

Date of Report:06/14/2018
Date of Report:07/11/2018
Date of Report:08/22/2018

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 #1

- Updating the initial funding request based on more accurate site data or design analysis
- Status of accomplishments to date **Additions and changes are shown in Blue**

3. Interim Report #2

- Updating the initial funding request based on more accurate site data or design analysis
- Status of accomplishments to date **Additions and changes are shown in Orange**

- 4. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name:Buzzard Fire

B. Fire Number:NM-GNF 000190

C. State:New Mexico

D. County:Catron

E. Region:03

F. Forest:Gila

G. District:Reserve

H. Fire Incident Job Code:P3LS7L18 0306

I. Date Fire Started: May 22nd 2018

J. Date Fire Contained: Estimated July 15th 2018

K. Suppression Cost: 11,369,000 as of 06/13

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles):Dozerline 9 miles Handline 1.5 miles as of 06/12
2. Fireline seeded (miles):10.5 miles as of 06/12
3. Other (identify):2 spike camp locations seeded

M. Watershed Number: 6th code Watersheds, 1302080601-La Jolla Canyon, 1302080707-Long Canyon, 150400040201-Long Canyon-Tularosa River, 150400040202-Headwaters North Fork of Negrito, 150400040204-Outlet NorthFork Negrito Creek, 150400040206- NorthFork Negrito Creek

N. Total Acres Burned: 38,883 as of 06/06/18

NFS Acres(38,883) Other Federal (0) State (0) Private (0)

O. Vegetation Types: Wet Mixed Conifer, Dry Mixed Conifer, Ponderosa Pine and Piyon/Juniper

P. Dominant Soils: Pachic Argiudolls, Lithic Argiustolls, Pachic Argiustolls, Typic Hapludolls

Q. Geologic Types: Basalt and Basaltic Andesite

R. Miles of Stream Channels by Order or Class: .31 Perennial miles, 1.37 Intermittent miles, 138 Ephemeral miles

S. Transportation System

Trails: 16.56 miles total (6.75 miles Continental Divide National Scenic Trail (FLTP), 9.82 other miles

Roads: 12 miles FLTP and 73 miles of level 2 roads

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 1421 (no data) 4817 (unburned) 25789 (low) 6209 (moderate) 2068 (high)

B. Water-Repellent Soil (acres): 5300 acres

C. Soil Erosion Hazard Rating (acres):

2,156 slight (low) 5,271 moderate 31,456 severe (high)

D. Erosion Potential: 3.91 tons/acre

E. Sediment Potential: 332 cubic yards/square mile *moderate and high

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 5-7 years

B. Design Chance of Success, (percent): 75%

C. Equivalent Design Recurrence Interval, (years): 25

D. Design Storm Duration, (hours): 1

E. Design Storm Magnitude, (inches): 1.74

F. Design Flow, (cubic feet / second/ square mile): 344

G. Estimated Reduction in Infiltration, (percent): 55%

H. Adjusted Design Flow, (cfs per square mile): 813

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

The Buzzard Fire is located in the Tularosa Mountain Range in the vicinity of Eagle Peak which is approximately 10 miles east of Reserve, New Mexico in Catron County. The fire was human caused and was started by an abandoned campfire on May 22nd. As of June 9th the fire has burned 40,313 acres and is 68% contained. Elevations range from 7500 to 9800 feet within the burned area. The fire burned with mixed severities but tended to burn with high severity in the wet mixed conifer vegetation type. Threats to public safety exist as a result of the fire. Critical Forest values at risk as a result of the fire include loss or damage to Forest roads 38 and 233 which is the access route to the Eagle Peak lookout tower, a critical Forest Service radio repeater, sheriffs departments 911 system and a private communication tower. Forest road 94 a level 4 road provides access to private inholdings with year round residences and is one of the main arterial roads on the northern portion of the District. Forest roads 47 and 3070 are also at risk of damage or loss due to the fire. Six miles of the Continental Divide National Scenic Trail is located within the burned area and sections of the trail are at risk of loose to tread or accelerated erosion due to post fire conditions. Soil productivity and watershed function are at great risk of experiencing negative effects due to loss of vegetative canopy, vegetative ground cover and the duff layer which will significantly increase overland flow, erosion and sedimentation rates. Downstream threatened and endangered aquatic occupied habitat for the endangered loach minnow and the threatened narrow headed garter snake and chiricahua leopard frog will experience elevated levels of ash and sediment as a result of the fire.

Critical Values Identified

Critical Values identified (FSM 2523.1 Exhibit 01) during the BAER assessment are: Human life and safety, property, natural resources and cultural/heritage resources. The BAER team evaluated the risk to those critical values using the BAER Risk Assessment (FSM 23235.1 Exhibit 02).

The following risk matrix shown below, Exhibit 2 of Interim Directive No.: **2500-2017-1**, was used to evaluate the Risk Level for each value at risk identified during Assessment:

BAER Risk Assessment

Probability of Damage or Loss	Magnitude of Consequences		
	Major	Moderate	Minor
	RISK		
Very Likely	Very High	Very High	Low
Likely	Very High	High	Low
Possible	High	Intermediate	Low
Unlikely	Intermediate	Low	Very Low

The Very High and High Risk are unacceptable risk levels due to threats to human life, property, infrastructure and resources, therefore treatments should be applied. An Intermediate Risk could be unacceptable if human life or safety is the critical value at risk.

A full list of values at risk that were analyzed and assigned ratings during the assessment can be found in Appendix A.

Risk to Human Life and Safety

Post-wildfire threats exist to life, property and safety within the burned area. There are several key level 3 and level 4 forest roads in the burned area that are at risk of being washed out or blocked with debris during rain events and potential entrapment of vehicles and persons. One of these roads is the 38 road to Eagle Peak. There is a very high probability that a section of this road could become impassable or lost during post-fire flood events standing persons on Eagle Peak. Eagle Peak is the location of a manned lookout tower on the Reserve Ranger District. It also is the location of a Gila National Forest radio repeater that services a majority of the District's radio communications, this repeater is also tied to the local sheriffs department 911 system, in

addition there is a private radio repeater that services some local ranches with communications to increase the safety of ranch personnel.

Risk to Forest infrastructure

There is a very high post-fire risk of damage or loss to several key level 3 and 4 Forest roads located within the burned area. Forest Road 233 ties into Forest Road 38 which is the only access to the manned Eagle Peak Lookout Tower and its associated Forest radio repeater. Both the 233 and 38 are level 3 roads at very high risk of damage, loss or blockage. Maintaining access to Eagle Peak is critical from a human safety and a District safety and operational perspective. Forest road 94 is a level 4 road at very high risk of damage, loss, or blockage due to debris flows and is a main arterial road on the northern portion of the District. It provides access to a large portion of the northern part of the Reserve Ranger District and also provides access to several private ranch residences located within the Forest. In 2006 and 2013 portions of the 94 road located in Cox Canyon were washed out and in both cases the amount of damage to the road qualified them for the Federal Lands Highway Program EFLO funding for repair of the flood damaged road. Forest Roads 3070 and 47 are both level 3 which are at high risk of post-wildfire damage, loss or blockage. These roads are located in fairly narrow drainage bottoms that either have large amounts of high and moderate severity on the steep slopes above them or large amounts of high and moderate burn severity in the upper portion of the drainage that the road is located in. The roads also cross the drainage bottom in numerous locations and it is estimated that the current small diameter culverts will not provide for sufficient water passage. To add to this the drainages have pinch points where the drainage bottom narrows up in numerous places which will force water, sediment and debris up on the road causing road failure to sections of the road. In many places the road bed in these drainages are only elevated one to two feet above the drainage bottom which is also a concern. Due to the location of the roads mentioned above there is very little prep work that can be done to them besides having all ditchlines pulled and culverts cleaned prior to monsoon season. Once monsoon season sets in they will have to be dealt with by storm patrol and response.

There are several level 2 roads that are at high risk of damage and potential sources of excessive sedimentation and gullying if additional drainage features (rolling dips, lead out ditches) are not added to portions of these roads. These roads are associated with high and moderate burn severity or have high or moderate burn severity above them in drainages that intersect the roads. Many of the roads mentioned above are located in watersheds that drain into T&E critical aquatic habitat. The roads are 3080 B, 3080 G, 3189, 4176 O, 4176 X and 597.

There is high post-fire risk of damage to .5 miles of the Continental Divide National Scenic Trail located in high and moderate burn severity. The risks to the CDT trail prism from increased overland flow and accelerated erosion concentrating on segments of trail.

There is a cement low water crossing on the Tularosa River located on Forest road 233 that is at risk of failure due to increased post fire peak flows. This low water crossing had issues prior to the fire and had experienced a 4 to 5 foot downcut immediately below the structure in 2016. With the increased peak flows the cement crossing is experiencing severe undercutting. This road is the only access to a Forest Service radio repeater and a manned lookout tower.

Risk to Natural and Cultural Resources

Soils

There is a very high risk of increased levels of soil erosion and sediment delivery predicted to result from the high and moderate burn severity areas within the Buzzard Fire. Modeling shows that erosion will increase from pre-fire levels just over 0 tons per acre to post fire levels of over 35 tons per acre. The initiation of new surface erosion sources from moderately steep and steep slopes pose an extreme threat to long-term soil productivity, water quality impacts, Aquatic T&E habitat and damage to Forest Roads 233, 94, 3070 and 47 from bulking of flood flows and debris flows.

Hydrologic Function

Hydrologic function will be greatly reduced due to loss of vegetative overstory, vegetative ground cover, and the litter layer. The loss of these layers in the ecosystem has profound negative effects to hydrologic function.

Water Quality

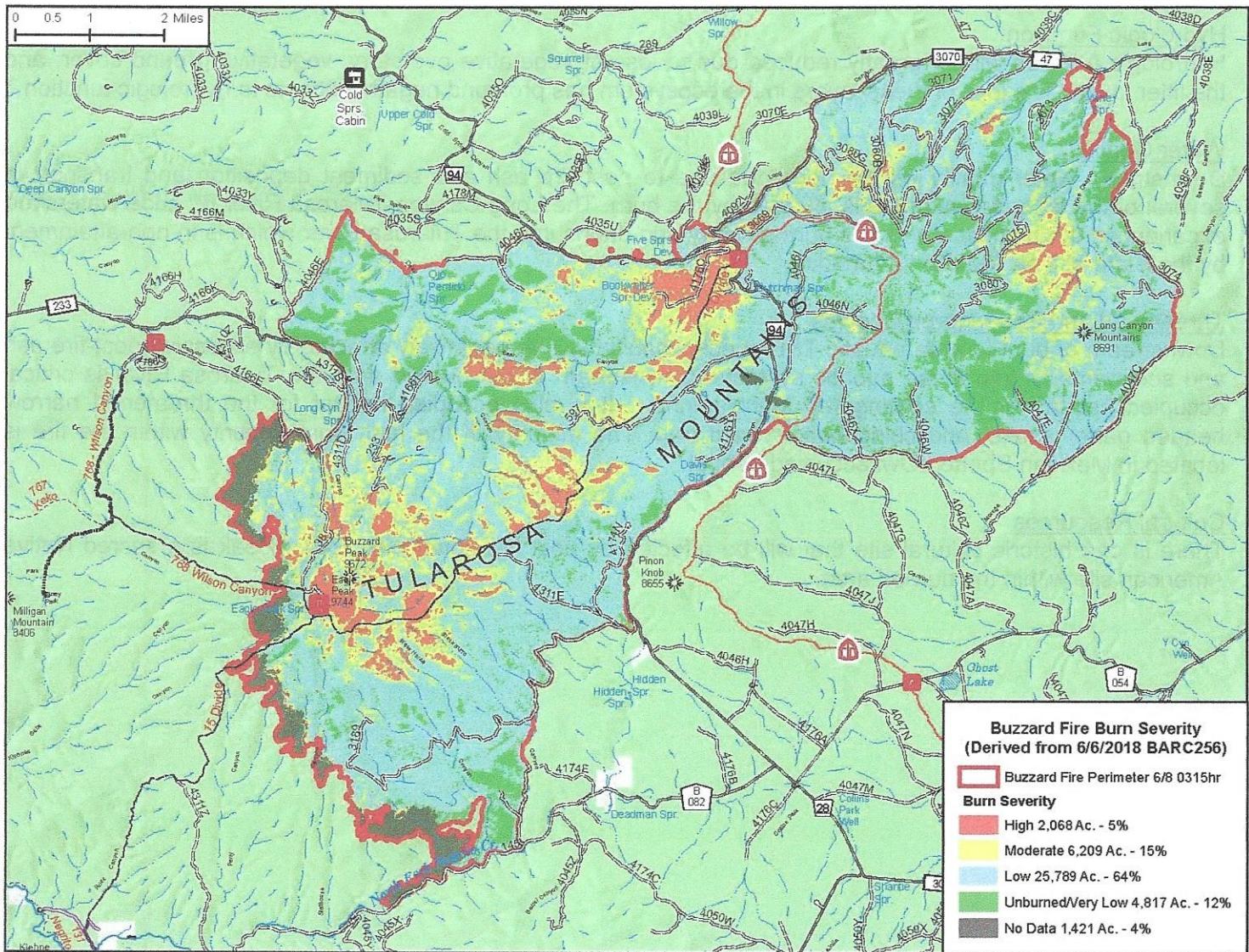
Downstream water quality will be degraded due to post fire ash and sediment deposition and transport in several of the 6th code watersheds affected by the burn. The Long Canyon-Tularosa River 6th code watershed experienced the highest amount of burn severity and drains into the Tularosa River which is in non-attainment by the State of New Mexico for turbidity.

Threatened and Endangered Species

Downstream of burned area aquatic T&E species habitat will be negatively affected by excessive post-fire ash and sedimentation into these aquatic systems. Downstream of the burned area the Tularosa River is critical occupied habitat for the endangered loach minnow. It is also occupied habitat for the threatened narrow headed garter snake, and chiricahua leopard frog. The majority of the high burn severity within the fire is located in Mexican Spotted Owl occupied habitat.

Cultural Resources

There is one historic cultural site that will be affected by post fire conditions. Eagle Peak is a sacred Native American site within the burned area.



B. Emergency Treatment Objectives:

The objective of the gates and signs protection measure is to reduce risks to human life and safety by warning Forest visitors/users of existing threats while traveling within the burned area.

The objective of aerial seeding is to reduce hill-slope erosion and associated flooding, sediment laden flows and/or debris flows within the burned area. This treatment is recommended to:

- Lower the risk of post wildfire impacts to life/safety of the public;
- Lower the risk of post wildfire impacts to private property, roads and water supply infrastructure;
- Lower the risk of post wildfire impacts to public drinking water quality;
- Reducing the negative impacts to downstream aquatic T&E species.

The objective of noxious weed detection surveys and treatments is to allow natural recovery of native vegetation by preventing the establishment and spread of noxious weeds in the recently burned area.

The objective of road and trail stabilization treatments is to lower the risk of damage to property (roads and system trails) by lowering erosion of the trail surface in severely burned and steep areas within the burned area and to provide for public safety. The objective of temporary closure of roads is to reduce risk to human life and safety.

The objective of the low water crossing stabilization effort is to prevent total loss of the crossing and potential excessive headcutting further up the Tularosa River above the crossing.

The objective of the channel treatment is to reduce the risk of culverts becoming plugged and subsequent damage to the road system and lessen negative impacts of potential debris flows to the road system

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

Land 95 % Channel 80 % Roads/Trails 70 % Protection/Safety 90 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	80	90	90
Channel	75	75	75
Roads/Trails	75	80	90
Protection/Safety	85	90	95

E. Cost of No-Action (Including Loss): 5,490,000

F. Cost of Selected Alternative (Including Loss): 648,530

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Mike Natharius

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BAER Team Members

Soils - Nori Koehler
Hydrology – Nessa Natharius
Roads – Rex Null
GIS – Brian Park

Timber- Gabe Partido
Range – Aarron Baldridge
Wildlife – Jerry Monzingo
Recreation – Annette Smits

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.)

Protection/Safety Treatments: Hazard warning signs on Forest Roads 94,3070,47, 38 and 233.

Implement Storm Patrol and response on sections of Forest roads identified as high risk. Post Hazard warning signs on main roads entering the burned area and at trailheads entering the burned area.

Hazard Warning Signs The purpose of this treatment is to reduce risks to human life and safety by warning Forest visitors/users of existing threats while traveling within the burned area.

“Entering Burned Area” signs are needed to alert the public of possible threats to their life and safety that exist within the burned area. The signs 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 sign will be placed at key access roads and trails entering the burned area.

Closure gate- The purpose of this treatment is to reduce risks to life and safety and possible entrapment by placement of a gate on the lower end of the 38 road to Eagle Peak. This road is the only road that goes to the lookout tower and associated forest radio repeater.

Land Treatments: Aerial Seed approximaetly 2019 acres of high severity burn with some intermingled moderate severity burn in the mixed conifer vegetation type with non-persistent annual barley and a small percentage of native grass species found within the burned area.

This treatment is proposed to provide relatively quick establishment (within 3 to 4 weeks) of vegetatative cover in areas of high burn severity. The objective of this treatment is to reduce soil erosion rates and aid in slope stabilization. This treatment is expected to reduce hillslope erosion and sediment delivery by an appreciable amount and assist in stabilizing burned slopes. Re-establishment of vegetation over the longer term will assist in site stabilization, assisting in maintenance of long-term site productivity. The certified weed free seed mix would be comprised of a quick growing annual non persistent cereal barley and a small percent of high elevation native seeds to give the burned areas a jump start in recovery. From many years of personal experience in the Southwest Region high elevation seeding with annual barley has been proven to be a successful treatment in site stabilization. This treatment will utilize the new Region 3 IDIQ contract for seeding and will be scheduled for the onset of the monsoons in July.

Certified Weed Free Seed Mix

Species	Seeds/ft ² Contribution from Planting Rate
Barley (<i>Hordeum vulgare</i>)	18
Prairie Junegrass (<i>Koeleria macrantha</i>)	2
Mutongrass (<i>Poa fedleriana</i>)	2
Arizona Fescue	3
Total	25

Aerial seeding costs were estimated at \$120/acre and bids came in at \$147.80/acre. An additional \$56,532 is needed to award seeding contract.

Noxious Weed Early Detection Rapid Response

There are 10.5 miles of dozerline associated with the Buzzard Fire. In addition there is 1.5 miles of handline. All fireline was rehabed with appropriate BMP's which included waterbars, pulling slash and woody material onto lines and was seeded with certified weed free native grass species. The ICP was located at a Forest campground and the were numerous spike camps around the burned area, these areas were also rehabed and seeded.

It is proposed to have a crew of 2 seasonal employee's inventory these areas in October 2018. It is planned to take 2 weeks time to complete this invitory. These individuals will have eperience in this type of survey as they will have been surveying our Wilerness Areas during the summer months for noxious and invasive species.

Channel Treatments:

Remove floatable woody material in drainages that have these associated forest roads located in them. Forest roads 94, 38, 233, 3070 and 47. This is being proposed so that culverts are not plugged with floatable material during rain events and these Forest roads are not further damaged due to plugged culverts during high flow events. There is also potential for sections of these roads that are located in drainage bottoms to experience debris flows. It is felt that by reducing the amount floatable material that roads would sustain less damage. This treatment will be done prior to monsoon season by a State Forestry DOC Fire Crew.

Road Storm Patrol and Response - The overall purpose of this treatment is to reduce the potential for loss and further damage to Forest roads and culverts as a result of storm events. In addition, the treatment reduces the risk to designated critical or suitable occupied habitat for loach minnow by mitigating the additional loss of infrastructure and associated sediment/debris that in turn causes an impact to water quality and riparian areas.

Areas proposed for implementation work along some roads and trails still pose a risk from hazard trees. These trees will need to be removed to mitigate this risk and provide for worker safety during implementation. The extent of this treatment is relatively small as many hazard trees were cleared by fire crews on the incident. However, some still remain and the threat will have to be removed.

Stabilize a low water crossing that is at risk of failure. This treatment intends to place large rip-rap directly below a low water crossing where peak flows have created a large incision in the stream channel. It also proposes to pump cement under the cerrent structure where high flows have caused it to severely undercut underneath the structure. Design plans have been generated for this treatment by an engineer from FWHA.

Trail Treatments:

Trail tread work to improve drainage will be done on .5 miles of the Continental Divide Trail National Senic Trail. Waterbars will be added to prevent damage and excessive erosion and susequent tread loss.

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.)

PART VII - APPROVALS

		NFS Lands			Other Lands				All	
Line Items	Units	Unit Cost	#of Units	BAER \$	Other \$	#of units	Fed \$	#of Units	Non Fed \$	Total \$
A. Land Treatments										
Aerial seeding	acres	120	2019	\$242,280	\$0		\$0		\$0	\$242,280
EDRR Invasive weeds Fire	ea	4000	1	\$4,000	\$0		\$0		\$0	\$4,000
Adjusted Seeding Cost	acres	28	2019	\$56,532	\$0		\$0		\$0	\$56,532
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Land Treatments				\$302,812	\$0		\$0		\$0	\$302,812
B. Channel Treatments										
channel Clearing	miles	1000	15	\$15,000	\$0		\$0		\$0	\$15,000
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Channel Treat.				\$15,000	\$0		\$0		\$0	\$15,000
C. Road and Trails										
Storm Patrol&Response	week	10,000	7	\$70,000	\$0		\$0		\$0	\$70,000
Ditchline/culvert/leadout prep	miles	500	23	\$11,500	\$0		\$0		\$0	\$11,500
Road Drainage Level 2	week	3,600	2	\$7,200	\$0		\$0		\$0	\$7,200
CDT Trail Drainage	miles	30,000	0.5	\$15,000						\$15,000
Stabilization Cement Lows	ea	30,000	1	\$30,000						\$30,000
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Road & Trails				\$133,700	\$0		\$0		\$0	\$133,700
D. Protection/Safety										
Closure Gate	per	4,000	1	\$4,000	\$0		\$0		\$0	\$4,000
Hazard signs Road	per	300	6	\$1,800	\$0		\$0		\$0	\$1,800
Hazard signs Trails	per	150	8	\$1,200	\$0		\$0		\$0	\$1,200
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Structures				\$7,000	\$0		\$0		\$0	\$7,000
E. BAER Evaluation	1	25,000		\$25,000						
Insert new items above this line!				—	\$0		\$0		\$0	\$0
Subtotal Evaluation				—	\$0		\$0		\$0	\$0
F. Monitoring										
Insert new items above this line!				\$0	\$0		\$0		\$0	\$0
Subtotal Monitoring				\$0	\$0		\$0		\$0	\$0
G. Totals				\$458,512	\$0		\$0		\$0	\$458,512
Previously approved				\$428,512						
Total for this request				\$30,000						

1.

Forest Supervisor (signature)

Date

2.

Elaine Kuhnman

8/31/2018

for

Regional Forester (signature)

Date