

September 18, 2018; initial; Updated 10/15/18

## EXECUTIVE SUMMARY

The Bull Draw Fire started on July 29, 2018 approximately 12 miles northwest of Nucla, Colorado. The majority of the fire is on the Grand Mesa, Uncompahgre, and Gunnison National Forests with a third on Bureau of Land Management (majority on Uncompahgre Field Office and a small acreage on the Grand Junction Field Office); the cause is lightning/natural. Containment of the Bull Draw Fire is expected mid-October, a Burned Area Emergency Response (BAER) assessment was initiated in early September as the fire activity has been minimal and most of the perimeter has been contained. The BAER assessment covers 30,384 acres and identifies risks to public safety and infrastructure prior to the first damaging storm.

The BAER assessment is based on available BARC data from August 28, 2018. Of the burned acres assessed on NFS lands, 12% were unburned, 34% were of low burn severity, 52% were moderate burn severity, and 2% were of high burn severity.

### Soil Burn Severity By Ownership:

Owner	High	Moderate	Low	Unburned	Total
GMUG NF	487	10,480	6,763	2,450	20,180
BLM	12	3,631	4,990	1,261	9,894
Private	2	116	175	17	310
Total	501	14,227	11,928	3,728	30,384

The USFS is responsible for addressing risks on NFS lands. This report focuses on risks and proposed treatments to address threats to values at risk on NFS lands, but also provides relevant information to help identify potential threats lands downstream of the fire. Proposed treatments focus on inter-agency coordination and information sharing to reduce threats to life/safety and property, storm proofing roads, and minimizing the spread of noxious weeds into burned areas which could detrimentally affect native plant communities.

In total the BAER team identified approximately \$174,085 in potential emergency stabilization treatments to address post-fire threats from the Bull Draw Fire.

Date: Sept. 18, 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

- [X] 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: Bull Draw Fire
  - B. Fire Number: CO-UPD-000258
  - C. State: CO
  - D. County: Mesa and Montrose County
  - E. Region: 02
  - F. Forest: GMUG NF
  - G. District: Grand Valley RD
  - H. Fire Incident Job Code: PDL14B (1502)
  - I. Date Fire Started: July 29, 2018
  - J. Date Fire Contained: 60% as of Sept 13, 2018
  - K. Suppression Cost: \$11 million as of Sept 13, 2018

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): Approximately 10.37 miles of dozer line and about 5 miles of handlines were constructed during the fire. All dozer lines was repaired using excavators and handcrews. Where appropriate, water bars were constructed.
  2. Fireline seeded (miles): Dozer lines have been seeded with a stabilizing seed mix (10.37 miles).
  3. Other (identify): Spike camps and parking areas will have rehabilitation activities implemented, including seeding, planting, ripping or scarification, and access blockage where needed.

M. Watershed Number:

## Sixth field sub-watersheds and named streams within burned area

5th level sub-watershed and named streams within burned area						
5th level watershed	6th level sub-watershed	HUC	Major named streams in the sub-watershed	Total acres	Acres burned	Percent burned
Tabeguache Creek	Spring Creek	140300030605	Spring Creek, Burro Creek	13,526	4624	34%
	Campbell Creek	140300030707	Campbell Creek	17,752	1565	8.8%

Mesa Creek	North Fork Mesa Creek	140300040102	North Fork Mesa Creek	35,280	7238	21%
	South Fork Mesa Creek	140300040401	East Mesa Creek, Dry Fork of Mesa Creek	30,399	6576	22%
Cottonwood Creek – San Miguel River	Atkinson Creek	140300030707	Big Atkinson, Big Johnson, Little Johnson, Wet Atkinson Creek	22,152	10806	49%

The streams within these watersheds are bedrock, cobble, and gravel dominated stream systems. Many of the riparian areas are timbered with cottonwood and as well as a willow component.

N. Total Acres Burned: NFS Acres ( 20,180<sup>1</sup>) BLM (9,894) Private (310)

O. Vegetation Types: Vegetation in the Bull Draw fire varies by elevation. Lower elevations are a mix of gambel oak and pinyon juniper with some ponderosa pine. As elevation increases, pondersoa pine and aspen becomes more dominant with spruce-fir replacing the oak and ponderosa pine at the highest elevation within the fire perimiter. There are some open grass meadows and shrub hillsides.

P. Dominant Soils: Dominant soil types within the fire perimeter include the Hoosan-Lamphier complex, Delson-Kubler-Showalter complex, Belain-Falcon complex and Ustorthents-Ustochrpets. The Hoosan series consists of very deep, well drained soils that formed in clayey alluvium. Hoosan soils are on terraces, fans, and foot slopes. The Lamphier series consists of very deep, well drained soils that formed in alluvium and colluvium mainly from sedimentary rocks and conglomerate. Lamphier soils are on fans, concave mountain and valley side slopes, and in drainage ways in mountainous areas. The Delson series consists of very deep, well drained soils that formed in alluvial material derived from sedimentary rocks and from residuum and colluvium from sandstone and shale. Delson soils are on stony outwash fans, benches, mountain and mesa side slopes. The Kubler series consists of deep, well drained soils that formed in alluvium or glacial till derived primarily from rhyolite and rhyolitic tuff. The Showalter series consists of very deep, well drained, slowly permeable soils that formed in alluvium on pediment surfaces. The Belain series consists of moderately deep, well drained loamy soils that formed in residuum weathered from igneous rock and alluvium or colluvium over bedrock. The Falcon series consists of shallow, well to somewhat excessively drained soils that are formed in materials weathered residually from arkose and similar beds overlying hard sandstone, interbedded sandstone and shale, or conglomerate.

Q. Geologic Types: The geology of the Bull Draw Fire in the higher elevation consists of Wingate Sandstone (reddish-brown, buff, and grayish-orange, fine grained, massive, thick-bedded, and prominently cross-bedded eolian sandstone), Summerville Formation (red, gray, green, and brown sandy shale and mudstone of terrestrial origin), and Precambrian rocks (includes gneiss, schist, granite and pegmatite). In the lower elevations, the geology consists of the Dakota Sandstone (yellowish-brown and gray friable to quartzite fluvial sandstone and conglomeratic sandstone with interbedded bray to black carbonaceous nonmarine shale) and Burro Canyon Formation (white, gray, and light-brown fluvial sandstone and conglomerate interbedded with green and purplish lacustrine siltstone, shale, and mudstone, and thin beds of impure limestone).

R. Miles of Stream Channels by Order or Class: 24 miles perennial; 161 miles Intermittent

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<sup>1</sup> As of August 28, 2018

## S. Transportation System

Trail Type	Miles in Fire Perimeter
Non-motorized	18.33
Wheeled Vehicles <50" width	9.37
Single-track Motorized	21.54
<b>TOTAL</b>	<b>49.24</b>

System Road	Miles in Fire Perimeter
County	0
NFS - ML1	0.87
NFS - ML2	46.71
NFS - ML3	0
<b>TOTAL NFS</b>	<b>47.58</b>

## PART III - WATERSHED CONDITION

- A. Burn Severity (acres): 2,490 (12%)(unburned); 6,723 (34%)(low); 10,480 (52%)(moderate); 487 (2%)(high)
- B. Water-Repellent Soil (acres): 6,629 acres
- C. Soil Erosion Hazard Rating (acres):
  - 4,520 (slight); 7,202 (moderate); 2,737 (severe); 5,721 (very severe)
- D. Erosion Potential: 9.2 tons/acre
- E. Sediment Potential: 3,926 cubic yards / square mile

Supporting information regarding these estimates is available in the soils specialist report. The final soil burn severity map is displayed in Appendix A.

## PART IV - HYDROLOGIC DESIGN FACTORS

- A. Estimated Vegetative Recovery Period, (years): 3-5 years
- B. Design Chance of Success, (percent): 80%
- C. Equivalent Design Recurrence Interval, (years): 25 year
- D. Design Storm Duration, (hours): 1 hour
- E. Design Storm Magnitude, (inches): 1.12 inches
- F. Design Flow, (cubic feet / second/ square mile): See Table 2
- G. Estimated Reduction in Infiltration, (percent): 55%, See Table 1
- H. Adjusted Design Flow, (cfs per square mile): See Table 2

Table 1: Soil burn severity and percent of watershed in each severity class by modeled drainage

Modeled drainage	Unburned acres	UB %	Low acres	Low %	Moderate acres	Mod %	High acres	High %
Spring Creek	8902	66	1235	9	2756	20	185	1
Campbell Creek	16190	91	328	2	1069	6	32	0.2
Atkinson Creek	11346	51	4716	21	4914	22	89	0.4
North Fork Mesa	28042	80	3052	9	3079	9	72	0.2
South Fork Mesa	23823	78	2759	9	2443	8	124	0.4

Table 2: Pre and post-fire peak flow predictions from StreamStats and Peak Flow Calculator

Modeled Watershed	Percent NFS land	Percent BLM land	25-year, 1-hour event			
			Pre-fire estimated discharge (cfs)	Post-fire estimated discharge (cfs)	Relative percent increase	Post-fire time to peak (hours)
Spring Creek	34%	61%	879	1616	47%	3.83
Campbell Creek	31%	54%	566	1501	62%	3.60
Atkinson Creek	27%	72%	1540	2715	43%	4.20
North Fork Mesa Creek	34%	62%	1694	3094	45%	5.60
South Fork Mesa Creek	21%	77%	1991	3174	37%	4.40

Additional information pertaining to the hydrology modeling is available in the hydrology specialist report.

## PART V - SUMMARY OF ANALYSIS

A. **Describe Critical Values/Resources and Threats:** Threats to critical values and determination of risk was based on the following matrix from FSH 2523.

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

**Probability of Damage or Loss:** The following descriptions provide a framework to estimate the relative probability that damage or loss would occur within 1 to 3 years (depending on the resource):

- Very likely. Nearly certain occurrence (90% - 100%)
- Likely. Likely occurrence (50% - 89%)
- Possible. Possible occurrence (10% - 49%)
- Unlikely. Unlikely occurrence (0% - 9%)

**Magnitude of Consequences:**

- Major. Loss of life or injury to humans; substantial property damage; irreversible damage to critical natural or cultural resources.
- Moderate. Injury or illness to humans; moderate property damage; damage to critical natural or cultural resources resulting in considerable or long term effects.
- Minor. Property damage is limited in economic value and/or to few investments; damage to critical natural or cultural resources resulting in minimal, recoverable or localized effects.

**Critical Value: Human life/safety**

Threats to life, safety, and property exist in steep moderate and high soil burn severity areas throughout and downstream from the burned area. Forest users will be exposed to significantly increased risk of flooding and debris flows, as well as hazard trees.

**Debris Flow Hazard:**

The debris flow hazard is expected to increase significantly in the years following the fire. The infrastructure in the area is not adequate to handle the increases in flow and sediment predicted. Debris across the roads, particularly down canyon onto BLM and private lands.

**Hazard Trees:** The number of hazard trees has significantly increased from fire weakened trees. Forest users are at greater risk of injury from hazard trees following the fire.

The burned area is popular with hunters. Fall recreation results in a higher threat to human life and safety from hazard trees as well as direct and indirect effects of flooding and debris flows.

**Emergency Determination:** The probability of loss is Unlikely and the magnitude of consequence is Major for threats to life/safety on Forest Service lands; the BAER risk is Intermediate.

#### **Critical Value: Property**

##### **Roads**

There are 47.58 total miles of NFS Roads within the burn perimeter of which 8.50 miles were identified as being burned over by fire of Moderate to High Severity. Roads within the burned area are at risk from impacts from increased water, sediment, and/or debris. Impacts include damage to the road and/or loss of access due to severe erosion of the road surface, or deposition of sediment or debris. Roads within the burned area are also likely to exacerbate the risk of flooding and erosion by collecting surface water, concentrating it and delivering it to hillslopes or stream channels. Most of the roads within the burned area have inadequate cross-drainage for anticipated post wildfire flows.

The 598 Road and 668 Road both provide access to NFS lands for the general public from hwy 141 through BLM lands to NFS. These two arteries are main access points to backcountry experiences and used heavily in the fall by hunters (the fire perimeter falls within prime big game trophy hunting (Unit 61). These roads provide key access for the public and administrative use within the burned area.

**Emergency Determination:** An emergency for roads was determined for Human Life and Safety and Property. The probability of loss is Likely and the magnitude of consequence is Moderate. The BAER risk is High.

##### **NFS Recreation Trails**

Within the fire perimeter there are 49.24 miles of trail of which 11.75 miles identified as being burned over by fire of Moderate to High Severity. Values at risk include the trail tread, water quality, and fish habitat. It is anticipated that increase in flows associated with the fire effects will cause trail rilling and erosion, trail approaches to stream crossings on steep slopes are at risk of failure, and cut slope and fill slope failures are likely to occur. In addition to the resource degradation, the trails are likely to become difficult or dangerous for travel.

**Emergency Determination:** An emergency for recreation (trails) was determined for Human Life and Safety and Property. The probability of loss is Likely and the magnitude of consequence is Moderate; the BAER risk is High.

#### **Critical Value: Natural Resources**

**Soil Productivity:** While wildfire will have a negative effect on soil productivity and vegetative recovery, over time it is expected that natural processes will result in the most effective revegetation of these soils. While soil loss may be greater in localized patches, these impacts are not considered significant and will not result in permanent impairment of soil productivity in the long-term (10 years).

**Emergency Determination:** The probability of loss is possible and the magnitude of consequence is minor; the risk is low. Therefore, no BAER emergency exists

##### **Water Quality:**

The cumulative effect of increased peak flows and sediment laden flows from the burned areas increases the risk for water quality on the Forest and various downstream values at risk, particularly effects on drinking and irrigation water providers.

Soil erosion and subsequent large sediment increases are predicted throughout and downstream of the burn area. An effort to inform water users about water quality degradation the following has been initiated since large sediment increases are expected from erosion (including ash) and debris flows. These increases will be of short term duration, recovering to pre-fire conditions over time with the worst impacts occurring over the next three years. During this time there is likely potential for degradation of source water quality for water developments downstream of moderate to high severity burn areas.

**Emergency Determination:** The probability of loss is Very Likely and the magnitude of consequence is Minor on NFS lands. The risk is low; therefore no BAER emergency exists on NFS lands. Municipal surface water developments are all located off NFS lands, therefore no BAER assessment was made.

#### **Native or Naturalized Plant Communities**

The fire area was under management for noxious weed infestations prior to the fire. Oxeye Daisy (*Leucanthemum vulgare*), Spotted Knapweed (*Centaurea stoebe*), Sulfur Cinquefoil (*Potentilla recta*), and Canada thistle (*Cirsium arvense*) are known to occur within the burn area and along adjacent access routes to the burn. Several plant vectors such as Forest roads, trails, areas impacted by fire suppression, high winds, and waterways occur within the fire area. Even though a weed washing station was utilized, seed could have been transported into the burn on suppression vehicles and equipment that arrived on the fire before the washing station was established. Fire is known to enhance the establishment of all weed species present. The spread of noxious weeds would adversely affect multiple resources including native plant communities which in turn affects threatened and endangered species habitat for wildlife and fisheries. Forest Service policy mandates the Forest to minimize the establishment of non-native invasive species to prevent unacceptable degradation of the burned area.

**Emergency Determination:** An emergency for native plant communities from invasion of noxious weeds was determined exists. The probability of loss is Very Likely and the magnitude of consequence is Moderate; the BAER risk is Very High.

#### **Wildlife/Fisheries/Botany: Critical TES Habitat or Suitable Occupied Habitat**

No federal listed species exists within the fire perimeter. No critical habitat is present for any federally listed species.

#### **Critical Value: Cultural and Heritage Resources**

Twenty-one (21) recorded cultural resource sites are located within the Bull Draw fire perimeter. Of these 21 sites, 12 were previously determined "eligible" or remain unevaluated for eligibility to be listed on the National Register of Historic Places. No potential risks to the site were observed and no emergency stabilization treatments are recommended.

**Emergency Determination** –No emergency exists pertaining to cultural resources. Cultural resource surveys for road treatments will be needed to ensure compliance with the National Historic Preservation Act.

#### **Summary of BAER Risk Assessment**

Resource	Critical Value	Probability of Loss	Magnitude of Consequences	BAER Risk
Life/safety	Life/Safety	Unlikely	Major	Intermediate
Roads	Property	Likely	Moderate	High
Trails	Property	Likely	Moderate	High
Native Plant Communities	Natural Resources	Very Likely	Moderate	Very High
Soil Productivity	Natural Resources	Possible	Minor	Low
Water Quality	Natural Resources	Very Likely	Minor	Low
Wildlife/Fish/Botany	Natural Resources	Unlikely	Moderate	Low
Cultural Resources	Cultural Resources	Possible	Minor	Very Low

**B. Emergency Treatment Objectives:** The proposed treatments on National Forest System lands can help to reduce the impacts of the fire from storm events, but treatments cannot fully mitigate the post-fire effects of the fire. Detailed information of the treatments summarized below can be found in the specialist reports prepared in support of this funding request. The treatments listed below are those that are considered to be the most effective on National Forest System lands to minimize threats to identified values at risk.

#### **Proposed Land Treatments**

The objective of the land treatments are to:

1. Promote and protect native and naturalized vegetative recovery by reducing the spread of noxious weeds (L1).

### Proposed Road and Trail Treatments

The objective of the road and trail treatments are to:

1. Protect road and trail investments from becoming impassible and damaged due to increased post-fire runoff. (R1, R2, T1)
2. Reduce sedimentation into streams degrading water quality (R1, R2, T1)
3. Improve road drainage by increasing ditch and catchment basin capacity to reduce the potential for road failure due to increased flows (R1, R2)

### Proposed Protection/Safety Treatments:

The objective of the protection/safety treatments are to:

1. Protect human life and safety by raising awareness through posting hazard warning signs at recreation sites, trailheads, and when entering the burn area. (P1)

Proposed Channel Treatments: There are no proposed channel treatments.

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

Land NA (weeds) % Channel NA- none proposed % Roads/Trails 75 % Protection/Safety 85 %

### D. Probability of Treatment Success

		Years after Treatment		
		1	3	5
Land	70	75	80	
	NA	NA	NA	
Roads/Trails	80	90	90	
Protection/Safety	85	90	95	

E. Cost of No-Action (Including Loss): \$420,000—cost only reflects monetary loss, it does not reflect loss of life or native plant communities

F. Cost of Selected Alternative (Including Loss): \$193,320.

Extensive repair or reconstruction of roads and at increased risk of post-fire effects is estimated to be \$220,000 per the GMUG Forest Engineer. There is a threat to life and safety as well as natural resources that have non-monetary value. The VAR tool was used to assess the cost benefit of implementing the treatments, and indicated that treatments were justified with a ratio of 1.2. The VARTool Calculation Spreadsheet is available in the project file. As described in this report, increased risk for impacts to life/safety and non-ecological values exists throughout the burned area. These values were not addressed in the VAR Assessment nor considered in the benefit/cost ratio.

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

Team Leader: Beth Anderson; Bethaanderson@fs.fed.us; 970-275-7620

#### Team members:

Kevin Hyatt (BLM)—Soils  
Tony Smith—GIS  
Eric Freels—Fish/wildlife  
Luke Holquin – Fish/wildlife  
Justin Bennett—Weeds/range

Jedd Sondergaard (BLM)—Hydrology  
Doug Marah - Engineering  
Dan Gray - Recreation  
Loren Paulson - Recreation  
Jeremy Karchut—Archaeology

**H. Treatment Narrative:**

(Describe the emergency treatments, where and how they will be applied, and what they are intended to do. This information helps to determine qualifying treatments for the appropriate funding authorities. For seeding treatments, include species, application rates and species selection rationale.)

**Land Treatments:**

**L1 - Invasive Weed Detection and Treatment:** Invasive plant detection and treatment along the Forest Service trails and drainages, that were of high to moderate burn severity and where non-native invasive plants are absent or present in small amounts, will be necessary to prevent spread and dispersal of non-native invasive plants into newly burned and disturbed areas. Although moderate burned areas may have some intact vegetation or may experience needle fall, it is not sufficient to prohibit the spread and establishment of invasive plants. The focus will be on locations adjacent to known weed sites, where fire suppression may have introduced invasive plants and road systems that have been previously disturbed and will have a greater potential for invasive plants to establish. The road and trail systems are primary vectors for weed spread and Early Detection/Rapid Response (EDRR) will allow treatments to occur before these species are able to spread. An estimated 318 acres will be surveyed.

**Road and Trail Treatments:**

**R1 – Storm Proofing and road stablization:** Storm proof drainage features where identified to protect the ML3 road investment. Activity will include cleaning culverts inlets, road ditches, and ensuring water does not concentrate on the road.

**T1- Trail Stabilization** - Work will include the installation of drainage features (outsloping, rolling grade dips, water bars), stabilization of two drainage crossings, and snagging trees as appropriate for worker safety. This work is necessary to protect the trail asset by diverting anticipated increases in surface runoff off the trail.

**Protection/Safety Treatments:**

**P1/R1 – Road Hazard Warning Signs and Gates**

This treatment will design and install burned area warning signs to caution forest visitors recreating and administrative users about the potential hazards that exist within the burned area. It is consistent with the language provided in the BAER Treatments Catalog. This treatment will place closure signs, hazard warning signs and information signs at key entry points or trail junctions, and numerous recreation trailheads. It will inform users of the dangers associated with entering/recreating within a burned area as well as inform them of closures to help ensure that users are able to access available routes in a safe manner. The warning signs will identify the types of hazards to watch for at roads, trails, and campgrounds.

**Treatments considered, but not carried forward at this time**

**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.)

Storm patrol will monitor the effectiveness of road and trail treatments and identify additional maintenance needs. EDRR will monitor weed establlishment and identify if additional treatment is warranted within the first year.

Part VI – Emergency Stabilization Treatments and Source of Funds							Interim #
R1-Culvert cleaning	each	2000	8.25	\$16,500	\$0	\$0	\$0
R1Ditch restoration	each	200	144	\$28,800	\$0	\$0	\$0
R1Mobilization	each	18000	1	\$18,000			
R1Armor fill slopes	Cyd	210	26	\$5,460			
hardened fords	each	4000	5	\$20,000			
T1armoured xing	each	750	2	\$1,500			
T1Rollingdips	each	300	155	\$46,500			
T1armored drainiage	each	4000	5	\$20,000			
Cultural resource clear	Days	390	3	\$1,170			
contract officer	Days	450	6	\$2,700			
Contract prep/admin	Days	390	13	\$5,070	\$0	\$0	\$0
<i>Insert new items above this line!</i>							
<b>Subtotal Road &amp; Trails</b>							<b>\$0</b>
<b>D. Protection/Safety</b>							
R1-Rd closure gate	each	0		\$0	\$0	\$0	\$0
P1Safety signs	each	0	0	\$0	\$0	\$0	\$0
p1 install mileage	each	0	0	\$0			
P1Installation	Days	0	0	\$0	\$0	\$0	\$0
<i>Insert new items above this line!</i>							
<b>Subtotal Structures</b>							<b>\$0</b>
<b>E. BAER Evaluation</b>							
<i>Insert new items above this line!</i>							
<b>Subtotal Evaluation</b>							<b>\$0</b>
<b>F. Monitoring</b>							
<i>Insert new items above this line!</i>							
<b>Subtotal Monitoring</b>							<b>\$0</b>
<b>G. Totals</b>							<b>\$0</b>
Previously approved				\$0	\$0	\$0	\$0
Total for this request				<b>\$174,085</b>	<b>\$10,861</b>	<b>\$0</b>	<b>\$0</b>

PART VII - APPROVALS

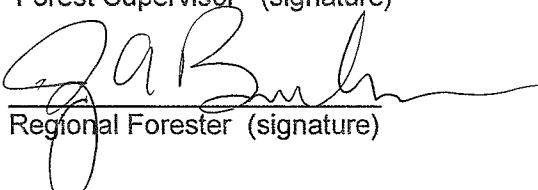
1.

  
\_\_\_\_\_  
Forest Supervisor (signature)

10/15/2018

Date

2.

  
\_\_\_\_\_  
Regional Forester (signature)

10/30/18

Date

## Appendix A: Maps

Figure 1: Final Soil Burn Severity Map

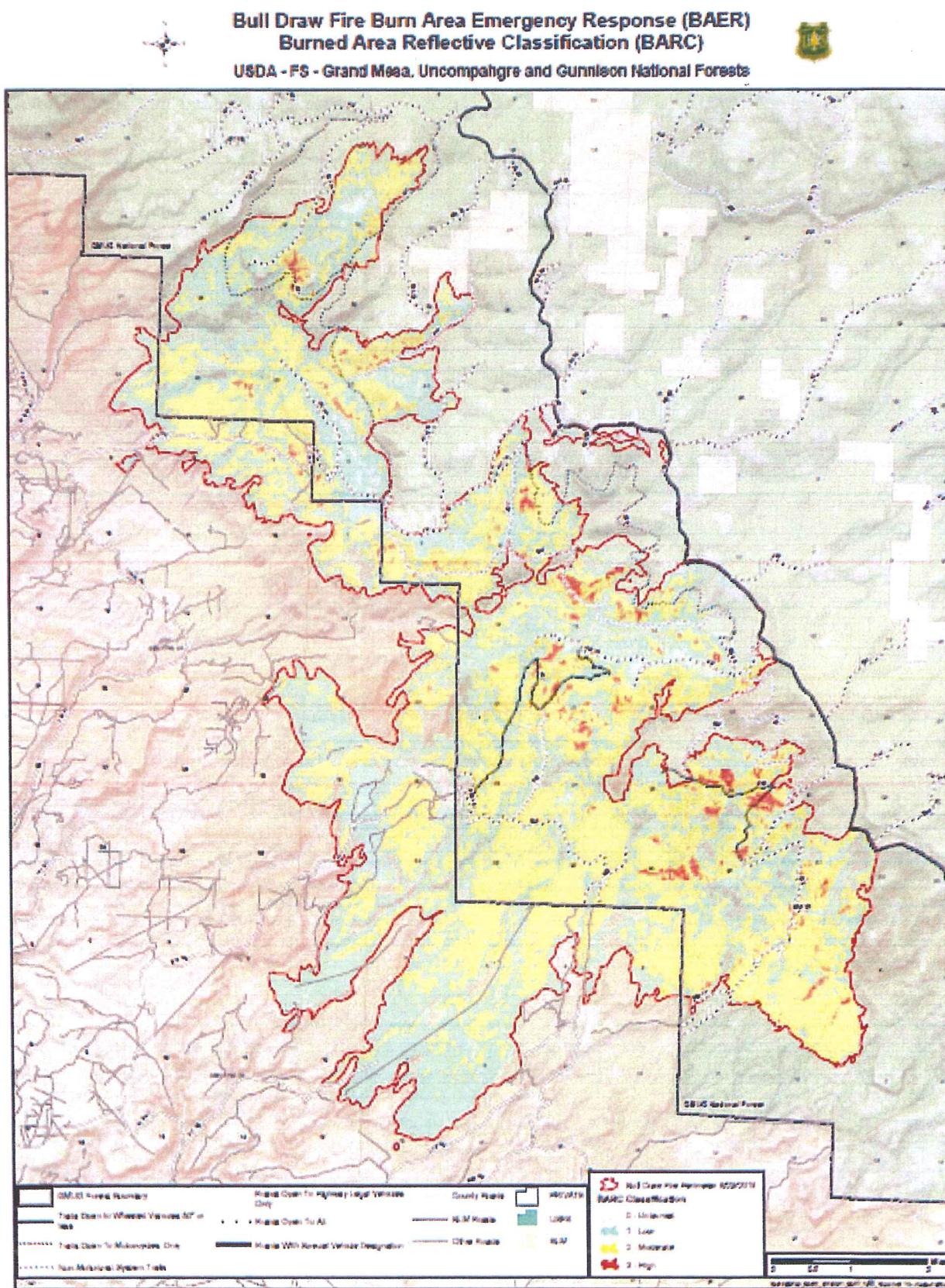


Figure 2: Road and Trail treatments

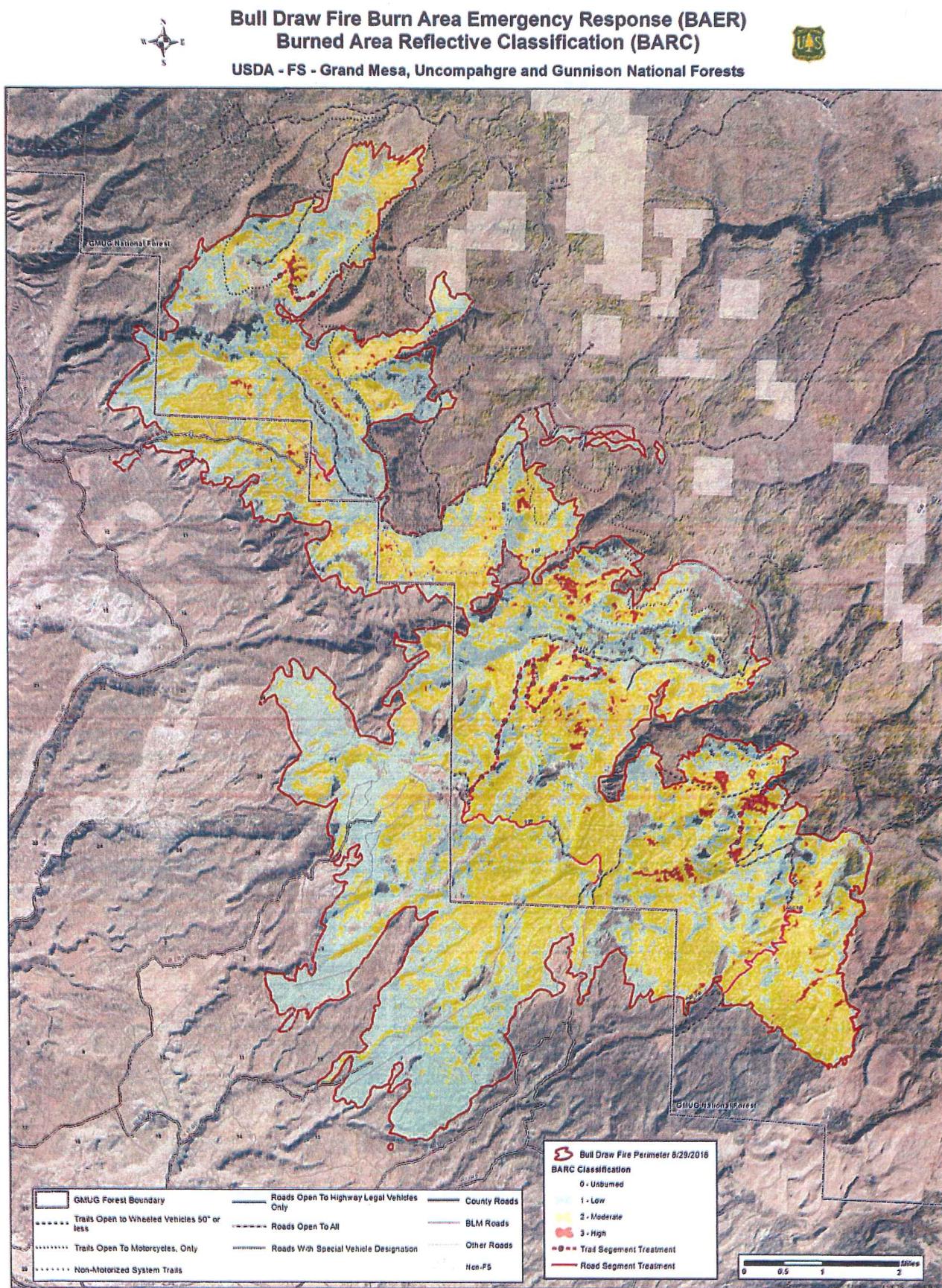


Figure 3: EDRR Survey Areas

