

Date of Report: 12/8/20**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:** Rice, Snider, and Wiltse Fires**B. Fire Number:** Rice: LG29-349  
Snider: LG29-346  
Wiltse: MCD378**C. State:** MT**D. County:** Rosebud**E. Region:** 1**F. Forest:** Custer Gallatin NF**G. District:** Ashland RD**H. Fire Incident Job Code:** Rice: PNNJX7  
Snider: PNNJV7  
Wiltse: PDNLH4**I. Date Fire Started:** Rice: 9/2/20  
Snider: 9/2/20  
Wiltse: 9/15/20**J. Date Fire Contained:** Rice: 9/7/20  
Snider: 9/7/20  
Wiltse: 9/20/20**K. Suppression Cost:** Rice: \$185k  
Snider: \$500k  
Wiltse: \$50k**L. Fire Suppression Damages Repaired with Suppression Funds (estimates):**

1. Fireline repaired (miles): Rice: 2.3, Snider: 3.6, Wiltse: 4.4
2. Other (identify):

**M. Watershed Numbers:**

Table 1: Rice Fire - Acres Burned by Watershed

| HUC #        | Watershed Name              | Total Acres | Acres Burned | % of Watershed Burned |
|--------------|-----------------------------|-------------|--------------|-----------------------|
| 100901020505 | Tongue River-Bringoff Creek | 33092       | 4815         | 15                    |
| 100901020504 | Tongue River-Colbert Coulee | 26625       | 7245         | 27                    |
| 100901020501 | Tongue River-Double E Creek | 15150       | 4044         | 27                    |

Table 2: Snyder Fire - Acres Burned by Watershed

| HUC #        | Watershed Name      | Total Acres | Acres Burned | % of Watershed Burned |
|--------------|---------------------|-------------|--------------|-----------------------|
| 100901020703 | Liscom Creek        | 30444       | 15583        | 51                    |
| 100901020603 | Middle Beaver Creek | 18883       | 1468         | 8                     |
| 100901020705 | Lay Creek           | 25668       | 947          | 4                     |
| 100901020702 | Dry Creek           | 8705        | 1029         | 12                    |
| 100901020704 | Hart Creek          | 34611       | 10758        | 31                    |
| 100901020704 | Coal Creek          | 39657       | 4092         | 10                    |

Table 3: Wiltse Fire - Acres Burned by Watershed

| HUC #        | Watershed Name             | Total Acres | Acres Burned | % of Watershed Burned |
|--------------|----------------------------|-------------|--------------|-----------------------|
| 100901021102 | Lower Little Pumpkin Creek | 39175       | 69           | 0.1                   |
| 100901020603 | Middle Beaver Creek        | 18883       | 979          | 5                     |

**N. Total Acres Burned:**

Table 4: Rice Fire - Total Acres Burned by Ownership

| OWNERSHIP    | ACRES         |
|--------------|---------------|
| NFS          | 3,016         |
| BLM          | 219           |
| STATE        | 349           |
| PRIVATE      | 10,205        |
| <b>TOTAL</b> | <b>16,104</b> |

Table 5: Snider Fire - Total Acres Burned by Ownership

| OWNERSHIP    | ACRES         |
|--------------|---------------|
| NFS          | 1,592         |
| BLM          | 1,140         |
| STATE        | 1,763         |
| PRIVATE      | 22,234        |
| <b>TOTAL</b> | <b>33,877</b> |

Table 6: Wiltse Fire - Total Acres Burned by Ownership

| OWNERSHIP | ACRES |
|-----------|-------|
| NFS       | 987   |

| OWNERSHIP                             | ACRES |
|---------------------------------------|-------|
| OTHER FEDERAL (LIST AGENCY AND ACRES) | 0     |
| STATE                                 |       |
| PRIVATE                               | 8     |
| TOTAL                                 | 1,049 |

**O. Vegetation Types:** Pine Savannah, Douglas Fir, Riparian

**P. Dominant Soils & Geologic Types:**

Rice Fire: The top three most prevalent soil series by area within the Rice Fire Perimeter on NFS lands were Cushman (56.9%), Midway (33.9%), and Barvon (4.9%). See parent material and slope information below.

Snider Fire: The top three most prevalent soil series by area within the Snider Fire perimeter on NFS lands were Midway (38.2%), Barvon (21.9%), Cushman (18.1%). The Midway series are derived from shale residuum and slope alluvium ranging from 0 to 40%. Barvon soils are derived from unconsolidated shale and silty sedimentary beds ranging from 0 to 70%. Cushman soils are derived from interbedded shales, siltstones, and sandstones on slopes 0 to 20%.

Wiltse Fire: The two most prevalent soil series by area within the Wiltse Fire perimeter were Midway (33.8%) and Barvon (29.3%), followed by Rock Outcrops (25.2%).

**Q. Geologic Types:** A majority of the area within the fire boundaries is dominated by the Tongue River Member of the Fort Union Formation. The sedimentary geology within this unit includes Sandstone, Shale, and Coal Seams. Clinker is found on ridgetops within all three fire perimeters. Alluvium is found in the bottom of larger drainages.

**R. Miles of Stream Channels by Order or Class:**

Table 7: Rice Fire - Miles of Stream Channels by Order or Class

| STREAM TYPE       | MILES OF STREAM |
|-------------------|-----------------|
| PERENNIAL         | 0               |
| INTERMITTENT      | 3.5             |
| EPHEMERAL         | 35.4            |
| OTHER<br>(DEFINE) | 0               |

Table 8: Snider Fire - Miles of Stream Channels by Order or Class

| STREAM TYPE       | MILES OF STREAM |
|-------------------|-----------------|
| PERENNIAL         | 0               |
| INTERMITTENT      | 1.3             |
| EPHEMERAL         | 20.6            |
| OTHER<br>(DEFINE) | 0               |

Table 9: Wiltse Fire - Miles of Stream Channels by Order or Class

| STREAM TYPE       | MILES OF STREAM |
|-------------------|-----------------|
| PERENNIAL         | 0               |
| INTERMITTENT      | 2.5             |
| EPHEMERAL         | 7.5             |
| OTHER<br>(DEFINE) |                 |

## S. Transportation System:

### Rice Fire

**Trails:** National Forest (miles): 0      Other (miles): 0  
**Roads:** National Forest (miles): O&M: 4.7      Other (miles): 0

### Snyder Fire

**Trails:** National Forest (miles): 0      Other (miles): 0  
**Roads:** National Forest (miles): O&M: 6.7      Other (miles): 0

### Wiltse Fire

**Trails:** National Forest (miles): 0      Other (miles): 0  
**Roads:** National Forest (miles): O&M: 4.2      Other (miles): 0

## PART III - WATERSHED CONDITION

### A. Burn Severity (acres):

Table 10: Rice Fire - Burn Severity Acres by Ownership

| Soil Burn Severity | NFS  | BLM/BIA/UND | State | Private | Total | % within the Fire Perimeter |
|--------------------|------|-------------|-------|---------|-------|-----------------------------|
| <b>Unburned</b>    | 491  | 97/3/1      | 215   | 1507    | 2314  | 14%                         |
| <b>Low</b>         | 2507 | 218/01      | 349   | 9083    | 12158 | 75%                         |
| <b>Moderate</b>    | 509  | 1/0         | 0     | 1119    | 1629  | 10%                         |
| <b>High</b>        | 0    | 0/0         | 0     | 3       | 3     | <1%                         |
| <b>Total</b>       | 3507 | 321         | 564   | 11712   | 16104 | 100%                        |

Table 11: Snider Fire - Burn Severity Acres by Ownership

| Soil Burn Severity | NFS  | BLM/UND  | State | Private | Total | % within the Fire Perimeter |
|--------------------|------|----------|-------|---------|-------|-----------------------------|
| <b>Unburned</b>    | 893  | 552/87   | 387   | 4975    | 6894  | 20%                         |
| <b>Low</b>         | 1555 | 1104/128 | 1584  | 19450   | 23821 | 70%                         |
| <b>Moderate</b>    | 37   | 36/119   | 179   | 2739    | 3110  | 9%                          |
| <b>High</b>        | 0    | 0/6      | 0     | 46      | 52    | <1%                         |
| <b>Total</b>       | 2485 | 2032     | 2150  | 27210   | 33877 | 100%                        |

Table 12: Wiltse Fire - Burn Severity Acres by Ownership

| Soil Burn Severity | NFS  | Other Federal (List Agency) | State | Private | Total | % within the Fire Perimeter |
|--------------------|------|-----------------------------|-------|---------|-------|-----------------------------|
| <b>Unburned</b>    | 51   |                             |       | 2       | 53    | 5%                          |
| <b>Low</b>         | 494  |                             |       | 5       | 499   | 48%                         |
| <b>Moderate</b>    | 492  |                             |       | 3       | 495   | 47%                         |
| <b>High</b>        | 1    |                             |       | 0       | 1     | <1%                         |
| <b>Total</b>       | 1039 |                             |       | 10      | 1049  | 100%                        |

- B. **Water-Repellent Soil (acres):** All area burned under moderate and high severity were observed to express moderate water repellency. Acres of water repellent soil are shown in Table 13.

*Table 13: Acres of Water Repellency by Ownership*

| <b>Fire</b>  | <b>NFS</b>  | <b>Other</b> | <b>Total</b> |
|--------------|-------------|--------------|--------------|
| Rice         | 509         | 1120         | 1629         |
| Snider       | 37          | 3125         | 3162         |
| Wiltse       | 493         | 3            | 493          |
| <b>Total</b> | <b>1039</b> | <b>4248</b>  | <b>5284</b>  |

**C. Soil Erosion Hazard Rating:** Soil Erosion Hazard Ratings were based directly on soil burn severity and are shown in Table 14.

*Table 14: Acres of Soil Erosion Hazard Rating (SEHR) by Ownership*

| <b>SEHR</b> | <b>NFS</b> | <b>Other</b> |
|-------------|------------|--------------|
| Low         | 4556       | 31922        |
| Moderate    | 1038       | 12764        |
| High        | 1          | 56           |

**C. Erosion Potential:** Due to the extremely small amount high soil burn severity areas erosion potential was not modeled or estimated using other means.

**D. Sediment Potential:** Due to the extremely small amount high soil burn severity areas sediment potential was not modeled or estimated using other means.

**E. Estimated Vegetative Recovery Period (years):** 1-3 (grasslands and forest understory)

**G. Estimated Hydrologic Response (brief description):** All three fires burned through pine savannah rangeland on private and Forest Service lands.

The Rice Fire was reported in the late morning on September 2<sup>nd</sup> and spread quickly under west winds, which shifted to north with 40-50 mph gusts in the evening. Ground response was rapid, including a large amount of dozer line constructed relatively quickly in rangeland terrain, and air attack arrived the morning of September 3<sup>rd</sup>. The fire was declared contained on Sept 7<sup>th</sup> and out on Sept 10 with final acreage 16,371 acres (Figure 1). Soil burn severity was “unburned” or low on 90%, moderate on 10%, and high on <<1% of the fire area. Hydrologic response is expected to be insignificant.

The Snider Fire was reported midday on September 2<sup>nd</sup> and spread quickly under the same high wind conditions as the Rice Fire. By mid afternoon many structures were threatened in the Liscom and Beaver Creek areas and an evacuation notice was requested for those areas and for a 10-mile radius around the fire. As with the Rice Fire ground response was rapid, and it was declared contained on Sept 7<sup>th</sup> and out on Sept 14 with final acreage 34,527 acres (Figure 2). Soil burn severity was “unburned” or low on 90%, moderate on 9%, and high on <1% of the fire area. Hydrologic response is expected to be insignificant.

The Wiltse Fire was reported on the evening of September 15th in an area that had burned relatively recently. It was declared contained on Sept 20<sup>th</sup> and out on Oct 14 with final acreage 1,047 acres (Figure 3). Soil burn severity was “unburned” or low on 53%, moderate on 47%, and high on <1% of the fire area. Change in hydrologic response in this area is expected to be minor or insignificant, partly due to the fact that the area was still recovering from the Ash Creek Fire which removed most of the vegetation in 2012.

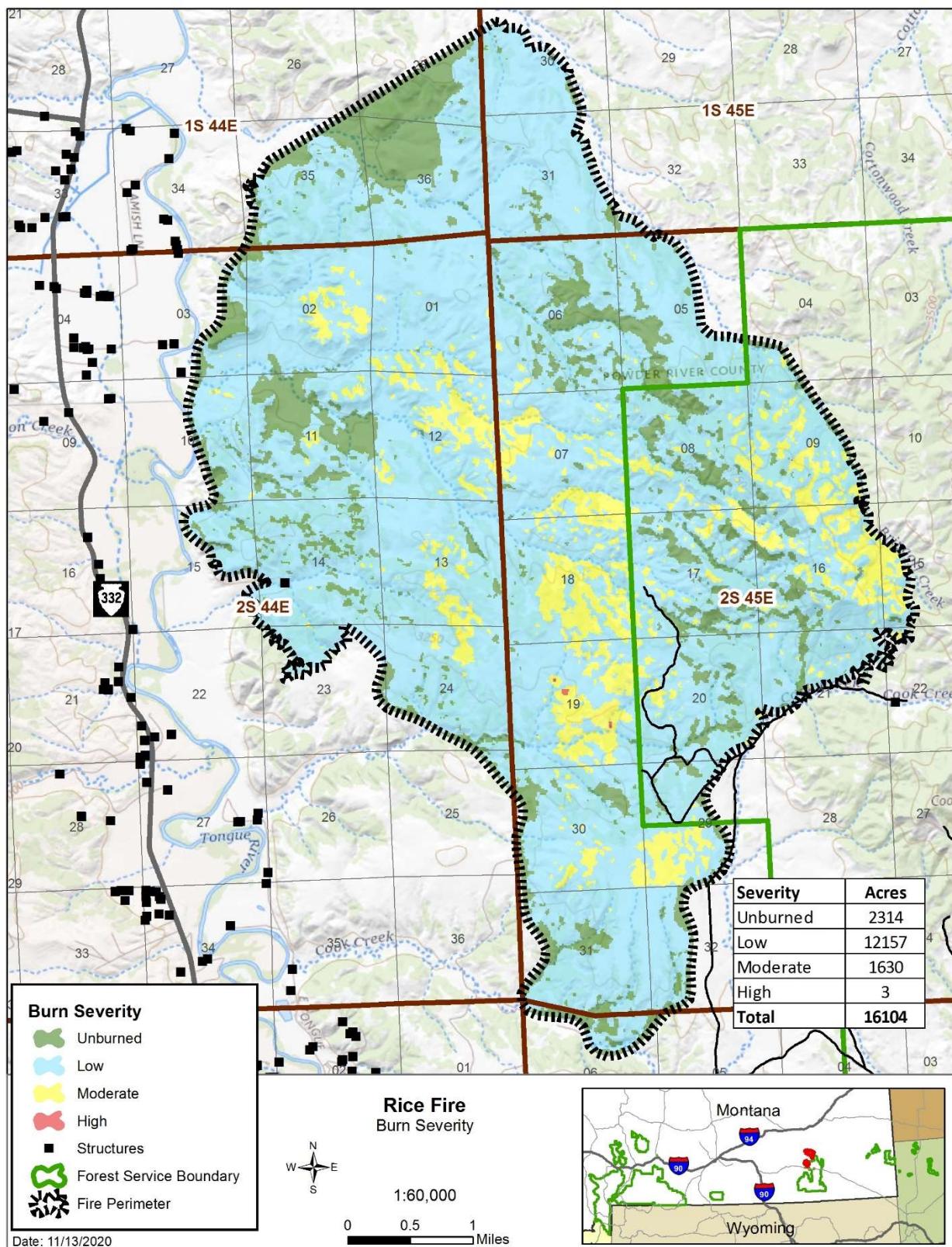


Figure 1: Rice Fire Soil Burn Severity Map

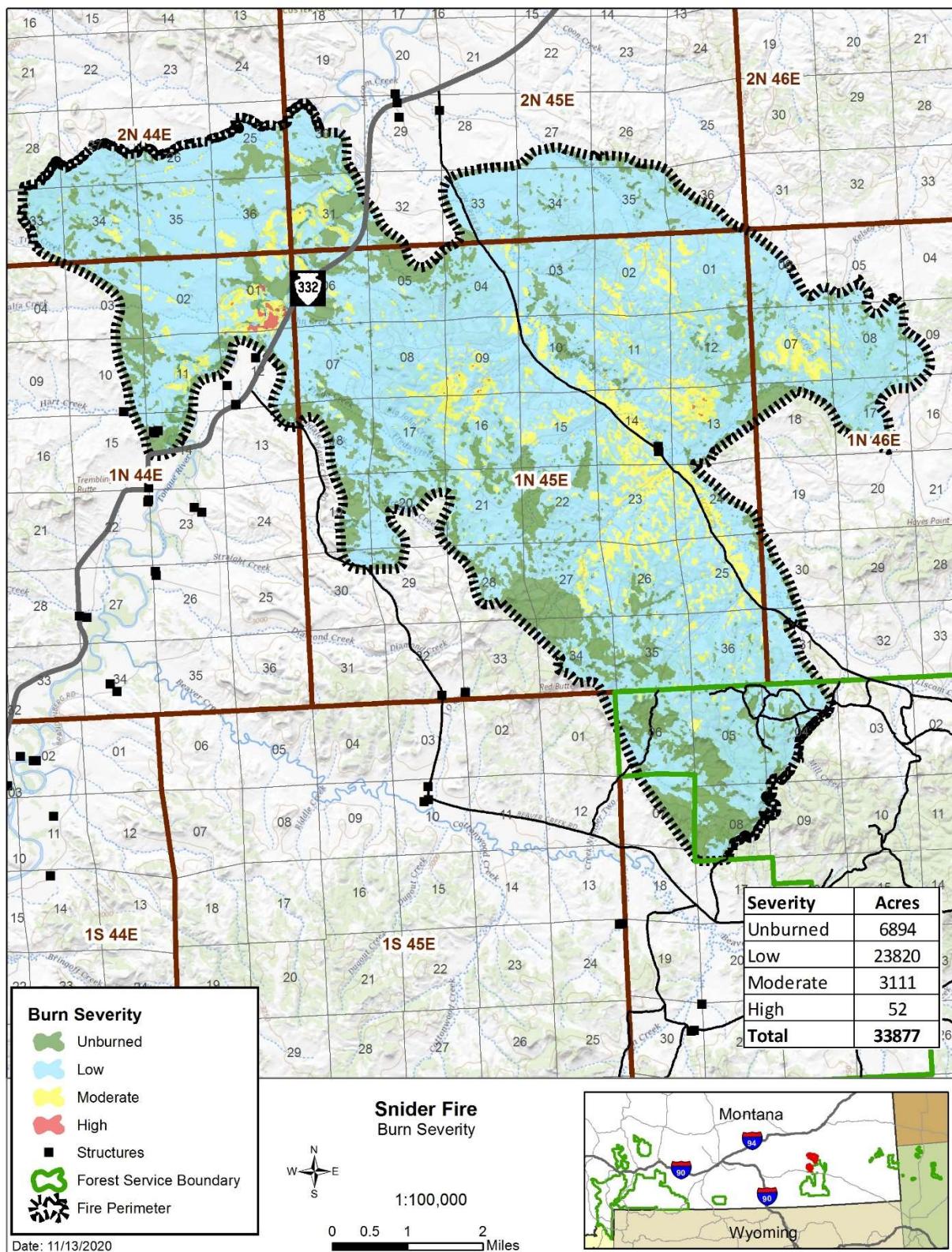


Figure 2: Snyder Fire Soil Burn Severity Map

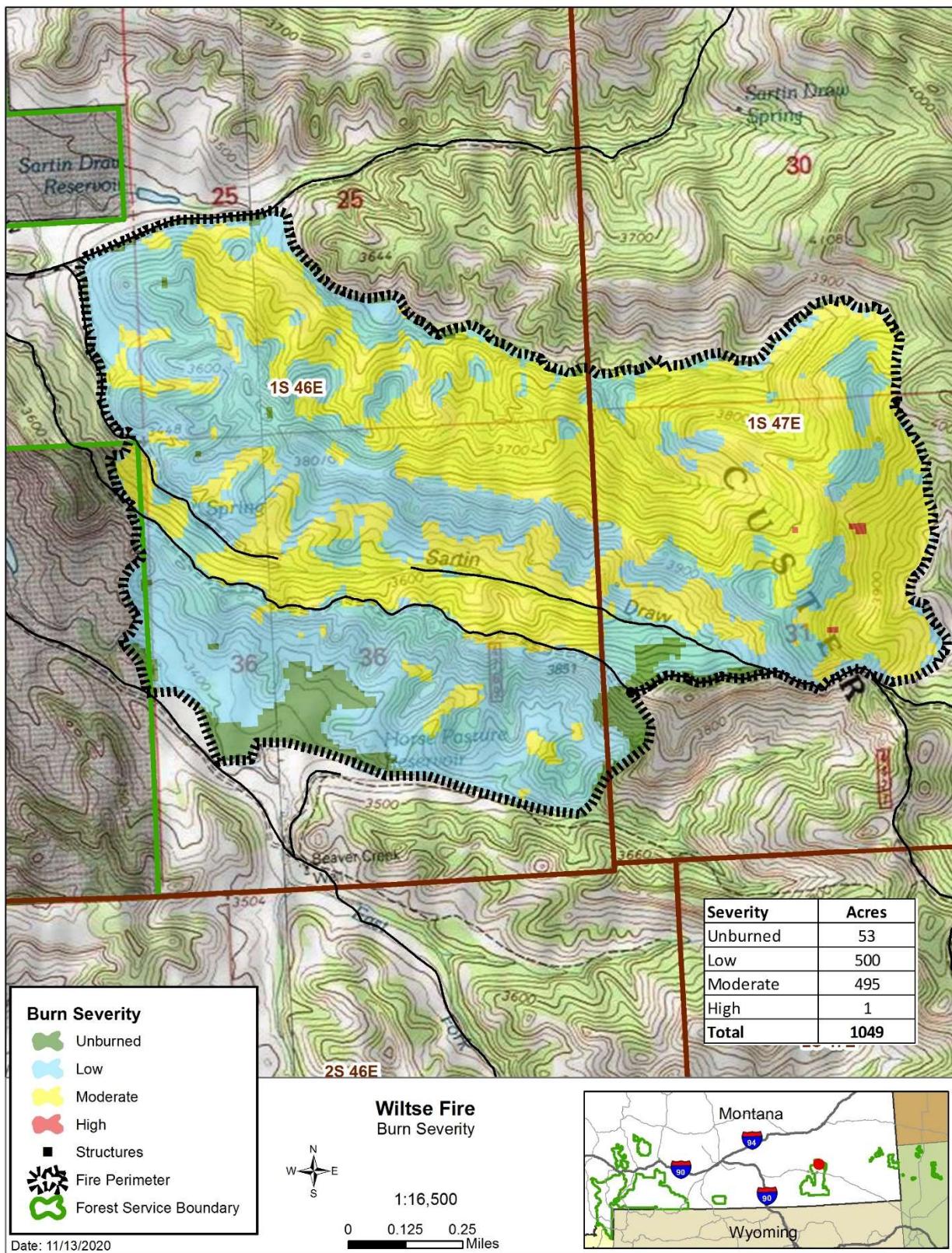


Figure 3: Wiltse Fire Soil Burn Severity Map

**PART V - SUMMARY OF ANALYSIS****Introduction/Background****A. Describe Critical Values/Resources and Threats (narrative):**

Table 15: 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): NA****2. Property (P): NA****3. Natural Resources (NR):****Natural Resources: Native Plant communities**

Noxious weeds already present in the burned areas, or inadvertently introduced during fire suppression activities, have the potential with the available seed bed to establish and/or spread within burned areas.

*Risk Assessment – Threats to native plant communities*

*Probability of Damage or Loss: Likely - Based on burn severity and disturbance associated with fire line construction and rehabilitation during suppression operations..*

*Magnitude of Consequence: Moderate – Loss of native plant communities and spread of noxious weeds.*

*Risk Level: High – Invasive species treatment is needed for areas disturbed by fire suppression activities such as fire lines. Additional invasive species monitoring next year will determine if weeds spread is occurring in the burned area.*

**4. Cultural and Heritage Resource:** The only effects to this resource were due to suppression efforts and these were addressed during post-fire rehabilitation work.

**B. Emergency Treatment Objectives:** As noted above, threats to life, property, and natural resources could result from post-fire conditions in the burned area. For these reasons the primary treatment objectives are:

- Minimize the establishment and spread of noxious weed infestations that have the potential to occur in the next 12 months.

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

Land: 50

#### D. Probability of Treatment Success

*Table 16: Probability of Treatment Success*

|                        |  | <b>Years after Treatment</b> |    |    |
|------------------------|--|------------------------------|----|----|
|                        |  | 1                            | 3  | 5  |
| <b>Land</b>            |  |                              |    |    |
| Noxious weed treatment |  | 80                           | 85 | 85 |

**E. Cost of No-Action (Including Loss):** The value of protecting the ecological integrity of native plant communities and soil productivity of the burned area from noxious weed infestation easily exceeds the cost of treatment and monitoring. Noxious weed establishment and spread would impact treatment costs in the future. Fire suppression activities have rendered 52 acres within the burned areas susceptible to weed establishment and spread. If pre-emptive detection and suppression of weeds on this 52 acres is not carried out, and weeds become established in these areas during the first year after the fire, the footprint of the weed infestation would likely spread over subsequent years. As a coarse estimate the weeds, once established in areas made susceptible by the fires, may spread into adjacent areas at the rate of 14% per year. Using the base estimate treatment area, this infestation area could grow to 100 acres in the five years after initial establishment and cost \$10,000 to treat. Thus, not addressing the risks equates to at an estimated cost of \$10,000 in the long run.

**F. Cost of Selected Alternative (Including Loss):** There remains a 20 percent chance that the proposed treatments for this work either may not be complete prior to damaging storms or fail. As a gross estimate, the cost is the treatment estimate (\$5,200) plus the loss ( $0.2 \times \$5,200$ ) which equals \$6,240.

#### G. Skills Represented on Burned-Area Survey Team:

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

#### Team Leader:

Email: dale.white@usda.gov

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#### Forest BAER Coordinator:

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#### Team Members:

| Skill               | Team Member Name |
|---------------------|------------------|
| <i>Team Lead(s)</i> | Dale White       |
| <i>Soils</i>        | Erik Anderson    |
| <i>Hydrology</i>    | Dale White       |
| <i>GIS</i>          | Bryce Hancock    |
| <i>Archaeology</i>  | Mike Bergstrom   |
| <i>Weeds</i>        | Beth Bischoff    |

**H. Treatment Narrative:****Land Treatments:****Objective:**

The objective is to detect and suppress new weed infestations in the burned area. The unintentional introduction and dispersal of invasive weeds into areas disturbed by fire suppression and rehabilitation has the potential to establish persistent weed populations. Left unchecked, it is likely that such weed infestations will increase post-fire, particularly in moderate to high burn severity areas. In high soil burn severity areas, due to conditions favorable to accelerated growth and reproduction and release from competition with native plant communities. It is expected that most native vegetation will recover if weed invasions are minimized.

**Methods:**

As monitoring indicates, treat:

- 1) Areas disturbed during suppression including dozer lines, hand lines, routes travelled for suppression, etc.
- 2) Native plant communities near vector corridors

**Channel Treatments: NA****Roads and Trail Treatments: NA****Protection/Safety Treatments: NA****I. Monitoring Narrative: NA****PART VI – EMERGENCY STABILIZATION TREATMENTS AND SOURCE OF FUNDS**

| Line Items                       | Unit  | NFS Lands |      |            | Other          | Other Lands |            |        | All        |            |
|----------------------------------|-------|-----------|------|------------|----------------|-------------|------------|--------|------------|------------|
|                                  |       | Units     | Cost | # of Units | BAER \$        | \$          | # of units | Fed \$ | # of Units | Non Fed \$ |
| <b>A. Land Treatments</b>        |       |           |      |            |                |             |            |        |            |            |
| EDRR suppression-disturbed areas | Acres | 100       |      | 22         | \$2,200        |             |            |        |            |            |
| EDRR native grassland range      | Acres | 100       |      | 30         | \$3,000        |             |            |        |            |            |
| <i>Subtotal Land Treatments</i>  |       |           |      |            | <b>\$5,200</b> |             |            |        |            |            |
| <b>B. Channel Treatments</b>     |       |           |      |            |                |             |            |        |            |            |
| None                             |       |           |      |            |                |             |            |        |            |            |
| <b>C. Road and Trails</b>        |       |           |      |            |                |             |            |        |            |            |
| None                             |       |           |      |            |                |             |            |        |            |            |
| <b>D. Protection/Safety</b>      |       |           |      |            |                |             |            |        |            |            |
| None                             |       |           |      |            |                |             |            |        |            |            |
| <b>E. BAER Evaluation</b>        |       |           |      |            |                |             |            |        |            |            |
| Initial Assessment               | Lump  | \$4,200   |      | 1          | \$4,200        |             |            |        |            |            |
| <i>Subtotal Evaluation</i>       |       |           |      |            | <b>\$4,200</b> |             |            |        |            |            |
| <b>F. Monitoring</b>             |       |           |      |            |                |             |            |        |            |            |
| <b>NA</b>                        |       |           |      |            |                |             |            |        |            |            |
| Total for this request           |       |           |      |            | <b>\$5,200</b> |             |            |        |            |            |

**PART VII - APPROVALS**

1. \_\_\_\_\_  
Forest Supervisor    Date