DECISION NOTICE

and

FINDING OF NO SIGNIFICANT IMPACT

for the

TRAPPER PROJECT

USDA Forest Service
Willamette National Forest
McKenzie River Ranger District

May 2003

DECISION

This Decision Notice documents my reason for selecting and implementing Alternative B from the Trapper Project EA. Appendix B provides orientation and project maps for this Alternative. Actions within Alternative B include using timber harvesting techniques, prescribed fire, and snag creation methods to approximate stand structures resulting from historic high severity, stand-replacement fires and partial-stand replacement fires on 155 acres. The treatments would retain some overstory green trees and abundant standing and down dead woody material.

Prescribed burning is proposed on 92 acres to approximate the effects of historic low severity fires. An extensive landscape and stand-level monitoring strategy is in place to evaluate the effects of these actions. Monitoring results would be incorporated in an adaptive management process.

Approximately 11.4 miles of existing permanent roads will receive maintenance to facilitate access for logging that includes resurfacing, culvert replacement, hazard tree removal, and roadside brushing and ditching. These roads are all currently open and expected to have continued use in the future for a variety of uses. The 1500, 1516, and 1517 roads were identified in the Forest Road Analysis (USDA 2003) as Key Forest Roads. Approximately 1 mile of road will be decommissioned or stored to improve watershed conditions. These roads and road segments were not identified as Key Forest Roads in the Forest Road Analysis (USDA 2003). The EA analyzed the effects of implementing this proposal on the human environment.

My decision is based on information in the analysis file, including but not limited to, the environmental assessment, comments from the public and other agencies, and applicable laws and regulations.

Implementation of this project is scheduled for 2003-2005.

REASONS FOR THE DECISION

I have selected Alternative B because it satisfies the primary purpose and need to manage mature timber stands within the project area in a manner that is consistent with the Willamette National Forest Land and Resource Management Plan, as amended by the Northwest Forest Plan in 1994, to provide timber products; to provide sustainable native habitats and ecological processes which support wildlife, fish, and plant species; to meet Aquatic Conservation Objectives; and to respond to issues about the resources within the project area obtained through scoping. It also continues the opportunity to learn from implementing the Blue River Landscape Strategy within the Central Cascades Adaptive Management Area.

BACKGROUND FOR THE DECISION

Central Cascades Adaptive Management Area

The alternatives analyzed in the Trapper EA are located entirely within the Central Cascades Adaptive Management Area, as described in the Northwest Forest Plan Record of Decision (NWFP, USDA USDI 1994, 2001).

The purpose of this Adaptive Management Area (AMA) is to "encourage the development and testing of technical and social approaches to achieving desired ecological, economic, and other social objectives." While the management of areas outside of AMAs, such as matrix and reserve lands, is grounded in a set of prescriptive, region-wide standards and guidelines, AMAs are recognized as areas where innovation, testing, and experimentation are both expected and appropriate. They are places where learning leads to validating or changing how resources are managed.

The following specific objectives for the Central Cascades Adaptive Management Area are listed in the NWFP (pages D12-13):

1. *"Intensive research on ecosystem and landscape processes and its application to forest management in experiments and demonstrations at the stand and watershed level,*
2. *approaches for integrating forest and stream management objectives and implications of natural disturbance regimes, and*
3. *management of young and mature stands to accelerate development of late-successional conditions."*

Blue River Landscape Strategy

The Blue River Landscape Strategy (*BRLS*, USDA 1997, 2002) was developed to respond to direction contained within the NWFP for the Central Cascades Adaptive Management Area. The Strategy consists of a recommended landscape management and watershed restoration plan; an administrative study designed to measure effects on the ground; and a series of analyses of landscape effects over time. The *BRLS* outlined the idea that, over time, a landscape could be developed with a pattern and structure based to some degree on historical disturbance regimes -- particularly fire. To achieve that idea, the strategy recommended a system of no-harvest "reserves" coupled with three distinct landscape areas where timber harvest and fire could be used to alter forested conditions (Figures 3 and 4). The recommended timber harvest will approximate the important aspects of the frequency, severity, and spatial extent of historic fires. The retention of abundant down and standing live and dead woody material will approximate important habitat structures left after a fire. An initial evaluation of this approach indicates several potential benefits (Cissel et. al 1999).

The *BRLS* proposed to "restore" the pattern of the landscape over a period of many decades while meeting the objectives of the NWFP, including providing timber products; sustaining native habitats, species, and ecological processes; and meeting Aquatic Conservation Objectives. Where the landscape pattern is currently highly fragmented from a past "staggered-setting

clearcutting" approach, it would evolve into a landscape with large blocks of old forest with high levels of connectivity. Where it is currently lacking in structure from standing dead and down wood in openings, those elements would be restored.

1. **Existing conditions are far different from historical conditions.** Forest roads, a patchwork of openings from past timber harvest, and a reservoir all influence the current landscape.
2. **Using timber harvest and prescribed fire as disturbance "tools" will produce results different than historical disturbances like fire, landslides, floods, etc.** During harvest, biomass is removed from the forest system in the form of live and dead trees for timber products. At the stand-level during historical natural fires, material that wasn't volatilized by the fire stayed on site and contributed structure to a future forest. At the landscape-level, natural historical fires occasionally occurred at large scales, burning thousands of acres. That level of modification can not be done through timber harvest or prescribed fire because the results would be unacceptable to today's society. Various laws require that native species be maintained, timber produced, and fire suppressed.

The *BRLS* can be found in its entirety at the Cascade Center for Ecosystem Management Web Site at http://fsl.orst.edu/ccem/brls/brls.html.

The Willamette National Forest previously implemented recommendations from the *BRLS* with the Blue River Timber Sale Environmental Assessment (USDA 1997).

The *BRLS* was formally approved as an **Administrative Study** (Forest Service memo on file with the McKenzie River Ranger District, 4/28/98). Revisions to the *BRLS* are expected as new information becomes available and experience is gained while implementing this management approach. This is the foundation of an "adaptive management" approach. Numerous monitoring activities are underway as part of the study. Updates and results of the study can be found on the internet at http://fsl.orst.edu/ccem/brls/brls.html. The *BRLS* was presented to the Regional Interagency Executive Committee in 2001, which resulted in a memo signed by all of the NWFP agency executives. The memo supported continued implementation of recommendations from the *BRLS* (Appendix J).

Legal Description of Project Area: The proposed project area (Figure 1) is located in the Blue River watershed north of Highway 126, near the town of Blue River, Oregon. The legal location is T14S, R5E Sections 34 - 36 and T15S, R5E section 4, W.M., Lane and Linn Counties, Oregon.

THE SELECTED ALTERNATIVE

Alternative B

Areas proposed for using timber harvest, prescribed fire, and snag creation techniques to approximate the structures that resulted from historic stand-replacing and partial stand-replacing fires in Alternative B are displayed below.

Unit	**Acres**	Volume MBF	**Remaining Live Canopy**[1]	**Snags Created/ Retained /acre**[2]	**Under-burn?** [3]	**Logging System**[4]	**Temporary Roads Constructed (feet)**
20-1, 20-2, 20-3	36	1.695	15% -13 ac. 50% -23 ac.	20-1 = 16.9/8.3 20-2 = 2.8 20-3= 16.0	Yes	C--11 ac. H--25 ac.	200’
21-1	27	1.994	15 %	15.4	Yes	H	
21-2	46	2.744	15 %	15.4	Yes	C--20.2ac. H--12ac. G--13.8ac.	300’
21-3	1	0.0236	15 %	15.4	Yes	G	
40-1	39	1.886	15 %	23.7	Yes	C--33 ac. H--2 ac.	900’
Total	**149**	**8.343**					**1400’**

Volume MBF = Millions of Board Feet

[1] *Average across entire stand, including non-harvested retention areas, following timber harvest, prescribed burning, and snag creation.*
[2] *Approximately 240 lineal feet of down woody material will also be retained.*
[3] *Underburning occurs following timber harvest.*
[4] *Logging Systems – H = Helicopter; C = Cable; G = Ground Based*

Road Maintenance and decommissioning associated with Alternative B includes the projects listed below.

Road Maintenance	Miles Maintained	Maintained Roads Access These Activities	Key Forest Road
1500-612	1.40	Units 20-1, 20-2, 20-3 to 1500	No
1500-613	0.20	Units 20-1 to 1500-612	No
1500	3.2	Units 20-1, 20-2, 20-3 1500-612 to jct. W/ 1516	Yes
1517-655	1.05	Unit 21-2 to 1517	No
1516	2.84	Units 21-1, 21-2, 21-3 and 40-1	Yes
1517-560	0.24	Unit 40-1 to 1517	No
1517-565	0.19	Unit 40-1 to 1517-560	No
Road Decommissioning	**Miles Treated**	**Treatment**	**Key Forest Road**
1508-435	0.37	Decommissioned to make it hydrologically stable	No
1508-426	0.5	Water barring, drainage dips, and berming	No
1500-613	0.1	Water barring, re-vegetation, removal of stream crossing fills, berming	No

Additional road work includes:

1. Road 1508-435 (0.37 miles) will be *decommissioned* (for definition see USDA 2003 pg. 63). This will include activities to make it hydrologically stable on the landscape.
2. Road 1508-426 (0.5 miles) will be stored, which includes waterbarring, drain dips, and a berm to close it from vehicle traffic.
3. Unit 21-2 will be logged using a combination of cable, ground, and helicopter systems (Alternative A used only helicopter systems for this unit). This type of logging will be facilitated by building 300 feet of temporary road that will be obliterated following logging.
4. Unit 40-1 will be logged using a combination of cable, ground, and helicopter systems. Compared to Alternative A, this Alternative will use less helicopter and more cable and ground systems. This will be facilitated by building 900 feet of temporary road that will be obliterated following logging.
5. Approximately 0.1 mile of Road 1500-613 will be stored following timber sale use. The storage will include water barring, re-vegetation, removal of stream crossing fills below Unit 20-2, and placement of a berm to close it to vehicle traffic.

Mitigation Measures

A number of mitigation measures accompany Alternative B. Mitigation measures help define the alternatives by describing more specifically how the actions will be accomplished and how the resources will be protected. The following table shows the mitigation measures planned to

protect soil and water, vegetation, Survey and Manage species, non-forest habitats, heritage resources, and wildlife. It also includes operating restrictions, safety measures, and mitigation measures for fire. Though they are not all mentioned here, all applicable Standards and Guidelines from the Willamette Forest Plan (as amended) are also part of Alternative B.

Mitigation Measure	Objective	Location	How
Soil and Water			
Retain trees on localized areas prone to streamside slides	Minimize risk of failure	21-1,2,3	Layout
Full suspension across class III and IV streams in skyline units	Protect water quality, stream bank integrity and channel bed	20-3, 21-2, 40-1	Contract
Construct one water bar for every 200 feet of cable corridors that have bare soils and with slopes less than 40 % along the corridor and two water bars along cable corridors that have bare soils for greater than 100 feet and with slopes greater than 40 % along the corridor.	To reduce the potential of erosion and fine sediment transport	All skyline units	Contract
Road construction and haul on native surface roads will be restricted to dry conditions, generally between July 15 through October 31. Hauling will be restricted when water pools on road surface.	To assure road stability, and limit sedimentation	20-3, 21-2, 40-1	Contract
All ground-based yarding will be restricted to dry conditions. Activities will not occur when water is pooling in skid trails and landings.	To protect site productivity, maintain soil hydrologic characteristic, minimize the potential of soil erosion and transport of fine sediments	All ground-based units	Contract
Use of ground-based equipment should be avoided within 100 feet of all stream channels.	To avoid sedimentation to streams	All ground-based units	Contract
Clean fill (soil or rock free of slash and debris) will be used for new temporary road construction and maintenance.	To assure stable road construction	21-2,40-1	Contract
All native surface roads shall have water bars constructed and shall be stored before seasonal shutdown.	To provide functional drainage and minimize potential road failures		Contract

Mitigation Measure	Objective	Location	How
Skid trails and landings within areas of regeneration harvest with ground-based equipment will be subsoiled. These trails and landings will have water bars constructed where necessary to provide effective drainage and shall be planted with conifers	To re-establish the natural hydrologic pattern and grow trees until the next entry in about 35 years	21-3	Contract
Locate designated skid trails to facilitate drainage following harvest.	To minimize disrupting drainage	21-3	Contract
Place weed-free straw bale sediment traps at class IV and larger streams during winter time haul.	To minimize the potential of soil erosion and transport of fine sediments into streams	Along all haul routes	Contract
Vegetation			
Ramaria stuntzii-fungus will have a 172-foot radius no harvest or ground disturbance buffer. No prescribed fire within buffered site.	To protect site from disturbance and maintain microclimate	21-2	Layout
Nephroma occultum-lichen will have a 172-foot radius no harvest buffer. No prescribed fire within buffered site.	Maintain substrate and microclimate	40-1	Layout
Mechanically remove noxious weeds in landings and along spur roads adjacent to units prior to project implementation.	Reduce the spread of noxious weeds in harvest units and along travel ways	20, 21, 71	Contract or District personnel
Minimize fireline construction; where it is necessary, use hand-construction rather than machine-constructed line.	Reduce the spread of noxious weeds	Entire project area	Fire Plan
All road construction and logging equipment will be pressure washed prior to working on the area.	Reduce the spread of noxious weeds	Entire project area	Contract
A weed free source of rock will be used for all road construction and maintenance.	Reduce the introduction of noxious weeds	Entire project area	Contract
Non-forested sites will be protected with a 50-200' no-disturbance buffer.	Maintain integrity of site	Entire project area	Layout
Heritage Resources			
All known significant heritage sites will be protected from harvest activities. Locate unit boundaries away from heritage resources. If any sites are found during future fieldwork or during activities, contract provisions will be used to protect these new findings until they can be evaluated.	Maintain the integrity of heritage sites	Entire planning area	Layout and contract

Mitigation Measure	Objective	Location	How
Wildlife			
If previously undocumented species of concern are found, project modifications will be made as needed.	Minimize effects to species of concern	Entire planning area	Contract
240 lineal feet (or ≥3 sound trees) per acre of class I-II down woody material will be left in each unit. All existing down logs regardless of decay class will be left.	To provide down wood habitat and emulate effects of residual material following fires	All units with harvest activity	Contract
Snag creation will occur August 1-January 15 (inoculation and girdling) and September 30 - January 15 (blasting). It will not occur during elk rifle season or the first week of deer season (See Appendix G for specifications for retained trees).	To provide snag habitat and emulate effects of residual material following fires	20-1 & 20-3 = 16.9 snags/acre 20-1 w/ 30% canopy retention = 8.3 snags/ acre 20-2 = 2.8 snags/acre 21-1,2,4 = 15.4 snags/acre 40-1 = 23.7 snags/acre	Contract
Operating Restrictions			
Restriction on falling trees, ground-based yarding, and helicopter yarding between January 15 to July 31.	Minimize noise disturbance during nesting season of TES raptors	20-1,2,3 and 40-1	Contract
Restriction on falling hazard trees along haul routes April 1 to August 1.	Protect nesting primary and secondary cavity nesters	Haul Routes	Contract
Safety			
A flight safety plan, traffic management plan, and spill prevention and containment plan will be completed as part of contract preparation for the timber harvest and road work.	To maintain safe operations	Entire Project Area	Contract
Require fire equipment during logging operations.	Reduce risk of human caused fire	All units	Contract

Mitigation Measure	Objective	Location	How
Complete a risk assessment and contingency plan before ignition of prescribed fires.	To reduce the risk of fire escapement	All units	Burn Plan
Develop a prescribed fire safety plan.	Reduce risk to humans	All burn units	Contract Burn Plan
Fire Management			
Follow the Oregon Smoke Management Plan.	To control air pollution	All units	Burn Plan
Consult ODEQ to ensure burning will occur within the daily limit on tonnage of logging slash.	To control air pollution	All units	Burn Plan
Verify burn day upper wind direction and airshed condition at the burn site prior to burning.	To control air pollution	All units	Burn Plan
Follow Oregon Smoke Management Plan which encourages burning in spring when fuel moistures are higher.	To control air pollution	All units	Burn Plan

Riparian Management

The riparian management strategy within the *BRLS* includes a network of large, headwater aquatic refugia coupled with fish-bearing stream aquatic reserves. Intermittent and non-fish bearing perennial streams are not included in the reserve system. Interim riparian reserve boundaries in AMA's and non-AMA watersheds can be changed based on watershed analysis and site-specific analysis. The *BRLS* is an update to the Blue River Watershed Analysis that was complete in 1996. The IDT used the recommendations from the *BRLS* as a starting point, but fine-tuned the method of management for streams in the Trapper planning area based on site-specific analysis. Specific prescriptions for individual streams were based on their location in relation to reserves and their potential to provide high quality fish habitat. Details are provided in the table below.

The *BRLS* reserve system was designed to meet the objectives of the Aquatic Conservation Strategy over time on a landscape basis. Reserves, coupled with recommendations for long periods between harvest, will limit the extent of disturbance in any one decade. The location of retained trees in harvested areas will emphasize a connection between riparian and upland habitats. The *BRLS* meets the intent of the NWFP standards and guidelines for riparian reserves (as required by USDA USDI May 2000) by providing protection of watershed and riparian processes. Additional detail on the riparian management strategy and its underlying assumptions can be found in Appendix A of the Trapper EA and in the *BRLS* on the web at http://fsl.orst.edu/ccem/brls/brls.html.

Harvest Units	Average Canopy Closure Following Harvest, Prescribed Fire, and Snag Creation	Streams in Unit	Prescription near Streams
20-1	15% canopy closure	None	Not applicable
20-2	50% canopy closure	Stream 20A = Class III Stream 20B = Class III	Retain 50% canopy closure the same as the rest of the unit, and retain all bank trees[1]
20-3	15% canopy closure	Stream 20A = Class III Stream 20B = Class III Stream 20C = Class III	20A: Retain all bank trees and retain 30% canopy closure within ½ potential tree height (86') of the active channel. 20B: Retain all bank trees and leave 15% canopy closure. 20C: No harvest within ½ potential tree height (86') of active channel.
21-1	15% canopy closure	Seep	Retain trees within 25' of seep.
21-2	15% canopy closure	Stream 21F = Class IV	Retain all bank trees and leave the same canopy closure as rest of unit (15%); limit disturbance; avoid ground-based logging within 100' of channel
21-3	15% canopy closure	None	None
40-1	15% canopy closure	Stream 40A = Class IV Stream 40B = Class III	Retain all bank trees and leave the same canopy closure as rest of unit (15%).
Prescribed Fire Units:			
26	Understory Burn	Stream 26A = Class IV Stream 26B = Class III Stream 26C = Class IV	Understory burn through creeks. Avoid installing control lines w/ground-based equipment w/in 100' of all streams.
71	Understory Burn	Stream 71A, B, C, D = Class IV	Understory Burn through creeks. Avoid installing control lines w/ground-based equipment w/in 100' of all streams.

1 Bank Trees = Trees that have the potential to provide stability to the stream bank through their root structure, usually all trees within 25'.

OTHER ALTERNATIVES CONSIDERED

Alternative A

Alternative A implements several of the actions outlined in Alternative B, with the following exceptions:

1. Road 1508-435 (0.37 miles) would not be decommissioned to make it hydrologically stable on the landscape.
2. Road 1508-426 (0.5 miles) would not be stored with activities such as berming to close it from vehicle traffic.
3. Unit 21-2 would be logged using helicopter systems only -- compared to Alternative B which uses a combination of cable, ground, and helicopter systems. An additional 300 feet of temporary road would not be necessary to facilitate the helicopter logging.
4. Unit 40-1 would be logged using more helicopter than in Alternative B. An additional 900 feet of temporary road would not be necessary to facilitate the helicopter logging.
5. Approximately 0.1 mile of Road 1500-613 would not be stored following timber sale use. Water barring, re-vegetation, removal of stream crossing fills below Unit 20-2, and placement of a berm to close it to vehicle traffic would not occur.

Alternative A meets the purpose and need to manage mature timber stands within the project area in a manner that is consistent with the Willamette National Forest Land and Resource Management Plan, as amended by the Northwest Forest Plan in 1994, to provide timber products; to provide sustainable native habitats and ecological processes which support wildlife, fish, and plant species; and to meet Aquatic Conservation Objectives. It is less responsive to the economic and water quality issues that were identified during scoping.

Alternative C – No Action

Alternative C -- No-Action, would not implement recommendations from the *BRLS*. No timber harvest or project-related road maintenance would occur; no road construction, prescribed burning, or monitoring would occur, and on-going studies designed to meet the intent of the AMA for adaptive learning would be interrupted. The no-action alternative, required by the National Environmental Policy Act (NEPA), provides a basis for describing the environmental affects of the proposed action.

The No Action Alternative does not meet the purpose and need to manage mature timber stands within the project area in a manner that is consistent with the Willamette National Forest Land and Resource Management Plan, as amended by the Northwest Forest Plan in 1994, to provide timber products; to provide sustainable native habitats and ecological processes which support wildlife, fish, and plant species; to meet Aquatic Conservation Objectives; and to respond to issues about the resources within the project area obtained through scoping. It also would disrupt an opportunity to learn from implementing the Blue River Landscape Strategy within the Central Cascades Adaptive Management Area.

SCOPING AND PUBLIC INVOLVEMENT

The Trapper Project was initiated in 1998 as part of the Wolfmann DEIS. Field trips and mailings occurred over a 2-year period to gain feedback on that Draft. The Trapper EA, a modified-subset of Wolfmann proposed actions, was listed in the spring 2002 issue of the Willamette Forest Focus--the quarterly schedule of proposed actions (SOPA) for the Willamette National Forest. The project has since appeared in the Forest Focus through the current issue (Winter 2002).

In August 2002, letters were sent seeking comment from the Tribal Council and Cultural Resource Coordinators of the Confederated Tribes of Warm Springs, Confederated Tribes of the Siletz Indians and the Confederated Tribes of the Grand Ronde. Letters were also sent to interested parties on the McKenzie River Ranger District mailing list.

One letter was received in response to scoping. Oregon Natural Resources Council Action and Oregon Natural Resources Council Fund supplemented original scoping letters to Wolfmann. Issues raised included roads and road building, roadless/wilderness areas, old growth, fish and wildlife, lynx, and water quality.

Comments to the EA were received from ONRC during the 30-day comment period, which ended April 30, 2003. A responses to those comments is attached in Appendix A.

Significant Issues

Three significant issues were considered to have a direct influence on the decision. Alternative B responds to the following significant issues as indicated.

1. Learning and the Adaptive Management Area (Significant Issue)

Because this project lies in an Adaptive Management Area, its location requires that any actions include the components for learning. Two key components facilitate successful learning:

1) Monitoring efforts must be in place. This should include the identification up-front of key questions that, when answered, can benefit future management decisions.
2) A mechanism should be in place that feeds new information back into an adaptive management framework.

Alternative B addresses the issue of Learning and Adaptive Management by including an extensive monitoring effort. The BRLS was approved as an administrative study, which provides a framework and support for testing methods in this area. The monitoring plan includes long-term, multi-scale monitoring to evaluate effectiveness. Monitoring of previous projects (Blue River Face Timber Sale and North Fork Quartz Timber Sale) that followed BRLS recommendations has already been initiated. Pre-treatment data has already been gathered for the Trapper area for amphibians, trees, vascular plants, lichens, stream channel morphology, and stream temperature. Numerous other on-going monitoring projects are occurring in the adjacent H.J. Andrews Experimental Forest. The varying scales of monitoring for the BRLS

were shown in Table 2-4 of the EA, and Appendix F of the EA displayed the types of monitoring questions being addressed.

A critical aspect of projects that result from the BRLS, such as Alternative B of the Trapper Project, is the emphasis on adaptive management. The Trapper Project lies in an Adaptive Management Area, and the monitoring questions are designed to feed into an adaptive management model (http://fsl.orst.edu/ccem/brls/brls.html). The adaptive management model followed in this study consists of three phases. In the first phase, new information is assessed to determine its potential relevance to the landscape management and watershed restoration strategy. In the second phase, these findings are evaluated to determine their significance and potential implications. Recommendations for change are identified. In the third phase, adjustments to the BRLS would be made based on the information produced from the preceding phases, and any other source of new information.

2. Water Quality/Aquatic Resources (Significant Issue)

Landslide and debris torrents are natural disturbances on this landscape. However, timber harvest on unstable earthflow terrain and slopes could increase the risk of landslides and debris torrents following harvest. If a failure did occur, it could deposit sediment into streams, causing increased turbidity and/or imbeddedness that could adversely affect water quality, fish and other aquatic habitat of Blue River and its tributaries. Deposition of coarse sediment may also have positive affects when combined with inputs of large wood. Streams use these materials to create complex habitat for fish and other aquatic species. Opportunities for road restoration that could eliminate existing sediment sources were identified in the Road Restoration component of the *BRLS*.

Removal of forest canopy cover in the rain-on-snow zone may adversely affect peak stream flows that could affect stream channel conditions.

The *BRLS* did not recommend "no-harvest reserves" on non-fish bearing perennial and intermittent streams in the project area. However, it does include numerous prescriptive guidelines to maintain watershed processes. Timber harvest in riparian areas could potentially increase stream temperatures or bank instability and potentially affect water quality. Timber harvest within these areas may also enhance stand structure that will result in increases in shade, large wood production, and an improvement of habitat for aquatic and riparian species.

Alternative B addresses soil disturbance concerns through mitigation measures:

- *Mitigation measures including deep ripping, surface scarification, and construction of water bars will minimize the flow of water over compacted and disturbed surfaces. These mechanical treatments are designed to control all but the most severe storm flows on these sites until the vegetation can establish itself.*
- *Re-vegetation with native plant species and planting trees on disturbed sites will facilitate the restoration of ground-covering vegetation within 2 to 3 years.*
- *Ground-covering vegetation is conserved in streamside-areas by prohibiting the use of ground-based equipment within 100 feet of class IV and larger streams.*

Alternative B addresses mass-wasting and sediment transport aspects of this issue by conducting road maintenance that will result in a cumulative reduction of the risk of road-related mass failures. Maintaining and restoring ditch lines and drainage features and upgrading culverts will reduce the likelihood of fill saturation that can lead to failure. Removal of unstable fill material will also reduce the likelihood of failure. Alternative B also decommissions one mile of road, which will reduce the sediment transport system associated with the road network.

Stream temperature concerns are addressed in Alternative B through the development of site-*specific stream prescriptions for all perennial streams that maintain substantive contributing flows to high value downstream habitat. Implementation of these prescriptions maintains existing water temperatures within these streams, as well as in the high value downstream reaches. All other streams in the units proposed for harvest, including intermittent streams and very small perennial streams that flow discontinuously above ground, will be managed with retention ranging from 15-50% canopy closure. Water temperature will be maintained in these streams even with this level of harvest because these intermittent streams do not flow during the season when elevated stream temperatures occur. The small perennial streams that have no additional shade protection prescribed are heavily influenced by the cooling effects of ground water, and do not provide substantial flows to down-stream reaches of concern. These streams are being specifically monitored for impacts to temperature under the BRLS Administrative Study.*

Peak flow impact analysis indicates Alternative B maintains the landscape above threshold values identified in the Forest Plan.

Issues related to large wood availability/delivery were analyzed, and there could be indirect effects to fish-bearing streams from interception of the supply of large wood that could migrate to the downstream fish-{ XE "fish" }bearing reaches. These effects are difficult to predict and measure since the events that mobilize large wood are also difficult to predict. These indirect effects are not expected to be adverse because areas with potential to provide large woody debris inputs to riparian habitat are protected in no-harvest buffers on earthflow terrain, and on landslide prone terrain, at least 50% canopy is retained to provide large woody material in the future. The assumption that this is adequate is being monitored in the BRLS Administrative Study.

3. Logging Economics (Significant Issue)

Logging systems vary in their operational expense. In general, helicopter logging is more expensive to accomplish per thousand board foot of timber than ground-based or skyline harvesting. Logging using ground-based or skyline operations may require the building of roads to support the operation.

Alternative B addresses the issue of logging economics by proposing to minimize the amount of expensive helicopter logging. To facilitate ground-based activity, more temporary road will be constructed than proposed in Alternative A.

Other Issues

The following issues did not have a direct influence on the decision and were dismissed as significant for the reasons that follow the issue statements.

4. Vegetative Pattern and Composition

Forest ecosystems are dynamic: they change when humans disturb them, and they change when humans eliminate disturbance (Agee 2002). Introduction of disturbance through prescribed fire or timber harvest may alter the pattern of early and older forests at the landscape-level, and it may alter forest components such as species' composition, stand layers, snag levels, and large down wood at the stand-level. These impacts may vary in the short and long-term.

Timber harvest and prescribed fire proposed in the Trapper Project follow recommendations from the Blue River Landscape Strategy. Plant species of concern will be protected in all action alternatives, and woody material will be retained at levels that meet the intent of the NWFP. *At least 15% of the watershed will be retained in late successional condition. Currently, 52% of the Blue River 5th field watershed is in a late successional condition (USDA USDI, Late Successional 15% Analysis, 1999)*

5. Threatened Northern Spotted Owl

Activities that alter or remove older-forest habitats may affect the northern spotted owl. The degree of the affect varies by the proximity of the action to known nest sites and the amount of habitat that will remain within a home range. Long-term landscape management strategies can impact the effectiveness of the arrangement of spotted owl habitat on the landscape.

Surveys of the proposed project area have documented the presence of spotted owls and their habitat. Consultation with the USFWS has resulted in a "may affect, but not likely to adversely affect" determination. All applicable protection measures from the consultation will be included in the decision.

6. Heritage Resources

Harvest and other ground-disturbing activities could potentially affect heritage resources.

Surveys of the proposed project area have been completed. Archaeological evidence was found. Consultation with SHPO via the Forest Specialist has resulted in a finding of "No Effect" to significant heritage resources. Boundaries were adjusted so that significant heritage resources are safely outside of any proposed ground disturbance areas. Any newly-discovered cultural resource materials found during the course of project implementation will be evaluated for significance by the Zone Archaeologist.

7. Prescribed Burning and Fuels

Prescribed burning may produce levels of smoke that may negatively impact the health of people or diminish visual qualities of the airshed. Timber harvest may result in increased fuel loads that may change the risks associated with natural fires.

The use of fire will follow regional standards for thresholds in Class I airsheds. All proposed actions that generate fuels will be followed by the application of prescribed fire to reduce fuel loads. Targeted levels will be those outlined in the Willamette Forest Plan.

8. Threatened, Endangered, and Sensitive Wildlife; Migratory Landbirds; Management Indicator Species; Survey and Manage; and Botanical Species of Concern

Activities that remove or degrade forest habitats or create noise above ambient levels may impact a variety of wildlife and plant species.

All proposed actions that remove or degrade forested habitat will follow conservation and protection guidelines provided by the Willamette National Forest Plan, as amended (USDA USDI 1994 and 2001). Activities that generate noise above ambient levels near nest sites of threatened species will be seasonally restricted following USFWS terms and conditions.

9. Inventoried Roadless Areas, Unroaded Areas, and Wilderness Areas

Activities that alter forest habitats may impact the character of roadless or wilderness areas.

All proposed actions occur outside of Congressionally designated wilderness areas or Inventoried Roadless Areas as described in the WNF LMP. Other unroaded areas with potential for unique characteristics were identified during the January 2003 Willamette National Forest Road Analysis Report (USDA 2003, Map #4). None of the unroaded areas and no other places with potential for unique characteristics were identified within the Trapper planning area.

APPLICABLE LAWS AND REGULATIONS:

Federal Laws:

The Preservation of Antiquities Act, June 1906 and National Historic Preservation Act, October 1966 -- Surveys of the proposed project area have been completed. Archaeological evidence was found. Consultation with SHPO via the Forest Specialist has resulted in a finding of "No Effect" to significant heritage resources.

The National Environmental Policy Act (NEPA), 1969 -- NEPA establishes the format and content requirements of environmental analysis and documentation. Preparation of the Trapper Project EA is in full compliance with these requirements.

The Endangered Species Act (ESA), December 1973 – The ESA establishes a policy that all federal agencies will seek to conserve endangered and threatened species of fish, wildlife and plants. Biological Evaluations for plants, wildlife, and fish have been prepared, which describes possible effects of the proposed action on sensitive, and other species of concern that may be in the Trapper Project area.

The National Forest Management Act (NFMA), 1976 – The alternatives were developed to be in full compliance with NFMA through compliance with the Amended Willamette National Forest Land and Resource Management Plan (US Forest Service, 1990).

Clean Air Act Amendments, 1977 – The alternatives are designed to meet the National Ambient Air quality standards through avoidance of practices that degrade air quality below health and visibility standards.

The Clean Water Act, 1987 -- The alternatives meet and conform to the Clean Water Act, Amended 1987. This act establishes a non-degradation policy for all federally proposed projects. The selected alternative is not likely to degrade water quality below standards set by the State of Oregon. This will be accomplished through planning, application and monitoring of Best Management Practices (BMPs).

State Laws:

Oregon State Best Management Practices (BMPs) -- State BMPs will be employed to maintain water quality.

The Oregon Smoke Management Plan -- The Oregon State Implementation Plan and the Oregon State Smoke Management Plan will be followed to maintain air quality.

Consultation with the Oregon State Historic Preservation Officer (SHPO) has occurred (see above).

Oregon State Forest Worker Safety Codes, The Oregon Occupational Safety and Health Code for Forest Activities shall be met with implementation of the Alternative B.

Finding of No Significant Impact

Considering site-specific environmental analysis documented in the Trapper Project Environmental Assessment (EA), I have determined that this is not a major Federal action that would significantly (40 CFR 1508.27) affect the quality of the human environment (40 CFR 1508.14); therefore, an environmental impact statement is not warranted. Beneficial and adverse

direct, indirect, and cumulative environmental impacts discussed in the Trapper Project EA have been disclosed within the appropriate context and will have little intensity. This determination is based following factors:

- This action will have neither significant beneficial nor adverse effects. Sufficient information has been disclosed in the analysis to make a reasoned choice between alternatives and no significant impacts to the human environment have been identified. Information available from past actions of similar context and intensity in this area also indicate that no significant impacts would be anticipated.

- This action will not significantly affect public health or safety. All proposed activities are in compliance with relevant Federal, State, and local laws, regulations, and requirements designed for the protection of the environment. The proposed action will meet or exceed Oregon State water and air quality standards and is consistent with the Oregon Smoke Management Plan.

- There will be no significant adverse impacts to historic or cultural resources, park lands, wetlands, flood plains, prime farm land, range lands, wild and scenic rivers. No significant effects to any ecologically sensitive or critical areas are anticipated.

- The decision will not likely cause highly controversial environmental effects because controversy in this context refers to cases where there is a substantial dispute as to the size, nature or effect of the actions, rather than opposition to its adoption. There have been no substantial disputes as to the size, nature, or effect of this action.

- This action is consistent with the goals, objectives, and direction contained in the 1990 Willamette National Forest Land and Resource Management Plan, as amended (1994, 2001), and is consistent with the Aquatic Conservation Strategy as outlined in the Northwest Forest Plan Record of Decision, April 1994. Implementation of this project will result in no significant adverse affect to Aquatic Conservation Strategy objectives.

- There will be no expected significant irreversible or irretrievable commitment of resources. There will be no significant direct, indirect, or cumulative effects to soil, water, fisheries, or wildlife resources or other components of the environment. The analysis of cumulative effects considered past, present, and reasonably foreseeable future actions on National Forest lands.

- Biological Evaluations (BEs) for Proposed, Endangered, Threatened, and Sensitive wildlife, fish, and botanical species have been completed and are located in the appendix of the environmental assessment. The BEs indicated that the proposed project will have no significant effects or adverse impacts to any species or their habitats.

- This action will not significantly affect aquatic systems, recreational fisheries, or designated Essential Fish Habitat. The anticipated effects are based on sound aquatic conservation and restoration principles for the benefit of recreational fisheries, as directed by Executive Order #12962. No further consultation under the Magnuson-Stevens Fishery Conservation and Management Act is required.

- This Federal action has been conducted in a manner that does not exclude persons (including populations) from participation in, deny persons (including populations) the benefits of, or subject persons (including populations) to discrimination because of their race, color, or national origin, as directed by Executive Order #12898.

- The proposed action is consistent with the National Forest Management Act.

ADMINISTRATIVE REVIEW OR APPEAL

This decision will be subject to appeal pursuant to Forest Service Regulations at 36 CFR 215.8(a). Though no comments were received within the 30-day comment period (which ended April 30, 2003), comments were received from a party with a long-standing interest in District activities on May 2, 2003. For more information about this project you may contact IDT Leader Cheryl Friesen at the McKenzie River Ranger District, McKenzie Bridge, OR, at 541-822-3381.

Responsible Official:_____ Date:_____
JOHN ALLEN
District Ranger

Appendix A: Responses to EA Comments

Trapper Project
Environmental Assessment

Issue: AMA Objectives

Even though these projects are planned in an AMA…you note that the only objective specific to management in the CCAMA is to manage "young and mature stands to accelerate development of late-successional characteristics." These stands are already late successional. (ONRC – 1)

Response: The Trapper project was also designed to meet two other objectives listed in the NWFP on pages D12-13, which were repeated in the EA on page 1. These include 1) Intensive research on ecosystem and landscape processes and its application to forest management in experiments and demonstrations at the stand and watershed level; and 2) Approaches for integrating forest and stream management objectives and implications from natural disturbance regimes. These objectives and several related assumptions being tested with the Trapper project are provided in the BRLS and in the Trapper EA.

Issue: Impacts to Late Successional Forest

This project will remove older forest underrepresented in the Cascades. (ONRC –2)

Response: Analysis was conducted to ensure that the Alternatives in the Trapper project maintained the required amount of late successional forest at a 5th field watershed level. The results indicated that the Blue River watershed is about 52% late successional forest, exceeding the 15% threshold requirement in the NWFP.

Issue: Cumulative Effects

The Forest Service's use of Aggregate Recovery Percentage (ARP) as a model of hydrological recovery may not be adequate. The ARP system seems to ignore the quality of the recovery. The USFS fails to consider whether it would be better to wait a little longer to achieve higher quality of recovery. If the USFS were to leave more of the larger trees in these stands, then the quality of recovery would be better because the large trees provide deep roots, future large down wood, more roughness for soil surface and stream channel, etc. (ONRC-3)

Response: The use of the Aggregate Recovery Percentage (ARP) model to evaluate the potential risk that proposed management activities will have a cumulative effect on the timing and size of peak flows is required by the Willamette National Forest Land and Resource Management Plan (Forest Plan). Specifically, Forest-wide Standard 93 on Page IV-62 of the Forest Plan specifies that the analysis will be done, and Appendix E of the Forest Plan details the

ARP methodology to be used. Consequently, the decision to use the ARP methodology was already determined by a higher level decision.

Regarding the included comments from Beschta et. al. 1995, Section 7.11.11, we agree that the ARP methodology does not address items other than peak flow response resulting from canopy manipulation. However, the Trapper Environmental Assessment utilizes the ARP methodology only in its analysis of the potential effects on water quantity and peak flows, and subsequent indirect effects on channel processes on Pages 55 and 56. Separate discussions of sediment, temperature, and large wood are provided under the heading of Water Quality/Aquatic Resources on Pages 52-60. The ARP methodology, as required by the Forest Plan does account for natural variability between basins. Appendix E of the Forest Plan details varying recommended midpoint ARP values by sub-drainage, based on sensitivity to peak flow, stability, and the beneficial uses of the water resources in those sub-drainages. And finally, the Willamette National Forest has an ongoing program of Forest Plan Monitoring to evaluate the effectiveness of its Standards and Guidelines in meeting resource objectives.

Regarding the included comments from Beschta et. al. 1995, Section 7.12(5), all sub-drainages were evaluated during the forest planning process, and only those sub-drainages that included no terrain within the transient snow zone, did not receive recommended levels of harvest. However, lack of a recommended ARP Mid-point value for these sub-drainages does not relieve these areas from the requirements of Forest-wide Standards 79 – 114 on Pages IV-61 through IV-64 of the Forest Plan to provide sound management of water resources. At any rate, all four sub-drainages that contain portions of the Trapper Project did have Midpoint ARP recommendations in the Forest Plan, and this project was evaluated against them as required. The results can be found on Page 56 of the Trapper Environmental Assessment.

The NMFS criticized the use of Best Management Practices and mitigation as poor surrogates for addressing cumulative watershed effects because BMP's are addressed to individual actions and fail to do anything to limit the totality of individual actions within watershed. (ONRC-4)

Response: The use of Best Management Practices (BMP's) to limit undesired effects of management activities on water resources is required by the Willamette National Forest Land and Resource Management Plan (Forest Plan), specifically by Forest-wide Standards FW-88, FW-90, and FW-91 on Pages IV-61 and IV-62 of the Forest Plan.

These practices are certainly intended to avoid or minimize the undesirable effects of the Trapper Project on soil and water resources. By doing so, they will limit the extent of potential cumulative effects, but at no point does the Trapper Environmental Assessment claim that a cumulative effects analysis is not required because BMP's were employed to minimize or eliminate potential adverse effects or that implementation of site specific BMP's would preclude the possibility of cumulative effects.

The incorporated reference to Reid 1993 is taken out of context as the quote was extracted from a discussion of the evolution of the definition of the term "cumulative watershed effect" and represents a historical perspective. It is not intended as an indictment of the use of BMP's to minimize or avoid adverse effects on soil and water resources.

And finally, it appears that the NMFS Position Paper on the Oregon Forest Practices Act, May 13, 1996 that is the source reference for this comment uses the term BMP to refer to any action, rather than the specific mitigative context under which it is applied in the Trapper Project.

Issue: Threatened and Endangered Species

The 1999 Biological Opinion for FY99 Habitat Modification projects recommends minimizing "rate of harvest of suitable spotted owl within the matrix and critical habitat (sic)." Just because this project has been found not to result in jeopardy for the local population of owls, it does not mean the USFS has met its obligations. (ONRC-5)

Response: At this time, the USFS can continue to design projects that remove spotted owl habitat as long as the activity is reviewed by the USFWS in a Biological Assessment and a Biological Opinion is rendered.

The USFS should withdraw this logging proposal until they have consulted the public and fully complied with NEPA and NFMA with respect to the Lynx Conservation Assessment and Strategy and the regional lynx mapping criteria. Any Forest Service assertion that this area is not lynx habitat is suspect until these legal matters are resolved. (ONRC-6)

Response: Based on references cited in the Biological Evaluation for this project, the area does not provide habitat for the lynx. The biologist made this determination based on several references, which included but was not limited to the FS regional mapping. References used to support that determination included:

Ruggiero, L.F., K.B. Aubry, S.W. Buskirk, L.J. Lyon, and W.J. Zielinski, tech. eds. 1994. The scientific basis for conserving forest carnivores: American marten, fisher, lynx and wolverine the in the western United States. Gen. Tech. Rep. RM-254. Ft. Collins, CO: USDA, Forest Service, Rocky Mountain Forest and Range Experiment Station. 184 p.

Zielinski W. J., and T. E. Kucera, eds. 1996. American marten, fisher, lynx, and wolverine: survey methods for their detection. USDA For. Serv., Pac. Southwest Res. Stn., Gen. Tech. Rep. PSW-GTR-157. 163pp.

Verts, B.J., and Carraway, L.N. 1998. Land Mammals of Oregon. University of California Press, *Berkeley. 668 pp.*

USDA Forest Service, Internal letter: Wolverine, Lynx and Fisher Habitat and Distribution Maps, Draft Hierarchical Approach and Draft Conservation Strategies. September 14, 1994.

Csuti, B. et. al. 1997. Atlas of Oregon Wildlife. Oregon State University Press, Corvallis. 492 pp.

Issue: Aquatic Conservation Strategy

Logging will violate the NWFP ACS by removing mature and large trees from the forest, thereby depriving riparian areas of needed large wood and retarding attainment of ACS objectives. Project-related sediment asociated with the activity will also violate ACS. The USFS riparian reserves are applied arbitrarily to one side of the streams and cut the distance of the riparian reserves in half. These actions violate ACS. In ACSO discussions, short term impacts are ignored and long term benefits promoted.

Further fragmentation clearly violates ACSO #1 despite the suggestion that fragmentation is avoided by logging some of the last older forests in watersheds already highly fragmented. Cutting stands that likely provide connectivity in riparian and upland forest violates ACSO #2. Modifying riparian reserve boundaries, compacting soil, and opening up the canopy does not maintain nor restore water quality, as required by ACSO #3. (ONRC-7)

Response: The Aquatic Conservation Strategy Evaluation in Appendix A of the Trapper Environmental Assessment describes in great detail a strategy for managing aquatic resources on a landscape basis that is very different from the default standards for managing riparian reserves and aquatic habitat in the Northwest Forest Plan (NWFP). This evaluation also includes a discussion of the management basis for this different approach, stemming from the role of Adaptive Management Areas in providing an ability to test assumptions made in the NWFP, and an opportunity to evaluate alternative methods of meeting resource goals and objectives.

This alternative strategy for managing aquatic resources is a component of the Blue River Landscape Project, which is designed to implement an overall landscape management strategy for the Blue River Watershed to meet the specific objectives of the Central Cascades Adaptive Management Area which are discussed on Pages D12 and D13 of the Record of Decision for the Northwest Forest Plan.

The Blue River Landscape Project was reviewed for consistency with the objectives of the Northwest Forest Plan by the agencies party to the plan. In their letter to the Willamette National Forest dated March 14, 2002, they stated that "the Blue River landscape management plan … rests on a sound scientific base and is an excellent opportunity to evaluate an alternative science based management strategy." This letter was included in Appendix J of the Trapper EA.

Issue: Snags

The USFS should acknowledge and discuss the challenges of "managing for decadence." The proposed logging will reduce snag habitat and reduce the disturbance mechanisms of falling snags. Creating new snags to replace those felled for safety reduces the natural diversity in the decay classes represented on a site. (ONRC-8)

Response: The USFS acknowledged the challenge of managing snag and down wood habitat by highlighting these ecological components in the issue "Vegetation Composition and Pattern." Difficulties in estimation and low levels from previous timber harvest were discussed. The EA acknowledged a short-term reduction in existing snags in the areas harvested. Some of the class

II-IV snags may be protected in no-harvest reserves and by marking them for retention when they do not pose safety hazards. In the long-term, the Trapper project will provide significant snag levels. Also, decay class III - V down logs will not be removed with the project, and additional inputs will be felled and left in decay class I-II after harvest, providing decay classes throughout the cycle.

Issue: Red Tree Voles

The FS red tree vole surveys are suspect. (ONRC-9)

Response: The USFS used established red tree vole surveys for this project. The USFS recognizes that these surveys do not cover 100% of the area, and some red tree vole sites may be undocumented.

Issue: Range of Alternatives

The FS should have considered a non-commercial alternative that falls or girdles a few trees, creating some diversity, but leaving the trees in place for snags and down wood. Both action alternatives treat identical acres and produce exactly the same amount of wood fiber. The only difference between them is that Alternative B calls for dramatically more road construction. (ONRC-10)

Response: The purpose and need for the Trapper project included a desire to provide timber products, which is responded to by proposing commercial harvesting. Non-commercial elements are included in both alternatives A and B: fire will be introduced into intact forested stands to introduce disturbance, diversity, and create snag and down wood habitat. Non-commercial habitat improvement projects are occurring in other areas of the District, including meadow enhancement, browse cutback, diversity thinning in young stands, etc. They are covered in separate decision documents that are available for review.

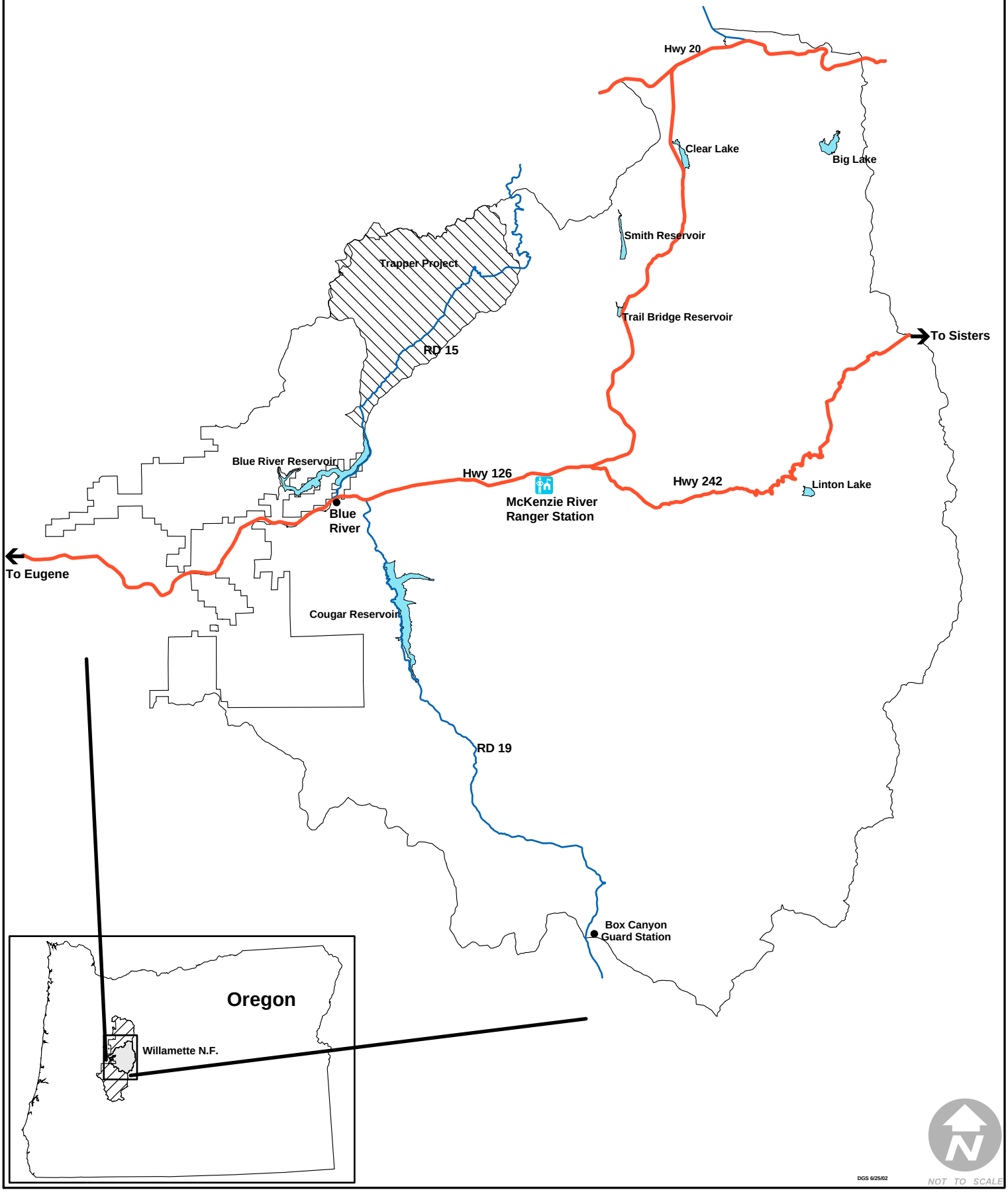
The issues of economics and water quality were both significant drivers in the development of the two alternatives proposed. Alternatives A and B differ in their logging systems and associated costs; miles of temporary road constructed; and miles of road decommissioned for watershed improvement.

Appendix B

Maps of the Trapper Project

Figure 1

Vicinity Map
Trapper Project Environmental Assessment



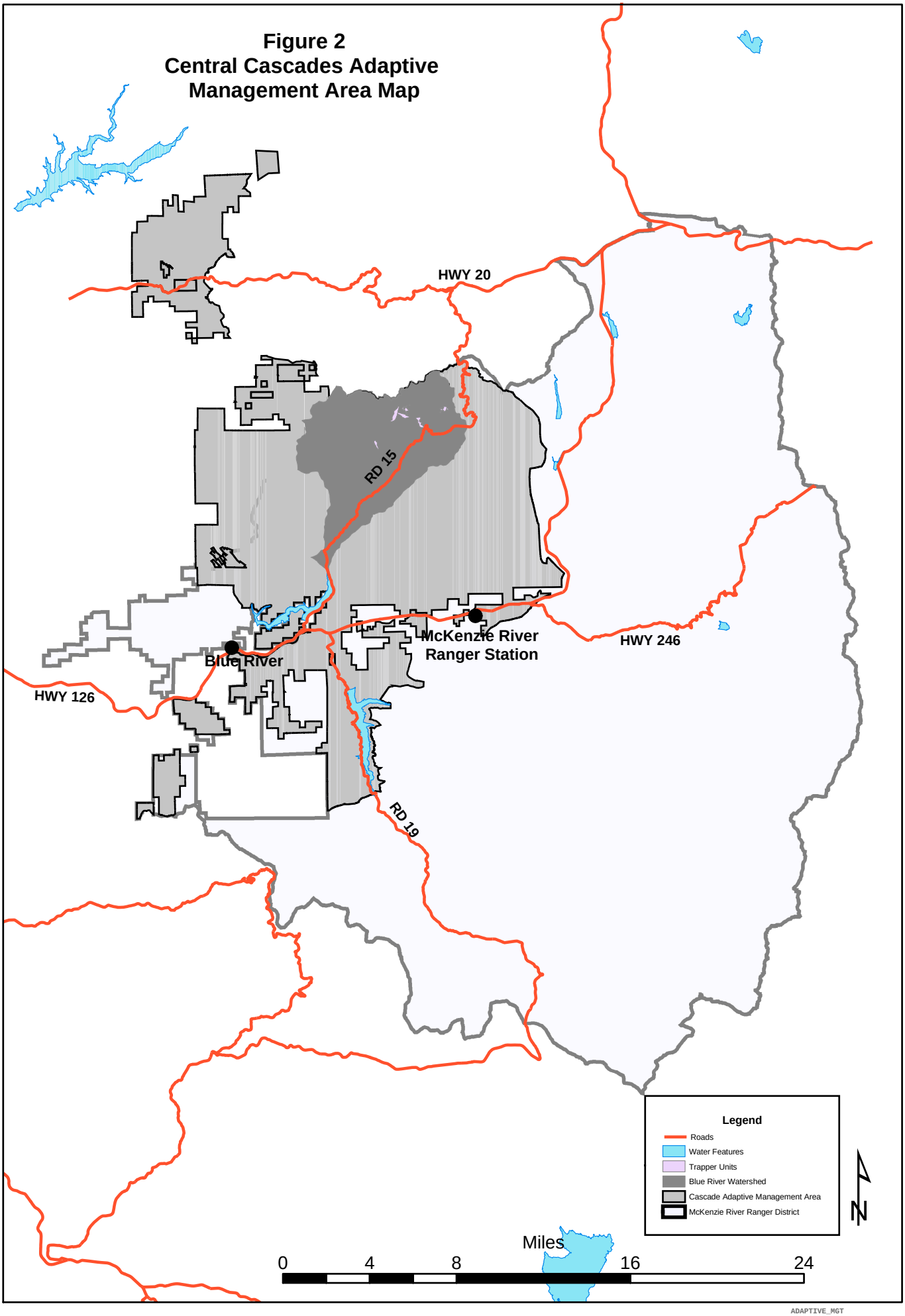
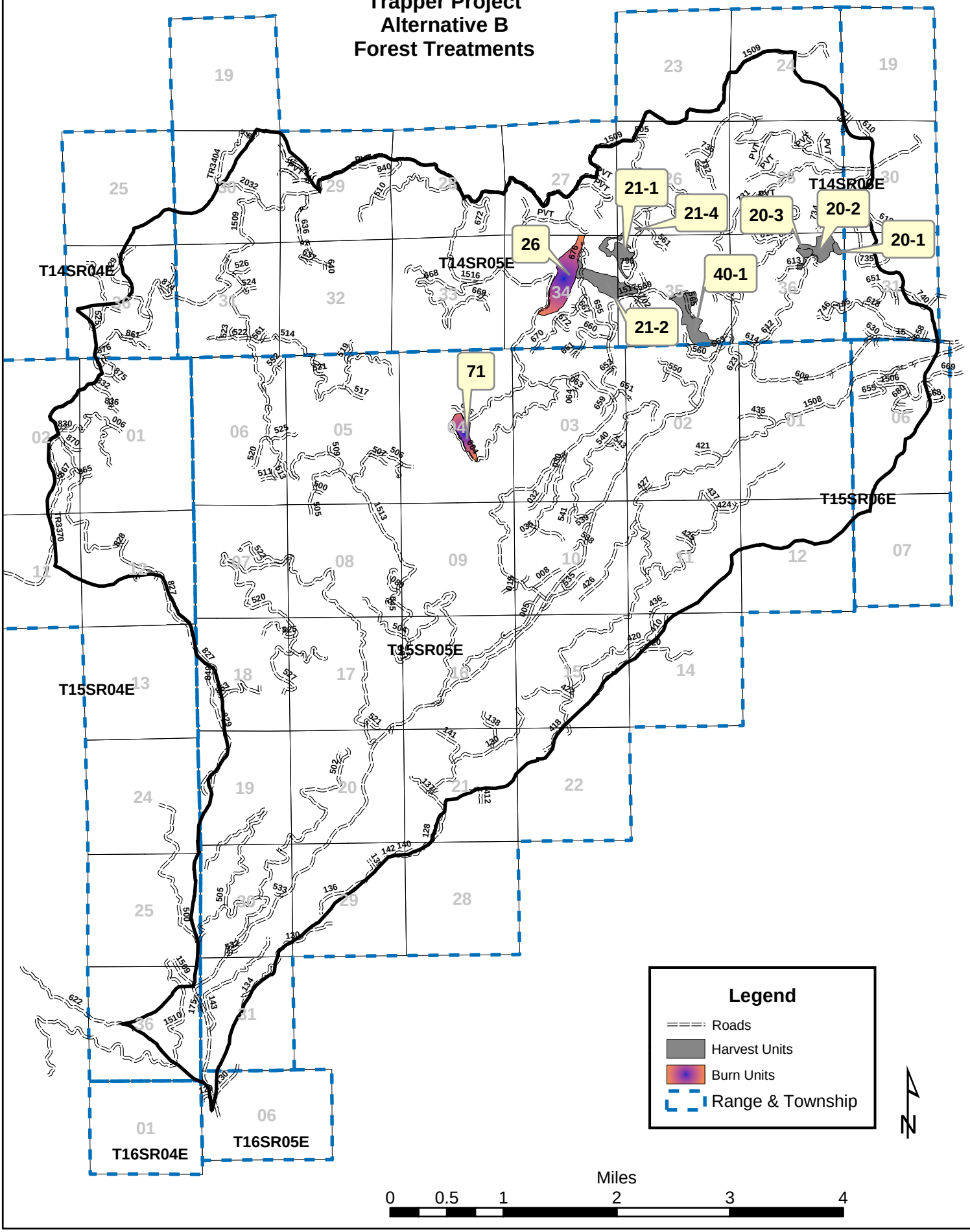


Figure 2
Central Cascades Adaptive
Management Area Map
HWY 20
RD 15
McKenzie River
Ranger Station
Blue River
HWY 246
HWY 126
RD 19
Legend
Roads
Water Features
Trapper Units
Blue River Watershed
Cascade Adaptive Management Area
McKenzie River Ranger District
N
Miles
0
4
8
16
24
ADAPTIVE_MGT

Figure 3
Trapper Project
Alternative B
Forest Treatments



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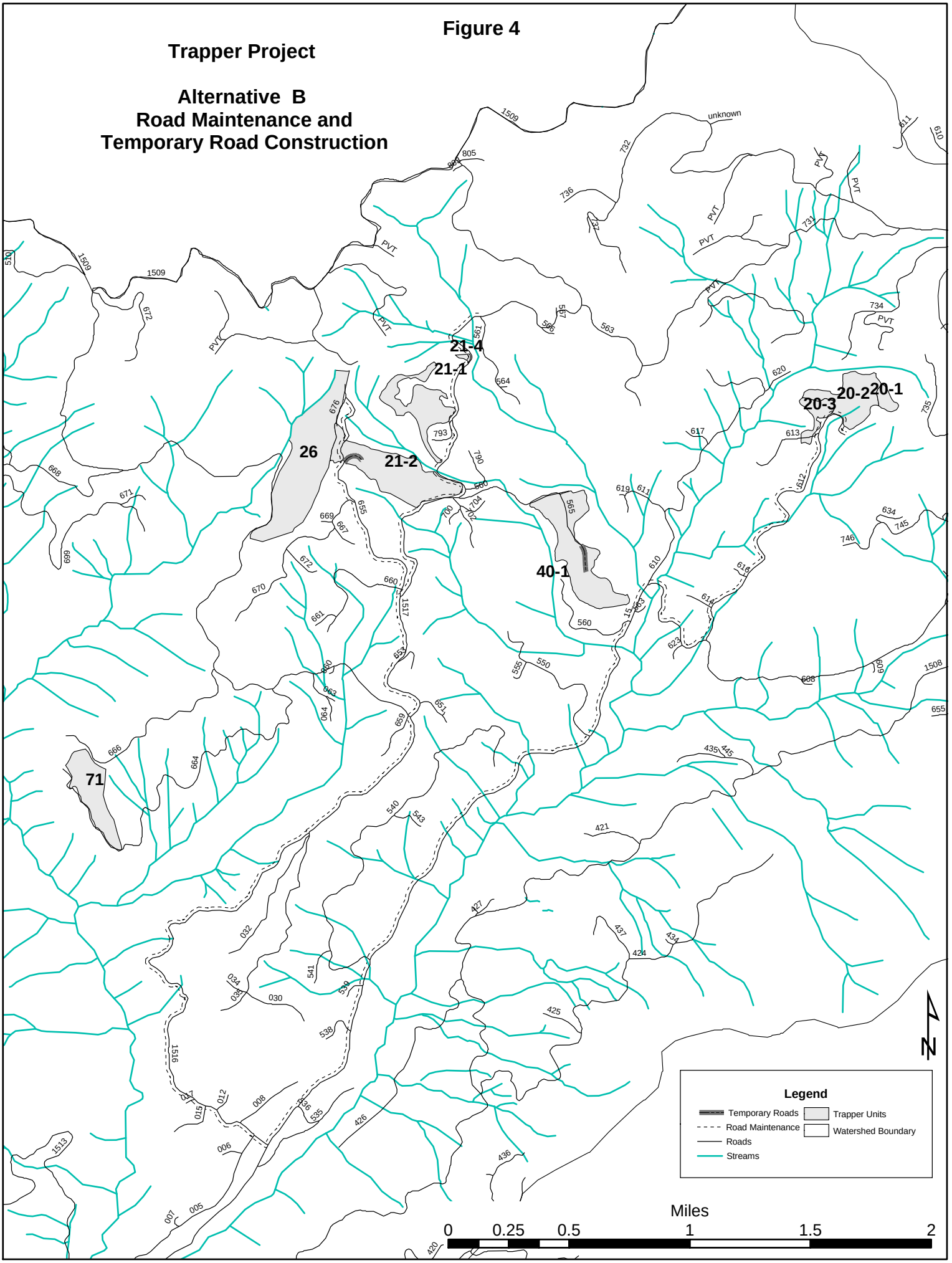
Figure 4
Trapper Project
Alternative B
Road Maintenance and
Temporary Road Construction
21-4
21-1
26
21-2
20-3
20-2
20-1
40-1
71
Legend
Temporary Roads
Road Maintenance
Roads
Streams
Trapper Units
Watershed Boundary
N
Miles
0
0.25
0.5
1
1.5
2

Figure 5

Trapper Project Alternative B Road Storage and Decommissioning