Environmental Assessment

Nineteen Road Salvage
Timber Sale Project

McKenzie River Ranger District
Willamette National Forest

July 2002

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References Cited

U.S.D.A. Forest Service. 1990. Final Environmental Impact Statement, Land and Resource Management Plan, Willamette National Forest.

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Chapter 1
Purpose and Need for Action

Introduction

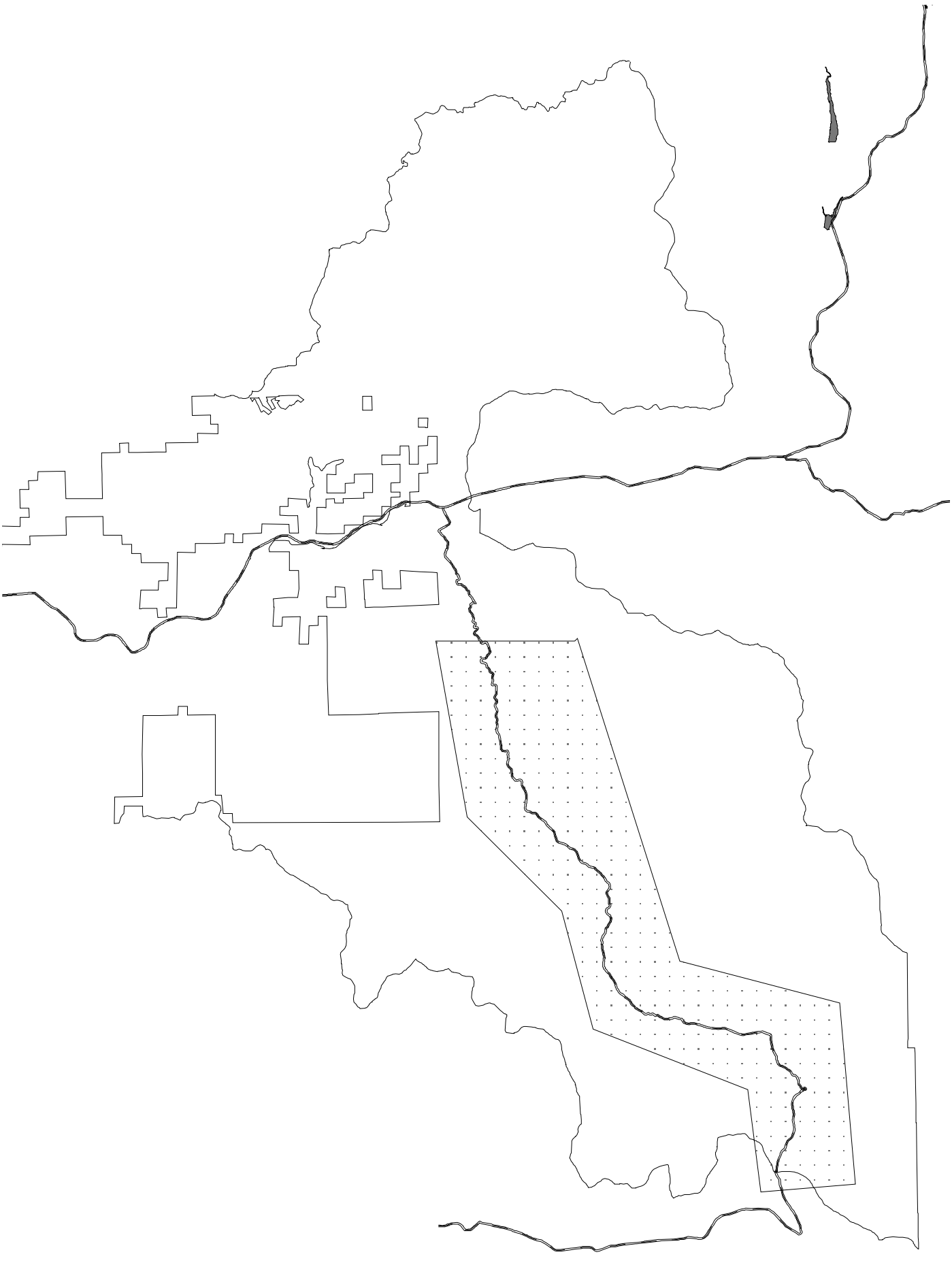
This environmental assessment (EA) is written to fulfill the purposes and requirements of the National Environmental Policy Act (NEPA), as well as meeting policy and procedural requirements of the USDA Forest Service. The purpose of NEPA, its implementing regulations, and Forest Service policy, is to evaluate and disclose the effects of proposed actions on the quality of the human environment. The intent of these procedures is to improve the quality of decision-making by making the process more accessible and transparent to the public.

The Forest Service and the Oregon Department of Transportation periodically inspect State and Forest Highways for potential hazard trees in order to insure safe passage for the public along these roadways. The Nineteen Road Salvage Timber Sale Project analyzes the effects of a proposal to implement the removing of hazard trees along a Forest Highway.

Project Area Description

The Nineteen Road Salvage Timber Sale Project area is located on the McKenzie River Ranger District along Forest Service Road 19 (Aufderheide Drive) between mileposts 32 and 50. Forest Service Road 19 is a through road that connects with State Highways 58 and 126. This area was analyzed in the South Fork Watershed Analysis. The elevation of the area ranges from 1600 feet to 3600 feet. For more detail of the project area please refer to **Appendix A.**

Legal Description: T.16, 17, 18, and 19S; R.5 and 51/2E; Willamette Meridian; Lane County, Oregon (See Figure 1).



Proposed Action

The Nineteen Road Salvage Project proposes to fall hazardous trees adjacent to Forest Service Road 19 and include some of the trees in a salvage timber sale. There are 18 areas with hazard trees that were selected and designated for falling by McKenzie River Ranger District **(See maps in Appendix A)**. **(Tree locations identified in the maps in Appendix A are only general locations**; **they are not to scale)**. The project implementation is proposed for fiscal year 2002.

Approximately 204 trees are designated for falling within the 18 different areas including areas that are within Riparian Reserves. The proposal would include 168 trees in a salvage timber sale that would yield an estimated 200 thousand board feet (MBF). The remaining 36 trees would remain on the site where felled to either contribute to large woody material, or for stream restoration purposes. **(See Appendix B)**.

Trees that would be left on site will contribute to the minimal required amount of 240 lineal feet per acre of trees greater than 20" dbh and greater than 20' minimum piece length to be available in forested areas of the site as specified in the Standards and Guidelines for Management of Habitat for Late-Successional and Old-growth Forest Related Species Within the Range of the Northern Spotted Owl (USDAFS, 1994). Some areas, especially those in riparian reserves, would have more than 240 lineal feet left for down woody material.

Purpose and Need

The District Ranger for McKenzie River Ranger District has determined a need for falling hazardous trees along Forest Service Road 19 (Aufderheide Drive) in order to provide public safety and protection of property. In addition to falling, the removal of some trees is needed to insure that access along the road is maintained. Trees that should be left on site will also need to be determined.

Currently, there are trees located along Forest Service Road 19 that are considered hazardous because they are dead or dying and within striking distance of roadways and turnouts, and they constitute a hazard to the roadways or turnouts by the extent and direction of their lean. Forest Service Road 19 also has areas where large quantities of downed wood is available, however, some areas do not meet the suggested amount of 240 lineal feet per acre of trees greater that 20 inches dbh and 20 feet minimum piece length.

Hazard trees removed from the project area along Forest Service Road 19 would reduce the chances of trees falling into the roadways and turnouts as well as the likelihood for accidents to occur. Trees that are left on site after falling and not included in a timber sale would provide needed large woody material or contribute to stream restoration.

Decision Framework

The District Ranger of the McKenzie River Ranger District will make a decision whether or not to implement a hazard tree removal project based on the interdisciplinary analysis. The project would include a commercial salvage timber sale to offset the cost to the federal government for necessary removal of identified hazard trees in the project area.

The Forest Plan

All actions to satisfy the purpose and need will be consistent with the Willamette National Forest Land and Resource Management Plan as amended by the April 1994 Record of Decision for Amendments to Forest Service and BLM Planning Documents within the Range of the Northern Spotted Owl; and the January 2001 Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (Forest Plan).

The Willamette Forest Plan guides all natural resource management activities and establishes management standards and guidelines for the Willamette National Forest. It describes resource management practices and levels of resource production. The Forest Plan also describes the availability and suitability of lands for resource management.

The proposed actions for this project would occur in the following management areas: 17, Adaptive Management Reserves; 5a, Special Interest Areas; and 11f, Scenic – Retention Foreground. The proposed actions for this project would meet the Management Goals, Desired Future Condition, and Standards and Guidelines for each of the management areas.

Issue Development

Scoping, in the context of Forest Service projects, is the process for determining the issues relating to a proposed action. It includes review of written comments, distribution of information about the project, public meetings, and interdisciplinary (ID) team meetings.

The ID team and responsible official identified ten issues they considered pertinent to the Nineteen Road Salvage Timber Sale Project, two of which are Significant Issues. Significant Issues drive the development of the alternatives and provide criteria for measuring each alternative. The two Significant Issues identified are: Public Safety/ Protection of Property and Economics.

Significant Issues:

Public Safety and Protection of Property

The Forest Service, in cooperation with the Oregon Department of Transportation (ODOT), has an obligation to the public for the maintenance of forests along road corridors. The maintenance of road corridors includes falling, and if necessary, the removal of hazardous trees. If left to fall on their own, hazardous trees may fall into roadways creating a road hazard that may contribute to automobile accidents. Hazardous trees located in areas such as parking lots, turnouts or roadsides have the potential of falling directly on to vehicles. These types of incidents will cause damage to public property and puts the public's safety at risk.

Hazardous trees that could interfere with or jeopardize travel on Forest Service Road 19 have been identified within the project area. Falling the hazardous trees would reduce the risk of injury, death or destruction of property. Once felled, their removal may be required to allow safe passage and continued access on the roadways.

Economics – Forest Products

The Forest Plan identifies an overall goal responding to the socioeconomic effects of management strategies (IV-3). The removal of hazard trees would produce jobs and contribute wood fiber to the local economy. The sale of forest products from this project would help offset the cost of hazard tree cutting and removal, and potentially return revenue to the U.S. Treasury.

Other Issues

Water Quality/Riparian and Aquatic Habitat

The proposed salvage removal of hazard trees could affect aquatic and riparian habitat through decreases in large wood available for input, shade reduction, and increases in sedimentation. This can result in simplification or elimination of habitat and degradation of water quality with respect to elevated stream temperatures and increases in turbidity.

Threatened, Endangered, Sensitive, and Other Species of Concern

The proposed action may adversely affect threatened, endangered, sensitive, and other species of concern through noise disturbance or alteration of habitat. The proposed action may also be beneficial to threatened, endangered, sensitive, and other species through alteration of habitat with an increase in the amount of downed wood available.

Management Indicator Species and Migratory Birds

Land management projects may remove or degrade habitat for Management Indicator Species and migratory birds. They may also improve or create habitat from a stand or landscape-perspective.

Air Quality

The proposed action may include slash piling and burning after timber removal in the project area. The amount, application and timing of slash pile burning could affect air quality and fire hazard. The nearby wilderness area (Three Sisters Wilderness) is a Class I air-shed. The Oregon Visibility Protection Plan includes additional standards for potential impacts to these areas between July 4 and Labor Day.

Recreational Experience and Scenic Quality

The project area receives heavy recreational use including the Cougar Reservoir Recreation Area, various campgrounds, and several hiking trails. Designed criteria to comply with the Forest Plan standards and guidelines for inventoried Recreation Opportunity Spectrum (ROS) class and visual quality objectives (VQO) must be considered.

Placement of wood into the South Fork McKenzie River could impede use by kayakers or other river travel.

In recognition of the river corridor's important scenic value, the Aufderheide drive was designated a National Scenic Byway in 1988. Management activities along the route could potentially affect the scenic quality and recreational experience travelers through the area have come to expect. Salvage activities including residual slash piles, stumps, and cut-faces, may affect visual quality if left along the roadsides. Noise and log truck traffic from the activities may also affect the recreational experience.

Oregon Scenic Waterway

The project area is located along the South Fork McKenzie River. The South Fork is designated an Oregon Scenic Waterway. According to the Eligibility Determination for South Fork McKenzie River, goals of the program include the protection of the free-flowing character of the river for fish, wildlife, and recreation and to protect and enhance scenic aesthetic, natural recreation, scientific, and fish and wildlife values along the scenic waterway (USDAFS, 1992). Management activities within the project area could affect the waterway.

Wild and Scenic River

The South Fork of the McKenzie River has been determined to be eligible for inclusion into the Wild and Scenic Rivers system. It has four attributes that meet the criteria for Outstandingly Remarkable Values (ORV's): scenery, recreation, fish, and prehistoric sites (USDAFS 1994). Falling and salvaging hazardous trees could affect the river's ORV's and special attributes that have provided the area this eligibility.

Heritage Resources

The project area has some known heritage resource sites and contains other areas that could harbor additional undiscovered sites. Salvage activities could potentially affect heritage resources. Federal laws and regulations require that cultural resources be protected either through avoidance or data recovery.

Chapter 2
Description of the Alternatives

The interdisciplinary team developed two alternatives, an Action and No Action alternative. The Alternatives are designed to meet the Purpose and Need as described in Chapter 1 and to address the Significant Issues.

A No Action alternative was developed in order to comply with the National Environmental Policy Act of 1969. The No Action alternative provides the baseline from which effects of other alternatives can be compared and measured.

Legal Requirements

The alternatives for this project were designed to comply with the following federal laws:

- The Preservation of Antiquities Act, June 1906 and National Historic Preservation Act, October 1966.
- The National Environmental Policy Act (NEPA), 1969.
- The Endangered Species Act, December 1973.
- The National Forest Management Act (NFMA), 1976.
- The Clean Water Act, 1982.
- Clean Air Act Amendments, 1977.

Alternative A - No Action

The No Action alternative, Alternative A, would not implement the removal of hazard trees for a timber sale within the project area. This alternative does not meet the purpose and need for removing hazard trees nor does it address the Significant Issues.

Alternative B – Action

Alternative B meets the purpose and need for action by allowing for the falling and salvaging of hazardous trees within the Nineteen Road Salvage Project area. The project would fall approximately 204 dead or dying trees along Forest Service Road 19 located within the 18 Areas.

Area Number	Mile Post	Number of Felled Trees Salvaged	Number of Felled Trees Left
1	32	16	4
2	33	22	6
3	34	5	0
4	35	19	7
5	36	3	0
6	37	23	2
7	38	11	1
8	39	5	3
9	40	20	5
10	41	12	1
11	42	13	2
12	43	5	2
13	44	6	0
14	45	2	0
15	46	0	1
16	47	2	2
17	48	2	0
18	49	2	0

Table 1 : Alternative B Area Descriptions

The trees selected for falling are either dead or dying and are leaning in the direction where if they should fall they would land in public access areas including roadways. Approximately 168 of those trees felled would be removed as part of a timber sale producing about 200 thousand board feet. The other 36 trees, including those that are in Riparian Reserves, will be left where they fall as downed wood to maintain or enhance late-successional or riparian habitat, or for stream restoration **(See Table 1 above)**.

Alternative B addresses both the Significant Issue of Public Safety and Protection of Property as well as the Significant Issue of Economics with the removal of hazard trees through a commercial timber sale.

Implementation Details for Alternative B

If Alternative B is selected, the following guidelines would be implemented:

1. Trees and portions of trees would be retained onsite in Riparian Reserves to provide coarse woody material where assessment of existing levels of wood indicate that there is a need. Where possible, trees would be felled toward the stream. Where trees that are needed for riparian large wood are situated above Road 19, the trees would be felled across the road and the portion that falls outside of the road prism would be retained. (**See Appendix B for list of trees and the prescription for action**).

2. Yarding and loading operations would occur only on existing roadways to limit ground disturbance in surrounding stands.

3. Area 17 Tree number 2 has scotch broom on roadside near tree. The occurrence would be pulled prior to implementation of this project. The district botanist would be contacted prior to implementation of the project to coordinate removal of the plants.

4. Trees would be felled between September 30th and January 1st during the time of year when birds are no longer nesting. This will protect threatened, endangered, and sensitive wildlife species, which have not been surveyed to protocol, as well as nesting harlequin ducks, which cannot be effectively surveyed for. Non-listed cavity nesters using snag habitat will also be protected by this seasonal restriction.

5. When possible, trees would be felled in such a way that existing snag habitat that does not pose a road safety hazard will be protected.

6. Stumps would be flush cut with the cut-faces opposite the roadside.

7. Area designation using paint, cards, and flagging, would be kept to a minimum to meet legal and contractual requirements along the highway, and developed and dispersed recreation sites. Upon completion of operations, markings would be removed or obliterated from the foreground view of the site.

8. Existing trails would be managed and/or buffered from salvage operations according to appropriate trail class standards.

9. Cultural resource sites would be protected from ground disturbing activities through avoidance. Previously unknown archeological sites identified during project implementation that are in conflict with ground disturbance activities, would be evaluated to determine significance to the National Register of Historic Places; appropriate mitigation measures would be taken, including avoidance. Trees with telephone line insulators will require retrieval of the insulators during salvage operations.

Consultation With Others

Oregon Department Of Transportation -MOU

A Memorandum of Understanding (MOU) between the Forest Service and Oregon Department Of Transportation (ODOT) was developed to establish coordination between the agencies regarding highways over National Forest Lands (USDAFS & ODOT, 1992). In accordance with the MOU, the Forest Service is responsible for disposing of identified potential danger trees as promptly as possible. The Forest Service shall include an approved traffic control plan in their timber sale contract, if done with a timber sale, which will require each timber sale purchaser to post warnings, flaggers and other safety measures deemed necessary to protect road traffic during logging operations.

Oregon Parks and Recreation Department
The Nineteen Road Salvage project lies within the South Fork Scenic Waterway. In accordance with a joint agreement between the Oregon Parks and Recreation Department and the Forest Service, a letter was sent notifying them of the proposal.

Public Involvement
The Nineteen Road Salvage Project was listed in the fall issue of the Willamette Forest Focus, the Schedule of Proposed Actions (SOPA) in November of 2001 and has since appeared through the current issue (summer of 2002).

Several organizations were notified with scoping letters including the Oregon Natural Resources Council, and the America Lands Alliance.

Government Organizations notified include: Confederated tribes of the Grand Ronde, Confederated tribes of the Siletz Indians, Confederated tribes of the Warm Springs, the US Army Corps of Engineers, and Oregon Department of Transportation.

KV Coordination

The following are actions that could be accomplished through KV collection associated with sales from this Environmental Analysis.

- Gate maintenance for winter elk closure of road systems: 19-415, 19-425, 19-428, 19-429, and 19-430.

- Felling and placement of instream wood near Roaring River Bridge by cable lining five of the identified hazard trees located adjacent to the Roaring River channel (Area 4, trees 23-26). The trees will be placed so that they are retained in Roaring River and will not migrate down to the South Fork of the McKenzie River where they could impede river traffic.

- Replacement of recreational signs along Forest Service Road 19.

Chapter 3
Affected Environment

Chapter 3 describes aspects of the environment that could be affected by the alternatives. This provides the baseline for the effects analysis in Chapter 4. The following components of the affected environment are described by issue. Additional details on the affected environment can be found in the Nineteen Road Salvage Project File and the South Fork Watershed Analyses.

Significant Issues

Public Safety and Protection of Property

The project areas that have been identified are located in areas with moderate levels of traffic. Forest Service Road 19 (Aufderheide Drive) is a segment of the West Cascades National Scenic Byway providing a scenic drive and many recreational stops. There is traffic from boaters, hikers, bikers, visitors to the hot springs, and other recreators along the road during the summer months. Parking lots may fill up quickly especially on weekends and there are often a good number of visitors walking or biking near the roadways.

Economics – Forest Products

Some of the trees identified as hazardous within the project areas are of merchantable value. Trees considered merchantable have enough sound wood to be felled and bucked to desirable lengths in order to be sold to local mills for processing. This process provides jobs for those who provide the falling and yarding operations and the wood fiber is provided to the local economy.

Other Issues

Water Quality/Riparian and Aquatic Habitat

The project sites associated with this proposal all lie immediately adjacent to Forest Service Road 19, within the South Fork McKenzie Watershed. Streams within the vicinity of these sites include the South Fork McKenzie River, Roaring River, and Mc Bee Creek as Road 19 follows them, and the confluences of numerous tributaries of these streams. Portions of the South Fork McKenzie River above and below Cougar Reservoir have been identified as a Study River in the Willamette National Forest Plan for potential inclusion in the National System of Wild and Scenic Rivers. In addition, the South Fork McKenzie River below Cougar Reservoir is listed in the 1998 Oregon 303(d) List of Water Quality Limited Streams for stream temperatures that exceed the 50 degree F.

standard for bull trout habitat. The South Fork also is a major tributary of the McKenzie River, which is the major source of drinking water for the City of Eugene.

At the top end of the project area, Mc Bee Creek and Roaring River are high gradient streams that flow through recent volcanic terrain that is generally very stable and not prone to excessive sediment yield. Consequently, these streams have stable bank and channel configurations with most substrate material consisting of small boulders and cobbles.

Below the confluence with Roaring River, the South Fork of the McKenzie River flows with a more moderate gradient through terraces of glacially deposited material, although some localized development of floodplain areas has occurred. Banks in this area are still relatively stable, although raveling can occur if vegetation is removed. High stream energies easily move fine sediment downstream to Cougar Reservoir, while the moderate gradients and ready access to coarse sediments allow development of complex habitat structure, provided adequate amounts of large wood are present. This channel type continues downstream to just below the confluence with Rebel Creek.

Below Rebel Creek, the river becomes more confined with characteristics similar to those of Roaring River, though with a more moderate gradient. This continues for about a mile downstream, where the valley becomes less confining and the river takes on characteristics that lie between the gradients and stability of the volcanic terrain, and those of the glacial terrain.

Threatened, Endangered, and Sensitive Species

Wildlife:
Harlequin ducks, which are listed as a sensitive species, have been seen in the Southfork Mckenzie River as well as in French Pete Creek. It is suspected they use other tributaries with fast-moving water as well. Habitat also includes large downed wood for resting and loafing.

Most of the area along Road 19 qualifies as spotted owl nesting habitat due to the abundance of large, old-growth conifers. When these trees are associated with a large body of water such as Cougar Reservoir and the mainstem of the McKenzie River, they are also suitable nesting habitat for bald eagles. In addition to one known peregrine falcon eyrie which has a secondary nest protection zone that overlaps Road 19, there are numerous cliff bands bordering the Three Sisters Wilderness as well as in the Augusta Creek area and at Hardy Ridge, all of which are suitable peregrine falcon nesting habitat. Some of these areas have been surveyed in recent years and some have not had surveys conducted.

Plant Species:
The project area is located directly adjacent to Forest Service Road 19. Three habitats were identified in the project area; mixed conifer forest, riparian area, and rocky slope.

The rocky slope and riparian area habitats present were identified as potential habitat for sensitive species. The rocky slope habitat is potential habitat for the sensitive plant species *Romanzoffia thompsonii* and *Carex scirpodea* var. *stenochlaena*. The riparian area habitat is potential habitat for the sensitive species *Corydalis aqua-gelidae*, and *Cimicifuga elata.* There are no known sites of these four species within or adjacent (within ½ mile) of the project area.

Fish Habitat:

The project sites associated with this proposal all lie immediately adjacent to Forest Service Road 19 in the South Fork McKenzie Watershed. There are numerous fish bearing, perennial non-fish bearing, and intermittent streams in the South Fork McKenzie Watershed as well as numerous lakes and ponds.

Fish species that inhabit the South Fork McKenzie Watershed include:

- Mottled sculpin (*Cottus bairdi semiscaber*)
- Shorehead sculpin (*Cottus confusus*)
- Torrent sculpin (*Cottus rhotheus*)
- Mountain Whitefish (*Prosopium williamsoni*)
- Spring chinook salmon (*Oncorhynchus tshawytscha*)*
- Coastal cutthroat trout (*Oncorhynchus clarki clarki*)
- Rainbow trout (*Oncorhynchus mykiss*)
- Bull trout (*Salvelinus confluentus*)*
- Brook trout (*Salvelinus fontinalis*)**

* Listed as "threatened" under the Endangered Species Act.
** Introduced species.

The South Fork McKenzie Watershed is designated as a "Tier 1 Key Watershed" in the Northwest Forest Plan upstream of Cougar Dam due to the presence of at-risk fish stocks (ie. spring chinook salmon and bull trout), and water quality.

Locations of importance to spring chinook salmon are the main stem of the South Fork McKenzie River, Roaring River, and the lower reaches of tributaries to the South Fork. Adult holding areas consist of deep pools in these water bodies. Spawning habitats utilized by spring chinook salmon are low gradient riffles and pool tail-outs rich in cobble and gravel. Rearing habitat and winter refuge habitat consist of side channels, low velocity river margins and lower reaches of tributaries. Spring chinook found upstream of Cougar Dam are trucked around the dam by the Oregon Department of Fish and Wildlife (ODFW).

Important locations in the South Fork McKenzie for bull trout are the main stem South Fork McKenzie River, Roaring River, and Cougar Reservoir. Spawning and early rearing habitat for the bull trout sub-population that inhabits the South Fork McKenzie above Cougar Dam is Roaring River. This creek provides excellent water quality, woody material, and cover for bull trout. Above Cougar Dam, foraging and rearing habitat

consists of the Cougar pool, and main stem South Fork McKenzie. Bull trout inhabit the South Fork McKenzie downstream of Cougar Dam. In the South Fork main stem below the dam, conditions are not suitable for spawning or early rearing. However, bull trout below Cougar Dam can use the river as a sub-adult and adult rearing area.

Rainbow trout and Coastal cutthroat trout can be found throughout the South Fork McKenzie Watershed in the main stem river, in smaller tributaries, in the reservoir, and in lakes and ponds. Little information is known about the abundance or population trends of these species. In general, they require cold water to survive, gravel size substrate for spawning, large wood for cover and to create habitats, and low velocity areas for winter refuge.

Brook trout can be found in the reservoir, ponds, and lakes above Cougar Dam. Brook trout were introduced into the watershed in the early 1900's. Naturally barren high mountain lakes lacking opportunity for downstream migration are the only locations currently used for brook trout stocking by ODFW. Native populations of trout and char are at-risk due to the presence of brook trout because of competition and the possibility of hybridization between brook trout and bull trout.

Management Indicator Species and Migratory Birds

Management Indicator Species (MIS) were addressed in the Willamette National Forest Plan (1990). They include the spotted owl, pileated woodpecker, marten, elk, deer, cavity excavators, bald eagles, peregrine falcons, and fish. Through Region-wide coordination, each Forest identified the minimum habitat distribution and habitat characteristics needed to satisfy the life history needs of the MIS's. Management recommendations to ensure their viability were incorporated into all Willamette National Forest (WNF) Plan Action Alternatives. All alternatives in this project meet applicable Standards and Guidelines from the WNF Plan. The amount or characteristic required habitat is not significantly changed. With the 1996 and 2001 Amendments to the WNF Plan (i.e. the Northwest Forest Plan, NWFP), persistence for spotted owls, pileated woodpeckers, and marten was evaluated, and the FSEIS indicated persistent populations would be maintained under the NWFP Standards and Guidelines (Appendix J2). All alternatives in this project meet applicable Standards and Guidelines from the NWFP.

A January 11, 2001 Executive Order outlines the "Responsibilities of Federal Agencies to Protect Migratory Birds." Habitats vary broadly for this large group of species. The felling of hazard trees with the action alternative of this project may unintentionally take individual migratory birds, but is not expected to have a measurable negative effect on bird populations because of the limited extent of the habitat removal. Mitigation measures such as autumn felling will mitigate for losses to active nests.

Air Quality

The Clean Air Act directs federal agencies to comply with state and local regulations designed to prevent and control air pollution. The Oregon Smoke Management Plan was developed in order to attain the standards set by the Clean Air Act. The Oregon Smoke Management Plan establishes designated areas, which are principal population centers, and Class I air-sheds, which include wilderness and other sensitive air-sheds. One purpose of the Smoke Management Plan is to protect air quality in these high priority areas.

Air quality in the proposed action areas could be affected by forest-land fuel treatments such as burning hand piles. The Oregon Smoke Management Plan and the Oregon Visibility SIP (State Implementation Plan) have a number of requirements designed to meet Clean Air Act standards, reduce the amount of smoke produced, and reduce smoke impact on designated areas and wilderness areas. They have also required or encouraged a variety of measures to reduce smoke emissions.

Recreation Experience and Scenic Quality

Aufderheide drive is designated a National Scenic Byway. Aufderheide Drive serves as a primary travelway between the North Fork of the Middle Fork of the Willamette River drainage and the McKenzie River drainage. The area provides views of the South Fork McKenzie River and Three Sisters Wilderness among many others. Recreational opportunities along this scenic byway include driving, hiking, biking, camping, boating, and fishing. Cougar Reservoir is located along the road and has very high use during the summer. Terwilliger Hot Springs is also located within the project area. The Hot Springs is world renowed and used by many for its scenic, aesthetic, and spiritual qualities.

French Pete, Dutch Oven, Homestead, Twin Springs, Frissel and Roaring River are all developed campgrounds located within the project area. Many dispersed campsites are also located along the road within the project area.

Oregon State Scenic Waterway

The Oregon Scenic Waterway program is administered by the Oregon State Parks and Recreation Department. The South Fork was added to the State Scenic Waterway program in 1988. According to the Eligibility Determination for South Fork McKenzie River, goals of the program include the protection of the free-flowing character of the river for fish, wildlife, and recreation and to protect and enhance scenic aesthetic, natural recreation, scientific, and fish and wildlife values along the scenic waterway (USDAFS, 1992).

Wild and Scenic River

The South Fork McKenzie has not been designated a Wild and Scenic River, however the river is eligible due to having the following Outstandingly Remarkable Values: scenery, fisheries, recreation, and prehistoric sites. The segment of river that is within the project area is paralleled by the Aufderheide National Scenic Byway and crossed by several bridges. This segment is classified under the Wild and Scenic Rivers Act as "recreational." Management activities should meet with the Visual Quality Objectives determined under the Wild and Scenic Rivers Act for areas with this classification.

Heritage Resources

Prehistoric Settlement

The Nineteen Road Salvage Project area contains a moderate density of prehistoric lithic (stone tool) archeological sites. That density relates to the likely position of the South Fork of the McKenzie River within prehistoric hunter/gatherer settlement patterns in the upper McKenzie River area. Much of the area is along river or stream terraces, had abundant water and productive fishing and big game habitat. Thus, it was an attractive hunting and foraging area. The South Fork canyon was probably a natural travel corridor between the main stem of the McKenzie and the Upper Middle Fork of the Willamette River to the south.

Tool making debris found in the cultural sites within the project area tends to be at low to moderate densities. It is unclear whether this relates to conservation of obsidian by the Indians, or that activities not requiring many stone tools were undertaken. Most archeological evidence derives from the Middle Archaic period of about 6,000 to 2,000 years ago.

Natural resource attractions of the project area, in concert with its geographic and topographic attributes, made it a favorable hunting and foraging and travel route for native people. The known, fully documented archeological sites within the project area are assumed to be eligible to the National Register of Historic Places (NRHP) because of their ability to yield information about prehistory. They are "lithic" sites, comprised of obsidian chipped stone tool making debris and discarded tools; basalt and other lithic raw materials are a minor fraction of the artifacts in some of the sites.

The 1851 Gibbs and Starling treaty sketch map depicts this part of Western Oregon as being within the tribal area of the Molalla Indians, although it is clear that Indians from the Warm Springs reservation used the area seasonally until the 1920's. Linguistic evidence suggests that the Molalla language had evolved in relative isolation over a considerable period of time. The Nineteen Road Salvage project area was probably used by the Molalla (and their ancestors), however, there is a perplexing lack of late prehistoric or early historic archeological evidence that relates to the historic Molalla. It may be that our methods of age-dating the artifacts is too imprecise, and that more of the

lithic sites are indeed late prehistoric. Possibly the life ways of late prehistoric people have left few discernable traces. Or, it may be that for whatever reason, the project area was not heavily used in the late prehistoric (A.D. 0 to A.D. 1800). These are questions for which there is no ready resolution with our existing data; clearly, then, preserving what remains is important. Thus, the project area is a valuable repository of information about prehistoric human life ways in the upper McKenzie basin specifically, and about the Cascades generally.

Historic Use

There is limited evidence that fur trappers from the Pacific Fur Company visited the McKenzie in 1812, and indeed the river is named after one, Donald MacKenzie. Evidence for Native American presence during the mid to late 19th Century is present in the form of culturally modified trees (red cedars and hemlocks) a few miles from Road 19. Those trees were peeled primarily for use of inner bark as container material (itself related to the intensive gathering and processing of huckleberries). Historic travel by European Americans up the South Fork was by trail and short segments of road until 1936, when the Forest Service and CCC completed the Box Canyon Road, the first motor travel route between the South Fork and the town of Westfir to the south. Few traces of that road remain, since most of its length was covered over by the present Rd. 19, or is underwater in Cougar Reservoir.

Traces of 19th and early-20th Century activity may be found in remnant way trails, blazed trees, spring board stumps and old clearings. Thus far, none of these has been evaluated as historically significant.

Chapter 4
Environmental Consequences

This chapter summarizes the environmental consequences that would result from implementing both alternatives. Emphasis is placed on resources related to the issues as described in Chapter 1. Additional information on the environmental consequences of implementing both alternatives can be found in the project analysis file.

Significant Issues

Public Safety and Protection of Property

Alternative A – No Action

The impact on public safety and protection of property associated with Alternative A is the risk that would still exist because the hazard trees would remain standing. The obligation for falling the hazard trees would remain and would need to be addressed at a later time.

Alternative B – Action

Alternative B would impact public safety and protection of property by allowing for the falling and salvaging of hazardous trees that may pose threat to public safety and/or property should they be left to fall on their own at unpredictable times.

During salvaging operations, an approved traffic control plan will require the posting of warnings, flaggers and other safety measures deemed necessary to protect road traffic. Existing trails would be managed and/or buffered from salvage operations according to appropriate trail class standards in order to provide safety to the public.

Economics - Forest Products

Alternative A – No Action

No wood fiber or jobs wood be added to the local economy at this time. There is no certainty that the expense of hazard tree removal would be regained through sale of available wood products upon its completion.

Alternative B – Action

Alternative B will have an impact on the local economy with the removal of hazard trees through a commercial timber sale. This sale would contribute to the local economy by providing wood products and would also produce jobs. The sale of forest products from this project would help offset the cost of hazard tree cutting and removal and potentially provide revenue to the U.S. Treasury.

Other Issues

Water Quality/Riparian and Aquatic Habitat

Alternative A - No Action

Allowing the hazard trees to fall on their own may result in less than ideal orientation of the resulting down wood to provide in stream and riparian coarse wood.

Alternative B - Action

Sediment and Turbidity

Since ground-disturbing equipment will be confined to the existing roadways, soil displacement and compaction, and the resultant potential for erosion will be minimal. This will also insure that bank raveling and resultant inputs of sediment are avoided. With the potential for erosion and bank raveling minimized, there is little likelihood that measurable amounts of sediment or turbidity will be introduced into the South Fork of the McKenzie River or its tributaries.

Coarse Wood

Trees within Riparian Reserves that are needed to provide coarse wood are being retained on site. Where possible, and where other safety concerns permit, they will be felled toward or into the stream. As a result of these precautions and the low intensity of this treatment, meaningful adverse effects on the short term or long-term supply of large wood to the streams in the project area are not anticipated. In the short term, directional felling of some of the trees to be retained could create some excellent complex in stream structure. The cluster of trees below Roaring River Campground that will be felled or lined into the river are an excellent example.

Stream Temperature

Removal of the hazard trees will have no meaningful impact on the structure and density of the streamside stands. Existing shade levels and the corresponding ability of the streamside stands to moderate stream temperatures will be maintained. There will be no additional adverse impacts to 303(d) listed streams in the project area.

Flow Conditions

Removal of the hazard trees will have no meaningful impact on the structure and density of the streamside stands. Existing patterns of interception, storage, and runoff of rain and snowfall will be maintained, and there will be no measurable effects on stream flows.

Threatened, Endangered, and Sensitive Species

Alternative A - No Action

Wildlife:
There would be no effects on TES wildlife species with this alternative. The hazard trees would undergo natural processes and eventually fall to the forest floor, providing large down woody material which provides cover and habitat for small and medium sized mammals, amphibians, and insects. Those trees that land in riparian areas of Class 1 and 2 streams would provide loafing habitat for harlequin ducks.

Plant Species:
Naturally falling trees may affect sensitive plants and potential sensitive plant habitat. If a tree falls on a sensitive plant it can cause mortality or damage the plant, which may cause a decline in health. A tree falling on potential sensitive plant habitat may cause degradation of the habitat. Since a tree falling is a stochastic event we cannot predict where or when it will fall. Thus we cannot predict the effects to potential sensitive plant habitat or sensitive plants.

The potential sensitive plant habitats present in the project area are rocky areas and riparian areas. These habitats are not rare on the McKenzie River Ranger District or the Willamette National Forest. If one of the potential sensitive plant habitats were to be degraded by a tree falling on it, it would not cause the habitat to become rare on the district or the forest.

An indirect effect of this alternative would be a potential change in site soil moisture. Loss of a standing tree may result in short term increases in soil moisture due to reduced transpiration. This could impact sensitive plants by creating condition for which they cannot tolerate.

Fish Habitat:
In general, the no action alternative will have no direct or indirect effect on fish habitat for species in the action area. Cumulatively, stream channels that are near some of the designated hazard trees might benefit from falling wood if the tree happened to fall in that direction.

Alternative B - Action

Wildlife:
Falling and removal of hazard trees may impact, but is not likely to adversely impact TES species due to noise disturbance as well as habitat removal. Mitigation for noise disturbance effects during the nesting season will occur by a seasonal operating restriction near known pair sites and unsurveyed habitat for northern spotted owls, peregrine falcons, and bald eagles. With seasonal restrictions in place, Alternative B will not impact any TES wildlife species.

Falling of hazard trees and leaving them in place may benefit harlequin duck habitat by increasing the number of resting and loafing sites.

Plants:
This alternative may impact individual plants, but will not result in a trend towards federal listing.

If sensitive plants are present, this alternative may directly impact individual plants if a tree were felled on them. This could result in mortality or damage to the plant that could cause a decline in health. A single tree would not likely effect an entire population of sensitive plants, thus would have minimal impact on species viability. Because surveys were conducted before sensitive plants could be identified in the project area, mitigation measures have been developed to protect potential sensitive plants.

Potential sensitive plant habitat may be degraded if a tree were to be felled on it. Mitigation measures have been developed to have trees directionally felled away from the habitat when possible. The potential sensitive plant habitats present in the project area are rocky areas and riparian areas. These habitats are not rare on the McKenzie River Ranger District or the Willamette National Forest. If one of the potential sensitive plant habitats were to be degraded by a tree falling on it, it would not cause the habitat to become rare on the district or the forest.

An indirect effect of this project would be a potential change in site soil moisture. Removal of trees may result in short term increases in soil moisture due to reduced transpiration. This could impact sensitive plants by creating a condition for which they cannot tolerate.

Fish Habitat:
Sediment and Turbidity

Since ground-disturbing equipment will be confined to the existing roadways, soil displacement and compaction, and the resultant potential for erosion will be minimal. With this potential minimized there is little likelihood that measurable amounts of sediment or turbidity will be introduced into the South Fork McKenzie River, Roaring

River, or other stream channels. Therefore from a sediment/turbidity aspect, there will be no direct, indirect, or cumulative impacts to fish habitat or populations from this action.

Coarse Woody Material

Trees within Riparian Reserves that are needed to provide coarse wood will be retained on site. Where possible, and where other safety concerns permit, they will be felled toward stream channels. This will provide a beneficial direct effect to streams due to the addition of large wood. Large wood in stream channels serve as a physical feature for fish habitat creation, a source of fish cover, a feature that retains smaller organic debris that can be processed in the stream ecosystem, and as a long-term source of organic decomposition.

Indirectly if a tree cannot be felled into a stream channel but can be felled and left in the riparian reserve, this will also benefit fish habitat due to the maintenance of a healthy riparian ecosystem.

Cumulative effects are expected to be maintained and beneficial since hazard trees that are needed as a source of large wood in Riparian Reserves and in stream channels will be left on site. In the foreseeable future it can be expected that other trees along Forest Service Road 19 will become hazard trees. When considering current actions and effects combined with foreseeable future actions, this activity will not have adverse cumulative effects to riparian areas or stream channels. The rationale for this finding is based on professional judgment and on field investigations. For example, the riparian area along Forest Service Road 19 is well stocked and in a mature to old-growth condition. This will provide for a continual source of large wood to riparian areas and stream channels. It is also expected that if future hazard trees need to be removed, they will be left on site if needed for large wood.

Stream Temperatures

Felling and removal of the hazard trees will have no meaningful impact on the structure and density of streamside tree stands. The rationale for this finding is that trees are scattered and the loss of individual trees that serve as shade will not have a measurable effect on temperatures. Also, the overwhelming majority of hazard trees are far enough away from the South Fork and Roaring River that their removal will not affect stream temperatures. Each hazard tree that could potentially provide for shade was reviewed in the field. The trees reviewed were all snags and did not have any foliage in their canopies, and are therefore not providing any shade at present. Therefore the corresponding ability of the remaining streamside stands to moderate stream temperatures will be maintained. Due to these reasons there will be no direct, indirect, or cumulative effect to fish habitat or populations.

Flow Conditions

Due to the limited scope of this project, and the individual tree felling and removal of some of the trees in the action area, there will be no meaningful impact on the structure, density, and canopy cover across the South Fork McKenzie River Watershed. Therefore existing patterns of interception, storage, and runoff of rain and snowfall will be maintained. Due to these conditions and the limited scope of this action there will be no direct, indirect, and cumulative effect on fish habitat for populations.

Air Quality

Alternative A - No Action

There are no direct or indirect impacts to air quality associated with Alternative A.

Alternative B - Action

Alternative B would create a small, localized short-term increase in fire hazard in the zero to three-inch diameter size classes, and a long-term decrease in fire hazard following fuel treatment. Piling and burning of woody debris generally produces fewer emissions per ton of fuel due to a more efficient burning process.

Because tree debris will be located in all the Road 19 Project areas, smoke would not be concentrated enough to cause an intrusion exceeding the National Ambient Air Quality Standards (NAAQS) for PM 2.5 in the designated areas of Oakridge or Bend. Pile burning would occur outside the July 1 through September 15 smoke restriction period in the Oregon Visibility SIP (State Implementation Plan) for the Three Sisters Wilderness, which is a Class I airshed. Air quality visibility in the near vicinity could be affected by smoke during the burning operations and for approximately 1-2 hours after ignition is completed.

Recreational Experience and Scenic Quality

Alternative A - No Action

Potential impacts on recreational experience with Alternative A include visual quality being reduced due to the current dead and dying trees within recreational areas and along the scenic highway. The recreational experience would also be impacted if a visitor was injured or their personal property was damaged directly or indirectly, due to a falling tree or limb.

Alternative B - Action

Alternative B is consistent with the West Cascade Scenic Byway Corridor Management Plan as well as the McKenzie Pass-Santiam Pass Scenic Byway Management Plan developed for the McKenzie-Santiam Scenic Byway. Forest Plan Standards for the Recreation Opportunity Spectrum classes would not be changed by implementation of Alternative B.

Timber harvesting operations is not likely to affect recreating public other than short-term trail and road closures during falling and yarding operations. Mitigation measures such as trees being flush-cut with the cut-faces opposite the roadside have been developed to maintain visual quality.

Trees placed in Roaring River for fish habitat will not be able to migrate into the South Fork of the McKenzie River where they could impede kayakers or other river traffic.

Oregon Scenic Waterway

Alternative A - No Action

With Alternative A, conditions and processes within the river corridor will remain unchanged. The river's special attributes will continue to provide public use and enjoyment.

Alternative B - Action

Because the proposed action is limited to the removal of hazard trees and the felling and yarding operations will occur from existing roads, there are no expected adverse effects to the river's special attributes. Visual quality of the corridor will remain unchanged.

Wild and Scenic River

Alternative A - No Action

With Alternative A, there will not be any impacts on the South Fork McKenzie River or the Outstandingly Remarkable Values that have allowed its eligibility for inclusion into the Wild and Scenic Rivers system.

Alternative B - Action

Alternative B will not change the character of the river from the conditions that existed at the date of its determination for eligibility. The felling and removal of the hazard trees will result in only minor changes over existing conditions.

The Outstandingly Remarkable Values of the river will not be affected by the proposed activity. Recreational camping may be slightly affected by possible temporary closures during the felling process of specific trees. The scenic character will be changed in the short-term only slightly from a motorist's perspective.

Heritage Resources

Alternative A - No Action

There are no direct or indirect impacts to the heritage resources associated with Alternative A.

Alternative B - Action

Cultural resource surveys for the area have been concluded. All surveyed and inventoried significant cultural resource sites in the Nineteen Road Salvage Project area will be buffered and excluded from resource management activities.

Archeological survey reports, specifying survey methods and findings, are being prepared for review by the Forest Archeologist and the State Historic Preservation Office, as outlined in the Programmatic Memorandum of Understanding between that agency and the Forest Service. A formal Determination of Effect will be submitted concurrently.

This review does not constitute a formal Determination, but is intended to serve as a plan for achieving "No Effect" determinations for the Nineteen Road Salvage Project.

<u>Heritage Site Protection Plan:</u>
Site protection hinges on successful identification and boundary determination. Protection would consist of avoidance by ground disturbing activities, and a practice of "falling and leaving" hazard trees within previously documented cultural site areas. This would have less effect than natural blow down, and will safely preserve the heritage values of below ground archeological sites. Above ground heritage resources in this project area consist of a discontinuous line of trees with telephone line insulators. This is not considered to be a significant cultural resource, and accurate mapping and retrieval of the insulators during salvage operation will constitute adequate mitigation of any impact to their limited heritage resource values.

Irreversible and Irretrievable Commitment of Resources

No irreversible and irretrievable commitments of resources were identified.

Management of Competing and Unwanted Vegetation

All action alternatives would incorporate the measures contained in the Final Environmental Impact Statement for Managing Competing and Unwanted Vegetation (November 1988); the Record of Decision, signed December 8, 1988; and the requirements of the Mediated Agreement, signed May 24, 1989. The alternatives would use prevention as the main strategy to manage unwanted and competing vegetation.

Indirect, Cumulative and Unavoidable Effects

There would be no significant direct, indirect or cumulative effects to soil, water, fisheries, wildlife resources, or other components of the human environment if either of the alternatives are implemented. The analysis of cumulative effects considered past, present, and reasonably foreseeable future actions on these lands. This Environmental Assessment is tiered to the Final Environmental Impact Statement for the Willamette National Forest Land and Resource Management Plan.

Required Disclosures

The interdisciplinary team determined that the proposed alternatives met all applicable national laws and executive orders with specific direction toward timber sales. These specifically included cultural resources, water quality, visual quality objectives, regeneration period, air quality, and soil productivity. It was determined that no proposed alternative is likely to have significant adverse effects on the items listed above.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires the identification of habitat "essential" to conserve and enhance the federal fishery resources that are fished commercially. The Pacific Fishery Management Council (PFMC) designated Essential fish Habitat (EFH) for Chinook, coho, and Puget Sound pink salmon in their Amendment 14 to the Pacific Coast Salmon Plan, issued September 27, 1990. The interim final rule implementing the EFH provision of the MSA (62 FR 66531) requires federal agencies to consult with the NMFS for any action that may adversely affect EFH.

The South Fork McKenzie River is designated as Essential Fish Habitat (EFH) up to Cougar Dam. Upstream of Cougar Dam the South Fork is not designated as EFH because Cougar is an impassible barrier. Since there are no trees that will need to be felled below the dam, and since trees are being left on site when needed as down wood or instream wood, this project will not adversely affect EFH. Since the project will not adversely affect EFH, no further consultation under the Magnuson-Stevens Fishery Conservation and Management Act is required.

Spring Chinook salmon and bull trout are both listed as "threatened" species under the Endangered Species Act. Therefore consultation is required under Section 7 of the Act if projects "may affect" those species or their habitats. Consultation for hazard tree removal has been completed for both species under programmatic consultation documents (Biological Assessments and Biological Opinions). Under these documents the effects determination for hazard tree removal is "may affect, but not likely to adversely affect."

In the specific case of this proposed action the determination is consistent based on the following rationale:

- Any effects that occur are expected to be negligible, or beneficial if the trees can be felled into stream channels. Felling trees into channels will provide a beneficial direct effect to streams due to the addition of large wood. Large wood in stream channels serve as a physical feature for fish habitat creation, a source of fish cover, a feature that retains smaller organic debris that can be processed in the stream ecosystem, and as a long-term source of organic decomposition. Also since the stands along Forest Service Road 19 and the South Fork McKenzie River are well stocked, there will be a continued future source of large wood for the area.

- Project design criteria found in the programmatic consultation documents will be met.

The project design criteria are as follows:

- Remove minimum number of trees required for safety.
- Conduct activities to limit need for additional access or disturbance to other vegetation.
- Use felled trees as large woody debris in the riparian area or stream when practical.

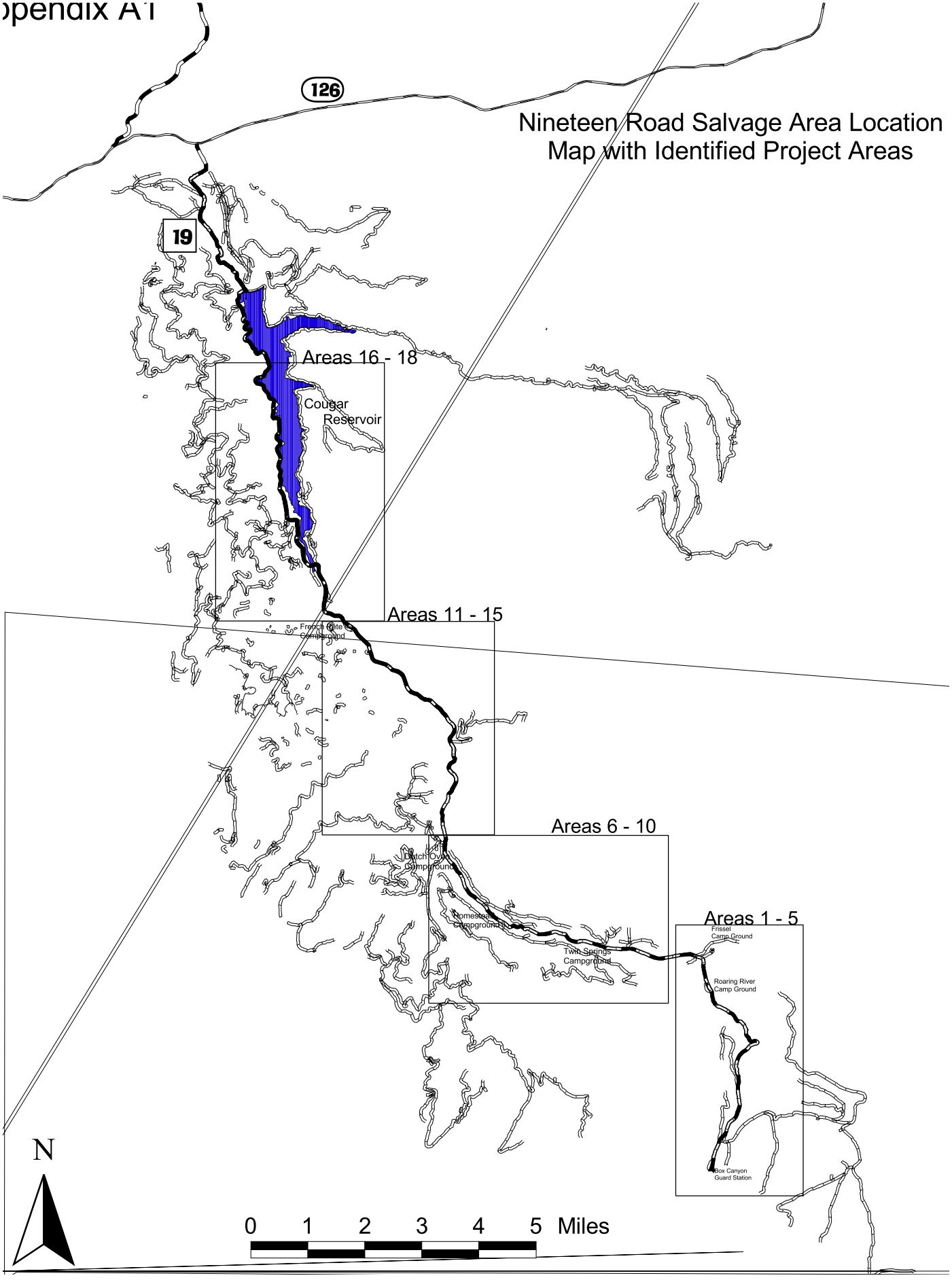
The project design employs these criteria by only removing the minimum number of trees based on recommendations of the South Fork McKenzie Watershed Analysis (USDAFS, 1994); limiting access of yarding and loading equipment to existing roadways; and felling trees toward stream channels where possible.

Proposed actions would be 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.

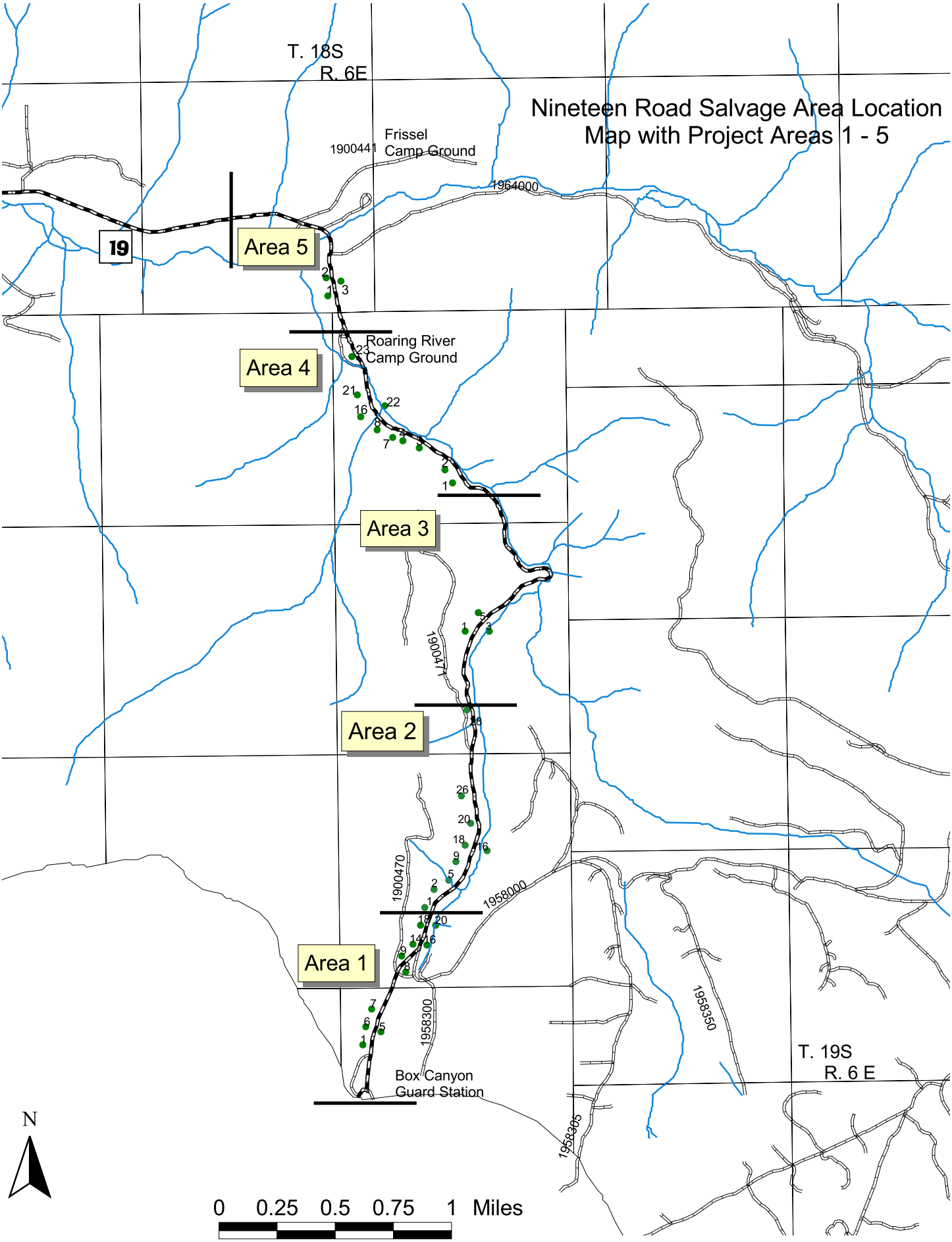
The policy of the United States Department of Agriculture Forest Service prohibits discrimination on the basis of race, color, national origin, age, religion, sex or disability.

Persons believing they have been discriminated against in any Forest Service related activity should write to: Chief, Forest Service, USDA, Washington, DC 20250.

Nineteen Road Salvage Area Location Map with Identified Project Areas

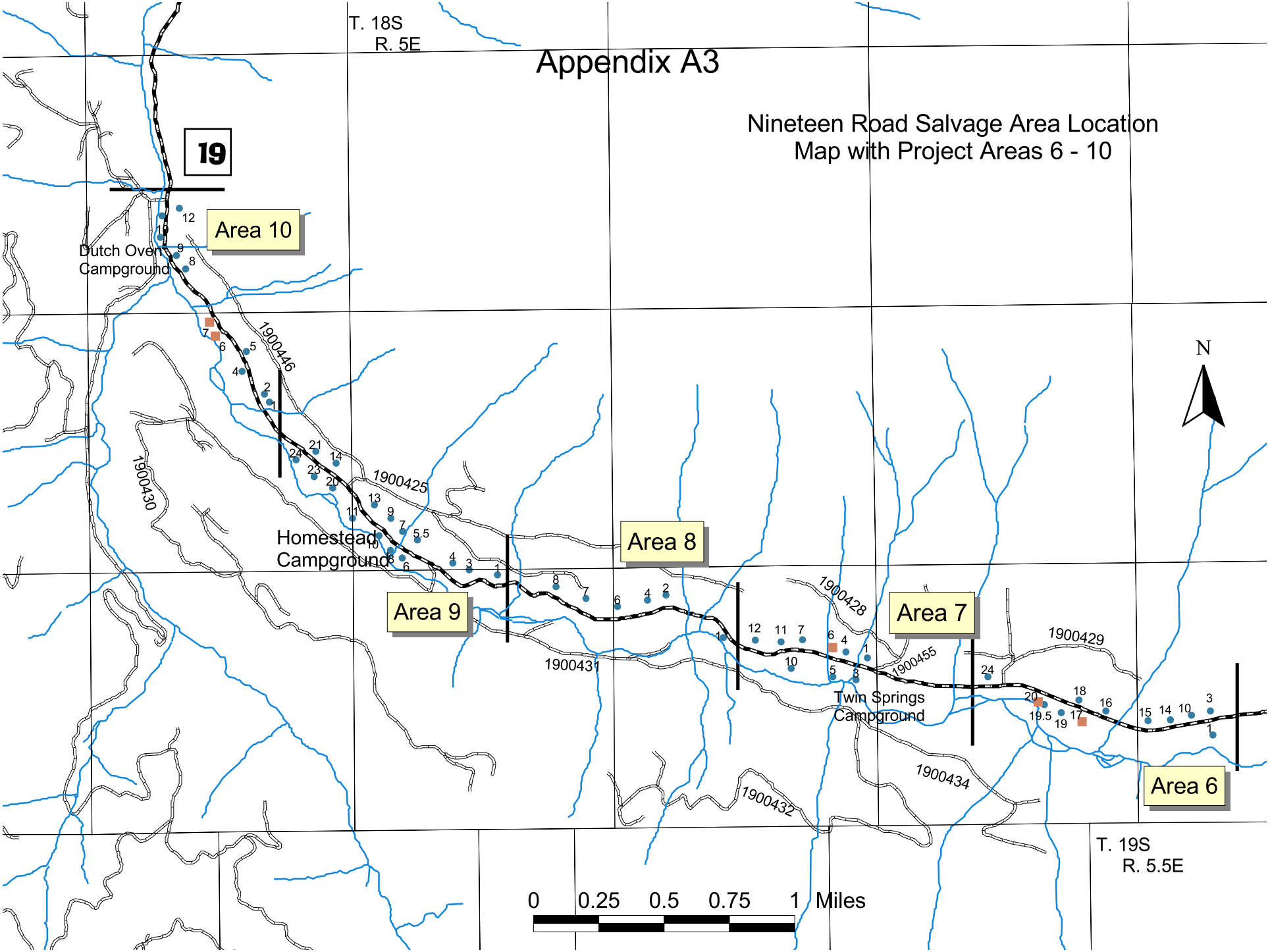


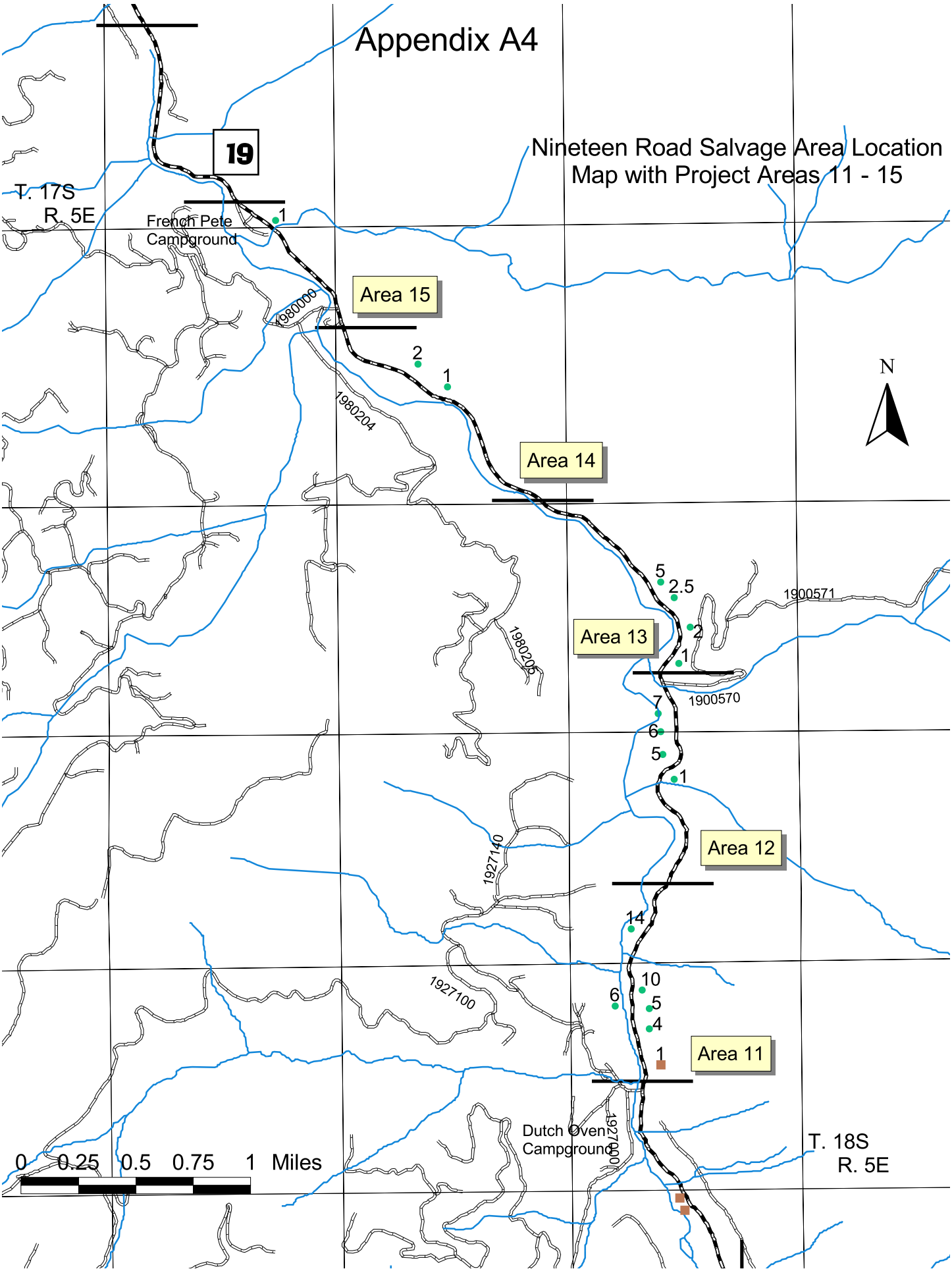
Appendix A2

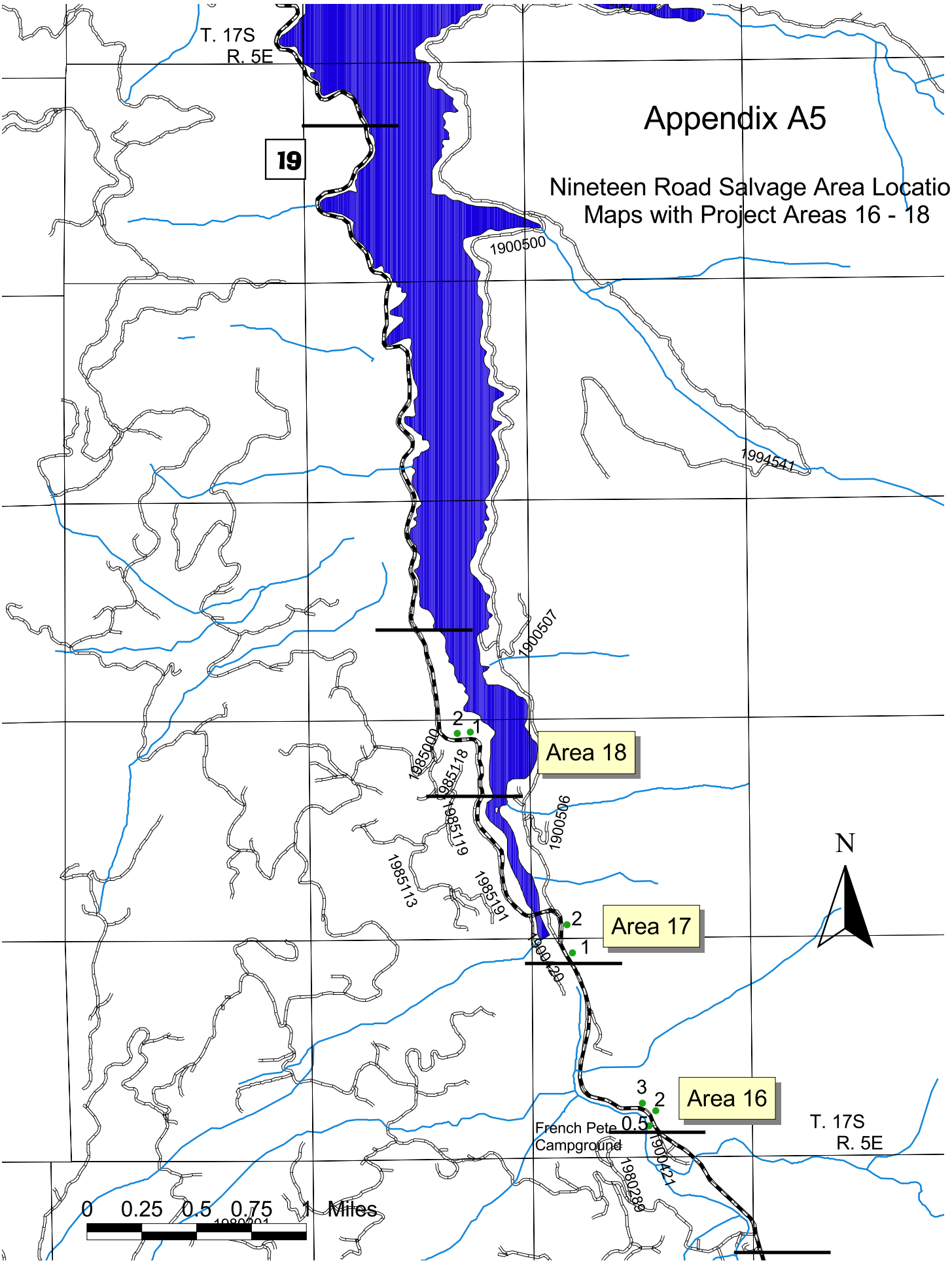

Nineteen Road Salvage Area Location Map with Project Areas 1 - 5
T. 18S
R. 6E
Frissel Camp Ground
1900441
1964000
19
Area 5
Roaring River Camp Ground
Area 4
Area 3
1900471
Area 2
1900470
1958000
Area 1
1958300
1958350
1958305
Box Canyon Guard Station
T. 19S
R. 6 E
N
0 0.25 0.5 0.75 1 Miles

Appendix A3

Nineteen Road Salvage Area Location Map with Project Areas 6 - 10




Appendix A4
Nineteen Road Salvage Area Location Map with Project Areas 11 - 15
19
T. 17S
R. 5E
French Pete Campground
1
Area 15
2
1
1980000
1980204
Area 14
5
2.5
1900571
Area 13
2
1
1980205
1900570
7
6
5
1
Area 12
1927140
14
10
6
5
4
1
Area 11
1927100
Dutch Oven Campground
1927000
T. 18S
R. 5E
N
0 0.25 0.5 0.75 1 Miles


Appendix A5
Nineteen Road Salvage Area Location Maps with Project Areas 16 - 18
T. 17S
R. 5E
19
1900500
1994541
1900507
Area 18
1985000
1985118
1985119
1900506
1985113
1985191
Area 17
1900420
Area 16
French Pete Campground
1900421
1980289
T. 17S
R. 5E
N
0 0.25 0.5 0.75 1 Miles

Appendix B

PRESCRIPTION FOR ACTION

NOTE: NO SALVAGE OF EXISTING DOWN MATERIAL WILL BE INCLUDED IN THIS PROJECT. ALL MACHINERY WILL STAY ON THE ROADSIDE. ALL DIRECTIONAL FALLING WILL BE DONE ONLY IF POSSIBLE.

AREA	Tree No.	TREE FATE	RESOURCE ISSUE
1	1,2 &4	Salvage	Tree 3 is down
	5	Salvage	Fall away from adjacent genetics tree
	6	Salvage	
	7	Salvage	
	8	Salvage	
	9-13	Salvage 4 of 5	Leave tree 11 for LWD
	14-15	Salvage	
	16, 16.5 &17	Salvage 1 of 3	Riparian Reserve.
	18-19	Salvage	Riparian Reserve. Fall tree 18 away from genetics tree.
	20	Leave	Riparian Reserve. Fall toward McBee Creek if possible
2	1	Leave	
	2-3	Salvage	Tree 4 does not need felled
	5-8	Salvage 1 of 4	Riparian Reserve. Leave trees 6 and 7 and fall upstream if possible. Fall and Leave 8 in stream gorge if possible.
	9-15	Salvage	Riparian Reserve.
	16-17	Salvage	Riparian Reserve.
	18-19	Salvage	Riparian Reserve.
	20-25	Salvage	Riparian Reserve.
	26-27	Salvage	
	28-29	Leave	Potential sensitive plant habitat. Directionally fall away from rocks
3	1-2	Salvage portion	Riparian Reserve. Potential sensitive plant habitat. Directionally fall into roadway and salvage portion in road prism only
	3-4	Salvage	Riparian Reserve.
	5	Salvage	Riparian Reserve.
4	1	Salvage portion	Riparian Reserve. Potential sensitive plant habitat. Directionally fall away from rocks and into roadway salvage portion in road prism only.
	2	Salvage	Riparian Reserve. Fall away from adjacent snag.
	3	Salvage	Riparian Reserve.
	4-7	Salvage portion	Riparian Reserve. Directionally fall into roadway and salvage portion of all trees in road prism only.
	8-15	Salvage portion	Riparian Reserve. Directionally fall into roadway and salvage portion of all trees in road prism only. Protect other snags
	16-20	Salvage 4 of 5	Riparian Reserve. Protect snags.
	21	Leave	Riparian Reserve. Protect snag (30 feet south of tree)

LWD = Large Woody Debri

AREA	Tree No.	TREE FATE	RESOURCE ISSUE
4 (Cont)	22	Leave	Riparian Reserve. Fall towards Roaring River.
	23-26	Leave	Riparian Reserve. Line into river w/rootwads or fall towards Roaring River
5	1	Salvage	
	2	Salvage	
	3	Salvage	
6	1-2	Salvage	
	3-9	Salvage	
	10-13	Salvage	Riparian Reserve. Protect snag by tree 11.
	14	Salvage	
	15	Salvage	Riparian Reserve.
	16	Salvage	
	17	Salvage	Insulator
	18	Salvage	
	19	Salvage	
	19.5	Leave	
	20-23	Salvage 3 of 4	Riparian Reserve. Leave either tree 21 or 22 and fell towards the river. Tree 20 has insulator
	24	Salvage	
7	1-2	Salvage	Tree one has Reference point tag for a CVS plot on stump. Cut tree above tag
	3	Salvage	
	4	Salvage	
	5	Salvage	
	6	Salvage	Insulator
	7-9	Salvage	
	10	Salvage	
	11	Salvage	
	12	Leave	
8	1	Salvage	
	2-3	Salvage 1 of 2	
	4-5	Leave	Riparian Reserve. Sensitive plant habitat.
	6	Salvage	Riparian Reserve.
	7	Salvage	
	8	Salvage	
9	1-2	Salvage	
	3	Salvage	
	4-5	Salvage 1 and portion of 2nd	Riparian Reserve. Directionally fall into roadway and salvage portion of tree 4 in road prism only.
	5.5	Salvage	
	6	Salvage	
	7	Salvage	
	8	Leave	Riparian Reserve.
	9	Salvage	Riparian Reserve.
	10	Leave	Riparian Reserve.
	11-12	Salvage	Riparian Reserve.
	13	Salvage	
	14-19	Salvage	

LWD = Large Woody Debri

AREA	Tree No.	TREE FATE	RESOURCE ISSUE
9 (Cont)	20	Salvage	
	21-22	Salvage 1 of 2	Riparian Reserve. Leave tree 21
	23	Leave	Riparian Reserve. LWD
	24	Leave	Riparian Reserve.
10	1	Salvage	
	2-3	Salvage	
	4	Salvage portion	Riparian Reserve. Salvage portion in road prism only
	5	Salvage	
	6	Salvage portion	Riparian Reserve. Directionally fall into roadway and salvage portion in road prism only. Insulator.
	7	Leave	Riparian Reserve. Fall toward the river if possible. Insulator.
	8	Salvage portion	Riparian Reserve. Directionally fall into roadway and salvage portion in road prism only.
	9	Salvage	Riparian Reserve.
	10- 10.5	Salvage	Riparian Reserve. Tree 10.5 leans over outhouse**.**
	11	Salvage	Riparian Reserve.
	12	Salvage	Riparian Reserve.
11	1-3	Salvage	Insulator
	4	Salvage	
	5	Salvage	Protect snag
	6-9	Salvage 2 of 4	Fall trees 6 and 7 toward the river and leave.
	10-13	Salvage	Riparian Reserve
	14-15	Salvage	Riparian Reserve
12	1-4	Salvage 3 of 4	Fall tree 1 into the creek and leave
	5	Salvage	
	6	Leave	Fall toward river
	7	Salvage	
13	1	Salvage portion	Potential sensitive plant habitat. Directionally fall into roadway and salvage portion in road prism only.
	2	Salvage	
	2.5-4	Salvage	
	5	Salvage	
14	1	Salvage portion	Directionally fall into roadway and salvage portion in road prism only.
	2	Salvage	
15	1	Leave	Fall towards creek
16	0.5-1	Leave	
	2	Salvage	
	3	Salvage portion	Directionally fall into roadway and salvage portion in road prism only.
17	1	Salvage	
	2	Salvage portion	Directionally fall into roadway and salvage portion in road prism only.
18	1	Salvage	
	2	Salvage	

Total Salvage Trees 145
Total Salvage Portion Trees 23
Total Leave Trees 36

Total Trees Felled 204

LWD = Large Woody Debri

Results of Prefield Review and Field Reconnaissance
for
Protection Buffer and
Survey and Manage Animal Species

Willamette National Forest

Project Name: **NINETEEN ROAD HAZARD TREE SALVAGE PROJECT**_____

Location: District-wide, see Analysis File and EA

Is the project ground disturbing? Yes x____ (if yes, then conduct survey if required by matrix)
No _____ (if no, then document in project file)

Species	Habitat Present? (Y/N)	Date Surveyed	Surveyor(s) Name(s)	Species Located? (Y/N)	Additional Survey Needs? When and Where?
Megomphix hemphilli Oregon megomphix	Y	Surveys not required			
Pristiloma arcticum crateris Crater Lake tightcoil	Y	Surveys not required			
Strix nebulosa Great gray owl	Y	Surveys not required			
Phenacomys (Arborimus) longicaudus Red tree vole	Y	Surveys not required. Individual trees to be felled as well as surrounding trees that might be impacted by the falling trees were inspected, and no nests were found.	Ruby Seitz	N	N

Survey and Manage species surveys are not required for hazard tree removal.

_____ _____

Wildlife Biologist Date

United States Department of Agriculture | Forest Service | McKenzie River Ranger District | McKenzie Bridge OR 97413
(Tel) 541-822-7232
(Fax) 541-822-7254

Date: **July 15, 2002**

File Code: **2600 Wildlife**

Subject: **Wildlife Survey and Manage, Protection Buffer, Mitigation Measure, Management Indicator Species, and Migratory Landbird Analysis for the Road 19 Environmental Assessment, McKenzie River Ranger District**

Wildlife Survey and Manage, Protection Buffer, Mitigtion Measure Species

The Record of Decision (ROD) for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (2001) amends the Northwest Forest Plan to provide a more efficient level of species protection. The ROD requires that all habitat altering projects consider their effects to Survey and Manage, Protection Buffer, and Mitigation Measure species. The species listed in Table 1 occur on the Willamette National Forest.

Table 1: Survey and Manage, Protection Buffer, and Mitigation Measure Wildlife Species on the Willamette National Forest (ROD 2001).

SPECIES	Management Strategy	Habitat
egomphix hemphilli (Linn and Marion Counties only)	A = Rare. Predisturbance surveys required. Manage Known Sites. 180' no-harvest buffer.	Forested areas with a hardwood component and down woody material
Megomphix hemphilli (S. of Linn/Benton Counties only)	F = Status Unknown. Strategic Surveys Required Only. Manage Known Sites. 180' no-harvest buffer.	Forested areas with a hardwood component and down woody material
Pristiloma arcticum crateris	B = Rare. Strategic Survey. Manage Known Sites. 180' no-harvest buffer.	Forested areas with a hardwood component and down woody material
Arthropods	F = Status Unknown. Strategic Surveys Required Only. 180' no-harvest buffer.	Unknown
Red Tree Vole	C = Uncommon. Predisturbance Survey Required. Manage High Priority Sites. 10 acre protection buffer.	Forested stands >10" DBH
Great Gray Owl	C = Uncommon. Predisturbance Survey Required. Manage High Priority Sites. 0.25 mile protection buffer on known site.	Mature stands near openings (natural or human-made)
Fringed myotis, silver-haired bat, long-eared myotis, long-legged myotis, and Townsend's big-eared bat.	Protect caves, abandoned mines, abandoned wooden bridges, and abandoned buildings.	Caves, mines, abandoned wooden bridges, and abandoned buildings.
Black-backed woodpecker	Manage snags to provide for 100% population levels	High elevation forests.
Pygmy nuthatch	Manage snags to provide for 100% population levels	High elevation forests.

The proposed action outlined in the Road 19 EA will not affect any of these species. As shown on the attached document: "Results of Prefield Review and Field Reconnaissance for Protection Buffer and Survey and Manage Animal Species", no special protection is needed.

Management Indicator Species

Management Indicator Species (MIS) were addressed in the Willamette National Forest Plan (1990). They include the spotted owl, pileated woodpecker, marten, elk, deer, cavity excavators, bald eagles, peregrine falcons, and fish. Through Region-wide coordination, each Forest identified the minimum habitat distribution and habitat characteristics needed to satisfy the life history needs of the MISs. Management recommendations to ensure their viability were incorporated into all WNF FSEIS Action Alternatives. All alternatives in this project meet applicable Standards and Guidelines from the WNF Plan. The amount or characteristics of their required habitat is not significantly changed. With the 1996 and 2001 Amendments to the WNF Plan (i.e. the Northwest Forest Plan, NWFP), persistence for spotted owls, pileated woodpeckers, and marten was evaluated, and the FSEIS indicated persistent populations would be maintained under the NWFP Standards and Guidelines (Appendix J2). All alternatives in this project meet applicable Standards and Guidelines from the NWFP.

Migratory Landbirds

A January 11, 2001 Executive Order outlines the "Responsibilities of Federal Agencies to Protect Migratory Birds." Habitats vary broadly for this large group of species. The removal of hazard trees adjacent to Road 19 as proposed may unintentionally take individual migratory birds, but is not expected to have a measurable negative effect on bird populations because of the limited extent of habitat removal. Falling of some hazard trees will be restricted to occur outside of the nesting season for spotted owls and peregrine falcons, which will also mitigate impacts to nesting migratory landbirds. These restrictions may limit the timing of the entire hazard tree project to the fall and winter, which would further reduce impacts.

_____

Ruby Seitz
Wildlife Biologist

Appendix C 2

Survey and Manage Species

Surveys for the Survey and Manage Species as listed on table 1-1 in the 2001 Final Supplemental Environmental Impact statement Record of Decision and Standards and Guidelines (FSEIS ROD), were not required for this project as per ROD direction on page 22: “maintenance of improvements and existing structures is not considered a habitat disturbing activity. Examples of routine maintenance include…falling hazard trees” (USDAFS, 2001).

Appendix D

USDA Forest Service

Willamette National Forest
McKenzie Ranger District

57600 McKenzie Hwy
McKenzie Bridge, OR 97413
Tel (541) 822-3381
FAX (541)822-7254

File Code: 2670 **Date:** March 25, 2002
Route To: Files

Subject: Biological Assessment and Biological Evaluation Road 19 Hazard Tree Removal

To: Rita Mustatia – Team Leader

The purpose of this report is to provide documentation on the potential effects to species listed under the Federal Endangered Species Act (Biological Assessment), and listed as "sensitive" by the Forest Service and in accordance with Forest Service Manual (FSM) 2670 (Biological Evaluation).

Threatened and Endangered Species

- **Consultation With National Marine Fisheries Service for Spring Chinook (*Oncorhynchus tshawytscha*), and U.S. Fish and Wildlife Service for Bull Trout (*Salvelinus confluentus*)**

Spring chinook salmon and bull trout are both listed as "threatened" species under the Endangered Species Act (ESA). Therefore consultation is required under Section 7 of the Act if projects "may affect" those species or their habitats. Consultation for hazard tree removal has been completed for both species under programmatic consultation documents (Biological Assessments and Biological Opinions). Under these documents the effects determination for hazard tree removal is **"may affect, but not likely to adversely affect."**

In the specific case of this proposed action the determination is consistent based on the following rationale:

- Any effects that occur are expected to be negligible, or beneficial if the trees can be felled into stream channels. Felling trees into channels will provide a beneficial direct effect to streams due to the addition of large wood. Large wood in stream channels serve as a physical feature for fish habitat creation, a source of fish cover, a feature that retains smaller organic debris that can be processed in the stream ecosystem, and as a long-term source of organic decomposition. Also since the stands along Forest Road 19 and the South Fork McKenzie River are well stocked, there will be a continued future source of large wood for the area.

- Project design criteria found in the programmatic consultation documents will be met.

The project design criteria are as follows:

- Remove minimum number of trees required for safety.

- Conduct activities to limit need for additional access or disturbance to other vegetation.
- Use felled trees as large woody debris in the riparian area or stream when practical.

The project design employs these criteria by only removing the minimum number of trees; limiting access of yarding and loading equipment to existing roadways; and felling trees toward stream channels where possible.

Consultation on wood placement in streams inhabited by spring chinook salmon or bull trout has also been conducted programmatically. Under these documents the effects determination for large wood placement (or aquatic habitat projects) is **"may affect, likely to adversely affect."**

The programmatic Biological Opinion made this determination based on the following potential effects associated with instream projects:

- The potential for sediment delivery, including turbidity effects.
- The potential for fuel or oil spills.
- The potential for streambank erosion.
- The potential to disturb the stream influence zone.
- The potential to cause "take" of listed fish.

The project design criteria are as follows:

- Follow ODFW guidelines for timing of in-water work.
- Stabilize known or potential erosion areas.
- Have a fish biologist, hydrologist, or other agency individual with understanding of threats and impacts to aquatic ecosystems present on site during operations to ensure that:
    1. The number of access points through the riparian area is minimized
    2. Time heavy equipment is in the stream channel is minimized.
    3. Equipment operation is performed in a manner that minimizes sedimentation.
- Include an approved spill response plan for any actions involving operation of heavy equipment in or near streams.
- No conifers should be felled (for instream habitat projects) in the riparian area unless conifers are fully stocked.

The project design employs these criteria by: not allowing any equipment in stream channels; there will be no access through the riparian area since trees will be directionally felled toward streams, where appropriate, from an existing road; trees would be felled into streams during the

ODFW instream work period (July 1 thru August 15); equipment must remain on existing roadways so there will be no increased erosion due to tree felling and removal; fuel and oil spill plans are required in the contract; and finally, the riparian area is in a fully stocked condition.

- **Critical Habitat**

The South Fork McKenzie River is designated as critical habitat for chinook salmon. Given the rationale used for the effects determination to listed fish, and since project design criteria will be adhered to, the finding of effect to critical habitat for this project is: **will not destroy or adversely modify designated critical habitat.**

On March 11, 2002 the National Marine Fisheries Service (NMFS) announced that it is seeking judicial approval of a consent decree withdrawing its current **critical habitat designations** for 19 salmon and steelhead populations. The spring chinook that inhabit the McKenzie River are included in this withdrawal request. The NMFS will undertake a new, more thorough analysis consistent with a recent decision of the United States 10th Circuit Court of Appeals and will proceed to re-issue critical habitat designations after the analysis is complete. The authorities of the ESA (sections 4, 7, 9, and 10) that NMFS primarily relies on for its enforcement and protection measure will remain in effect.

U.S. Forest Service Sensitive Species – Pacific Northwest Region

There are currently no aquatic species on the Regional Forester's Sensitive Species List that occur on the Willamette National Forest. Therefore this project will have **no impact** on aquatic sensitive species (FSM 2670).

Magnuson-Stevens Fisheries Conservation Act – Essential Fish Habitat

The South Fork McKenzie River is designated as Essential Fish Habitat (EFH) up to Cougar Dam. Upstream of Cougar Dam the South Fork is not designated as EFH because Cougar is an impassible barrier. Since there are no trees that will need to be felled below the dam, and since trees are being left on site when needed as down wood or instream wood, this project **will not adversely affect EFH.**

/s/Ramon Rivera
RAMON RIVERA
District Fisheries Biologist

APPENDIX E

United States Department of Agriculture

Forest Service

Willamette National Forest
McKenzie River Ranger District

57600 McKenzie Highway
McKenzie Bridge, OR 97413
Tel (541) 822-3381
FAX (541) 822-7254

Caring for the Land and Serving People

BIOLOGICAL EVALUATION/ASSESSMENT
For the
Road 19 Hazard Tree and Salvage Project
July 17, 2002

Environmental Analysis for the Road 19 Hazard Tree and Salvage Project requires a Biological Evaluation to be completed (FSM 2672.4). The Biological Evaluation process is intended to analyze and document activities to ensure proposed management actions: 1) do not contribute to loss of viability of any native or desired non-native plant or animal species; 2) incorporate concerns for sensitive species throughout the planning process, reducing negative impacts to species and enhancing opportunities for mitigation; 3) ensure that activities will not cause a species to move toward federal listing; 4) comply with the requirements of the Endangered Species Act that actions of Federal agencies not jeopardize or adversely modify critical habitat of Federally listed species; and 5) provide a process and standard by which to ensure that threatened, endangered, proposed, and sensitive species receive full consideration in the decision making process (FSM 2672.41 ID and 2672.41). Species evaluated include:

1. Species listed or proposed to be listed as endangered (E) or threatened (T) by the USDI Fish and Wildlife Service
2. Species listed as sensitive (S) by USDA Forest Service Region 6.

I. INTRODUCTION

This biological evaluation determines the effects of all alternatives of the Road 19 EA on any proposed, threatened, endangered, or sensitive fauna that may occur within the analysis area. Biological evaluations of the potential effects to threatened, endangered, and sensitive flora, fish, and macro-invertebrates are in separate documents, prepared by a Botanist and a Fisheries Biologist. This determination, required by the Interagency Cooperation Regulations (Federal Register, January 4, 1978), ensures compliance with the Endangered Species Act of 1973, P.L. 93-205 (87 Stat. 884) as amended.

Project Location and Description

The proposed Road 19 EA is located along Forest Service Road 19, also known as Aufderheide Drive, on the McKenzie River. It includes the felling of hazardous trees of various diameters and species within approximately 150’ of the road. Hazard trees were assessed based on:

- Long-Range Planning for Developed Sites in the Pacific Northwest
- Tree Hazards, Recognition and Reduction in Recreation Sites
- Forest Disease Management Notes, Pacific Ranger District Northwest Region

An IDT has identified which trees will be felled and left in place. In general, trees will be left on the ground where either 1) there is limited LWD currently available in the immediate vicinity; 2) the trees are within a

spotted owl late successional reserve; or 3) the trees are within a riparian reserve. Appendix 1 describes the fate of each tree and the resource issue involved with the prescription. All machinery will stay on the roadbed. The exception is tree 10.5 for which machinery will be needed. No impacts are expected because this tree is entirely within a campground administrative site. Seasonal restrictions are included for activities near T&E sites (see Table 1).

II RISK ASSESSMENT PROCESS

This Biological Evaluation covers a 6-step process to identify proposed, threatened, endangered, and sensitive (TES) wildlife species that may be associated with the project area, and to evaluate any impacts the project may have to those species:

1. Review of existing documented information.
2. Field reconnaissance of the project area for evidence of species or habitat.
3. Evaluation of the impacts of the project to suspected or known local populations of TES species.
4. Analysis of the significance of the project's effects on local and entire populations of TES species.
5. If step 4 cannot be completed due to lack of information, a biological investigation is done*.
6. Conferencing or informal/formal consultation with FWS is initiated at appropriate stage as outlined in FSM 2673.2-1, or is otherwise arranged through formal channels.

* Step #5 pertains only to listed species and will not be shown in the table below except when applicable.

A summary of the Biological Evaluation process for species with potential to occur in this project area is displayed below.

Step #5 (BIOLOGICAL INVESTIGATION) was not required for any species, and it is not displayed.

The entire analysis area has been surveyed for potential habitat on aerial photos, and to a large extent, on the ground. Surveys completed are described on the following pages by species. Specific wildlife surveys are not required if potential habitat is not present or if the proposed alternatives would avoid impacts to potential habitat (FSM ID 2672.43, 1992) (indicated under "Survey Completed," by a No*).

Table 1: Initial Screening for Effects Determination

	STEP 1	**STEP 2**	**STEP 3**	**STEP 4**	**STEP 6**
	PreField Review	*Field Reconn.*	*Conflict Determination*	*Analysis of Significance*	*FWS Review*
	Habitat Present	**Species Survey?**	**Species Present?**	**Conflict?**	**Consulta-tion?**
Spotted Owl *Strix occidentalis caurina*	**yes**	**no**	**yes**	**No – RX 1&2**	**Not required**
Bald Eagle *Haliaeetus leucocephalus*	**yes**	**yes**	**no**	**No – RX 1**	**Not required**
Canada Lynx *Lynx canadensis*	**no**	**n/a**	**no**	**no**	**Not required**
Least Bittern *Ixobrychus exilis*	**no**	**n/a**	**no**	**no**	**Not required**
Bufflehead *Bucephala albeola*	**no**	**n/a**	**no**	**no**	**Not required**
Harlequin Duck *Histrionicus histrionicus*	**yes**	**no**	**yes**	**No – RX 1**	**Not required**
American Peregrine Falcon *Falcon peregrinus anatum*	**yes**	**yes**	**yes**	**No – RX 1**	**Not required**
Yellow Rail *Coturnicops noveboracensis*	**no**	**n/a**	**no**	**no**	**Not required**
Black Swift *Cypseloides niger*	**no**	**n/a**	**no**	**no**	**Not required**
Tricolored Blackbird *Agelaius tricolor*	**no**	**n/a**	**no**	**no**	**Not required**
Baird's Shrew *Sorex bairdii permiliensis*	**yes**	**no***	**unknown**	**no**	**Not required**
Pacific Shrew *Sorex pacificus cascadensis*	**yes**	**no***	**unknown**	**no**	**Not required**
California wolverine *Gulo gulo*	**no**	**no**	**yes**	**no**	**Not required**
Pacific Fisher *Martes pennanti*	**no**	**no**	**no**	**no**	**Not required**
Pacific Fringe-tailed Bat *M. thysanodes vespertinu*	**yes**	**no***	**unknown**	**no**	**Not required**
OR Slender Salamander *Batrachoseps wrighti*	**yes**	**no***	**unknown**	**no**	**Not required**
Cascade Torrent Salamander *Rhyacotriton cascadae*	**yes**	**no***	**unknown**	**no**	**Not required**
Foothill Yellow-legged Frog *Rana boylii*	**no**	**n/a**	**no**	**no**	**Not required**
Oregon Spotted Frog *Rana pretiosa*	**no**	**n/a**	**no**	**no**	**Not required**
Northwestern Pond Turtle *C. marmorata marmorata*	**no**	**n/a**	**no**	**no**	**Not required**

RX 1 = Seasonal Restriction will be in place during breeding season.
Seasonal Restriction Periods:
Spotted Owls: March 1 – July 15
Peregrine Falcons: January 15 - July 31
Harlequin Ducks: March 30-July 15
Bald Eagles: January 1-August 31

RX 2 = Some trees will be retained as LWD in riparian reserve and where less than 240 lineal feet/acre is present

III AFFECTED WILDLIFE

A discussion of the effects of the proposed project alternatives on TES species follows. All species on the R-6 List for the McKenzie River Ranger District were considered. If it was determined that habitat does not exist in this analysis area, they are not discussed below. References for this determination are listed at the end of this document.

NORTHERN SPOTTED OWL (*Strix occidentalis*)
Federal Threatened
State Threatened

Introduction
In general, owl activity is expected to occur primarily in the interior of older timber stands. These habitats provide the structural characteristics required by the owls for food, cover, nest sites, and protection from weather and predation.

Habitat Availability and Owl Sites
Most of the area along Road 19 south of Cougar Reservoir contains suitable spotted owl nesting, roosting, and foraging habitat. Portions of the project area are overlapped by known spotted owl home ranges. Most of these owls have USFWS leg bands and color bands as part of an Oregon State University Demographic study. Spotted owl home ranges are mapped as 1.2 mile radius circles. Some areas along Road 19 have not been surveyed for spotted owls in recent years and no longer meet R6 protocol. Three survey visits were conducted in 2002 at several campgrounds along Road 19 that no longer meet protocol.

CONFLICT DETERMINATION

Management Plan Compliance
On April 13, 1994, the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl (1994 ROD) was signed by the Forest Service and other Federal agencies. This 1994 ROD amended the Willamette National Forest Land Management Plan (1990). The 1994 ROD includes a network of large Late Successional Reserves (LSR) distributed throughout the owl's range, totaling approximately 7.4 million acres. It also includes 100 acre LSRs to be designated around owl sites known as of Jan. 1, 1994. The 1994 ROD, which also includes additional protection for riparian areas and other species, was assessed by the USFWS, and they determined it would not jeopardize the northern spotted owl. Incidental take, however, still requires consultation at the project level. Implementation of the 1994 ROD includes the following:

1. Establishment of 100 acre LSRs around known sites, and no treatment of stands > 80 years old in LSRs;
2. The implementation of all other applicable standards and guidelines within the ROD.

Analysis of the proposed alternatives indicates that:
1) Seasonal restrictions will be in place during the critical nesting period (March 1 – July 15)
2) Some trees felled will be retained on site to ensure adequate amounts of large woody material where it is currently low.

There are no conflicts with current management direction and this project. None of the hazard trees are located within LSRs.

Direct Effects
No Action: There are no expected negative impacts to spotted owls or their habitat with the selection of the no action alternative because no habitat alteration or noise disturbance would occur. These trees will fall naturally over time, causing impacts to habitat or individual animals in an unknown manner.

Action: The project includes the application of seasonal restrictions, and some felled trees will be retained on the ground in to ensure adequate levels of large woody material. Though individual trees near Road 19 will be felled, some of them currently contributing to the overstory elements of spotted owl habitat, it is unlikely that the scope of this activity affect spotted owls, spotted owl habitat, or critical habitat. The removal of scattered individual trees is not extensive enough to alter the function of the existing habitat. The planning boundary does not include any areas of concern (The Santiam Pass Area of Concern is several miles to the east).

CONCLUSION
At the time this document was written, a final Recovery Plan for the spotted owl had not been published. Final Critical Habitat (CHU) had been designated January 15, 1992. A "No Jeopardy" Biological Opinion was prepared for the 1994 FEIS ROD and 2001FSEIS ROD. Consultation guidelines were provided for 1994 and 1995 projects (USFWS 1994), and additional guidance was provided by the WNF Biologist group October 1996 (informal memo). Based on analysis described above, the following determinations can be made:

The action alternative for this project will have no effect on spotted owls, owl habitat, or critical habitat. Seasonal restrictions will be in place to avoid disturbance, and the function of habitat will not be diminished by the removal of limited, individual trees near roads. Formal consultation is not required, and concurrence with the USFWS is not required for this determination. The No Action alternative will also have no effect on spotted owls because only natural events will occur near the owl sites.

NORTHERN BALD EAGLE (*Haliaeetus leucocephalus*)
Federal Threatened
State Threatened

The bald eagle requires habitat consisting of scattered old-growth conifer trees in proximity to available food sources, such as lakes, reservoirs, and rivers.

Conflict Determination
Potential nesting, foraging, and roosting habitat occur in the project area surrounding Cougar Reservoir. The southern end of the reservoir has not been surveyed in recent years. Bald eagles were surveyed along the northern half of Cougar Reservoir in 2001, 2000, and 1998. One eagle has been seen several times, and on one occasion two eagles were seen, but a nest has never been found. There is a known nest at Blue River Reservoir, located only a few miles away.

Direct/Indirect and Cumulative Effects
No Action: There are no expected effects to bald eagles associated with implementation of the no action alternative because there will be no habitat alteration or disturbance. These trees will fall naturally over time, causing impacts to habitat or individual animals in an unknown manner

Action: The project includes the application of a seasonal restriction around Cougar Reservoir because the southern area has not been surveyed. Removal of scattered individual trees is not extensive enough to alter the function of the existing eagle habitat.

CONCLUSION
The action alternative for this project will have no effect on bald eagles or their habitat because seasonal restrictions will be in place to avoid disturbance. If eagle surveys that include the southern portion of Cougar Reservoir do not result in locating nests, the seasonal restriction may be waived.

The function of habitat will not be diminished by the removal of limited, individual trees near highways. Formal consultation is not required, and concurrence with the USFWS is not required for this determination. The No Action alternative will also have no effect on bald eagles because only natural events will occur near the sites.

HARLEQUIN DUCK (*Histrionicus histrionicus*)
Federal Sensitive

Harlequin ducks use rivers, streams, and creeks as feeding habitat and commonly nest in bank cavities. Log jams and overhanging vegetation are most important along smaller streams whereas islands and mid-stream boulders are used for security cover on larger rivers (Wallen and Groves, 1989). Harlequin ducks feed on aquatic insects, crustaceans, mollusks, tadpoles, and small fish. Macroinvertebrate levels may play a role in determining harlequin duck population densities.

Breeding ducks appear to require clean, fast-moving water, nearby loafing sites (consisting of exposed rocks, logs, or root wads), dense riparian shrubs and/or timber on the banks, and undisturbed drainages (Cassirer and Groves, 1989). A number of authors have suggested that brood rearing areas do not correspond to nesting locations, and that broods move downstream from nesting areas (Wallen, 1987; Cassirer and Groves, 1989). Broods prefer lower gradient streams not less than 10 m in width, with overhanging vegetation, and plentiful woody material (Cassirer and Groves, 1989).

Conflict Determination
Harlequin ducks have been seen in the Southfork of the McKenzie River as well as in French Pete Creek. Other suitable tributaries are also present in the Road 19 project area.

Direct/Indirect and Cumulative Effects
No Action: There are no expected effects to harlequin ducks associated with implementation of the no action alternative because there will be no habitat alteration or disturbance. These trees will fall naturally over time, causing impacts to habitat or individual animals in an unknown manner.

Action: This project may benefit harlequin duck habitat because large wood from hazard trees for suitable loafing sites will be added to the Southfork McKenzie River. A seasonal operating restriction during the harlequin duck nesting season will prevent noise disturbance which could cause nesting failure, as well as physical damage disturbance to current year nest sites

CONCLUSION
The action alternative for this project may benefit harlequin ducks by the addition of large logs to suitable nesting/loafing habitat. Seasonal restrictions will be in place to avoid disturbance during the nesting season. Formal consultation is not required, and concurrence with the USFWS is not required for this determination. The No Action alternative will also have no effect on harlequin ducks because only natural events will occur near the sites.

AMERICAN PEREGRINE FALCON (*Falco peregrinus*)
Federal Sensitive
State Endangered

In the Pacific states, preferred peregrine falcon nesting sites are sheer cliffs 75 ft. or more in height within proximity to meadows, lakes, or riparian areas where there is an abundance of prey species.

Conflict Determination
In 1981, 1990, 1991, and 1992 the Oregon Department of Fish and Wildlife completed an aerial reconnaissance of cliffs on the McKenzie River RD that identified areas with nest site potential. Subsequent surveys have identified one peregrine falcon eyrie in the project area. The secondary and tertiary zones overlap Road 19. Other surveys have been conducted along cliffs along Hardy Ridge and along the Three Sisters Wilderness boundary, which is bounded by cliff bands. Although these surveys were conducted following established protocol, they are not current at this time.

Direct/Indirect/Cumulative Affects
No Action: There are no expected effects to peregrine falcons associated with implementation of the no action alternative because there will be no habitat alteration or disturbance. These trees will fall naturally over time, causing impacts to habitat or individual animals in an unknown manner

Action: This alternative will not affect peregrine falcons because: 1) There will be a seasonal operating restriction between January 15 - July 31 due to unsurveyed habitat. 2) Some trees will be left in place near the known peregrine site to ensure abundant large woody material is available to the peregrine falcon prey base.

CONCLUSION
The action alternative for this project will have no impact on peregrine falcons or their habitat because seasonal restrictions will be in place to avoid disturbance, and the function of habitat will not be diminished by the removal of limited, individual trees near highways. The No Action alternative will also have no effect on peregrine falcons because only natural events will occur near the sites.

BAIRD'S SHREW (*Sorex bairdii permiliensis)*
and
PACIFIC SHREW (*Sorex pacificus cascadensis*)
Federal Sensitive

The Baird's shrew is endemic to Oregon, occurring from the Coast Range to Benton County and along the west slope of the Cascade Range from the Columbia River to central Lane County. Little is known about its habitat needs, but it appears to be associated with coniferous forests. In 1986, 2 specimens were trapped from an open Douglas-fir forested area with numerous rotting logs in Polk County. Known locations on the McKenzie River District have been documented in the Mill Creek area.

The Pacific Shrew appears to occur in two disjoint populations in the Cascades and Coast ranges. It is associated with wet areas along class III-IV streams flowing through red alder and salmonberry, the banks of which are strewn with fallen trees and interspersed with skunk cabbage marshes. They can occasionally be found around fallen trees in the moist conifer forest itself. They make their nests out of grasses, mosses, lichens, or leaves. There are no known locations on the McKenzie River RD.

Conflict Determination
There are no known locations in the project area for either of these species. However, there is potential habitat for these species because coniferous forests are located along Road 19.

Direct/Indirect/Cumulative Affects
No Action: There are no expected effects to these shrews associated with implementation of the no action alternative because there will be no habitat alteration or disturbance. These trees will fall naturally over time, causing impacts to habitat or individual animals in an unknown manner.

Action: It is unknown how the felling and felling/removal of trees may impact these two species. Ground-disturbance will be minimal because machinery will remain on the roadbed during tree removal. Some felled trees will be left in place to supplement existing levels of large woody material, which may benefit these species. There could be direct impacts to these species if falling trees land on their nests or resting areas.

CONCLUSION
The alternatives associated with this project may impact individual animals if they are directly impacted by falling trees, or if their habitat is altered by tree removal. Because of the limited amount of area associated with this project, the action will not likely contribute to a trend towards Federal Listing or a loss of viability to the population or species.

PACIFIC FRINGE-TAILED BAT *(M. thysanodes vespertinu)*
Federal Sensitive

Fringed-tailed bats are thought to be rare over much of Oregon. Essentially nothing is known of their habitat requirements, though they have been captured in coniferous forests. They are known to use caves, mines, rock crevices, and buildings as both day and night roosts. Nothing is known of their hibernaculum requirements.

Conflict Determination
There are no known locations in the project area for either of these species. However, coniferous forests are located in the project area, and there is potential habitat for these species under bridges and in rock crevices.

Direct/Indirect/Cumulative Affects
No Action: There are no expected affects to this bat associated with implementation of the no action alternative because there will be no habitat alteration or disturbance. These trees will fall naturally over time, causing impacts to habitat or individual animals in an unknown manner.

Action: There could be direct impacts to this species from crushing if they are occupying trees felled with this project. There will be no indirect impacts to this species because of the limited number of trees involved with this project. There will continue to be abundant coniferous forest habitat on this landscape, and no caves, mines, rock crevices, etc. will be impacted with this project.

CONCLUSION

The alternatives associated with this project may impact individual animals if they are directly impacted by falling trees or if their habitat is removed by tree felling. Because of the limited amount of area associated with the action alternative, if individual animals are affected, the action will not likely contribute to a trend towards Federal Listing or a loss of viability to the population or species.

OREGON SLENDER SALAMANDER (*Batrachoseps wrighti)*
and
CASCADE TORRENT SALAMANDER (*Rhyacotriton cascadae)*
Federal Sensitive

Oregon Slender salamanders occur in coniferous forests, especially those with old-growth Douglas-fir but also in younger stands with abundant large logs. They lay their eggs under thick bark or inside crevices in logs or talus. Juveniles and adults live under thick bark, inside partially decayed logs, or in debris-piles around the bases of large snags. They also occur in moist talus that has abundant woody debris.

Cascade Torrent Salamanders occur in very cold, clear springs, seeps, headwater streams and waterfall splash zones. They may forage in moist forests adjacent to these areas. They lay their eggs in rock crevices and in seeps. The juveniles and adults live in gravel or under small cobbles in silt-free, very shallow flowing water in streams and seeps. Adults may also be found under debris on stream banks or within streamside forests and talus during rainy periods.

Conflict Determination
There is potential habitat for these species in forested areas of the project area. There are no documented locations within the area, but it is likely that they do occur.

Direct/Indirect/Cumulative Affects
No Action: There are no expected affects to these salamanders associated with implementation of the no action alternative because there will be no habitat alteration or disturbance. These trees will fall naturally over time, causing impacts to habitat or individual animals in an unknown manner.

Action: There will be no impacts to these species because 1) existing downed logs that may be providing habitat will not be removed or disturbed; 2) if existing large woody material levels are low, trees will not be removed. Impacts to individual Oregon slender salamanders may occur if felled trees fall on them as they rest in forested areas.

CONCLUSION
The alternatives associated with this project will not impact habitat, but may impact individual animals if they are directly impacted by falling trees. Because of the limited amount of area associated with the action alternative, if individual animals are affected, the action will not likely contribute to a trend towards Federal Listing or a loss of viability to the population or species.

Prepared by: /s/ Ruby Seitz _____ 7-17-2002
RUBY SEITZ Date:
Wildlife Biologist

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Date: 9 April 2002

File Code: 2670 Plants
Subject: 19 Road Salvage BE

Purpose/Location

The purpose of this Biological Evaluation is to review the Nineteen Road Salvage project in sufficient detail as to determine whether the proposed action will result in a trend toward Federal listing of any sensitive plant species.

The project is located on the McKenzie River Ranger District, Willamette National Forest, along Federal Highway 19 (Aufderheide Drive). T16, 17, 18, and 19S, R5 and 5 ½ E.

Proposed Action and Need

The Nineteen Road Salvage Project proposes to fall hazardous trees adjacent to Federal Highway 19 and include some of the trees in a salvage timber sale. There are 18 areas with hazard trees that were selected and designated for falling by the McKenzie River Ranger District.

Approximately 200 trees are designated for falling within the 18 different areas. Some selected trees will remain on the site where felled to either contribute to large woody material, minimize impacts to potential sensitive plant habitat, or for stream restoration purposes.

Trees that will be left on site will contribute to the minimal, general suggested amount of 240 lineal feet per acre of trees greater than 20" dbh and greater than 20' minimum piece length to be available in forested areas of the site. This is in concordance with the Standards and Guidelines for management of Habitat of Late-Successional and Old-growth Forest Related Species Within the Range of the Northern Spotted Owl (USDAFS, 1994 and USDAFS, 2001).

There is a need to fall existing hazardous trees along State and Federal Highways on the McKenzie River Ranger District in order to provide public safety and protection of property. In addition to falling, the removal of some trees is necessary for insuring that access along the highway is maintained. For this project, trees are considered hazardous if they are dead or dying and within striking distance of roadways and turnouts, and they constitute a hazard to the roadways or turnouts by the extent and direction of their lean.

The purpose of this project is to include a commercial sale for a portion of the designated hazard trees to offset the cost of falling the trees and removing them from the roadways where they land. Another identified purpose is to determine which trees should be left on site to provide needed large woody material, or contribute to stream restoration.

Alternatives

Alternative A - No Action

The No Action alternative, Alternative A, would leave all the identified hazard trees standing and would not implement the timber sale. This alternative does not meet the purpose and need for removing hazard trees.

Alternative B – Action (Hazard Tree Removal with a Timber Sale)
Alternative B meets the purpose and need for action by allowing for the falling and salvaging of hazardous trees within the Nineteen Road Salvage Project area. Approximately 200 trees are designated for falling within the 18 different areas. Some selected trees will remain on the site where felled to either contribute to large woody material, minimize impacts to potential sensitive plant habitat, or for stream restoration purposes. Yarding and loading operations would occur only on existing roadways.

Prefield Review
A prefield review of the proposed project area for plant species listed on the 2001 Regional Foresters list for the Willamette National Forest was conducted. No known sensitive plant populations were found during the prefield review.

Survey Results
A survey of the proposed project area for potential sensitive plant habitat was conducted by Susan Stearns on November 26, 2001 and December 7, 2001. Two habitats were recognized as potential sensitive plant habitat; rocky slopes and riparian areas. The rocky slope habitat is potential habitat for the sensitive plant species *Romanzoffia thompsonii* and *Carex scirpodea* var. *stenochlaena*. The riparian area habitat is potential habitat for *Corydalis aqua-gelidae*, and *Cimicifuga elata.* There are no known sites of these four species within or adjacent to (within ½ mile) the project area.
Six locations were recognized as potential sensitive plant habitat:

- Area 2, Trees 28-29: Rocky roadside slope.
- Area 3, Trees 1-2: Steep riparian area.
- Area 4, Tree 1: Small rock cliff below Tree 1.
- Area 8, Trees 4-5: Edge of stream, riparian area.
- Area 13, Tree 1: Rock outcrop.

Mitigation Measures
To minimize the impact to potential sensitive plant habitat the following mitigation measures have been developed for implementation and will be part of Alternative B.

- Area 2, Trees 28-29: Directionally fall away from the rocky slope if possible. Leave trees on site after felling.

- Area 3, Trees 1-2: If possible fall trees into roadway. If that is not possible leave trees in riparian area, do not drag trees through the riparian area.

- Area 4, Tree 1: Directionally fall tree away from rock cliff if possible. Salvage portion in road prism only.

- Area 8, Trees 4-5: Leave trees on site after felling.

- Area 13, Tree 1: Directionally fall tree away from rocks if possible. Leave tree on site after felling.

Effects of the Proposed Project

Direct Effect

Alternative A:

Naturally falling trees can cause a direct effect to sensitive plants and potential sensitive plant habitat. If a tree falls on a sensitive plant is can cause mortality or damage the plant which may cause a decline in health. A tree falling on potential sensitive plant habitat may cause degradation of the habitat. The trees identified as hazard trees in this project are expected to fall and may pose a hazard to humans and property. It is possible these trees could fall on potential sensitive plant habitat or sensitive plants within the project area and cause damage to them. Since a tree falling is a stochastic event, we cannot predict where or when it will fall. Thus we cannot predict the effects to potential sensitive plant habitat or sensitive plants.

The potential sensitive plant habitats present in the project area are rocky areas and riparian areas. These habitats are not rare on the McKenzie River Ranger District or the Willamette National Forest. If one of the potential sensitive plant habitats were to be degraded by a tree falling on it, it would not cause the habitat to become rare on the district or the forest.

Alternative B:

This alternative may lead to a direct effect on potential sensitive plant habitat. Potential sensitive plant habitat may be degraded if a tree were to be felled on it. This would be mitigated for if the trees could be directionally felled away from the habitat. The potential sensitive plant habitats present in the project area are rocky areas and riparian areas. These habitats are not rare on the McKenzie River Ranger District or the Willamette National Forest. If one of the potential sensitive plant habitats were to be degraded by a tree falling on it, it would not cause the habitat to become rare on the district or the forest.

If sensitive plants are present this alternative may directly impact individual plants if a tree were to fall on them. This could result in mortality or damage to the plant that could cause a decline in health. A single tree would not likely effect an entire population of sensitive plants, thus would have minimal impact on species viability. Because surveys were conducted before sensitive plants could be identified in the project area, mitigation measures have been developed to protect potential sensitive plant habitat. With mitigation measures as part of Alternative B, there may be impacts to individuals, but these impacts are not likely to result in a trend towards federal listings because trees will be felled away from potential sensitive plant habitat.

Indirect Effect

Alternative A:

An indirect effect of this alternative would be a potential change in site soil moisture. Loss of a standing tree may result in short term increases in soil moisture due to reduced transpiration. This could impact sensitive plants by creating condition for which they cannot tolerate.

Alternative B:

An indirect effect of this project would be a potential change in site soil moisture. Removal of trees may result in short term increases in soil moisture due to reduced transpiration. This could

impact sensitive plants by creating condition for which they cannot tolerate.

Determination

It is my determination that implementaiton of Alternative A may impact sensitive plants but is not likely to result in a trend towards federal listing of sensitive plant species because a tree falling is a natural stocastic event for which we can not predict the effects.

It is my determination that implementation of Alternative B with the above mentioned mitigation measures may impact but is not likely to result in a trend towards federal listing of sensitive species because trees will be felled away from potential sensitive plant habitat.

Prepared by:_____ Date:_____

Susan Stearns, District Botanist
McKenzie Ranger District

Reviewed by:_____ Date:_____

Cheryl Friesen, District Wildlife Biologist
McKenzie Ranger District

Literature Cited

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Attachment 1: 2001 Regional Forester's List of Sensitive Plant species on the Willamette National Forest

Species	Habitat Present
Agoseris elata	N
Arabis hastatula	N
Arnica viscosa	N
Asplenium septentrionale	N
Aster gormanii	N
Aster vialis	N
Botrychium minganese	N
Botrychium montanum	N
Botrychium pumicola	N
Calamagostis breweri	N
Carex livida	N
Carex scirpoidea var. stenochlaena	Y
Cimicifuga elata	Y
Coptis trifolia	N
Corydalis aqua-gelidae	Y
Frasera umpquaensis	N
Gentiana newberryi	N
Iliamna latibracteata	N
Lewisia columbiana var. columbiana	N
Lycopodiella inundata	N
Montia howellii	N
Ophioglossum pusillum	N
Pellaea andromedaefolia	N
Polystichum californicum	N
Potentilla villosa	N
Romanzoffia thompsonii	Y
Scheuchzeria palustris var. americana	N
Sisyrinchium sarmentosum	N
Utricularia minor	N
Wolffia borealis	N
Wolffia columbiana	N

Attachment 2: Maps of the Project Area

Forest Road 19 Salvage and other Hazard Tree Removal
AQUATIC CONSERVATION STRATEGY ANALYSIS

February 13, 2002

ACS Objective #1: Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.

Watershed Analysis has been conducted for the South Fork McKenzie Watershed where this project is located. This document describes the important physical and biological processes and features that occur within the landscape. This project removes individual or very small clumps of hazard trees, spread out along approximately 25 miles of Forest Road 19. Individual sites are extremely small and are generally isolated from each other so that impacts will be localized and landscape-scale features would be maintained.

ACS Objective #2: Maintain and restore spatial and temporal connectivity within and between watersheds. Lateral, longitudinal, and drainage network connections include floodplains, wetlands, upslope areas, headwater tributaries, and intact refugia. These network connections must provide chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic and riparian-dependent species.

Temporal and spatial connectivity within the watershed would be maintained, since the project is not large enough, or located in a position to affect connectivity between watersheds. There are no aspects of the project that will result in chemical or physical obstruction of routes to areas critical to aquatic or riparian dependent species.

ACS Objective #3: Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.

Unless adequate existing levels of large, down wood are available, hazard trees that are situated in riparian reserves will be retained on site, either in the riparian area, or in-stream. This will contribute to continued integrity of shorelines, banks, and stream bottoms, and eliminates the need for ground disturbing removal activities adjacent to the streams.

ACS Objective #4: **Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. Water quality must remain within the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals comprising aquatic and riparian communities.**
and
ACS Objective #5: **Maintain and restore the sediment regime under which aquatic ecosystems evolved. Elements of the sediment regime include the timing, volume, rate and character of sediment input, storage, and transport.**

Unless adequate existing levels of large, down wood are available, hazard trees that are situated in riparian reserves will be retained on site, either in the riparian area, or in-stream. This will contribute to continued integrity of shorelines, banks, and stream bottoms, and eliminates the need for ground disturbing removal activities adjacent to the streams. By eliminating ground disturbing activities adjacent to streams and preserving shoreline and bank integrity, sediment regimes and water quality will be maintained.

ACS Objective # 6 Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.
and
And ACS Objective # 7: **Maintain and restore the timing, variability and duration of flood inundation and water table elevations in meadow and wetlands.**

The project has no known effects on stream flows or wetland water tables in the watershed.

ACS Objective #8: **Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distribution of coarse woody debris sufficient to sustain physical complexity and stability.**

Due to the spatial orientation of these projects, the on-site retention of trees within riparian reserves, and the limited geographic scope of this project, measurable changes in stream temperatures and coarse wood supply will not occur.

The project has no known effects on nutrient filtration.

Surface and bank erosion have been previously discussed under ACS Objective #5 above.

ACS Objective #9 Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.

This project complies with the Northwest Forest Plan, and all of its applicable standards and guidelines. Option 9 was expected to maintain and restore late-successional and old-growth forest ecosystems, and provide adequate viability levels for all late successional species including species listed in the FSEIS ROD Table C-3, and subsequent 2001 ROD Table 1-1. The Watershed Analyses for the South Fork Watershed did not identify any need for increased protection above the ROD recommendations. Adequate amounts of down woody debris will be retained on site. This project will not affect the amount or distribution of these habitats or species that use these habitats.

Forest Road 19 Salvage and other Hazard Tree Removal
ACS Objectives Analysis

Prepared/Reviewed by:

Dave Kretzing, Hydrologist

Susan Stearns, Botanist

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Dave Bickford, Fisheries Biologist

Cheryl Friesen, Resources and Planning Staff Officer

APPROVED BY:

John Allen, District Ranger

Appendix H

19 Road Salvage

South Fork McKenzie River
Wild and Scenic Study River
Section 7(a) Determination
Willamette National Forest
April 30, 2002

19 ROAD SALVAGE
Evaluation of Proposed Hazard Tree Removal and Salvage Project

The purpose of this document is to analyze whether the proposed felling and removal of hazard trees located along Forest Road 19 (Aufderheid Drive) a segment of the West Cascades National Scenic Byway, has a direct and adverse effect on the values of the South Fork McKenzie River. The Omnibus Wild and Scenic Rivers Act of 1988 added segments of 40 rivers to the national Wild and Scenic Rivers system. It also called for study of seven Oregon Rivers to determine whether they are eligible and/or suitable for inclusion into the national system. A 25.7-mile stretch of the South Fork McKenzie River (South Fork) is one of the study rivers. The South Fork is divided into three segments. Segment 1, originating in the Three Sisters Wilderness, is classified "Wild". Segment 2 & 3, paralleled by Forest Road 19, are classified "Recreation". The South Fork has four values that meet the criteria for ORVs: Scenery, Recreation, Fish and Prehistoric.

PROPOSED ACTIVITY

A. Project Proponent

McKenzie River Ranger District, Willamette National Forest, USDA Forest Service

B. Purpose and Need for the Project

The District Ranger for McKenzie River Ranger District has determined a need for falling hazardous trees along Forest Highway 19 (Aufderheide Drive) in order to provide public safety and protection of property. In addition to falling, the removal of some trees is necessary for insuring that access along the highway is maintained. Trees that should be left on site will also need to be determined. This project will include a commercial sale for a portion of the designated hazard trees to offset the cost of falling the trees and removing them from the roadways where they land.

Hazard trees removed from the project area along Forest Highway 19 will reduce the chances of trees falling into the roadways and turnouts as well as the likelihood for accidents to occur. Trees that are left on site after falling and not included in a timber sale will provide needed large woody material or contribute to stream restoration.

Currently, there are trees located along Forest Highway 19 that are considered hazardous because they are dead or dying and within striking distance of roadways and turnouts, and they constitute a hazard to the roadways or turnouts by the extent and direction of their lean.

C. Location

See enclosed map (Appendix A).

D. Proposed Action (magnitude and extent)

Approximately 204 trees are designated for falling within 18 different areas including areas that are within Riparian Reserves. The proposal would include 145 trees in a salvage timber sale and 23 trees that would be partially salvaged The remaining 36 trees would remain on the site where felled to either contribute to large woody material, or for stream restoration purposes.

Trees that will be left on site will contribute to the minimal, general suggested amount of 240 lineal feet per acre of trees greater than 20" dbh and greater than 20' minimum piece length to be available in forested areas of the site as specified in the Standards and Guidelines for Management of Habitat for Late-Successional and Old-growth Forest Related Species Within the Range of the Northern Spotted Owl (USFS, 1994). Some areas, especially those in riparian reserves, will have more than 240 lineal feet left for down woody material.

E. Options Eliminated from Further Study

The "no action" alternative was determined to be inappropriate given safety and liability issues associated with the operation of Forest Road 19.

F. Duration of Proposed Activities

Felling and salvage operations are expected to take 60 - 90 days. Slash disposal is expected to take 30 days.

G. Relationship to Past and Future Management

Historically hazard tree felling and removal have occurred as part of forest road and highway corridor management.

It anticipates the continuing periodic need for hazard tree removal. The plan also addresses the need for leaving sufficient numbers of these trees in place to allow continued natural floodplain and riparian functions. It also recognizes the need to restore this ecosystem component where needed.

It is anticipated that periodically in the future other hazard tree removal activities will be needed.

HOW THE PROPOSED ACTIVITY WILL DIRECTLY ALTER WITH-IN CHANNEL CONDITIONS

A. The following items have been examined and a determination made that no changes are expected as a result of implementing this project.

- Redirection and realignment
- Active channel location
- Channel geometry and slope
- Channel form
- Water quality parameters (turbidity, temperature, nutrient availability)
- River navigation

B. Effect on the River's Outstandingly Remarkable Values (ORVs)

The ORVs identified in the Eligibility Determination for South Fork McKenzie River Report are: scenery, fisheries, recreation, and prehistoric.

(1) Scenery

Minor changes may be apparent in those areas where projects have been implemented to meet management goals and objectives, but impacts would be minor and short-lived.

Project activities will result in short-term color changes, evidence of vegetative and ground disturbance, and a decline in the number of snags visible from the highway and river. Color changes and disturbance areas will recover over a period of one to three years. Reappearance of the snag component will occur over a longer period of time as trees naturally die within the stands.

Slash treatment, rehabilitation of disturbed areas, and “low stumping” of the cut tree stumps will hasten visual recovery.

Most of these transitory changes are not expected to be evident to the casual Forest visitor.

(2) Fisheries

The fishery resource was found to be an ORV due to the river’s overall diversity of fish, anadromous and bull trout populations, and existing and potential habitat that was considered to be exemplary.

Hazard trees along the road were typically too far away from the South Fork to either reach the channel, or to serve as a shade tree. However, a small number of trees could reach the channel and were designated to be felled toward the stream or side channels. This will provide large woody material to the stream. In turn, this will benefit the fishery ORV by providing a source of cover for juvenile fishes from stream velocities. It will also serve a s a physical feature that will aid in the retention of smaller organic material, and spawning gravels.

The proposed action will not adversely affect the fishery ORV. In fact, some of the facets of the project will benefit the fishery ORV.

(3) Recreation

The project area receives heavy recreational use including the Cougar Reservoir Recreation Area, various campgrounds, and several hiking trails. Designed criteria to comply with the Forest Plan standards and guidelines for inventoried Recreation Opportunity Spectrum (ROS) class and visual quality objectives (VQO) must be considered.

In recognition of the river corridor’s important scenic value, the Aufderheide drive was designated a National Scenic Byway in 1988. Management activities along the route could potentially affect the scenic quality and recreational experience travelers through the area have come to expect. Salvage activities including residual slash piles, stumps, and cut-faces, may affect visual quality if left along the roadsides. Noise and log truck

traffic from the activities may also affect the recreational experience.

(4) Prehistoric

Knowledge of prehistoric use of the river drainage is incomplete. Much of the data collected has come from cultural resources surveys conducted prior to ground-disturbing activities. Such surveys have generally been limited to surface examinations of archeological sites, rather than subsurface sampling of cultural deposits. Several significant prehistoric sites have been identified within the East Fork corridor but will not be impacted from this activity.

HOW THE PROPOSED ACTIVITY WILL DIRECTLY ALTER RIPARIAN AND/OR FLOODPLAIN CONDITIONS.

A. Position of the Proposed Activity relative to the Riparian Area and Floodplain

B. Effects to Vegetation

There will be localized disturbance at the site of each tree caused by felling and additional disturbance associated with the skid trails created by yarding activities of the trees to be salvaged. Areas of disturbance are expected to be evident for one to three years.

C. Effects to Soils

Surface duff and soil disturbance is expected to be associated with each felled tree. Skid trails resulting from yarding are expected to show some disturbance to the surface of the mineral soil layer. Overall soil characteristics are not expected to change appreciably.

D. Effect to the Floodplain

The project will not significantly alter the existing floodplain.

HOW DOES THE PROPOSED ACTIVITY ALTER UPLAND CONDITIONS

No trees are considered to lie in the uplands of the South Fork corridor.

HOW CAN/WILL CHANGES IN ON-SITE CONDITIONS ALTER EXISTING HYDROLOGIC OR BIOLOGIC PROCESSES

A. Ability of the Channel to Change Course, Reoccupy Former Segments, or Inundate its Floodplain.

   No changes from present conditions are expected.

B. Effects to Streambanks

   None.

C. Effects to the Amount or Timing of Flow in the Channel

   None. The proposed project will not change the channel's flow capacity or the availability of flows. Consequently, there would be no effect on the timing or duration of the run-off peak flows.

D. Effects to Existing Flow Patterns

   Flow patterns will not be changed because none of the project is in the river channel.

E. Effects to Surface and Subsurface Flow Characteristics

None

F. Flood Storage (detention)

None

G. Aggradation/deagradation of the Channel

Aggradation and degradation of stream channels occur as a response to: the availability of sediment, the quantity of flows, and channel gradient. The proposed project will not substantially affect any of these parameters and will not result in aggradation or degradation of the channel.

H. Biological Processes

Because of the location and scattered nature of the hazard trees no impacts to terrestrial wildlife is expected.

Reproduction:

The area where work is proposed is out of the river so suitable spawning sites for salmonid fish is not affected. Because of the limited amount of surface disturbance and the lack of connectedness of that disturbance to the river no fine sediments are expected to enter the river.

The scope of the project is not of the magnitude that it will affect the survival of salmonid fish.

MAGNITUDE AND SPATIAL EXTENT OF POTENTIAL OFF-SITE CHANGES

The project is not likely to influence other parts of the river system. Any changes will be extremely localized and minor. Visual rehabilitation of individual sites will occur over a period of a few years.

TIME SCALE OVER WHICH EFFECTS ARE LIKELY TO OCCUR

Effects are expected to occur at various rates. There are changes associated with active project implementation. Those effects will be transitory, created by felling and yarding activities. Vegetation changes

will occur immediately within the project area. Full recovery is expected to take a number of years, although re-establishment will begin immediately and be substantially complete in the herbaceous layer in two to three years and two to five years in the shrub layer.

CONSISTENCY WITH MANAGEMENT GOALS

This action is consistent with the goals and objectives within the Willamette National Forest, Land and Resource Management Plan and will not to effect the future determination or ORVs of the South Fork McKenzie River.

SECTION 7 DETERMINATION

It is my determination that the proposed activity will not have a direct and adverse effect on any of the identified values in the Study Plan for the South Fork McKenzie River.

The proposed activity will not change the free-flowing character of the river from the conditions that existed at the date of the Study Plan. The felling and removal of the hazard trees will result in only minor changes over existing conditions.

The ORVs of the river will not be affected by the proposed activity. Fish habitat conditions will not be changed. Recreational camping may be slightly affected by possible temporary closures during the felling process of specific trees. The scenic character will be changed in the short-term only slightly from motorist's perspective.

_____ _____

JOHN ALLEN Date
District Ranger
McKenzie River Ranger District