

Decision Notice and  
Finding of No Significant Impact  
**Bryant's Fork Forest Health/Spruce Beetle Treatment**  
USDA Forest Service  
Heber Ranger District, Uinta National Forest  
Wasatch County, Utah

**Introduction**

The Heber Ranger District of the Uinta National Forest has prepared an Environmental Assessment (EA) to evaluate the effects of implementing vegetative management treatments in the Bryant's Fork watershed. Treatments will be located in conifer stands that are heavily infested by the spruce beetle (*Dendroctonus rufipennis*). The conifer stands in this area are comprised primarily of Engelmann spruce (*Picea engelmannii*) and subalpine fir (*Abies lasiocarpa*), with lesser amounts of quaking aspen (*Populus tremuloides*). The infestation was originally discovered in February 2004. Ongoing observations and monitoring during the analysis period have shown that the beetle populations have continued to expand and are at epidemic proportions in most of the conifer stands, causing widespread mortality in spruce.

This project is located on six northwest to north-facing slopes between 7800 to 9000 feet elevation, between Strawberry Reservoir and Strawberry Ridge, Township 12 North, Range 3 South, USM, Sections 26, 27, 34 and 35, in Wasatch County (see attached map).

Several years of drought, mild winters, and dense stands with abundant susceptible host trees have contributed to the rapid expansion of endemic beetle populations to the current epidemic levels. Previous and on-going trap tree treatments have reduced the rate of increase in beetle populations over the short term, but are not effective in reducing the long term stand risk. The proposed treatment is needed to further reduce beetle populations within the Bryant's Fork drainage and limit the spread of the insect to uninfested spruce stands in adjacent watersheds.

**Proposed Action**

The purpose of the proposed action is to modify the structure and composition in the spruce-fir stands within the analysis area to reduce beetle populations, reduce overall stand risk, retain a viable spruce seed source, and create opportunities for natural spruce regeneration. Trees targeted for removal will include recently dead and actively infested spruce trees. This proposed action is needed because without further treatment, it is likely that spruce beetle populations would continue to rapidly expand and kill most of the spruce greater than 5 inches dbh in affected stands (Dymerski et al. 2001). Continued accumulation of dead fuel in affected stands could pose a serious risk from wildfire to the Bryant's Fork community if weather conditions suitable for ignition and fire spread were to occur, especially within the first 2-3 years while needles remain on infested trees.

The proposed action is to harvest commercial timber (>8" dbh) on about 190 acres of affected conifer stands focusing on sanitation and salvage of infested spruce trees to reduce beetle populations, average stand density and diameter as well as promote natural

regeneration of spruce. These treatments will reduce susceptibility of stands to continued and future spruce beetle attacks. In addition, follow up precommercial thinning will be implemented in the smaller size classes to promote increased growth and vigor. Where post-treatment monitoring indicates stocking is inadequate, revenues from the sale of the timber would be used to supplement natural reforestation in the affected stands with tree planting. Approximately 3.7 miles of temporary roads will need to be constructed, about 1.6 miles of which currently exist as closed roads, to facilitate access for operations and removal of the harvested timber. Temporary roads constructed and non-system roads used for timber removal operations would be obliterated following use and before closure of the timber sale contract.

### **Alternatives**

In addition to the proposed action, a no action alternative was analyzed. The no action alternative would not have involved any actions by the Forest Service to manage the spruce bark beetle infestation in the Bryant's Fork drainage other than continued population monitoring. Infested trees would not be removed and stand structural diversity would not be manipulated to reduce stand risk. The spruce beetle would continue to cause mortality in spruce trees within affected stands depending on weather and population dynamics. Populations would be monitored for informational purposes using a limited number of pheromone baited funnel traps each year. The no action alternative would not meet the purpose and need. The Healthy Forest Restoration Act (HFRA) provides that for areas inside the wildland-urban interface and within 1½ miles of the boundary of an at-risk community, the USDA Forest Service is not required to analyze any action alternative in addition to the proposed action (Section 104 (d) (2)). However, the no action alternative was analyzed in detail to disclose the affects to the project area if the proposed action was not taken.

A separate spruce trap tree alternative, as well as the original Proposed Action which included a 48-acre aspen clear cut and decommissioning of Forest Road 70290 were considered but eliminated from the final proposed action. The trap tree alternative would not have met the purpose and need. The aspen clear cut and road decommissioning were removed from the original proposed action based on public comments and resource specialist input.

### **Decision and Rationale**

Based upon my review of the EA, I have made the decision to implement the Proposed Action - Forest Health/ Spruce Bark Beetle Treatment and associated design features included in the environmental assessment. My rationale for selection is as follows:

An insect epidemic exists, as determined in the Biological Evaluation completed in April 2004 by the State and Private Forestry Forest Health Protection office and concurred by the Forest Supervisor on July 25, 2005. Removal of spruce beetle infested trees will reduce beetle populations, continued mortality in spruce, and limit spread into adjacent areas.

The project area is within a 6<sup>th</sup> order Hydrologic Unit Code (HUC) Watershed that is classified as a Fire Regime Condition Class 3 (78% departure from the natural fire regime). Fire regimes have been substantially altered. Risk of losing key

ecosystem components is high. Fire frequencies may have departed by multiple return intervals. This may result in dramatic changes in fire size, intensity/severity, and landscape patterns.

Bryant's Fork has been identified as a community at Risk (Federal Register Notice Vol. 66, No. 160, p. 43423, 8/17/01). Removal of dead and dying trees will reduce the fire intensity and severity if a wildfire were to occur and threaten the Bryant's Fork Summer Home community.

This project will move toward the desired future condition for forested vegetation within the Strawberry Reservoir Management Area and within management prescription 5.2 which states forested vegetation '*are managed to maintain or restore vegetation to achieve multiple resource values while providing for multiple uses and attaining goals and objectives for timber commodity production.*' In terms of the overall Desired Future Condition (DFC) for spruce/fir forests on the Uinta, page 5-5 of the 2003 Forest Plan states that '*Insects and disease are not causing large-scale tree mortality across entire landscapes.*'

### **Public Involvement**

The proposal has been listed quarterly in the Schedule of Proposed Actions since the Spring Edition 2004. The Schedule of Proposed Actions is posted on the Uinta web site and is mailed to over 400 individuals.

- The Heber Ranger District sent a scoping document to the public and other agencies listed on the Heber District mailing list requesting comments on June 3, 2004.
- A news release was sent to the "*Provo Daily Herald*" on June 4th 2004.
- The Proposed Action was sent to the public and agencies listed on the Heber District mailing list requesting comments on February 24, 2005.
- A request for comments was published in the "*Provo Daily Herald*" on February 25, 2005.
- A corrected request for comments was published in the *Provo Daily Herald* on April 9, 2005 listing the proposal as a hazardous fuel reduction project as defined by the Healthy Forests Restoration Act (HFRA) of 2003.
- A legal notice initiating the objection period was published in the *Provo Daily Herald* on September 21, 2005. Copies of the environmental assessment were mailed to 17 interested parties.
- A public meeting was held at the Heber Ranger District on October 17, 2005. No members of the public attended.
- District Ranger Julie King met with the Bryant's Fork Homeowners Associations on March 19, 2005, August 14, 2005 and September 26, 2005. At each meeting the status and progress of the environmental analysis was discussed.
- District Ranger Julie King met with the Friends of Strawberry Valley on March 9, 2005 and July 13, 2005 and presented the proposed action and progress of the environmental analysis.
- District Ranger Julie King met with the Wasatch County Council on April 6, 2005 and presented the proposed action and progress of the environmental analysis to the council.

- Legal notices, maps, scoping letters, and the environmental assessment were posted on the Uinta web site.

### **Finding of No Significant Impact**

After considering the environmental effects described in the EA, I have determined that these actions will not have a significant effect on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. I base my finding on the following: *My finding of no significant environmental effects is not biased by the beneficial effects of the action.*

*There will be no significant effects on public health and safety.* USDA Forest Service timber sale contract stipulations will be in place and enforced to inform, notify, and protect the public during project activities (to include, but not limited to road closure, signing, etc). Project specific design features (EA pages 12-13) were incorporated into the Proposed Action in order to minimize impact to culinary and surface water sources.

*There will be no significant effects on unique characteristics of the area or ecologically critical areas such as historic or cultural resources, park lands, prime farmlands, wetlands, and wild and scenic rivers.* The project is not within an Inventoried Roadless Area, nor does it affect any wild and scenic rivers, parklands, or prime farmlands. The project area was surveyed for cultural resources; one site that is not eligible for the National Register of Historic places was within the project area but would not be affected by the project (EA, page 25). Concurrence on this project was received from the Utah State Historic Preservation Office (September 7, 2005, project record). Wetlands within the project area will be avoided through utilization of a 100-foot buffer (EA page 12 and project record).

*The effects on the quality of the human environment are not likely to be highly controversial.* Controversy in this context refers to scientific dispute over the effects of the Federal action, not opposition to its implementation. The Utah Environmental Congress (UEC) responded with substantive comments throughout all phases of project development. Questions were raised in regard to:

- Recently published research casting serious doubt on whether stands with a history of high beetle mortality have an increased risk of catastrophic fire (UEC letter dated 7/1/2004, page 3).

In terms of fire risk resulting from standing and down dead spruce and snags from spruce beetle epidemics Bebi et al. (2003) cites Despain and Sellers (1977), states “that although no increase in fire density followed the 1940’s spruce beetle outbreak (in Colorado), potentially the large quantity of standing dead fuels might be expected to contribute to more intense and widespread fire in the affected stands, especially in comparison with younger stands lacking large numbers of large, standing dead trees”. All affected stands in the Bryant’s Fork area have high numbers of large standing dead (both with and without needles) and infested trees, which will gradually begin to topple over adding to the horizontal continuity of available fuels.

Knight (1987) notes that fire risk may be increased for 2-3 years until the fall and

decay of dead needles. The Bebi article echoes this increased risk by stating conditions that increase the probability of occurrence of a certain disturbance, such as increased fire risk due to the dead needles on beetle-killed trees, may change within just a few years. Trees infested one year will not exhibit dead needles until the following year. The majority of dead trees retaining needles in the Bryant's Fork area are a result of infestation in 2003 - 2005. A majority of these trees can be expected to retain needles for at least 2-3 more years, still leaving the risk of fire relatively high through 2008 were an ignition to occur.

- The effectiveness of logging to stop/suppress the epidemic (UEC letter dated 3/24/2005, page 2).

The Assessment and response to Bark Beetle Outbreaks in the Rocky Mountain Area (RMRS-GTR-62, 2000) states "removal of dead and beetle infested trees (salvage and sanitation) is a treatment that helps to reduce local beetle populations and prevent further mortality in the area". The purpose and need states that the proposed treatment is needed to further reduce beetle populations and limit the spread of the insect to uninfested spruce both within and adjacent to treated stands.

- The proposed action moving the forest away from attaining Forest Plan sub-goal 2-9 of retaining at least 10% of each forest vegetation type in an old growth condition (UEC letter dated 3/24/2005, page 6).

An analysis of old growth conditions in the Strawberry Watershed was conducted in the summer of 2004 (Wright 2004). The results of this analysis indicate that approximately 16% of the conifer type inventoried within the watershed met Region 4 (R4) old growth standards for structural old growth. Three sample points fell within the Bryant's Fork analysis area and were determined to have met the R4 definition. Following treatment and subsequent removal of these stands from old growth classification, the Strawberry Watershed would still retain 12% of the stands that met the R4 definition of old growth. Sub-goal-2.9 on page 2-6 of the Uinta National Forest Land and Resource Management Plan directs that management projects should generally meet or move toward the following, '*Maintain adequate distribution of old growth in forested community types. Maintain at least 10 percent of each forest vegetation type in an old growth condition as defined in the Forest Service publication, Characteristics of Old Growth Forests in the Intermountain Region (USDA 1993), or subsequently modified Regional Forester-approved definition. Ensure the presence through time by providing for suitable and potential replacement areas*'. .

Without any action by the Forest Service, spruce beetle populations will likely continue to increase and spread, killing most of the spruce greater than 5-inches dbh in affected stands (Dymerski et al. 2001). Old growth characteristics (within living, uninfested trees) which still currently exist in affected stands would diminish over time as susceptible large spruce trees continue to be attacked and killed by the spruce beetle. Replacement of old growth characteristics in the affected stands could take up to 200 years if all spruce greater than 5-inches dbh are successfully attacked and killed by the spruce beetle. The proposed action will provide for more timely replacement of beetle-killed spruce by reforesting treated areas as required by the National Forest Management Act.

The complete scientific basis for the analysis is contained in the project record and summarized in the EA. The Bryant's Fork homeowners have filed letters in support of the project (project record), and no objections were filed within the 30-day period stipulated under the HFRA.

*We have considerable experience with the types of activities to be implemented. The effects analysis shows the effects are not uncertain, and do not involve unique or unknown risk.* The Forest Service has performed similar tree removal projects in spruce-fir habitat types in the past. In addition, the Forest Service will ensure that a qualified logging company is used and that all Best Management Practices (BMPs) and measures incorporated into the Proposed Action, as outlined in the EA, are carried forward in the sale contract.

*The action is not likely to establish a precedent for future actions with significant effects.* Approval of this project would not represent a decision for future projects; each project would be analyzed separately according to the National Environmental Policy Act (NEPA).

*The cumulative impacts are not significant.*

Cumulative effects were analyzed and disclosed that this project, in combination with other projects would not have a significant cumulative impact on the environment (EA pages 44-56).

*The action will not adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species act of 1973.*

Wildlife surveys for Threatened and Endangered Species (TES), Management Indicator Species (MIS), as well Forest Service Sensitive Species and Other Species of Concern were conducted in 2004 and 2005. A biological evaluation/assessment (BE/BA) was completed August 18, 2005 and found the following: *No Effect* for bald eagle, western yellow-billed cuckoo, and a *May Affect, Not Likely to Adversely Affect* for Canada lynx (EA page 26 and project record).

Fish population surveys were conducted by the USFS during 2003, 2004, and 2005. The fisheries BE/BA was completed on August 16, 2005 and had a finding of *May Affect but not Likely to Adversely Affect* (EA page 43 and Project Record). Four aquatic TES species have been identified to have historically occurred or are currently present on or immediately adjacent to the Uinta National Forest. These include June sucker, Utah valvata snail, Colorado River cutthroat trout (CRCT), and Bonneville cutthroat trout (BCT). Because the June Sucker and Utah valvata snail do not or no longer occur in the Bryant's Fork drainage, they will not be affected by this project. The Bonneville cutthroat trout and Colorado River cutthroat trout are identified as aquatic Management Indicator Species (MIS) for the Uinta National Forest, and listed sensitive species for USFS Region 4 and the State of Utah.

The Bryant's Fork drainage is located within the Northeastern Geographic Unit (GU) for CRCT and streams in the watershed were historically inhabited by CRCT. The construction of Strawberry Reservoir fragmented and isolated headwater populations of CRCT, and subsequent "fisheries enhancement" activities and the introduction of non-native fish species is believed to have eliminated any remnant genetically pure CRCT populations within the Bryant's Fork drainage. Consequently, no conservation or persistence populations for CRCT have been identified within this watershed. The Bear Lake strain of BCT is not native to the Bryant's Fork drainage but has been transplanted into Strawberry Reservoir and now inhabits the Bryant's Fork drainage. However, since they are not native here, no conservation or persistence populations of BCT have been identified in the Bryant's Fork drainage. Because native populations of aquatic MIS for the Uinta National Forest no longer occur within the Bryant's Fork drainage, the USFS does not conduct fish population surveys in the drainage as part of the Forest-wide MIS monitoring program (EA pages 40-41 and project record). However, the USFS does conduct fish habitat and population monitoring surveys for watersheds on the Forest in which intensive land management activities and/or projects have been identified.

Surveys were completed in August 2004 for Threatened/Endangered/Sensitive Species plants; no rare plants were found but did find suitable habitat for moonworts. The BE/BA was updated and completed August 25, 2005 and had a finding of *No Effect* on the Ute Ladies' - tresses orchid because there is no habitat for the species in the project area. Since there is no suitable habitat for Barneby Woody Aster, Garrett bladderpod, Rockcress draba or Wasatch jamesia in the project area, the project is *Not Likely to Result in a Trend Towards Federal Listing* of these species. For Dainty moonwort and Slender moonwort, the proposed action *May Impact Individuals or Habitat, but Will Not Likely Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability* to the species (EA page 24 and project record).

The action will not violate Federal, State, and local laws or requirements for the protection of the environment. Applicable laws and regulations were considered in the EA. The action is consistent with the Uinta National Forest Land and Resource Management Plan (EA page 7 and project record).

### **Findings Required by Other Laws and Regulations**

This decision is consistent with the 2003 Forest Plan and Environmental Impact Statement, and is consistent with Federal, State and local laws pertinent to land management. The actions in this project comply fully with the goals of the Forest Plan, the Management Area Direction, and the Forest-wide standards and guidelines.

The Bryant's Fork Forest Health/Spruce Beetle Treatment EA was completed in compliance with NEPA and other relevant Federal and State laws and regulations applicable under the HFRA.

### **Administrative Review Opportunity**

This decision is not subject to appeal pursuant to 36 CFR 215.12 (Decisions and actions not subject to appeal). The objection process pursuant to 36 CFR 218 provided the sole

means of administrative review for this HFRA project. No objections were received on this project.

**Implementation Date**

Implementation of this project may occur immediately.

**Contact**

For additional information concerning this decision contact Shawn Martin, Silviculturalist, Heber Ranger District, 2460 South Highway 40, Heber City, UT 84032 or calling (435)654-0470.

/s/ Julie K. King  
Julie K. King  
District Ranger  
Heber Ranger District

01/13/06  
Date