

(Reference FSH 2509.13)

Waca-Meiss complex, 30-50% slopes,

Waca-Meiss-Cryumbrepts, wet complex, 30-50% slopes,
Ledford Variant-Rock outcrop complex, 30-75% slopes.

Q. Geologic Types: Glacial Deposits (QG); Sailor Canyon Formation (JSC); Granite or Granodiorite (KJGR); and Andesitic Volcanic Rocks (TVA).

R. Miles of Stream Channels by Order or Class: Perennial: 3.8 miles; Intermittent: 1.0 miles

S. Transportation System

Trails: 0.0 miles Roads: 4.4 miles

PART III - WATERSHED CONDITION

A. Soil Burn Severity (acres): 653 (31%) (low) 970 (46%) (moderate) 491 (23%) (high)

B. Water-Repellent Soil (acres): 491

C. Soil Erosion Hazard Rating (acres):
0 (low) 0 (moderate) 2114 (high)

D. Erosion Potential: 10 tons/acre

E. Sediment Potential: 2904 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): 23

H. Adjusted Design Flow, (cfs per square mile): 48

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

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

a. **Private land** - There are several structures adjacent to the Bassetts Fire perimeter on private land. The structures include several isolated recreational homes, a business (Bassetts Station Store and Motel), and Sierra City Fire Station. The owners of Bassetts Station Store and Motel (Mike and Carol

Williams, owners) were contacted by Tim Biddinger and Rick Weaver and advised of the potential for post-fire increase in stream and debris flow in Howard Creek. We also advised the Williams to talk to other people in the area of the potential hazards following the fire and during the rain/snow season. There is one home in the Lower Salmon Creek subwatershed with a small (<5 acres) drainage area above the home which burned at a moderate soil burn severity (SBS). The remaining structures are in the Howard Creek subwatershed. They are situated outside of the floodplain and are advised to be diligent when the rainy season starts. Since the fire area is in the snow belt, the critical periods are the first significant rain event, during rain-on-snow events, and the spring snow melt period when an increase in stream flow would occur. Sierra County and CalTrans officials have been contacted in regard to potential post-fire affects of the fire on the road system and users of the road system.

b. Forest Service (NFS) land – There are two summer home tracts, Carvin Creek Summer Home Tract (SHT) and Haskell Creek SHT, adjacent and downslope from the Bassett Fire. The Carvin Creek SHT is in a 375 acre subwatershed in which 27% burned high SBS and 35% burned moderate SBS. Field review of the drainage revealed no structures were located near the floodplain of Carvin Creek. The only culvert on FS Road 49-54 leading into the Carvin Creek SHT is a 36" culvert. Suppression crews have cleared the inlet to the culvert. Any user of FS Road 49-54 should use caution when approaching the site of the culvert during precipitation events.

The Haskell Creek SHT is located in a 1471 acre subwatershed of which 20 acres (<2%) were inside the burn perimeter. Haskell Creek should see little, if any, affect to peak flow increases.

2. **Threats to Non Forest Service Facilities** – There a Pacific Gas & Electric (PG&E) power transmission line which runs through the southern 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 rehab. There is no BAER treatments prescribed for the right-of-way or for the power poles.
3. **Threats to Roads** – The two major roads adjacent to the burn area are State Highway 49 (SH 49) and County Road 620 (Gold Lake Highway). Howard Creek flows under both roads with a 16' X 3' concrete box culvert on the Gold Lake Highway and on SH 49. There is existing road damage to the Gold Lake Highway at the Howard Creek stream crossing which occurred during the previous winter. Guardrail wooden supports on the Gold Lake Highway were burned during the fire. Joe Marcantonio, Sierra County Roads, has been contacted and informed of the potential threat to the County road system. Carvin Creek flows under SH 49 with a 24" corrugated metal culvert. Steve Folsom from CalTrans was contacted and he informed the BAER team that the 24" culvert has not been a problem in the past but would be assessed prior to the rainy season. All potential threats to roads occur on either State or County facilities.
4. **Threats to Water Quality** – There will be a short-term threat to water quality in the two main drainages within the burn area, Howard Creek and Carvin Creek, which are tributary to the North Yuba River. 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. None of the drainages within or downstream of the burn area are used for domestic water use.
5. **Threats to Long Term Soil Productivity** – The risk of excessive soil erosion attributed to the Bassetts Fire 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 Bassetts Fire 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 Bassetts Fire 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 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.

7. **Threats to Wildlife Resources** – There are no known Threatened and Endangered wildlife resources within or influenced by the Bassetts Fire.
8. **Threats to Botanical Resources** – There are no known Threatened and Endangered botanical resources within or influenced by the Bassetts Fire.
9. **Threats to Cultural Resources** – There are no proposed BAER treatments for any of the known cultural resources within the fire perimeter of the Bassetts Fire. There are no ground disturbing 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 Bassetts Fire.

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:

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

Team Leader: Tim Biddinger

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FAX:

Core BAER Team

Tim Biddinger (Team Leader) Tahoe NF

Rick Weaver (Deputy Team Leader, Hydrologist) Tahoe NF

Melissa Hallas (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 **\$1,750** 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 #

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	4	\$1,600	\$0		\$0		\$0	\$1,600
Vehicles	miles	0.5	300	\$150	\$0		\$0		\$0	\$150
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				\$1,750	\$0		\$0		\$0	\$1,750
B. Channel Treatments										
				\$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 Channel Treat.</i>				\$0	\$0		\$0		\$0	\$0
C. Road and Trails										
				\$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 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										
Salaries	days	600	20	\$12,000	\$0		\$0		\$0	\$12,000
Vehicles	miles	0.5	500	\$250	\$0		\$0		\$0	\$250
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Evaluation</i>				\$12,250	\$0		\$0		\$0	\$12,250
F. Monitoring										
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Monitoring</i>				\$0	\$0		\$0		\$0	\$0
G. Totals				\$14,000	\$0		\$0		\$0	\$14,000
Previously approved										
Total for this request				\$14,000						

PART VII - APPROVALS

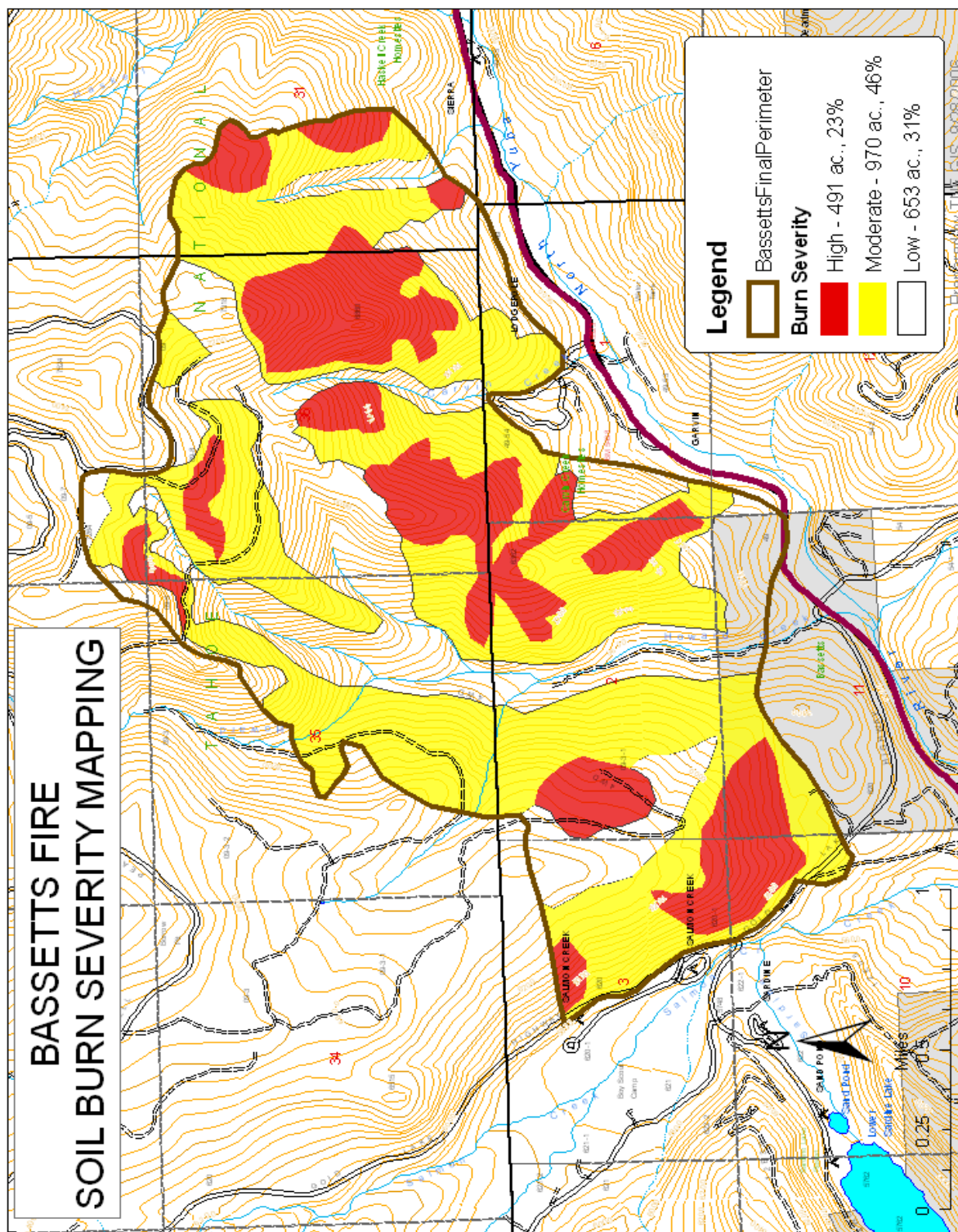
1. /s/ Steven T. Eubanks _____
Forest Supervisor (signature)

10/02/06
Date

2. /s/ Tomas L. Tidwell _____
Regional Forester (signature)

10/6/2006
Date

APPENDIX A
BASSETTS FIRE Soil Burn Severity Map



APPENDIX B

BASSETTS FIRE Noxious and Invasive Non-native Species Report

Fire Name: Bassetts Month/Year: September/2006

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 Bassetts Fire 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 Bassetts Fire 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 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

On September 26 – 28, 2006, concurrent with the Supression Rehabilitation Phase of the Bassetts Fire 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. 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*); bull thistle (*Cirsium vulgare*); and wooly mullein (*Verbascum thapsus*). 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 Bassetts Fire 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 inadvertently introduced. The seeds and vegetative propagules of existing non-native invasive species may have been transported throughout the Bassetts Fire Incident area by heavy foot and vehicular traffic.

II. Emergency Determination

A potential emergency may be caused by the Bassetts Fire 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 2007

GS-11 Biologist: \$400/day x 4 person days = \$1,600

Mileage: 150 miles/trip X 2 trips @ \$0.50/mile = \$ 150

Total for first year survey: \$1,750

Fiscal Year 2008
(similar expected costs to FY2007)

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 Bassetts Fire burned area and adjacent land. It is necessary to conduct detection surveys along an estimated 5 miles of dozer lines and 2 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 Bassetts Fire, there may be the need for the control and eradication of target invasive plant species.