

BURNED-AREA REPORT

(Reference FSH 2509.13)

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

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

B. Type of Action

- ☒ 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)

Butte Lightning – Canyon Complexes Soil Burn Severity Map

(note: maps are available upon request)

PART II - BURNED-AREA DESCRIPTION

- A. Fire Name: Butte Lightning/Canyon Complexes
- B. Fire Number: CA-PNF-000539
- C. State: CA
- D. County: Plumas
- E. Region: 5
- F. Forest: Plumas
- G. District: Feather River, Mt. Hough, Beckwourth
- H. Fire Incident Job Code: P5D8LS
- I. Date Fire Started: June 22, 2008
- J. Date Fire Contained: Canyon Complex is 97% contained, as of this date, Butte 100% Aug 4, 2008.
- K. Suppression Cost: \$128mil. as of Aug 6, 2008 for both complexes
- L. Fire Suppression Damages Repaired with Suppression Funds: Not available as of this date as suppression on other fires within the Complex is still on going.
 - 1. Fireline waterbarred (miles): suppression rehab is under initial stages due to continued needs for fireline suppression support.
 - 2. Fireline seeded (miles):
 - 3. Other (identify):

M. Watershed Number:

| Sixth-Level HUC | Sixth-Level HUC |
|-----------------|--------------------------|
| 180201210701 | Rock Creek Reservoir |
| 180201210703 | North Valley Creek |
| 180201210704 | Grizzly Creek |
| 180201210705 | Dogwood Creek |
| 180201210802 | Big Kimshaw Creek |
| 180201210803 | Mid. West Branch Feather |
| 180201210804 | Low West Branch Feather |
| 180201210901 | Flea Valley Creek |
| 180201210902 | Bush Creek |
| 180201210903 | Wild Yankee Creek |
| 180201230501 | Bear Creek |
| 180201230502 | Mountain House Creek |
| 180201230503 | Pinchard Creek |
| 180201230504 | Fall River |
| 180201230505 | Bald Rock Canyon |
| 180201230701 | McCabe Creek |

N. Total Acres Burned: **85,564**

NFS Acres (**PNF 42566, LNF 19369**) Other Federal () State () Other, including private (23,630)

O. Vegetation Types: Pine, shrub, oak

P. Dominant Soils: Deadwood-Josepine, Josephine-Mariposa, UVI-Smokey family complexes

Q. Geologic Types: Shoo-fly formation with Andesite

R. Miles of Stream Channels by Order or Class: USFS Only: 74 miles of Perennial Stream,
198 miles of Intermittent Stream,
357 miles of Ephemeral stream

S. Transportation System: Trails: 20 miles; Roads: 99 miles

PART III - WATERSHED CONDITION

A. Burn Severity by total and FS (acres)

| Butte-Lightning and Canyon Complexes | Ownership | | | |
|--------------------------------------|-----------|-----------|--------------------|--------------|
| Burn Severity Class | Plumas NF | Lassen NF | Other/Private land | Total |
| Unburned | 12,860 | 3,179 | 3,241 | 19,280 (23%) |
| Low | 20,184 | 8,539 | 7,162 | 35,885 (42%) |
| Moderate | 8,288 | 5,842 | 9,557 | 23,687 (28%) |
| High | 1,234 | 1,808 | 3,670 | 6,712 (8%) |
| | 42,566 | 19,368 | 23,630 | 85,564 |

B. Water-Repellent Soil by total and FS (acres):

| | Ownership | | |
|--|-----------|-----------|--------------------|
| | Plumas NF | Lassen NF | Other/Private land |
| Water-repellant soils and % of total fire area (acres) | 2689 (3%) | 2364 (3%) | 4224 (5%) |

C. Soil Erosion Hazard Rating by total and FS (acres):

| Soil Erosion Hazard Rating | Ownership | |
|----------------------------|-----------------|--------------------|
| | National Forest | Other/Private land |
| Low | 1101 (2%) | * |
| Moderate | 13,533 (22%) | * |
| High | 27,008 (43%) | * |
| Very High | 20,292 (33%) | * |

D. Erosion Potential:

| Average Erosion (tons/acre/24 months) | Average Sediment Delivery (yd ³ /mi ²) per 24 months |
|---------------------------------------|---|
| 57 | 9,200 |

E. Sediment Potential: 9,000 cubic yards/square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 2

B. Design Chance of Success, (percent): 80

C. Equivalent Design Recurrence Interval, (years): 5

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 2.4

F. Design Flow, (cubic feet / second/ square mile): Average Pre Fire = 107

Note: This design storm is considered to be a very localized (i.e. covering less than 4 mi² in area) high intensity short duration storm. The csm (cfs/mi²) estimates should not be applied to watershed larger than 5 square miles.

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

Pre and post burn runoff volumes for the design storm (5-yr, 6-hr = 2.4 inches)

| Watershed | Watershed Area (acres) | Percent Burned | Pre Fire Volume (acre-ft) | Post Fire Volume (acre-ft) | Infiltration Reduction |
|---|------------------------|----------------|---------------------------|----------------------------|------------------------|
| Bean Creek | 2,514 | 69% | 57 | 75 | 24% |
| Concow Tributary | 359 | 100% | 8 | 14 | 44% |
| Flea Valley Creek | 2,044 | 98% | 52 | 80 | 35% |
| Jackass Creek | 1,703 | 44% | 75 | 86 | 13% |
| Average Infiltration Reduction = | | | | | 30% |

H. Adjusted Design Flow, (cfs per square mile): $+57 = 164$ (Average Post Fire)

Note: This design storm is considered to be a very localized (i.e. covering less than 4 mi² in area) high intensity short duration storm. The csm (cfs/mi²) estimates should not be applied to watershed larger than 5 square miles.

PART V - SUMMARY OF ANALYSIS

A. On the afternoon of June 21, 2008, a dry lightning storm moved across the western slopes of the Sierra from the southern Sierras to the Oregon border. This storm started 40 to 50 fires on the western half of the Plumas National Forest. Numerous small fires were quickly contained west of Quincy and along the South Fork of the Feather River. Collectively, all of the fires were assigned to two complexes, the Canyon Complex, managed by USFS, and the Butte Lightning Complex, managed by CALFIRE. In the initial stages of the fires on the Plumas National Forest, the Cold Fire, located on the Beckworth District, was the predominant fire. Fire fighting resources were assigned to obtain containment, which held through several days of heat storm, yielding temperatures in excess of 100. The Canyon Complex BAER team was able to obtain limited access to this burned area, with the intent to assess the various other smaller fires in order. An initial 2500-8 request for funds for the Cold fire was submitted and approved on 7/21/2008. The numerous fires on the western side of the complexes, located within the Middle Fork and North Fork Feather Rivers, which were affected by the heat storm and accompanying winds, burned together to form larger fire perimeters. To date, the fires within the Middle Fork Feather R. (Canyon Complex) are not fully contained, however the BAER team was able to access a majority of the ground, and was also able to make an assesment of remote areas from the air. Therefore, this initial report addresses the effects of fire within the Canyon Complex fires that were over 300 ac. in size, excluding the Cold Fire burned area. In addition to the Canyon Complex, a similar scenario exists with the Butte Lightning Complex fires, one of which has burned into the Canyon Complex largest fire perimeter. The N.Fork Feather R. (Butte Lightning Complex) fires had a containment date of July 29, 2008. The Canyon Complex fires are chiefly located within the Middle Fork Feather River subbasin, and were mostly under the responsibility for supression by FS teams. The Butte Lightning Complex fires are chiefly located within the North Fork Feather River subbasin and were mostly under the responsibility for supression by CALFIRE. 106 homes in the Concow community were destroyed by the Camp Fire within this complex. The Camp fire of the the BAER team assessment area includes all Plumas NFS lands, Lassen NFS lands administered by the Plumas NF, and Lassen NFS lands that are within the Butte Lightning Complex, and tributary to the North Fork Feather River, chiefly within the Rock Cr. watershed. Both complexes included lands that are owned and administered by several private and governmental agencies besides the FS. The BAER team assessment has included all burned areas in the two complexes that lie within the Plumas NFS administrative boundaries. A number of emergencies have been identified on both NFS and non NFS lands. The BAER team specialist reports include recommendations for information sharing concerning the identified values at risk on nonNFS lands.

The Canyon Complex fires burned areas that are tributary to the Wild and Scenic Middle Fork Feather River. Portions of the Middle Fork Feather River are also designated as Wild Trout Stream. The BAER

team evaluated the impacts of the fire to potential threats to Human Health and Safety, in addition to potential threats to the designated Wild and Scenic Middle Fork Feather River and the effects to Forest resources, in an effort to determine if a new emergency exists as a result of the Canyon Complex Fires. Although the Canyon Complex Fires did burn land that is tributary to these important designated areas, there was not a determination of emergency to the designated outstanding features of the Middle Fork Feather River, due to hillslope processes (additional runoff and sedimentation) that were affected by the fire. No high soil burn severity was identified, and a major amount of the burned area was mapped as unburned, low soil burn severity, or moderate soil burn severity with high potential for leaf litter and needle cast ground cover.

Several miles of highly used trail system were burnt over by fires within the two complexes. Trails of special interest include the Pacific Crest Trail, which has a very high amount of use, due to popularity and easy access to trail heads within the burned areas, and the Feather Falls Trail, which leads to a waterfall on the Fall River above its confluence with the Middle Fork Feather River. This trail is highly used due to its proximity to Oroville and other Central Valley Communities, in addition to being a destination for weekend camping trips for San Francisco Bay Area residents.

The following emergencies have been identified within the Canyon-Butte Complexes burned area:

1. **A Threat to Human Health and Safety exists** from hazard trees, stump holes, new access to previously closed, nonengineered roads and trails used in fire protection.
2. **A Threat to Human Health and Safety exists** from, changed road conditions, including washouts from the loss of control of water, and hazard trees. Loss of control of water within the road and trail drainage systems may result in complete or partial washout of the road or trail prism. This would result in an emergency threat to forest recreationists who may be unexpectedly stranded remote country during high intensity rainstorms.
3. **A Threat to Human Health and Safety exists near the following Communities and Residences:** There are several homes located throughout the burned area. Specific areas at risk of increased flood and debris flows include Concow, Storrie, Pulga, Little Indian Creek (a few houses), and the Berry Creek Rancheria. All of these areas are expected to have increased streamflows during the burned area recovery period, however flow levels should not exceed historic floods. For instance, a storm that would normally create a 2-year peak flow would result in a flow from the burned area approximately equivalent to a 10-year peak flow. Runoff on burned areas will produce otherwise unexpected peak flows in drainages that flow closeby existing homes and through neighborhoods. Small local drainages (ephemeral & intermittent) are abundant around Concow. Homes in the Pulga (Flea Valley Creek), Little Indian Creek, and the Berry Creek Rancheria (Bean Creek) areas are located near the watershed mouth, in existing high risk areas for debris flows; those areas are at a slightly higher risk to increased stream and debris flows due to the newly burned tributary areas.
4. **A Threat to Human Health and Safety and public water supply exists in Jackass Cr** from potential debris flow that would obliterate a diversion that supplies water to the communities of Tobin and Rock Crest PGE work camp. The need for continued maintenance from blockage of intake structures by materials that have been transported during post fire runoff events creates a potential life threatening situation if that maintenance is carried out during the runoff event, or during periods of precipitation.
5. **A Threat to Water Quality** in the local stream channels exists from the loss of road and trail prism as a result of the loss of control of water on midslope roads and trails within the burned area within moderate severity burned areas.

Additionally, sedimentation from burned area sources will cause an increase in nutrient levels and loss of capacity of the Concow reservoir, a municipal water supply that is not treated locally, but diverts water into Lake Oroville, then rediverted to public treatment facilities and returned to the Concow community for use.

PG&E facilities downstream of the burn include the Poe, Rock Creek, and Cresta reservoirs along the North Fork of the Feather River. All of which will likely experience some degree of sediment influx, thus compromising storage capacity. Points along the Union Pacific Railroad will also experience increases in storm flows and sediment, resulting in a threat to water quality due to blocked culverts beneath the rail line.

6. **A Threat to Property exists from the loss of control of water** on roads, and on the heavily used Pacific Crest and Feather Falls trails within the burned area that are midslope and that have moderate soil burn severity areas on land that is tributary to road and trail drainages.
7. **A Threat to property exists from flooding and debris flow** in channels where homes are near the channels as described in #3 above.
8. **A Threat to Ecosystem Integrity exists from invasive weeds.** Many non-native plants are found in California wildlands, but some are much more invasive and noxious than others. Invasive weeds are very effective at occupying disturbed soil and displacing native plants and habitat. Non-native invasive weeds have the potential to displace native vegetation, degrade habitat function, and lower ecosystem stability. Ecological stability relates to the value of native plant communities for wildlife habitat and watershed function. The potential values at risk, in relation to invasive noxious weeds are the ecological stability of native plant communities and the degradation of Region 5 Sensitive plant habitat. The Canyon and Butte Lightning Complex fires impacted a variety of different plant communities and environments. The majority of the fire area can be classified as mixed conifer forest.

The R5 Sensitive Plants with potential to be affected by noxious weeds are:

- Jepson's onion (*Allium jepsonii*)
- Hoover's calycadenia (*Calycadenia oppositifolia*)
- Mildred's clarkia (*Clarkia mildrediae* ssp. *mildrediae*)
- Mosquin's clarkia (*Clarkia mosquinii*)
- Clustered lady's-slipper (*Cypripedium fasciculatum*)
- Fissidens moss (*Fissidens pauperculus*)
- Butte County fritillary (*Fritillaria eastwoodiae*)
- Water veined lichen (*Hydrothyria venosa*)
- Cantelow's lewisia (*Lewisia cantelovii*)
- Closed-throated beardtongue (*Penstemon personatus*)
- Cut-leaved ragwort (*Packera eurycephalus* var. *lewisrosei*)

The unknowing introduction of invasive noxious weeds into areas disturbed by fire suppression and rehabilitation has the potential to establish persistent weed populations. These persistent populations could affect the structure and habitat function of plant communities within the burn area. Forest Service direction is to minimize the establishment of non-native invasive species to prevent unacceptable degradation of the burned area. Consequently, delayed assessment of roads, dozer lines, drop points, helispots, and safety zones is necessary to detect the spread and introduction of weeds in the first year after fire. Assessing the establishment of weeds and treating small outlying

populations before they expand, will prevent the weeds from becoming serious threats to the recovery of native plants.

Any new noxious weed populations established in the fire area also threaten all nearby public and private lands. Agricultural lands around the fire area may be degraded due to noxious weed spread. Water quality may also be threatened when noxious weeds displace native riparian and wetland plant species. Many native wetland plants prevent riparian soil erosion while some noxious weeds do not.

B. Emergency Treatment Objectives: The treatments proposed will help reduce the risk to life and property, the effects on water quality and the infrastructure (roads) investments, within the fire area. The treatments will also help reduce the threat to ecosystem integrity from the introduction and spread of invasive weeds.

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

Land 80 % Channel % Roads/Trails 90 % Protection/Safety 100 %

D. Probability of Treatment Success:

| | Years after Treatment | | |
|-------------------|-----------------------|----|----|
| | 1 | 3 | 5 |
| Land | 70 | 80 | 90 |
| | | | |
| Channel | | | |
| | | | |
| Roads/Trails | 80 | 90 | 95 |
| | | | |
| Protection/Safety | 70 | 80 | 90 |
| | | | |

E. Cost of No-Action (Including Loss): **\$10,400,000+cost of loss of ecosystem integrity, water quality and human life**

F. Cost of Selected Alternative (Including Loss): \$3,866,366

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 checked="" type="checkbox"/> Forestry | <input checked="" type="checkbox"/> Wildlife | <input type="checkbox"/> Fire Mgmt. | <input checked="" type="checkbox"/> Engineering |
| <input type="checkbox"/> Contracting | <input checked="" 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 |

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H. **Treatment Narrative:**

Protection/Safety Treatments: Protection of public safety will be provided through administrative means. Signs and natural barriers will be utilized to inform the public of increased risk from entering the burned area, and natural barriers will be used to provide protection from hazards in areas where administrative means require additional protective measures.

Due to the amount of hazards that exist on federal, state, and private thru-ways and lands below NFS burned areas, it is imperative that FS resource specialists with knowledge of risks identified by the BAER team remain involved in public informational meetings. Extended Coordination with local cooperating agencies will occur to aide in providing public information, and in helping to determine contingency plans and needed treatments in the case of emergency created by hillslope failures or debris flows created by post fire storm events. Additionally, the FS geologist will continue to monitor debris flow potential in the Jackass creek and other identified drainages in the burned area with debris flow potential.

Roads and Trail Treatments: The following treatments were identified as BAER treatments for the Butte Complex and Canyon Complex Fire burn areas:

- A. Restore and Improve Drainage Function
- B. Roadside Hazard Tree Mitigation
- C. Install Relief Dips
- D. Clean Culvert Inlets
- E. Install Culvert Inlet Treatments (MES)
- F. Install Drainage Armor
- G. Install Hardened Crossing (LWC)
- H. Install and Repair Overside Drains
- I. Install Rirap
- J. Install Signs (BAER Warning / Information, and Administrative Closure).
- K. Monitoring and Storm Patrol

Within the Butte Complex the dominant road feature on the landscape is the Rim Road (23N06), a maintenance level 3 road that traverses the ridge top and at mid slope on the West side of the North Fork Feather River. This is a main road whose failure would create a lot of issues. This road requires approximately 6.86 miles of treatments to restore drainage function. The following roads within this complex access and traverse the midslope within the canyons. Most are constructed on highly erosive, decomposed granitic soils.

The 21N41X Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 1.8 miles of treatments to restore drainage function.

The 22N06A Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 0.34 miles of treatments to restore drainage function. This road is used for a private residence access.

The 23N06E Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 1.34 miles of treatments to restore drainage function

The 23N02 Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 1.04 miles of treatments to restore drainage function.

The 23N02B Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 2.3 miles of treatments to restore drainage function.

The 23N02B spurs, are maintenance level 2 roads that traverse a medium slope. These spurs require approximately 0.4 miles of treatments to restore drainage function.

The 23N04 Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 1.27 miles of treatments to restore drainage function.

The 23N14YA Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 2 miles of treatments to restore drainage function.

The 23N63Y Road, is a maintenance level 2 road that traverses a steep slope. This road requires approximately 3.5 miles of treatments to restore drainage function.

The 24N41X Road, is a maintenance level 2 road that traverses a steep slope. This road requires approximately 0.6 miles of treatments to restore drainage function. This road has a high potential for failure due to the steepness of the road.

The 23N03X Road, is a maintenance level 2 road that traverses a steep slope. This road requires approximately 1.29 miles of treatments to restore drainage function.

The 23N24Y Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 1.4 miles of treatments to restore drainage function.

The 23N14X Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 1.4 miles of treatments to restore drainage function. The lower end of this road will produce a diversion without outslowing.

The 23N22Y Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 1.9 miles of treatments to restore drainage function.

The 23N20Y Road, is a maintenance level 2 road that traverses a low slope. This road requires approximately 4.56 miles of treatments to restore drainage function.

The 23N01 Road, is a maintenance level 2 road that traverses a low slope. This road requires approximately 1.4 miles of treatments to restore drainage function.

The 23N44X Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 0.7 miles of treatments to restore drainage function.

The 23N13 Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 2.32 miles of treatments to restore drainage function.

The 23N19Y Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 2.35 miles of treatments to restore drainage function.

The dominant road features within the perimeter of the Canyon Complex are the 22N94, a maintenance level 4 road on the East side of the Middle Fork Feather River and the Sky High Road (22N29), a maintenance level 2 road on the West side of the Middle Fork Feather River. Roads within this complex access and traverse the midslope within the canyons. Most are constructed on highly erosive, decomposed granitic soils.

The 21N36 Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 3 miles of treatments to restore drainage function. This road has a high failure probability due to inadequate drainage.

The 21N71 Road, is a maintenance level 2 road that traverses a steep slope. This road requires approximately 2.93 miles of treatments to restore drainage function.

The 21N85 Road, is a maintenance level 2 road that traverses a steep slope. This road requires approximately 0.44 miles of treatments to restore drainage function.

The 21N24 Road, is a maintenance level 2 road that traverses a steep slope. This road requires approximately 1.5 miles of treatments to restore drainage function.

The 21N25 Road, is a maintenance level 2 road that traverses a steep slope. This road requires approximately 4.96 miles of treatments to restore drainage function.

The 21N25A Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 3.78 miles of treatments to restore drainage function.

The 22N02X Road, is a maintenance level 2 road that traverses a steep slope. This road requires approximately 0.24 miles of treatments to restore drainage function.

The 22N69 Road, is a maintenance level 2 road that traverses a low slope. This road requires approximately 0.4 miles of treatments to restore drainage function.

The 22N25Y Road, is a maintenance level 2 road that traverses a low slope. This road requires approximately 1 mile of treatments to restore drainage function.

The 22N75 Road, is a maintenance level 2 road that traverses a low slope. This road requires approximately 2.5 miles of treatments to restore drainage function.

The 23N00 Road, is a maintenance level 2 road that traverses a steep slope. This road requires approximately 2 miles of treatments to restore drainage function.

The 22N01Y, 22N34, 22N39 Roads, are maintenance level 2 roads that traverse a medium slope. These roads requires approximately 7.3 miles of treatments to restore drainage function.

The 22N93 Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 1 mile of treatments to restore drainage function.

The 23N60 Road, is a maintenance level 2 road that traverses a steep slope. This road requires approximately 3.6 miles of treatments to restore drainage function.

The 22N30 Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 2.83 miles of treatments to restore drainage function. This road has a high fill failure potential.

The 22N30A Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 0.37 miles of treatments to restore drainage function.

The 23N70 Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 2.7 miles of treatments to restore drainage function.

The 22N77 Road, is a maintenance level 2 road that traverses a medium slope. This road requires approximately 4.24 miles of treatments to restore drainage function.

The 22N29 Road, is a maintenance level 2 road that traverses a low slope. This road requires approximately 3 miles of treatments to restore drainage function.

The road assessment team was unable to access portions of the burned areas that were still too hot to enter at the time of assesment. Using information gathered on the ground with nearby roads, and assumption was made that a portion of those unvisited roads will also need storm protection and drainage function restoration.

Restore/maintain drainage function on Pacific Crest and Feather Falls trails.

Land Treatments:

1) Aerial straw mulching will be applied to 884 acres of NFS land that is tributary (lies above private lands within the Concow community, and above Pulga. The lands to be treated are those within 20-40% slope, are directly above values at risk, and are moderate soil burn severity with no potential for ground cover created by needle cast or leaf litter in the first year.

2) Noxious weed detection surveys of all roads, dozer lines, drop points, and safety zones affected by the Butte Lightning and Canyon Complex fires. These areas will be surveyed for evidence of introduction or spread of noxious weeds. If any new or outlying populations are found in these surveys, a supplementary request for noxious weed treatment will be submitted. Inspect all areas and monitor for newly established weed occurrences. Monitoring will include documentation and hand pulling small new weed occurrences at the time of inspection. New weed occurrences will be pulled to root depth, placed in sealed plastic bags, and properly disposed.

Documentation of new infestations will include:

- GPS negative and positive inspection results
- Incorporate data into GIS spatial database
- Establish photo points
- Map perimeter of new infestation
- Estimate number of plants per square meter
- Treatment method
- Dates of treatment
- Evaluate success in subsequent inspection

Inspections and monitoring should be accomplished during June, July, and August of 2009. Based upon findings in the first year's survey, additional surveying may be requested for up to three years.

I. Monitoring Narrative:

No monitoring is requested at this time.

Part VI – Emergency Stabilization Treatments and Source of Funds

Interim #

| NFS Lands | | | | | | Other Lands | | | | All Total \$ |
|------------------------------------|-------|--------------|---------------|--------------------|-------------|---------------|------------|---------------|---------------|--------------------|
| Line Items | Units | Unit Cost | # of Units | BAER \$ | Other \$ | # of Units | Fed \$ | # of Units | Non Fed \$ | |
| A. Land Treatments | | | | | | | | | | |
| botanist gs 11 | ea | \$350 | 11 | \$3,850 | | | \$0 | | \$0 | \$3,850 |
| botanist gs 9 | ea | \$287 | 23 | \$6,601 | | | \$0 | | \$0 | \$6,601 |
| botanist gs 7 | ea | \$180 | 23 | \$4,140 | | | \$0 | | \$0 | \$4,140 |
| botanist gs 5 | ea | \$125 | 23 | \$2,875 | | | \$0 | | \$0 | \$2,875 |
| straw aerial mulch | ea | \$1,200 | 884 | \$1,060,800 | | | \$0 | | \$0 | ##### |
| Imp. Team leader | ea | \$350 | 45 | \$15,750 | | | \$0 | | \$0 | \$15,750 |
| <i>Subtotal Land Treatments</i> | | | | \$1,094,016 | \$0 | | \$0 | | \$0 | ##### |
| B. Channel Treatments | | | | | | | | | | |
| | | | | \$0 | | | \$0 | | \$0 | \$0 |
| | | | | \$0 | | | \$0 | | \$0 | \$0 |
| | | | | \$0 | | | \$0 | | \$0 | \$0 |
| | | | | \$0 | | | \$0 | | \$0 | \$0 |
| <i>Subtotal Channel Treatments</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| C. Road and Trails | | | | | | | | | | |
| imp drainage func | mi | \$1,800 | 99 | \$178,200 | | | \$0 | | \$0 | \$178,200 |
| maint. Drainage | ea | \$300 | 1 | \$300 | | | \$0 | | \$0 | \$300 |
| rdway dip | ea | \$500 | 329 | \$164,500 | | | \$0 | | \$0 | \$164,500 |
| 24" metal end sec | ea | \$2,800 | 13 | \$36,400 | | | \$0 | | \$0 | \$36,400 |
| 18" metal end sec | ea | \$2,400 | 40 | \$96,000 | | | \$0 | | \$0 | \$96,000 |
| 48" metal end sec | ea | \$4,700 | 1 | \$4,700 | | | \$0 | | \$0 | \$4,700 |
| Drainage Armor | cu yd | \$250 | 1,684 | \$421,000 | | | \$0 | | \$0 | \$421,000 |
| storm patrol | ea | \$2,000 | 3 | \$6,000 | | | \$0 | | \$0 | \$6,000 |
| waterbars | ea | \$250 | 89 | \$22,250 | | | \$0 | | \$0 | \$22,250 |
| low water rcd xing | ea | \$2,500 | 2 | \$5,000 | | | \$0 | | \$0 | \$5,000 |
| rest. drainage/trail | ea | ##### | 1 | \$10,000 | | | \$0 | | \$0 | \$10,000 |
| trash racks | ea | \$3,000 | 8 | \$24,000 | | | \$0 | | \$0 | \$24,000 |
| | | | | \$0 | | | \$0 | | \$0 | \$0 |
| <i>Subtotal Road & Trails</i> | | | | \$968,350 | \$0 | | \$0 | | \$0 | \$968,350 |
| D. Protection/Safety | | | | | | | | | | |
| hazard signs | ea | \$500 | 4 | \$2,000 | | | \$0 | | \$0 | \$2,000 |
| admin signs | ea | \$300 | - | \$0 | | | \$0 | | \$0 | \$0 |
| public safety patrol | days | \$500 | - | \$0 | | | \$0 | | \$0 | \$0 |
| physical barriers | ea | \$1,000 | - | \$0 | | | \$0 | | \$0 | \$0 |
| continued coord | ea | ##### | 1 | \$12,000 | | | \$0 | | \$0 | \$12,000 |
| monitor debris flow | ea | \$5,000 | 1 | \$5,000 | | | \$0 | | \$0 | \$5,000 |
| <i>Subtotal Protection</i> | | | | \$19,000 | \$0 | | \$0 | | \$0 | \$19,000 |
| E. BAER Evaluation | | | | | | | | | | |
| Team | --- | --- | --- | --- | \$60,000 | --- | | --- | | \$120,000 |

PART VII - APPROVALS

1. /s/ Maria T. Garcia (for)
Alice B. Carlton
Forest Supervisor
Plumas National Forest
8/13/2008
Date

2. /s/ Jack J. Walton (for)
Kathleen Morse
Forest Supervisor
Lassen National Forest
8/12/2008
Date

- Regional partial approval, reference cover letter for specifics.

3. /s/ Chris Knopp (for)
Regional Forester
8/18/08
Date