Date of Report:

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[**X**] 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)

[**X**] 2. Interim Report
[] Updating the initial funding request based on more accurate site data or design analysis
[**X**] Status of accomplishments to date

[ ] 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: **North Fork**

B. Fire Number: **SNF-1212**

C. State: **CA**

D. County: **Madera**

E. Region: **Pacific Southwest (R-5)**

F. Forest: **Sierra NF**

G. District: **Minarets RD**

H. Date Fire Started: **Aug. 29, 2001**

I. Date Fire Controlled: **Sept. 4, 2001**

J. Suppression Cost:

K. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): **11**
2. Fireline seeded (miles): **0**
3. Other (identify): **safety zones, water drafting sites**

L. Watershed Number:

M. Total Acres Burned: **4,132**
NFS Acres (**3,878**) Other Federal (**0**) State (**0**) Private (**254**)

N. Vegetation Types: **chaparral, ponderosa pine, mixed conifer, mixed conifer/fir**

O. Dominant Soils: **Holland, Chaix, Dome, Chawanakee soil families**

P. Geologic Types: **granitic bedrock (Granite of Shuteye Peak and Bass Lake Tonalite)**

Q. Miles of Stream Channels by Order or Class:

Order	Miles
1	45.9
2	14.7
3	5.5
4	0.9
5	0.1
6	1.5

R. Transportation System

Trails: **0** miles Roads: **10.3** miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): **2,717** (low) **299** (moderate) **1,116** (high)

B. Water-Repellent Soil (acres): **125**

C. Soil Erosion Hazard Rating (acres):
2,717 (low) **0** (moderate) **1,415** (high)

D. Erosion Potential: **17** tons/acre

E. Sediment Potential: **2,318** 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): **2**

D. Design Storm Duration, (hours): **24**

E. Design Storm Magnitude, (inches): **4.0**

F. Design Flow, (cubic feet / second/ square mile): **93**

G. Estimated Reduction in Infiltration, (percent): **30**

H. Adjusted Design Flow, (cfs per square mile): **140**

PART V - SUMMARY OF ANALYSIS

A. Describe Watershed Emergency:

Forest Road 7S09, Douglas Ranger Station Road, parallels the South Fork of Willow Creek and in places is located on the banks of this channel. As a consequence, the road is crossed by many of the subwatersheds draining the area burned by the North Fork fire. As noted in the initial report, some of these subwatersheds have a high likelihood of generating debris flows. Debris flow deposits from past events are present near some of the crossing of concern. A debris flow could be expected to destroy or damage the road crossing the stream or, at a minimum, plug the existing culvert.

Also, field observations suggest that several culverts have a high likelihood of failure due to either insufficient capacity, expected increases in floatable material, crushed inlet or rusted pipe, or some combination of these factors. Based upon observation, collected data, and hydrologic analysis, an emergency situation exists to downstream improvements below the North Fork fire area. There is a likelihood that increased runoff and erosion will result in culvert failure along the Douglas Ranger Station road (FR 7S09).

Also, a 0.78 length of the Douglas Ranger Station road (FR 7S09) is parallel and near the course of the South Fork of Willow Creek. While riparian vegetation remains to provide some protection along the stream channel, there is a high intensity burn area immediately upslope from the road that is expected to increase overland flow across the road surface and into this part of the South Fork. While the opportunity to prevent the problem by treating the slope was re-evaluated, it was concluded that this was not viable due to shallow soils and absence of trees for constructing effective barriers. The local topography also steepens to 60% with rock outcrops on the slope immediately above the road making it extremely difficult to prevent overland flow from reaching the road. This segment of road has been rocked in past years as normal maintenance to maintain its drivability. The heavy traffic from fire suppression activity and the expected additional heavy vehicle traffic from BAER construction work would likely reduce the already impacted surface and render it no longer effective even under normal wet weather conditions. In addition to creating unsafe driving conditions, it would increase the movement of fine sediment into the adjacent South Fork of Willow Creek channel and degrade water quality.

The loss of access to private and National Forest System lands along Forest Road 7S09 (Douglas Ranger Station Road) is likely as a result of the fire. The risk of this occurring is during the winter months, especially during high precipitation storm events. Multiple residences are located along this road and the homeowners could lose access to their houses. This is effectively a one-way road, as the only connection into an alternative exit requires fording a stream. This would be an option ranging from barely adequate to dangerous depending on storm conditions at the time local residents might need to use it should the road be rendered unserviceable.

B. Emergency Treatment Objectives:

1) **Prevent loss of life from debris flows and accidents due to road damage along the Douglas Ranger Station Road used by local residents for their primary home access.**

2) **Minimize damage to the Douglas Ranger Station road necessitating costly repairs and the indirect costs due to residents being unable to travel between homes and work/school/medical/ etc.**

3) Prevent the spread of noxious/invasive weeds into the area from fire lines

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

Land __ % Channel __ % Roads **99** % Other __ %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	NA	NA	NA
Channel	NA	NA	NA
Roads	95	99	99

Other	NA	NA	NA

E. Cost of No-Action (Including Loss): **The potential loss of Douglas Ranger Station Road is estimated to be $320,000. An unquantified additional loss is for lost access to multiple households dependant on this non-loop road for access to work/school/medical/commodities and the water quality impact of sediment loads to the South Fork of Willow Creek from road damage, debris flows, and flood flows and from the road surface where it parallels the creek for a significant length.**

F. Cost of Selected Alternative (Including Loss): **The cost to prevent significant damage to Douglas Ranger Station Road and sediment delivery to the South Fork of Willow Creek is a total of $158,356. Because $110,300 was approved under the initial report, this report is requesting an additional $48,046.**

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: **Jerome V. DeGraff**

Email: **jdegraff@fs.fed.us** Phone: **(559) 297-0706, x 4932** FAX: **(559) 294-4809**

H. **Treatment Narrative:**

Land Treatments: None recommended at this time

Channel Treatments: None recommended at this time.

Roads and Trail Treatments:

The contractor for completing the approved work on Douglas Station road started work on November 27, 2001. With the exception of burning of a slash pile, all culvert replacement, debris basins and other work approved through the initial and interim #1 2500-8 forms were completed and inspected by engineering on January 14, 2002. The contract release was done on May 9, 2002 following burning of the slash pile. The road treatment measures have worked for two seasons with only limited problems to one culvert in 2002. Normal forest maintenance funding took care of these culvert. Of the $158,346.00 approved for road and trail work in the October 18, 2001 letter responding to the Interim Report #1, $114, 039.02 was spent on the contracted work.

H. **Monitoring Narrative:**

See attached report

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

Line Items	Units	Unit Cost	# of Units	WFSU SULT $	Other $	# of units	Fed $	# of Units	Non Fed $	Total $
A. Land Treatments										
				$0			$0		$0	$0
				$0			$0			
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Land Treatments				$0			$0		$0	$0
B. Channel Treatments										
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Channel Treat.				$0			$0		$0	$0
C. Road and Trails										
Changes in culvert,							$0		$0	$0
rock-bottomed dips,										$0
and excavation costs	site	2831	8	$22,646					$0	$0
base rock surfacing	0.1 mi	3175	8	$25,400						$0
							$0		$0	$0
Subtotal Road & Trails				$48,046			$0		$0	$0
D. Structures										
				$0			$0		$0	$0
				$0			$0		$0	$0
Subtotal Structures				$0			$0		$0	$0
E. BAER Evaluation										
							$0		$0	$0
				$0			$0		$0	$0
G. Monitoring Cost				$0			$0		$0	$0
H. Totals				**$48,046**			**$0**		**$0**	**$0**

PART VII - APPROVALS

1. Kathy Gage (for)_____ _____
   Forest Supervisor (signature) Date

2. _____ _____
   Regional Forester (signature) Date

2002 BURNED AREA EMERGENCY REHABILATION MONITORING REPORT – SIERRA NATIONAL FOREST
North Fork Fire

SUMMARY OF PROGRESS AND FINDINGS – NOXIOUS WEED MONITORING

In the 2500-8 for the North Fork Fire $5,750 was requested and approved for noxious weed monitoring. The report contains the following wording regarding methods:

> **Noxious Weed Monitoring**
>
> *Monitoring is proposed for 3 years to determine whether noxious weeds were introduced into the burned area and dozer lines. This would involve a team of two GS-5 biotechs walking the approximately 8 miles of dozer lines and 4 miles of hand lines twice each year, once in the spring and once in the summer, to ensure detection of species with different life cycles and blooming periods. Staging areas and drop points will also be inspected. The surveyors will look with binoculars into the burned areas visible from the dozer lines and roads and in some cases they will walk through the burned area away from dozer lines and roads. The field surveyors will search for any California State Noxious Weeds (www.cdfa.ca.gov/weedhome), especially yellow starthistle and medusahead, as these plants were known to be present at the Trough Fire. Surveyors will also search for invasive pest plants such as bull thistle and tocalote. If noxious weeds are detected, the surveyors will GPS the locations for mapping in the Forest GIS layer, fill out a standard Sierra National Forest 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, and dispose of them in a safe manner. If large infestations are found that would take a more significant investment of resources and time to eradicate, the Forest Botanist will be consulted and the appropriate control actions will be planned. The goal will be to prevent seed set of any weeds located during the surveys. It is expected to be 99% successful.*

Work accomplished in FY 2002: Due to the fact that the noxious weed crew did not start work until mid-June and because of a heavy overall botany program workload in 2002, only one dozer line was surveyed using the BAER fund code. However, parts of the burned area were surveyed for noxious weeds during fieldwork for several other projects within the fire perimeter (Malum Reforestation, Peckinpah Road Hazard, South Willow Road Hazard, and North Fork Fire Salvage Project). Attachment 1 is a summary of findings for the North Fork Fire Salvage Project. Reports for the other projects are on file at the Bass Lake Ranger District office in North Fork. Based on results of all of these surveys, which took place over the course of the spring and summer, no noxious weeds have been observed to have been introduced into the burned area during the firefighting effort.

The following summarizes the findings of surveys done using the BAER fund code:

On August 21, 2002 the southernmost dozer line (Division Y) was walked from the top to near the bottom by botanists Joanna Clines and Shannon Sommer (about 1 mile). No noxious weeds were found, and the dozer line appeared to have good regeneration of native plants. Photos were taken, and will be included in the final report in 2003. Towards the bottom of the dozer line, scattered plants of the invasive non-native plant *Torilis arvensis* were found, and cheat grass (*Bromus tectorum*) was seen scattered sparsely along the dozer line, but both of these plants are so ubiquitous at low to mid elevations in the Sierra National Forest that no special action will be taken to remove them at this time.

Plants seen on the Division Y dozer line:

NAITVE PLANTS:
Black oak (*Quercus kelloggii)*
Canyon live oak (*Quercus chrysolepis)* - resprouting
Mariposa manzanita (*Arctostaphylos viscida* ssp. *Mariposa*) - seedlings
Ponderosa pine (*Pinus ponderosa)*
Deerbrush (*Ceanothus integerrimus)* – seedlings
Buckbrush (*Ceanothus cuneatus)* - seedlings
Bearclover (*Chamabaetia foliolosa*) - resprouting
Yerba santa (*Eriodictyon californicum)*
Poison oak (*Toxicodendron diversiloba)*
Sierra gooseberry (*Ribes roezlii)*
Claytonia parvifolia
Clarkia sp.
Dichelostemma volubile
Epilobium brachycarpa
Lotus purshianus
Mimulus bolanderi

Stephanomeria virgata.
Trifolium willdenovi
Wyethia elata

NON-NATIVE PLANTS
Cheatgrass (*Bromus tectorum)*
Soft chess (*Bromus hordeaceous)*
Rat-tail fescue (*Vulpia myuros)*
Prickly lettuce (*Lactuca serriola)*
Wheat grass (*Agropyron* sp)
Wild tobacco (*Nicotiana attenuata)*
Mare's tail (*Conyza* sp.)
Nitgrass (*Aira caryophylla)*
The Regional BAER coordinator, Gary Schmitt, approved the use of the BAER fund code to finish the monitoring of all 12 miles of fire lines during fiscal year 2003, and we plan to accomplish this work, with some modifications of the survey techniques (e.g., only one field visit to most sites should yield adequate information – it is too expensive, time-consuming, and impractical to make 2 field visits to all 12 miles of dozer lines). A full report with photographs and a map will be provided by the end of fiscal year 2003.

CONCLUSION: No State-listed noxious weeds were found during an August 21, 2002 survey of the Division Y dozer line funded by BAER (job code H57087), and relatively few non-native invasive plants were seen.

Some noxious weeds were found during surveys funded by the salvage timber sale:

1. **Klamathweed along Douglas Ranger Station Road was hand-pulled and bagged to ensure no seeds set during 2002.**

2. **Scattered plants of tocalote and klamathweed were found in the burned area within the Malum Reforestation project. Some, but not all plants were pulled prior to flowering to prevent seed set. These areas will be checked again during 2003 and plants will be pulled to prevent seeds from setting.**

Any questions can be directed to me at 559/877-2218, ext. 3150, or email at jclines@fs.fed.us

/s/ *Joanna Clines* January 7, 2003
JOANNA CLINES DATE
Forest Botanist
Sierra National Forest

ATTACHMENT 1. SUMMARY OF BOTANICAL SURVEY RESULTS AND PLANT LIST – NORTH FORK FIRE AREA. Joanna Clines, Forest Botanist. 559/877-2218, ext. 3150
(Also see Noxious Weed Risk Assessment for Peckinpah Road Hazard Sale). On May 29, June 27, and August 9, 2002 I surveyed along Douglas Ranger Station Road for Threatened, Endangered, and Sensitive plants; as well as for noxious weeds – charged to fund code for salvage timber sales.

MAY 29, 2002 with Ron Cummings

Driving north on 7S09 from County Road 225 (zeroed mileage), at 3.1 miles we came to Unit 26. surveyed for TES plants and noxious weeds by hiking around in the burned area to the east of road 7S09, looking especially for *Mimulus gracilipes.* The following plant species were observed.

Allophyllum divaricatum
***Aira caryophylla* – NONNATIVE GRASS**
***Avena* sp. – NON-NATIVE GRASS**
***Bromus diandrus* – RIPGUT GRASS –NON-NATIVE INVASIVE**
***Bromus hordeaceous* – SOFT CHESS – NONNATIVE INVASIVE**
***Bromus tectorum* – CHEATGRASS – NONNATIVE INVASIVE**
Ceanothus cuneatus – BUCKBRUSH – SEEDLINGS
Ceanothus integerrimus – DEERBRUSH – SEEDLINGS
Cercocarpus betuloides – MOUNTAIN MAHOGANY - RESPROUTING
Chamabaetia foliolosa BEAR CLOVER - RESPROUTING
Claytonia parviflora – MINER'S LETTUCE
Collinsia heterophylla – *CHINESE HOUSES*
Collinsia tinctoria – TINCTURE PLANT
Calochortus amoenus – *PINK FAIRY LANTERNS*
Chlorogalum pomeridianum – SOAP PLANT - RESPROUTING
Clarkia dudleyana – DUDLEY'S CLARKIA
Cryptantha sp.
Delphinium gracilentum – *LARKSPUR*
Delphinium hansenii - LARKSPUR
Dichelostemma volubile – SNAKE LILY
Elymus glaucus – BLUE WILDRYE –NATIVE PERENNIAL GRASS
Eschscholtzia californica – CALIFORNIA POPPY
Gilia capitata
Githopsis sp.
Hypericum perforatum – KLAMATHWEED, ST. JOHN'S WORT
– ***NOXIOUS WEED, (500 PLANTS PULLED AND BAGGED BY SIERRA NF WEED CREW WEEK OF 8/5/02).***
Lathyrus sulphureus – *SULPHUR PEA*
Lonicera interrupta – CHAPARRAL HONEYSUCKLE
Lupinus bicolor
Melica californica – ONIONGRASS – NATIVE PERENNIAL GRASS
Mimulus torreyi
Nemophila parviflora ssp. *quercifolia* – Oak-leaved Nemophila - WATCH LIST PLANT
Potentilla glandulosa
Pseudobahia heermanii
Pterostegia drymarioides
Quercus chrysolepis – CANYON LIVE OAK - RESPROUTING
Qercus kelloggii – BLACK OAK – RESPROUTING
Prunus subcordata – SIERRA PLUM - RESPROUTING
Rhamnus ilicilolia
Rubus discolor – *HIMALAYABERRY – NONNATIVE INVASIVE VINE (AT 3.3 MILES)*
Rubus parviflorus - THIMBLEBERRY

Sanicula bipinnatifida
Scutellaria sp.
***Torilis arvensis* – BUR CHERVIL – NONNATIVE INVASIVE ANNUAL HERB**
Toxicodendron diversilobum – POISON OAK – RESPROUTING
Trifolium ciliolatum
Trifolium willdenovii
Triteleia ixioides var. *scabra* – PRETTY FACE, GOLDEN BRODIAEA
Wyethia elata – HALL'S WYETHIA – RESPROUTING PERENNIAL HERB

JUNE 27, 2002 with Shannon Sommer

Surveyed lower elevation units along Douglas Ranger Station Road: Drove 7S09 again going north from Road 225, looked for weeds, turned around at 7S09A. Added the following species to the plant list:

Achillea millefolium - YARROW
Artemisia douglasiana – MUGWORT
Bromus californicus – CALIFORNIA BROME
Helianthus californicus
***Vulpia myuros* – rat tail fescue – NON-NATIVE INVASIVE ANNUAL GRASS**

Upper units: Drove 8S09 to 8S26 and viewed the upper areas of units 3 and 4. Walked around in former unit 10 (dropped from sale), saw: Sugar pine, ponderosa pine, incense cedar, canyon live oak, black oak, mariposa manzanita. Also, bear clover (*Chamabaetia foliolosa)* resprouting, *Claytonia parviflora*, *Clarkia rhomboidea*. No noxious weeds.

AUGUST 9, 2002 with Thobe Oestreich

Drove through upper region of proposed salvage project, looked for *Hulsea brevifolia* and noxious weeds in areas of South Fork Sale being logged by Mel Espe. Above former NFSS Project Unit 17. **No noxious weeds seen.**

Walked around the upper half of Unit 20, no noxious weeds seen. Plants seen in burned mixed conifer forest are listed below:

Apocynum androsaemifolium – BITTER DOGBANE
Asarum hartwegii – HARTWEG'S WILD GINGER
Calystegia sp. – WILD MORNING GLORY
Ceanothus integerrimus - DEERBRUSH– abundant seedlings throughout area we walked, also resprouting
Ceanothus parvifolius – LITTELEAF CEANOTHUS
Chamabaetia foliolosa – resprouting
Clarkia rhomboidea – TONGUE CLARKIA – dried up, seeds dispersed
Eriophyllum lanatum
Erysimum capitatum – WALLFLOWER
Iris hartwegii – HARTWEG'S IRIS
Keckiella breviflora - BUSH PENSTEMON - near rocks
Pteridium aquilinum – BRACKEN - resprouted, flourishing
Quercus kellogii – BLACK OAK – sprouting
Ribes roezlii – SIERRA GOOSEBERRY - seedlings
Rosa sp. – WILD ROSE
Sambucus mexicana – BLUE ELDERBERRY – seedlings and resprouts

NO GRANITE / GRAVEL HABITAT, NO SEEPS OR WET AREAS, **NO NOXIOUS WEEDS**