Date of Report: October 31, 2013

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

[ ] 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures)

[X] 2. Interim Report #_1_.
[X] 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 Fire

B. Fire Number: CA-TNF-1562

C. State: CA

D. County: Placer

E. Region: 5

F. Forest: Tahoe

G. District: American River

H. Fire Incident Job Code: 0517-P5HU11

I. Date Fire Started: August 10, 2013

J. Date Fire Contained: August 29, 2013

K. Suppression Cost: $ ~30,000,000

L. Fire Suppression Damages Repaired with Suppression Funds
1. **Fireline waterbarred (miles):** 110 (71 mies of dozer line)
2. **Fireline seeded (miles):** 0 miles
3. **Other (identify):**

M. Watershed Number: 180201280301 Upper North Fork of the Middle Fork American River

N. Total Acres Burned: 27,440
[22,207] NFS FRA Acres
[ ] Other Federal [5033] State SRA
[ ] Private

O. **Vegetation Types**: Sierra Mixed Conifer, Montane Hardwood, Montane Chapparral, Douglass Fir, Pondorosa Pine, Jefery Pine, Montain hardwood-Conifer.

P. **Dominant Soils**: Common soils in the area include Hurlbut gravelly loam, Deadwood very gravelly sandy loam, Smokey gravelly sandy loam, Woodseye very gravelly sandy loam, Crozier loam, Cohasset loam and McCarthy gravelly sandy loam.

Q. **Geologic Types**: Ordivician to Devonian aged meta sesimentary bedrock, Miocene to plicene aged voacanic rocks of andesitic composition, and Quaternary aged glacial deposits.

R. **Miles of Stream Channels by Order or Class**: **Perennial**: 69 **Seasonal**: 26 **Ephemeral**: 224

S. **Transportation System**

Trails: 54 **miles** **Roads**: 147 **miles**

PART III - WATERSHED CONDITION

A. **Burn Severity (acres)**: 1510 **(unburned)**10,482 **(low)** 11689 **(moderate)** 3,759 **(high)**

B. **Water-Repellent Soil (acres)**: 3,748

C. **Soil Erosion Hazard Rating (acres)**: 2961 **(moderate)** 19380 **(very high)** 5096 **(high)**

D. **Erosion Potential**: 15.12 **tons/acre** for 24 months

E. **Sediment Potential**: 1,800 **cubic yards / square mile**

PART IV - HYDROLOGIC DESIGN FACTORS

A. **Estimated Vegetative Recovery Period, (years)**:	5
B. **Design Chance of Success, (percent)**:	85
C. **Equivalent Design Recurrence Interval, (years)**:	5
D. **Design Storm Duration, (hours)**:	24
E. **Design Storm Magnitude, (inches)**:	6.19
F. **Design Flow, (cubic feet / second/ square mile)**:	91
G. **Estimated Reduction in Infiltration, (percent)**:	25%
H. **Adjusted Design Flow, (cfs per square mile)**:	114

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats (narrative): The American Fire started on the afternoon August 10, 2013 in very rugged and heavily forested terrain in the upper North Fork of the Middle Fork American River. The deep canyon country dissected by steep drainages made fire suppression efforts very difficult. The fire was finally contained after burning for 19 days, at 27,440 acres on the evening of August 29, 2013. Other major streams in the burned area include Dark, Black, and Secret Canyon, Antoine, Manila, Screwauger, and Cliff Canyon, Deep Canyon and Bear Trap Creek. Ephemeral channels comprise approximately 224 miles within the fire area along with 26 miles of intermittent channels and 69 miles of perennial streams. The burned area includes the gold rush era town sites of Deadwood and Last Chance as well as many other historic mining sites and portions of the Western States Trail, which is home to internationally known 100-mile endurances events; the Tevis Cup and the Western States Run. Approximately 57% of the fire burned at moderate and high burn severity. The fire made long runs through the forest canopy in Secret and Black Canyons, with 71% of both canyons burning at high and moderate burn severity. Other Critical values potentially at risk from post-fire effects include a high value native resident rainbow trout fishery, 135 miles of National Forest System road used for public access and to manage forest resources, highly productive forest soils, and many cultural sites.

Threats to Human Life/Property – The American Fire burned 22,358 acres (81%) of NFS land and 5,080 acres (19%) privately owned land. There are no known year-round residents within the American Fire burn perimeters. There is, however, human activity in and around the burned areas including: travel routes through the burned areas, recreational users, private industrial timber land and other private landowners, and other private structures. The threat to human life comes from the potential unstable slopes above the waterways, travel routes, recreation trails, caused by the fires and the potential for rock slides and other falling debris. In the Black Canyon area the BAER team found a dangerous shaft that was previously obscured by vegetation. It is now visible from a Forest System Road and is a threat to human life. The BAER Team recommends that a fence be constructed around the shaft to mitigate the hazard. The forest AML program will mitigate this hazard using other program funding. There is an orginazational camp on the North Fork American River below the North Fork of the Middle Fork confluence. The BAER Team visited the site and spoke with the operators. The discussion centered on the threat of increased flooding due to post fire runoff from the burned area. According to John Close, a long-time camp caretaker, the camp has never sustained damage due to floods in recent history. This includes large flood events in 1997, 1986, and 1964, which were 100-year events. The probability of damage or loss to human life and property from downstream flooding is unlikely, although the magnitude of consequences could be major, the risk is intermediate.

Threats to Water Quality – There will be a short-term threat to water quality from the tributaries of the main stem of the North Fork of the Middle Fork American River and down to the confluence with the Middle Fork American 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 ash deposition. Placer County Water Agency operates the American River pump station, which is located at the proposed Auburn Dam site, which is on the North Fork American River over 40 river miles downstream of the fire. The watershed area above the station is approximately 620,800 acres. The total burn area of the American Fire is 4.4% of the area

above the station. Initial concerns were about increased sediment and debris from the burned area. The probability of debris and sediment affecting the operation of the pump station is low.

Threats of Nonative and Invasive Weeds – It is unknown whether or not all fire suppression and rehabilitation equipment used on the American Fire was weed-free prior to arrival at the incident. Equipment such as trucks, passenger vehicles, heavy equipment, and engines; and foot traffic has the potential to introduce seeds and reproductive propagates of non-native plant species to areas of fire suppression activities. Soon after the base camp was established, a washing station was setup for fire suppression equipment departing and arriving from the fire. Monitoring /observations conducted to track whether fire suppression equipment and vehicles were utilizing the weed washing station revealed that the wash station was bypassed on several occasions by fire equipment leaving the base camp to go to the fire, agency vehicles being de-mobbed, and heavy equipment that was stationed in other areas/directed to stage from other areas than the base camp. All of these activities increase the likelihood that fire suppression equipment had the potential to spread nonnative invasive plant species (NNIP). Prior to the fire, the area of the American 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 fire line, can create the optimum situation for invasive plant establishment. With early detection, the cost to eradicate noxious and invasive non-native species is greatly reduced. Overall, the probability of damage from noxious and invasive weeds is very likely and the magnitude of consequences would be major, making the risk very high.

Threats to Cultural Resources – Initially, 71 heritage sites were considered at risk for impacts from the fire and/or fire-related suppression or rehabilitation measures. Forty-seven sites are within the burned area (1 unburned site, 28 low burn severity, 13 moderate burn severity, 5 high burn severity), but only 22 sites were assessed by the BAER team archaeologist. Eleven of the sites monitored were located in areas of moderate and high burn intensity; however, seven sites were not visited due to safety concerns, a lack of potential BAER issues, or the necessity to prioritize a large assessment in a relatively short amount of time. Historic resources in the area include habitation structures, cemeteries, hydraulic mining ditches, mining features (e.g., tailings, adits, shafts, trails, etc.), refuse dumps, and trails. The American Fire has increased the accessibility and visibility of archaeological site locations making the probability of loss from vandalism/artifact looting and unauthorized recreational activity possible. The magnitude of consequences is major to moderate. The American Fire has put Heritage resources at a heightened risk of looting and/or unauthorized recreational access.

Threats to Roads – The BAER Team Road Engineer inspected approximately 85 miles of the 135 National Forest Routes within the burned area during the rapid BAER field reconnaissance. Many of the roads were not visited due to closure fromdown trees, prior earthen barriers and a lack of time. Post-fire precipitation in the these areas, combined with the lack of vegetation and ground cover is expected to result in increased, flashy, runoff; down slope movement of fine ash and sediment; rock fall, and possible debris flow until vegetation is reestablished. Roadway ditches, overside drains, culverts and cross drains are at risk of losing their drainage function and diverting water onto the roadway when becoming clogged with debris during post-fire storm runoff events. A few Maintenance Level 3 Roads extend within the fire perimeter and are main collector roads for other road networks within the burn area. The probability of loss on these roads given that they are within the high burn severity area was determined to be likely to very

likely. The magnitude of consequences for significant damage on these roads should be considered major. A majority of road sites at risk are at the stream crossings. Flood frequency analysis has determined that these culverts are at risk due to the predicted increase in post-fire runoff from within the high to moderate burn severity areas. The risk of this threat is high.

Threats to Recreation Sites and Trails – The American Fire burned a major portion of the Western State Trail: a prestigious trail that hosts two annual internationally acclaimed 100 mile endurance events: the Western States Endurance Run and the Western States Endurance Ride or Tevis Cup. Approximately 19 miles of the trail are in the burn area. That portion of the trail that is affected by the American Fire is significant because it some of the very heart of the endurance event with large elevation changes and 6 miles of the trail that is on the National Register of Historic Places. The probability of increased storm runoff, debris, erosion of the running surface and sedimentation will cause loss of drainage function on the trail. The erosion of the trail infrastructure is likely. The magnitude of property damage is moderate. The risk of this threat is high. Hazards caused by the fire include threats to Forest Service employee safety during BAER implementation from imminently hazardous trees and destabilized trail tread, rolling or falling debris from steep slopes, burned out stumps, and potentially unstable hillsides. There are two bridges on the Western States Trail in the burn area that could be additionally threatened if imminent hazard trees or rock now loosened on immediately adjacent hillslopes by loss of vegetation were to fall onto the bridges.

Threats to Soil Productivity – Black Canyon and Secret Canyon contain the largest concentration of high intensity burn. Much of this area has moderate to high productivity and moderate slopes conducive to timber production. There is an emergency for soil productivity in this area. Other areas of high burn severity throughout the burn are smaller and more isolated and are on steeper slopes and do not constitute an emergency for soil productivity even though they will experience significant erosion. The Probability of Damage or Loss of current soil productivity is **Likely** and the Magnitude of Consequences is **Moderate**. The Risk is **High**.

Threats to Fisheries and Aquatic Habitat: The majority of the fire has burned at a severity of moderate or less. Riparian vegetation includes alder, willow, dogwood, mixed conifer and Indian rhubarb. Vegetation within the fire primarily burned at low and moderate severity. Areas of moderate to high burn severity have the greatest potential to move sediment into stream systems and impact fisheries or other aquatic resources. Aquatic habitat and biota would be affected by such movement due to turbidity effects on water quality, and from loss of habitat due to sediment accumulation in pools and riffles. Sedimentation may also reduce the productivity of the stream system through effects on macroinvertebrates and reduce availability of spawning habitat. Fire may result in a large array of direct and indirect effects to resident trout populations in Black Canyon and Secret Canyon. Direct effects to these populations will generally occur when high severity burns occur in riparian areas. In the American Fire riparian areas generally burned at low or moderate severity, but some isolated areas within the headwaters of Black Canyon and Secret Canyon where it burned more severely were completely denuded of vegetation. Since some of the drainages burned very hot, fish may have died as a result of water heating, gas exchange or ash loading to streams. The probability of significant loss of trout as a result of the American Fire is unlikely. There is a known population of foothill yellow-legged frogs at the confluence of Peavine Creek and the North Fork Middle Fork American River. Modeling results for the North Fork Middle Fork American River show a 25% increase in post fire discharge. This increase in post fire discharge is not expected to have a significant effect on this population of foothill yellow-legged frogs. A BAER emergency does not exist for resident trout populations or downstream populations foothill yellow-legged frogs as a result of the American Fire.

B. Emergency Treatment Objectives (narrative): Recreation Sites and Trails: A major objective is to protect Forest Service employees from imminent hazards while implementing BAER treatments. Another objective is to minimize the destabilization of trails, to limit the potential for soil erosion, and to warn the general public of potential life threatening hazards after the closure is lifted. Roads: The main objective of the Road's treatments would be to protect Forest Service property within the burn. One secondary objectives accomplished by completing the work would be to protect the aquatic habitat, water quality and wildlife from large deposits of sediment created if any of the roads are washed out. Another secondary effect would be the protection of several archaeological sites located below some of these roads. If some of the roads are washed out, some heritage resources would be directly affected. The objective of the soils mulching treatment is to reduce soil erosion and maintain soil productivity. A secondary objective is to protect water quality and aquatic habitat.

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

Land 90% **Channel** N/A **Roads/Trails** 85% **Protection/Safety** 90%

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	85	90	95
Channel	n/a	n/a	n/a
Roads/Trails	80	90	95
Protection/Safety	95	90	95

E. Cost of No-Action (Including Loss): The total cost of non-treatment for the soil productivity mitigation comes to $1,672,100. In reality the cost of non-treatment cannot be estimated in a dollar amount. The real cost of non-treatment can only be measured in the loss of timber production, degradation of aquatic habitat, and the decrease in water quality.

F. Cost of Selected Alternative (Including Loss): XXX

G. Skills Represented on Burned-Area Survey Team:

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

Hydrology: Luke Ruten, Fisheries: Dan Teater, Soils: Dave McComb, Recreation: Mo Tebbe/Mary Sullivan, Botany: Kathy Vanzuuk, Engineering: Ryan Mack, Archaeology: Kalie Crews, GIS: Karie Wiltshire, Deputy Team Leader: Randy Westmoreland

Team Leader: Rick Weaver **Email**: rweaver@fs.fed.us **Phone**: 530-478-6241 **FAX**:

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: Noxious and invasive non-native species: The BAER team recommends noxious and invasive non-native species detection surveys be conducted to determine if the wildfire and associated ground disturbing activities have promoted the establishment and spread of NNIPs to the extent that eradication efforts are necessary. Noxious weed treatments will be a simultaneous detection and with a rapid response for the removal. Initial surveys will focus on detection of immature plants/basal rosettes. Other surveys will focus on detection of mature plants and will occur during the flowering periods of NNIP species (roughly mid July through August dependent on climatic conditions). Since different NNIP flower at different times, some areas may need to be visited 2-3 times. Lower elevation portions of the fire area will be surveyed first. All locations of NNIP will be mapped, and documented using the NRIS protocol. Survey results will be entered into the NRIS database. New NNIP occurrences will be pulled and properly disposed of when detected at the time of survey. Documentation of new NNIP infestations will include: a perimeter map, treatment method, date of treatment, input of data into GIS spatial database, input of data into the National Resource Information System (NRIS) database, input of data into the FACTS database, and inspections to evaluate treatment success. A NNIP Detection Survey Report will be submitted to the regional and Tahoe NF BAER coordinators and the American River District Ranger. Estimated costs are based on the assumption that two (and possibly 3) visits will be needed due to the differences in flowering times. If timing is such that all the target species are detectable in one visit, the actual costs would be lower than displayed below.

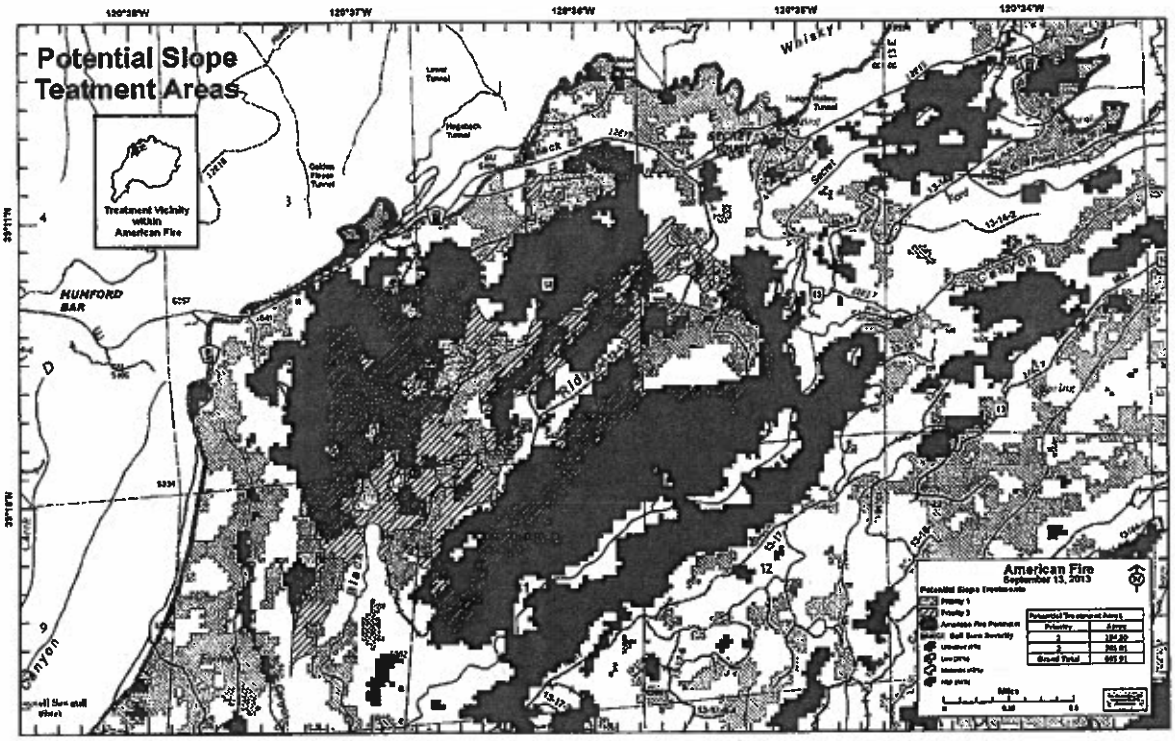
GS-11 botanist ($450/day x 8 days)	=$ 3,600
4 GS-05 botanists ($600/day x 20 days)	=$ 12,000
GS-9 FACTS/NRIS data entry ($335 /day x 4 days)	=$ 1,340
Vehicle mileage (3600 miles @ 0.40/mile)	=$ 1,440
Supplies (gloves, insect repellant, trash bags, etc.)	=$ 200
Total for NNIP detection surveys for FY14	=$ 18,580

Soil Productivity Treatments: The Secret Canyon HUC7 watershed including Black Canyon received the highest amount of soil burn severity in the fire. 30% of the area is high soil burn severity and 41% moderate. It is recommended that straw mulching and mastication of burned trees be implemented on approximately 696 acres of ground in the Secret and Back canyon areas that have moderate to high soil burn severity. These soils are moderate to highly productive and generally on slopes less than 35%.

The objective of this treatment is to reduce soil erosion and maintain soil productivity. A secondary objective is to maintain water quality and aquatic habitat. Treatment areas have been divided in to two priority groups. The first priority treatment group consists of **194** acres on the highly productive Crozier-McCarthy-Cohasset complex. Treating these areas with mulch at the rate of 1 ton/acre is expected to reduce soil erosion from approximately 11 tons/acre to 2.4 tons/acre in the first year. The second priority group is the moderately productive McCarthy-Ledmount-Crozier complex. This group covers an area of approximately **502** acres. Mulching these areas is expected to reduce soil erosion from 20

tons/acre to 12 tons/acre in the first year. The treatment would consist using a masticator to masticate sub-merchantable dead trees in areas where they are in sufficient volume to create a ground mulch of 1 ton per acre. Rice straw would be used in other areas. This straw could be applied by hand, through the use of a straw blower or aerial application. Approximately 10% of the treatment area is within 200 feet of the road. This is the effective area for hand or straw blower treatment. All other straw mulch locations would have to be completed using aerial application.

Probability of Damage or Loss of current soil productivity is **Likely.** Magnitude of Consequences is **Moderate**. Risk is **High.**



Map showing the Priority 1 and Priority 2 soils

The cost for mastication is $600 to $700 per acre. Aerial application of rice straw is up to $1300 per acre. Hand or blower application of rice straw is more labor intensive and is about $1300 also. Assuming that one half of the area could be treated using mastication and the other half using rice straw the cost of treating the first priority 194 acres would be $194,000. To treat the 502 acres of second priority soils the cost would be $502,000. An archeologist would need to investigate archeological sites and monitor the priority treatment area at a cost of $1,700. This would be a total of $697,000 for treating all recommended acreage. It is recommended that the first priory soils treatment be funded in this request with the second priority soils treatment to be funded at a later date if funds are available.

Treatment	Unit	Unit Cost	# of Units	Cost
Treat high priority soils with mulch and mastication	acres	$1000	194	$194,000
Treat second priority soils with mulch and mastication	acres	$1000	502	$502,000
Archaeologist for priority 1 mastication areas	day	$340	5	$1700
Implementation Leader/COR	days	$400	20	$8,000
Total				**$222,280**

Channel Treatments: N/A

Roads Treatments: The transportation system treatments are limited to rolling dips to stabilizing road drainage and to stream crossings, which include culvert improvements or low water crossings. The culvert improvements such as a flared end section or drop inlets would help the culvert either orient the debris at a better angle to flow through the culvert or provide relief flow from above the culvert in the event that the culvert becomes clogged at the inlet. The low water crossings would be located on low maintenance level roads where increase runoff could start to erode the fill slope on the road. The goal of the low water crossing would be armor the road prism and fill slope with larger rock and rip rap to reduce any damage to the road. Rolling dips were prescribed on several road sections where concentrated runoff on the road has potential to scour the road subgrade for long distances These roads sections currently show scour in the road and that type of damage will increase significantly. Rolling dips are designed to collect the water running longitudinally down the roads and direct if off the roads.

Treatment	Unit Cost	Units	Total
DI and Culvert inlet construction	$2,500	14	$35,000
Install new culverts	$3,000	7	$21,000
Clean Roadside Ditches MI	$1,200	5	$6,000
Regrade Road	$1,500	3	$4,500
Signs	$300	6	$1,800
Road 13 Pavement drainage	$12,125	1	$12,125
Storm patrol	$400	30	$12,000
Rip Rap Slopes ton	$800	24	$19,200
Rolling dips	$2,200	22	$48,400
Low Water Crossing	$7,500	2	$15,000
Culvert Cleaning	$300	6	$1,800
Design and Contract Prep/Admin	$20,000	1	$20,000
	Base	Total	**$196,825**

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Regrade Road	$1,500	3	$4,500
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Culvert Cleaning	$300	6	$1,800
Design and Contract Prep/Admin	$20,000	1	$20,000
	Base Total		**$196,825**

Recreation and Trail Treatments: 1. Install erosion control features to stabilize trail tread, prevent erosion, and limit loss of trail tread where roots have burned out from erosion by a variety of methods: install a low swale and armor downhill of the swale too catch overland flow and sediment using local/native materials such as vegetation or rock; or when there are no such materials present install waddles. 2. Stabilize trail tread to prevent erosion and loss of trail from burnt out stumps; there are a variety of sizes of burned out stumps. Only those that have potential of channeling water/erosion down slope or collapsing the trail tread that would erode would be treated. Native surrounding materials such as the soil that has dry raveled from upslope could be used if nearby. Where there is no nearby native material, or where the stump hole is very large and extends outward, install foam such as is used to close abandoned mines.

Trail Treatment	Unit	# of Units	Unit Cost	Cost
Trail Stabilization by installing low swales and erosion control on the drains (armor with local materials or install waddles)	sites	10	280	$2,800
Hazard Tree Mitigation for Worker Safety	each	25	800	$20,000
Stabilize Trail by filling stump holes	each	20	450	$9,000
Total				**$31,800**

Interim Report #1 Recreation and Trail Treatments

1. Replace/repair retaining walls with local native materials- to stabilize trail tread, prevent erosion, and limit loss of trail tread due to increased runoff and debris.
2. Install/replace erosion control - water bars and drainage dips on the trail to prevent erosion and stabilize tread. This may include armoring dip outlets with local native rock to prevent erosion in the severely burned areas.
3. Stabilize trail tread - to prevent erosion and loss of trail from burned out roots and stumps. Only those that have potential of channeling water/erosion down slope or collapsing the trail

tread that would erode would be treated. Fill material would be local native materials such as soil that has dry raveled onto the trail bed or rock.

Work will be completed manually on the Western States Trail, and by a combination of manual and mechanical (e.g. SWECO trail tractor) on 11E44 and 12E23.

Trail Treatment	Unit	# of Units	Unit Cost	Cost
Replace/Repair Retaining Walls for trail tread stabilization and erosion prevention with local native materials	Days	7	$1,000	$7,000
Replace/Repair Retaining Walls for trail tread stabilization and erosion prevention with local native materials (rebar to anchor log retaining wall)	Each	1	$60	$60
Install/Replace Erosion Control waterbars and drainage dips	Days	26	$1,000	$26,000
Stabilize Trail by filling in root and stump holes	Days	12	$1,000	$13,000
Total				$46,060

Protection/Safety Treatments: Trails/Recreation: Install closure and warning signs at various access and information points including the Western States Trail, the American Hill and Ford Point OSV trails and Loop 6. Install closure and warning signs on 8 roads that access the fire area: Deadwood (PLA 6149), Black Canyon (FSR 0088-26), both ends of the American Hill loop (FSR 13), Cliff Canyon (FSR 0088-44), both ends of the Flat Ravine Road (FSR 43) and the Deep Canyon Road (FSR 44) at the Peavine Road (FSR 33). After lifting the administrative **closure, warning signs will replace the closure signs. The closure order is projected to be lifted when the hazards are abated which may be after a normal winter's snowfall, rain, and wind. Monitoring wil be condsucted to determine if the closure can be lifted. Estimated June 1, 2014.**

Protection/Safety Treatments	Unit	# of Units	Unit Cost	Cost
Protection/Safety: Closure and Warning Signs	each	40	308.75	$12350
Total				**$12350**

Range Recommendation – The BAER Team recommendation is that during the post-fire recovery period, the Mosquito Allotment be placed in non-use for resource protection for the next two grazing seasons (specifically 2014 and 2015). The cattle are likely to drift into the burned areas where water may be found and trample riparian dependent resources.

Also, any brush that had been a barrier to cattle egress out of the allotment along the Last Chance Ridge area is now either removed or reduced and could prove to be an attractive nuisance to livestock as shrubs resprout after fire, or unknown spring areas are now exposed to the potential use by cattle.

Fisheries Recommendation: It is recommended that the following work/monitoring be pursued using non-BAER funding: 1.) Trout populations should be monitored in the headwaters of Black Canyon and Secret Canyon to evaluate post-fire effects. Monitoring using electroshocking over time, preferably over several years, will help determine the status of these resident trout populations. If there are future impacts, the effects to the population will be more accurately determined. 2.) SCI Data Gathering: SCI attributes and protocols are designed to measure a suite of characteristics of inventorying stream conditions at a specific time and place. SCI consists of established and proven stream assessment techniques that are organized into a package that can be measured in the field in a complimentary and time-effective manner. Each attribute has a protocol for field measurement and these protocols are the keystones to the success of the SCI since accurate data collection over time is essential. SCI is designated so reliable repeat measurements can be made at desired intervals to detect change. SCI is primarily designed for use on wadable, perennial streams with gradients up to about 10%. When appropriate conditions exist in a project area SCI protocol is used to determine if relevant stream characteristics are within the range of natural variability. 3.) Cooperate with CDFW and interested Universities on research and monitoring of post-fire effects to trout within the American Fire perimeter. For the first three years after the fire, annual meetings should be conducted to evaluate lessons learned from post fire impacts (what could have been done differently, compile existing data, evaluating new data needs and establish photo points). 4.) Additional water quality samples should be taken to help to better understand changes in habitat conditions for aquatic biota following the American Fire.

Cultural Resource Treatment

Exposed Cultural Resources:

A. Treatment Type: Post ARPA signs.
B. Treatment Objective: Provide an avenue to prosecute looters within the burn area and prevent the destruction of important cultural resources.
C. Treatment Description: Educational signs that inform the public about the importance of cultural resources and the laws protecting them. Informational signs increase the viability of criminal prosecution through the Archaeological Resource Protection Act of 1979 (ARPA). The signs will be located at campgrounds, trailheads, and access points located around the fire perimeter.
D. Treatment Cost: The TNF heritage program has a sufficient number of signs. Signs would need to be posted and monitored on a periodic basis. Labor for posting and monitoring effectiveness would cost approximately $1020.

I. Monitoring Narrative:
(Describe the monitoring needs, what treatments will be monitored, how they will be monitored, and when monitoring will occur. A detailed monitoring plan must be submitted as a separate document to the Regional BAER coordinator.)

Recreation/Trails: Closure area monitoring will be necessary to ensure effectiveness of closure. Monitoring will be implemented by various recreation staff and trails manager. Monitoring will occur at a minimum of once every two weeks during the year following

implementation of closure.
Trail monitoring for trail BAER Treatments will be conducted because the Western States Trail endurance events are in June and July of each year. Trail maintenance and monitoring is expected to occur as soon as access allows in the spring. Monitoring will be ocular unless there are potential significant issues where a specialist (soil scientist or hydrologist) is required and then notifications would be made. Standards would be similar to BMP monitoring as well as TNF Forest Plan monitoring.

Item	Unit	Unit Cost	# of Units	Cost
Closure Monitoring	days	$300	13	$3,900
Monitor Tail BAER Tratments	day	$300	4	$1,200

Part VI – Emergency Stabilization Treatments and Source of Funds

	NFS Lands			
Line Items	**Unit**	**Average Unit Cost**	**# of Units**	**BAER Funds**
A. Lands Treatments				
Weed detection survey and treatment	FY2014	$18,580	1	$18,580
Treat high priority soils with mulch and mastication	acres	$1000	194	$194,000
Savings from Mastigation contract coming in below Govt. Est.	Lump sum	-$20,000	1	-20,000
Archaeologist evaluation/monitor implementation	days	$340	5	$1,700
Implementation Leader/COR	days	$400	20	$8,000
Initial Request Subtotal Land Treatments				***$222,280***
Interim #1 Request Subtotal Land Treatments				**$202,280**
B. Channel Treatments NONE				
Subtotal Channel Treatments				***$0***
C. Roads and Trails				
Trail Stabilization by installing low swales and erosion control on	sites	$280	10	$2,800

the drains (armor with local materials or install waddles)				
Trail Hazard Tree Mitigation for Worker Safety	Each	$800	45	$20,000
Stabilize Trail by filling stump holes	Each	$450	20	$9,000
Replace/Repair Retaining Walls for trail tread stabilization and erosion prevention with local native materials	Days	7	$1,000	$7,000
Replace/Repair Retaining Walls for trail tread stabilization and erosion prevention with local native materials (rebar to anchor log retaining wall)	Each	1	$60	$60
Install/Replace Erosion Control waterbars and drainage dips	Days	26	$1,000	$26,000
Stabilize Trail by filling in root and stump holes	Days	12	$1,000	$13,000
Interim Report #1 Subtotal				$46,060
Road Treatments	lump sum	$189,203	1	$196,825
Subtotal Roads and Trails				***$274,685***
D. Protection and Safety				
Road & campground hazard warning signs	Each	$309	40	$12,350
Post NHPA Signs to Protect Heritage Resources	Lump Sum			$1,020
Subtotal Protection and Safety				***$13,370***
E. BAER Assessment				
Assessment Team	Each	$42,000	1	$45,000
Subtotal Assessment				***$45,000***
F. Monitoring				
Closure Monitoring	days	$300	13	$3,900
Monitor Tail BAER Treatments	day	$300	4	$1,200
Subtotal Monitoring				***$ 5,100***

G. Totals	
Previously Approved	n/a
Totals for this Request	**$495,435**

PART VII - APPROVALS

1. Forest Supervisor (signature) — Date: 10.31.13

for 2. Regional Forester (signature) — Date: 11/6/13