

Record of Decision

West Bear Vegetation Management Project

**USDA Forest Service
Evanston Ranger District, Wasatch-Cache National Forest
Summit County, Utah
Section 1, T1N, R8E, Sections 1 Through 12, 16 and 17, T1N, R9E, Sections 6 and 7, T1N, R10E,
Salt Lake Meridian, Utah.**

Introduction

In a March 5, 2007 Record of Decision (ROD), former Forest Supervisor Faye Krueger approved Alternative 2 for the West Bear Vegetation Management Project. Two appeals were received on the project; one of the appellants identified an error in the Final Environmental Impact Statement (EIS). Additionally, Forest Supervisor Krueger saw an opportunity to clarify the scientific methodology employed in the West Bear Vegetation Management Project FEIS. On May 25, 2007 Deputy Forest Supervisor Dave R. Myers, acting for Supervisor Krueger, withdrew the decision.

After reviewing the West Bear Vegetation Management Project, Steve Ryberg, the Evanston District Ranger, determined specific areas in need of additional analysis or consideration. The interdisciplinary team was instructed to concentrate on the analysis of soils, vegetation, and some species of wildlife for a Draft Supplemental Environmental Impact Statement (SEIS). In March 2008 the Draft SEIS was distributed to the public. This Draft SEIS presented additional analysis to supplement information presented in the West Bear Vegetation Management Final FEIS. Based on comments received on the Draft SEIS, some additional changes and additions were made to the FEIS and documented in a Final Supplement to the FEIS. The SEIS does not replace the Final EIS in entirety. Instead, information provided in the SEIS replaces discrete sections of the FEIS or provides additional information to supplement the analysis presented in the FEIS. Both documents are available on the web at: <http://www.fs.fed.us/r4/wcnf/projects/proposed/index.shtml>.

Decision and Reasons for the Decision

Project Location and Background

The project is located on the Evanston Ranger District of the Wasatch-Cache National Forest. The project area encompasses National Forest System land in the West Fork of the Bear River and its tributaries and unnamed tributaries on the west side of the Hayden Fork of the Bear River (FEIS Section 1.3).

The purpose of this project is to move the forested portions of this landscape toward properly functioning condition and to move toward a variety of vegetation types, age classes, and patch sizes covering the landscape. This will provide for healthier watersheds, aquatic and terrestrial wildlife habitats, and recreation environments. It will also produce commodities such as lumber and forage.

This action is needed because the Wasatch-Cache Revised Forest Plan (USDA FS 2003) on Page 4-29 identified a need to treat vegetation within the aspen, aspen/conifer, spruce/fir and mixed conifer forest types on the forest to maintain or move the forests toward properly functioning condition. A forest-wide assessment concluded that aspen communities as well as conifer, sagebrush and several other vegetation

types are currently outside the historic range of variation, primarily related to the absence of naturally occurring fire in vegetation types that evolved with repeated fires.

The Forest Plan describes the forest-wide desired future conditions for aspen and conifer stands in terms of a variety of age classes across the landscape representing a variety of seral stages in varying patch sizes. Pine and spruce beetle infestations are kept to an endemic level through the use of a variety of management tools including timber harvest, prescribed fire, and wildland fire use (USDA FS 2003, p 4-8).

Timber harvest will continue to be a management objective in the West Fork Bear River landscape, and will serve as an important tool to achieve other management objectives both within and outside of the suitable timber base. The amount of timber harvested in any decade will be driven by identified needs and the blended desired future conditions of all resources. Managing the forest vegetation to maintain wildlife corridors, reduce insect risk, increase the aspen component, and create a more balanced distribution of size classes will provide and sustain a timber output.

The Purpose and Need for the proposed action contains the following elements:

1. Maintain or move the forest cover types toward properly functioning condition.
2. Move forest cover types toward a variety of vegetation types, age classes, and patch sizes covering the landscape and contributing to healthy watersheds, aquatic and terrestrial wildlife habitats and recreation environments.
3. Production of timber commodities.

Following an outbreak of spruce bark beetles in the early 1990s in the Meadow and Humpy Creek areas, and discussions over the current aspen and conifer forest conditions, the Evanston Ranger District initiated a landscape assessment of the larger West Bear drainage. This assessment was completed in February of 2002 (USDA FS 2002). The landscape assessment described existing forest conditions and potential management actions to move the landscape toward a desired future condition. An Interdisciplinary Team reviewed this analysis and the project was initiated in March of 2002. During the summer of 2002, the East Fork Fire changed district priorities, so the project was deferred until February 5, 2005 when public scoping was re-opened.

The SEIS documents supplemental analysis of the same three alternatives (one no action and two action alternatives) considered in the West Bear Vegetation Management Project FEIS to meet this need.

Decision

Based upon my review of all alternatives, I have decided to implement Alternative 2.

My conclusion is based on a review of the record that shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and acknowledgement of incomplete or unavailable information, scientific uncertainty, and risk. I have considered input from groups and individuals with responsible opposing views and discussed our response to them in Chapter 5 of the FEIS, Chapter 3, and the project record. I have considered the scientific information that is necessary to adequately assess the effects of my decision. In my judgment, Alternative 2 is consistent with the Revised Wasatch-Cache Forest Plan (USDA 2003) as well as with all laws, regulations and policy governing National Forest System land management. All practical means to avoid or minimize environmental harm from the decision have been adopted.

Alternative 2 treats stands within the analysis area to begin developing properly functioning condition within the spruce-fir, mixed conifer and mixed aspen/conifer forest types. Timber harvest will consist of a variety of practices depending upon the specific forest type and stand condition. Treatment will involve group selection harvest in spruce-fir and mixed conifer stands, small (1 to 5 acre) patch cutting in mixed aspen/conifer stands, conifer removal and prescribed burning in aspen/conifer stands, and burning within aspen stands. The treatment includes retaining green trees and snags for wildlife habitat. Approximately 1,686 acres within 38 units will be treated under this decision. Harvests will be accomplished using ground-based systems, and in conformance with Forest Plan Standards and Guidelines (FEIS Section 1.5). Approximately 12,000 hundred cubic feet (CCF) will be harvested. The previous Decision contained an estimate of 10,220 CCF. More intensive reconnaissance since then indicates that we underestimated the volume per acre in some areas and overestimated in others. The effects analysis for everything except financial efficiency is based on acres harvested under various prescriptions and those parameters remain unchanged. As displayed in the Final SEIS, revised Section 3.9, Financial Efficiency, there was little change in the comparative financial efficiency of the alternatives. Approximately 326 acres of aspen and mixed aspen/conifer will be burned following removal of conifers on those acres. In addition, about 197 acres will be prescribed burned without prior conifer harvest. Access to the timber will require the construction of approximately 7.8 miles of temporary roads, 0.9 miles of intermittent service system roads, and relocation of approximately 0.6 miles of existing system roads to reduce sedimentation and improve drainage. All temporary roads will be recontoured / rehabilitated after harvest. Reconstruction or relocation of existing roads will emphasize improving drainage design of the roads near stream crossings and relocating or improving drainage where the roads are near stream channels. No harvest or road construction will take place in inventoried roadless areas. Firelines will be constructed where needed prior to burning to reduce the probability of fire escaping the boundaries. Approximately 3.4 miles of firelines will be needed.

Alternative 2 is composed of the following treatments and parameters (SEIS, p. 2-1 through 2-2):

Spruce-fir treatment within mapped treatment units will consist of the following:

1. Group Selection (patch cuts). Within the ~575 gross acres of spruce-fir stands identified for treatment, harvesting will create approximately 115 acres of small openings to establish spruce regeneration. Openings will range from $\frac{1}{4}$ acre to $\frac{1}{2}$ acre in size, and planting containerized spruce seedlings after harvest will ensure adequate spruce regeneration. Openings in patches of spruce-fir will not exceed $\frac{1}{2}$ acre in size. Existing small openings will be used whenever possible to meet treatment objectives.
2. Thinning. This treatment will thin dense groups of mature spruce-fir within approximately 460 acres of spruce-fir stands (575 acres minus 115 acres of group selection) to reduce the stand density. Thinning will be discontinuous concentrating on groups or “clumps” of trees. Spruce-fir clumps will be thinned to an average basal area of about 120 square feet to reduce the higher densities associated with “high hazard” ratings for spruce beetle with an objective of retaining at least 80 square feet of live trees (Schmid and Frye 1976). Thinning will remove both subalpine fir and spruce trees to perpetuate spruce on the landscape, while maintaining a mixed species stand to improve resistance to future spruce beetle activity. Standing and down trees will be retained to benefit wildlife in accordance with Forest Plan Guidelines.
3. Salvage. Harvest will remove existing insect killed and infested trees in excess of those needed to meet Forest Plan guidelines for snag and woody debris retention. Recently killed trees in the spruce-fir stands are generally individual trees or very small patches of trees.

Mixed Conifer stands contain substantial variation in species composition; therefore no single treatment will be applied uniformly throughout the stands. Rather the treatments will be determined by the composition of patches within the stand and will consist of the following:

1. Group Selection (patch cuts). Within the ~427 gross acres of mixed conifer, an estimated 85 acres of groups and/or small patches will be harvested to increase the amount of mixed conifer regeneration within the type. Openings in patches of spruce-fir will not exceed ½ acre in size; groups in lodgepole pine dominated patches will not exceed 2 acres in size.
2. Thinning. Thinning clumps of spruce-fir and/or lodgepole pine will reduce bark beetle hazard ratings on ~342 acres (427 acres minus 85 acres of regeneration). Spruce-fir clumps will be thinned to a basal area of about 120 square feet to reduce the higher densities associated with “high hazard” ratings for spruce beetle, while lodgepole pine clumps will be thinned to less than 100 square feet. Thinning will be done with an objective of retaining at least 80 square feet of basal area in live spruce and 60 square feet of live lodgepole pine.
3. Salvage. Harvest will remove existing insect killed and infested trees in excess of those needed to meet Forest Plan guidelines for snag and woody debris retention. Most of these are mountain pine beetle infested patches of lodgepole pine and are located primarily in units 30, 31, 36, and 37.

Aspen/Conifer treatment will consist of the following:

1. Harvest merchantable conifers from 5 stands totaling about 326 acres. Slash will be left scattered to provide fuel for prescribed burning.
2. Prescribed burn harvested areas to stimulate aspen regeneration. The fire is expected to burn about an additional 197 acres between harvested units. Assuming 80% burn effectiveness, about 418 acres will be regenerated.
3. Removal of conifers from 1-5 acre patches totaling about 40 acres of mixed aspen/conifer scattered within about 161 acres in units 7, 24, and 25 to create uneven-aged aspen patches.

Total acres harvested under any timber harvest treatment prescription will not exceed those listed in Table 2.1.1 of the FEIS.

Roads (FEIS Section 2.1.2.2)

Roads to be constructed include approximately 7.8 miles of temporary road, 0.9 miles of intermittent service road, relocating 0.6 miles of existing system road to improve drainage and reduce sedimentation, and applying spot surfacing (gravel) to segments of an existing system road (032). See FEIS Table 2.1.2 for a description of miles of roads by unit number.

Temporary roads will be constructed to minimal standards (level 1). These roads will be located to minimize their potential to impact water quality. As part of the initial road clearing, slash removed from the right-of-way will be placed in a windrow below the excavated soil so that it can be replaced on the recontoured surface following use. Following unit harvest, the road will be fully recontoured. Recontouring will include replacing soil back onto the road prism to return the ground to its natural contour, placing slash and woody debris on the disturbed area, and seeding the disturbed area. Following use, the road will appear as a linear opening. Within 10 to 15 years (depending on location), the area will become heavily brushed in or grown in with young trees. Temporary road construction and closure will be completed as a part of timber sale contracts and be financed by funds generated from the sale. With the exception of the temporary roads into units 41, 42, 43, and 44 in the Mill City Sale and Unit 34 in Reservoir East Sale, closure will immediately follow completion of timber haul.

The temporary roads in the Mill City Sale and unit 34 will be located to serve as firelines during the prescribed burning phase of the project. Following the burn, they will be recontoured as described above. This will normally occur within one year following prescribed burning which could be up to two or three years following construction. Public access will be blocked during that time. Financing for recontouring will be provided by KV funds from the sale or appropriated dollars.

Intermittent service roads will be constructed to provide future access into units 2, 3, 5, 6, and 11. Intermittent service roads will remain as level 1 roads after harvest, with surface scarification and seeding to stabilize the road prism. Culverts and fill installed to cross stream channels will be removed following closure of the intermittent service roads. They are spur roads from an existing gated intermittent service road and will not be open to public traffic.

Portions of Roads 80324, 80309 and 80135 (Whitney Area) will be relocated to improve drainage and reduce existing erosion problems. All of these road segments are poorly located in wet areas and are currently deeply rutted by recreational traffic. The new locations will shift the road to a better location that will permit maintenance of the surface and improve the drainage. In addition, spot surfacing will be applied to sections of road 80069 to improve the running surface, reduce erosion and facilitate maintenance. Road relocation and surfacing will be financed by the timber sale.

Table 1. Summary of the Activities that are Included in the Decision.

Alternative 2 - Activities	
Activity	Approximate Quantity
Acres Treated	1,686
Acres Harvested	1,489
Timber Harvest Volume	12,000 CCF
Prescribed Burning / aspen regeneration	523 / 418 acres *
Fireline Construction/Rehabilitation	3.4 miles
Temporary Road Construction/Obliteration	7.8 miles
Intermittent Service Road Construction	0.9 miles
System Road Relocation	0.6 miles

*Assumes 80% burn effectiveness.

General management direction and mitigation measures applicable to all alternatives (FEIS 2.1.4) implemented with this decision are:

Table 2. Management Direction and Mitigation Measure Description.

Management Direction and Mitigation Measure Description
Soil, Water, Fisheries and Aquatic Resources
Erosion control measures will be left in place for one growing season or until no evidence of pedestaling, rills, or surface soil movement is evident.
Riparian Habitat Conservation Area (RHCA) Category 1 consists of fish-bearing streams and the area on either side of the stream extending from the edges of the active stream channel to 300 feet slope distance (600 feet, including both sides of the stream channel). Category 2 and 3 RHCAs consist of permanently flowing non-fish bearing streams and ponds, lakes, reservoirs, and wetlands greater than 1 acre and the area on either side of the stream or pond extending from the edges of the active stream channel or pond edge to 150 feet slope distance (300 feet, including both sides of the stream channel or pond). Category 4 includes features with high variability in size and site-specific characteristics including seasonally flowing or intermittent streams, wetlands less than 1 acre, landslides, and landslide-prone areas. At a minimum the interim RHCAs must include, landslides and landslide-prone areas, 100 feet slope distance. No vegetation treatments will be conducted in any of these RHCAs to meet Forest Plan Guidelines G9 and G45.
Prescribed burning will be conducted in the fall when soils are moist enough as determined by a forest soil scientist to prevent severe soil damage.

Management Direction and Mitigation Measure Description
Ground based activities will be restricted to dry or frozen ground conditions generally between June 15 and December 30. Operations outside of the specified conditions may only occur on a case-by-case basis following consultation with a qualified soils specialist.
Main tractor skid roads (those receiving three or more passes by skidding equipment) on Apco fine and Hoodie soils found within 207 and 491 soil types will be no less than 100 feet apart, except where converging. This applies to units 2-6, 11-14, 20, 24-26, and 31-37 in compliance with Forest Plan Guideline G4.
As soon as possible following the completion of harvest operations, not to exceed one year, landings will be recontoured to the original surface contour, ripped, and grass seeded with an approved Wasatch-Cache native seed mix. Coarse woody debris will be spread on site to provide for long-term soil productivity.
Skid trails will be water barred with slash scattered on their surfaces prior to discontinuing operations each fall, and where appropriate, seeded in compliance with Forest Plan Standard S2.
Firelines will be water barred at the time of construction with slash scattered on their surfaces following their use
Temporary containment pits or barriers will be installed around any fuel storage units located on the forest during timber harvest or road construction operations in compliance with Forest Plan Standard S2.
Road decommissioning of temporary roads will require recontouring to match the natural slope gradient followed by seeding with Wasatch-Cache approved native grass species and spreading coarse woody debris on site to provide for long-term soil productivity.
Closure of intermittent service roads will include surface scarification and seeding, removal of culverts, removal of fills over culverts, and recontouring of stream banks to meet Forest Plan Guideline G13.
Erosion control measures will be inspected and maintained on a recurrent basis until the site was stabilized to ensure their effectiveness to meet Forest Plan Guideline G13. Additional inspections and maintenance will occur following high rainfall events and prior to fall and spring runoff to ensure their effectiveness.
If debris or slash were to enter a stream, it will be removed by hand immediately whenever there is a potential for blockage of the stream or crossing structure, or if the stream has the ability to transport such material.
On temporary roads, sediment-buffering devices will be installed below all fill slopes within 300 feet downhill distance of streams or drainage crossings in compliance with Forest Plan Standard S2 and Guideline G47.
Temporary roads except for those in units 34, 41, 42, 43, and 44 will be re-contoured, seeded, and cover added within one season of completion of use in compliance with Forest Plan Standard S2. Those roads kept open will be cross drained at the end of the operating season.
Cross drain spacing (dips, grade sags, or water bars) on temporary roads will be approximately 300 feet for road grades between 0 and 5 percent, and approximately 200 feet or less for steeper grades. In unit 24, all drainages will pass through cross drain culverts.
As temporary roads are closed, all culverts will be removed. Where culverts are removed, fill at crossings will be recontoured to a stable slope angle approximating natural undisturbed stream banks adjacent to the site, and fills will be seeded with an approved Wasatch-Cache seed mix.
Temporary and intermittent roads will avoid wetlands and cross RHCAs at best crossing sites with the least distance across to meet Forest Plan Guideline G12.
Standard timber sale contract clauses will be applied that address resource and residual timber protection by requiring directional felling, pre-approved skid trails and landings, logs yarded with leading edge free of the ground. These provisions will be used to protect conifer and aspen seedlings and steep slopes during harvests.
Cultural Resources
Previously recorded heritage resource sites within units shall be avoided and protected from logging impacts to meet Forest Plan Guideline G88.
Any artifact or structure located during reconnaissance or project implementation will be left undisturbed and reported to the Forest Archeologist immediately to meet Forest Plan Guideline G88.
Vegetation and Forest Resources
Surveys for sensitive plant species have been completed. If any additional populations are located, the Forest

Management Direction and Mitigation Measure Description
Botanist will be notified, and mitigation will occur as necessary. This could include unit boundary adjustments to exclude populations, alternative harvest methods to minimize ground disturbance, buffers around populations, and adjustments in harvest to meet prescriptions for sensitive plant habitats to meet Forest Plan Guideline G23.
All equipment that will be used off road will be washed prior to moving into the project area. All equipment will be inspected and approved before operations will begin.
Wasatch-Cache Native Grass Seed Mixes will be used in all areas (intermittent service roads, temporary roads, and log landings) except where it has been determined there is a high possibility that weeds may be more competitive to meet Forest Plan Guideline G22. Other Wasatch-Cache Grass Seed mixes may be used in these locations.
Post harvest monitoring and control of weeds with herbicides will be required on intermittent service roads, temporary roads, and log landings to meet Forest Plan Guideline G25.
Wildlife Resources
The Wasatch-Cache National Forest Revised Plan Dead and Down Woody Debris guidelines will be followed to meet Forest Plan Guideline G16.
Timber harvest will not be allowed within active northern goshawk nest areas (approximately 30 acres) during the active nesting period in compliance with Forest Plan Standard S12.
Harvest operations in units within ½ mile of active nests will not be allowed during nesting or post-fledging if the wildlife biologist determines that it is necessary to prevent disruption of nesting or post-fledging activities to meet Forest Plan Guideline G15. Topography and timber haul routes will be considered.
Restrict harvest operations between December 31 and June 15 to minimize disturbance to wildlife.
Restrict burning to the fall season, after neotropical nesting is over and fuels cure.
Additional surveys will be conducted prior to activities. Mitigation, buffers and/or modification of units will be implemented if these surveys detect goshawk nesting activity. These surveys are in addition to the sensitive species surveys done for the Biological Evaluation.
In accordance with Forest Plan Guideline (G16), snag and woody debris habitat components at the stand level (where they are available distributed over each treated 10 acres) will be maintained at the minimum levels and characteristics described under FEIS Section 1.5.2 in Chapter 1. If the minimum number of snags is unavailable, green trees will be substituted. If the minimum size is unavailable, then the largest trees available on site will be retained.
Visual Resources
The Forest Landscape Architect will be involved with the planning of all units to insure that visual quality will be maintained to meet Forest Plan Standards and Guidelines during implementation of this project.
Create natural appearing openings as seen from middleground and superior viewers' positions. Configuration of opening will be free form with undulated edges. Feather edges of vegetation to mimic native vegetation.
In log decking areas stack logs as close to the travelway access as is safely possible and rip, re-contour and seed the deck areas with native seed.
Follow the natural contour of the land where possible when constructing fireline. When it is not possible, scarify fireline and seed with native vegetation. Scarification will undulate and disturb areas outside of the fireline prism.
Where borrow material for road maintenance or relocation is needed, modify existing steep road cuts to remove the geometry of the landscape and re-vegetate.
When constructing new roads alignment will follow the natural contour of the land as much as possible. Cuts and fills will be rounded and contoured to the existing landscape to eliminate the geometry of the road in the landscape.
Recreation
Increase Forest Service presence until evidence of temporary roads have been re-established with native vegetation.
When closing temporary roads use adequate logs, rocks to block access to recontoured road tracks.
Temporarily close locations for primitive car camping where timber operations pose a threat to the health and

Management Direction and Mitigation Measure Description
safety of the public, especially in the area of units 12-16, 20-23 and 25, and inform public of closures.
Suspend operations during holidays and weekends between Memorial Day and Labor Day and the Friday before opening day of the Utah general elk season to minimize overall impact on campers and other recreationists using the area.
Provide the public with information so that they can make a choice as to whether they would like to recreate in the analysis area over the period of timber operations.

Unit specific mitigation measures (FEIS 2.1.5) implemented with this decision are listed in Table 3 below.

Table 3. Unit Specific Mitigation Measure Description.

Unit Number	Site Specific Mitigation Measure
2	300' buffer between unit boundary and Humpy Creek.
3	300' buffer between unit boundary and Humpy Creek.
5	100' buffer along intermittent streams on east and west of unit
6	150' buffer along perennial stream on east side of unit
7, 8	No additional mitigation required.
9	100' buffer around ponds. Maintain 150' buffer between unit and stream on the east side.
10	100' buffer around ponds. Maintain 150' buffer between unit and stream on the east side, and 300' buffer between unit and Meadow Creek.
11	100' buffer around ponds. Maintain 150' buffer between unit and stream on the west side. Maintain a 50' buffer around wet seeps in north end of the unit.
12	100' buffer along intermittent stream to east of unit
13	100' buffer along intermittent stream to west of unit
14 to 16	No additional mitigation required.
17	Designate leave trees in clusters on the south end of the unit in the vicinity of ponds to benefit boreal toads.
18	100' buffer along intermittent stream to north of unit
19	100' buffer along intermittent stream to north of unit
20	Maintain 300' buffer between unit boundary and unnamed tributary to the north of the unit.
21	Maintain 300' buffer between unit boundary and unnamed tributaries to the north and east of the unit.
22	Maintain 300' buffer between unit boundary and unnamed tributaries to the north and east of the unit.
23	No additional mitigation required
24	100' buffer along intermittent stream to south of unit
25	100' buffer along intermittent stream to north of unit
26	300' buffer between unit and Meadow Creek; 100' buffer along intermittent stream on south side of unit.
27	Access to unit will require fish passable culvert installation. Maintain 100' buffer between unit and intermittent stream north of unit.
29	No additional mitigation required.
30	Maintain 150' buffer between unit boundary and Coyote Hollow Creek.
31	No additional mitigation required.
32	Maintain 100' buffer between unit and intermittent stream east of unit.
33 to 37, 41	No additional mitigation required.
42	Maintain 100' buffer around pond.
43, 44	No additional mitigation required.

Monitoring is also a key part of my decision. Monitoring specifics outlined in FEIS Section 2.1.6 will be followed and the results available for public review.

Project Specific Monitoring

Because not all proposed activity areas could be monitored, representative areas will be identified for the proposed activities and sampled. The results of the data and interpretations from the sample sites will be extrapolated to similar areas and activity types. Most monitoring completed under this program will be ongoing for 4 to 5 years.

Implementation and effectiveness soil, water, and aquatics monitoring will be conducted in compliance with FSH 2509.18, 1/21/03 R4 Supplement, Soil Quality Monitoring, and FSH 2509.22, Soil and Water Conservation Practices. This monitoring will include soil samples on at least two units and monitoring of sediment movement from those units. Water quality monitoring will include observations of effectiveness of road realignment in reducing sedimentation of stream channels and effectiveness of best management practices at new stream crossings. Effectiveness of Riparian Habitat Conservation Areas (RHCA) will be monitored on at least two units adjacent to RHCAs.

Implementation monitoring will include documentation ensuring that timber sale preparation of all harvest units on the ground and in the contract are in compliance with the West Bear EIS requirements. It will also include documentation of timber sale administration site visits and observations of overall contract compliance. Post harvest effectiveness monitoring using regeneration surveys will be completed on all units to determine whether adequate regeneration has occurred and whether or not any additional planting is needed.

Rationale for Decision

I evaluated Alternatives 1, 2 and 3 using the following criteria in making this decision:

- A. How well the alternatives meet the purpose and need for action
- B. How well the alternatives addressed the issues in the analysis
- C. How well the alternatives meet the Revised Forest Plan direction

A. How well the alternatives meet the purpose and need for action.

The Purpose and Need for the proposed action contains the following elements:

1. Maintain or move the forest cover types toward properly functioning condition.
2. Move forest cover types toward a variety of vegetation types, age classes, and patch sizes covering the landscape and contributing to healthy watersheds, aquatic and terrestrial wildlife habitats and recreation environments.
3. Production of timber commodities.

Alternative 1 – No Action does not meet the purpose and need in this analysis. Both Alternatives 2 and 3 meet the above elements of the purpose and need to varying degrees as follows:

- Alternative 2 provides the most movement of forest cover types toward properly functioning condition (approximately 1,686 acres compared to 1,387 acres under Alternative 3).
- Alternative 2 increases age class diversity on more area in spruce/fir (approximately 575 acres compared to 389 acres under Alternative 3) and mixed conifer stands (approximately 427 acres compared to 348 acres under Alternative 3). Alternative 2 regenerates more aspen forests (approximately 458 acres compared to 241 acres under Alternative 3). These treatments all

maintain a variety of vegetation types and patch sizes and protect watersheds, aquatic and terrestrial habitat and recreational environments. Improvements in existing road alignment under both alternatives will reduce long-term sources of sediment to streams, although Alternative 2 will fund all of the improvements through the timber sales while Alternative 3 will require other sources of funding to improve more than 1 stream crossing.

- Alternative 2 provides the greatest recovery of economic values through volume offered (12,000 CCF compared to 6,000 CCF).

B. How well the alternatives addressed the issues in the analysis.

Concerns related to effects on water resources, soils, aquatic species and their habitat, old growth forest, noxious weeds, sensitive plants, wildlife species and their habitat, browsing on aspen regeneration, and recreational use were raised during scoping and as comments on the DEIS. The Forest Hydrologist, Soils Scientist, Plant Ecologist, Archaeologist, Fisheries Biologist, Wildlife Biologist, Silviculturist, Environmental Coordinator, and Timber Management Coordinator visited each of the harvest units and road locations, modified unit and road locations from the original proposed action, and prepared general management direction and mitigation measures (FEIS Table 2.1.7) and site specific mitigation measures where needed for each of these sites (FEIS Table 2.1.8). Analysis indicates that mitigation measures and project design will protect resource values. Management requirements and implementation/effectiveness monitoring will address any differences or concerns common to both action alternatives identified during this analysis.

In making my decision, I compared the two action alternatives (FEIS Table 2.2.1) and how they responded to the issues. The issues identified in the analysis (FEIS Section 1.7) and a description of how the alternatives respond to those issues is as follows:

1. Water Resources (FEIS Section 3.1) – *Forest canopy removal and erosion following log skidding, prescribed burning, and road construction could lead to adverse effects on runoff quantity/timing/peak flow, water quality, wetlands and flood plains.*

Analysis of effects on runoff quantity/timing/peak flow, water quality, wetlands and flood plains indicate very little difference between Alternatives 2 and 3 and that Forest Plan Standards and Guidelines will be met. Relocation of some problem road segments will result in slight increases in wetland protection and reduction in sediment delivered to streams from those sites, offsetting a slight increase in sediment from new temporary stream crossings.

A comment on the DEIS indicated that all of the 0.6 miles of road relocation identified under Alternative 2 should be included in Alternative 3 if Alternative 3 was selected. If I had selected Alternative 3, I would have included that work in the decision. Alternative sources of funding would have been needed since the road segments in question would not have been utilized for timber hauling and could not have been funded as required work under the timber sale contract.

2. Soils (FEIS Section 3.2) – *Log skidding, prescribed burning, and road construction could lead to detrimental soil disturbance including soil displacement, soil erosion, compaction, and soil hydrophobicity (water repellence) due to severe fire effects.*

Analysis of detrimental soil disturbance including soil displacement, soil erosion, compaction, and soil hydrophobicity (water repellence) due to severe fire effects indicates no significant difference between Alternatives 2 and 3 and that Forest Plan Standards and Guidelines will be met. No activity area will have more than 15% detrimental soil disturbance under any of the alternatives (Forest Plan Guideline G4).

3. Aquatic Habitat (FEIS Section 3.3) – *Forest tree removal, log skidding, prescribed burning, and road construction could lead to adverse effects on aquatic species stream, wetland, and riparian habitat from reduced shade, woody debris recruitment and sedimentation.*

There will be no effects on aquatic species' stream, wetland, and riparian habitat from reduced shade and woody debris recruitment since riparian habitat conservation areas (RHCAs) are being maintained along all of the streams in the analysis area. Sedimentation is the same as described above under water resources.

4. Threatened, Endangered and Sensitive Aquatic Species (FEIS Section 3.3) – *Timber harvest, prescribed burning, and road construction could affect Bonneville cutthroat trout and their habitat.*

The determination for the action alternatives on Bonneville cutthroat trout is that the project "may impact individuals, but is not likely to cause a trend toward Federal listing or a loss of viability."

5. Aquatic Management Indicator Species (FEIS Section 3.3) – *Timber harvest, prescribed burning, and road construction could affect Bonneville cutthroat trout and their habitat.*

Bonneville and Colorado River cutthroat trout are management indicator species for aquatic habitat under the Revised Wasatch-Cache Forest Plan. Implementation of any of the alternatives identified in this project should not affect the trend of the cutthroat trout populations identified for the Forest.

6. Properly Functioning Condition (FEIS Section 3.4) – *The forest in this area may still be in a properly functioning condition. If it is not, timber harvest may not be the best means of restoring properly functioning forest conditions and may intervene in natural disturbance processes and result in additional fragmentation and loss of biological diversity and ecological integrity.*

Alternative 1 would have no direct effect on movement toward properly functioning condition (PFC). Stands would remain in their current conditions unless affected by unplanned disturbance such as insects, fire or windthrow. Wildfire suppression would continue on the landscape but the potential for an escaped fire would gradually increase due to increases in fuel loading over time. Allowing wildfires to burn in this area was determined to be unacceptable under the Wasatch-Cache Antennal Forest Wildland Fire Use Plan due to downwind private property. Spruce-fir and mixed conifer stands are heavily skewed toward mature and old age classes. The Wasatch-Cache Forest Plan has desired landscape structure for spruce-fir and mixed conifer of about 40% in mature and old age classes with the remaining age classes in grass/forb, seedling/sapling, young forest and mid-aged forest. About 93 % of the spruce-fir and mixed conifer in the West Bear landscape is currently mature and old. Most of the lodgepole pine in the landscape is currently mature and old and is presently being threatened by a heavy mountain pine beetle infestation. The Forest Plan has a desired landscape structure of 30% old aspen forest with 40% in grass/forb and seedling/sapling age classes and, 30% in young, mid-aged, and mature forests. Only 3% of the aspen in the West Bear landscape is currently in the grass/forb and seedling sapling age classes.

Alternatives 2 and 3 would replace and mimic natural disturbance processes on portions of the landscape to move the forest toward PFC. The disturbances under Alternatives 2 and 3 would occur in patch sizes similar to those that occurred historically. Group selection and thinning in spruce-fir and mixed conifer stands would maintain large areas of continuous forest cover with small openings replicating the forest structure following naturally occurring mixed severity fire regimes. Alternative 2 will initiate regeneration in small patches totaling about 200 acres and thin about 802 acres in spruce-fir and mixed conifer forest. Alternative 3 would initiate regeneration in small patches totaling

about 148 acres and thin about 589 acres in spruce-fir and mixed conifer forest. About 10 % of the spruce-fir and mixed conifer in the West Bear landscape will be in younger age classes under Alternative 2 and 9% would be in younger age classes under Alternative 3. Conifer removal followed by burning under Alternative 2 or burning only under Alternative 3 in the mixed aspen/conifer forest along with small patch cuts to remove conifers would increase the seral aspen component that is currently shrinking due to conifer encroachment. About 40 acres of conifer removal only in small patches (up to 5 acres) will be done in aspen stands with conifer patches under Alternative 2. About 32 acres of conifer removal only in small patches (up to 5 acres) would be done in aspen stands with conifer patches under Alternative 3. It is expected that Alternative 2 will result in 458 acres of aspen regeneration and Alternative 3 would result in 241 acres of aspen regeneration. About 16 % of the mixed conifer /aspen in the West Bear landscape will be in younger age classes under Alternative 2 and 10% would be in younger age classes under Alternative 3. Most of the lodgepole pine in the landscape is currently mature and old and is presently being threatened by a heavy mountain pine beetle infestation.

The fire regime condition class (FRCC) for the forested area is currently at the high end of “moderately departed” considering past harvest and fires. Both Alternatives 2 and 3 would have a minor cumulative effect of reducing the departure from 66% to 65% in the West Bear watershed and from 65% to 62% in the Hayden Fork watershed.

Moving the landscape toward the historical species and age class diversity of forest cover types in patch sizes that occurred historically helps to maintain the overall biological diversity and ecological integrity of the forest. Timber harvest and prescribed fire are tools that can be used to replace historical natural disturbance processes. Timber harvest and regeneration in patch sizes that historically resulted from natural disturbances does not create any fragmentation that would not have occurred historically. Roads and firelines are necessary to provide access and firebreaks. Roads are necessary to provide access. These are narrow corridors that result in minor fragmentation of the forest. However, most of the roads are temporary and will therefore result in only temporary fragmentation. Firelines are necessary to provide firebreaks. They are on the perimeter and part of the opening created by the prescribed fire. The 0.9 miles of intermittent service road under Alternative 2 will be closed to public use and seeded following timber harvest and will therefore have less fragmentation effect than an open road. Although the landscape structure will remain skewed toward mature and old forest with less than desired in the grass/forb, seedling/sapling, young, and mid-aged forest, both alternatives move the landscape toward PFC. Alternative 2 accomplishes the most.

7. Old Forest (FEIS Section 3.4) – *The cumulative effects of past, present, and future timber harvest could reduce the amount of old forest.*

Alternatives 2 and 3 will change the structure of current old forest. Group selection harvesting in the spruce/fir cover type will create gaps of ¼ to ½ acre in the canopy and thin some dense pockets of mature spruce. This treatment will retain many of the habitat components of old forest. Snag and woody debris habitat components in old forest serve as important wildlife habitat as well as serving other functions and are being maintained throughout the harvest units in accordance with Forest Plan Guideline G16. The Forest Plan Standard for old forest is that 20% of each cover type in the Uinta Mountains ecoregion should be retained in old forest (age of 150 years +). Under either action alternative, more than adequate old forest will remain.

A comment on the DEIS indicated that age is not the only indicator of old growth forest conditions. The Forest Plan Standard is based on stand age because it was determined to be the best indicator of old forest.

8. Noxious Weeds (FEIS Section 3.4) – *Timber harvest, prescribed burning, and road construction could increase noxious weed invasion.*

Preharvest equipment cleaning and post-sale monitoring and treatment of weeds under both action alternatives mitigate this threat.

9. Sensitive Plants (FEIS Section 3.4) – *Timber harvest, prescribed burning, and road construction could affect sensitive plants in the area.*

A survey of all proposed units identified one sensitive species site and this site is being protected and buffered under both action alternatives.

10. Terrestrial Wildlife and Their Habitat (FEIS Section 3.6) – *Timber harvest, prescribed burning, and road construction could increase noise disturbance, create barriers to wildlife movement, fragment forest habitat, and have adverse effects on migratory birds and their habitat.*

Analysis of the effects of human activity during timber harvesting, prescribed burning, and road construction under Alternative 2 indicate it is likely to have more direct and cumulative effects (along with recreational use) on the movements of some species of wildlife than Alternative 3 or the No Action Alternative. These effects are mitigated by maintenance of movement corridors under both action alternatives. Analysis of the effects of Alternatives on landscape vegetation species and age class diversity is generally similar to effects of historical natural disturbance and positive in maintaining that diversity. Alternative 2 treats more acres and moves the landscape closer to historical conditions. Fragmentation is temporary and quite limited under both action alternatives, due to regeneration and growth of young forest and revegetation of temporary roads. The effects of intermittent service roads under Alternative 2 as opposed to Alternative 3 with no intermittent service roads are minor due to revegetation and closure of these roads to public and administrative motorized use between periods of harvest. Cumulative effects of past harvesting are minor since past harvest has been limited and spread over a long period of time on this landscape.

As a result of maintaining and improving forest age class diversity, species composition and fire regime condition classes, Alternative 2 also maintains and improves diversity of habitat for wildlife species.

Migratory bird species of concern include red-naped and Williamson's sapsuckers and Swainson's hawk. For the Red-naped and Williamson's sapsuckers a mature aspen component is important. There would be mature aspen both live and dead available to both sapsucker species following treatment under both action alternatives. A sufficient amount of foraging and cavity nesting trees would be available well into the future. The Swainson's hawk is not likely to be negatively or positively affected by any of the alternatives.

11. Threatened, Endangered and Sensitive Terrestrial (FEIS Section 3.6) – *Timber harvest, prescribed burning, and road construction could affect Canada lynx denning and foraging habitat and prey species, bald eagle roosting habitat, wolverine foraging habitat, goshawk nesting and foraging habitat, three-toed woodpecker nesting and foraging habitat, boreal owl nesting and foraging habitat.*

Canada lynx denning and foraging habitat and bald eagle roosting habitat, wolverine foraging habitat, goshawk nesting and foraging habitat, three-toed woodpecker nesting and foraging habitat, boreal owl nesting and foraging habitat are all maintained under both action alternatives. Goshawk nesting and

foraging habitat meets goshawk conservation strategy standards under both action alternatives. The determination for Canada lynx and bald eagle for both action alternatives is “may affect, but is not likely to adversely affect” and has concurrence from the U.S. Fish and Wildlife Service (USDI 2005). The determination for all Forest Service sensitive species under both action alternatives is “may impact individuals, but is not likely to cause a trend toward Federal listing or a loss of viability”

12. Terrestrial Management Indicator Species Issue Statement (FEIS Section 3.6) – *Timber harvest, prescribed burning, and road construction could affect goshawk nesting and foraging habitat, snowshoe hare cover and foraging habitat, beaver dam building material and other beaver habitat.*

Goshawk nesting and foraging habitat meets goshawk conservation strategy standards under both action alternatives. Snowshoe hare cover and foraging habitat, beaver dam building material and other beaver habitat are also maintained under both action alternatives.

13. Browsing/Aspen (FEIS Section 3.6) – *Browsing by wildlife and domestic livestock could retard or eliminate aspen regeneration in timber harvest and prescribed burn units.*

An analysis of effects of browsing by wildlife and domestic livestock following harvest and burn of conifer aspen stands determined that neither action alternative would have significant effects based on monitoring of similar conditions across the north slope of the Uinta Mountains.

14. Recreational Use (FEIS Sections 3.7 and 3.8) – *Timber harvest, prescribed burning, and road construction could affect or conflict with recreational use in the analysis area.*

The activities associated with timber harvesting, prescribed burning, and road construction under Alternative 2 will have more direct effects than Alternative 3 on recreational use in the analysis area due to more activity associated with Alternative 2. These effects are primarily noise and dust associated with log haul and harvest. These are mitigated by restricting operations on weekends and holidays. Recreational use in the Whitney area is much lower on weekdays and there are many dispersed campsites in the area that can accommodate that use and are not near any of the harvest or log haul operations. Popular dispersed sites on Whitney Reservoir will be affected by log haul on the adjacent road but the volume of timber to be hauled on this road will be low.

15. Economic Efficiency (FEIS Section 3.9) – *Alternative combinations of timber harvest, prescribed burning, and road construction as well as size and timing of offerings and size of material available for harvest could have different levels of economic efficiency in returns to the government and in efficiency of operations for timber purchasers.*

Due in part to economy of scale and timber volume produced, Alternative 2 has the best present net value.

16. Timber Utilization (FEIS Section 3.9) – *Prescribed burning without removal of merchantable timber on accessible ground could result in a loss of timber values and difficulty in achieving objectives of the burn.*

There is a substantial component of conifers in the mixed conifer aspen cover type. Removing and utilizing the conifers prior to burning under Alternative 2 provides better utilization of this resource than prescribed burning alone as well as creating fine fuels to more efficiently burn and regenerate the aspen.

Table 4. Comparison of Alternatives.

Issue	Resource Values Analyzed		Effects of Alternatives		
			Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3
Water Resources	Water yield increase in Acre-Feet / % (3.1.3.5, 3.1.4.3)	West Fk Bear	0	164 acre feet / 0.5 %	149 acre feet / 0.4 %
		West Fk Bear Above Whitney	0	12.9 acre feet / 0.2%	9.5 acre feet / 0.2 %
		Hayden Fork	0	39 acre feet / 0.1 %	39 acre feet / 0.1 %
		Timing of increased runoff (3.1.4.3)	No change	No change	No change
		Increase in peak flow (3.1.4.3)	No change	Slight increase	Slight increase
		Water Quality (3.1.4.2, 3.2.4)	No change	Very slight effect	Very slight effect
		Wetlands (3.1.4.1)	No change	Slight improvement from road relocation	No effect
		Floodplains (3.1.4.1)	No change	No effect	No effect
Soils	Wepp modeled erosion (3.2.4, 3.2.4.1)		No change	Very low	Very low
	Soil compaction (3.2.4.1)		No change	~11-15% of each activity area (harvest unit)	~11-15% of each activity area (harvest unit)
	Burning - hydrophobic soils (3.2.4.2)		No change	No effect	No effect
	Productivity (3.2.4.1)		No change	At least 85%	At least 85%
Aquatic Habitat	Riparian Habitat Conservation Areas (3.3.4.1)		No change	Slight increase in impacts	Slight increase in impacts
Threatened, Endangered and Sensitive Aquatic Species	Bonneville cutthroat trout (3.3.4.3)		No change	"May impact individuals, but is not likely to cause a trend toward Federal listing or a loss of viability"	"May impact individuals, but is not likely to cause a trend toward Federal listing or a loss of viability"
	Amphibians (3.3.4.4)		No change	Minor favorable and adverse effects	Minor favorable and adverse effects
Aquatic Management Indicator Species	Forest-wide trend in population of Bonneville cutthroat trout. (3.3.4.5)		No change	No effect	No effect
Properly Functioning Condition	Age Class Diversity and Species Composition. (3.4.4.1)		Continued gradual move away from PFC (Gradual loss of aspen and continued shortage of young age classes)	Improvement in conifer and aspen age class diversity	Improvement in conifer and aspen age class diversity
	Fragmentation, biological diversity, and ecological integrity. (3.3.4, 3.4.4, 3.6.4)		No change in fragmentation. Continued trend toward mature and old forest habitat	Slight increase in fragmentation. Slight improvement in diversity of habitat. Ecological integrity maintained	Slight increase in fragmentation. Slight improvement in diversity of habitat. Ecological integrity maintained

Issue	Resource Values Analyzed		Effects of Alternatives		
			Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3
			and potential for large stand replacing fires		
	Disease and insect infestations (3.4.4.2)		Continued gradually increasing risk of landscape bark beetle epidemics	Age and species diversity and lower conifer density leading to future stand conditions that will be less likely to support beetle epidemics	Age and species diversity and lower conifer density leading to future stand conditions that would be less likely to support beetle epidemics
	Acres and percentage of forest type in fire regime condition classes. (3.5.4.1)		Gradual trend toward substantially altered fire regimes.	Slight improvement in watershed fire regime condition class	Slight improvement in watershed fire regime condition class
	Prescribed fire effects with and without fuel from conifer tops and limbs. (3.4.4.1)		No change	~418 acres of conifer/aspen moved to seral aspen based on 80% burn effectiveness.	~209 acres of conifer/aspen moved to seral aspen based on 40% burn effectiveness.
Old Forest	Acres (%) of old forest in the ecosection. (3.4.4.4)	Spruce/Fir	No change, 83,319 acres (67%)	Change in old forest structure on ~575 acres	Change in old forest structure on ~389 acres
		Mixed Conifer	No change, 60,169 Acres (43%)	Change in structure on ~427 acres	Change in structure on ~348 acres
	Acres of old forest in the analysis area. (3.4.4.4)	Spruce/Fir	No change	Change in old forest structure on ~575 acres	Change in old forest structure on ~389 Acres
		Mixed Conifer	No change	Change in structure on ~427 acres	Change in structure on ~348 acres
Noxious Weeds	Effects on noxious weeds. (3.4.4.3)		No change	Increased risk mitigated by equipment washing and follow-up treatment	Slightly less risk than Alt 2 mitigated by equipment washing and follow-up treatment
Sensitive Plants	Effects on sensitive plants. (3.4.4.5)		No change	No effect, one identified site protected.	No effect, one identified site protected.
Wildlife	Changes in forest habitat from timber harvest and prescribed burning. 3.6.4)		No change	Temporary increase in spruce/fir and mixed conifer forest gaps and large openings in conifer/ aspen forest	Same as Alt 2 with fewer spruce/fir and mixed conifer acres treated
	Effects of roads on noise, barriers to movement, fragmentation. (3.6.4)		No change	Increased traffic and equipment noise, Slight increase in snow compaction, temporary barriers to movement of some species.	Same as Alt 2 with proportionately less effect due to less road mileage.
	Effects of harvest and roads on migratory birds. (3.6.4.5)		Continued decline in forest habitat age and species diversity	Generally positive effects on aspen dependent and habitat generalists with minor adverse effects on old forest dependent	Same as Alt 2 with fewer effects on old forest dependent species.

Issue	Resource Values Analyzed		Effects of Alternatives		
			Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3
				species.	
Threatened, Endangered and Sensitive Terrestrial Species	Effects on Threatened, Endangered and Sensitive Terrestrial Species and their denning, nesting, and foraging habitat. (3.6.4.1)	Bald eagle	No change	“No effect”	“No effect”
		Canada lynx	No change	“May affect, but is not likely to adversely affect”	“May affect, but is not likely to adversely affect”
		Wolverine, boreal owl, great gray owl, three-toed woodpecker northern goshawk	No change	“May impact individuals, but is not likely to cause a trend toward Federal listing or a loss of viability”	“May impact individuals, but is not likely to cause a trend toward Federal listing or a loss of viability”
Terrestrial Management Indicator Species	Terrestrial Management Indicator Species and their denning, nesting, and foraging habitat. (3.6.4.4)	Snowshoe hare	No change	Slight short-term reduction in habitat and hares, increase after 10-15 years	Same as Alt 2 with fewer acres treated
		Beaver	No change	Minor favorable effect in Mill City area	Minor favorable effect in Mill City area
		Northern goshawk	Gradual long-term decline in nesting and foraging habitat associated with mixed conifer and aspen and early successional stands	Short-term reduction in suitable nesting habitat and foraging opportunities, long-term maintenance of conifer/aspen habitat	Same as Alt 2 except that fewer acres would be treated
	Forest-wide trend of Terrestrial Management Indicator Species (3.6.4.4)	Snowshoe hare	No change	No significant effect on forest-wide trend	No significant effect on forest-wide trend
		Beaver	No change	No significant effect on forest-wide trend	No significant effect on forest-wide trend
		Northern goshawk	No direct effects	No significant effect on forest-wide trend	No significant effect on forest-wide trend
Browsing / Aspen	Browsing impacts on past aspen treatment. (3.6.4.7)	No change	Possible minor effect on rapidity of aspen establishment	Possible minor effect on rapidity of aspen establishment	
Recreational Use	Dispersed camp sites. (3.7, 3.8)	No change	Meets Forest Plan scenic integrity objectives, minimal direct effects on areas adjacent to 94 sites	Same as Alt 2	
	Noise from timber harvest operations. (3.8.4.4)	No change	Adverse weekday effects on up to 109 campers at one time while harvest or haul operations are ongoing within ½ mile of camp	Same as Alt 2	

Issue	Resource Values Analyzed	Effects of Alternatives		
		Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3
			sites	
	Effects of truck traffic on recreational traffic. (3.8.4.4)	No change	Estimated 4 loads per weekday with up to 9 loads per day using Whitney Road for ~308 days	Estimated 4 loads per weekday with up to 9 loads per day using Whitney Road for ~221 days
	Effects of road relocation on recreational use. (3.7, 3.8)	No change	Slightly improved access to some sites, removes shoreline road on Beaver Lake	Slightly improved access to some sites.
	Effects of harvest operations on snowmobiling. (3.8.4.1)	No change	Minor effect on opportunities before December 15	Same as Alt 2
Economic Efficiency	Economic efficiency comparison of alternatives. (3.9.4)	0	Benefits: \$1,104,867 Costs: \$625,279 PNV: \$479,589	Benefits: \$621,445 Costs: \$405,364 PNV: \$216,080
Timber Utilization	Anticipated timber sale size. (3.9.4)	0	~1,489 acres, 12,000 Hundred Cubic Feet (CCF)	~864 acres, ~6,000 Hundred Cubic Feet (CCF)
	Anticipated timber sale scheduling. (2.1, 3.8, 3.9)	None	Moffit: ~4,000 CCF Reservoir: ~4,000 CCF Mill City: ~4,000 CCF	Moffit: ~3,000 CCF Reservoir E: ~3,000 CCF
	Anticipated size categories of timber to be offered. (2.1)	None	Moffit: Sawlogs Reservoir E: Sawlogs Mill City: Sawlogs and poles.	Moffit: Sawlogs Reservoir E: Sawlogs Mill City: None
	Volume of merchantable timber burned (3.9.4)	None	Up to 100 CCF	Up to 1,200 CCF

Other Alternatives Considered

In addition to the selected alternative, I considered two other alternatives in detail, which are discussed below. A more detailed comparison of these alternatives can be found in FEIS Section 2.1.

Alternative 1 – No Action

Under Alternative 1, the no action alternative, there would be no change from current management within the project area. No stand structure modification would occur under this alternative.

Alternative 3

This alternative responds to public concerns related to new road construction and public interest in reintroducing fire as the primary landscape disturbance agent. Most harvesting would be limited to those areas that can be reached from existing roads and there would be no construction of intermittent service roads under this alternative. There would 1.9 miles of temporary roads constructed and recontoured following harvest. Units where prescribed fire is feasible would be prescribed for burning without conifer removal. Approximately 6,000 CCF = (3 million board feet) of timber would be harvested from about 864

acres and approximately 209 acres burned within a treatment area of 523 acres of National Forest System land.

Treatments of spruce/fir and mixed conifer are the same as for the proposed action, but would occur on fewer acres due to the limited access.

Alternatives Considered, but Eliminated from Detailed Study

Three alternatives were considered, but eliminated from detailed study. See FEIS Section 2.1.7 for the reasons why these alternatives were eliminated from detailed study. They included:

- Alternative 4 would place the primary vegetation management emphasis on the use of prescribed fire and wildland fire use, limit harvest units to 1 acre in size and restrict harvesting to areas accessible from existing classified roads.
- Alternative 5 was similar to Alternative 4, but differed in that it did not allow timber harvest, relying on prescribed fire and wildland fire use to achieve desired future condition.
- Alternative 6 would preserve undeveloped landscapes within the West Bear area.

Public Involvement

The West Bear Landscape Assessment (West Fork Bear River Ecosystem Management Project) was completed in February 2002. Public comments on that assessment were solicited through public meetings and a request for written public comments and were considered in the assessment. A proposed action was developed based on the landscape assessment. A Notice of Intent to Prepare an EIS for the West Bear Vegetation Management Project was published on March 20, 2002. Public scoping was initiated on March 19 with a comment period ending on April 19, 2002. An open house to discuss the West Bear Vegetation Management Project was held on March 28, 2002. The East Fork Fire during the following summer changed priorities; so a notice was published in the Wasatch-Cache NF quarterly update deferring the West Bear Vegetation Management Project. A new notice of the proposed project was published in the Wasatch-Cache schedule of proposed actions (SOPA) beginning in January 2005 (USDA FS 2005). Public scoping was re-opened on February 5 with a comment period ending on March 7, 2005.

Twenty-one comments were received during the second comment period. Using the comments from the public and other agencies, the interdisciplinary team developed an alternative and a list of issues (see issues section) and an alternative to address the issues. A Notice of Availability of the Draft Environmental Impact Statement was published in the Federal Register on July 22, 2005 followed by a second Notice of Availability extending the comment period to September 30, 2005. Twelve comment letters were received during the 45 day comment period. FEIS, Appendix B, Response to Comments displays the comments and the Forest Service response, as well as copies of letters from other government agencies.

In a March 5, 2007 Record of Decision (ROD), former Forest Supervisor Faye Krueger approved Alternative 2 for the West Bear Vegetation Management Project. Two appeals were received on the project; one of the appellants identified an error in the Final Environmental Impact Statement (EIS). On May 25, 2007 Deputy Forest Supervisor Dave R. Myers, acting for Supervisor Krueger, withdrew the decision.

After reviewing the West Bear Vegetation Management Project, Steve Ryberg, the Evanston District Ranger, determined specific areas in need of additional analysis or consideration. The interdisciplinary

team was instructed to concentrate on the analysis of soils and some species of wildlife for a Draft Supplemental Environmental Impact Statement (SEIS).

The Notice of Intent to prepare a supplement to the Environmental Impact Statement was published in the *Federal Register* on January 24, 2008 (vol. 73, no. 16). Public scoping is not required for supplements to environmental impact statements (40 CFR 1502.9(c)4(4)).

In March 2008 the Draft SEIS was distributed to the public. This Draft SEIS presented additional analysis to supplement information presented in the West Bear Vegetation Management Final FEIS. The Notice of Availability for the Draft SEIS was published in the *Federal Register* on March 14, 2008 and comments were accepted through April 28, 2008. Six comments were received and reviewed. One comment was received from the U.S. Department of the Interior, Office of Environmental Policy and Compliance stating they had no comment. A Final SEIS was prepared that addressed additional questions raised about issues addressed in the FEIS and Draft SEIS. The responses to these questions are contained in the Response to Comments section of the Final SEIS.

The Final SEIS does not replace the Final EIS in entirety. Instead, information provided in this Final SEIS replaces discrete sections of the FEIS or provides additional information to supplement the analysis presented in the FEIS. Both documents are available on the web at: <http://www.fs.fed.us/r4/wcnf/projects/proposed/index.shtml>.

Environmentally Preferred Alternative

Alternative 3 is the environmentally preferred alternative. The objective of this alternative was to reduce the effects of road construction and timber harvest by reducing the miles of road needed for access and by substituting prescribed burning only for units that would be harvested prior to prescribed burning.

Alternative 3, however, was not the one I selected for implementation for several reasons. This alternative would reduce the percentage of the analysis area that could be moved toward properly functioning conditions and reduce the timber utilization in areas treated.

Further, it is my opinion that with the implementation of the selected alternative, and the application of management direction (Section 2.1.4) and mitigation (Section 2.1.5) listed in Chapter 2 of the Final Environmental Impact Statement, this project will not result in harm to the environment. The selected alternative is an environmentally acceptable project, which is responsive to public demands, and appropriate management of the forest in the West Bear area of the Evanston Ranger District.

Relationship to Revised Forest Plan

In making my decision, I considered the relationship of the project to the 2003 Revised Forest Plan Wasatch-Cache National Forest. The 2003 Revised Forest Plan sets forth management direction for managing the land and resources of the Wasatch-Cache National Forest. The Forest Plan is the result of programmatic analysis, which is addressed in the Forest Plan FEIS (USDA Forest Service 2003). The West Bear Vegetation Management EIS is a project-level analysis; its scope is confined to addressing the significant issues and possible environmental consequences of the project. Where appropriate, the West Bear Vegetation Management EIS tiers to the Forest Plan FEIS, as encouraged by 40 CFR 1502.20.

The 2008 National Forest Management Act regulations at 36 CFR 219 became effective on April 21, 2008.

Science

The techniques and methodologies used in this analysis consider current and accurate science. The analysis includes a summary of the credible scientific evidence which is relevant to evaluating reasonably foreseeable impacts. The analysis also identifies methods used and references scientific sources relied on. When appropriate, the conclusions are based on the scientific analysis that shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information. Literature reviewed and considered by specialists in the analyses is referenced in the FEIS, Chapter 5.

Findings Required by Other Laws and Regulations

National Forest Management Act – This decision to implement Alternative 2 is consistent with the intent of the 2003 Revised Forest Plan's forest wide goals, subgoals and objectives listed on pages 4-16 to 4-34 and the desired future condition of the Western Uintas Management Areas on pages 4-176 to 4-191. The project incorporates applicable forest wide standards and guidelines from Chapter 4, Section A4. This decision is consistent with management prescription direction mapped for the area. Under 36 CFR 219.27 ((c) (1)), no timber harvesting, other than salvage sales or sales to protect other multiple use values shall occur on lands not suited for timber production. I have found that timber harvest on the lands with Forest Plan Management Prescriptions of 4.4, 5.1, and 6.1 is consistent with the direction under 36 CFR 219.27(c)(1).

Clean Water Act – The Clean Water Act requires each state to implement its own water quality standards. The State of Utah's Water Quality Anti-degradation Policy requires maintenance of water quality to protect existing in-stream Beneficial Uses on streams designated as Category I High Quality Water. All surface waters geographically located within the boundaries of the Wasatch-Cache National Forest whether on public or private lands are designated as Category I High Quality Water. This means they will be maintained at existing high quality. New point sources will not be allowed and non-point sources will be controlled to the extent feasible through the implementation of Best Management Practices (BMPs) or regulatory programs. The State of Utah and the Forest Service agreed through a 1993 MOU to use Forest Plan standards and guidelines and the Forest Service Handbook (FSH) 2509.22 Soil and Water Conservation Practices (SWCPs) as BMPs. The requirement for using SWCPs in my decision meets the water quality protection elements of the Utah Non-point Source Management Plan and Nonpoint Source Management Plan for Silvicultural activities.

Executive Order 11990 of May 1977 – This order requires the Forest Service to take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. In compliance with this order, Forest Service direction requires that analysis be completed to determine whether adverse impacts would result. Wetlands within the project area were identified. Potential impacts will be avoided by implementing BMPs as described in mitigation measures. In addition, approximately 0.44 acres of wetlands south of Unit 27 in the West Fork Bear River subwatershed will be improved by rerouting an existing road out of the wetlands. My decision is in compliance with EO 11990.

Executive Order 11988 of May 1977 – This order required the Forest Service to provide leadership and take action to (1) minimize adverse impacts associated with occupancy and modification of floodplains and reduce risk of flood loss, (2) minimize impacts of floods on human safety, health and welfare, and (3) restore and preserve natural and beneficial values served by floodplains. There are no floodplains within

the project area as identified by the Department of Housing and Urban Development. My decision is in compliance with EO 11988.

Endangered Species Act – This Act directs that all Federal departments and agencies shall seek to conserve endangered, and threatened (and proposed) species of fish, wildlife and plants. This obligation is further clarified in a National Interagency Memorandum of Agreement (dated August 30, 2000), which states our shared mission to “...enhance conservation of imperiled species while delivering appropriate goods and services provided by the lands and resources.” Based on the disclosure in Chapter 3, concerning threatened and endangered or proposed wildlife, plant or fish species, and the Biological Assessment (USDA FS 2005f), it has been determined there are no adverse effects to populations of endangered, and threatened (and proposed) species of fish, wildlife and plants relative to this decision. The US Fish and Wildlife Service concurred with this determination on September 27, 2005 (USDI 2005).

Executive Order 13186 of January 10, 2001 – Based on the discussion in Chapter 3, Section 3.6.4.5 of the FEIS and information in the project file concerning migratory birds, my decision is in compliance with this Executive Order for the Conservation of Migratory Birds.

Executive Order 13112 – Invasive Species – This Executive Order directs that Federal Agencies should not authorize any activities that would increase the spread of invasive species. Based on the mitigation and management requirements included as part of my decision, the approved activity will not increase the spread of invasive species.

American Antiquities Act of 1906 and the National Historic Preservation Act of 1966 – The project area has been surveyed for cultural properties, and all project activities have been cleared with the State Historic Preservation Officer (Utah State 2004). No proposed activities are located in or near known cultural resource properties, or within areas of a high probability of such properties occurring.

New sites discovered during sale operations will be protected by provisions in the timber sale contract (C6.24#). Other non-timber sale related activities will be under the same obligations of avoidance and protection that the law requires.

Clean Air Act, As Amended In 1977 – Based on discussion in Chapter 3, Section 3.03 of the FEIS concerning air quality, it has been determined that there will be no direct, indirect, or cumulative effects to air quality in Class I or II airsheds relative to the decision.

Roadless Area Conservation Rule of January 12, 2001 - The intent of the rule is to provide lasting protection for inventoried roadless areas within the National Forest System in the context of multiple use management. It prohibits road construction and reconstruction and timber harvest in inventoried roadless areas on National Forest System lands. For the West Bear project, timber harvest and road construction will take place outside inventoried roadless areas. The decision is consistent with this Rule.

Travel Management Rule of November 9, 2005 – (36 CFR Parts 212 and 261) – The rule requires designation of roads, trails, and areas open to motor vehicle use. It prohibits the use of motor vehicles off the designated system. New roads will be constructed as part of my decision; however, all of the created roads will be gated and/or otherwise closed to public access during the harvesting operations. Following harvest operations temporary roads will be obliterated, recontoured and revegetated. Intermittent service roads will be closed to public access. My decision does not make changes to roads or trails open to motor vehicle use and is consistent with this Rule.

Prime Farmland, Rangeland and Forest Land (Secretary of Agriculture Memorandum 1827) –

There is no prime farmland within the project area. The Decision does not make any changes to grazing allotments found within the project area.

Civil rights – Based on comments received during scoping and the comment period for the DEIS no conflicts have been identified with other Federal, State or local agencies or with Native Americans, other minorities, women, or civil rights of any United States citizen.

Executive Order 12898 of February 16, 1994 “Federal Actions to Address Environmental Justice on Minority Populations and Low-income Populations” – This order requires Federal Agencies to the extent practicable and permitted by law to make achieving environmental justice part of its mission by identifying and addressing as appropriate disproportionately high and adverse human health effects, of its programs and policies and activities on minorities and low income populations in the United States and territorial possessions. In compliance with this Executive Order the Wasatch-National Forest through intensive scoping and public involvement attempted to identify interested and affected parties, including minorities and low-income populations for this project. A comment period was held for 45 days following the publication of the Notice of Availability in the Federal Register. No minorities and low-income populations were identified during public involvement activities.

Appeal Opportunities

This decision is subject to appeal pursuant to Forest Service regulations at 36 CFR 215. Appeals must meet the content requirements of 36 CFR 215.14. Only individuals or organizations who submitted comments or otherwise expressed interest in the project during the comment period may appeal. Appeals must be postmarked or received by the Appeal Deciding Officer within 45 days of the publication of the notice in The Salt Lake Tribune. This date is the exclusive means for calculating the time to file an appeal. Timeframe information from other sources should not be relied on. Incorporation of documents by reference is not allowed. The Appeal Deciding Officer is Harv Forsgren, Regional Forester. Appeals must be sent to: Appeal Deciding Officer, Intermountain Region USFS, 324 25th Street, Ogden, Utah 84401; or by fax to 801-625-5277; or by email to: appeals-intermtn-regional-office@fs.fed.us. Emailed appeals must be submitted in rich text (rtf), Word (doc) or portable document format (pdf) and must include the project name in the subject line. Appeals may also be hand delivered to the above address, during regular business hours of 8:00 a.m. to 4:30 p.m. Monday through Friday.

Implementation

If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, 5 business days from the close of the appeal filing period. When appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

Contact Person

For additional information concerning this decision or the Forest Service appeal process, contact Larry Johnson at the Evanston Ranger District, 1565 Hwy 150 South, Suite A, Evanston, WY 82930 or by phone at (307) 789-3194.

/s/ David R. Myers

6/11/08

Dave Myers

Acting Forest Supervisor
Uinta-Wasatch-Cache National Forest

DATE

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.