

**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)

**PART II - BURNED-AREA DESCRIPTION**A. Fire Name: **Washington**B. Fire Number: **NV-HTF-030251**C. State: **California**D. County: **Alpine**E. Region: **04 - Intermountain**F. Forest: **17 - Toiyabe**G. District: **Carson City**H. Fire Incident Job Code: **P4JTA6**I. Date Fire Started: **June 19, 2015**J. Date Fire Contained: **Est. July 31, 2015**K. Suppression Cost: **\$12.4** (estimate from 07/06/2015)

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): Handline 20.2
2. Fireline seeded (miles): Handline 0
3. Other (identify):

M. Watershed Number:

Subwatershed Name (HUC6)	Total HUC6 Acres	Acres in Fire Perimeter	Acres Unburned	Acres of Low Severity	Acres of Moderate Severity	Acres of High Severity
Bagley Valley – East Fork Carson River	16,529	4,140	873	1,106	2,114	47
Cottonwood Canyon – East Fork Carson River	15,749	15	2	8	5	0
Leviathan Canyon	32,653	149	90	37	22	0

Subwatershed Name (HUC6)	Total HUC6 Acres	Acres in Fire Perimeter	Acres Unburned	Acres of Low Severity	Acres of Moderate Severity	Acres of High Severity
Markleeville Creek – East Fork Carson River	27,652	10,041	1,770	2,877	5,335	59
Silver Creek	19,684	1,903	450	602	813	38
Wolf Creek	19,044	1,534	337	540	611	46
<b>Total</b>		17,790	3,530	5,170	8,900	190

N. Total Acres Burned:

NFS (16,470) Carson-Iceberg Wilderness (741) State (562) Private (758)

O. Vegetation Types: Vegetation in this geographic area ranges from mixed brush to Jeffery Pine forests.

P. Dominant Soils: Major soils series from Alpine County Soil Survey (CA-729) (2006)—Loope, Celeridge, Joecut, Heenlake, Carshal, Dogbed, Newcone, Pinew, Leroman, Toiyabe. Typically the soils have sandy loam to loam surface texture with very gravelly to extremely bouldery modifiers. Soils are shallow to moderately deep and average 25-50 percent slope.

Q. Geologic Types: The area affected from the fire is underlain almost entirely by the igneous rock. Tuff, tuff-breccia, andesite and granite are common within the fire perimeter. Fracturing has provided for the intrusion of mineral bearing solutions which provide for much of the historic mining districts mineral production.(i.e. Colorado Hill, Loope Canyon Area and Silver Hill historic mining districts)

R. Miles of Stream Channels by Order or Class:

Perennial: 17.9 Intermittent: 47.2

S. Transportation System (miles)

Roads: 10.6 miles Maintenance Level 1  
19.3 miles Maintenance Level 2  
5.6 miles Maintenance Level 3  
2.3 miles Maintenance Level 5

### PART III - WATERSHED CONDITION

A. Burn Severity (acres): 5,170 low 8,900 moderate 190 high (3,530 unburned)

B. Water-Repellent Soil (acres): 900

C. Soil Erosion Hazard Rating (acres):

Erosion Hazard Class	Inherent Erosion Hazard (Acres)
Moderate	13,762
Severe	360
Very Severe	3,668

D. Erosion Potential: 1.45 tons/acre (ranges from 0.50 to 2 tons/acre)

E. Sediment Potential: 684 cubic yards/square mile (range: 388 to 1,555)

#### PART IV - HYDROLOGIC DESIGN FACTORS

- A. Estimated Vegetative Recovery Period (years): 3 – 5 years
- B. Design Chance of Success (percent): 50%
- C. Equivalent Design Recurrence Interval (years): 10 years
- D. Design Storm Duration (hours): 1 hour
- E. Design Storm Magnitude (inches): 0.89 inches
- F. Design Flow (cubic feet / second / square mile): 33.8 ft<sup>3</sup>/s/mi<sup>2</sup>
- G. Estimated Reduction in Infiltration (percent): 40%
- H. Adjusted Design Flow (cfs per square mile): 207.6 ft<sup>3</sup>/s/mi<sup>2</sup>

#### PART V - SUMMARY OF ANALYSIS

##### Background:

The Washington Fire was started on June 19, 2015 and has burned about 17,790 acres to date was 99% contained on July 6, 2015. The fire burned in the East Carson River watersheds. The burned area is within the Carson City Ranger Districts on the Toiyabe National Forest.

##### A. Describe Critical Values/Resources and Threats (narrative):

A list of critical values was discussed with Carson City RD staff and the BAER team during July 2-5<sup>th</sup>. The BAER team subsequently evaluated this list of values through field assessment and associated analysis to determine the critical values (Interim Directive No. 2520-2014-1 – 2523.1 – Exhibit 01) that may be treated within the BAER program. The risk (Interim Directive No. 2520-2014-1 – 2523.1 – Exhibit 02) to these critical values has been assessed by the BAER team and is described below. A list of treatment numbers has been included below each critical value description to ensure tracking between values and treatments.

##### 1. Human Life and Safety (HLS)

- a. Intermediate risk to **forest visitors and Forest Service employees** parked at high use areas along informal, non-system trails, picnic spots, or fishing holes adjacent to the East Carson River area due to the increased threat of falling trees, rocks, and other debris. (*Treatment: T2*)
- b. High risk to **forest visitors** due to the threat of slips, falls, caving-in and asphyxiation into open mine shafts and adits. The exposure of previously hidden abandoned and inactive mine openings within the Loope Canyon Mining Area present a significant threat to the health and safety of the public who may intentionally or inadvertently enter the mine workings. (*Treatment: T2*)

- c. Intermediate risk to the East Carson River **water sports users** due to the threat of an increase in floatable material delivered from the burned area. This floatable material is expected to be delivered during debris flow events and may impact recreationists safety. (Treatment: T2)

2. Property (P):

- a. Very high risk to **road infrastructure** due to an increased threat of damage expected to these forest investments from imminent flooding, debris flows, erosion and deposition. (Treatments: T4, T5, T6, T7, T8, T9, T10, T11, T12)

3. Natural Resources (NR):

- a. High risk to **native plant diversity** due to the threat from the spread of noxious weeds and invasive plant species. Known noxious weed and invasive populations (spotted knapweed, nodding plumeless thistle, Scotch and Bull Thistle) exist within and immediately adjacent to the burned area. Most populations to date occur along existing road systems and riparian corridors. There is also invasive cheatgrass scattered throughout the East Carson River drainage within and adjacent to the fire. (Treatment: T1)

4. Cultural and Heritage Resources (CHR):

- a. Very High risk to **eligible or potentially eligible cultural resources** due to the threat of previously hidden artifacts becoming exposed and susceptible to looting. There are 29 eligible or potentially eligible cultural resources within the burned area. (Treatment: T3)
- b. High risk to **eligible or potentially eligible cultural resources** due to the increased threat from erosion, falling trees, or falling debris causing irreversible damage to these sites. (Treatment: T3)

B. Emergency Treatment Objectives:

The goal of the burned area emergency rehabilitation is to:

- Reduce threats to personal injury and/or human life of visitors using forest system roads.
- Protect or minimize damage to National Forest System investments within the burned area. Minimize damage to key system travel routes within and adjacent to the fire boundary.
- Protect or mitigate potential post-fire impacts to critical natural resources and significant cultural resources within or downstream from the burned area.
- Control expected invasion of noxious weeds within and adjacent to the area where soils/vegetation was disturbed as a result of suppression activities.
- Warn users of Forest roads and trails of hazards present in the burned area. Consider temporary closure to protect public users of NF lands.

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

Land 70%      Channel -- %      Roads/Trails 70%      Protection/Safety 90%

D. Probability of Treatment Success

Treatment	Years after Treatment		
	1	3	5
Land	80	70	--
See VAR; treatment design life is 3 years			

Channel	--	--	--
Roads/Trails	70	80	90
See VAR; road treatments are designed for increased runoff which will decrease as vegetation recovers.			
Protection/Safety	60	60	60
See VAR; Visitors will pay attention to the new signs.			

E. Cost of No-Action (Including Loss): See VAR;

Overall, the summary of the three map zones identified that the total treatment cost is estimated at \$231,378 with an expected benefit of \$684,800. The summary implied minimum value of protecting non-market resource critical values is justified for the treatments proposed in this BAER assessment. Map zone A has an expected benefit/cost ratio of 3.3; map zone B is designated for human life/safety and cultural resource protection; and map zone C has an expected benefit/cost ratio of 3.4. SEE ATTACHED VAR ANALYSIS

F. Cost of Selected Alternative (Including Loss): See VAR and summary statement in section E, above.

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

Team Leader: Rich Jaros/James Hurja

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Team Members:

Brian Anderson	Hydrologist
Jennifer Brickey	Botanist
Sally Champion	Hydrologist
Kalie Crews	Archaeologist
James Hurja	Soil Scientist
Rich Jaros	Soil Scientist
Troy Jorgenson	Engineer
Demetrius Purdie-Williams	GIS Specialist
Brendan Waterman	Hydrologist

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.)

*These treatments were developed by each of the respective resource groups as part of a specification sheet that helped guide narrative and cost considerations. Each treatment proposal was then captured within this document. Since the*

*development of those specification sheets, the team leader has communicated with BAER Coordinators at forest and regional levels to ensure consistency with BAER authority.*

## **Land Treatments:**

### **T1 - Early Detection & Rapid Response**

**General Description of Treatment:** Invasive plants and weed assessments will be conducted in FY2016 for Early Detection and Rapid Response (EDRR) on any new infestation located within the fire perimeter. Treatments will occur at proper phenology of each species to ensure maximum control.

Because noxious weeds are scattered in small patches (mostly less than 1 acre) throughout the burn area, there is a high risk for new infestations within the fire perimeter to become established due to the disturbance caused by the wildfire and the suppression equipment used to fight the fire. Bull thistle is the primary species of concern to invade the burn; cheatgrass is already a concern due to the amount prior to the wildfire along roads in the northern half of the burn.

**Suitable Sites:** Assess areas that have a high potential for weed/invasive species establishment. Priority acres for EDRR are as follows:

- 1) 828 acres: Fire Points @ 89 acres, Fire Lines @ 281 acres and Roads/Trails @ 458 acres.
- 2) 97 acres: Existing infestation sites
- 3) 9,000 acres: Unoccupied habitat within bi-state sage-grouse Pine Nut Population Management Unit (PMU)

### **Design/Construction Specifications:**

1. Conduct short-term monitoring in FY2016 using EDRR assessment/monitoring of noxious weed/non-native invasive plant species infestations within the burned area. Monitoring to determine the post-fire presence or spread of invasive species will be prioritized by critical areas and disturbed areas near existing infestations.
2. Inventory/assessment, photos and map new noxious weed infestations within burned area using GPS technology and upload into the Carson Ranger District GIS Noxious Weeds database.
3. Mechanical treatments, primarily through hand pulling, will be used on appropriate noxious and non-native invasive species such as spotted knapweed and bull thistle that are located within the fire on public lands. Prior to mechanical treatments, clear observed occurrences for cultural resources.
4. If Humboldt-Toiyabe N.F. completes the California Integrated Weeds Management Project Decision before expiration of the funds, chemical treatments using pickups, UTVs and backpack spray units will be used on any noxious weeds located within the fire on public lands.
5. Biocontrol agents will be used if available and applicable on larger infestations for long term weed management.

6. For the unoccupied bi-state sage grouse Pine Nut PMU, monitor cheatgrass expansion in the PMU using a stratified sampling method to focus efforts on areas of highest concern for the district.

**Purpose of Treatment:** This treatment is necessary to prevent the establishment and to control the spread of new noxious weeds and non-native invasive species in the burned area. Low sagebrush and mountain big sagebrush communities are at risk of type conversion to cheatgrass-dominated communities. The Washington Fire includes unoccupied bi-state sage-grouse habitat that is a part of the Pine Nut PMU as well as rangelands with grazing allotments. This treatment is necessary to protect the integrity of the area for bi-state sage-grouse habitat and grazing suitability from expansion of noxious weeds.

## Protection/Safety Treatments:

### **T2 – Safety Warning Signs**

**General Description:** This treatment is for the installation of burned area warning signs and exposed mining hazards signs.

Burned area signs warn the public identifying of the possible dangers associated with a burned area on major entry points into the burned area and recreational areas. It shall contain language specifying items to be aware of when entering a burn area such as falling trees and limbs, rolling rocks, and flash floods. Warning signs will also be placed in abandoned mines areas. (AML)

#### **Suitable Sites:**

Locations on FS lands for burned area warning signs on major entry points are:

- On Loope Canyon Road at CA Highway 89 (North of Red Gap Mine).
- On Loope Canyon Road at Leviathan Road Junction.
- On Wolf Creek Road at Centerville Flat.
- On Poor Boy Road at fire boundary.

Locations on FS lands for burned area warning signs or safety placards at dispersed recreation areas and/or trails are:

- Centerville Dispersed Campground Area.
- East Carson River Bridge Area (Fishing Access).

#### **Detailed Design/Construction Specifications:**

Burned Area warning signs along the roads shall be specified by the Carson City District and SO Engineering Staff to be the minimum necessary for safety considerations.

Examples of signs are:

BURNED AREA

Potential Hazards Include:

Loose Rock, Falling Trees and Limbs, Flash Flooding and Debris Flows

(Where needed additional language for abandoned mine area will be added)

**Purpose of Treatment:** The purpose of the Burned Area signs is to provide safety to the motorists and forest visitors of upcoming dangers and/or objects.

### **T3 – Cultural Resource Signage (ARPA) and Patrol**

**General Description:** Sign and Patrol/ monitor sites susceptible to looting, erosion, runoff, and flash flooding.

**Suitable Sites:** There are eleven cultural resources in the Washington Fire area at risk from looting. Placing signs at high use areas and locally known historic sites may mitigate potential adverse effects to cultural resources. ARPA signs will be posted and maintained during Fiscal Years 2015 and 2016. It is anticipated that vegetative regrowth will begin to mitigate visibility of the exposed sites after winter 2016/2017.

**Purpose of Treatment:** The general purpose is to deter site looting and monitor to determine if sites are being damaged by looting or erosion. If damage is discovered, additional funding will be sought so that law enforcement can take needed action and mitigation measures can be implemented to minimize damage to cultural resources from erosion.

With vegetation burned off over large parts of the incident, on-site monitoring by archaeologists is necessary to determine if active site looting or erosion is taking place. Depending on location of the archaeological sites, archaeologists will monitor from 4-7 sites each visit. Catching a looter will increase the potential of criminal prosecution through the Archaeological Resource Protection Act of 1979 (ARPA).

The purpose of posting ARPA signs is to discourage looting of exposed cultural resources as a result of the Washington Fire and to help prosecute looters if necessary. Looting destroys site integrity.

## **Road Treatments:**

### **T4 – Clean and Armor Inlets**

**General Description:** The goal is to minimize the potential for roads washing out as a result of non-functioning road drainage. At two locations culvert inlets have become plugged with sediment and/or debris. Non-functioning roadway drainage greatly increases the risk of road damage including road washout.

**Suitable Sites:** The proposed treatment is located on Wolf Creek Road and Leviathan Road.

**Design/Construction Specifications:** Culvert Inlets have become plugged with sediment and/or debris; utilize a backhoe, dumptruck, and handtools to remove sediment and/or debris, dispose of off of forest in accordance with local laws. Armor area immediately adjacent to inlet with 6-8" of rock.

**Purpose of Treatment:** The purpose of this treatment is to restore drainage function to existing culverts that have become plugged and ineffective, thereby preventing failure of the culvert during peak runoff events, which could cause a washout of the road.

These roads are open system roads that provide access to private residences, a commercial pit/quarry, mining sites and recreation uses. Therefore a loss of this segment of road would be a significant impact to the community.

### **T5 – Upsize Existing Culverts**



**General Description:** The goal is to minimize the potential for roads washing out as a result of inadequate drainage due to anticipated increase in peak runoff during heavy rain events. At four locations on Wolf Creek Road, existing culverts are undersized due to the anticipated increase in runoff as a result of loss of natural erosion protection from moderate to high burn severity. Undersized culverts greatly increase the chance of road damage including road washout.

**Suitable Sites:** The proposed treatment is located on Wolf Creek Road.

**Design/Construction Specifications:** Remove existing culvert, replace with appropriately sized 16GA CMP, initial plan is 36", backfill with excavated material if suitable. Place backfill in lifts, performing compaction on each lift.

**Purpose of Treatment:** The purpose of this treatment is to maintain adequate drainage function where roads cross drainages that have expected peak flows that exceed existing culvert capacity.

Wolf Creek Road is an open system road that provides access to private residences, a commercial pit/quarry, mining sites and recreation uses. Therefore a loss of this segment of road would be a significant impact to the community.

## **T6 – Low Water Crossings**

**General Description:** The goal is to provide an armored channel to allow flow over a roadway surface in lieu of a culvert where expected flows would exceed a culvert's capacity during peak runoff events. At various locations, drainages cross roads where there is not adequate drainage in place. Due to the anticipated increase in flow rates, the likelihood of high velocity flows across road surfaces puts road surfaces at risk of washing out or capturing flows and channeling it down the road, causing road failure.

**Suitable Sites:** The proposed treatment is located on the following roads: Silver Hill Road, Curtz Mine Road, Colorado Hill Road, Poor Boy Road, Morningstar Spur B, Morning Star Road.

**Design/Construction Specifications:** Create an armored drivable low flow channel across a road to allow water to flow over the road, greatly reducing the risk that peak flows will erode the road, deep rills or a road washout.

**Purpose of Treatment:** The purpose of this treatment is to allow water to flow over a road without damaging the road surface, while providing a drivable surface.

The above listed roads are open system roads providing access to forest land for administration, as well as recreation opportunities, and private land. Therefore a loss of this segment of road would be a significant impact to the community.

## **T7 – Remove Culverts / Replace with Low Water Crossings**

**General Description:** The goal is to provide an armored channel to allow flow over a roadway surface in lieu of a culvert where expected flows would exceed a culvert's capacity during peak runoff events. At various locations, existing culverts are not adequately sized to convey anticipated peak flows due to increased runoff as a result of increased flows after the fire. These increased flows will inundate the existing culverts, overtopping the road, and cause damage to the road surface, including possible road washout.

**Suitable Sites:** The proposed treatment is located on the Poor Boy and Morning Star Roads.

**Design/Construction Specifications:** Remove existing culvert, create an armored drivable low flow channel across a road to allow water to flow over the road, greatly reducing the risk that peak flows will erode the road, deep rills or a road washout.

**Purpose of Treatment:** The purpose of this treatment is to allow water to flow over a road without damaging the road surface, while providing a drivable surface.

## **T8 – Armored Rolling Dips**

**General Description:** The goal is to provide an armored drivable surface that will collect drainage that has been captured in the roadway prism as well as drainage in an inside ditch and channel it to the downhill side of the road. At various locations, roads are anticipated to capture drainage either in the roadway prism or in an inside ditch with no adequate means for allowing the water to exit the roadway prism. Construction of armored rolling dips will force the water off the roadway before allowing it to concentrate flows and establish velocity such that the roadway is damaged or washed out.

**Suitable Sites:** The proposed treatment is located on the Silver Hill, Curtz Mine, Colorado Hill, Poor Boy, Morningstar Spur B and Morning Star Roads.

**Design/Construction Specifications:** Create an armored drivable contoured surface that will channel water from the road surface and/or inside ditch to the downhill side of the road. Armor the road surface.

**Purpose of Treatment:** The purpose of this treatment is to allow water to flow over a road without damaging the road surface, while providing a drivable surface.

## **T9 – Restoring Drainage Function**

**General Description:** The goal is to restore drainage function to roads to allow water that encounters the road to exit the roadway prism without damaging the roadway surface. At various locations, road drainage has been compromised by the gradual creation of berms on the outside edges of roads or rutting that channels water down the road rather than allowing it to escape. As a result, water that encounters the road is channeled down the road, causing further damage including rutting and possible washout.

**Suitable Sites:** Restore Drainage Function is not depicted on the Washington Fire BAER Treatment Map. Treatment locations shall be as staked in the field. The proposed treatment is located on the following roads:

- Dixon Mine Road
- Silver Hill Road
- Curtz Mine Road
- Colorado Hill Road
- Leviathan Cutoff Road
- Centerville Spur C
- Long Spur Road Spur D
- Poor Boy Road
- Morningstar Spur B
- Wolf Creek Road
- High Peak Road

- Leviathan Road
- Morning Star Road

**Design/Construction Specifications:** As needed, outslope road, remove outside berms, repair/re-establish roadside ditch, create lead-off ditches.

**Purpose of Treatment:** The purpose of this treatment is to allow water to flow over a road without damaging the road surface, while providing a drivable surface.

### **T10 – Downslope Inlet Repair**

**General Description:** The goal is to repair and armor failed steep slopes on the downhill edge of a road that has eroded, causing rutting and narrowing of a road surface. At various locations, water has been trapped in the roadway prism, become concentrated, and exited the road causing erosion and narrowing of the road. If not repaired, erosion will continue, eventually washing out the road completely.

**Suitable Sites:** The proposed treatment is located on the Silver Hill and Colorado Hill Roads.

**Design/Construction Specifications:** Excavate as needed, install three gabion baskets (3'X3'X6') and backfill to anchor in place.

**Purpose of Treatment:** The purpose of this treatment is to allow water to flow over a road without damaging the road surface, while providing a drivable surface.

### **T11 – Debris Removal**

**General Description:** The goal is to remove approximately 7,000 cubic yards of material that has sloughed off of the slopes in drainages above Wolf Creek road, blocking road drainage structures and reducing the road to one lane. On Wolf Creek Road, significant rain and runoff events have caused large sediment deposits along Wolf Creek Road, blocking drainage structures, and risking significant sediment and debris transport to Wolf Creek.

**Suitable Sites:** Treatment locations shall be as staked in the field. The proposed treatment is located on the Wolf Creek Road.

**Design/Construction Specifications:** Excavate material, dispose of off of forest in accordance with local laws. Clean and armor existing inlets, ensure proper functioning of existing culverts.

**Purpose of Treatment:** The purpose of this treatment is to restore proper drainage function at several drainages along Wolf Creek Road.

### **T12 – Detention Basins**

**General Description:** The goal is to provide storage space for increased floodwater, floatable debris, sediment, boulders, and debris flows that are expected to occur due to burned conditions upstream. These increases in flows pose a threat to the existing downstream road infrastructure including crossings which may result in plugging culverts or exceeding their maximum flow capacity. If these flows plug drainage structures, the result will likely be additional erosion and debris further down the drainage. At two locations near Morning Star Road (also known as Loop Valley Road) large drainages intersect the road below large tributary

burn areas, creating a high risk of large peak velocities that are likely to deliver large amounts of sediment to waterways.

**Suitable Sites:** The proposed treatment is located on Morning Star and Loope Canyon Road.

**Design/Construction Specifications:** Create two detention basins, approximately four feet deep, 50 feet wide by fifty feet long, sloped up at a 1.5:1.

**Purpose of Treatment:** The purpose of this treatment is to provide storage space for increased floodwater, and reduce velocity of runoff during peak runoff.

All maintenance of installed basins will be completed by non BAER programs. BAER funding will not be available for clean out of basins nor repair of damaged basins. BAER funds may only be used for initial construction.

#### 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.)

**Early Detection / Rapid Resonse Treatment Effectiveness Monitoring:** Follow-up monitoring with program funds will occur in 2nd & 3rd years as needed if new or expanded weed populations are discovered during the 1st year BAER treatments.

**Road Treatment Effectiveness Monitoring:** Monitoring will be conducted by district personnel and/or members of the Forest Engineering staff. Monitoring will consist of visiting the site after high intensity thunderstorms and/or after spring run off to ensure the replacements culverts are functioning as designed. In addition, photos will be taken during the site visits and a photo log will be established.

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

Initial Request

Line Items	Units	Unit Cost	NFS Lands		Other	Other Lands				All
			# of Units	BAER \$		# of units	Fed \$	# of Units	Non Fed \$	
<b>A. Land Treatments</b>										
T1-Early Detection & Rapid	acre	2	9925	\$18,029	\$0		\$0		\$0	\$18,029
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Land Treatments</i>				\$18,029	\$0		\$0		\$0	\$18,029
<b>B. Channel Treatments</b>										
				\$0	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Channel Treatments</i>				\$0	\$0		\$0		\$0	\$0
<b>C. Road and Trails</b>										
T4-Clean & Armor Inlets	each	800	3	\$2,400	\$0		\$0		\$0	\$2,400
T5-Upgrade Existing Culverts	each	4,250	4	\$17,000	\$0		\$0		\$0	\$17,000
T6-Low Water Crossings	each	750	28	\$21,000	\$0		\$0		\$0	\$21,000
T7-Replace Culverts with Lo	each	800	3	\$2,400	\$0		\$0		\$0	\$2,400
T8-Armored Rolling Dips	each	800	18	\$14,400	\$0		\$0		\$0	\$14,400
T9-Restoring Drainage Funct	mile	480	11.67	\$5,600	\$0		\$0		\$0	\$5,600
T10-Downstream Inlet Repa	each	2,900	2	\$5,800	\$0		\$0		\$0	\$5,800
T11-Debris Removal	CY	15	3500	\$50,750	\$0		\$0		\$0	\$50,750
T12-Detention Basins	each	7,100	2	\$14,200	\$0		\$0		\$0	\$14,200
<i>Insert new items above this line!</i>				\$0	\$0		\$0		\$0	\$0
<i>Subtotal Road and Trails</i>				\$133,550	\$0		\$0		\$0	\$133,550
<b>D. Protection/Safety</b>										
T2-Warning Signs	each	275	18	\$4,950	\$0		\$0		\$0	\$4,950
T3-Cultural Resource Signa	each	15,309	1	\$15,309	\$0		\$0		\$0	\$15,309
				\$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 Protection/Safety</i>				\$20,259	\$0		\$0		\$0	\$20,259
<b>E. BAER Evaluation</b>										
Initial Assessment	Report	\$50,100	1	---	\$0		\$0		\$0	\$0
<i>Insert new items above this line!</i>				---	\$0		\$0		\$0	\$0
<i>Subtotal Evaluation</i>				---	\$0		\$0		\$0	\$0
<b>F. Monitoring</b>										
				\$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
<b>G. Totals</b>				\$171,838	\$0		\$0		\$0	\$171,838
Previously approved										
Total for this request				\$171,838						

**PART VII - APPROVALS**

1.

/s/William A. Dunkelberger

WILLIAM DUNKELBERGER

July 16, 2015

Forest Supervisor (signature)

Date

2. /s/ Regina A Freel (for)  
Regional Forester

July 22, 2015  
Date