,227**
Previously approved										
Total for this request				**$11,932**						

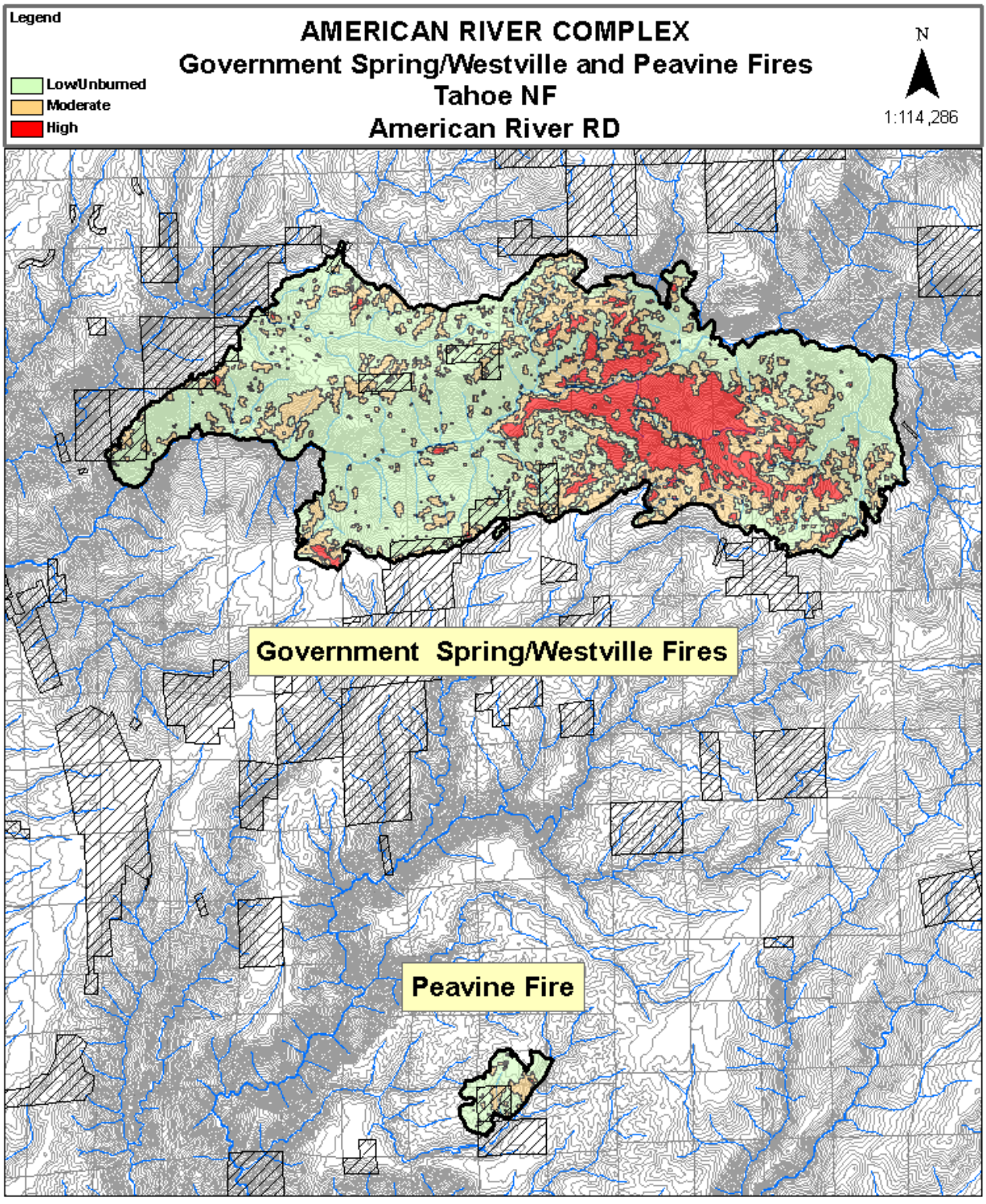
PART VII - APPROVALS

1. /s/ Judie L. Tartaglia — 8/11/08
   Forest Supervisor (signature) — Date

2. _____ — _____
   Regional Forester (signature) — Date

APPENDIX A

AMERICAN RIVER COMPLEX Soil Burn Severity Map



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

Fire Name: American 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 American River Complex Incident was weed-free prior to arrival at the incident. In addition, the area used a base camp, the Mill Site Base Camp, was heavily infested with the noxious weed, yellow star thistle. 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 the fire area. Prior to the fire, the area of the American River Complex Incident had isolated populations of non-native invasive plant species. 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 by a catastrophic event such as a fire can create the optimum situation for invasive plant establishment. If dormant seeds of other invasive and/or noxious weeds (previously undetected) are present, it is possible that fire effects to soils and ground cover could promote post-fire germination. 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 American 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 established, were also noted. The following noxious weed species were observed within the fire perimeter: cheatgrass (*Bromus tectorum*) (Species of Concern) and Klamath weed (*Hypericum perforatum)* (Class C rated Noxious Weed). Table 1 lists other invasive species noted in the vicinity of the fire incident during Fire Suppression Repair reconnaissance activities conducted from July 21 - 26, 2008.

Table 1 Non-native Species Encountered in the Fire Vicinity during Fire Suppression Repair Phase of the American River Complex Incident

Scientific name	Common Name	Weed Rating
Rubus discolor	Himalayan blackberry	Species of Concern*
Cytisus scoparius	Scotch broom	C rated Noxious Weed***
Centaurea solstitialis	Yellow star-thistle	C rated Noxious Weed***
Chondrilla juncea	Rush skeletonweed	A rated Noxious Weed **
Verbascum thapsus	Woolly mullein	No rating (noxious in Colorado and Hawaii, but not listed in CA)
Cirsium vulgare	Bull thistle	No rating but noxious in 9 states, including Colorado, Washington

		and Oregon
Ailanthus altissima	Tree of Heaven	Not rated but invasive in CA
* Species of Concern on the Tahoe National Forest ** A rated Noxious Weed: mandated for eradication or containment by the California Department of Food and Agriculture. ***C rated Noxious Weed: endorsed by the California Department of Food and Agriculture for eradication when found in a nursery.		

2. Additional Information

The area used a base camp, the Mill Site Base Camp, was heavily infested with the noxious weed, yellow star thistle. Yellow star thistle flowers and seeds were observed. In addition, vehicles and equipment used at the American 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 by equipment and vehicles. The seeds and vegetative propagules of existing non-native invasive species may have been transported throughout the American River Complex Incident area by heavy foot and vehicular traffic.

II. Emergency Determination

A potential emergency may be caused by the American River Complex Incident 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 8 person days = $3,200

Mileage:114 miles/trip X 7 trips @ $0.50/mile = $ 400

Total for first year survey: $3,600

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 American River Complex Incident area and adjacent land. There are an estimated 28.9 miles of dozer lines, 20 miles of dozer lines on roads and 2.7 miles of hand lines within the American River Complex. It is necessary to conduct detection surveys along the disturbed dozer lines, roads

and hand lines, when accessible, 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 surveys indicate an increase in non-native invasive plant species or detect noxious species as a result of the American River Complex Incident, there may be the need for the control and eradication of target invasive plant species.