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BLT Project

Record of Decision

Crescent Ranger District, Deschutes National Forest,
Klamath County, Oregon

Townships 24, 25, 26 South and Ranges 6 ½, 7, 8, East
(Willamette Meridian)

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Record of Decision Table of Contents

Decision Summary	1
Project Background.....	2
Purpose and Need for Action	7
Proposed Action.....	7
Public Involvement	8
Consultation with the Tribes	8
Consultation with Government Agencies	9
Issues.....	9
Issue #1 – Management Indicator Species Habitat	9
Issue #2 – Matsutake Production in the Short- and Long-Term	10
Alternatives Considered in Detail	10
Alternative A – No Action	11
Alternative B.....	11
Alternative C	11
Alternative D.....	11
Decision and Rationale	12
Response of the Alternatives to the Purpose and Need.....	17
Response of the Alternatives to the Key Issues	19
Environmental Consequences.....	21
Other Public Concerns	22
Changes between Draft and Final EIS	26
ESA Consultation/Conferencing with U.S. Fish and Wildlife Service.....	27
Legal Requirements and Policy	27
Other Policy or Guiding Documentation	32
The Environmentally Preferable Alternative	34
Resource Protection Measures	35
Monitoring	35
Consistency with the Eastside Screens	35
Implementation	35
Appeal Rights.....	36
Contact Persons.....	37
Responsible Official.....	37

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Decision Summary

This Record of Decision (ROD) documents my decision and rationale for the selection of Alternative B, described in the September 2008 Draft Environmental Impact Statement (EIS) titled *BLT Project*. The BLT Project continues to work toward the broad goals of increasing resistance to wide-scale disturbance events from insects, disease, and wildfire on a landscape scale through risk reduction activities. The maintenance of a healthy forest also sustains goods and services related to a forest product program, which includes harvest of matsutake mushrooms.

In summary, my decision includes:

- Improvement cutting, primarily in lodgepole pine, to enhance overall stand composition and health (HIM, 3,614 acres);
- Thinning from below to favor the larger trees with healthy foliage (HTH, 3,550 acres);
- Small diameter thinning and fuels reduction on 312 acres;
- Application of prescribed fire to maintain or enhance fire-dependent ecosystems on 2,312 acres; and
- Opportunity for utilization of forest products such as posts and poles and firewood on 3,093 acres.

Alternative B also includes opening of about 22 miles of currently closed Maintenance Level 1 roads to allow timber hauling and other activities. Roads would be closed following implementation. Road maintenance, especially blading and brushing, would be performed on about 160 miles of Maintenance Level 1 and 2 roads. About 9.7 miles of temporary roads would be constructed to facilitate economical timber harvest removal. These would be obliterated following implementation and restored to a condition that is hydrologically functional and able to revegetate more quickly. Activities in the Proposed Action would take place over 7,499 acres.

My selection of Alternative B includes all identified mitigation measures and monitoring specified within Chapter 2 of the Final EIS (FEIS). Implementation is expected in August of 2009.

Project Background

In 1998, the Crescent Ranger District completed a Landscape Analysis Process (LAP) which looked at key issues regarding vegetation, terrestrial, aquatic, natural disturbance regimes, and human uses. The intent of the LAP was to contribute to a more accurate, long-term, sustainable plan for the District. The LAP identified approximately 30-50 percent of the Plant Association Groups found within the BLT Project analysis area as imminently susceptible to a large-scale disturbance event, such as insects, disease, or wildfire. Furthermore, the LAP determined that a large-scale disturbance event in the BLT analysis area could impact the security of local communities (especially in a wildfire event), wildlife habitat, special forest products, and socially desirable large trees.

Although some work toward risk reduction has been accomplished in the vicinity of the BLT analysis area since the completion of the LAP, there is an immediate need to further reduce fuel loadings and the density of trees to decrease the risk of large-scale loss of late- and old-structured stands and other forest resources on the landscape.

The entire BLT Project lies within the Upper Little Deschutes 5th field watershed, which totals about 80,072 acres and includes the upper reaches of the Little Deschutes River. Approximately 53,542 acres are National Forest System lands within the Deschutes National Forest, and the remaining acres are privately owned. The analysis area and the 5th field watershed are the same: and it is located about 50 miles south of Bend, Oregon, in Township 25-26 South, Range 6 ½ East; Township 25-26 South, Range 7 East; Township 24 South, Range 8 East, Willamette Meridian. The entire analysis area also lies within Klamath County. Approximately one-third of the analysis area (26,487 acres) is within the boundary of the Northwest Forest Plan, with about 10,190 acres in the Matrix allocation. The remaining two-thirds lie within the direction that is provided by the Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales (Eastside Screens).

The major Plant Association Groups within the BLT analysis area are lodgepole pine (49 percent), ponderosa pine (16 percent), and mixed-conifer (15 percent). The lodgepole pine is mostly "pure" in the lower elevations; but then interspersed with other plant associations, most often mixed-conifer, usually in relatively abrupt transitions associated with topographic change.

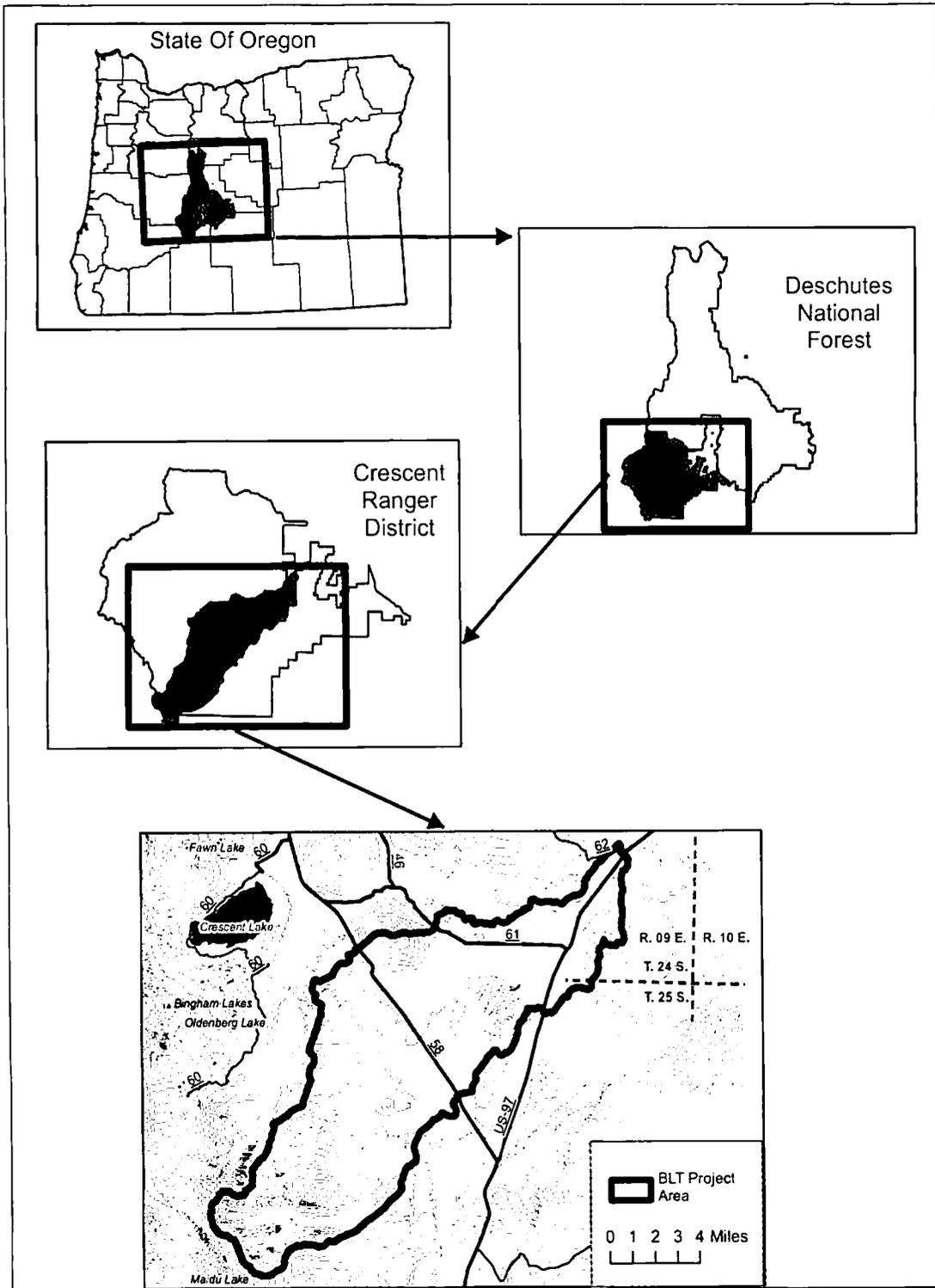
Older and denser lodgepole pine stands in the BLT area require activities to reduce or modify fuel loads. As noted from the Davis Fire of 2003, the considerable loading of fuels that often dominates lodgepole pine stands is a very real threat to adjacent areas in the event of wildfire. Lodgepole pine stands in the analysis area often are heavily traversed by people, especially for recreation and access to mushroom harvest areas, which increases the chance of human-caused fire ignitions.

Matsutake mushrooms are an economically important forest product. Every September, hundreds of harvesters come to the Chemult and Crescent Ranger Districts to participate in the matsutake harvest. Harvest levels for mushrooms are highly variable each year due to

factors such as weather and moisture regimes, stand progression, fungi harvesting techniques, and some types of active forest management that change canopy levels from “closed” to “open” and disturb soil. These physical and biological conditions are discussed in detail in Chapter 3, Special Concern Plants in the final EIS.

Soils within the analysis area are generally well-drained and permeable, comprised from the eruption of Mt. Mazama over an older glacial outwash within the La Pine Basin.

Figure 1. Location of the BLT Project



Purpose and Need for Action

1. There is a need to reduce forest vegetation density so as to lessen the risk that disturbance events such as insect, disease, and wildfire will lead to large-scale loss of forest.

Currently, values associated with all management areas including Wild and Scenic Rivers, Old-Growth and other lands that interface urban areas have a common denominator - forest health. Whether it is the aesthetic and/or spiritual value of large trees, habitat for vegetative and wildlife communities, or risk to a populated subdivision, how much of the forest that is maintained in a condition that is sustainable on the landscape affects the values people associate with these areas. This also includes limiting the extent of a potential wildfire within the Wildland Urban Interface (WUI). Appendix A summarizes these values and management direction, but a Landscape Analysis Process has identified too much of the landscape in a condition susceptible to a wide-scale disturbance. The Forest Plan (as amended) supports proactive maintenance and enhancing the vigor of the forest in preventing a stand-replacement event, rather than waiting (4-36).

2. There is a need to contribute to the local and regional economies by providing timber and other wood fiber products.

The Forest Plan (as amended) supports management of timber resources and recognizes the value in a way that is consistent with other resource objectives, environmental constraints, and economic efficiency (4-37).

Proposed Action

The Proposed Action, described in Chapter 2 of the Final EIS, is to utilize silvicultural and fuels reduction activities to limit the extent of a wide-scale loss of forest from wide-scale disturbance processes across the larger landscape. Currently, within the analysis area, canopy closure and tree density are at unsustainable levels, as noted by the current mountain pine beetle outbreak. Strategic Placement of Treatments (SPOT) was used to identify those areas where active management would be most efficient in protecting homes. By design, the Proposed Action would maintain late- and old-structured forest with no net loss. The goal is to bring appropriate stands into a condition where re-introduction of fire to fire-dependent ecosystems operates as a natural fuels reduction agent. These actions would maintain the forests in a sustainable condition, continue long-term harvesting of fungi in the analysis area, protect communities from wildfire, and offer economic opportunities that result from vegetation management activities.

The Proposed Action includes a variety of vegetation management activities across approximately 7,499 acres, and would harvest approximately 12.1 million board feet (80 percent saw logs) of timber. It would improve stands from a condition that is classified as imminently susceptible to change, particularly from insects or wildfire. However, it would reduce potential nesting habitat for some Management Indicator Species (black-backed and

three-toed woodpeckers) by 12 percent and potentially reduce short-term mushroom production on 1,454 acres. It would also potentially improve production of matsutake on 776 acres, moving canopy cover from too dense to a more beneficial condition. Refer to Figure 2-1 for locations of Alternative B units and Table 2-2 in the FEIS for site-specific prescriptions. Activities to improve forest health and reduce risk on the landscape include those as specified on page 1 of this Record of Decision and on page 17 of the FEIS.

Public Involvement

The BLT Project has truly been an effort to reach out to the stakeholders and modify activities to address their concerns. On November 3, 2003, scoping began on the BLT Project for an environmental assessment. In March, 2005, the interdisciplinary team traveled to communities where many of the mushroom harvesters reside (Stockton and Redding, California) to present the BLT Project and listen to concerns. At that time, approximately 14,000 acres were proposed for active management. A decision was made to prepare an Environmental Impact Study and a Notice of Intent (NOI) was published in the Federal Register on April 1, 2005. The NOI asked for public comment on the proposal from April 1 - May 1, 2005. A scoping letter was again sent to interested citizens on April 22, 2005, with a 12,800-acre Proposed Action. Accounting for economics to allow for an economical timber sale and actual on-the-ground layout resulted in a Proposed Action of 7,499 acres. Another opportunity to comment on the 7,499-acre Proposed Action and the alternatives was provided March 28, 2008. Interested parties were updated on the analysis and asked to comment on the draft alternatives. Table 2-1 (FEIS, page 8) documents the public involvement and outreach activities associated with this project.

A 45-day comment period for the BLT Project Draft Environmental Impact Statement (DEIS) was provided for interested and affected publics, including appropriate local, state, and federal government agencies and Tribes. This period started with Notice of Availability in the Federal Register on October 3, 2008. The public comment period ended November 17, 2008. During this period, the Forest Service received comments from different sectors of the public, with a range of concerns and questions. Some comments resulted in a clarification of discussions within the DEIS. I have reviewed and considered the comments in the decision-making process. All comments were reviewed and substantive comments received the focus during this comment analysis. The complete comment records are kept within the BLT Project public record and are available for review at the Crescent Ranger District, Crescent, Oregon.

Consultation with the Tribes

Tribal consultation for the BLT Project was initiated in 2003 under the 1995 Programmatic Agreement. During the early stages of this project, contacts were made with affected tribes (Klamath, Confederated Tribes of Warm Springs, and Burns-Paiute). Government-to-government consultation has been informal through meetings between the Deschutes National Forest Supervisor and their representatives, scoping letters, and personal contact with natural resource members representing all three tribes. In addition, Paul Clacysens, the Central Oregon Tribal Liaison acting on behalf of the Forest Supervisor, met with the Klamath tribal leaders in January and then again in March 2008 at their annual quarterly meetings to discuss

Forest programs and potential projects of interest. No special concerns about Tribal resources were identified.

It is acknowledged that the Tribes may have lost the verbal history and they may not know where desired plant species and resources may be found. This affects their ability to tell Federal agencies where Tribal trust resources can be located on Federal lands. Restorative activities planned for the BLT Project, such as prescribed burning in appropriate places would promote the types and amounts of plants that evolved in a frequent fire regime and were likely utilized by native peoples, so they would likely remain or increase in the project area.

Consultation with Government Agencies

Informal coordination has occurred with federal, state, and local government officials (see also Chapter 4 of the FEIS). Since there are no Threatened, Endangered, or Candidate species affected, consultation with the U.S. Fish and Wildlife Service was in the form of information sharing. Similarly, the Environmental Protection Agency was provided with project updates and offers for field trips. The Oregon Department of Fish and Wildlife was utilized for information on big game for the analysis.

Issues

In response to my Proposed Action, the public and the Forest Service identified two key issues. These issues were then used to develop alternatives to the Proposed Action:

Issue #1 – Management Indicator Species Habitat

The potential effects of active management on selected Deschutes National Forest Wildlife Management Indicator Species and their habitat could alter effectiveness of habitat.

The BLT Project proposes to limit large-scale loss of forest to uncharacteristically severe insect, disease, and wildfire events within the 80,072 acre planning area. The proposal would use silvicultural techniques and prescribed underburning to maintain and encourage the development of late- and old-forest structural stand characteristics, plus improve forest health. However, the intensity of the treatments, their timing, and their placement on the landscape has the potential to change up to 12 percent of nesting habitat for some species. The Deschutes Forest Plan designated a group of individual wildlife species and/or guilds of species as Management Indicator Species (MIS) because their welfare could be used as an indicator of other species dependent upon similar habitat conditions.

Project activities would primarily focus on understory tree thinning and result in a reduction of stem density and overall canopy cover within activity units. Thus, the quality, effectiveness, and distribution of avian wildlife habitat available to some Management Indicator Species in the planning area may be altered. Because MIS species are potentially affected differently by various aspects of vegetation management, three species were selected to measure effects for this issue and for the purposes of alternative development. Reynolds (1995) stated preferred nest stands for northern goshawks have a minimum 40 percent canopy cover and nests sites within those stands have greater than 60 percent canopy cover. For the three-toed and black-backed woodpeckers, neither species prefers to roost in logged forests

(Goggans et al. 1989). For these reasons and because active management to reduce risk of a wide-scale disturbance has potential to affect certain aspects of habitat for these species, the northern goshawk, 3-toed woodpecker, and black-backed woodpecker were selected for this Key Issue analysis. Alternative C was developed to address the needs of wildlife species that favor dense canopies and decadent conditions for some of their life requirements. To respond, stands of late and old-structured lodgepole pine were dropped in Alternative C as compared to Alternative B to provide for additional goshawk nesting and three-toed/black-backed woodpecker nesting and roosting habitat. Disclosure of effects to the remaining MIS species are discussed in Chapter 3 of the FEIS.

Issue #2 – Matsutake Production in the Short- and Long-Term

The potential effects of active management could reduce mushroom production in the short-term.

The analysis area includes important harvesting areas for matsutake, although many acres of canopy closure across the BLT landscape are not at sustainable levels and at risk to wide-scale disturbances. Vegetation management and fuels treatments have the potential to affect matsutake growing conditions in the short-term by changing micro-climates as tree canopies are reduced below optimal conditions. Canopies closed more than 70 percent or less than 40 percent may not be optimal for matsutake production because of below ground competition with other mycorrhizal species (Hosford et al., 1997; Luoma et al., 2004; Luoma and Eberhart, 2005). Also, soil biota important for mushroom production uses a complex symbiotic relationship in an environment that does not tolerate soil disturbance related to the use of equipment.

Some research has shown that the optimal canopy cover may be 50-90 percent, although site-specific surveys in the analysis area have shown matsutake presence (or a surrogate *Allotropa virgata*) in canopies as open as 25 percent in some Plant Association Groups.

Alternative D was developed to focus on the short-term production and harvest of matsutake mushrooms by excluding active management in the most productive matsutake areas.

Additional issues were considered in the assessment of effects, but were not used as the basis for alternative development as they were resolved in other ways (Record of Decision, page 21).

Alternatives Considered in Detail

Three action alternatives and a “No Action” alternative were analyzed in the FEIS. Several alternatives were considered in the FEIS and “dropped from detailed consideration” (FEIS, page 41). The three action alternatives considered in the FEIS examine different combinations of activities and were developed to address the significant issues and the purpose and need. For additional details on these alternatives, see the FEIS (Chapter 2, Alternatives B, C, and D).

Alternative A – No Action

The purpose of this alternative is to allow current processes to continue, along with associated risks and benefits, in the BLT Project area. Under the No Action alternative current management plans would continue to guide management of the project area. No additional thinning or fuels treatments would be implemented to accomplish project goals. Custodial activity would continue, such as routine maintenance of roads and timber plantations. Response to environmental emergencies, such as suppression response to a wildfire, would continue. In Alternative A (No Action), no risk reduction activities would occur; therefore, the potential remains for large-scale loss of forest, particularly through competition for scarce site resources (such as water and nutrients).

Alternative B

Alternative B was described as the “Proposed Action” on page 7 in this document with specific actions detailed under the Decision Summary. It is also discussed in the FEIS on page 17.

Alternative C

Alternative C was described in detail in the FEIS, starting on page 22. Alternative C includes a variety of vegetation management activities across approximately 5,771 acres and would harvest approximately 9.8 million board feet of timber. This alternative was developed to address the needs of wildlife species that favor dense canopies and decadent conditions for some of their life requirements. To respond, in the development of this alternative, stands of late and old-structured lodgepole pine were dropped in comparison to Alternative B (Proposed Action) to provide for additional goshawk nesting and three-toed/black-backed woodpecker nesting and roosting habitat. All types of actions that occur in this alternative are the same as described for Alternative B. It would reduce potential nesting habitat for some Management Indicator Species up to 3 percent less than Alternative B and would reduce short-term mushroom production on 1,054 acres (450 acres less than Alternative B). Approximately 2,042 acres of forest susceptible to imminent disturbance would be thinned. Refer to Figure 2-3 in the FEIS for locations of Alternative C units. Management activities would include:

- Improvement cutting primarily in lodgepole pine to enhance overall stand composition and health (HIM, 2,672 acres);
- Thinning from below to favor the larger trees with healthy foliage (HTH, 2,765 acres);
- Small diameter thinning and fuels reduction on 334 acres;
- Application of prescribed fire to maintain or enhance fire-dependent ecosystems on 1,764 acres; and
- Opportunity for utilization of forest products such as posts and poles and firewood on 2,304 acres.

Alternative D

Alternative D was also described in detail in the FEIS, starting on page 26. The Proposed Action includes a variety of vegetation management activities across approximately 2,616 acres, and would harvest approximately 5.2 million board feet of timber. This alternative focuses on the short-term production and harvest of matsutake mushrooms by excluding active management in the most productive matsutake areas, primarily west of Highway 58.

All actions that occur in this alternative are the same as described for Alternative B. It would potentially reduce short-term mushroom production on 468 acres and change up to 4 percent of nesting habitat for some Management Indicator Species. Also, it would reduce acres of forests susceptible to imminent disturbance on 897 acres. Refer to Figure 2-3 for locations of Alternative D units. Management activities would include:

- Improvement cutting primarily in lodgepole pine to enhance overall stand composition and health (HIM, 1,323 acres);
- Thinning from below to favor the larger trees with healthy foliage (HTH, 981 acres);
- Small diameter thinning and fuels reduction on 312 acres; and
- Application of prescribed fire to maintain or enhance fire-dependent ecosystems on 824 acres; and
- Opportunity for forest products such as post and poles and firewood on 1,064 acres.

Decision and Rationale

It is my decision to select Alternative B (Figure 4) as the Forest Service plan for the BLT Project. For a detailed discussion of all the facets of Alternative B, see FEIS starting on page 17. My decision is to select Alternative B in its entirety, including the associated resource protection, mitigation measures, and monitoring starting on page 29 of the FEIS.

My conclusion is based on a review of the record, which shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk. Particularly relevant was the analysis addressing Special Concern Plants (matsutake), and the trade-offs regarding actively managing the forest.

Regarding cumulative effects, there are basically two methodologies used in discussing additive actions and consequences. The first method would be to describe each individual past, present and reasonably foreseeable action – including mitigation (cataloging). The second would be to “lump” or “aggregate” individual actions if the information regarding those actions would not be useful to illuminate or predict the effects of the Proposed Action and its alternatives. I found these the most meaningful. A mere “cataloging” of effects, such as accomplished in the soil quality section may not provide the most useful discussion for other resources. In some cases, lumping past actions and describing them in terms of “where we are today” used in the wildlife analysis was the most informative for me. I have found the methods used in this analysis provided the most relevant, useful, helpful, necessary and informative format for the public.

In making this decision, I carefully considered the comments received regarding the proposed project, alternatives considered, and comments received on the DEIS during the 45-day comment period.

I have carefully listened to the advice the mushroom harvesters have provided to this project since 2002 when they began to voice opinions on the effect of active forest management on their livelihood. Some have commented that any soil disturbance or thinning that opens up the canopy too much can directly affect their pocketbook and way of life. I also am very

concerned about having a forest that can sustain matsutake harvest over the long-term. The below-ground biota is directly tied to larger host trees. Without these trees, there can be no mushroom harvest. My challenge was to balance the short-term reduction in production with a long-term strategy to keep as many large trees on the landscape as possible. While all action alternatives reduce risk of a stand replacement event to some magnitude across the landscape, they all would potentially reduce matsutake habitat and mushroom production in the short-term.

My interdisciplinary team met with the mushroom harvesting community here and in their own communities, as well as with scientists from the Pacific Northwest Research Station to better understand matsutake habitat and what the impacts are to those who depend upon it. I am confident that we have found a balance where some of the most productive habitat available is deferred from active management, while stands that are in the greatest need are thinned.

Alternative B could be considered the most active alternative focused on the long-term as it relates to reducing risk of a wide-scale disturbance event that could remove large blocks of forest. That does not mean I have sacrificed short-term production for the longer term. Since 2002, in developing the Proposed Action, my interdisciplinary team worked closely with the harvesters through an open public process to identify the best areas for picking. These areas were then retained in a passively-managed scenario, or designed for restoration using measures to protect the soil and underground biota. These include harvesting over frozen ground in the winter, and restrictions on mechanical equipment, among others (Project Design Features and Mitigation Measures, page 29, FEIS). If active management associated with Alternative B *totally* removed its acres from matsutake production (which it does not), approximately 87 percent of the potential habitat in the entire analysis area would remain. In addition, one of the very best picking areas (acknowledged by the harvesters) is the Windigo Pass vicinity near Crescent Lake. It is outside the analysis area and would remain in its current state of mushroom production. No other timber sales have been planned for the area.

In addition to 9-year study data from Diamond Lake, research from Amaranthus et al. (2006) and Durall et al. (2006) were used as a basis for the rationale and methodology in estimating recovery time for mushroom production (FEIS, page 316). It is considered reasonable to expect that some reduction in mushroom production might occur after silvicultural and fuel reduction activities, and that recovery to pre-treatment conditions, mushroom production might occur in a time period of 2-6 years. Areas of marginal, but still potential habitat, may take 10 years or more to recover. Monitoring would be necessary to validate the recovery time estimate.

Also, it is not possible to predict accurately to what extent active management would affect mushroom production, even where it is known to occur. "The interval of time and correlation between stand treatment and matsutake fruiting are still unknown, but it will be critical to planning future management action. Matsutake may occur several years or several decades after stand treatment or perhaps not at all (Amaranthus et al., 1998)." Production can vary a great deal from year to year for many reasons, even in areas untouched by human activity. It is assumed for this analysis, that *any* ground disturbing activity or removal of a host species

would have some effect, even if small, on mushroom production (Amaranthus et al., 1996; Amaranthus et al., 1998; Durall et al., 2006; Kranabetter and Kroege, 2001; Kropp and Albee, 1996; Luoma et al., 2004; Luoma et al., 2006). There is little data regarding silvicultural effects on ectomycorrhizal organisms in general, and matsutake mushroom production in particular (Amaranthus et al., 1998; Kropp and Albee, 1996; Luoma et al., 2004; Weigand, 1998), or how much time is needed to return to pre-treatment production. In collaboration with the scientific community and interested matsutake harvesters, I want to more closely determine the effect of active management on matsutake production. The goal is for forests in a sustainable condition also producing collectible mushrooms. It is expected a study plan with appropriate monitoring criteria would be developed with the Pacific Northwest Research Station prior to implementation (Proposed Monitoring, FEIS, page 317).

A few commenters were also concerned about maintaining adequate levels of dead and down wood now and through time for dependent species. They also questioned our modeling methodology, how DecAID was used, and the adequacy of our standards and guidelines.

All existing snags would remain except where snags must be felled for temporary and Maintenance Level 1 roads, log landings, or occupational safety (FEIS, page 33). For down wood, except in areas where fire behavior is maintained through time and areas of potential firewood, the intent is to retain all existing levels of down wood 7 inches and greater in lodgepole pine and 9 inches and greater in all other Plant Association Groups. Only activity-created slash below these maximum diameters would be piled and utilized or disposed (FEIS, page 34). The BLT Project seeks to manage snags and down wood habitat at various densities across the landscape utilizing a reference condition based on the historical range of variability as described in the FEIS. The best available science on dead wood relationships to wildlife habitat was compiled in the form of DecAID and local data sets. **DecAID was not used to set snag levels in BLT Project.** Effectiveness monitoring is ongoing in terms of research, and DecAID continually will be updated with new science as it becomes available. As this information is updated, management will adapt to the new information. This project demonstrates the Forest Service commitment to adaptive management to meet the needs of wildlife.

The Deschutes National Forest Plan, as amended, specifies standards and guidelines for snags and down wood. Across the forest, snags are to be managed at 100 percent of Maximum Population Potential (MPP) for primary cavity excavators. The Forest determined guidelines for meeting this standard and documented them in the Deschutes National Forest Wildlife Tree and Log Implementation Strategy (USDA, 1994).

One commenter asked for an explanation of why the Proposed Action went from 14,000 acres in 2003 to 7,499 acres now. The Crescent Ranger District requested feedback on the changes to the Proposed Action, as well as alternatives, in March 2008, when early responses would be most meaningful in drafting the DEIS. Interested parties were updated on the analysis and asked to comment on the draft alternatives. At that time, the Proposed Action had been reduced to 7,499 acres. This was a result of additional analysis and an adjustment to make the alternatives economically viable. Areas that did not need active management and were of low commercial value were dropped from this analysis.

One commenter believes the range of alternatives was too narrow and that an alternative should focus on thinning non-commercial material. Thinning of small diameter trees ranging from 8-15 inches (only) was modeled and did not reduce the basal area sufficiently to reduce competition for scarce site resources; thus it did not meet the Purpose and Need limiting the extent of disturbance processes nor contributing appreciably to the local and regional economies by providing timber and other wood fiber products. Also, limiting removal to small diameter trees would not only sufficiently reduce stand competition for scarce resources, but it also would make a responsible timber harvest impossible.

I recognized that the public was passionate about what they felt was best for the land and the community, and that there is no management strategy that could totally satisfy all concerns that were expressed. I have selected an alternative that addresses all of these concerns, though it is not likely to resolve the conflicting points of view.

Landscape-level risk reduction is becoming an increasingly important concept in land stewardship in dry forests on the east slope of the Cascade Range. In terms of needs and opportunities, I have considered the two main questions: What are the best actions to take to reduce risk while maintaining the desired forest structure on the landscape? And, where should these actions take place on the land to assure desired outcomes, especially in the long-term of 10 years and beyond? I reviewed the latest peer-reviewed ecological science and considered its relevance to the BLT Project area. 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 the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk.

An example of relevant science related to forest health I have relied upon is Tappeiner, Maguire, and Harrington 2007 and Fettig et al. 2007. These authors provide considerable evidence that less-dense stands of white fir, lodgepole pine, and ponderosa pine are less likely to experience mortality from bark beetles than are higher density stands. The two most plausible mechanisms in which stand density relates to damage are the reduction of trees that will attract bark beetles and/or an increase in individual tree vigor, which allows for better defense from attack.

Also, I utilized the Pacific Northwest Research Station to provide a thorough review of the science surrounding matsutake and potential effects. Dan Luoma, author of many peer-reviewed publications visited the BLT Project area, along with a colleague, to discuss what we know and do not know about the organism and its habitat.

Some commenters claim we used controversial science. When these concerns were put forth, I looked for evidence in the letters. I have taken every opportunity to understand the commenters' opposing science, such as Response to Comment 1-11 in the FEIS where it is purported that cutting of large trees exacerbates wildfire severity. In essence, the commenter's cited science was not found to be contrary to the activities being planned in the BLT Project and that my decision best meets the Purpose and Need. In this case, as in several other comments, the science cited actually is supportive. I suspect some of the statements are

based on beliefs rather than actual expert opinion that differ from the science used for the project.

Action Alternatives B, C, and D, to different degrees, would help to ensure a healthy and productive forest ecosystem, including clean water and biological diversity. But Alternative B goes the farthest in reducing the potential extent of a disturbance process. I explain my reasoning for choosing B instead of the other alternatives in the *Response of the Alternatives to the Purpose and Need* section beginning on page 17 of this Record of Decision.

I acknowledge commenters who believe there should be no commercial removal of trees from the BLT landscape. I have considered their arguments in favor of either allowing passive processes to take their course or conducting only small-tree thinning to meet risk reduction objectives. I have determined that neither of these proposed courses of action would meet the purpose and need of the project for the following reasons:

Analysis of the BLT Project included modeling of vegetation and fire risk. Results of the analysis showed that the current condition of the dense vegetation across the landscape remains at an unacceptable risk of loss from particularly insects, as well as from disease and wildfire. Such a disturbance process could result in loss of late- and old-structured forest, most important to the wildlife species that use the area, and long-term sustainability of matsutake production.

The BLT Project area is between two geographic areas that currently display lodgepole pine mortality at a scale (greater than 250,000 acres) that is compelling for any land manager to take action. To the south, on the Fremont and Winema National Forests, wide-spread mortality caused by mountain pine beetle, particularly in lodgepole pine, has been moving north and is currently right on the boundary of the Deschutes National Forest. At the sheer numbers of insects currently overwhelming those stands, it increases the chances of the insects to move into other tree species, such as ponderosa, white bark, and sugar pine (personal communication, Andris Eglitis, Area Entomologist). The very same condition is moving south down the Cascade Lakes Highway (46). By taking action now, not only would it help lessen the imminent insect threat (Tappener, Maguire, and Harrington 2007 and Fetig et al. 2007) to the north and south, but it would also put the landscape in a more sustainable condition against other disturbances such as disease and wildfire for the next 20-30 years.

Strategically placed thinning of commercial-sized timber will produce a by-product in the form of merchantable material. This makes sense when undertaken with appropriate environmental protection. The project potentially contributes to the economic health of forest-dependent communities, especially the local towns of Crescent/Gilchrist and La Pine, Oregon. Several economic opportunities are expected to trickle down in all forms of goods and services resulting from timber sale contracts, stewardship agreements, and service contracts for small diameter thinning.

Alternative B provides the best combination of activities to reduce risk and improve forest health on the landscape while maximizing the retention of late- and old-structured forest (where they currently exist) for wildlife species and collection of forest products that are

dependent upon those habitats. Some Management Indicator Species, such as the northern goshawk, may have a short-term effect to their nesting habitat. However, in the longer-term, it will maximize retention of habitat that currently is in an unsustainable condition. This is consistent with recommendations from Wisdom et al. 2000, who states that long-term maintenance of foraging areas is as important for successful reproduction as protection of the immediate nest stand.

In order to meet project objectives, some late- and old-structured stands will need to be thinned, but the largest trees will remain. I see this as a necessary trade-off to maximize risk reduction on a landscape level. All practicable means to avoid or minimize environmental harm have been adopted {CEQ 1505.2(c)}.

The BLT Project alone will not reduce risk or improve forest health across the entire landscape, but is a step in the process begun by the Baja 58 and Seven Buttes Return projects. Activities that will be implemented under this decision represent a limited portion of the landscape (7,499 acres actively managed in an 80,000-acre watershed); nonetheless, the strategic placement of units will achieve risk-reduction to a relatively large percentage of the project area while only conducting activities on a small percentage of acres. Future activities such as prescribed fire and thinning will likely be needed, along with maintenance of fuels activities already considered as part of the landscape strategy. Appropriate environmental review would be accomplished at that time.

After concluding that active landscape-level management was appropriate in the BLT Project area, I weighed the advantages, benefits, and effects of each alternative based on the Purpose and Need and significant issues listed above. The following is a discussion of these considerations and my conclusions. Reference Table 2-10, page 44 of the FEIS for a summary of how each alternative responds to the Purpose and Need.

Response of the Alternatives to the Purpose and Need

- ✓ *There is a need to reduce forest vegetation density so as to lessen the risk that disturbance events such as insect, disease, and wildfire will lead to large-scale loss of forest.*

In evaluating the alternatives: response to this purpose, I considered the analysis presented in the FEIS.

Fifty four (54) percent of the mixed-conifer dry PAGs (Plant Association Groups) on the Crescent District are classified as imminently susceptible to insect and disease outbreaks and in ponderosa pine, 19 percent (LAP 1998). In addition, in lodgepole pine, the BLT analysis area is bordered by a wide scale mountain pine beetle infestation event to the north and south along the Cascade Mountain Crest. Mortality is most evident from Diamond/Crater Lake north through the Three Creeks area (Sisters) up to Mount Jefferson and over to the Willamette National Forest (page 88, FEIS).

Alternative B goes the farthest in actively managing the forest - given the considerable evidence that less-dense stands of white fir, lodgepole pine, and ponderosa pine are less likely to experience mortality from bark beetles than are higher density stands. The two most plausible mechanisms in which stand density relates to damage are the reduction of trees that will attract bark beetles and/or an increase in individual tree vigor, which allows for better defense from attack.

Table 1. Acres of Risk-Reduction Activities by Alternative

Purpose and Need	Alternative A No Action	Alternative B	Alternative C	Alternative D
There is a need to reduce forest vegetation density so as to lessen the risk that disturbance events such as insect, disease, and wildfire will lead to large-scale loss of forest.				
Acres changed to a more sustainable condition	0	7,499 acres	5,771 acres	2,616 acres

- ✓ *Contribute to the local and regional economies by providing timber and other wood fiber products.*

The analysis presented in the FEIS discloses that Alternative B would produce the highest output for both volume of timber and jobs supported (reference the Economic and Social Analysis discussion starting on page 343 of the FEIS). Table 2 displays the outputs for the alternatives. Alternative B best meets this purpose.

Table 2. Economic Outputs of the BLT Project

Economic Element	Alternative			
	A	B	C	D
Volume of Commercial Timber in MMBF (70% Saw Logs).	0	12.1	9.8	5.2
Potential Shifts Supported at the Local Mill by Saw Logs	0	64	52	27

Response of the Alternatives to the Key Issues

Key Issue #1: The potential effects of active management on selected Deschutes National Forest Wildlife Management Indicator Species and their habitat could alter effectiveness of habitat.

Although all action alternatives would limit large scale loss of forest to uncharacteristically severe insect, disease, and wildfire events within the 80,072 acre planning area to some extent, Alternative B would go the farthest.

After the analysis was completed, changes to the three species habitat in the short- and long-term were not as great as expected. In the short term, up to 9 percent of nesting habitat (Alternative B) changed for the northern goshawk and 12 percent for the black-backed and three-toed woodpeckers. Ten years and beyond nesting habitat modeled by Viable Ecosystems for all three showed not much difference between all alternatives. Project activities would primarily focus on understory tree thinning and result in a reduction of stem density and overall canopy cover within activity units. The following Table 3 displays the changes in habitat by alternative for the northern goshawk, black-backed and three-toed woodpeckers. The discussion of effects begins on page 142 for the goshawk and page 149 in the FEIS for the woodpeckers.

For the northern goshawk, due to a fire exclusion policy in the West, there have been large transitions from shade-*intolerant* to shade-*tolerant* tree species, leading to possible unsustainable conditions of older forests (Wisdom et al. 2000). This has resulted in an increased susceptibility to stand-replacing wildfires. Management practices in all alternatives are consistent with Wisdom recommendations in habitat risk-reduction, by including prescribed fire and thinning to reduce fuel loading and to encourage the development of forest and shrub openings, and shade-intolerant and fire-, insect-, and disease-resistant tree species. For all alternatives, no activity would occur within a designated 400-acre Post Fledgling Area established for the Hemlock/Spruce Creek nest territory. There are also no activities planned within one mile of the other three known nest sites. Project implementation is not expected to lead to a loss in pair territories in the analysis area or across the Crescent Ranger District.

For both woodpecker species, existing snag habitat would generally remain in its current state. All existing snags (which are an important habitat component) would remain except where snags must be felled for temporary and Maintenance Level 1 roads, log landings, or occupational safety (FEIS, page 33). For the black-backed woodpecker, the selection of any action alternative, because of thinning in dense stands, would likely result in an increase of home range size, although this is not likely to occur for individual three-toed woodpeckers. Because the black-backed woodpecker's home range size would increase, it would result in fewer individuals the analysis area could support in the very short-term (less than 10 years). The analysis shows an increasing trend in suitable nesting acres beginning 10 years after project implementation. This would result in an increase in the number of pairs the analysis area could support for the long-term.

Table 3. Comparison of How Each Alternative Responds to Key Issue #1

Issue and Indicators	Alternative A	Alternative B	Alternative C	Alternative D
Key Issue 1: Wildlife Habitat – Management Indicator Species				
Goshawk – acres/percent habitat changed from nesting and foraging	14,211 acres existing nesting and foraging	1,270 acres (9%) changed to foraging only	1,016 acres (7%) changed to foraging only	378 acres (3%) changed to foraging only
Black-backed woodpecker – acres/percent habitat changed from nesting, roosting, foraging	57,107 acres existing nesting, roosting and foraging	6,547 acres (12%) changed to potential for nesting; general stand avoidance for roosting and foraging	4,987 acres (9%) changed to potential for nesting; general stand avoidance for roosting and foraging	2,247 acres (4%) changed to potential for nesting; general stand avoidance for roosting and foraging
Three-toed woodpecker – acres/percent habitat changed from nesting, roosting, foraging	57,107 acres existing	6,547 acres (12%) less likely to nest; general stand avoidance as roosting and foraging	4,987 acres (9%) less likely to nest; general stand avoidance as roosting and foraging	2,247 acres (4%) less likely to nest; general stand avoidance as roosting and foraging

Key Issue #2. The potential effects of active management could reduce mushroom production in the short-term.

Post-treatment effects on matsutake habitat and mushroom production would likely reduce mushroom production immediately following treatment proportionately to the acres of active management in Alternatives B, C, and D. Opening the overstory, by stand thinning and by selecting species with naturally more open canopies, permits stronger pulses of solar energy and water to reach upper soil layers at the time of matsutake mushroom fruiting. Thinning trees and pruning branches both reduce leaf area index, although the intensity of control differs with each practice. Thinning reduces drought stress and concentrates biomass on trees having the best prospects for financial returns or on trees promoting the best environment for matsutake mushrooms (Weigand, 1998).

Matsutake production recovery might occur as soon as 2 years or as many as 6 years or more following treatment depending on PAG and original quality of habitat. *Ten years following activity, there is little difference between any of the alternatives and modeled results for Alternative A across all PAGs, seral stages, canopy, or size classes* (FEIS, page 313). This

indicates a high degree of similarity between all alternatives for potential matsutake habitat and mushroom production.

Table 4. Comparison of How Each Alternative Responds to Key Issue #2

Issue and Indicators	Alternative A	Alternative B	Alternative C	Alternative D
Key Issue 2: Potential Reduction of Mushroom Production in the Short Term				
Detrimental soil following restoration activities (acres)	0	1,524	1,166	468
Acres of change from closed to open canopy (mixed-conifer)	0	56	56	17
Acres of change from closed to open canopy (lodgepole)	0	1,108	754	341
Acres of change from closed to open canopy (ponderosa pine)	0	290	244	66
Total acres	0	1,454	1,054	424
Net shift toward less productive habitat due to active management	0	1,120	859	352
Acres of forest changed to a more sustainable condition	0	7,499	5,771	2,616

Environmental Consequences

In selecting Alternative B, I carefully reviewed disclosures in Chapter 3 of the FEIS. Most notable effects of the action alternatives include:

- Actions proposed comply with Forest Plan standards and guidelines for maintaining soil productivity (FEIS, page 67). However, some ground disturbance related to activities will affect matsutake production and reduce mycorrhizal connectivity (FEIS, page 308). There are no cumulative effects to soil quality. It would be maintained to Regional policy for maintaining soil productivity, past and present actions are accounted for, and no foreseeable actions with potential for causing detrimental soils overlap units of activity.
- Alternative B would overlap the most acres (2,017) identified for Strategic Placement of Treatments (Figure 3-14 in the FEIS, page 124). The overlap of activity units provides the most strategic effectiveness for reducing the extent of a potential wildfire.
- Alternative A would have the greatest risk of future loss of goshawk habitat due to a wide-scale disturbance event.
- Analysis of changes in dead wood over time showed there were little to no differences between alternatives (FEIS, page 394). Further, existing snag habitat would generally remain in its current state. All existing snags would remain except where snags must

- be felled for temporary and Maintenance Level 1 roads, log landings, or occupational safety (FEIS, page 33).
- Activities proposed within each Old-Growth Management Area (OGMA) have been found to be consistent with the assessments and the requirement of the Deschutes LRMP (FEIS, page 259) because:
 - All vegetation manipulations are designed to “enhance and perpetuate old-growth characteristics” Deschutes LRMP (M15-4) and provide habitat for the focal species. Vegetative prescriptions focus on thinning from below and application of prescribed fire where appropriate.
 - The goal of the activity is to retain the largest diameter trees in each OGMA for the longest period possible and no tree over 21 inches in diameter would be harvested.
 - No standing or downed dead trees would be removed except those for occupational safety.
 - Prescriptions are designed to meet the minimum habitat needs of the focal species and maintain vegetative species diversity.
 - No temporary roads would be constructed and interior habitat and edge effect would not change.
 - Water quality is not expected to be affected as the result of active management. This is due to very flat topography, high infiltration rates, no harvest inside riparian reserves, Best Management Practices and Project Design Features applied to harvest and log hauling (FEIS, starting on page 263).
 - It is assumed that ground disturbance and opening the canopy below 25 percent in some Plant Association Groups would reduce quality habitat and mushroom production, at least in the short-term (FEIS, page 309).
 - Cumulatively, if active management associated with Alternative B *totally* removed its acres from matsutake production, it would approximate 14 percent of the potential habitat in the entire analysis area (7,323 out of 54,122 acres). With this information, it is considered reasonable to expect that some reduction in mushroom production might occur after silvicultural and fuel reduction activities; and that recovery to pre-treatment conditions, mushroom production might occur in a time period of 2-6 years. For these reasons, the analysis of past actions other than those listed in this section is based on current environmental conditions. Areas of marginal but still potential habitat may take 10 years or more to recover (FEIS, page 316).
 - Active management will be temporarily visible in scenic areas. However, all activities have been found to be consistent with the Little Deschutes Wild and Scenic Management Plan by maintaining activities subordinate to the landscape, maintaining an existing level of scenic integrity (short-term), improving the scenic integrity level in the long-term, and reducing risk of a wide-scale disturbance event (FEIS, page 356).

Other Public Concerns

In addition to the key issues that drove alternatives, concern was expressed during the public scoping and in the comments on the FEIS about the effects of the Proposed Actions on:

Soil Quality

Wildlife
Water Quality and Fish Habitat
Botany and Invasive Plants
Cultural Resources
Old-Growth Management
Recreation
Social and Economic
Scenery and Wild and Scenic River
Oregon Cascades Recreation Area (OCRA)
Resident and Migratory Landbirds

Soil Quality (FEIS, page 51)

All activities have been designed to meet Forest Plan and Regional Standards. All areas where active management is to occur would continue to function as productive sites.

Wildlife (FEIS, page 130)

After extensive analysis, it was determined that the alternatives are very similar in their effects (in the short term) on selected Management Indicator Species. In the longer term, Alternatives A and D carry the highest risk of a stand replacement event that has potential to alter habitat on a landscape scale.

For Threatened and Endangered and Federal Candidate species: Alternatives A, B, C, and D would have “**No Effect**” on the northern spotted owl or Critical Habitat and the Oregon spotted frog. Alternatives B, C, or D would result in a determination of “**May Impact Individuals or Habitat, But Will Not Contribute To a Trend Toward Federal Listing or Loss of Viability To The Population or Species**” for the Pacific fisher.

For Regional Forester Sensitive Species: The action alternatives “**May Impact Individuals or Habitat**” but will not likely contribute to a trend toward Federal listing for the white-headed woodpecker, California wolverine, Lewis’ woodpecker and Johnson’s hairstreak.

The Pacific fisher is both a Federal Candidate *and* Regional Forester Sensitive species.

Fisheries and Aquatic Resources (FEIS, page 263)

The determination in the Biological Assessment was that implementation of this project would have **No Effect** to bull trout or their habitat. The project will have **No Impact** on redband trout.

Harvest activities and temporary road construction would occur outside of riparian resources and only one non-mechanical activity would occur within. It is categorized as a meadow restoration project and would remove encroaching lodgepole pine 3 inches and smaller and prescribe burn decadent willows. All activities have been designed to comply with the Riparian Reserve and Riparian Habitat Conservation Areas as specified in the Northwest Forest Plan and Inland Native Fish (respectively).

The analysis area contains two streams (Little Deschutes and Hemlock Creek) that are listed on the EPA's 303(d) list of water quality-impaired water bodies. Activities would be avoided in all Riparian Reserves and only one small restoration activity would occur within a Riparian Habitat Conservation Area. It is unit 1061 (22 acres), activities are non-mechanical, and it would restore meadow habitats and rejuvenate riparian vegetation through prescribed burning and cutting of small diameter lodgepole pine. Due to the scale of the project and retention of most vegetation that provides shading, this project would not result in a detectable or measurable increase in temperature in Hemlock Creek (FEIS, page 270). No other actions associated with this project would change the condition of any waterway or water body within the analysis area.

Botany and Invasive Plants (FEIS, page 288)

There would be **No Effect** to Threatened, Endangered, or Candidate plant species because there are none within or near the analysis area. Most plants that have been added to the Region 6, 2008 Sensitive Species list known or suspected on Deschutes National Forest were determined to have marginal habitat, or were not present (FEIS, page 289). Also, there are no known sites or potential habitat for "Rare and Uncommon" species within the BLT planning area as of September 2008. Reference page 33 of this document for more details on survey requirements and how the BLT Project is consistent.

Based on the vectors and proposed activity, Alternative B was determined to have the greatest risk rating for introduction and spread of existing populations of invasive plants. The risk rating is mostly based on the amount of ground disturbance. Since Alternative B has the greatest amount of activity, the potential is the greatest. As of 2007, surveys and records have not indicated the presence of invasive plants that overlap activity units within the BLT Project area.

This project will use prevention as the main strategy to manage invasive plant species (R6 Invasive Plant EIS Standard #7). Actions conducted or authorized by written permit (contracts) that operate outside the limits of the road prism, require clean equipment prior to entering National Forest System Lands. All active gravel, fill, sand stockpiles, quarry sites, and borrow material will be inspected for invasive plants before use and transport. Only weed-free gravel, fill, sand, and rock would be used.

Cultural Resources (FEIS, page 320)

Following guidelines in a 2003 Regional Programmatic Agreement among USDA-Forest Service, the Advisory Council on Historic Preservation, and the Oregon State Historic Preservation Office, a finding of "Historic Properties Avoided" was determined. This finding is based on the practice of avoiding all eligible and unevaluated sites.

Old-Growth Management (FEIS, page 257)

Implementation of the alternatives would result in silvicultural activities prescribed to reduce stand density and return a frequent fire regime where (appropriate) within all four OGMAs. Active management will occur on up to 438 acres out of 1,172 in Alternative B.

Recreation (FEIS, page 323)

Very few effects would be associated with this resource. No developed recreation sites would be affected. In Alternatives B, C, and D prescriptions for management of trees are designed to lessen the risk of a large-scale disturbance process. They would maintain the largest trees on site and there would be no loss of Late- and Old-Structure (LOS). However, evidence of active management would be noticeable to people who use the dispersed camping sites, particularly off the 6100-100 spur near the Little Deschutes River (unit 65) and the Odell Butte/Highway 58 site off of roads 5800-895, 925, and 927.

In units where matsutake mushrooms have been determined or are suspected to be present, tractor skidding and mechanized felling shall be on frozen ground or sufficient snow depth as determined by the Forest Service except for units 770 and 785 which overlap the Beals Butte groomed snowmobile trail. No other trails, summer or winter, are affected.

Economic and Social (FEIS, page 343)

I considered the surrounding physical and biological environments that influence human social life in the central Oregon area. This is most evident in rural areas where the variety and quality of available natural resources often determine the chief means of economic livelihood and what leisure activities people are likely to pursue and, therefore, influence local preferences for the use of public lands. Also, I considered comments received from people who wanted limited activity to occur on the landscape.

I weighed the trade-offs carefully between all four alternatives and how they respond to economic opportunity. I recognize the need for forest products from forest ecosystems to help maintain the stability of local and regional economies. Silvicultural activities with an attendant benefit of providing timber are an appropriate way to manage these lands. Providing forest products to the economy is one of the two "needs" identified for this project.

Investments in forest stands are not to be based solely on net primary aboveground productivity. Both forest incomes and forest structure are maintained. Although matsutake production recovery might occur as soon as 2 years or as many as 6 years or more following treatment depending on Plant Association Group and original quality of habitat, worst case scenario in Alternative B would retain over 60 percent of picking areas categorized as "good habitat" and retain 87 percent of potential habitat (worst case scenario) in the Upper Little Deschutes Watershed/BLT analysis area. This does not include the picking area surrounding the Crescent Lake/Windigo Pass area.

None of the alternatives generates revenues that exceed all costs associated with the project. In regard to timber outputs, Alternative B has the greatest economic efficiency of the action alternatives and would harvest 12.1 million board feet (MMBF), followed by Alternative C (9.8 MMBF), and Alternative D (5.2 MMBF).

Scenery and Wild and Scenic River (FEIS, pages 282)

Much of the corridor has been impacted by the 1980s beetle infestation. All activities have been found to be consistent with the Little Deschutes Wild and Scenic Management Plan by

maintaining the Outstandingly Remarkable Values. All activities are subordinate to the landscape and reduce risk of a wide-scale disturbance event.

The BLT Project includes up to 11 proposed units within the Wild and Scenic River corridor of the Little Deschutes River. Alternative B overlaps the most at 541 out of 2,445 acres. These units have been identified for treatment to improve forest health conditions and promote the development of large trees by thinning small trees. This process would help improve stand condition and Outstandingly Remarkable Values associated with the health of vegetation within the corridor.

Oregon Cascades Recreation Area; including Unroaded, Inventoried Roadless Area Resources (FEIS, page 334)

Inventoried Roadless Areas are avoided. Oregon Wild provided a map of unroaded areas that overlaps the Oregon Cascades Recreation Area. They requested that the Forest Service avoid timber harvest, roads, mining, development, and motorized recreation in roadless areas greater than or equal to 1000 acres or any roadless area adjacent to existing wilderness or parks and all inventoried roadless areas. Refer to the Unroaded/Oregon Cascades Recreation Area section in the Environmental Impact Statement for disclosure and a figure (Figure 3-31) overlaid by BLT activity units.

Resident and Migratory Landbirds (FEIS, page 226)

The Forest Service has prepared a Landbird Strategic Plan (January 2000) to maintain, restore, and protect habitats necessary to sustain healthy migratory and resident bird populations to achieve biological objectives. The primary purpose of the strategic plan is to provide guidance for the Landbird Conservation Program and to focus efforts in a common direction. Species selected to be analyzed represent focal species for habitat types or features considered at risk. The Landbird Strategic Plan was considered and trade-offs are associated with individual species. For example, habitat cannot be provided on every acre for species with different requirements. The effects are displayed in Chapter 3, Wildlife in the FEIS.

Changes between Draft and Final EIS

Very few changes were made between the BLT Project Draft and Final EIS, besides minor grammatical corrections, editorial formatting, and clarification of data previously presented. The changes were driven by public comment and a comprehensive internal review.

Additional information regarding the northern goshawk was added as a result of a commenter suggesting the Forest Service review a Greenwald et al. 2005 document. This document reviewed the most current research on goshawk telemetry studies and reached some of the same conclusions of Reynolds 1992 recommendations on managing habitats for goshawks. However, the Greenwald et al. review also did not find support for a few of the assumptions underlying Reynolds management recommendations. The Greenwald et al. review stated that most but not all of the studies cited showed that goshawks tend to select stands for foraging that are similar to those used for nesting. A contrary view in Bloxton (2002) in a western Washington study of managed forests confirmed goshawk prey captures in forested stands ranging from 13 year-old regeneration units to 200 year-old complex, old-growth forests. He

also determined that goshawks hunted in all forest types and successional stages except for recent clearcuts and shrub/sapling stages though they tended to hunt in stands (greater than 30 years old) with larger diameter trees and avoided areas composed primarily of small trees (sapling/pole). Bloxton (2002) also stated that goshawk used areas containing high densities of small trees less than expected based on availability and used areas composed of fewer, but larger, trees more than expected based on availability and that goshawks may benefit if young stands in managed forests were thinned. Greenwald's et al. review would suggest that thinning forested stands could enhance the quality of goshawk foraging habitat is inconclusive at this time. In light of this recent paper, the FEIS will reflect this information. The remaining disclosure of effects to the goshawk, including the number of acres of nesting habitat affected and the return interval of actively-managed stands to functioning nesting habitat is unchanged.

ESA Consultation/Conferencing with U.S. Fish and Wildlife Service

Informal consultation and correspondence has occurred with the US Fish and Wildlife Service. All required consultation and conferencing with the U.S. Fish and Wildlife Service was completed. Reference page 23 of this document for more discussion on findings.

Legal Requirements and Policy

In reviewing the EIS and actions involved in Alternative B, I have concluded that my decision is consistent with the following laws and requirements that have not previously been discussed in this document:

The National Environmental Policy Act (NEPA)

NEPA establishes the format and content requirements of environmental analysis and documentation. The entire process of preparing this environmental impact statement was undertaken to comply with NEPA.

The National Forest Management Act (NFMA)

I find this decision to be consistent with the Deschutes Forest Plan, as amended, and with the requirements of the National Forest Management Act implementing regulations; specifically:

Silvicultural Practices

In Alternative B, there is no timber harvest on lands classified as unsuitable for timber production. Alternative B is consistent with 36 CFR 219.27(c)(1).

Vegetative Manipulation/Management Requirements

The Selected Action is consistent with the seven management requirements from 36 CFR 219.27 and the vegetation requirements from 36 CFR 219.27(b).

Maintaining Viable Populations of Fish and Wildlife Species

The Selected Action is consistent with the viable population requirements of 36 CFR 219.19 by meeting the Forest Plan Standard and Guidelines as amended by the Eastside Screens and Northwest Forest Plan for dead wood. The Forest determined

guidelines for meeting this and documented them in the Deschutes National Forest Wildlife Tree and Log Implementation Strategy (USDA 1994). This strategy estimates the number of hard snags per acre by vegetative series and species (FEIS, page 135).

The BLT Project meets or exceeds standards given in the amended Deschutes Land and Resource Management Plan. The design criteria common to all alternatives is to retain all existing snags, except those that must be removed under limited circumstances, and for all down wood, the intent is to retain all existing levels of down wood 7 inches and greater in lodgepole pine and 9 inches and greater in all other Plant Association Groups. Only activity-created slash below these diameters would be piled and utilized or disposed (FEIS, Resource Protection Measures and Project Design Criteria, page 34). The BLT Project seeks to manage the retention and recruitment of snags and down wood habitat at various densities across the landscape utilizing a reference condition based on the historical range of variability as described in the FEIS (Chapter 3, Snags and Down Wood Habitat). Managing within the historical range would provide for those species that survived to the present with those densities meeting NFMA objectives. The best available science on dead wood relationships to wildlife habitat was compiled in the form of DecAID and local data sets. Effectiveness monitoring is ongoing in terms of research and DecAID will be continually updated with the new science as it becomes available. As this information is updated, management will adapt to the new information. This project demonstrates the Forest Service commitment to adaptive management to meet the needs of wildlife. NEPA requires a disclosure of effects of Federal actions. The direct, indirect, and cumulative effects of implementation of the alternatives on snag habitat are disclosed in Chapter 3 of the FEIS. The effects analysis is based on habitat needs determined by research.

The Preservation of American Antiquities Act of June 1906 and The National Historic Preservation Act: The Oregon State Historic Preservation Officer (SHPO)

A cultural resource inventory has been completed for the project area. On June 09, 2006, the Deschutes National Forest completed the "Project Review for Heritage Resources under the Terms of the 2004 Programmatic Agreement" with the Oregon State Historic Preservation Officer (SHPO). The activities in the selected alternative have been designed to have No Effect or No Adverse Effect to cultural resource sites through both protection and avoidance. The project is compliant with the SHPO regulations.

The Endangered Species Act of 1973, as amended

Biological Assessments have been prepared to document possible effects of proposed activities on endangered and threatened species in the BLT Project area. See the summary of effects to Threatened, Endangered, Candidate and Sensitive species on page 23 of this document. Appropriate coordination, conferencing, and consultation with USFWS have been completed (See previous section of this document titled Consultation/Conferencing with USFWS).

Aquatic Conservation Strategy

There are no activities within Riparian Reserves. This project has been determined to be consistent with the Deschutes Land and Resource Management Plan, as amended, by the

Northwest Forest Plan Record of Decision for the Aquatic Conservation Strategy (ROD, B-9) by meeting the nine objectives, as well as Key Watershed Standards and Guidelines found in the ROD, C-7. I have determined that Alternative B is consistent with the Aquatic Conservation Strategy for the following reasons:

I have reviewed the 1998 Landscape Analysis Process (LAP) and this information has informed me about the ecological functions within this watershed. The LAP identified approximately 30-50 percent of the Plant Association Groups found within the BLT Vegetation Management analysis area as imminently susceptible to a large-scale disturbance event, such as insects, disease, or wildfire. Furthermore, the LAP described how a large-scale disturbance event in the BLT analysis area can impact the security of local communities (especially in a wildfire event), wildlife habitat, special forest products, and socially desirable large trees.

Active management associated with this project is necessary to restore the Historical Range of Variability, particularly in the late- and old-successional stands. I have reviewed the proposed management activities from both a project and watershed-level scale. While accomplishing project objectives, proposed activities will not retard or prevent attainment of Aquatic Conservation Strategy Objectives. By focusing on understory removal, Alternative B is the best at moving the watershed toward the range of conditions that were most likely found prior to fire exclusion. This would result in multiple benefits associated with the Strategy Objectives. First, it would reduce competition to the largest trees, possibly keeping them on the landscape longer; large trees are the component that would take the longest to replace. Second, strategic risk-reduction would allow fire to return to its role in selected and appropriate areas, allowing the watershed to potentially return to the proper scale and range of disturbance that probably occurred prior to fire exclusion.

These actions would reverse an immediate need to reduce stand densities and fuel loadings to reduce the risk of large-scale loss of late- and old-structured stands and other forest resources on the landscape.

This project has no consequences to listed fish, water quality, or other riparian resources identified as important in this watershed (FEIS, pages 263). I acknowledge the potential for adverse effects to riparian resources (albeit very small in this case) when action is taken and the ground is disturbed. However, these risks are characterized as very low and the trade-off is to restore this watershed into a more sustainable condition. The potential consequences of doing nothing are not acceptable.

I have reviewed the Aquatic Conservation Objectives (FEIS, Fisheries and Aquatic Resources, Chapter 3) in light of the analysis found in the soil and water quality sections. I have determined that the actions in Alternative B meet, and do not prevent attainment of these objectives. The following rationale supports my conclusions:

Aquatic systems would be avoided by active management on all stream reaches and would be protected by a reduction of risk associated with a large disturbance in the upland vegetation entering the Riparian Reserve. There are no activities associated with the BLT Project that

are within Reserves; however there is one small riparian restoration project within the Riparian Habitat Conservation Area outside of the Northwest Forest Plan.

I am confident that Best Management Practices (BMPs) and Standard and Guidelines listed in Appendix A of the FEIS. Project Design Features and Mitigation Measures identified in Chapter 2, along with compliance with local and Regional Soil Quality Standards, will protect beneficial uses of the streams in the project area in a manner consistent with the Aquatic Conservation Strategy outlined in the Northwest Forest Plan and the Clean Water Act of 1972. BMPs have been used numerous times on the Deschutes National Forest in contract provisions and for other similar vegetation management projects and have been proven to be effective in resource protection.

The Clean Water Act, 1982 and 303(d)

The selected alternative will comply with the Clean Water Act. This Act establishes a non-degradation policy for all federally proposed projects. The selected alternative meets anti-degradation standards through planning, application, and monitoring of Best Management Practices (BMPs). The Environmental Protection Agency has certified the Oregon Forest Practices Act and regulations as BMPs. The State of Oregon has compared Forest Service practices with the State practices and concluded that Forest Service practices meet or exceed State requirements. Site-specific BMPs have been designed to protect beneficial uses. Chapter 2 of the Final EIS lists the design criteria and resource protection measures that are common to all action alternatives. A number of these measures are BMPs. Appendix A of the Final EIS describes the application of water quality BMPs and lists the BMPs that will be utilized to implement the activities.

The Final EIS documents the analysis of effects to streams listed on the state 303(d) list of Water Quality Limited Water Bodies for summer water temperature. The Little Deschutes River was listed on the Oregon DEQ's 2004 303(d) "Water Quality Limited Streams" list for exceeding standards for temperature and dissolved oxygen (river mile 0 to 68.8). Dissolved oxygen is a parameter related to temperature. The warmer the water, the less oxygen it can hold. Hemlock Creek (river mile 0-5.9) is listed for elevated summer stream temperatures. Activities must improve conditions in the stream, or at least ensure that the conditions are not further degraded.

Implementation of the selected activities should not result in any measurable increase in water temperatures in any fish-bearing or non fish-bearing perennial stream in the project area. Water temperatures and water quality within the analysis area and downstream into the Deschutes River are not expected to be affected as the result of active management. There would be no change to the 303(d) parameters for which both streams are listed. No shade will be removed from water bodies. Activities in Unit 1061 are designed to improve the health and vigor of riparian vegetation, including willows. Currently, small lodgepole pine seedlings are encroaching into meadow habitat and riparian vegetation, including willows which are in a very decadent condition. Approximately one year after prescribed burning, the willows are expected to respond by an increase in canopy and ultimately providing shading. All overstory trees with the ability to affect shading of the stream and riparian area would not be disturbed.

All work would be implemented by hand crews to minimize disturbance of surface soils and reduce the possibility of mobilizing sediment to the stream.

Civil Rights and Environmental Justice

Executive Order 12898 on environmental justice requires federal agencies to identify and address any disproportionately high and adverse human health or environmental effects on minority and low income populations. The analysis focuses on potential effects from the project to minority populations, disabled persons, and low-income groups.

Alternatives B, C, and D may have some adverse impacts associated with matsutake harvest for both the Asian matsutake harvester community and the White low-income populations of Klamath County. Research shows that vegetation management and fuels treatments have the potential to affect matsutake growing condition in the short-term by changing micro-climates as tree canopies are reduced. Also, as mentioned in the issues statements, soil biota important for mushroom production uses a complex symbiotic relationship in an environment that does not tolerate soil disturbance well. In sum, timber harvesting practices may have a negative impact on the production of matsutake mushrooms. Botanists predict that recovery of the matsutake production to pre-treatment conditions will take between 2 and 6 years in most of the area, and up to 10 years dependent upon the Plant Association Group and site-specific conditions. See page 12 of this document for more discussion about the rationale.

Based on site-specific and modeled data, the BLT planning area currently contains approximately 54,122 acres (71 percent) of potential matsutake habitat. As a subset of potential habitat, 39,325 acres (51 percent) is currently "Good" habitat, 12,837 acres (17 percent) can "Grow" to "good" habitat, and 1,960 acres (3 percent) can be "Thinned" to "good" habitat. If there is a net shift of less production compared to acres considered "good habitat". Alternative B would potentially affect 8.7 percent (or 2.0 percent of the total habitat), followed by 6.7 percent in Alternative C (or 1.5 percent of total habitat), and 2.7 in Alternative C (or 0.7 percent of total habitat).

Mitigation Measures were incorporated into all action alternatives to address concerns for the effect to matsutake production:

- In units where matsutake mushrooms have been determined, or are suspected to be present, tractor skidding and mechanized felling shall be on frozen ground or with sufficient snow depth as determined by the Forest Service except for units 770 and 785 which overlap the Beals Butte groomed snowmobile trail. This applies to tractor units and advanced systems, if mechanized felling is used. This mitigation shall be incorporated in the following units:
 - a. **Alternative B:** 125, 195, 200, 210, 245, 265, 270, 285, 300, 310, 311, 312, 315, 316, 320, 335, 340, 410, 460, 525, 820, 835, 845, 915, 1035, 1100 and 1135.
 - b. **Alternative C:** 125, 195, 200, 210, 245, 265, 270, 300, 315, 316, 320, 335, 340, 525, 835, 845, 915, 1035, 1100, and 1135.

c. **Alternative D:** 125, 195, 200, 265, 270, 300, 315, 316, 335, 340, 410, 525, 820, and 845.

- In all other units where matsutake has *not* been determined or suspected to be present, when possible, operate equipment over frozen ground or a sufficient amount of compacted snow to protect mineral soil. Equipment operations should be discontinued when frozen ground begins to thaw or when there is too little compacted snow and equipment begins to cause soil-puddling damage (rutting).
- Prevent additional soil impacts in random locations of activity areas between skid trails and away from landings by machine piling and burning logging slash on existing log landings and skid trails. Machine piling equipment must stay on these areas.
- Restrict grapple skidders to designated areas (i.e., roads, landings, designated skid trails) at all times, and limit the amount of traffic from other specialized equipment off designated areas. The use of harvester machines will be authorized to make no more than two equipment passes on any site-specific area to accumulate materials.
- In "fuels only units" restrict mechanical equipment to existing areas considered in a detrimental condition such as skid trails and landings.
 - a. **Alternative B:** 45, 80, 115, 435, 620 and 940
 - b. **Alternative C:** 45, 80, 115, 620 and 940
 - c. **Alternative D:** 45, 80, and 115

Other Policy or Guiding Documentation

Biological Evaluations for Sensitive Species

Biological Evaluations were prepared to assess potential effects to sensitive species as identified by the Regional Forester. The evaluation for aquatic species and terrestrial wildlife determined that while there may be impacts to individual sensitive species, those effects are not likely to contribute to a trend toward federal listing or loss of viability of the population or species. See page 23 of this document for specific determinations.

On January 31, 2008 the Regional Forester released an updated version of the Sensitive Species List. The letter contains the following paragraph on the updated Sensitive Species list: "The updated RFSS list included in Enclosure 1 will apply to all projects initiated on or after the date of this letter. **Projects initiated prior to the date of this letter may use the updated RFSS list transmitted in this letter or the RFSS list that was in effect when the project was initiated (emphasis added).** For the purpose of this letter, "initiated" means that a signed, dated document such as a project initiation letter, scoping letter, or Federal Register Notice for the project exists (USDA 2008)." The BLT Project scoping was initiated in 2003. However, both flora and fauna used the updated January 2008 version of the sensitive species list.

For wildlife species listed as Region 6 Sensitive, effects are disclosed starting on page 181 of the FEIS.

For plants, after reviewing the Geographical Information System (GIS) Sensitive Plant layer and past survey information through the 2006 field season, no species on the Region 6 Forester's Sensitive Plant List (at that time) were found to occur in the BLT analysis area. Using the January, 2008 list, most plants that have been added to the R6 2008 Sensitive Species list known or suspected on Deschutes National Forest were determined to have marginal habitat, or were not present (FEIS, page 289). Also, there are no known sites or potential habitat for "Rare and Uncommon" species within the BLT planning area as of September 2008.

Old-Growth (Deschutes LRMP, p 4-149)

There are four designated Old-Growth Management Areas (OGMAs) that total 1,172 acres in the analysis area (FEIS, page 259). All four OGMAs are located outside the Northwest Forest Plan but within lands managed through the Eastside Screens. While large-diameter trees would be retained where they occur in each OGMA, some stands may not provide habitat needs for all life conditions for the focal species. For example, canopy cover may be reduced below levels typically used for nesting, roosting, or denning, but stands would still provide habitat for some elements of life functions such as foraging or dispersal. In addition, replacement trees of the appropriate species would be left including ponderosa, white and sugar pines, Douglas-firs and Shasta firs in the 15-21 inch diameter range where available to function as future LOS trees as existing trees fade out. These actions would improve the resiliency of treated stands to withstand disease and beetle attacks. There would be no removal of trees greater than 21 inches in diameter or temporary road construction.

Commercial thinning is proposed within each OGMA to reduce stocking density stress and lessen the risk of large scale loss of old forest to wide-scale disturbance processes. Within the lodgepole pine dominated OGMAs (Little Odell and 5825), variable density thinning would be applied. This would result in reduced canopy cover ranging from 20-30 percent post-harvest, depending upon the existing condition and the objective for the stand. In all cases the largest diameter trees would be retained. There would also be no removal of down logs as part of the timber sales or as personal use or commercial firewood (see PDFs, Chapter 2). Multi-story forested conditions would remain where they occur. In the ponderosa pine and/or ponderosa pine and sugar pine OGMAs (Muttonchop and Little Deschutes River) understory thinning would also occur favoring the retention of the largest diameter pines on each site. Underburning is also proposed to reduce ground fuels (less than 3 inches in diameter down wood and pine needles in the ponderosa or sugar pine dominated OGMAs but would retain down wood to the levels prescribed in the Project Design Features in Chapter 2). Post-harvest canopy cover would likely range from 30-35 percent in ponderosa pine or sugar pine OGMAs.

Consistency with the Forest Plan is specified on page 22 of this document and assessments for each OGMA have been completed and can be found on file at the Crescent Ranger District.

The Environmentally Preferable Alternative

Under the National Environmental Policy Act, the agency is required to identify the environmentally preferable alternative (40 CFR 1505.2(b)). This is interpreted to mean the alternative that would cause the least damage to the biological and physical components of the environment, and which best protects, preserves, and enhances, historic, cultural, and natural resources (Council on Environmental Quality, *Forty Most Asked Question Concerning CEQ's National Environmental Policy Act Regulations*, 46 Federal Register 18026). Factors considered in identifying this alternative include: (1) fulfilling the responsibility of this generation as trustee of the environment for future generations, (2) providing for a productive and aesthetically pleasing environment, (3) attaining the widest range of beneficial uses of the environment without degradation, (4) preserving important natural components of the environment, including biodiversity, (5) balancing population needs and resource use, and (6) enhancing the quality of renewable resources. An agency may discuss preferences among alternatives based on relevant factors, including economic and technical considerations and statutory missions {40 CFR 1505.2(b)}.

I have determined that the environmentally preferable alternative is Alternative B for the short- and long-term. Alternative B implements a strategy that adjusts the existing vegetative conditions to a more sustainable balance and maintains suitable habitat for old-growth dependent species that utilize high-risk stands. Vegetation management activities focus on retaining options for the most important habitat for late- and old-forest associated species while maintaining large trees across the planning area.

Alternative B attains the widest range of beneficial uses of the environment by preserving the most important feature on the landscape (e.g. large trees) without degradation. While commercial thinning would occur, the primary emphasis would be removing some of the understory trees to reduce ladder fuels and stand density competition. The largest diameter trees would be retained to maintain late- and old-structured forests. In addition, all existing snags would remain except where they must be felled for temporary and Maintenance Level 1 roads, log landings, or occupational safety (FEIS, page 33). Also, except for areas maintained for SPOTS or for collection of firewood, the intent is to retain all existing levels of down wood 7 inches and greater in lodgepole pine and 9 inches and greater in all other Plant Association Groups. Only activity-created slash below these maximum diameters would be piled and utilized or disposed. Soil quality is maintained to regional standards; effects to water quality and quantity are benign because of the limited activity in proximity to water resources. Risk of spread of existing or new invasive plant populations in the project area has been minimized.

Alternative B has been designed to maintain the full range of native species that are present on the landscape to contribute to the ecosystem's adaptability to changing climatic conditions. Also, Alternative B incorporates strategic locations for risk-reduction by maintaining these sites in an open condition; benefiting those that choose to live adjacent to and/or visit the National Forest.

Resource Protection Measures

Project Design Features and mitigation actions are site-specific management activities designed to avoid or reduce the adverse impacts of timber harvest and associated activities. These measures will be implemented through project design and layout, contract specifications, contract administration, and monitoring by Forest Service officers. I have decided to implement all design and mitigation measures specified in the FEIS for Alternative B (FEIS, page 39).

These selected measures will adequately prevent adverse effects for the following reasons: 1) the selected mitigation measures are practices we have used successfully in the past; 2) they are State-recognized best management practices for protecting water quality; and 3) they are based on current research (e.g., the snag management approach). I have decided to monitor the implementation of these measures and, in some instances, to monitor their effectiveness, as described in the following section, page 317 of the FEIS, and also on page 14 of this document.

Monitoring

Monitoring of the BLT Project is designed to accomplish three purposes: 1) to assure that all aspects of the project are implemented as intended; 2) to determine, for certain critical activities, that the effects of the activities are consistent with the intent; and 3) to allow adaptation if it is found that activities are not having the desired effects. Additional details of the monitoring items are found in the FEIS in Chapter 2.

Consistency with the Eastside Screens

Alternative B has been found to be consistent. For a summary for these requirements and various other laws and regulations that are not specified here, reference Appendix A of the FEIS for more details.

Implementation

Implementation would likely begin in August of 2009. I have reviewed the BLT Project FEIS and associated appendices. I believe there is adequate information within these documents to provide a reasoned choice of action. I am fully aware of the possible adverse environmental effects that cannot be avoided, and the irreversible/irretrievable commitment of resources associated with the Selected Alternative. I have determined that these risks will be outweighed by the likely benefits. Implementing the Selected Alternative will cause no unacceptable cumulative impact to any resource. The FEIS adequately documents how compliance with these requirements is achieved (FEIS, Chapter 3).

Procedure for Change during Implementation

Minor changes may be needed during implementation to better meet on-site resource management and protection objectives.

In determining whether and what kind of further NEPA action is required, I will consider the criteria for whether to supplement an existing Environmental Impact Statement in 40 CFR 1502.9(c) and FSH 1909.15, sec. 18, and in particular, whether the proposed change is a substantial change to the intent of the Selected Alternative as planned and already approved, and whether the change is relevant to environmental concerns. Connected or interrelated proposed changes regarding particular areas or specific activities will be considered together in making this determination. The cumulative impacts of these changes will also be considered.

The intent of field verification prior to my decision was to confirm inventory data and to determine the feasibility and general design and location of a road or unit, not to locate the final boundaries or road locations. Minor adjustments to unit boundaries may be needed during final layout for resource protection, to improve logging system efficiency, and to better meet the intent of my decision. Many of these minor changes will not present sufficient potential impacts to require any specific documentation or action to comply with applicable laws.

Appeal Rights

The 45-day appeal period begins the day following the date the legal notice of this decision is published in *The Bulletin*, Bend, Oregon, the official newspaper of record. The Notice of Appeal must be filed with the Reviewing Officer at:

*Appeal Deciding Officer,
Pacific Northwest Region, USDA Forest Service
Attn. 1570 Appeals
333 S.W. First Avenue
PO Box 3623
Portland, OR 97208-3623*

Appeals can also be filed electronically at: appeals-pacificnorthwest-regional-office@fs.fed.us or hand-delivered to the above address between 7:45 AM and 4:30 PM, Monday through Friday except legal holidays. The appeal must be postmarked or delivered within 45 days of the date the legal notice for this decision appears in the *The Bulletin* newspaper. The publication date of the legal notice in the newspaper is the exclusive means for calculating the time to file an appeal and those wishing to appeal should not rely on dates or timeframes provided by any other source.

Electronic appeals must be submitted as part of the actual e-mail message or as an attachment in Microsoft Word (.doc), rich text format (.rtf), or portable document format (.pdf) only. E-mails submitted to e-mail addresses other than the one listed above, in other formats than those listed, or containing viruses will be rejected.

It is the responsibility of those who expressed an interest during the comment period and wish to appeal a decision to provide the Regional Forester sufficient written evidence and rationale

to show why my decision should be changed or reversed. The appeal must be filed with the Appeal Deciding Officer (§ 215.8) in writing. At a minimum, an appeal must include the following:

1. Appellant's name and address (§ 215.2), with a telephone number, if available;
2. Signature or other verification of authorship upon request (a scanned signature for electronic mail may be filed with the appeal);
3. When multiple names are listed on an appeal, identification of the lead appellant (§ 215.2) and verification of the identity of the lead appellant upon request;
4. The name of the project or activity for which the decision was made, the name and title of the Responsible Official, and the date of the decision;
5. The regulation under which the appeal is being filed, when there is an option to appeal under either this part or part 251, subpart C (§ 215.11(d));
6. Any specific change(s) in the decision that the appellant seeks and rationale for those changes;
7. Any portion(s) of the decision with which the appellant disagrees, and explanation for the disagreement;
8. Why the appellant believes the Responsible Official's decision failed to consider the comments and;
9. How the appellant believes the decision specifically violates law, regulation, or policy.

Contact Persons

For additional information concerning the specific activities authorized with my decision, you may contact:

Chris Mickle
IDT leader
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Holly Jewkes
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Crescent Ranger District
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Responsible Official



John Allen
Forest Supervisor
Deschutes National Forest

1-21-2009
Date

Figure 4. Alternative B

