

File Code: 2520

Date: August 25th, 2020

Subject: Gold Fire Burn Area Emergency Response Assessment, 2500-8 Initial Request

To: Regional Forester

Attached is the initial request for Burned Area Emergency Response (BAER) funding for the Gold Fire on the Modoc National Forest. The fire burned 22,634 total acres and 10,750 acres of national forest lands. The fire began on July 31, 2020 and was contained on August 12, 2020.

I agree with the BAER Assessment findings that an emergency exists regarding threats to human health and safety, roads and infrastructure, and spread of noxious weeds.

The attached Initial 2500-8 BAER Report requests authorization to spend \$154,600 in emergency BAER funds for hazard warnings and closures to protect public safety, road work to control water on Forest and response to noxious weeds.

Approval is requested for treatments as follows:

Treatment	Request
Land Treatments	
EDRR survey	\$51,060
EDRR treatment	\$ 35,000
Channel Treatments	\$ 0
Road and Trail Treatments	
Stormprofing	\$ 53,940
Storm Patrol	\$ 9,600
OHV Barriers	\$2,500
Warning Signs	\$ 2,500
Protection/Safety	\$ 0
Monitoring	\$ 0
Total	\$154,600

* This request does not include costs of the BAER Assessment team.

This request is made with the understanding that BAER funds are emergency funds which may be spent only in accordance with the treatments proposed and approved in the 2500-8, that BAER projects are emergency work, and implementation should be completed as soon as possible and before damaging storms. In all cases initial implementation must be completed before the earlier of one year after fire containment or funding authorization.

Please contact William Goodman, Forest BAER Coordinator, at (530) 233-8794 or Assistant Forest BAER Coordinator at (530) 569-0060 if you have any questions.



Chris Christofferson
Forest Supervisor

Enclosure (1)

Cc: Dave Young (regional BAER coordinator), William Goodman (forest BAER coordinator)

Date of Report: 8/18/2020

GOLD FIRE BURNED-AREA REPORT

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

- 1. Funding request for estimated emergency stabilization funds
- 2. No Treatment Recommendation

B. Type of Action

- 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures)
- 2. Interim Request # _____
 - Updating the initial funding request based on more accurate site data or design analysis

PART II - BURNED-AREA DESCRIPTION**A. Fire Name: Gold****B. Fire Number: CA-MDF-000443****C. State: CA****D. County: Modoc****E. Region: 5****F. Forest: MDF****G. District: Adin****H. Fire Incident Job Code: PNNAD6 0506****I. Date Fire Started: 7/31/2020****J. Date Fire Contained: 8/12/2020****K. Suppression Cost: 12M****L. Fire Suppression Damages Repaired with Suppression Funds (estimates):**

- 1. Fireline repaired (miles): 133.3
- 2. Other (identify): 6.5

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
180200021404	Ash Valley-Ash Creek	35,253	5,094	14%
180200021405	Ambrose Canyon-Ash Creek	20,087	1,586	8%
180200021601	Upper Willow Creek	23,131	3,018	13%
180200021602	Lower Willow Creek	26,770	4,711	18%
180200021701	Butte Creek	24,869	8,225	33%

N. Total Acres Burned: 22,634

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	10,750
OTHER FEDERAL (LIST AGENCY AND ACRES)	2,176
STATE	-
PRIVATE	9,708
TOTAL	22,634

O. Vegetation Types: The dominant vegetation community within the fire perimeter consisted of Ponderosa Pine (*Pinus ponderosa*)/western juniper (*Juniperus occidentalis*) intermixed with curl-leaf mountain mahogany (*Cercocarpus ledifolius*), mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and bitterbrush (*Purshia tridentata*).

P. Dominant Soils:

Soils within the Gold Fire are dominated by a mix of volcanic parent material soils supported by basaltic lava flows that have been faulted due to the extension of the basin and range province. The surface soil is generally fine ash soil from nearby volcanic vents mixed from the residual soil derived from the basaltic basement rock. The resulting soil tends to have more clay compared to the pumiceous soils of the Caldwell Fire giving the soil a loam surface that is more prone to soil erosion, although erosion rates are low due to the dry climate. Because the faulting of the basalt tablelands dip to the west, the slopes on the west aspect are more gentle allowing the finer surface material be persistent on the stable slopes. The fault scarps of the east aspect slopes are steeper resulting in rockier soils. Debris flow potential is higher downslope of the eastern fault scarps. The BAER team examined the risk to highway 139 and determined there is elevated flooding risk and hyperconcentrated flow, but because the valley bottom slopes are more gentle in the headwaters, debris flow risk appears less elevated than the than the east slopes of the fire.

Q. Geologic Types: Intermountain basalts.

R. Miles of Stream Channels by Order or Class:

Table 3: Miles of Stream Channels by Order or Class

STREAM TYPE	MILES OF STREAM
PERRENIAL	52
INTERMITTENT	73
EPHEMERAL	36
OTHER (DEFINE)	

S. Transportation System:

Trails: National Forest (miles):

Other (miles): -

Roads: National Forest (miles):

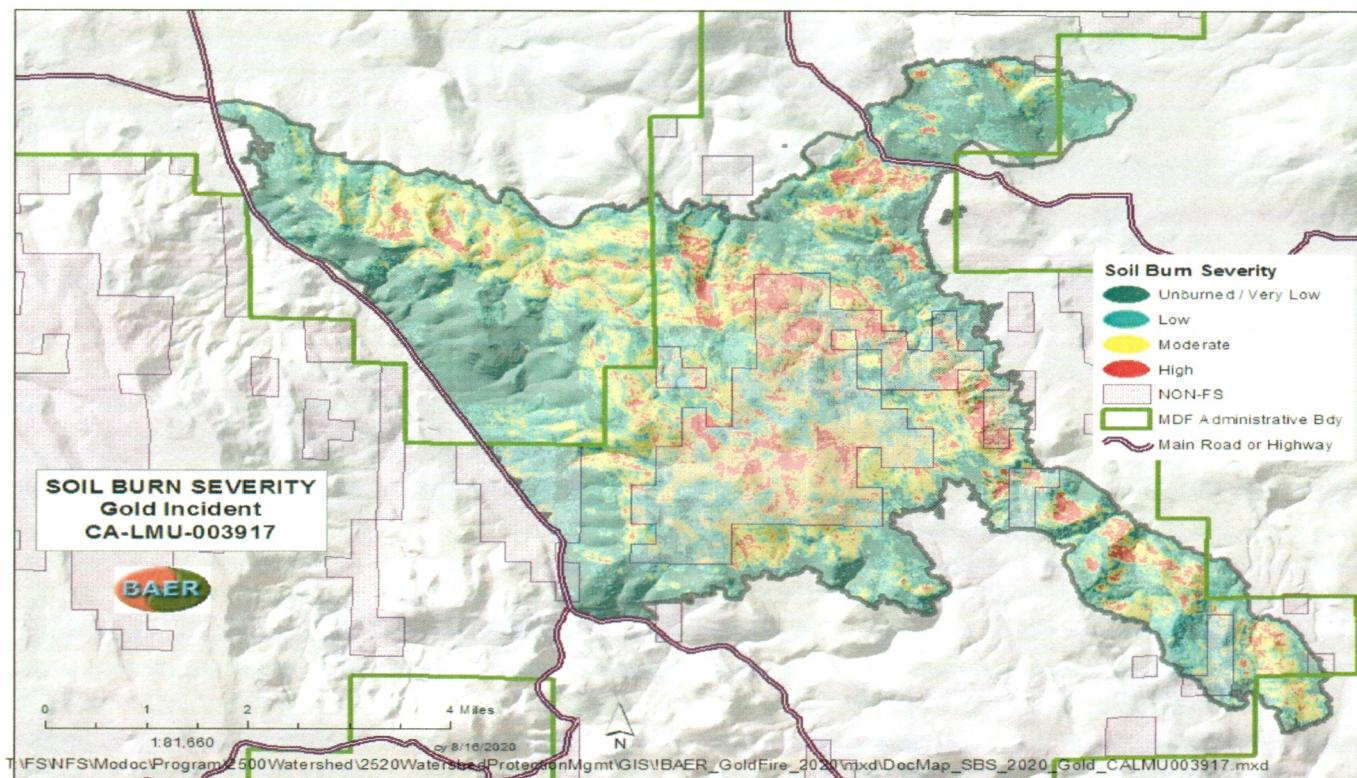
Other (miles): 85.4

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	NFS	Other Federal (List Agency)	State	Private	Total	% within the Fire Perimeter
Unburned	3,837	1,117	-	2,623	7,577	33
Low	2,853	510	-	2,701	6,064	27
Moderate	3,171	495	-	3,546	7,212	32
High	889	54	-	838	1,781	8
Total	10,750	2,176	-	9,708	22,634	-



B. Water-Repellent Soil (acres):

13,511 acres. The soils on the Gold Fire were not excessively water-repellent. The higher the clay content, the more surface area water repellent compounds has to adhere to. Water repellent soils confirms moderate water repellency and not uniform across the landscape.

C. Soil Erosion Hazard Rating:

Erosion risk is determined using WEPP modelling.

D. Erosion Potential:

The erosion rates for the Gold Fire are low for the whole fire. The rates were modelled to be 0.01, 0.45 and 1.14 tons/acre for a 2yr, 5yr, and 10yr event respectively. Although the erosion rates are higher on steeper slopes, the rate does not exceed 2 tons/acre for a 5 year event. Although there will be fine sediment transported to stream channels, the downstream risk will come primarily from elevated flow and sediment stored in channels. Erosion rates are low generally primarily because the climate is dry with precipitation falling primarily as short duration convective storms and winter snow but monsoonal high intensity thunderstorms can cause erosion rates up to a 5 or 10-year event in localized areas.

E. Sediment Potential:

F. Estimated Vegetative Recovery Period (years): 3 to 5 years

G. Estimated Hydrologic Response (brief description):

It is expected the landscape would respond as if the 2-year storm discharge were associated with a 2-year storm (unburned soil burn severity), 5-year event (low soil burn severity) and 10-year event (moderate and high soil burn severity), respectively. For the 5-year flood, low burn was calculated at the 10-year flow while moderate/high burn was calculated as the average between the 10- and 25-year flows.

Results for the post-fire 2-year flows were 2 to 3 times higher, and the 5-year flows were 1.8 to 2.6 times the pre-fire values. The unnamed drainage that flows into Willow Creek just upstream of the Willow Creek

campground was modelled to determine magnitude of change and thus risk factor. Flows at this location show 2 times increase in the 2-year event from 16 to 33 cfs and an increase from 33 cfs to 85cfs for the 5-year event. The flow increases may not be enough to damage the campground but the culvert and the two, foot bridges would be at a higher risk. There was no evidence of the culvert leading from the highway to the campground overtopping so it may be able to handle an extra 17 cfs for the 2- year event. The 5 -year event would add an extra 52 cfs to the channel. 52 cfs would fill a 36 inch cmp 85% full (2% grade at 8.7 fps) The existing culvert is 5.5 ft wide and 3.5 ft high. Some overflow would be expected from the 5-year event. The risk is possible with a major consequence if it did wash out the culvert or foot bridges that access the campground which is adjacent to highway 139.

PART V - SUMMARY OF ANALYSIS

Introduction/Background:

The Gold fire was human caused and is under investigation. The Gold fire quickly grew out of control with strong gusty southwesterly winds.

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

Table 5: Critical Value Matrix

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

1. Human Life and Safety (HLS):

Possible Risks to Human Life and Safety along the NFS Transportation System

Life: High Risk (Possible, Major)

Within the Gold fire perimeter, there are various locations of moderate to high soil burn severity, indicating a high potential for hazardous trees/snags along the roads system. Additionally, areas containing unburned/low severity soil burn have potential hazard trees, although the primary concerns come from within the mod/high SBS areas. Secondly, there is a high likeliness that various roads will see an increase in storm-related runoff, debris, rock, and sediment deposits downslope of the Gold fire perimeter due to increased instability in the mod/high SBS areas.

It is recommended to install signage along major access points into the fire area to mitigate these high-risk concerns by warning forest users of the potential risks of entering burn scar areas of the Gold fire.

2. Property (P):

Property: High Risk (Likely, Moderate)

Seasonal storms will likely bring an increase in runoff and sediment deposits along the Foster Draw/Willow Creek, Walker Draw, Hunsinger Flat, and Coyote Flat/Oxendine Draw areas due to their proximity to steep, moderate to high severity burn areas. Several roads in these areas lack the proper drainage structures to effectively mitigate increased runoff and sediment concerns. If not mitigated, there is likely potential for the cross-drain culverts to not function properly and fail, causing damage to the FS road system. Potential washouts could occur on road segments where lacking drainage structures may not handle an increased runoff and sediment delivery, worsening road conditions and possibly making them unsafe for FS user travel.

Protection and cleaning/fortification of existing culverts and road prism is necessary to handle the anticipated increase in runoff and sediments in the road system. Additionally, the burning of cover brush and conifer stands has increased the amount of potentially hazardous off-road/OHV access in the burned areas. To help discourage FS users from travelling off NFS roads and along suppression dozer lines, it is recommended to install OHV breaks in several areas throughout the fire perimeter.

3. Natural Resources (NR) - Invasive weeds: High Risk (Likely, Moderate)

During fire suppression activities access roads, drop points, dozerline, and hand line were constructed and will likely serve as weed seed dispersal corridors (refer to Table 2 for miles of dozerline broken down by fire). Dispersal of weed seed from fire equipment movement poses a significant risk to native vegetation regeneration especially since a weed washing station was not installed for the Gold Fire. An emergency exists with respect to natural vegetation recovery due to the threat of invasive weed introduction and spread. Invasive weed infestations are documented in unburned isolated patches within the Gold Fire.

4. Cultural and Heritage Resources (CHR): Intermediate Risk (Possible, Moderate)

Field assessment of historic properties for the Gold Fire was conducted over a span of one day. It was necessary to prioritize site visits as this is a large assessment in a relatively short amount of time. Eight sites that were identified as most "at risk" from post-fire effects were visited for assessment, although it should be noted that all sites that burned are at increased risk of vandalism and looting. For archaeological sites, a low to moderate burn severity is more likely to expose sites to increased vandalism and looting than a high burn severity. A high burn severity usually produces enough charcoal and ash to disguise archaeological sites, including charring surface artifacts and making them more difficult to identify; a low to moderate burn severity only removes the low vegetation, leaving the mineral soil and surface artifacts exposed for easy looting.

5. Rangeland Resource (RR):

Damage to range improvements (fences and gates) that facilitate livestock grazing rotations and exclusion areas commensurate with allotment management plans to be captured with Pilot BAR.

B. Emergency Treatment Objectives:

To allow safe passage of water to protect infrastructures and watersheds from accelerated sheet and rill erosion. To protect watersheds from the spread of noxious weeds and unfettered OHV access.

Risk determination is dependent on the design storm selected and downstream values at risk. By using an average storm (2-year event) emergency planning measures can be designed to mitigate and minimize anticipated risks. Using a 2-year design storm the values at risk can be evaluated to determine if an emergency exists.

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

Land: 80%

Channel: -

Roads/Trails: 90%

Protection/Safety: 90%

D. Probability of Treatment Success

Table 6: Probability of Treatment Success

	1 year after treatment	3 years after treatment	5 years after treatment
Land	90	80	80
Channel	-	-	-
Roads/Trails	90	85	80
Protection/Safety	80	75	75

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

F. Cost of Selected Alternative (Including Loss):

G. Skills Represented on Burned-Area Survey Team:

- | | | | | |
|---|---|---|--|---|
| <input checked="" type="checkbox"/> x Soils | <input checked="" type="checkbox"/> x Hydrology | <input checked="" type="checkbox"/> x Engineering | <input checked="" type="checkbox"/> x GIS | <input checked="" type="checkbox"/> x Archaeology |
| <input checked="" type="checkbox"/> x Weeds | <input type="checkbox"/> Recreation | <input type="checkbox"/> Fisheries | <input checked="" type="checkbox"/> x Wildlife | |
| <input type="checkbox"/> Other: | | | | |

Team Leader: Brad Rust

Email:

Phone(s) brad.rust@usda.gov; 530 806 5406

Forest BAER Coordinator: Cathy Carlock

Email:

Phone(s): cathy.carlock@usda.gov, 530-569-0060

Team Members: *Table 7: BAER Team Members by Skill*

Skill	Team Member Name
<i>Team Lead(s)</i>	Brad Rust, Cathy Carlock
<i>Soils</i>	Eric Nicita
<i>Hydrology</i>	Bill Goodman
<i>Engineering</i>	Chris Bielecki, Kaci Spooner
<i>GIS</i>	Celia Yamagiwa
<i>Archaeology</i>	Dayne Crosby
<i>Weeds</i>	Kerry Johnston
<i>Recreation</i>	-
<i>Other</i>	Pete Johnston (wildlife), Garrett Noles (range)

H. Treatment Narrative:

The proposed treatments on National Forest System lands can help to reduce the impacts of the fire, but treatments will not completely mitigate the effects of the fire. The treatments listed below are those that are considered to be the most effective on National Forest System lands, given the local setting including topography and access.

Land Treatments:

Early Detection Rapid Response (EDRR, Suppression-related) Early weed detection surveys and rapid response treatments are recommended for at least one year post fire, due to the high potential for weed invasions. Existing invasive weed data was limited before the fire. Some invasive weed infestations are documented in unburned isolated patches within the Gold Fire and outside/adjacent to the burn perimeters. However, many large infestations were unmapped and observed going to seed (especially the invasive annual grasses and dyer's woad) and dozerline was pushed from these areas outside the fire perimeter into the fire perimeter. These areas where ground disturbance was highly likely to transport seed into moderate SBS areas are likely to experience invasive weed introduction. There are several vectors that serve as corridors for invasive weed introduction within the moderate SBS areas including roads, recreational trails, high winds, and waterways. Weed detection surveys and treatments are recommended to determine whether ground disturbing activities related to the Gold Fire have resulted in the expansion of invasive weeds is requested for the first year. Completion of surveys in riparian areas and known invasive and populations would be the first priority. The second survey priority would be along roads, dozerlines, handlines, and staging areas. Surveys of the general habitats in the burned area would be the lowest priority. The introduction and spread of invasive weeds into areas that burned Moderate to High SBS and were disturbed during fire suppression related activities has the potential to establish large and persistent invasive weed infestations. In addition, existent infestations along access roads will increase the likelihood of establishment in the burn areas, due to their accelerated growth and reproduction and a release from competition with native species. These invasive weed populations may affect the structure and habitat function of native vegetation communities. It is expected that most native vegetation would recover if invasive weed introduction is mitigated.

All vegetation communities within the moderate and high SBS areas should be included in the list of high priority areas to survey and eradicate weed infestations. Any new or expanding invasive species will be removed.

Invasive Weed EDRR (inventory and treatment – all suppression-related)				
Item	Unit	Unit Cost	# of Units	Cost
Invasive Survey and Detection	Acres	\$60	851	\$51,060
Invasive Plant Treatment (includes herbicide)	Acres	\$125	284	\$35,500
Total Cost				\$86,560

Roads and Trail Treatments:

Safety

Within the Gold Fire there are several areas of high to moderate SBS, leaving various dangers to the safety of the public including: snags/hazard trees, falling rocks and debris, increased runoff along FS roads. Warning signs would need to be installed to alert road users of the unmitigated dangers present in the FS fire area. Signs will be placed on the main access roads to the Gold Fire: NFSR 38N46, NFSR 38N04, NFSR 37N11, and NFSR 39N08/CR 527 (Ash Valley RD).

Additionally, the burning of cover brush and conifer stands has increased the amount of potentially hazardous off-road/OHV access in the burned areas. To help discourage FS users from travelling off NFS roads and along suppression dozer lines, it is recommended to install OHV breaks in several areas throughout the fire perimeter.

Storm Proofing

Along sections of main access roads directly under steep terrain (30-50+%) that experienced moderate to high burn severity, a lack of additional drainage structures could compromise the road infrastructure and FS access into several areas under thunderstorm conditions, including: Foster Draw (NFSR 38N46), NFSR 38N04, 37N20, and 37N11 (H, N). Based on field observations of the current condition of drainage features in these road prisms, most lack the proper drainage to effectively mitigate increased runoff and sediment concerns likely to occur in seasonal thunderstorm events. At least five inadequately armored and crushed culverts were noted along Foster's Draw road alone (38N46), which is the main access road into this area. Concerns have also been raised about the potential for increased runoff in catchment areas downslope of mod/high SBS that also experienced heavy dozer suppression repair, which often further compacts soil and increase hydrophobic soil tendencies: 37N20, 37N11 (Oxendine Draw).

To help ensure safety and accessibility to these areas, it is recommended to install rolling dips, drivable waterbars, and provide ditch reinforcements and overflow construction for additional relief along cross-drains. In other areas within the burn scar, cross-drains would need debris clearing and/or culvert armoring to ensure they maintain their capacity to deliver sediment and water from FS roads, including: Hunsinger Flat (NFSR 38N04, 39N08) and the Oxendine Draw/Coyote Flat area (NFSR 37N11, 37N01, 38N04).

Storm Inspection and Response

In addition to the roads receiving treatments, several roads that are within a moderate to high burn severity would need to be monitored during and after storm events, especially areas in the downslope catchment of Ash Creek (39N11/CR52, 38N04, 38N33), Walker Draw (38N46, 38N56), and Oxendine Draw (37N20, 37N11). Storm inspection and response would allow the forest to monitor the road drainage structure treatments to ensure the treatments are functioning, clean the area to ensure they continue to function in the future, and maintain and/or repair any damage to the road surface due to the sediment delivery.

Treatment Objectives – Table 11

Treatment Type	Treatment Objective	Treatment Description	Treatment Cost
Storm Proofing	To protect the road infrastructure and maintain ML standards of road access for visitors and FS employees. Reducing likelihood of culverts plugging up and road washouts due to increased runoff and sediment delivery.	Construct rolling dips and waterbars, armor existing culverts which do not have the capacity to remove increased runoff, reinforce existing ditches, and complete vegetation clearing around culverts.	\$53,940
Storm Inspection and Response	To inspect and mitigate storm related damages to roads to ensure they continue to function into the future.	The forest will do a storm inspection and response after storm events to monitor and/or repair treatments as needed to prevent further damage to infrastructure.	\$9,600
Safety	Ensure human safety by bringing awareness of the hazards encountered when entering burned areas.	Install warning signs that describe hazards that can be encountered such as hazardous trees, falling rocks, and road debris.	\$2,500
Total Cost			\$66,040

** See Appendix A for Engineering Detailed Cost Summary (Table 12)

Protection/Safety Treatments:

From Range Report - Further discussions will be necessary between the Forest Service and affected stakeholders on how to establish guidelines for hazard tree removal in support of rebuilding fire damaged fences. Concerns have been raised by livestock permittees and other members of the public of what the more heavily timbered areas that burned may look like in the absence of salvage logging or service work operations to remove fire damaged trees/debris. The core concern raised are decreased accessibility and safety of permittees and Forest users should these materials not be removed from the burn areas.

I. Monitoring Narrative: none

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS

			NFS Lands			Other	Other Lands			
			Unit	# of	BAER \$		# of	Fed	# of	
Line Items	Units	Cost	Units	\$	units	\$	Units	\$	\$	Total
A. Land Treatments										
EDRR survey	acres	60	851	\$51,060	\$0	\$0	\$0	\$0	\$0	\$51,060
EDRR treatment	acres	125	280	\$35,000	\$0	\$0	\$0	\$0	\$0	\$35,000
<i>Insert new items above this line!</i>				\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Land Treatments				\$86,060	\$0	\$0	\$0	\$0	\$0	\$86,060
B. Channel Treatments										
				\$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	\$0	\$0
Subtotal Channel Treatments				\$0	\$0	\$0	\$0	\$0	\$0	\$0
C. Road and Trails										
Stormproffing	project	56,440	1	\$53,940	\$0	\$0	\$0	\$0	\$0	\$53,940
Storm Patrol	project	9,600	1	\$9,600	\$0	\$0	\$0	\$0	\$0	\$9,600
OHV barriers	project	2,500		\$2,500	\$0	\$0	\$0	\$0	\$0	\$2,500
Warning signs	project	2,500	1	\$2,500	\$0	\$0	\$0	\$0	\$0	\$2,500
<i>Insert new items above this line!</i>				\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Road and Trails				\$68,540	\$0	\$0	\$0	\$0	\$0	\$68,540
D. Protection/Safety										
				\$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	\$0	\$0
Subtotal Protection/Safety				\$0	\$0	\$0	\$0	\$0	\$0	\$0
E. BAER Evaluation										
Initial Assessment	Report	\$11,488	---	\$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	\$0
Subtotal Evaluation				\$0	\$0	\$0	\$0	\$0	\$0	\$0
F. Monitoring										
				\$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	\$0	\$0
Subtotal Monitoring				\$0	\$0	\$0	\$0	\$0	\$0	\$0
G. Totals										
				\$154,600	\$0	\$0	\$0	\$0	\$0	\$154,600

PART VII - APPROVALS

1. 
Forest Supervisor

8/26/20
Date

Appendix A – Engineering Detailed Summary

	Ditch Reinforcement	Rolling Dips	Drivable Waterbars	Culvert Armoring	Vegetation Clearing	Projected Total											
Road Miles of Concere	sq ft	Price /Unit (\$)	Total Cost	Quantity	Price/ Unit (\$)	Total Cost	Quantity	Price/ Unit (\$)	Total Cost	Quantity	Price/ Unit (\$)	Total Cost					
38N46	6.45	1.5	3,500	5,250	5	1,250	6,250	10	750	7,500	2	1,000	2,000	5	500	2,500	23,500
38N04G	0.26							3	2,250	1		1,000					3,250
38N04	0.42	0.15		525				4	3,000	1		1,000					4,525
37N20	1.32							6	4,500	1		1,000		2	1,000		6,500
37N11H	0.19	0.19		665				2	1,500								2,165
37N11N	1.04							2	2,500	2		1,500	1	1,000	2	1,000	6,000
37N01	0.62							2	2,500	2		1,500		2	1,000		5,000
38N33A	0.61							4	3,000								3,000
ALL	Road Storm-proofing												Subtotal	\$53,940			
ALL	Storm Patrol & Inspection												Estimated length of time: 12 days	9,600			
ALL	OHV Barriers												Installation price (ea.): \$500	5	2,500		
ALL	Warning Signs												Price/Unit: \$500	5	2,500		
																\$68,540	