Date of Report: 05/09/2022

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: McBride

B. Fire Number: NM-N5S-000115

C. State: New Mexico

D. County: Lincoln

E. Region: Southwestern

F. Forest: Lincoln National Forest

G. District: Smokey Bear

H. Fire Incident Job Code: PN PKD3 (1522)

I. Date Fire Started: 04/12/2022

J. Date Fire Contained: 05/06/2022

K. Suppression Cost/: $10,000,000

L. Fire Suppression Damages Repaired with Suppression Funds (estimates):

1. **Fireline repaired (miles): 12 miles**
2. **Other (identify): N/A**

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
130600080105	Devils Canyon	30,849	3,178	10%
130600080106	Middle Rio Ruidoso	37,185	1,121	3%
130600080103	Upper Rio Ruidoso	37,265	1,945	5%

N. Total Acres Burned:

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	4,551

OWNERSHIP	ACRES
OTHER FEDERAL (LIST AGENCY AND ACRES)	0
STATE	0
PRIVATE	1,325
LINCOLN COUNTY	370
TOTAL	6,246

O. Vegetation Types:

The dominant vegetation types within the burned area are pinyon-juniper woodland and ponderosa pine forest. Montane meadows in bottomland areas and mixed conifer forest on north-facing slopes or in cold air drainages are less extensive. Some locations of these vegetation types have reduced overstory canopies and are largely dominated by grasses, shrubs, and juniper re-sprout where high burn severity impacted the area in the White Fire of 2011 and the Cree Fire of the early 2000s.

P. Dominant Soils:

Lithic Argiustolls, clayey-skeletal, mixed, superactive, mesic; Lithic Haplustolls, loamy-skeletal, mixed, superactive, mesic; Typic Argiustolls, fine, mixed, superactive, mesic; Pachic Argiustolls, fine, mixed, superactive, mesic.

Q. Geologic Types:

Primary geology within the burned area consists mostly of sedimentary sources such as limestone. There are some small inclusions of igneous material such as alaskite. The bottomlands and drainages in the area consist of mixed alluvium.

R. Miles of Stream Channels by Order or Class:

Table 3: Miles of Stream Channels by Order or Class

STREAM TYPE	MILES OF STREAM
PERENNIAL	0.2
INTERMITTENT	4.8
EPHEMERAL	4.7
OTHER (DEFINE)	0.0

S. **Transportation System:**

Trails: *National Forest (miles):* 0 *Other (miles):* 0
Roads: *National Forest (miles):* 13.5 *Other (miles):* 0

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

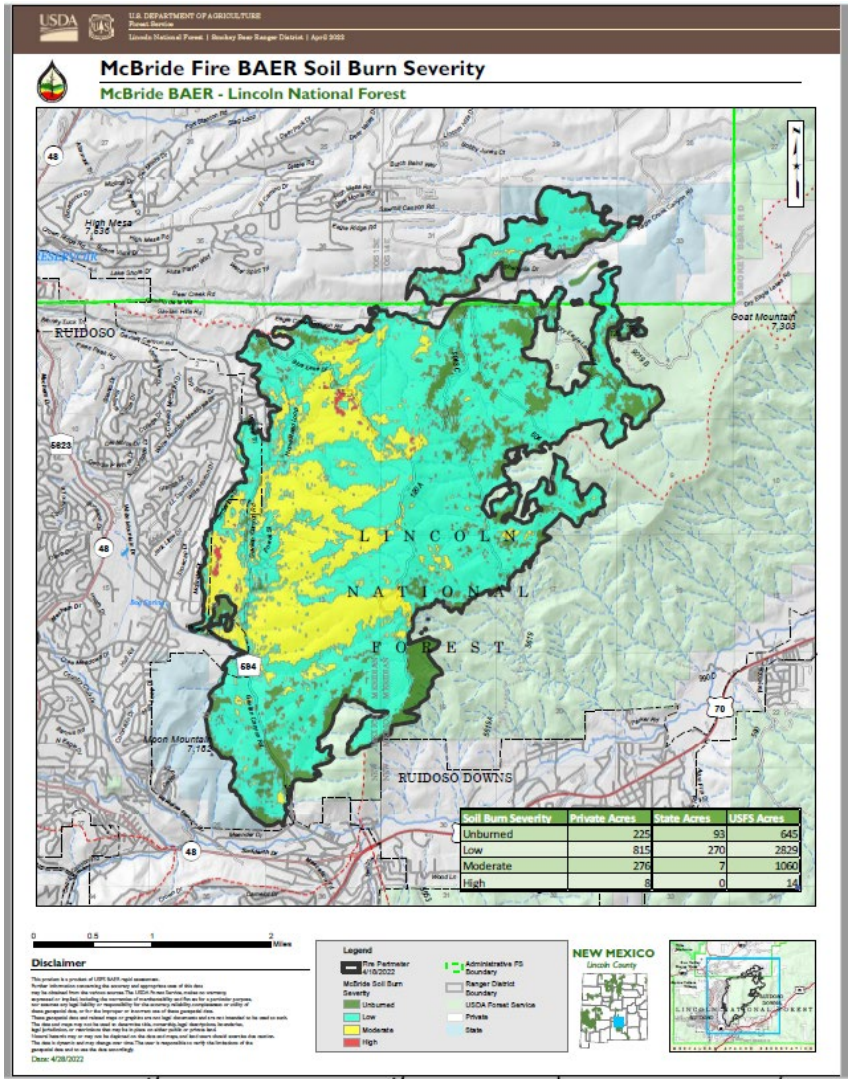

Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	NFS	Other Federal (List Agency)	State	Private	Total	% within the Fire Perimeter
Unburned	645		93	225	963	15.43
Low	2829		270	815	3914	62.70
Moderate	1060		7	276	1343	21.52
High	14		0	8	22	0.35
Total	4548		370	1324	6242	100

B. Water-Repellent Soil (acres): 3,999 acres (69%)

C. Soil Erosion Hazard Rating:

Slight: 553 acres (9%)
Moderate: 2,313 acres (40%)
Severe: 2,930 acres (51%)

D. Erosion Potential:

Terrestrial Ecological Units with the highest erosion potential were analyzed and identified on the assessment area utilizing ArcGIS Pro. Units with high erosion potential meet all the following criteria A) rate severe for soil erosion hazard, B) contain moderate or high soil burn severity, and C) have a moderate and high soil burn severity average of tons/acre sediment delivery of 3 times the rate of the unit's reported soil loss tolerance under untreated conditions.

Moderate and high soil burn severity within the steep terrestrial ecological units 251, 263, 2574, 3034, and 3054 (0-15, 40-80% and 40-120% slope gradients) are of the greatest concern for soil erosion; the extent of moderate and high soil burn severity identified with a severe soil erosion hazard rating in these units comprises 943 acres (~16%) of the assessed burn area.

E. Sediment Potential:
For the first year following fire containment, the highest sediment loss per acre is found in unit 263 with a total area of 209 acres with over 55 tons/acre sediment loss. For comparison, 103 tons/acre is roughly the equivalent of 2/3 inch of soil depth across an acre area. All units of concern and their high and/or moderate erosion potential conditions were assessed for increase in sedimentation rate from the unburned condition

F. Estimated Vegetative Recovery Period (years): 2 to 5 years

G. Estimated Hydrologic Response (brief description):
The Fire area was divided into three different areas for the purposes of modeling hydrologic response. These three areas are Gavilan Canyon, Johnson Canyon, and Eagle Creek. The hydrologic response for each area is discussed below. This fire is within portions of three watersheds, two of which have been rated as impaired as part of the Watershed Condition Classification. These two are the Upper Rio Ruidoso and Middle Rio Ruidoso watersheds. A portion of the fire is also within the Devils Canyon watershed, which is rated as functioning at risk.

Gavilan Canyon
The Gavilan Canyon Drainage is 12 square miles and constitutes the area on the west side of the fire. This is the watershed that contained almost all the homes that were destroyed in the fire and the area that is most susceptible to high flows that may impact private property, especially in Gavilan Canyon. A little less than 1/3 of this watershed burned. The area that burned consists of low to moderate soil burn severities with a few very small patches of high soil burn severity. Areas of greatest concern include the Blue Lake, Homestead Loop and Skunk Canyon basin areas, which each had extreme (>800% increases in clear water flows from pre-fire) changes in peak for the annual rainfall event and very significant (200%-800%) increases for the 50% chance event. A moderate flash flood risk from hyper concentrated flows is likely within this portion of the burn scar for the 1-10 yr events as well. This area also has highest probability of debris flows occurring according to the USGS debris flow model, with a few drainages in the vicinity of Bogg Spring being the highest probability. For more specifics on areas of concern in the Gavilan Canyon watershed see the specialist report.

Johnson Canyon
The Johnson Canyon drainage area is on the east side of the fire east of Gavilan Ridge and is approximately 2.8 square miles and contains only ephemeral channels. Only the upper half of the watershed burned and modeling shows a less than 100% increase for all events with several subbasins in the northwest section of the watershed contributing the most to the increased flows. Hydrophobic soils were not observed during field visits, so they were not modeled for.

Eagle Creek Drainages
This consists of three small drainages on the north side of the fire. The westernmost drainage shows the most increase in flow and has moderate flash flood risk from hyper-concentrated flows during the first few storms. A fourth small catchment just west of these three drainages has some moderate and high but was not modeled because of the lack of Forest Service BAER critical values.

PART V - SUMMARY OF ANALYSIS

Introduction/Background

A. Describe Critical Values/Resources and Threats (narrative):
The McBride Fire burned on Forest Service and private lands above the southwest portion of the Village of Ruidoso and above the Village of Ruidoso Downs. Fuel types were primarily pinon/juniper (P/J) woodland with a smaller amount of Ponderosa Pine and some Mix Conifer. This fire burned in variable, but largely steep terrain with dry, mixed fuel sizes and loading densities present. Some extent of this fire is reburn of the White Fire of 2011 and the Cree fire of the early 2000s. Elevations within the burned area range from roughly 6,500 feet at the south end of the burn perimeter along Gavilan Canyon Road up to approximately 7,650 feet at the taller peaks along Gavilan Ridge. Most slope gradients across the burned area are either moderately steep at 15-40 percent or very steep at over 40 percent. Approximately a quarter of the burned area is moderate with some high soil burn severity. In the McBride burned area, ~50% of the NFS area has a severe erosion hazard, approximately 2/3 of the NFS land burned has a high runoff potential. Some high erosion potential soil units yielded sediment delivery rates up to 55 tons/acre. (Refer to Soil Resource Report). The majority of the moderate soil burn severity plots sampled had <20% remaining, effective vegetative ground cover. Based on conversations with BAER team members, the McBride Fire footprint has had extensive disturbance in the past. Disturbances include considerable overlap with the Cree Fire of the early 2000s and the white fire in 2011. There has also been a considerable area of management and other land use activities, some resulting in potential disturbance, as a result of its proximity to the town of Ruidoso. About 70% of the burn area consists of mixed conifer forests and Pinyon Juniper persistent woodlands, characterized by an infrequent fire regime. The recent timeline of significant fire impacts to this area has altered recovery and forest health. If soils are left untreated, there is a potential for almost 40% loss of the surface A horizon.

The Middle Rio Ruidoso and Upper Rio Ruidoso watersheds are listed as impaired under the USFS Watershed Condition Framework. This existing impairment was taken into consideration when discussing the magnitude of consequences for hydrologic recovery. Because the watersheds were impaired prior to the fire, the hydrology team determined that they are less likely to be resilient to fire effects, and therefore the consequences of the large patches of moderate soil burn severity and potential for changes in post-fire peak flows are more likely to have a long-term effect on watershed function than if the watersheds had been functioning at risk or functioning prior to the fire. To analyze post-fire impacts, portions of the larger 6th code subwatersheds were broken down into smaller basins for the purposes of modeling post-fire conditions. All field data was collected using Survey123. Watersheds within the burn boundary were assessed using different methods to quantify increases in hyper-concentrated flows, clear water peak flows, and debris flows. Predicted rainfall amounts per time increments of 5 minute, 10 minute, 15 minute, 30 minute, and 60 minute intervals are listed below.

Table 5: Precipitation Events. (For more in-depth information, refer to Hydrologist Specialist Report).

PDS-based precipitation frequency estimates with 90% confidence intervals (in inches)[1]						
Duration	Average recurrence interval (years)					
	1	2	5	10	25	100
5-min	**0.292** (0.254-0.336)	**0.377** (0.328-0.436)	**0.505** (0.439-0.581)	**0.602** (0.522-0.692)	**0.734** (0.633-0.840)	**0.945** (0.807-1.08)
10-min	**0.445** (0.387-0.512)	**0.575** (0.500-0.664)	**0.769** (0.669-0.885)	**0.916** (0.794-1.05)	**1.12** (0.964-1.28)	**1.44** (1.23-1.65)
15-min	**0.551** (0.480-0.635)	**0.712** (0.620-0.822)	**0.953** (0.830-1.10)	**1.14** (0.985-1.31)	**1.39** (1.20-1.59)	**1.78** (1.52-2.04)
30-min	**0.743** (0.646-0.855)	**0.959** (0.835-1.11)	**1.28** (1.12-1.48)	**1.53** (1.33-1.76)	**1.87** (1.61-2.13)	**2.40** (2.05-2.75)
60-min	**0.919** (0.800-1.06)	**1.19** (1.03-1.37)	**1.59** (1.38-1.83)	**1.89** (1.64-2.18)	**2.31** (1.99-2.64)	**2.97** (2.54-3.40)
2-hr	**1.05** (0.916-1.22)	**1.35** (1.18-1.57)	**1.80** (1.57-2.09)	**2.15** (1.86-2.48)	**2.63** (2.27-3.03)	**3.43**(2.93-3.93)
3-hr	**1.11** (0.967-1.28)	**1.42** (1.24-1.64)	**1.87** (1.63-2.15)	**2.22** (1.93-2.55)	**2.72** (2.34-3.11)	**3.53**(3.01-4.03)
6-hr	**1.26** (1.11-1.43)	**1.60** (1.42-1.82)	**2.07** (1.83-2.35)	**2.44** (2.15-2.76)	**2.96** (2.59-3.35)	**3.80**(3.28-4.28)
12-hr	**1.42** (1.26-1.61)	**1.80** (1.60-2.04)	**2.32** (2.05-2.61)	**2.72** (2.40-3.06)	**3.27** (2.87-3.67)	**4.16**(3.61-4.67)
24-hr	**1.61** (1.47-1.79)	**2.02** (1.84-2.24)	**2.54** (2.31-2.82)	**2.95** (2.67-3.27)	**3.51** (3.17-3.88)	**4.40**(3.94-4.86)

B BAER Critical Values at Risk

Table 6: 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):

Value	Probability	Consequence	Rating	Threat
Hydrologic function Gavilan - Blue Lake Basins	Very Likely	Major	Very High	Greater than 1000% increase for the 1 year event and greater than 300% increase for the 2 year event. Potential loss of human life.
Hydrologic function Gavilan - Mid basins	Very Likely	Major	Very High	Greater than 200% for both the 1 and 2 year event. Potential loss of human life.
Hydrologic function West Eagle Creek	Very Likely	Major	Very High	195% increase for 1 year event. 146% increase for 2 year event. Potential loss of human life.
Dispersed camping sites (3 complex and 8+ single)	Likely	Major	Very High	Threat of falling trees, stump holes, logs, snags. These are in or surrounded by areas impacted by the Cree and McBride fires. Standing snags and damaged trees.
Blue Lake Interpretive Trail	Likely	Major	Very High	Trees around and next to the trail dead. A lot of people visit this area
Hydrologic function Gavilan - Lower (Southern) Basins	Possible	Major	High	Post-fire flooding, debris flow. Some basins have very significant increases for the annual storm event, others do not. All

				basins have minimal increase for the 2 year event.
Hydrologic function Johnson Canyon	Possible	Major	High	Post-fire flooding, debris flow. Some basins have very significant or significant increase in the 1 year storm event. All basins but 1 have minimal increase for the 2 year event.
Recreation, hunting and other visitors within the burned area	Possible	Major	High	USGS showed a greater than 60% probability of debris flow across several drains. Across the greater western portion of the area on the western Gaviln ridge there is quite a high risk. Several drains affected

2. Property (P):

Value	Probability	Consequence	Rating	Threat
FSR 120-A	Possible	Moderate	Intermediate	Level 2 road on top of the ridge. Not flooding chance, but chance for erosion. Limited maintenance of road. Biannual maintenance
Dispersed camping sites (3 complex and 8+ single)	Possible	Moderate	Intermediate	These are in flat and some are in open areas, impacted by the Cree Fire.. Standing snags and damaged trees. Trees falling, some obliteration.

3. **Natural Resources (NR):**

Value	Probability	Consequence	Rating	Threat
Hydrologic function Gavilan - Blue Lake Basins	Very Likely	Moderate	Very High	Greater than 1000% increase for the 1 year event and greater than 300% increase for the 2 year event. Will take significant time for the watershed to recover
Hydrologic function Gavilan - Mid basins	Very Likely	Moderate	Very High	Greater than 200% for both the 1 and 2 year event. Will take significant time for the watershed to recover
Hydrologic function Gavilan - Lower (Southern) Basins	Very Likely	Moderate	Very High	Some basins have very significant increases for the annual storm event, others do not. All basins have minimal increase for the 2 year event. Will take significant time for the watershed to recover
Hydrologic function West Eagle Creek	Very Likely	Moderate	Very High	195% increase for 1 year event. 146% increase for 2 year event. Will take significant time for the watershed to recover
Blue Lake wetland restoration area	Very Likely	Moderate	Very High	In the center of the high to moderate severity. Erosion and overland flow can go into the closed wetland system and cause longer-term consequences
Non-Native Invasive species	Very Likely	Moderate	Very High	Musk Thistle documented within the McBride perimeter, and at the upper reaches of Gavilan ridge. The musk thistle is a class B NNIS with the direction from NM.
Soil Productivity	Likely	Moderate	High	Approximately a quarter of the burned area is moderate with some high soil burn severity. In the McBride burned area, ~50% of the NFS area has a severe erosion hazard, approximately 2/3 of the NFS land burned has a high runoff potential. Some high erosion potential soil units yielded sediment delivery rates up to 55 tons/acre (Table 5). The majority of the moderate soil burn severity plots sampled had <20% remaining, effective vegetative

				ground cover. Due to severe erosion hazard ratings, high runoff potential, and levels of sediment delivery up to 55 tons/acre, 335 acres of high-risk area have been identified for post-fire agricultural straw mulching for mitigating runoff as well as soil loss.
MSO Recovery Foraging habitat. MSO 2012 RP	Likely	Moderate	High	This is in the MSO Recovery habitat and the PCEs could be affected. Loss of PCEs for the Recovery Habitat and inhibit recovery of the area
Hydrologic function Johnson Canyon	Possible	Moderate	Intermediate	Some basins have very significant or significant increase in the 1 year storm event. All basins but 1 have minimal increase for the 2 year event. Will take significant time for the watershed to recover
Hydrologic function Middle and East Eagle Creek	Possible	Moderate	Intermediate	Minimal increase in 1 and 2 year events. Will take significant time for the watershed to recover

4. Cultural and Heritage Resources:

There were four cultural resources within the perimeter of the McBride Fire. One site is eligible and listed on the National Register of Historic Places that was originally recorded after the Cree Fire in 2001. Site two is an NRHP eligible site that is a multicomponent site with Jornada Mogollon and Apache components. Site three was an Undetermined site recorded in 1997. Site four was recorded in 2001 during the Cree Fire cultural survey. BAER Recommendations were made for the two NRHP sites, recommending seeding and mulching to protect the sites from further degradation by post-fire conditions. Recommended monitoring for further damages and evaluation testing for determination of eligibility on the undetermined sites.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:
Land: 95
Channel: NA
Roads/Trails: NA
Protection/Safety: 95

D. Probability of Treatment Success

Table 5: Probability of Treatment Success

	1 year after treatment	***3 years after treatment***	***5 years after treatment***
Land	95	95	95
Channel	NA	NA	NA
Roads/Trails	NA	NA	NA
Protection/Safety	95	98	100

E. Cost of No-Action (Including Loss): $6,102,430

F. Cost of Selected Alternative (Including Loss): $692,067

G. Skills Represented on Burned-Area Survey Team:

☒ Soils ☒ Hydrology ☒ Engineering ☒ GIS ☒ Archaeology
☒ Weeds ☐ Recreation ☐ Fisheries ☒ Wildlife
☒ Other: PIO

Team Leader: Mark (Andy) Casillas
Email: mark.casillas@usda.gov **Phone(s)** 505-389-7436

Team Leader (trainee): Jennifer Hickamn
Email: jennifer.hickman@usda.gov **Phone(s)** 505-240-2287

Forest BAER Coordinator: Rhonda Stewart
Email: rhonda.stewart@usda.gov **Phone(s):** 575-434-7222

Team Members: *Table 6: BAER Team Members by Skill*

Skill	Team Member Name
Team Lead(s)	Mark (Andy) Casillas, Rhonda Stewart, Jennifer Hickman (trainee)
Soils	Eric Robertson, Jalene Weatherholt (trainee)
Hydrology	Kelly Mott Lacroix, Kevin Carns (trainee) Kyle Paffet (trainee) Peter Harden (trainee)
Engineering	Andres Bolanos (trainee)
GIS	Taci Ugraskan
Archaeology	Scott Hays-Strom
Weeds	David Baker
Recreation	N/A
Other	PIO - Cathleen Thompson, PIO (Trainee) - Laura Rabon PIO (Trainee) - Jessica Richardson Wildlife - Larry Cordova Wildlife - Taylor Joray

H. Treatment Narrative:

Land Treatments:

It was determined that there is a likely probability of damage or loss to soil productivity and a moderate magnitude of consequence. This brings the overall rating of risk to high. The treatment recommendation to mitigate the loss of soil productivity is the application of agricultural mulch at 1 ton/acre and seeding at a rate of 20 seed per square foot. The recommended seeding mix will be comprised of 3 seeds Western Wheatgrass, 2 seeds blue grama and 15 seeds annual barley.

Terrestrial Ecological Unit	Soil Burn Severity	*Acres/% Extent of Assessed Burned Area	Soil Loss Tolerance (tons/acre /year)	Soil Erosion Hazard Rating	Sediment Delivery (tons/acre)	Increase in Sedimentation Rate from Unburned (%)	Total Sediment Loss (tons/acre in the first year)
251	Moderate	579 / 10	2	Severe	6.51	98.9	37,69.29
251	High	13 / <1	2	Severe	23.24	99.2	302.12
263	Moderate	209 / 4	2	Severe	55.12	96.7	11,520.08
2574	Moderate	20 / <1	3	Severe	12.19	99.9	243.80
3034	High	3 / <1	3	Severe	13.76	98.5	41.28
3034	Moderate	45 / 1	3	Severe	9.53	99.0	428.85
3054	Moderate	74 / 1	3	Severe	9.53	98.4	705.22
Totals		**943 / 16**					**17,011**

Map Unit	Soil Burn Severity	Acres	Sediment Delivery-No treatment (tons/acre)	Total Loss	Sediment Delivery-1 ton mulch/acre (tons/acre)	Total Sediment Loss (Tons)	Total Reduction in Sediment loss (%)

251	High	11	8.92	98.12	1.61	17.71	81.95
251	Low	19	23.24	441.56	4.88	92.72	79.00
251	Moderate	213	6.51	1,386.63	0.26	55.38	96.01
262	Moderate	1	16.87	16.87	3.51	3.51	79.19
263	Low	4	42.92	171.68	9.31	37.24	78.31
263	Moderate	74	55.12	4078.88	14.66	1084.84	73.40
3054	Moderate	12	9.53	114.36	0.56	6.72	94.12
Totals		334		6308		1298	79

Guidance recommends treatments for only a Very High Risk to soil productivity. However, treating soil productivity will have benefits to other BAER critical Values in the treatment area. Reducing soil erosion, nutrient delivery, and sediment delivery will also have the benefit of protecting a critical ecosystem that is recognized in the Southwestern Regions Riparian Strategy from excessive damage. Blue Lake is and intermittent wetland located inside the burn area that has had approximately $961,000 over multiple project phases invested in its restoration and is home to flora and fauna that are dependent on its proper function. Without treatment of the uplands excess nutrients delivered to the wetland system could result in a nutrient imbalance and excess erosion and sediment delivery could result in partial filling of the wetland.

Mulching and seeding treatments are predicted to also improve hydrologic function in the burn area. Mulching treatment will result in Greater than 100% reduction of runoff for the 1yr and 2yr storm events in 5 of the 7 sub-basins mapped in the Gavilan canyon watershed. In addition, mulching decreases the peak flows for the annual storm in the Blue Lake basin from Extreme (>800% increase) to Significant (100-200%) and in the Middle Gavilan Canyon the reduction is from very significant (200-800% increase) to Minimal (<100%). For the 50% probability event changes from Very Significant (200-800% increase) to minimal is predicted for the Blue Lake and Middle Gavilan basins, Significant to Minimal for the Bogg Canyon basin, and Very Significant to significant in the Skunk Canyon Basin. Similar decreases are also predicted for the 10% probability storms.

There are two major cultural heritage sites that are on the National Register of Historic Place (NRHP) within the mulching treatment areas. As a result of being in the moderate to high severity burned areas, these sites are vulnerable to erosion and further damage due to post-fire effects. Further cracking of limestone spalling could occur and due to their location in the burn area, the expected erosion could result in a loss of the organic layer with additional soil movement which would result in a total loss of data for the sites. Mulching with agricultural straw would reduce these negative effects.

Mulching and seeding treatment areas within the McBride Fire include recovery habitat for the MSO that would benefit from said treatments. The high and moderate severity burned areas were within MSO recovery habitat. Many of the mature trees and shrubs necessary for MSO recovery habitat were killed or will die. Added to that no grass or forb regrowth was evident in the moderate to high severity burned areas, and needle cast was less than 10%. This means there will be post-fire impacts to several primary constituent elements (henceforth referred to as PCEs) of habitat identified as MSO critical habitat. Increased water runoff and soil erosion further inhibit vegetation re-establishment, which negatively affects PCEs related to the MSO's prey base. "High volumes of fallen trees and other woody debris", "a wide range of tree and plant species" and "adequate levels of residual plant cover to maintain fruits, seeds, and allow plant regeneration" are three PCEs related to the MSO's prey base (USF&WS, 2012) that will suffer severe negative impacts post-fire. This was evaluated at a Likely probability of damage or loss, with Major consequences, for a Very High risk.

NNIS early detection and rapid response will be needed to deal with suppression spread due to ground disturbing actives such as dozer line and use of road as improvised line. The rapid detection for suppression will take 3 days, with 2 people, and is estimated at $1,800. After the McBride fire, NNIS new establishments could occur within the burned area, and the rate of spread in the post-fire bare earth could be accelerated. The rapid detection for the burned area will take 5 days, with 2 people, and is estimated at $3,000. Treatment: NNIS Early Detection/Rapid Response. $4,800 total estimated cost.

Channel Treatments: NA

Roads and Trail Treatments: NA

Protection/Safety Treatments:
Area Closure - The BAER Team recommends an area closure starting as soon as possible going till December. The BAER Team members state that closing the area for this period of time will cover implementation, aerial application, treatments on the ground, Monsoon hazards, prevent further damage to BAER Critical values at risk and other possible risks that were included in our specialist reports.

I. Monitoring Narrative:

Non-native Invasive Plants
Monitoring should occur both before and after the monsoon season as well as into the next growing season, as well as identification of any new infestations from BAER treatment activities. A minimum recommended schedule would be 3-5 visits, starting in April/early May to develop current baseline, mid-late June prior to seasonal monsoons and in September after the monsoons. Monitoring should occur along roads and trails as well as spot checks of moderately burned areas. Areas identified for monitoring include suppression lines (blue lines in figure 1) as well as the entire area between Gavilan Ridge and Gavilan Canyon roads, as well as moderately and severely burned areas to the east of FSR 120A (see figure 1). Information collected should include species, areal extent of infestation, and approximate percent of infestation (i.e., sparse, dense, very dense, percentage, etc.). Photo points should be collected. Geospatial locations of infestations should be documented and put into the corporate databases including NRIS. Funding for EDRR is requested in the treatment narrative.

Archeology
Monitoring will include a multi-component site (prehistoric/historic) composed of two previously recorded sites. This site is not located within the burn but is downstream from the burned area and could be affected by increased flows. Regular monitoring and inspection after heavy rain and flood events will monitor any damage to the burial and artifact disturbance. No funds are requested at this time because monitoring will be completed by a full-time employee and charged to NFSE. Recommend evaluation testing of the site for further damage from the McBride fire. If site determination is changed, no further treatment recommendations are made.

Wildlife
Wildlife biologists will continue to monitor and evaluate impacts to the MSO Critical Habitat and Recovery Habitat. Two (2) additional visits will be made to the area, one immediately pre-monsoon and one immediately post-monsoon season. Changes and impacts will be documented in the report and photos. The Blue Lake wetland restoration area will receive monitoring on a monthly basis, going to every-two-weeks if necessary to document continued post-fire impacts and mitigation treatment to the area. A minimum of 5 visits will be made by wildlife biologists to document these changes in the report, accompanied by photo-documentation.

PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS

			NFS Lands				Other Lands				All
		Unit	# of		Other		Fed	# of	Non Fed		Total
Line Items	Units	Cost	Units	BAER $	$	# of units	$	Units	$		$
A. Land Treatments											
				$0	$0		$0		$0		$0
Aerial seeding	acres	100	344	$34,400	$0		$0		$0		$34,000
Straw mulch	acres	1,000	344	$344,000	$0		$0		$0		$344,000
Insert new items above this line!				$0	$0		$0		$0		$0
Subtotal Land Treatments				$378,400	$0		$0		$0		$378,000
B. Channel Treatments											
				$0	$0		$0		$0		$0
Insert new items above this line!				$0	$0		$0		$0		$0
Subtotal Channel Treatments				$0	$0		$0		$0		$0
C. Road and Trails											
				$0	$0		$0		$0		$0
Insert new items above this line!				$0	$0		$0		$0		$0
Subtotal Road and Trails				$0	$0		$0		$0		$0
D. Protection/Safety											
Road Waring Sign	each	3,800	8	$30,400	$0		$0		$0		$30,400
Trail Warning Sign	each	71	1	$71	$0		$0		$0		$71
Orange barriers	each	250	10	$2,500	$0		$0		$0		$2,500
Closure signs	each	3,800	2	$7,600	$0		$0		$0		$7,600
Insert new items above this line!				$0	$0		$0		$0		$0
Subtotal Protection/Safety				$40,571	$0		$0		$0		$40,571
E. BAER Evaluation											
Initial Assessment	Report	$61,000		---	$0		$0		$0		$61,000
				$0	$0		$0		$0		$0
Insert new items above this line!				---	$0		$0		$0		$0
Subtotal Evaluation				$0	$0		$0		$0		$61,000
F. Monitoring											
EDRR (suppression)	visit	$600	3	$1,800	$0		$0		$0		$1,800
EDRR (BAER)	visit	$600	5	$3,000	$0		$0		$0		$3,000
Insert new items above this line!				$0	$0		$0		$0		$0
Subtotal Monitoring				$4,800	$0		$0		$0		$4,800
G. Totals				$423,771	$0		**$0**		**$0**		**$484,371**
Previously approved											

PART VII - APPROVALS

1. TRAVIS MOSELEY Digitally signed by TRAVIS MOSELEY Date: 2022.05.11 08:23:24 -06'00'

Forest Supervisor Date