

CHAPTER 1 - PURPOSE AND NEED

Document Structure

The Forest Service has prepared this Final Environmental Impact Statement (FEIS) in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This FEIS discloses the direct, indirect, and cumulative environmental impacts that would result from the Proposed Action and alternatives to the Proposed Action. The document is organized into four chapters and a set of appendices:

- Chapter 1. Purpose and Need for Action: This chapter includes information on the history of the project proposal and the purpose of and need for this project. This section also details how the Forest Service informed the public of the proposal, how they responded, and the issues identified through their comments.
- Chapter 2. Alternatives: This Chapter provides alternative methods for achieving the stated purpose. These alternatives were developed based on key issues raised by the public, Forest Service employees, and other agencies. This discussion also includes design criteria for alleviating potential detrimental effects. Finally, this section provides comparative summary tables of the environmental consequences associated with each alternative.
- Chapter 3. Affected Environment and Environmental Consequences: This chapter describes the potential environmental effects of implementing the Proposed Action and other alternatives. This analysis is organized by resource area.
- Chapter 4. Consultation and Coordination: This chapter provides a list of preparers and agencies, organizations, and individuals consulted during the development of the environmental impact statements. It also includes a section of responses to public comments received on the Draft Environmental Impact Statement (DEIS).
- Appendices: The appendices provide more detailed information to support the conclusions presented in the EIS. Included is a glossary that defines abbreviations, acronyms, and terms used. Most abbreviations are defined when first used in the text and most terms are defined in the glossary to avoid interrupting the text.

Additional documentation, including more detailed analyses of project-area resources, may be found as exhibits in the project planning record, or project file, located at the Tally Lake Ranger Station in Kalispell, Montana. Project file exhibits are often referenced in this FEIS and are referred to simply as “Exhibit T-1” as an example.

Differences Between the DEIS and the FEIS

Chapter 1 of this FEIS differs from the same chapter in the DEIS in the following ways:

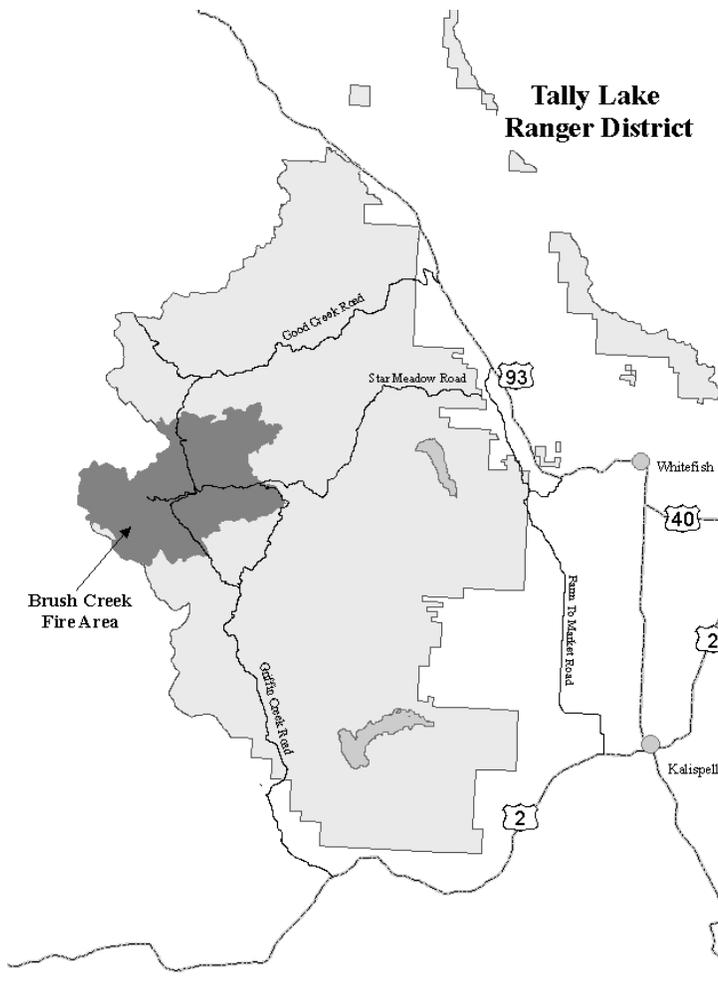
- The public involvement process since publication of the DEIS was updated in the FEIS.

- The brief description of the Proposed Action was updated to reflect new information gathered in the summer of 2008.
- The issue pertaining to old growth and recruitment old growth habitat was updated to reflect new information gathered in the summer of 2008.

Background and Project Area Description

The Brush Creek Fire burned a total of approximately 30,000 acres on the Flathead and Kootenai National Forests, Plum Creek Timber Company Lands, and a small amount of other private property. A lightning storm on July 26, 2007 ignited the fire which steadily grew in size for several weeks, finally being declared contained on August 26. Approximately 24,700 acres of the fire burned on lands administered by the Tally Lake Ranger District, Flathead National Forest. The majority of these acres burned in the upper reaches of the Sheppard Creek drainage (approximately 18,000). The Good Creek and Griffin Creek drainages were also affected by the fire.

Figure 1-1. Project Area Vicinity



A small portion of the Brush Creek Fire reburned areas affected by the Little Wolf Fire of 1994. Please refer to Figure 1-1 for the location of the fire area.

The Flathead National Forest Land and Resource Management Plan (USDA Forest Service 1986) allows the salvage of merchantable wood products after unexpected disturbances such as wildland fire. The Forest Service is therefore proposing a project, called the Sheppard Creek Post-Fire Project, to recover the value of wood products from the fire area. The Kootenai National Forest has proposed a similar but separate project on the west side of Brush Creek Divide. Their proposal is referred to as the Brush Creek Fire Salvage Project. Information regarding that proposal can be found at the Libby Ranger District, 12557 Highway 37 North, Libby, MT 59923, (406) 293-7773.

Proposed activities for the Sheppard Creek Post-Fire Project (hereafter

referred to as the Sheppard Creek Project) were developed by an interdisciplinary team (ID Team) and were based upon an evaluation of areas in and around those that burned in the Brush Creek Fire of 2007. The team that provided input for this FEIS is made up of a variety of specialists (wildlife biologist, soil scientist, fisheries biologist, hydrologist, fire and fuel specialists, recreation specialist, landscape architect, transportation planner, archeologist, and silviculturist). The evaluation was conducted to better understand:

- the impact of the fires on the resources across the landscape;
- the existing condition of key resources within the area on a broader, landscape scale; and
- a range of desired future conditions using public involvement, current management direction, regulations, and laws.

The evaluation, consisting of resource specialist reports in the Project Record, suggested management actions that appear appropriate at this time. The Proposed Action was then developed through interdisciplinary consideration of resource conditions.

Fire suppression and control activities employed a variety of methods, ranging from hand crew fireline construction to fire line construction using heavy equipment such as bulldozers and feller-bunchers. Approximately 60 miles of machine fire line were constructed on the Flathead National Forest side of the Brush Creek Divide. Some closed and impassable roads were reconstructed for firefighter access. Fire-killed trees along some roadways were felled for public safety.

A Forest Service Burned Area Emergency Rehabilitation (BAER) team was assigned in August 2007 to determine emergency watershed rehabilitation needs created by the fire. Some of the needs identified in their analysis included insect control using pheromones, noxious weed control and monitoring, storm patrols, trail erosion control, warning sign installation, culvert cleaning, and upgrading culverts. These actions began in late 2007 and will continue in the summer of 2008.

Some post-fire rehabilitation activities have already been completed or are scheduled. All fire lines have been rehabilitated by installing drainage features and seeding. Trees felled for safety have been contracted for removal.

A portion of the Brush Creek Fire burned into an area in the Good Creek drainage that was under contract for timber harvest activities. This part of the fire area will not be considered for salvage activities under the Sheppard Creek Project Proposed Action. The remaining area on the Tally Lake Ranger District considered in the analysis of the Proposed Action includes 22,285 acres. This is the land referred to as the Sheppard Creek Project Area.

All proposed activities are located within the perimeter of the Flathead National Forest's portion of the Brush Creek Fire with the exception of some road rehabilitation. The center of this area is approximately 20 air miles due west of Whitefish, Montana. The legal township locations for project activities include T30N, R25W; T30N, R26W; T31N, R25W; and T31N, R26W; Principal Montana Meridian, Lincoln and Flathead Counties, Montana.

Pre-Fire Vegetation Conditions

The Sheppard Creek drainage is characterized by the moist lower subalpine; cool lodgepole pine; and moist Douglas fir fire groups described by Fisher and Bradley in 1987. Early fire history records show that a large fire occurred here during 1889 burning the head end of Sheppard Creek around Tepee and Sheppard Mountains. It burned approximately 15,000 acres and left unburned patches scattered across the landscape.

A detailed forest inventory for Flathead and Lake Counties was completed in 1941. Data for the Sheppard Creek area was collected in 1939 and published as a series of half quadrangle maps in 1941. At this time, about four percent of the Sheppard Creek drainage was described as seedlings or non-stocked stands, two percent were sapling sized stands, 21 percent were pole size stands, and 73 percent were stands larger than pole-sized.

A major infestation of the mountain pine beetle occurred in the Sheppard Creek drainage and across the northern Rocky Mountains in the 1980s. This infestation started building in 1983 and reached epidemic proportions in 1985 and 1986. Mortality in lodgepole pine was extensive during this period.

Approximately 56 percent of the project area has experienced some type of timber harvest activity. Over 90 percent of the past timber harvest activities have been even-aged regeneration treatments. These types of treatments require the reinitiation of the forest either by planting or natural regeneration. Intermediate harvests have also occurred for salvage and thinning objectives. In addition, personal-use firewood cutting is considered a salvage treatment, concentrated along existing road systems. This is estimated to be approximately one to three percent of the area, with the majority occurring since the 1980s.

Past wildland fire, timber management, insect epidemics, and personal-use firewood cutting have all changed the vegetation structure and composition on the landscape than that displayed in the 1941 inventory. Prior to the Brush Creek Fire, about five percent of the project area was described as seedlings or non-stocked stands, 50 percent were sapling sized stands, five percent were pole size stands, and 40 percent were stands larger than pole-sized. Although artificial regeneration in the form of tree planting has occurred, conifer species distribution was still very similar to that found in 1941.

Brush Creek Fire Behavior and Effects

The lightning strike that started the Brush Creek Fire occurred in an area of heavy fuels. These heavy fuels primarily resulted from insect-caused mortality in lodgepole pine and subalpine fir stands over the past twenty to thirty years. Dry fuels resulting from sparse seasonal rainfall and prolonged drought created extreme fire behavior, allowing the fire to escape initial suppression efforts. Periodic wind events and low relative humidity over the next four weeks, as well as heavy fuel loading, contributed to the fire spreading to nearly 30,000 acres. Fire suppression activities and higher humidity levels later in the summer allowed the fire to be contained and eventually controlled.

Large fires in northwest Montana in the past usually exhibited behavior that resulted in a mosaic of low, moderate, and high vegetation burn severities. Low severity burns resulted from areas of sparse live and dead fuel levels, high fuel moisture content, and/or shading. Tree and other vegetation mortality are typically spotty with many of the largest, thick-barked trees surviving. High severity burns often resulted from areas with south- or west-facing slopes, high levels of dead fuel, and upland areas away from moist drainages. Nearly all trees succumb to high severity fire behavior. Moderate severity burns resulted from areas exhibiting the middle range of low and high conditions. Each of these three severities was typically well represented after a large fire.

Recent fire behavior on the Flathead National Forest (2006 and 2007) appears to be affected by a prolonged regional drought over the past eight to ten years. Areas not previously harvested experienced high levels of tree mortality across the fire area. Dried duff and litter layers on and in the soil burned hotter, longer, and deeper than had been observed in the past, thus damaging tree roots close to the surface and the area of the tree bole at ground level. Many of these stands did not have a component of “ladder” fuels so crown fires were not initiated. These trees now appear to be green and alive, but the charred roots and lower bole have effectively killed the tree but with delayed mortality. Large areas now appear alive, but are anticipated to turn brown in the next two or three months.

As previously discussed, about 56 percent of the project area has had some type of timber harvest activity in the past. Most of the timber harvest activities removed enough trees to require the reforestation of the site after logging was complete. These reforested areas had some type of post-harvest fuel treatment prior to reforestation activities so the resulting forests contained little surface fuels. As the Brush Creek Fire moved over the landscape and encountered these reforested areas, light fuel loading often allowed these stands to avoid damage from fire. The most common effect in these areas was charred seedlings and saplings around the perimeter with the interior sapling and pole-sized trees remaining unaffected.

Purpose and Need

The Flathead National Forest Land and Resource Management Plan provides direction for managing the Flathead National Forest. The social, economic, and ecological conditions of the Sheppard Creek Project area were considered by the Forest Supervisor in determining the purpose and need for management action. The Forest Supervisor defined the following purpose and need for this project:

Recover Merchantable Wood Fiber in a Timely Manner

There is a need to manage forest products in a predictable and sustainable condition as it positively affects the local social environment. Timber production and land stewardship activities from the Tally Lake Ranger District contribute to the local economy by affecting employment and labor income in the surrounding impact area. The Forest Plan designates much of the Brush Creek Fire area as emphasizing cost efficient production of timber while protecting the productivity of the land and timber resource.

Most of Flathead and Lincoln Counties are comprised of federal lands. Kalispell, Columbia Falls, Whitefish, Libby, Eureka, Rexford, and Troy were considered “Timber Specialized Communities” in a report by the U.S. Department of Agriculture and Department of Interior (1998). A large amount of the timber processed in the counties comes from federal lands. Jobs and income associated with timber harvest and contracted land stewardship activities on the Flathead National Forest can help support local economies.

The tree species composition of the burned area is mixed stands of live and dead lodgepole pine, Douglas-fir, and western larch at low to mid elevations and on south-facing slopes. The higher elevation forests, north-facing slopes, and riparian areas along streams are dominated by spruce, subalpine fir, and lodgepole pine. Some areas are nearly pure lodgepole pine. Minor quantities of other species such as western white pine, grand fir, cottonwood, and birch are scattered at low elevations.

The Sheppard Creek Project proposes to harvest burned timber in a timely manner to provide wood products to the local community while it is still economically feasible to do so. Timely recovery of wood fiber would support the economies of local and regional communities. Past experience with fire salvage in northwestern Montana indicates that so-called “whitewood species” such as spruce, subalpine fir, and lodgepole pine substantially deteriorate within a year or so after a fire. Salvage operations would need to begin in the winter of 2008/2009 to ensure economic utilization of the whitewood species.

Western larch and Douglas-fir resist checking and rot for a longer period of time, perhaps two or three years. However, because these more rot-resistant species are intermingled with whitewood species in the proposed project area, it is most cost-efficient to begin harvesting these species in late 2008 and early 2009 when harvest of the whitewood species is still economically feasible.

Proposed Action

A “Proposed Action” is defined early in the project-level planning process. This serves as a starting point for the interdisciplinary team of Forest Service resource specialists and gives the public and other agencies specific information on which to focus comments. Using these comments and information from preliminary analysis, the ID Team then develops alternatives to the Proposed Action. The Proposed Action and alternatives are discussed in detail in Chapter 2 of this Final EIS; a brief description of the Proposed Action is below.

The Proposed Action for the Sheppard Creek Project includes approximately 4510 acres of timber salvage. Logging systems for the 4510 acres of salvage include 114 acres of cable, 234 acres of helicopter, 1679 acres of skyline, 2313 acres of tractor, and 170 acres of tractor/skyline swing yarding. There would be 8.7 miles of new temporary road construction and 15.6 miles of temporary road construction over historic road templates. Regeneration of harvested units would consist of 1013 acres of planting, 745 acres of interplanting, and the remaining acres would be reforested using natural regeneration methods.

Decision Framework

The deciding or responsible official for this project is the Forest Supervisor of the Flathead National Forest. After release of this Final EIS, the Forest Supervisor will provide a 30 day notification and review period prior to making a final decision and issuing a Record of Decision. Given the purpose and need, the deciding official reviews the Proposed Action, the other alternatives, the environmental consequences, and submitted comments in order to make the following decisions:

- Does the selected alternative meet the purpose and need for action?
- Does the selected alternative meet laws and regulations governing natural resource management activities?
- Whether a project specific Forest Plan amendment is required, the nature of the amendment, and whether the amendment would be a significant change to the Forest Plan?

The deciding official may choose any of the alternatives analyzed in this document, including the No Action alternative or some combination of the elements of action alternatives, as long as they are within the range of effects of the alternatives that have been analyzed.

Relationship to the Forest Plan

National Forest planning takes place at several levels: national, regional, forest, and project. The Sheppard Creek Project Final EIS is a project-level analysis; its scope is confined to addressing the significant issues and possible environmental consequences of the project. This project will not address decisions made at higher levels, but could implement direction identified and provided at higher levels.

The Forest Plan embodies the provisions of the National Forest Management Act of 1976, its implementing regulations, and other guiding documents. The Forest Plan sets forth in detail the direction for managing the land and resources of the Flathead National Forest. Where appropriate, the Sheppard Creek Project Final EIS tiers to the Forest Plan, as encouraged by 40 CFR 1502.20.

The Forest Plan uses management areas to guide management of the NFS lands within the Flathead National Forest. Each management area provides for a unique combination of activities, practices, and uses. The Sheppard Creek Project Area includes five management areas. The goals and primary objective for each management area are summarized in Appendix B; Figure B-1 displays the management area distribution within the project area.

Public Participation and Scoping

Public participation and scoping helps the Forest Service identify concerns with possible effects of its proposals. It is also a means of disclosing to the public the nature and conse-

quences of actions proposed for National Forest Lands. The Council on Environmental Quality (CEQ) defines scoping as "...an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action" (40 CFR 1501.7).

A public involvement strategy was developed to ensure that potentially interested members of the public and other government agencies received timely information about the upcoming analysis so they may participate in the process (Exhibit B-4). The Forest Service developed a list of members of the public and agencies who may be interested in the Sheppard Creek Project. This includes members of the public within these general categories:

- Adjacent landowners or residents
- County governments
- Local Congressional representatives
- Advocacy or user-group organizations
- Interested individuals and the general public
- Adjacent National Forests and Ranger Districts
- Other federal agencies
- Montana State agencies
- Local economic organizations
- Timber industry groups
- Local news media

In addition to the following public participation processes, the Sheppard Creek Project has been listed on the Flathead National Forest Schedule of Proposed Actions since April 1, 2008. Listing of the project on the January 1, 2008 schedule was precluded by a technical oversight (Exhibit B-11). To date, the public has been invited to participate in designing the project in the following ways:

Public Field Tours: On November 7, 2007, a guided tour of the Brush Creek Fire area was hosted by Tally Lake Ranger District personnel. This tour gave interested citizens the opportunity to view the fire area, get a closer look at the fire effects and recovery, and visit with district employees about potential future management plans for the area. The tour was attended by about 55 individuals. Another field tour was hosted on June 13, 2008 to the project area to share information, answer questions, and accept comments for this project during the comment period on the Draft EIS. One individual attended.

Public Mailings: On December 14, 2007, a letter announcing the beginning of the public involvement process and detailing the Proposed Action was sent to approximately 165 individuals and organizations that had expressed interest in this type of project before or lived adjacent to NFS land in the project area. This letter invited comments on the Proposed Action. Comments were received from 18 members of the public. A mailing on April 7, 2008 to those individuals and organizations that were on the initial scoping mailing list was made to request who would be interested in receiving a copy of the Draft EIS. Approximately 28 individuals and organizations were interested.

On May 15, 2008, copies of the DEIS in various formats were distributed to the 28 individuals and groups who previously expressed interest and to several federal agencies. In addition, a letter was sent to approximately 175 individuals, organizations, and government agencies announcing the availability of the DEIS. This letter discussed how to obtain a DEIS, how to comment, and announced the field tour on June 13. The comment period for the DEIS ended on July 1, 2008.

Federal Register Notices: A Notice of Intent to prepare an environmental impact statement was published in the Federal Register on December 14, 2007. A Notice of Availability (NOA) for an environmental impact statement was published in the Federal Register on May 16, 2008.

Public Meetings: The public was invited to review the Proposed Action at an open house at the district office in north Kalispell on January 9, 2008 which was attended by 17 people. Individuals at this open house expressed support and/or concern about the Proposed Action. Suggestions regarding modifications were also expressed. These efforts resulted in specific comments that shaped the development of the alternatives to the Proposed Action.

Local Media: A legal notice was published in The Daily Inter Lake newspaper on December 16, 2007, announcing the project and seeking public comment. Articles discussing the project and the request for comments on the Proposed Action were published in the Daily Inter Lake on December 15, 2007. An editorial appeared in the Daily Inter Lake on December 23, 2007. A news story featuring an interview with project leader Bryan Donner was aired on local television station KAJ-18 on January 6, 2008. A legal notice soliciting public comments on the DEIS was published in the Daily Inter Lake on May 17, 2008. A press release was prepared and distributed announcing the availability of the DEIS and articles subsequently appeared in the Daily Inter Lake, Whitefish Pilot, and Hungry Horse News newspapers.

Content Analysis: Comments generated from the Forest Service's request for comments on the Proposed Action were analyzed using the content analysis process. Nineteen individuals and organizations commented on the proposal. Content analysis is a systematic process to compile, categorize, and capture the full range of public viewpoints and concerns regarding a plan or project. Content analysis helps the planning team clarify, adjust, or use technical information to prepare the Draft EIS. Information from public meetings, letters, emails, faxes, phone calls, and other sources are all included in this analysis. This process makes no attempt to treat comments as votes. Content analysis ensures that every comment is considered at some point in the decision process. The content analysis on the Proposed Action is presented in Exhibits in Part B of the Project Record.

To analyze the input, a list of comments was created and reviewed by the ID Team. This list identifies specific requests expressed by individuals and groups who responded to the Proposed Action. To develop the list, each letter was read and representative quotations were selected that best capture the respondent's sentiments in the form of an action the Flathead National Forest should consider pursuing. The list of comments to the Proposed Action from the public and descriptions on how they were used in the process is located in Exhibit B.

Using the comments received on the Proposed Action, the ID Team developed a list of issues to address. These issues are discussed later in this chapter.

Ten comment letters were received regarding individual's and organization's thoughts, suggestions, and concerns with the DEIS. Content analysis similar to that described above was conducted on these letters and is documented in Exhibit B. ID Team responses to these comments are found in Chapter 4 of this FEIS. These comments helped revise the alternatives in this FEIS and expanded some of the specialist's resource analysis in Chapter 3.

Many of the responses to the Proposed Action and comments on the DEIS cited scientific literature and requested the ID Team to consider this research. An attempt was made to locate and review this literature if team members were not already familiar with the research referenced. The result of this literature search is displayed in Exhibit V.

Forest Service personnel have also responded to specific information requests by individuals on the project in general and the DEIS in particular in various forms (letters, email, office visits, and phone calls).

A list of collaborating agencies, groups, and individuals consulted throughout the entire public participation process is in Chapter 4 of this Final EIS. Participation with the Salish and Kootenai Tribes was conducted during regular consultation meetings between tribal representatives and the Flathead National Forest Heritage Resource specialists. These meetings are documented in Exhibit K.

Copies of this Final EIS will be sent to those individuals or groups who responded to our recent invitation to receive a copy. A legal notice will appear in the Daily Inter Lake informing the public of the availability of the Final EIS and where they may acquire a copy.

The complete documentation of public participation, collaboration, and media coverage is contained in Exhibit sets B, C, and E.

Issues

An *issue* is defined as a point of discussion, debate, or dispute concerning environmental effects of an action. Issues are identified through the scoping process with the public and by review from other agencies and Forest Service personnel. The scoping process is used not only to identify important environmental issues, but also to identify and eliminate issues that do not pertain to the action, thus narrowing the scope of the environmental documentation process accordingly. Therefore, impacts are discussed in proportion to their importance.

To identify issues specific to the Sheppard Creek Post-Fire Project, the Responsible Official and the ID Team reviewed all public comments and information about historical and current conditions within the project area. They also reviewed the Forest Plan and other site-specific planning documents relevant to the Brush Creek Fire area to further develop a list of issues.

The Responsible Official and the ID Team then sorted the issues into three categories. “*Significant Issues*” drive the alternative development process. The team also analyzed “*Additional Issues and Concerns*,” which are recognized as important, but do not drive alternative development. In addition, the team classified some issues as “*issues outside the scope of the analysis*.” Examples of issues outside the scope of the analysis include issues that are already decided by law or regulations, or beyond the scope of the project (not related to the purpose and need). The Council on Environmental Quality (CEQ) NEPA regulations explain this delineation in Sec. 1501.7, “...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)...”

The ID Team also determined quantifiable “*issue indicators*” to measure how each alternative responded to the significant issues. Comparison of these indicators is presented in Table 2-11 at the end of Chapter 2.

Significant Issues

The following issues were determined to be significant and within the scope of the project decision. These issues are addressed through the Proposed Action and its alternatives.

1. Too much helicopter yarding is being proposed

Many comments were received that indicated the proposal is not economically desirable because it proposed too much helicopter yarding, which is very expensive and involves contractors who do not employ local workers.

This issue was addressed as a feature of Alternative C by not proposing any helicopter yarding.

Issue Indicator:

- Acres of salvage harvest using a helicopter yarding system.

2. Possible Old Growth and “Recruitment” Old Growth should not be Salvage Logged

The amount of individual tree mortality in stands experiencing low to moderate vegetation fire severity is often difficult to determine until the summer following the fire event. Comments were received expressing concern that all areas where the old growth status is uncertain should not have timber salvage. In addition, they felt that certain other areas would attain old growth characteristics more quickly and be of better habitat quality if left unsalvaged. Members of the public wanted the Forest Service to determine the status of these areas for their old growth and “recruitment” old growth characteristics and avoid logging if they still meet established criteria. “Recruitment” old growth areas have an older, larger overstory live tree layer but do not qualify as old growth habitat.

This issue was addressed in the Draft EIS through development of components of Alternative C that excluded salvage harvest in Douglas-fir or larch old growth that burned at low to moderate vegetation fire severity, but whose post-fire status had not yet been determined. All areas of proposed salvage in the Draft EIS where current and recruitment old growth values were uncertain were field-reviewed for old growth and “recruitment” old growth habitat attributes in the late spring and summer of 2008 (Exhibits Q-1 and Q-2). Units that met the minimum requirement values for old growth and “recruitment” old growth were subsequently removed from all alternatives in this Final EIS. Units that were excluded from the Draft EIS Alternative C because of their old growth status uncertainty but that were later determined to not be old growth or “recruitment” old growth were included in Alternative C in this Final EIS.

As a result of collecting field data in the summer of 2008 and eliminating some units from all Final EIS alternatives, this issue has been resolved. The issue is still presented in this

Final EIS and issue indicator data are presented in Table 2-12 in order to allow readers to track the issue between the Draft EIS and the Final EIS.

Issue Indicators:

- Acres of salvage harvest in pre-fire old growth with unknown post-fire status.
- Acres of salvage harvest in “recruitment” old growth.

3. Canada Lynx and Snowshoe Hare Habitat is Reduced

The large wildfires (in 1994 and 2007) and past timber management have affected Canada lynx habitat in and near the Brush Creek Fire area. Proposed salvage harvest and temporary road construction would occur in some areas with potential for use by Canada lynx. Some of this habitat appears to be excellent habitat for snowshoe hares and thus feeding habitat for Canada lynx. Other lynx habitats that would be affected appear to function as multi-story non-feeding or travel habitat for lynx.

This issue was largely addressed in the Draft EIS through development of components of Alternative C that dropped or relocated most of the salvage units and temporary roads that could affect important lynx and hare habitat. All areas of proposed salvage in the Draft EIS where lynx habitat values were uncertain were field-reviewed for lynx habitat attributes in the late spring and summer of 2008 (Exhibit Rt-8). Units or parts of units that were in snowshoe hare habitat were subsequently removed from all alternatives in this Final EIS. Units that were excluded from the Draft EIS Alternative C because of potential effects on lynx but that were later determined to not be in lynx feeding habitat were not excluded from Alternative C in this Final EIS. Alternatives B and D in the FEIS have some areas of salvage in what appears to still be “Other” or “Multistory Non-feeding” lynx habitat, where the Snag/Live Tree Prescriptions are designed to retain this habitat value for Canada lynx. In the Final EIS, Alternative C responds to the lynx and hare issue by not salvaging in such lynx habitats and by reducing the amount of temporary road construction through hare habitat.

Issue Indicators:

- Acres of salvage harvest in lynx feeding habitat.
- Acres of salvage harvest in multi-story non-feeding or travel lynx habitats.
- Miles of temporary road construction through lynx habitats.

4. Post-Fire Reserve Areas Should Be Left Unsalvaged

Setting aside larger burned areas, particularly where unlogged, was proposed as the best way to assure retention of ecosystem function across the landscape. These areas may be particularly important for many species likely to help contain insect populations such as spruce bark beetles. It was recommended that these areas: a) represent the diversity across the fire area, b) have connectivity corridors between reserves where possible, and c) include high-quality low-elevation habitat, as retention of such areas is relatively rare.

This issue was addressed through the design of Alternative C that excluded salvage harvest from some areas that were isolated from other groups of salvage harvest areas. Excluding isolated areas would allow for some relatively large blocks of previously unharvested areas to be retained. For this project, a post-fire reserve area is defined as an area at least 150 acres in size that is at least 0.25 miles from any timber salvage associated with the Brush Creek Fire.

Issue Indicators:

- Number of post-fire reserve areas.
- Percentage of the project area in post-fire reserve areas.
- Acreage of the largest post-fire reserve area.
- Percentage of total post-fire reserve area acreage that have past regeneration harvest.

5. Water Quality Must be Maintained or Improved

Construction of some temporary roads or re-opening historic roads can result in a short term increase in erosion and sediment delivery potential. The amount of erosion and sediment delivery depends on many factors, including the steepness of the slope, need for stream crossings, and relative location to wet areas and streams. Roads located in upland areas do not have the same potential to transport sediment into streams as temporary roads located close to streams.

This issue is addressed in Alternatives C and D by reducing the number of new or reconstructed roads that need to install and then remove culverts on any perennial, intermittent, or ephemeral stream, or located within an RHCA and parallel to a stream.

Issue Indicators:

- Miles of temporary road construction or reconstruction located within an RHCA and parallel to a stream.
- Number of new culvert installations on temporary roads.

6. Stream Channel Stability and Channel Morphology Must be Maintained or Improved

Construction of some temporary roads or re-opening historic roads may contribute to changes in local water flow regimes, which in turn could impact stream channel stability and morphology. However, short lengths of road construction within a watershed would seem to have minimal effect, especially if it is not located near other recent disturbance. Also, roads located far up the hillside in dry areas would tend to capture less groundwater movement than roads nearer a stream channel or moist area.

This issue is addressed in Alternatives C and D by reducing the miles of new or reconstructed roads that are located within an area with numerous seeps and moist sites, or are located near a high density of fire lines and/or constructed safety zones.

Issue Indicators:

- Miles of temporary road construction or reconstruction that are within RHCAs.

- Miles of new temporary road construction in the vicinity of a high density of fire suppression activities or numerous seeps and moist areas (see Exhibit D-1).

7. Bark Beetle Management is not Adequately Addressed in the Proposed Action

The Brush Creek Fire area has favorable habitat for Douglas-fir and spruce bark beetles. Many trees in the fire area were killed by underburning that left upper boles and crowns intact. Many large spruce were felled for hazard tree reduction and many more fell because their roots were severely damaged. In addition, Douglas-fir beetles have been active in and near the fire area for the last ten years. These conditions result in a high probability that bark beetles could increase populations within the fire area and attack trees in the surrounding areas over the next several years.

There is a concern that the Proposed Action does not harvest enough susceptible Douglas-fir and spruce trees to reduce further bark beetle spread and limit losses to National Forest and private land stands. This issue was addressed through the design of Alternative D that included additional timber salvage areas that consist of Douglas-fir and spruce trees susceptible to bark beetles.

Issue Indicators:

- Acres of salvage harvest in stands with spruce bark beetle hazard.
- Acres of salvage harvest in stands with Douglas-fir bark beetle hazard.

Additional Issues and Concerns

The following public concerns and resource areas are important and were considered in the analysis of issues; however, they were determined not to be significant issues that would require additional alternatives. Some are addressed as “Features Common to All Action Alternatives” in Chapter 2, others are addressed as “Alternatives Considered but Eliminated from Detailed Study” in Chapter 2, and some are addressed in the environmental consequences sections in Chapter 3.

8. Not Enough Snags and Down Wood are Being Left on the Landscape

Many comments were received stating that enough snags should be retained to ensure that these wildlife habitat and ecosystem components are provided on the landscape over time. Some commented that more snags should be left than the minimums required in the Forest Plan and other direction. Concern expressed often centered on the amount of previous timber harvest activity that occurred in the fire area that currently has very little snag habitat.

9. Salvage Harvest and Fuels Reduction in Riparian Areas is Needed to Reduce the Severity of Future Wildfires

Riparian areas need to have fuel reduction to reduce the impacts to soil, water, and riparian wildlife habitat from future wildfires (a watershed analysis would need to be conducted, which would allow us to harvest in RHCAs).

10. Big Game Wildlife Cover and Security is not Adequately Addressed in the Proposed Action

Some commenters requested that cover and security habitat be retained for big game species. Living cover is currently very limited in the fire area due to the fire and to extensive timber harvest before the fire. Underburned stands, even where almost all of the overstory trees die and fall, provide far better cover and security than open areas. In addition, some fire literature reports that standing dead trees may provide adequate cover in burns. Because of the limited living cover, leaving larger areas of standing burned trees will increase the amount of potential cover and subsequent use of the fire area by elk and other big game.

11. Noxious weeds could spread in the project area

There is a concern that past management activities, the current fire condition, and the proposed project (salvage and access management) would cumulatively influence the potential increase of spread and establishment of noxious weeds into the project area and create a long term cost burden on the public for continued treatment.

12. Burned-up Old Growth should not be Salvaged Logged

Several comments were received indicating that areas identified as old growth prior to the Brush Creek Fire exhibit important ecological properties, no matter how severely they burned. In the commenters' opinion, these areas should not be salvage harvested.

13. Forest Plan Management Areas Unsuitable for Timber Management should not be Salvage Logged

A few individuals and groups ask the Forest Service to avoid salvage harvesting in areas that the Forest Plan has identified as not suitable for long-term timber management to protect the resource values associated with these management areas. Forest Plan Management Areas located within the fire perimeters and listed as unsuitable for long term timber management are Management Areas 2C and 12. Salvage harvest is allowed under Forest Plan standards as long as important resource values are maintained, protected, or enhanced. Please see Appendix B for descriptions of these Management Areas.

15. Rehabilitation of the Fire Areas Does Not Require Salvage Logging

Some people and groups asked us to consider rehabilitating and restoring the fire-affected areas with little to no salvage logging. They suggested the Forest Service could accomplish fire area recovery through such actions as road decommissioning, tree planting, and reducing sediment sources.

16. Bark Beetle Control Does Not Always Require Salvage Logging

There is also a concern that the need to harvest susceptible trees, especially in riparian areas, could be reduced by using other beetle control techniques such as pheromone traps, trap trees, and dispersal pheromones.

17. Cattle Allotments should be Inactive During Recovery of the Fire Area

Cattle grazing on the Swaney Allotment should not be allowed until the fire area has sufficiently recovered vegetative and soil conditions to sustain cattle without further impacts.

Scope of the Analysis

The Sheppard Creek Project is a project level analysis. The Proposed Action is limited to the specific timber harvest, road management, and reforestation activities on national forest land in the project analysis area, although the geographic extent of some areas used to analyze different components (e.g., watershed, old growth, and wildlife home ranges) may extend beyond the analysis area.

Types of Actions Analyzed

The analysis of effects disclosed in this document includes those occurring from the entire "scope" of the decision. Scope is defined in 40 CFR 1508.25 as the range of actions, alternatives, and impacts to be considered in an environmental impact statement. The Council of Environmental Quality regulations require that all federal agencies consider the connected, similar, and cumulative actions to determine the scope of an EIS. A description of these actions can be found in the Introduction section of Chapter 3. Any new information that develops after the Decision is made would be considered prior to implementation.

Applicable Laws and Executive Orders

Shown below is a partial list of federal laws and executive orders pertaining to project-specific planning and environmental analysis on federal lands. While most pertain to all federal lands, some of the laws are specific to Montana. Disclosures and findings required by these laws and orders are contained in the applicable resource areas of Chapter 3 of this Final EIS.

- National Historic Preservation Act of 1966 (as amended)
- National Environmental Policy Act (NEPA) of 1969 (as amended)
- Clean Air Act of 1970 (as amended)
- Endangered Species Act (ESA) of 1969 (as amended)
- Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 (as amended)
- National Forest Management Act (NFMA) of 1976 (as amended)
- Clean Water Act of 1977 (as amended)
- American Indian Religious Freedom Act of 1978
- Archeological Resource Protection Act of 1980
- Executive Order 11593 (cultural resources)
- Executive Order 11988 (floodplains)
- Roadless Area Conservation Rule of 2001