

**Bald Fire Salvage
and
Restoration Project
Range Report**

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Introduction

The Bald Fire Salvage and Restoration Project (Bald Project) area is located approximately 14 miles southeast of Fall River Mills, California and encompasses part or all of four livestock grazing allotments on the Hat Creek Ranger District. The Bald Mountain Allotment is entirely within the fire perimeter. Approximately half the acreage of the Willow Springs and Bainbridge Allotments are within the fire, and only a few acres within the Bear Valley Allotment were burned. The fire burned with variable intensity across the allotments. Livestock grazing within the allotments will be affected depending on how severely range vegetation burned, damage to structural improvements such as water developments and fences, whether livestock can be kept out of burned areas if allowed to graze unburned portions of the allotments, and how soon salvage and restoration treatments can be completed so that repairs to range improvements can also be completed.

Existing Condition

The Bald Project area overlaps four livestock grazing allotments on the Hat Creek Ranger District. Livestock grazing is authorized under three Term Grazing Permits issued to three different individuals. The following table summarizes the allotment and permittee information.

Allotment	Acres	Permittee	Livestock #s	Season of Use	Acres w/i Fire
Bald Mtn.	3,559	Giacomini	135 cow/calf	4/16-5/31	3,493 (98%)
Bainbridge	9,448	Giacomini	280 cow/calf	6/1-9/30	3,196 (34%)
Willow Springs	46,596	Beaver Creek Ranch	450 cow/calf	6/1-10/15	24,684 (53%)
Bear Valley	35,218	Crum	240 cow/calf	6/1-9/30	171 (<1%)

The Bald Mountain Allotment is entirely within the fire perimeter. Nearly 90% of the acres burned have moderately high to very high burn severity. All fences, approximately 8 miles, within this allotment were burned, however damage was primarily to wooden posts and H-braces. The majority of the barbed wire seems to have retained its tensile strength. A portion of a wooden gathering corral at Moon Springs was also burned. This allotment is typically grazed every other year, alternating with another spring allotment, depending on annual conditions.

Approximately half the acreage of the Willow Springs Allotment burned, of which 19,480 acres (80%) have moderately high to very high burn severity. Fences were damaged to varying degrees. Most damage was confined to wooden posts and H-braces, but includes many areas where trees and scab boards were used in place of posts. In these instances, trees and scab boards burned and will require new posts. The Willow Springs allotment is well fenced, including boundary, interior division, riparian, and enclosure fences. Within the fire boundary,

approximately 6.75 miles of boundary fence burned, of most importance the boundary fence between Forest Service and Bureau of Land Management lands. Another 17 miles of interior fences burned, including seven miles of division fence which is critical for controlling livestock movement between the north and south portions of the allotment.

One third of the Bainbridge Allotment was within the fire, approximately 3,196 acres. Of those, 2,586 acres (81%) have moderately high to very high burn severity. Fences that burned are those that border the neighboring Willow Springs Allotment, approximately 4 miles in length. This allotment is part of a 4 pasture rotation grazing system with the adjacent Proctor Creek Allotment.

Only 171 acres within the Bear Valley Allotment were burned, however half of those acres were burned at moderately high to very high severity. Approximately $\frac{3}{4}$ mile of boundary fence with the Willow Springs Allotment was burned.

Desired Condition

Management Direction and Resource Objectives are identified in the Lassen National Forest Land and Resource Management Plan (LRMP1993), as amended by the Sierra Nevada Forest Plan Amendment (SNFPA 2004).

Management Prescription B – Range/Wildlife

Through allotment management plans, enhance range productivity and utilization, and provide at least medium habitat capability for wildlife species emphasized in the Management Area direction. Maintain or enhance satisfactory ecological condition.

The Bald Fire burned entirely within the Ladder Management Area (#6). Management Prescription B is applied to approximately 27% of the MA acres.

Allotment Management Strategies

The following Allotment Management Strategies apply to the four affected allotments within the Bald Fire area.

Intensive Management (D) – Grazing systems and structural and non-structural improvements are designed and implemented to maximize forage production and distribution of livestock while achieving rangeland management objectives. (Bainbridge, Bear Valley, Willow Springs)

Extensive Management (C) - Management objective is distribution of livestock use over rangelands to meet rangeland management objectives using cost-effective structural improvements. (Bald Mountain)

Forest Standards and Guides

Provide for long-term rangeland productivity for fisheries, wildlife, soil, water, timber, and livestock forage values. Emphasize managing rangelands to meet desired ecological conditions.

Manage grazing to achieve desired vegetative conditions on all rangelands, i.e. satisfactory or better ecologic condition with stable or upward trends.

Meadows are in or moving toward high ecological condition represented by at least 2 out of 3 of the following conditions: >50% relative frequency of plant species in the high functional group; > 22 cm rooting depth; < 5% bare soil.

Uplands are a mix of native grass and forb communities with bare soil less than 45%. Ground cover contains 30 percent cover in high functional group species, depending on soils. Perennial grasses set ample seed annually.

Where recommended, allow no livestock grazing on perennial grass range for two grazing seasons after prescribed or natural fires and planting or seeding forage species to allow desirable plants to establish.

Manage livestock grazing within plantations as needed to prevent unacceptable damage to seedlings.

Post Fire Existing Condition

Effects of proposed salvage activities are discussed in detail under each of the alternatives being considered. Effects to the rangeland resource and livestock management caused by the Bald Fire itself are discussed first, below.

The rangeland resource was directly affected primarily by the Bald Fire itself. In severely burned areas of the fire, the understory herbaceous vegetation was completely consumed. Above ground material as well as root systems and crowns of perennial grasses were likely killed. In lightly or moderately burned areas, aerial portions of herbaceous vegetation were burned, but for the most part, plant crowns and root systems were not severely damaged. In fact, light severity fire acts as a disturbance, much like mowing a lawn, by removing some of the above ground plant material. The plant then begins to regrow leaves, puts effort into seed production, and stores root reserves for the next growing cycle. Light fire can remove decadent material from a plant and invigorate new, young growth.

In areas of the Bald Fire that have high to extreme burn severity, herbaceous plants will not regrow, but be replaced by seed that was either in the soil and survived the fire, or by seed from adjacent areas. New plants will establish, but slowly. These areas will be rested from livestock grazing to allow vegetation to reestablish, soil to stabilize, and trend toward satisfactory ecological condition.

Areas of light to moderate burn severity were burned in a mosaic pattern, where not everything burned or burned to the same degree. As a result, many of those plants are capable of re-growing or there is an existing seed source that will replace weaker plants. These areas will recover more quickly, but will also be rested from livestock grazing for at least 2 years, or until the sites show an upward trend toward satisfactory ecological condition.

Livestock management was directly affected by the Bald Fire because of the damage caused to structural improvements, including boundary and pasture fences, corrals, riparian fences, and spring developments. This infrastructure is necessary for managing livestock movement within and across grazing allotments and will require repair before livestock return to the burned area to graze. Damage was variable across the four affected allotments. The Bear Valley and Bainbridge Allotments had minimal damage to small sections of boundary fence that will be easily repaired. Livestock can be managed to keep them out of the burned area, so once the boundary fences are

repaired, the remainder of those allotments can be grazed. The Bald Mountain and Willow Springs Allotments have extensive fence damage and livestock management would not be able to keep livestock out of the burned areas without fence repair. As a result, these allotments will not be immediately available for grazing.

Environmental Consequences

Alternatives

Alternatives are fully described in the environmental analysis and not included in this report. Effects to the rangeland resource and livestock management are discussed for each proposed activity.

Common to All Alternatives

Livestock grazing would be deferred in the burned area until ecological conditions are at least stable and in satisfactory condition. Fences would be repaired prior to livestock returning to allotments to control use within the burned area and other identified sensitive areas.

The removal of hazard trees along forest system roads would not have any direct or indirect effects to rangelands or livestock management.

Managing the road infrastructure on the forest would not have direct or indirect effects to rangelands or livestock management.

Alternative 1 – Proposed Action

Range Resource

Direct Effects

Direct effects from the proposed action would mostly come from proposed fuels treatments involving prescribed fire. Broadcast burning of small debris created by salvage operations would remove accumulations that could affect establishment of herbaceous vegetation. Burning would remove excess cover, allowing more light to reach the ground, warm the soil and improve conditions for seeds to germinate and herbaceous plants to reestablish. Broadcast burning usually results in a mosaic burn pattern, which leaves some material for soil protection, helps stabilize the soil and provides protection for young plants.

Pile burning does not provide the same beneficial effects as broadcast burning. Piles are localized and tend to be more intense. However, there are no substantial negative effects to rangelands from pile burning.

Salvage of commercial size material and biomass removal of fuels would not have direct effects to rangelands. Reforestation and planting activities also would have no direct effects to rangelands.

Indirect Effects

Salvage and fuel treatment activities could indirectly affect rangelands by adding to existing ground disturbance. Movement of equipment, although carefully monitored, could disturb soils where new vegetation might be trying to reestablish, adding to the length of time for rangeland vegetation to recover to a desired condition. Reforestation and planting activities would eventually create new overstory cover which in the long-term would begin to shade out understory herbaceous vegetation. During the limited time until the overstory begins to again dominate the area an increase in herbaceous vegetation may supply some additional forage for livestock grazing. The amount is limited, but can provide an opportunity to distribute livestock into areas they typically might not graze, which could result in lighter grazing in some riparian or meadow areas.

Cumulative Effects

Pre-fire many areas within the project area had become overgrown and understory vegetation was either non-existent or less productive. Past thinnings and fuels treatments within the project area have opened up the canopy encouraging an understory response. This has led to increased transitory forage. The recent Bald fire had a negative cumulative effect as the area burned at high intensity, a majority of the forage resource was temporarily removed. The proposed activities in Alternative 1 would individually have various effects to rangelands. They may extend the timeframe for recovery of the rangelands to satisfactory conditions by adding disturbances to the ground. However as discussed above this disturbance is short term. . Cumulatively, changes in distribution of herbaceous vegetation across the allotment may help improve overall range conditions by providing new areas of transitory range for better distribution of grazing pressure after grazing is allowed to return.

In summary, proposed activities in Alternative 1 would benefit rangelands over the short and long-term. Some minor negative effects would be outweighed by the long-term benefits.

Livestock Management

Direct Effects

Proposed treatment activities would have little to no direct effect to livestock management. As described above, the greatest effect to livestock management was from the fire itself. No treatments are proposed in the Bald Mountain and Bear Valley allotments. Only portions of one salvage unit and one fuels unit are within the Bainbridge Allotment. The Bainbridge Allotment is part of a four-pasture rotation grazing system that allows flexibility in management that can be adjusted to minimize potential conflicts between treatment activities and grazing. Activities proposed under Alternative 1 are concentrated within the Willow Springs Allotment.

Indirect Effects

Indirect effects to livestock management relate primarily to the amount of time it may take to accomplish proposed activities, particularly within the Willow Springs Allotment. Proposed activities are designed to start the process of recovering the burned area to a functioning, healthy, and productive condition. Consequently, the Willow Springs Allotment would be rested from grazing until desired conditions are reached within the burned area. As a result, the sooner the treatments are accomplished, the sooner vegetative conditions can recover, and ultimately conditions would allow for grazing to return. In the mean time, the permittee's overall ranching

operation would be affected, because this allotment provides important summer forage as part of the year-round maintenance of their livestock. Loss of this part of their annual forage source for an extended time could seriously affect the sustainability of their operation.

Timing of the proposed activities is also important for scheduling repairs necessary for structural improvements, particularly fences. Nearly the entire length (7 miles) of the primary division fence in the Willow Springs Allotment is within the burned area. This fence is critical for managing livestock, providing the means to control livestock when they use different areas of the allotment. Fence reconstruction or repair would be delayed until after salvage operations to minimize repeated repairs and to avoid the unsafe conditions created by many dead trees left standing after the fire and prior to salvage and fuels treatments. Safety is a concern for any type of livestock management activities that might occur prior to proposed treatments. Treatments would remove hazards from falling trees or limbs that could be dangerous to workers conducting repairs, monitoring, gathering, and any number of other activities in the burned area.

In the long-term, salvage and fuels treatments would improve accessibility for fence maintenance as well as livestock movement and distribution throughout the allotment. Treatments would minimize the potential for concentrations of large or jack-strawed areas of burned material that hinder livestock from scattering across the area.

Additional traffic on travel routes to and from treatment areas could have some impact to livestock operations in unburned areas of the active allotments if activities occur during the grazing season. The same travel routes may be used by permittees to monitor livestock distribution and movement in unburned areas of their allotment, where traffic from salvage-related activities may also occur.

Cumulative Effects

Cumulatively, the proposed action extends the initial effects from the fire over a longer period of time, as it relates to livestock management, especially on the Willow Springs Allotment. However, treatment activities would also help shorten vegetative recovery time so that when areas within the burn have reached desired conditions, livestock grazing would be returned. Treatment would contribute to healthier vegetative diversity, condition and vigor sooner than with no treatments. Removal of aerial as well as ground fuels would reduce safety hazards and lessen the need for repeated repair of fences within the burned areas, in both the short and long-term.

Alternative 2 – No Action

Range Resource

Direct and Indirect Effects

There would be no direct or indirect effects of Alternative 2 to rangelands. In areas of high or extreme fire severity, herbaceous vegetation would recover where opportunity provided the necessary conditions for individual plants to establish. It would most likely be very sparse and slow. The amount of fuels remaining on the ground may limit the success of herbaceous vegetative recovery.

In lightly or moderately burned areas, herbaceous vegetation would probably recover relatively quickly, provided conditions were favorable. The potential for a viable seed source and plants that survived the fire would be better than in higher severity areas. However, the lack of prescribed

fire for treating fuels could contribute to the potential for future fires causing continual set-back in vegetative recovery.

Treatment of hazard trees during road maintenance would not affect rangelands due to location of hazards that would be removed being limited to roadsides.

Alternative 2 would neither benefit nor harm the rangeland resource.

Cumulative Effects

Since there would be no direct or indirect effects to the rangeland resource under Alternative 2, there would be no cumulative effects,

Livestock Management

Direct Effects

Direct effects under Alternative 2 would primarily impact livestock management on the Willow Springs Allotment. Without additional treatments to remove burned standing trees or remove fuels created by the fire, the burned area would be very hazardous for any livestock management activities. Over the short and long-term, standing dead trees would be hazards to permittees when repairing and maintaining fences, as well as while gathering, trailing, and performing other livestock management activities. The potential for excessive numbers of burned trees to fall on fencelines would require continual and repeated maintenance.

Once livestock are allowed to return to the allotments, excessive fuels remaining on the ground would hinder livestock movement and distribution. Cattle would not be easily distributed across the entire range resulting in uneven use of suitable forage and possible areas of undesirable use levels. As hazard trees are felled and left in place along roadsides, the additional accumulation of debris would also hinder movement of livestock away from roads into forage areas, possibly leading to more animal/vehicle incidents, especially along well travelled routes.

Indirect Effects

Indirectly, by not implementing any treatment activities within the burn, it would be very unpredictable when livestock grazing could return to the allotment. Recovery of herbaceous vegetation would be slower than if treated, extending the time before desired conditions for grazing are met. Fences would be repaired, but as stated above, under hazardous conditions. Understandably, incentive for the permittee would be low for committing resources and time to repair structural improvements without knowing when they might be able to graze the allotment.

Cumulative Effects

If chosen, implementation of Alternative 2 would create a hazardous environment for both resources and humans. Removal of only roadside hazard trees would address the concerns for people traveling through the area on main roads. However, it does not take into account that on-going management, whether by forest employees, contractors, permittees or cooperators, does not occur only along well travelled roads.

Implementation of Alternative 2 would result in possible loss of a long-time ranching operation due to uncertainty about future grazing on the Willow Springs Allotment. The uncertainty caused

by a lack of commitment to implement activities to restore the natural resources affected by the fire.

Alternative 3 – Road Hazard Only

Range Resource

Direct and Indirect Effects

Alternative 3 would have the same direct and indirect effects to rangelands as Alternative 2. The only difference is that hazard trees identified along ML2 and higher roads would be felled. Commercial sized hazards would be removed. Sub-merchantable hazards would be left in place or piled and burned.

Cumulative Effects

The effects are the same as discussed under Alternative 2

Livestock Management

Direct and Indirect Effects

Alternative 3 would have nearly the same effects to livestock management as would Alternative 2. The primary difference would be the removal of the commercial-size hazard trees when felled along roadways instead of leaving them in place. This would reduce the debris which acts as a barrier for livestock movement when they travel along a road. When the debris is removed, livestock are more likely to scatter into adjacent areas to graze instead of following a road from one accessible area to another. This aids in distribution and better use of forage.

However, it does not alleviate the hazards of standing burned trees throughout the burned area that create a danger to permittees, specialists, or other publics. The greater issues about safety, sustainable use of resources, including local ranching operations still exist under Alternative 3.

Cumulative Effects

Cumulative effects of Alternative 3 would be similar to Alternative 2, except for the small reduction in fuel loads by felling and removing commercial-size hazard trees along roads instead of leaving them in place. Hazards throughout the rest of the burn area as discussed under Alternative 2 would remain as well as the uncertainty for continuation of a long-time ranching operation and cooperative management of their allotment.

