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PURPOSE AND NEED FOR THE PROPOSED ACTION

Changes between Draft and Final EIS

It became clear after reviewing the comments on the DEIS that the way in which the purpose and need was presented lead many reviewers to attach greater importance to some elements than was intended. We have therefore reworked the purpose and need for clarity and to focus on the primary purpose and need - salvage of timber - and to de-emphasize the other minor purposes.

The DEIS identified a purpose and need to remove fire damaged trees that were likely to die in the next year to prevent initiation of a bark beetle epidemic. It indicated that this purpose and need was secondary to the primary purpose and need of salvaging dead timber since due to the extent of remaining inaccessible fire damaged trees the removal of accessible trees would have a minimal effect. Subsequent field reconnaissance indicates that a bark beetle infestation is not developing. Therefore, the risk of a new infestation is low. Monitoring of this situation is still important. The analysis of bark beetle risks is being retained since an infestation could still develop. However, the action alternatives have been revised in the FEIS to harvest dead trees only, and insects and disease has been removed from the purpose and need.

Recreation, Heritage and Cultural Properties, Invasive Weed Species, Wildlife Habitats and Plants and Rare Habitats are resource values that are protected or mitigated, but not actually part of the purpose and need. They have been removed from the purpose and need, although they are considered and displayed in the analysis.

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1.0 Introduction

The East Fork Fire started on June 28th, 2002 in the East Fork of the Bear River drainage (see Appendix A, Map 1.1.1). Over the next three weeks, the fire burned toward the east and crossed into the Mill Creek and West Fork of the Blacks Fork drainages. Approximately 14,200 acres of the Evanston Ranger District of the Wasatch-Cache National Forest, and intermixed private lands burned (see Appendix A, Map 1.1.2).

The East Fork Fire greatly increased local public awareness of forest management and wildfire suppression policies on National Forest System Lands.

1.1 Project Background

Immediately following the fires, the Wasatch-Cache National Forest began assessing conditions in the burned areas. The Burned Area Emergency Rehabilitation Report (USDA Forest Service, BAER 2002) evaluated the need for emergency rehabilitation measures and considered opportunities for long-term monitoring.

Overall, the fire burned in a mosaic, at intensities and patterns that were likely for the most part within the historic range of variability. In some areas, the fires burned as low intensity understory burns, leaving the larger trees stressed, but still alive. In other areas the fires burned with moderate or high intensity, fully consuming both understory vegetation and tree canopy. Although stand replacing fires are

historically normal in the forest types affected, these high intensity burn areas may have exceeded the historic range of variability in extent due to continuity of heavy fuel loading and fuel ladders that developed over the last 100 years.

The fire degraded watershed conditions in many locations. It destabilized soils and drainage ways, and increased sediment delivery to fisheries habitat. In some areas, due to the loss of tree canopy, peak watershed flows may also have been increased to levels above the capacity of existing structures. In other areas, the fires killed or weakened trees.

However, the fire occurred in areas that have historically experienced stand replacing fires that can burn with relatively high severity. The adverse effects of this fire are probably not far outside of the historical range of variability. The fire has also returned vegetation types to early successional stages that provide a diversity of vegetation and wildlife habitat. It has helped to maintain the disturbance dependent aspen component in the landscape.

The fire also provided a situation where the commercial value of forest products could be recovered from areas designated as suitable for resource management and jobs and economic opportunities could be gained.

Additional information on the East Fork Fire is included in the EIS Project File.

1.2 Proposed Action

To respond to the resource conditions and opportunities created by the East Fork fire, the National Forest is proposing to harvest some dead timber resulting from the fire that would address the opportunity to work with local communities and people affected by the fires.

The Forest's proposed salvage activities would include harvest of fire killed trees. Green trees and dead trees below the merchantable diameter (7" for lodgepole pine, 8" for Englemann spruce and subalpine fir) will be retained on most of the harvest units, except where removed for skidtrails and landings. Optional removal of post and pole material between 4" and 7" would be allowed on harvest unit #2. This salvage would also result in removal of dead standing trees that would contribute to future heavy down woody fuel loading.

The proposed action includes 20 units totaling 781 acres (see Appendix A, Map 2.3.2). Two of the units are within the East Fork of the Bear River drainage, three are within the West Fork of the Blacks Fork drainage, and the rest are within the Mill Creek drainage. Approximately 4.4 miles of temporary roads would be required to access the timber. Slash resulting from temporary road construction will be placed on the downhill side of the road to provide a filter for sediment. Temporary roads will be obliterated at completion of their use. Obliteration includes returning the ground to the original contour and placement of slash on the surface to discourage use and prevent erosion. Harvest would be accomplished using ground based systems such as tractors, forwarders, or rubber tired skidders.

The proposed action includes maintenance and improvement of drainage on about 20 miles of existing roads. This work involves blading, shaping, installation of drain dips and ditch relief culverts, and replacing log culverts or undersized or improperly positioned culverts.

Approximately 100 acres of containerized spruce seedlings would be planted in areas where there is no adjacent seed source to ensure a future seed source.

Forest Road #80299 would be decommissioned in the upper East Carter Creek drainage. This

road is approximately 1.3 miles long. Remove two old log culverts, install water bars, scarify surface, and recontour 200 feet near the junction with Forest Road #80743.

Access to units 8, 9, 18, and 19 would be on Forest Road #80293. Several segments of this road on National Forest land were scheduled for decommissioning under the Mountain View and Evanston Travel Plan. Anadarko Corporation decided to decommission a 0.5 mile segment of the existing public access from Mill Creek to Lym Lake and Elizabeth Ridge that fords Mill Creek on their land in Section 29, T2N, R11E. This ford is a source of sediment in Mill Creek due to steep approaches. About 0.5 miles of Forest Road #80293 on National Forest Land would be kept open to maintain public access from Mill Creek to Lym Lake and Elizabeth Ridge.

Salvage and reduce fuel loading on approximately 781 acres of fire killed timber in 20 units. Harvest is limited to the roaded portion of the affected area.

Construct approximately 4.4 miles of temporary road to access proposed salvage units.

Perform maintenance and improve drainage on about 20 miles of existing roads.

Plant approximately 100 acres with containerized spruce seedlings.

Decommission Forest Road #80299 in the upper East Carter Creek drainage.

Keep 0.5 miles of Road #80293 open for public access to Lym Lake and Elizabeth Ridge.

Figure 1.1.1. Proposed Action. *The project proposal is focused on salvage of merchantable timber.*

It is anticipated that the implementation of the proposed timber salvage activities would occur over a two-year period. Resource conditions would determine priorities for timing and implementation of all activities.

Details of the Proposed Action are described in Chapter 2 and displayed in Figure 1.1.1 and Appendix A Map 2.3.2.

1.3 Purpose and Need for the Proposed Action

The purpose and need for the proposed action is to provide timber for commercial harvest and to capture economic value of timber killed by the East Fork Fire consistent with goals for watershed health, sustainable ecosystems, biodiversity and viability and scenic/recreation opportunities. Other management activities are needed to improve vegetation, watershed conditions and public access and are included in the proposed action if they are feasible and practical in conjunction with a timber sale.

The Forest has identified several reasons for proposing timber salvage activities and road management activities in burned areas. These are based on working with people and communities, and restoration and recovery of the land.

The Proposed Action is driven by the Forest's desire to respond to the direct effects of the East Fork Fire and existing conditions. This is primarily the recovery of economic value from burned timber. Resource impacts from the fire and existing conditions will be reduced utilizing the timber sale contract where that is feasible and practical.

The Proposed Action is also driven by recognition and mitigation of the effects of past fire suppression, timber harvesting, road development, and other land uses that have had a cumulative impact on the drainages where the East Fork Fire burned.

□ *Forest Products and Jobs*

While the East Fork Fire provided immediate jobs for fire suppression and fire rehabilitation, it also produced opportunities for commercial harvesting of fire damaged timber. Salvage of burned timber would provide forest products and jobs to community workers. The primary purpose of the proposed action is to utilize burned timber and recover economic values and to provide jobs associated with commercial use of forest products. Salvage harvest of burned timber would provide an economic return and contribute to the industry demand for wood products.

□ *Vegetation, Fire and Fuels*

The fire removed all sources of conifer seed in some areas. Planting of conifers where natural regeneration is not occurring or is unlikely would ensure better regeneration of native forest species. A purpose of the proposed action is to ensure that stands within the project area will adequately regenerate with forest vegetation native to the area.

Wildfire is one of the key disturbance processes affecting vegetation and forest conditions (Arno et al. 1995). Virtually all of the vegetation on the Forest is a component of fire-adapted ecosystems where fire recycles nutrients, regulates how forests develop, maintains diversity, reduces biomass, controls insect and disease populations, and maintains biological processes.

Fire exclusion effects in long fire interval fire regimes, such as those in lodgepole pine and spruce-fir are not yet manifest at the stand level, but are detectable at the landscape level. There are many examples of heightened insect and disease with fire suppression including dwarf mistletoe proliferation resulting from fire suppression, especially in lodgepole pine and ponderosa pine. Increased patch contagion (probability that similar patches are adjacent to each other) from lack of fire may amplify the severity of insect and pathogen outbreaks. Fire exclusion has converted some forests from lodgepole pine to fir and spruce. (Keane, et.al. 2002).

The newly created fuels from the East Fork fire may increase susceptibility to soil damage and loss of regeneration in the event of future wildfires. McIver and Starr (2000) found no studies documenting a reduction in fire intensity in a stand that had previously burned and then been logged. However, they also report that no studies have specifically looked at how postfire logging alters the size distribution of fuel and the concomitant changes in future fire risk. In general, logging of large-diameter material in green tree stands will lead to decreases in total fuel accumulations over the intermediate term but increases in fine activity fuels over the short term. They note that work examining fuels on harvested green tree stands suggests that postfire logging may increase short-term fuel loads and fire risk, owing to increased fine activity fuels, but reduce intermediate and long-term fire risk

through removal of larger dead structure (Brown 1980). They state that logging in postfire stands, however, would be expected to produce less fine activity fuel because the fine material burned, and one would expect removal of large-diameter material to have an intermediate-term effect similar to green tree stands.

A secondary purpose is to reduce future heavy fuel loading that could contribute to increased fire intensity in the event of a future wildfire. This could reduce risks to natural resources, private property and human life. Salvage of fire killed trees would result in lower fuel loading and risk of high intensity fires in the future within areas salvaged. It would also reduce the continuity of heavy fuel loading and provide locations for firebreaks to stop the spread of a high intensity wildfire in an area where human caused fires are not uncommon.

□ *Insects and Disease*

Outbreaks of bark beetles are often triggered by large scale disturbances such as wind throw events or wildfires. Nearby unburned spruce and lodgepole pine that have high stand densities with large trees are then susceptible due to high populations of beetles in fire damaged trees.

The DEIS identified a purpose and need to remove fire damaged trees that were likely to die in the next year to prevent initiation of a bark beetle epidemic. It indicated that this purpose and need was secondary to the primary purpose and need of salvaging dead timber since due to the extent of remaining inaccessible fire damaged trees the removal of accessible trees would have a minimal effect.

Subsequent field reconnaissance indicates that a bark beetle infestation is not developing. Therefore, the risk of a new infestation is low. Monitoring of this situation is still important. The analysis of bark beetle risks is being retained since an infestation could still develop. However, the action alternatives have been revised in the FEIS to harvest only dead trees.

□ *Watershed*

The existing roads in the East Fork Bear River, Mill Creek, and West Fork Blacks Fork drainages that are scheduled to remain open to public use under the Mountain View and

Evanston Travel Plan are generally on good locations and designed properly.

The Burn Area Rehabilitation Plan obtained funding to repair damage from the fire and to replace culverts that failed. However, additional maintenance and improvements in drainage are needed on most of the roads within the East Fork Fire perimeter to reduce sediment reaching stream channels. There is also a change in an access route and road decommissioning that could be done under the timber sale contract to reduce the likelihood of sediment reaching stream channels.

Maintenance and drainage improvement activities would help reduce the effect that roads have on other resources including water quality and aquatic habitat. Improving road drainage using best management practices (BMPs) would reduce the effects of the roads on watersheds and reduce maintenance costs.

■ 1.4 Wasatch-Cache National Forest Plan

The Wasatch-Cache National Forest Plan (USDA Forest Service 2003) provides the framework for determining the management of areas burned by the East Fork Fire. Although the East Fork Fire Salvage is designed to reflect all of the goals and objectives outlined within the Plan, two Forest Plan goals are especially pertinent to the burned areas. These goals are displayed in Figure 1.4.1.

Forest Plan Goals

Maintain and/or restore overall watershed health (proper functioning of physical, biological and chemical conditions). Provide for long-term soil productivity. Watershed health should be addressed across administrative and political boundaries. (*Wasatch-Cache National Forest Plan, Forestwide Goal 2-Watershed Health*).

Contribute to the social and economic well-being of local communities by promoting sustainable use of renewable natural resources and by participating in efforts to devise creative solutions for economic health (diversity and resiliency). Provide timber for commercial harvest, forage for livestock grazing, exploration and development opportunities for mineral resources, and settings for recreation consistent with goals for watershed health, sustainable ecosystems, biodiversity and

viability, and scenic/recreation opportunities.
(Forest Plan Goal #10).

Figure 1.4.1. Key Forest Plan Goals. *Two Forest Plan goals are especially pertinent to the East Fork Fire Salvage.*

Additional information on the Goals, Objectives, and Standards of the Forest Plan is described in Chapter 3 of this document, or found on pages 4-16 through 4-25 of the Wasatch-Cache National Forest Plan (USDA Forest Service February, 2003).

A large percentage of the land within the burn perimeter is allocated to Management Prescription Categories (MPC) 5.1 and 4.4 in the Wasatch-Cache National Forest Plan (USDA Forest Service, 2003). Approximately 55% of the area within the burn perimeter is in MPCs (See Appendix A, Map 1.1.3) that include an expectation for timber production along with other resource management goals (see Chapter 3.3).

1.5 The National Fire Plan

The DEIS described the relationship of this proposed action to the National Fire Plan. However, after reviewing comments, the interdisciplinary team reconsidered the applicability of the National Fire Plan.

The following National Fire Plan components were cited:

- **Key Point (2):** undertaking projects to reduce risks.
- **National Fire Plan Emphasis:** Markets for Removed Materials: Because the hazardous fuel load in forests comprises excessive levels of forest-based biomass, there are benefits of finding economical uses for this material if they will: help offset forest restoration costs, provide economic opportunities for rural forest-dependent communities, reduce the risk of catastrophic wildfires, help restore forest resilience, and protect the environment.

East Fork Fire Salvage operations would reduce future heavy fuel loading and provide areas where firelines could be more readily constructed. The National Fire Plan provides some general guidance, but because of its emphasis on drier forest types, it does not

provide specific guidance for the East Fork Fire Salvage.

National Fire Plan Emphasis

Markets for Removed Materials: Because the hazardous fuel load in forests comprises excessive levels of forest-based biomass, there are benefits of finding economical uses for this material if they will: help offset forest restoration costs, provide economic opportunities for rural forest-dependent communities, reduce the risk of catastrophic wildfires, help restore forest resilience, and protect the environment.

Figure 1.4.4. National Fire Plan. *The East Fork Fire Salvage Project emphasizes the fuel removal aspect of the National Fire Plan.*

1.6 Decisions That Must Be Made

The actions proposed in this document are not intended to serve as a general management plan for the area. If the Responsible Official selects an “action” alternative because of the analysis, implementation of the specifically identified activities will begin as soon as possible and without further NEPA documentation. The Responsible Official could also modify alternatives to address issues at the time of the decision.

The Responsible Official for this proposal is the Forest Supervisor. Based on the analysis in the Final EIS, the Forest Supervisor will make the following decisions and document them in a Record of Decision (Figure 1.5.1):

already covered under a nationwide permit. There will be no designated wetlands or navigable stream impacted by this proposal.

Decisions that must be made

What is the extent and timing, if any, of salvage harvest, road construction, road maintenance, drainage improvement, tree planting, road decommissioning, and travel route relocation that would be implemented. Where and how would these activities be conducted if they are implemented.

Management requirements and mitigation measures.

Appropriate monitoring requirements to evaluate project implementation.

Whether or not a site-specific Forest Plan amendment is required for implementation, the nature of the amendment, and whether the amendment would be a significant change to the Forest Plan.

Figure 1.5.1. Decisions that must be Made. *The Forest Supervisor will make these decisions and document them in a Record of Decision.*

The decisions to be made are directly connected to the scope of the action (alternatives and potential impacts).

Implementation of the decision for this Environmental Impact Statement is contingent upon resource constraints or conditions, available budgets, and agency priorities.

1.7 Applicable Legal and Regulatory Requirements and Coordination

The Forest Service is required to comply with the provisions of the Endangered Species Act (ESA). The United States Fish and Wildlife Service (USFWS) has been involved throughout this analysis process.

The Forest Supervisor is also required to consult with the State Historic Preservation Office to ensure compliance with the Historic Preservation Act of 1966 (amended) and other laws.

The Forest Supervisor is required to obtain a 404 permit for any activities that would alter wetlands or navigable streams. Some silvicultural and forest management activities are