

# *Suppression Repair Plan*

## **BLANKET CREEK AND SPRUCE LAKE FIRES**

### **Rogue River – Siskiyou National Forest**

**09 August, 2017**

**Background:**

The primary goal of wildfire rehabilitation is to mitigate or eliminate environmental resource impacts caused by the fire suppression effort and rehab the area to as natural conditions as possible.

**Purpose:**

The goal of the following bulleted list is to mitigate the detrimental effects incurred by suppression tactics during fire incidents. The focus of the plan seeks to rehabilitate any damage caused as a result of suppression actions.

**Firelines and access trails will not be obliterated until the fire is declared out or until directed by the District Ranger.**

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\_\_\_\_/s/ Al Hahn\_\_\_\_\_

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# **Blanket Complex**

## **Guidelines for Rehabilitation of Fire Suppression Activities**

### **August 6, 2017**

#### **Plan Objectives**

The objective of this rehabilitation plan is to mitigate the effects to the land, water, and property resources resulting from the Blanket Creek and Spruce Lake Fires suppression activities on Rogue River-Siskiyou National Forest administered lands. Primary rehabilitation needs are erosion control, restoration of hydrologic function, preventing the establishment of noxious weed populations, and removal of refuse resulting from suppression activities. The following includes general guidance to be applied on all fires. Additional site-specific measures and special considerations for each fire on the complexes administered lands may supplement this general guidance if needed.

#### **Section 1: General Guidelines**

- Following all rehabilitation actions in all areas, remove all litter, signs, and flagging from all areas utilized for suppression activities, including staging areas, drop points, safety zones, escape routes, water sources, firelines, heli-base locations, heli-spots, sling sites, access routes, and camping areas. USFS Resource Advisors will be contacted with questions, concerns, or suggestions prior to implementation of rehabilitation requirements. For Rehabilitation Standards for the Crater Lake National Park, consult the National Park READs.

#### **Section 2: Constructed Hand Line Rehabilitation**

- After fire spread is secured and declared out, replace dug-out soil and/or duff, as appropriate to site-specific landscapes. Obliterate any berms and leave as appearing natural, i.e. blend in with the landscape contours.
- Begin rehabilitation work from top or bottom of the fire, as appropriate at a site-specific level, in an attempt to avoid walking over newly rehabbed areas.
- Provide some means for drainage, such as shadow-depth water bars or natural materials that will act as sediment dams, to prevent erosion on firelines and existing and created trails that are the result of suppression activities on sloped areas.
- Construct water bars with a skew of 45-55 degrees to prevent the bars from filling with sediment and at distances appropriate for the fireline slope (Table 1). If the site allows, place organic debris on the downslope outlet to help dissipate the water.

**Table 1: Water Bar Construction Guidelines (Hand and Dozer Lines)**

| Fire Line Slope % | Maximum Water Bar Spacing (feet) |
|-------------------|----------------------------------|
| 2-5               | 300                              |
| 6-10              | 200                              |
| 11-15             | 150                              |
| 16-20             | 100                              |
| 21-35             | 75                               |
| 36+               | 50                               |

- **After the fire is declared controlled**, scatter cut brush and limbs onto the fireline or impacted area so that material blends with the naturally existing landscape (Figure 1).
- Scatter obvious, excessive piles and windrows of cut limbs/seedlings/saplings into the black. This will reduce erosion and help with sapling recruitment.

**Figure 1. Example of fireline camouflaging to provide for a natural appearance on the landscape.**



## Fire Access Trails

These are defined as trails created by foot traffic along hose lines and firelines, accessing pumps sites and all areas of the fire. Treatments differ for access trails in burned areas versus vegetated areas.

**Through Fire:** Access trails that travel through the fire may need attention in preventing further erosion and further use. The following will be utilized in rehabilitation of access trails utilized through the fire area:

- Restore slope contour by raking in nearby fill to a level equal to adjacent soil level.
- Drag available burned logs and brush across the trail as available.
- If slope is less than 25 degrees, drainage dips should be added every 20 feet, or where natural features on the land dictate them most useful (i.e. where they provide the most drainage), such as where the trail changes direction.
- Camouflage entry points of trails to preclude future use by people and OHVs.

**Through Vegetation:** An access trail through vegetation is rehabilitated as if it were a fireline, but because the level of impact is not normally as severe, the amount of work required is less intensive.

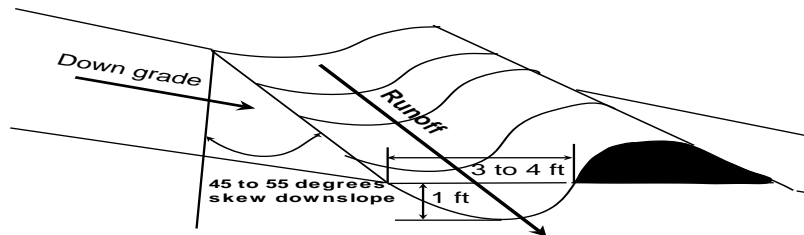
- If soil is compacted, rough up the soil lightly, retaining remaining live vegetation while doing so.
- Replace recoverable soil and rocks that were displaced during the use of the access trail, while maintaining contours of the slope.
- Restore slope contour, compensating for settling by mounding material 4-6 inches higher within the line than original contour of the slope.
- Replace removed litter by raking it back across the access trail.
- Drag available unburned logs and green material across trail.
- If the access trail is determined to be greater than 4 inches deep and the slope is very steep, follow the rehabilitation standards for fireline construction.

## Rehabilitation: Dozer Lines

- Use an excavator or tracked-hoe to rehab dozer line by pulling in material to dozer lines. Dozers will not be used to rehab dozer line under any circumstance.
- Use existing native materials on site for sediment traps along the fireline.
- Replace sections of logs that were cut out of the fireline.
- Obliterate any berms or mounded material 2- feet higher than original contour.
- Discourage use of newly created dozer lines as trails by disguising with brush, limbs, poles, and logs in a naturally appearing arrangement.
- Dozer Line on existing OHV Trails - trails will be returned to standards. 50 inch width with rolling dips or water bars per Table 1.
- Constructing water bars is the preferred erosion control method for all firelines. Dig water bars at a 45° angle to the slope. Direct drainage into the green if it does not create containment issues (transporting burning embers across the line). The following table provides spacing guidelines for constructing water bars.

| Gradient  | Spacing (feet) |
|-----------|----------------|
| 1% - 9%   | 100            |
| 10% - 19% | 75             |
| 20% - 39% | 50             |
| >40%      | 25             |

Monitoring of water bars has shown constructing a skew of between 45 to 55 degrees will help prevent the bars from filling with sediment. Place organic debris on the down-slope outlet to help dissipate the water, if the site allows. Placement of water bars perpendicular (90 degrees) to the road has proven to create problems and the water bars can act as check dams.



Typical Water Bar

per Chris Park, RRSNF Hydrologist

## Re-vegetation Needs: Dozer Lines:

1. In general dozer lines and reopened roads will be seeded with native grasses, to decrease erosion and to visually enhance the disturbed ground.
2. Broadcast the following species (available from High Cascades RD) by hand, after mixing together:
3. Grass plug planting as appropriate. Plant 1,000 plugs per acre as needed.

| Species                                 | Pounds/Ac |
|---|-----------|
| Elymus glaucus                          | 15        |
| Bromus carinatus                        | 15        |
| Deschampsia<br>elongatus                | 3         |
| Total Seed lbs. = 33#/ac                |           |
| Per Jessica Celis, <i>SMRD Botanist</i> |           |

## Rehabilitation Success Evaluation

### 1 Year:

- No significant erosion is visible
- No rills over 2" in depth are present and erosion control mats and/ or brush is still in place.
- No evidence of fireline in rocky outcrops, talus, or scree slopes.

### 2-3 Years:

- No evidence of erosion is observed. Evidence of suitable new plant invasion is observed.

### >5 years:

- No evidence of erosion.
- Suitable vegetation covers the fireline at a frequency of 80% of what was there pre-fire.

## **Helispots**

- Scatter all trees and brush cut during heli-spot construction.
- Cover and camouflage all bare soil created by construction of heli-spot.
- Re-contour all areas within heli-spot to natural land contours.

## **Sling Sites**

- If vegetation has been cut, lop and scatter back onto the site to camouflage it. Flush cut all stumps.
- Re-contour site as needed.
- Back haul all equipment and refuse.

## **Rehabilitation of Contingency lines, Drop Points, Dip Sites, Pump Chances, Heli-well sites and Camps (if applicable)**

- Restore any campsites used to pre-use conditions. Fill in sleeping holes and scatter debris and rocks on top to camouflage.
- Ensure that all inlets and outlets of all culverts are free of logs, brush and other debris.
- Obliterate constructed off road contingency lines by pulling material back onto them and scattering vegetative debris over them to blend them in with the surrounding natural landscape.
- Rehabilitate all areas disturbed by off road contingency line and heli-well activities to the extent possible to create a natural appearance.
- Use existing native materials (rock, wood) on site for sediment traps along off road contingency lines.
- Discourage use of off road contingency lines as trails by disguising with brush, limbs, poles, and logs in a naturally appearing arrangement.
- Constructing water bars is the preferred erosion control method for all off road contingency lines. Dig water bars at a 45° angle to the slope. Use the waterbar Table 1 above for hand and dozer lines as reference for water bar.

## **Roadside Clearing of Vegetation for Contingency Line:**

- Chip all crew slash work as well as any excess masticator slash. Cut material into lengths for handling. Deck outside ditches and drainages, off the traveled way and turnout locations prior to chipping. Chips should be dispersed evenly across the adjacent landscape, and not in large piles.
- Do not leave woody debris and slash in excess of 12 inches in length or 3 inches in diameter, or concentrations which may plug ditches or culverts, in ditches, drainage channels, or on backslopes, traveled way, shoulders, or turnouts.

### **Road Blading for Driving Safety:**

- Roads should be spot bladed with water to provide safe travel. Much of this road system has steeper road grades that lead to heavy if not extreme washboarding with increased vehicle use.
- Recommend night time blading to minimize ingress/egress impacts with the fire crews and to minimize water use. Anticipate each night an eight hour shift of spot blading will keep the roads in safe passable condition for the crews during the course of this fire activity.
- A roller and water truck may be needed to compact the rock on the vertical grades to minimize the overall blading effort during the course of this activity.
- Place volume pumps at all pumper sites to minimize impacts from tire ruts to these streams. Pumps will move tenders back from stream edge to flat ground where water run back will not reach the stream. The placement of silt fence may also be necessary to prevent this dirty runoff from reaching the streams.
- Damaged culverts need to be repaired or replaced. Provide Resource Advisor with the location of culverts if damage occurs.
- Reblock any road opened for fire suppression activities

**\*Contact Resource Advisor or Technical Specialist with questions, concerns, or suggestions.\***