FINAL DECISION DOCUMENTATION and DECISION RATIONALE

B Cubed

Environmental Assessment (EA) Number OR080-04-06

USDI - Bureau of Land Management
Oregon State Office, Salem District, Cascades Resource Area

Township 7 South, Range 3 East, Sections 1, 2, 3 and 15; Willamette Meridian
Clackamas County, Oregon

Introduction

The Bureau of Land Management (BLM) has conducted an environmental analysis for the B Cubed timber thinning project, which is documented in the B Cubed environmental assessment (EA) (EA # OR080-04-06) and the associated project file. This project is a proposed timber sale to thin 556 acres leaving variable tree densities within each stand. A Finding of No Significant Impact (FONSI) was signed on June 18, 2004 and the EA and FONSI were then made available for public review.

Decision

My decision is based on site-specific analysis in the B Cubed EA, the supporting project record, management recommendations contained in the Molalla River Watershed Assessment as well as the management direction contained in the *Salem District Resource Management Plan* (RMP) dated May 1995 and associated management direction (EA pp. 1-2).

I have decided to implement the Proposed Action of the B Cubed EA with modifications described below, hereafter referred to as the "selected action". The selected action is shown on the maps attached to this Decision Rationale.

1. Harvest

- Total harvest area of 556 acres. All harvest units are in the General Forest Management Area (GFMA) land use allocation (LUA) and Riparian Reserve (RR) LUA. Seven hundred (700) acres were analyzed in the EA. Acres were reduced due to natural topography features (e.g. rock outcroppings or slope breaks), a botanical area, and wet areas that were identified during field work.
  - There are 27 acres of Riparian Reserve thinning. Approximately half of the Riparian Reserve acres proposed (50 acres) were dropped from the selected action because the area already has a diversity of tree species which are widely spaced with horizontal and vertical forest structure beginning to develop;
  - 493 acres would be ground-based yarded and 63 acres would be skyline yarded.
  - Seventeen gaps (~ 12 acres) are located throughout the thinning in sections 2 and 3. The up to 20 gaps proposed in the EA was reduced to 17 based on field locations of the best gap locations for wildlife habitat improvement.

2. Road Access

- Three thousand three hundred and fifty-four (3354) feet of new road would be constructed to access the unit in section 15. This road would be left in place and seeded after use. The road length is due to actual field location of the road on stable ground along the ridge. There are no additional effects beyond those described in the EA.
  - A 500-foot extension of road 7-3E-3 was dropped because it would not be needed for access.

- Existing Road 7-3E-15.4 would be spot-rocked. One culvert would be removed after the sale is logged and the crossing would be armored with rock to minimize the need for future maintenance. The lower portion of the road would be waterbarred to move ditch and rut water off the road before the road enters riparian reserves. The road would be gated prior to the sale and left gated after the sale.

3. Fuels Treatments:

- Slash would be piled and burned on landings. Debris accumulations in the openings created within the stands would be mechanically or manually piled, covered and burned (RMP p. 65).

4. Snag/CWD Creation:

- Up to two snags per acre would be created within both GFMA and Riparian Reserves by top and/or bottom-girdling (RMP p. 21).
- One 24-inch (or greater) tree per acre would be felled if needed to meet coarse woody debris (CWD) requirements (RMP p. 21).

5. Design Features and Mitigation Measures

- All design features and mitigation measures described in the EA (pp. 6-9) have been incorporated into the timber sale contract.

Compliance with Direction

The selected action complies with applicable land use plans, policies, and programs; and is subject to the following documents, which direct and provide the legal framework for management of BLM lands within the Salem District: **1/** *Salem District Record of Decision and Resource Management Plan,* May 1995 (**RMP**), as amended; **2/** *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old Growth Forest Related Species Within the Range of the Northern Spotted Owl,* April 1994 (**NWFP**); **3/** *Molalla River Watershed Analysis*, May 1999 (**MRWA**); **4/** *Record of Decision to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl,* March 2004. All of these documents may be reviewed at the Cascades Resource Area office.

Alternatives Considered

The EA analyzed the effects of the "proposed action" and the "no action alternative." No unresolved conflicts concerning alternative uses of available resources (section 102(2) (E) of NEPA) were identified. No action alternatives were identified that would meet the purpose and need of the project and have meaningful differences in environmental effects from the proposed action (EA Section 2.1).

Reasons for the Decision

Considering the content of the EA and supporting project record, the management direction contained in the RMP and associated direction (EA pp. 1-2), and public comment; I have decided to implement the selected action as described above. My rationale for this decision follows:

The following table shows how the selected action meets the Purpose and Need of the project (EA section 1.3).

Purpose and Need (EA section 1.3)	**Selected Action**
Offer a marketable timber sale	This project would be offered as the B Cubed Timber Sale.
Achieve a desirable balance between wood volume production, quality of wood and timber value at harvest	Maintains volume production over the course of the rotation. Lengthens the rotation so that logs at end of rotation would be larger diameter, which increases quantity, quality and value.
Maintain a healthy forest ecosystem with habitat to support plant and animal populations and protect riparian areas and water resources	Encourages the development of larger diameter trees and creates more diversity within stands.
Accelerate tree growth of larger conifers in Riparian Reserves.	Diameter growth would be accelerated for remaining trees in the stand.
Restore or enhance habitat for riparian-dependent species and improve stand structural and spatial diversity.	Structural and spatial diversity would be improved by: 1) using variable spacing with openings to accelerate regeneration; 2) exposing trees to open growing conditions to develop large limbs; 3) creating snags; and 4) leaving areas with higher tree densities.
Provide appropriate access for timber harvest and silvicultural practices	Would implement maintenance of feeder roads, allowing continued access for management activities. Would improve access for management and fire protection in Section 15.
Reduce maintenance needs associated with the existing roads within the project area by improvements to stream crossings	One road is currently gated and would remain so. Provides an opportunity to stabilize the existing road into Section 15 and improve the road closure.

The No Action alternative was not selected because it does not meet the Purpose and Need directly, or delays the achievement of the Purpose and Need (EA sections 1.3, 3.2.9). For example:

- The No Action alternative would not contribute to the immediate supply of timber for local and State economic diversity.
- In addition, the No Action alternative:
  - Meets wood volume production over course of rotation. However, logs at end of rotation would be smaller diameter which generally reduces quality and value compared to thinned stands.
  - Retains the one-canopy level stand with only occasional development of a significant understory of shade intolerant Douglas-fir and a large number of smaller suppressed western hemlock.
- Diameter growth would continue to increase, but more gradually.
- Diversity would develop slowly in this one-canopy level, evenly- spaced managed stand.
- Main routes would be maintained under both alternatives. However, road to Section 15 would not be improved.
- Roads are currently closed although the access to Section 15 is compromised by OHVs getting over the dirt berm. Culverts are checked rarely because of the walk-in.

Public Involvement/ Consultation/Coordination

Scoping: In compliance with National Environmental Policy Act (NEPA), the project appeared in the October 2003 (as Best and Better Bauer), March 2004, June 2004 and September 2004 editions of the quarterly Salem District Project Update, which were mailed to over 1,070 addresses. A scoping letter dated March 12, 2004 was sent to 46 potentially affected and/or interested individuals, groups, and agencies. One letter was received during the scoping period. A summary of the responses received was included in EA Appendix 3 – Scoping Letter Comments.

Comment Period and Comments: The EA was made available on the Internet and notices were mailed on June 18, 2004 to approximately 47 agencies, individuals and organizations. A legal notice was placed in the weekly Molalla Pioneer soliciting public input on the action on June 23, 2004. One letter was received from an organization during the EA comment period. The BLM response to substantive comments can be found in Appendix A of this Decision Rationale.

Consultation/Coordination: **Wildlife:** The B Cubed proposal was submitted for Formal Consultation with U.S. Fish and Wildlife Service (USFWS) on September 3, 2002. Consultation with the USFWS resulted in a May Affect, Likely to Adversely Affect Determination for northern spotted owl. The selected action would follow all applicable terms and conditions from the Biological Opinion dated February 27, 2003 [BO# 1-7-03-0008].

Fish: A determination has been made that this project would have "no effect" on Upper Willamette River steelhead trout or Upper Willamette River chinook salmon, due to design criteria that include dry condition hauling on non-paved roads, limited harvest activity within RR (approximately 27 acres), with only about three acres within 100 feet of a stream channel, and slopes of less than 35% throughout most of the project area. See appendix 1 ESA Determination of Effect to UWR steelhead trout and UWR chinook salmon (EA, p. 35).

Conclusion

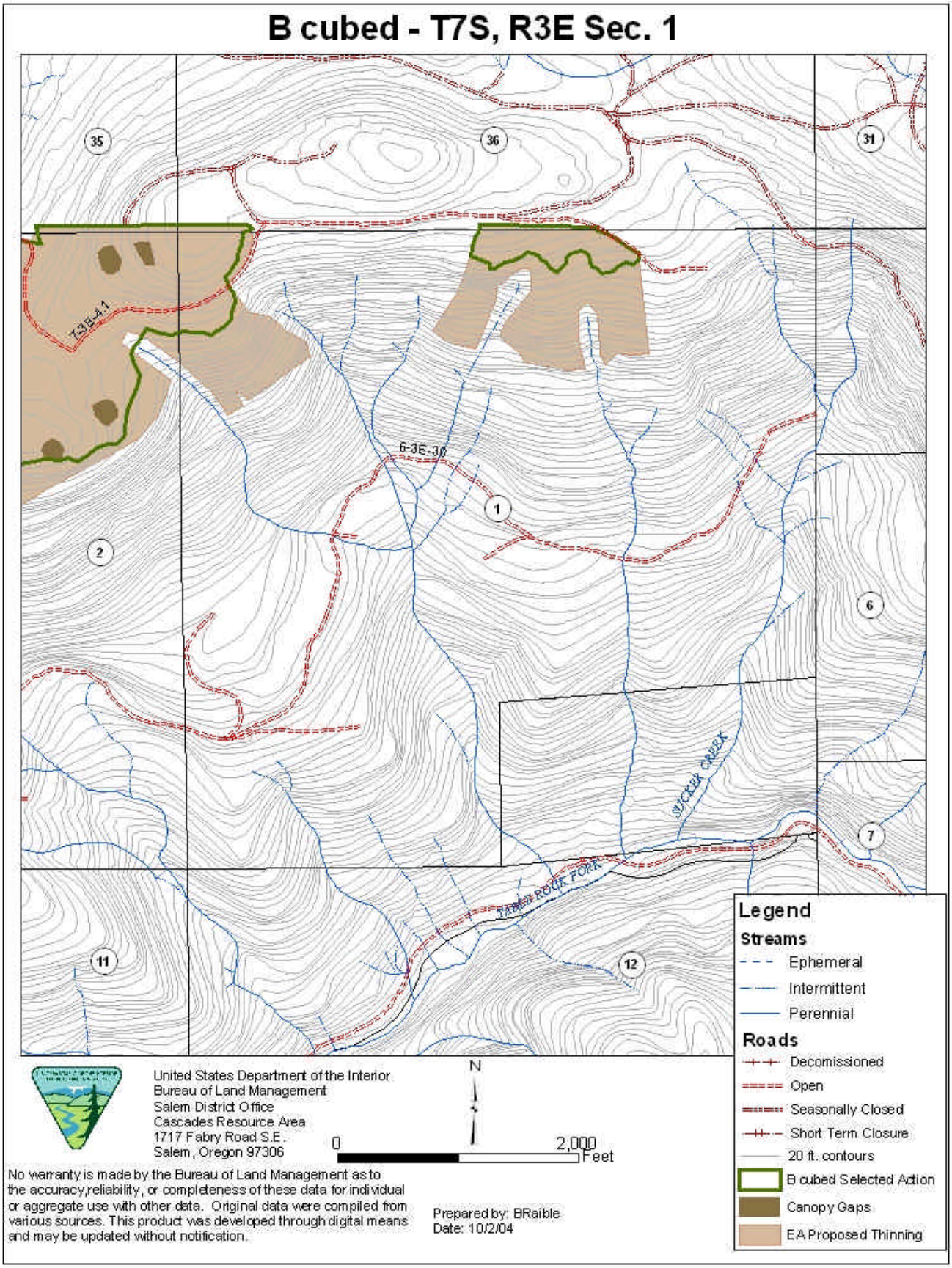
I have determined it is not necessary to change the Finding of No Significant Impact (FONSI - June 2004) for the B Cubed selected action. The B Cubed EA, along with additional information contained in this document, fully covers the project. There are no significant new circumstances or facts relevant to environmental concerns about the selected action or its impacts, which were not addressed in the EA.

Protests: In accordance with Forest Management Regulations at 43 CFR 5003.2, the decision for this timber sale will not become effective or be open to formal protest until the Notice of Sale is published "in a newspaper of general circulation in the area where the lands affected by the decision are located". Protests of this sale must be filed within 15 days of the first publication of the notice. For this project, the Notice of Sale will be published in the Molalla Pioneer on or around October 20, 2004. The planned sale date is November 17, 2004.

Contact Person: For additional information, contact Barbara Raible (503) 375-5687 or Rudy Hefter (503) 315-5931, Cascades Resource Area, Salem BLM, 1717 Fabry SE, Salem, Oregon 97306.

Approved by: Carolyn Sandy for 10/15/04

Rudy Hefter, Acting Field Manager — Date
Cascades Resource Area


B cubed - T7S, R3E Sec. 1
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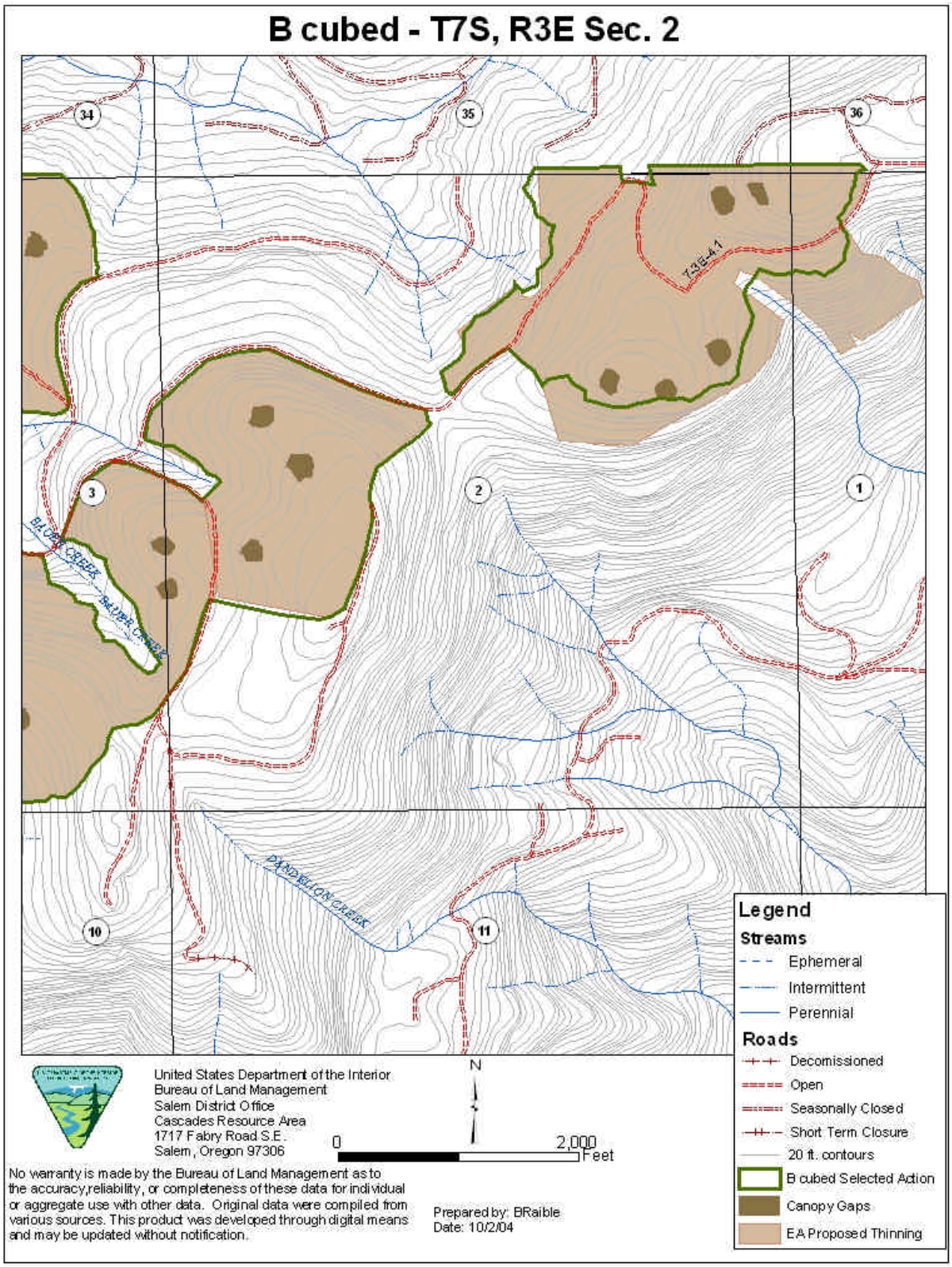
B cubed Selected Action
Canopy Gaps
EA Proposed Thinning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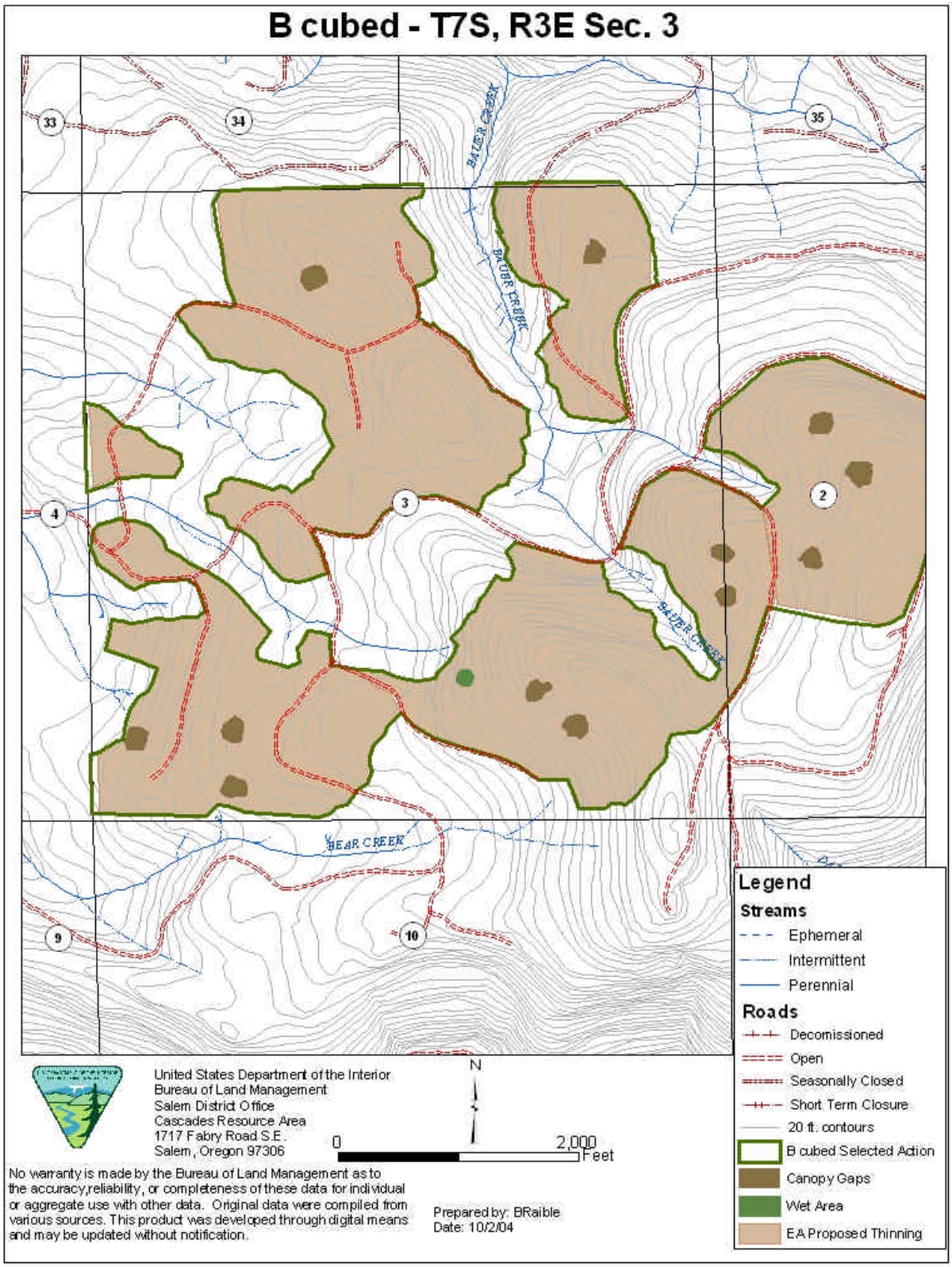
B cubed - T7S, R3E Sec. 3
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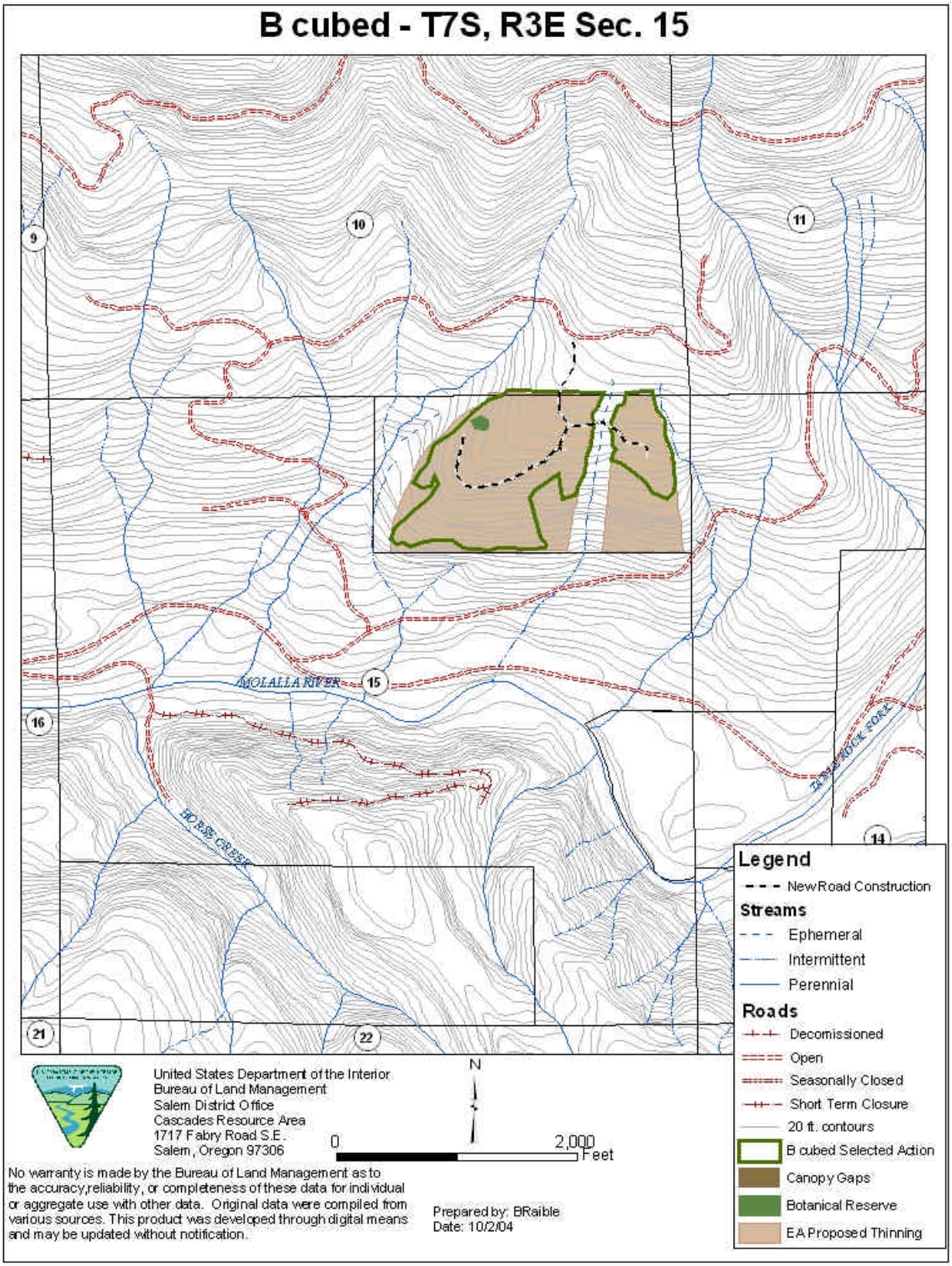
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MOLALLA RIVER
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ZOLLROCK FORK
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New Road Construction
Streams
Ephemeral
Intermittent
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B cubed Selected Action
Canopy Gaps
Botanical Reserve
EA Proposed Thinning
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Date: 10/2/04

Appendix A: Response to Substantive Public Comments and Summary of Other Public Comments on the EA

Introduction

One letter was received in response to the B Cubed EA. The comment is in italics. The BLM response follows each comment.

Oregon Natural Resources Council (ONRC), Jeremy Hall
Received July 19, 2004

Note: Section titles and most of the wording are directly from the letter. However, most of the comments as presented here are compiled from multiple paragraphs under the title, and/or multiple issues are included in the same paragraph and broken into separate comments for purposes of response.

1. Windthrow

Given the age of the trees, the size of the crowns, and the well-established root system, many areas may respond well to thinning to 50 tpa without experiencing a lot of windthrow. (What is the Curtis relative density index for these stands?) However, along ridgelines and other areas where windthrow may be an issue, leaving 60-70 tpa may be safer, will retain more options for the future and will do more to provide a matrix of habitat types and successional pathways..

Response: The Curtis relative density index for these stands is 79-87 percent for the previously thinned stands and 50-57 percent for the unthinned stands. We agree that the thinning in the previously thinned stands would result in little if any windthrown. We did mark the stands so that the residual density would vary across the stand from 30 to 70 tpa with the average of 50 tpa. The other previously unthinned stands are bordered by unthinned areas and are thinned to 60 to 70 tpa.

Experience on nearby sites is always used as a reference for developing the thinning prescriptions. The Bauercrest sale which also lies along this ridgetop was thinned to substantially less trees per acres and after 6 years there has not been any significant blowdown in any of these units.

2. Gaps

The EA has no explanation for the placement of the gaps. But more important than the number of gaps is how these gaps are created. First, gaps should generally be in the ¼ to ½ acre size class. While a few of the gaps can and should be larger, only a small percentage of the gaps should be between ½ and 1 acre in size. We strongly urge BLM not to create patches just by cutting every tree in a patch. …locate trees with deep crowns and release them by cutting every tree within 40-60' of them.

Response: The gaps were placed based on aspect and proximity to other openings and observed wildlife use by the wildlife specialist. The size of the gaps was estimated from the perimeter of the trees to be cut and most gaps would be ½ to 1 acre. When the trees are cut, the gap would not be as large due to the canopy of the edge trees over these openings. Therefore, most of the gaps would be ¼ to ½ acre. One gap is close to one acre. Trees that fit your description were left in the gaps.

3. CWD/Snags

Any prospective benefits to complexity and diversity accomplished by thinning these stands will be negated by the certain loss of the most important structural components of older, complex stands While "project design features reduce the risk to CWD habitat", BLM states in the EA that "existing snags and CWD habitat may be degraded". There is no mention of mitigation measures to protect legacy features on page 7 of the EA as suggested. Second, the measures that are mentioned in the EA are essentially management by caveat techniques that call for the retention "to the greatest extent possible" (page 9); essentially allowing snags to be felled if they interfere with "standard" logging operations. Protecting snags except where safety is an issue should no longer be used as a blanket loophole to cut existing snags.

Response: The wildlife section (P. 22) states that "much of the material that would have developed into snags and CWD has been removed in previous harvest entries. Large diameter material over 20 inches would be recruited over decades, and snags and CWD would be generated over long periods of time. Existing material would remain intact, but continue to decay. In some cases, these stands could take longer to develop late successional conditions if left untreated (due to past logging activity)." Short-term we have said that some habitat may be degraded (e.g. moved or disturbed) during logging operations, although little of this material exists on site (see EA, Stand Exam data, the Silviculture specialist report, and the Wildlife specialist report).

The photo shows a previous thinning of a similar stand, which still retains a large component of CWD and snags. In addition, up to two snags per acre would be created within both GFMA and Riparian Reserves by top and/or bottom-girdling and one 24-inch (or greater) tree per acre would be felled if needed to meet coarse woody debris (CWD) requirements (EA p. 6).

The proposed action follows the standards and guidelines for snags and CWD outlined in the RMP. Design features protecting snags and coarse woody debris are described on page 9 of the EA and are as follows:

- **"Snags:** Unmerchantable snags of all sizes and decay classes would be left standing to the greatest extent possible under standard contractual logging procedures, BMP, and OSHA requirements (RMP p.D-2). Any such snag cut or knocked down, would remain on site.

- **CWD:** CWD already on the ground would be retained and protected to the greatest extent possible from disturbance during treatment (NWFP S&G p. C-40, RMP 21, p.D-2). If CWD needs to be moved, a section of the log would be cut to allow access through, instead of moving the entire log" (EA p. 9) [leaving the remaining log habitat intact].

It is a goal of this project to retain all snags while providing for worker safety. Although from the EA description it may appear that these features are protected simply by the statement that they are not planned to be cut, in actuality, the protections are far more specific. Each tree authorized to be cut is required to be marked with blue paint by the BLM. Any tree not so marked is specifically reserved to the Government. Therefore each tree is individually visited and inspected and a decision made on how well it meets the criteria for inclusion in the sale. Snags are specifically described as not included in the sale. It is assumed that loggers can safely work around existing snags unless otherwise noted. In instances where a logger believes a snag to be a safety hazard, a BLM representative is required to: 1/ inspect the snag in question; 2/ make a determination as to the safety of operations around the snag; and 3/ determine the best course of action to protect the snag, the workers, and allow the operations to go forward. This is hardly "management by caveat"; instead, it is site specific with the cutting of snags the exception rather than the rule.

4. New Roads

"The sections on road construction in the EA are contradictory and confusing. BLM states that "new road construction under the proposed action would be limited to stable slopes outside of riparian reserves. This is simply untrue, because not only does the EA state that 'approximately 550 feet of temporary road construction would occur in riparian reserves, (page9), but the Ea states on several occasions and even has a photograph showing an ephemeral stream crossing in section 15. The Northwest Forest plan clearly requires buffers on riparian reserves on intermittent streams that have a definable channel and evidence of annual scour or deposition. …However, as we noted in our scoping comments, BLM should provide a detailed analysis of the costs/benefit analysis of building the roads. ONRC is not clear how many acres of thinning will be able to be yarded by each section of new road. The EA does not provide this information nor any information about cross drains will be installed, how much of the road will result in cut banks and ditches or how many waterbars will need to be installed to make the road hydrologically stable.

Response:

New Road Construction and Riparian Reserves: The 550 feet of temporary road construction in section 15, described above, crosses one ephemeral channel on a flat bench. See photo 3 in the EA, page 8. A temporary crossing at this location would likely have no measurable effect on surface or subsurface hydrology or streamflow because during the season of use, no surface flow would be evident and ground water levels would likely be several feet below the surface (EA p. 18). The material used for this temporary crossing would be removed after the sale; however, the rest of the newly constructed road would be left in place after use. Construction stabilization would include: shaping the road surface for proper drainage to forested slopes outside Riparian Reserves; seeding the road with native species; and blocking the road to other-than-administrative use (EA p 13).

The new and existing roads planned for use are intended for safe and reliable log transportation. The volume of traffic and season of road use on B Cubed is temporary, and is planned to be confined within the months of July through October, from 2005 through 2007.

Economic Analysis: Any economic analysis of logging systems and road construction on B Cubed Timber Sale would summarize total measurable costs versus total measurable revenues of each alternative for the project as a whole over the duration of the management plan.

The new road construction costs are very low because the road location was established on a secondary broad ridge with gentle slopes to minimize excavation, minimizing the heights of cutbanks and fill slopes. Surfacing was also minimized which also reduced road costs.

The total cost estimate of the new road construction is about $34,000 for approximately 3350 feet, (0.64 miles, a little over 5/8 of a mile). The two acres of new road construction and clearing provide access and directly affect the cost of felling, skidding and yarding of approximately 34 acres of Commercial Thinning yielding an estimated 650 Thousand Board Feet (MBF) in the Matrix LUA, and approximately 5 acres of thinning yielding an estimated 50 MBF in the Riparian LUA on a timber sale project containing approximately 550 acres yielding an estimated 10150 MBF. Without the new road construction, felling, skidding and yarding costs would increase and would also require new costs of secondary skidding.

The new road provides the least expensive option for ground based skidding and skyline yarding approximately 39 acres in Section 15, with an estimated initial investment cost of approximately $34,000. Without the new construction, the 39 acres in Section 15 would still be skidded and yarded, but with an increased cost of approximately $76,000 (minus the cost of construction) for a total net increased cost of approximately $42,000 for each entry of this initial commercial thinning.

Road Ditches and Cross Drains: The road construction is planned to be out-sloped and in-sloped with rolling dips to provide constant drainage along every station of the new route, avoiding traditional road ditches and cross drains. This design would also reduce excavation because of a substantially narrower road prism, and thereby minimize the new areas exposed to precipitation and snow melt, which would also reduce potential erosion. The elimination of ditches and cross drains reduces road maintenance problems which are known to exist with such surface drainage design features.