

Suppression Repair Plan – Borel Fire



Prepared and recommended by:

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Approved By:

Sequoia N.F. Agency Administrator

Bakersfield BLM Agency Administrator

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I.C.

1. OBJECTIVES:

The overall objective of this plan is to describe how damage caused by fire suppression activities will be repaired. Detrimental effects and damage to resources caused by the wildfire itself are not considered under this plan.

This is an “**All Lands**” repair plan including Bureau of Land Management and Private land suppression repair.

Implementation of this fire suppression repair plan will comply with all pertinent rules and regulations regarding fire suppression activities, including policies covered in FSH 6509.1lg_50. This repair plan complies with management direction, standards, and guidelines in the Sequoia National Forest Land and Resource Management Plan. Bakersfield Bureau of Land Management field office management plans. Damage to State, County, and private lands caused by wildland fire suppression activities will be repaired to the minimum extent needed to prevent further loss or injury. Treatment of the various fire suppression activities, as well as the responsibility for implementation, are described below.

This fire suppression repair plan is organized in phases of implementation to define the timing of activities depending on fire behavior and available line personnel. Repairs should be completed when **tactically appropriate** to do so ie. equipment and proper personnel including REAF’s are available to complete the work.

As much priority suppression repair work will be completed by the Incident Management Team (IMT) in place when the timing is right to accomplish the repairs. Repairs will be accomplished in close coordination with the lead resource advisor (READ). A list of necessary repairs is outlined in this document and approved by all necessary officials.

Priority repairs will occur on roads, trails, fire lines, drop points, staging areas, spike camps, helispots, water drafting sites, and all other facilities used by suppression resources. Examples of Stage 1 repairs include erosion control measures (water bars, rolling dips, road berm removal, opening of culverts and road ditches, etc.), grading, ditch clearing, and decking of felled trees along utilized system roads, restoring drafting sites and water crossings, and removing all trash, cached supplies, and hose lays from the fire area. Priority repairs are driven by the urgency in properly controlling erosion and user safety prior to the onset of winter precipitation. The timing of these actions should coincide with a reduction in fire behavior which provides for the safety of all repair personnel.

Hazard reduction to facilitate safe access within the fire perimeter will occur during suppression repair.

Invariably not all suppression repairs will be completed by the IMT. Phase II suppression repair will be a shared responsibility of the IMT and Sequoia National Forest, Bureau of Land Management and Calfire. The IMT will be expected to complete as much repair as possible as fire conditions equipment and personnel warrant. The agency administrator representative and the READ will work with the IMT on the expectations of Phase II repair.

These repairs will occur at the appropriate time(s), generally after priority activities have been completed and after the fire has been contained.

Repairs on non-forest service land are the responsibility of the landowner. The overall objectives of suppression repair activities are to minimize resource impacts and, to the extent practical, return the areas affected by suppression efforts to conditions like those that existed prior to the incident.

This plan has been approved by the Incident Commander of the IMT and the Agency Administrator. Any additions or clarification of guidelines will be incorporated by addendum.

The objectives of suppression repair on the Borel fire are:

- 1) Minimize sediment delivery to stream channels.
- 2) Minimize loss of soil productivity due to potential erosion in cleared areas.
- 3) Repair damage to NFS/BLM and County roads and trails.
- 4) Minimize suppression impacts to Wilderness, Wilderness Study Areas, inventoried roadless areas and wild and scenic river corridors.
- 5) Restore facilities used by suppression resources.
- 6) Avoid and minimize impacts to cultural resources.
- 7) Treat fuels created during fire suppression activities and suppression repair activities.
- 8) Minimize damage to impacted meadows and wetlands.

These objectives will be reviewed and validated by the READs assigned to the incident by verifying work has been completed to standard in Field Maps.

Existing suppression repair needs are mapped in Field Maps and serve as the basis for prioritizing repair needs.

GENERAL REPAIR GUIDELINES - All Divisions

Unless otherwise recommended by the READ/REAF's, the following guidelines will be followed during suppression repair. Resource advisors will identify all repair needs and verify their successful completion to the READ.

A. Cultural Resources

Consult with the assigned archaeologist prior to implementing repair work at locations mapped for archaeological monitoring.

Protect cultural resource discoveries by avoiding them, leaving them in place and reporting them to an archaeologist or READ immediately.

B. Fire Lines (Dozer)

Based on terrain, soil type and erodibility consider recontouring dozer lines and spreading slash over the line and minimizing water bar/rolling dips construction. *Excavators are preferable to dozers for completing repairs on dozer lines and should be used when available.* REAF/READ in consultation with Operations will determine best course of action. Construct water bars and/or rolling dips on all fire lines where surface erosion is likely to be a concern.

A crew may be needed to follow-up after the equipment to ensure slash is spread evenly and if water bars/rolling dips are constructed clearing outlets to ensure proper drainage.

- Water bar design and placement should follow the intent of the specifications below and be implemented according to the terrain and soil types present at each fire line.
- Highly erodible, steep slopes may warrant more frequent water bar placement than the guidelines indicate. Back-blading may be useful for compacting very steep dozer lines perpendicular to the hillside contour.
- Water bars and rolling dips should alternate drainage directions when practical, and drain into natural channels, if present.

Where dozer line intersects roads or motorized trails, construct non-OHV accessible utilizing logs and blocks, and spread brush/snags across the road for as far as practical away from intersection- the goal is to discourage OHV use of dozer line.

C. Fire Lines (Handline)

Again, consider recontouring and slashing first rather than waterbars to meet repair objectives.

Construct water bars according to the standards below. Underslung handlines do not require rehabilitation. Where handlines intersect roads or motorized trails, construct non-OHV accessible water bars, and spread brush/fell snags across line for a distance away from intersection—the goal is to discourage OHV use of the handline.

Fell and lop-scatter or chip hazard trees along roads within the fire perimeter.

Where practical, trenched, or cupped hand lines should be pulled back to the natural contour of the slope to reduce channeling water erosion.

Fire lines that cross drainages will be cleaned of debris, excess dirt, and recontoured to the original slope to the extent feasible. Constructed stream crossings (temporary culverts, Humboldt crossings, etc.) will be removed. Vegetation should be lopped and scattered off the fire line or piled for burning, chipping, or removal. A REAF/READ should be present during the implementation of this repair activity.

D. Discrete Suppression Activity Areas (Spike Camps, Drop Points, Staging Areas, Safety Zones, Tanks, Helispots, Sling Sites, etc.)

Constructed or improved discrete suppression activity areas will have any accumulated berms spread out to reduce the likelihood of pooling and improper drainage.

Pile and plastic cover all slash generated during area construction directly on the area for ease of burning. Piles will be burned when conditions are appropriate under an approved burn plan.

All discrete suppression activity areas identified as Primary will have no slash scattered across their surfaces.

All discrete suppression activity areas identified as non-primary may have adjacent slash spread across their surfaces. Slash pile construction is still preferable to scattering and may be necessary for excessive quantities of slash.

E. FS/BLM System Trails-Motorized and non-motorized

Restore system trails to pre-fire condition specifications. Spread accumulations of duff and mineral soil but consider keeping foot trail to bare mineral soil. Desired trail bed width is 24 inches on primary trails and 18 to 24 inches on secondary trails.

Restore trail surface and water drainage features. identified in their Trail Management Objective.

F. FS/BLM System Roads (Main Stems, Spurs, and Turnouts)

System roads used by fire suppression resources will be returned to their pre-existing conditions.

Chip piles of vegetation along improved roads (e.g., Sherman Pass Road, Mosquito Flat Road).

Dirt and gravel roads will be watered and graded to restore and stabilize their surfaces.

Berms created along roads during fire suppression will be removed to restore proper drainage.

Ditches, side drains, rolling dips, culverts, and other existing road drainage features that were damaged by fire suppression activities will be repaired and or cleaned to functioning condition and established forest service road maintenance standards.

Clear accumulated debris from culvert inlets.

Restore improved or modified low water crossings to pre-fire conditions. A READ should be present during the implementation of this repair activity.

Fall all hazardous trees along roads used by fire personal.

Pile or deck trees felled during suppression and hazard mitigation outside of riparian areas.

Chip slash and spread chips so they do not impact drainage structures or go into stream courses or wet areas.

G. Wetlands and Meadows

No work should be implemented in these areas prior to consultation with the READ/REAF.

Site specific-Special repair instructions maybe necessary depending on level of impact.

Use hand tools to decompact wetland and meadow soils impacted by suppression activity.

H. Water Sources

Remove any dams, dikes, or other impoundments that were created for fire suppression efforts.

Recontour stream banks damaged by suppression activities as directed by the READ.

Clear any accumulated debris from culvert inlets at drafting sites.

Clean and/or remove any soil and vegetation impacted by fuel or oil spills.

I. Gates and Fences

Repair or replace any gates and fences cut or damaged by fire suppression activities unless no longer needed, in which case remove them in lieu of making repairs.

J. Garbage and Equipment Removal

Fire suppression equipment and supplies, litter, discarded hose, and other material refuse, and all non-necessary flagging and signage will be removed from all areas of fire suppression.

K. Miscellaneous

Remove porta-potties, signage, non-necessary flagging, and any installed structural wrap from all areas of fire suppression.

If recreation site vault toilets were used significantly by fire suppression personnel, ensure toilets are pumped. This can be paid for with P code repair funds.

L. BLM Wilderness and Wilderness Study Areas (WSA)

Reseeding will need to occur for all disturbed areas in Wilderness and WSAs. Seed should be locally sourced and seeding needs to occur at during the appropriate season which could be many months after the fire. Please coordinate with local unit specialists and READ/REAF for additional guidance.

Division Specific and Special Considerations

Fire Camp

Camp 9 ICP

- Repair damaged ground from engine going through moist area

Suboil, seed and mulch areas as appropriate certified weed free seed and mulch. Prior to implementation, consult with the district or forest botanist to determine which species to use as well as the application rate.

BLM Specific Dozer Lines around the community of Bodfish

- Bald Mountain Dozer Line: This was a preexisting dozer line widened to 4-6 blades. It follows the prominent ridge above Saddle Springs Road for approximately 1.5 miles terminating at a safety zone of approximately 200x200 feet. The BLM would like to maintain the dozer line and safety zone as strategic fire management features. On this line we would still need water bars for erosion control and mastication of staked vegetation.

- Hooper Hill Dozer Line: This line is a series of dozer line approximately 2 miles in length and single blade dozer line. This follows the prominent feature of Hooper Hill ridge running North connecting to both the Kern Canyon Road and Calinete Bodfish Road. We would like to maintain these lines as a strategic fire management feature. Water bars would be needed for erosion control. Access points would need to be blocked with a cattle gate and small stretches of fence to block off-highway vehicle use and to easily allow us to maintain the line in the future.

Appendix A:

STANDARDS AND GUIDELINES

Water Bars:

- Install water bars on all fire lines with slopes greater than 20%.
- Space a maximum of 50 feet on slopes 20-40%, and max 25 feet apart on slopes greater than 40%.
- Where feasible, drain into the unburned area.
- Where feasible, place water bars at points where energy from the water can be effectively dissipated, (e.g. onto rocky areas, into heavy brush, etc.).
- Keep the ends of water bars open to allow water to flow out and distribute over the undisturbed area.
- Where water bars drain toward a creek, place slash or rocks downhill of the outlet to help dissipate energy and filter sediment.
- Logs, rocks, and other material (if available) can be used to dissipate the water diverted by the water bar. Use primarily those logs and rocks that have been disturbed during hand line or dozer line construction.

When locating and building water bars, place them the right **distance** apart (see chart below), at a **diagonal** to the fire line, so that they **divert**, then **discharge**, then **dissipate** the energy of the flowing water. Be sure to make them deep enough to be durable.

Fireline slope %	Maximum Water bar spacing (feet)
21-40	50
41-60	25

Recommended spacing for water bars on fire lines. Water bars should be no further apart than noted here, but they may be closer. When in doubt, put in more.

