Environmental Assessment

Spot Salvage Timber Sale Project

McKenzie Ranger District
Willamette National Forest

June 2001

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Chapter 1
Purpose and Need for Action

This environmental assessment 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 affected public.

The Forest Service and the Oregon Department of Transportation periodically inspect State and Federal Highways for potential hazard trees in order to insure safe passage for the public along these roadways. A prior highway hazard tree removal project was implemented on State Highways 126 and 242, and Federal Highway 20 in 1996. The Spot Salvage Timber Sale Project analyzes the effects of a proposal to implement the next cycle of removing hazard trees from the stands along these highways.

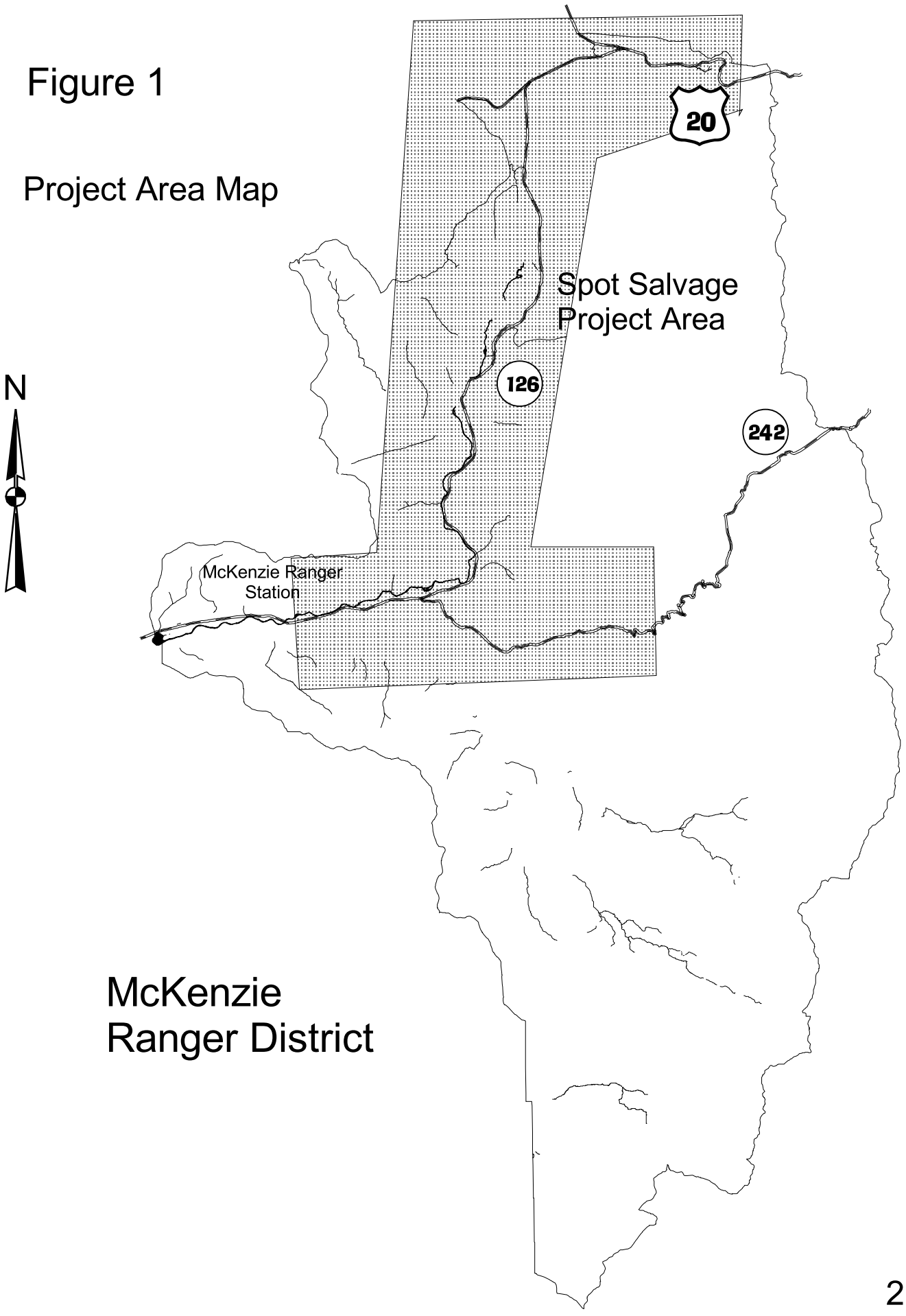
Project Area Description

The Spot Salvage Timber Sale Project area is located on the McKenzie Ranger District along Oregon State Highways 126 and 242, and U.S. Highway 20. This area was analyzed in the Upper McKenzie Watershed Analysis. The elevation of the area ranges from 1,600 feet to 3,300 feet. For more detail of the project area please refer to **Appendix 1**.

Legal Description: T.13, 14, 15, and 16S; R.6 and 7E; Willamette Meridian; Linn and Lane Counties, Oregon **(See Figure 1).**

Figure 1

Project Area Map



McKenzie
Ranger District

Proposed Action

The Spot Salvage Project proposes to fall hazardous trees adjacent to State and Federal Highways within the project area, and include some of the trees in a salvage timber sale. There are 22 areas with hazard trees that were selected and designated for falling by McKenzie Ranger District and Oregon State Highway Department personnel **(See maps in Appendix 1)**.

Approximately 205 trees are designated for falling within the 22 different areas. Approximately 23 of those trees are located within Riparian Reserves. The proposal would include 171 trees in a salvage timber sale that would yield an estimated 100 thousand board feet (MBF). The remaining 34 trees, including 6 that are within Riparian Reserves, would remain on the site where felled to either contribute to large woody material, or for stream restoration purposes. **(See Appendices 2A & 2B)**.

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 Upper McKenzie Watershed Analysis (USDAFS, 1995).

Purpose and Need

There is a need to fall existing hazardous trees along State and U.S. Highways on the McKenzie 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 highways 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.

All actions to satisfy the project 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).

Decision to be made

The decision to be made is whether or not to implement a hazard tree removal project. 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

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; 10b, Dispersed Recreation - Semiprimitive Motorized; 14a, General Forest - Intensive Timber Management; 16b, Late Successional Reserve; 7, Old Growth Groves; 11c, Scenic - Partial Retention middleground; 11f, Scenic - Retention Foreground; 5a, Special Interest Areas; 6d, Wild and Scenic Rivers – McKenzie River; and 9d, Wildlife Habitat - Special Areas. The proposed action for this project would meet with 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 nine issues they considered pertinent to the Spot Salvage Timber Sale Project, two of which are Key Issues. Key Issues drive the development of the alternatives and provide criteria for measuring each alternative. The two Key issues identified are: Public Safety and Protection of Property, and Economics.

Key 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 highway corridors. The maintenance of highway 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 State and Federal Highways have been identified within the project area by Forest Service and ODOT personnel. Falling the hazardous trees would reduce the chance of public property being damaged, and 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.

Air Quality

The proposed action would include slash piling and burning after timber removal in the project area. The amount, application and timing of slash pile burns could affect air quality and fire hazard. The nearby wilderness areas (Mt. Washington and Three Sisters) are Class I airsheds. 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

Salvage activities may affect visual quality if residual slash piles, stumps, and cut-faces are left along the roadsides.

The project area receives heavy recreational use including the McKenzie River Trail, various campgrounds, and Clear Lake Resort. 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.

Oregon State and Scenic Waterway

The project area includes a portion of an Oregon State Scenic Waterway located from Paradise Campground eastward along the McKenzie River to Trail Bridge Reservoir. This designation provides the protection and enhancement of resource values in the river corridor, and allows public use and enjoyment of those resources. Management goals include striving for a balance of resource use and protection, and permitting other activities to the extent that they protect and enhance the river's special attributes. Management activities within the project area could affect the waterway.

Wild and Scenic River

Portions of the project area lie within the Wild and Scenic River- McKenzie River Management area. Falling and salvaging hazardous trees could affect the river's outstandingly remarkable values and special attributes associated with this designation.

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 Key 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.
- Clean Air Act Amendments, 1977.
- The Clean Water Act, 1982.

Alternative A - No Action

The No Action alternative, Alternative A, would not implement the timber sale for the project area. This alternative does not meet the purpose and need for removing hazard trees nor does it address the Key issues determined pertinent to the project.

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 Spot Salvage Project area. The project would fall approximately 205 dead or dying trees along State and Federal Highways located within 22 Areas.

Area Number	Highway / Mile Post	No. of Trees
1	20 / 77.8 N	3
2	20 / 76.0 N	3
3	20 / 70.9 N	8
4	126 / 0.8 W	2
5	126 / 4.1-4.4 W	14
6	126 / 5.5 W	11
7	126 / 4.2 E	6
8	126 / 5.6 E	2
9	126 / 7.8-8.0 W	9
10	126 / 8.4 W	6
11	126 / 9.8-10.0 E	13
12	126 / 9.8 W	3
13	126 / 9.9 W	10
14	126 / 15.0 E	5
15	126 / 15.4 W	1
16	126 / 17.3 W	24
17	126 / 17.5 E	5
18	126 / 53.3-54.4 N/S	18
19	242 / 56.6-61.6 N/S	47
20	126 / 58.8 N/S	10
21	126 /	2
28	126 /	5

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 171 of those trees felled would be removed as part of the timber sale producing about 100 thousand board feet. The other 34 trees, including 6 that are in Riparian Reserves, will be left as downed wood for the area to maintain or enhance late-successional or riparian habitat, or for stream restoration. The trees remaining will not be moved off site.

Alternative B addresses both the Key issue of Public Safety and Protection of Property as well as the key 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. The following trees would be retained onsite in Riparian Reserves to provide coarse woody material (Area-Tree): 15-1, 19-19, 19-41, and 19-45. These trees will be felled toward the stream and into riparian areas

2. Yarding and loading operations would occur only on existing roadways.

3. Seasonal restrictions would be imposed in nesting areas of threatened, endangered, and sensitive species.

4. Slash would be disposed of by hand piling and burning.

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

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

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

8. 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.

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 in order to establish coordination between the agencies regarding highways over National Forest Lands (USDAFS & ODOT, 1992). Potential hazard trees within the project area have been selected and marked jointly by ODOT and Forest Service personnel. The Forest Service is responsible for disposing of the designated 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 highway traffic during logging operations.

Oregon Parks and Recreation Department

Portions of the Spot Salvage project lie within the McKenzie River State 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 Spot Salvage proposal.

Native American Notification and Consultation

Tribal governments were notified of the Spot Salvage Project by letter and in a project review meeting that was held on February 8, 2001. They have also been provided

updates on the Spot Salvage Project through the Willamette Forest Focus, the quarterly review of proposed actions (SOPA),

Public Involvement

The Spot Salvage Project was listed in the SOPA in July of 2000 and has since appeared through the current issue (Summer of 2001).

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 Spot Salvage Project File and the Upper McKenzie Watershed Analyses.

Key Issues

Public Safety and Protection of Property

The project areas that have been identified are located in heavy traffic areas. Portions of Highway 126 is part of the McKenzie Pass-Santiam Pass National Scenic Byway and the West Cascades National Scenic Byway. Highway 242 is also included in the McKenzie Pass-Santiam Pass National Scenic Byway open only during the summer. Both highways provide a scenic drive and many recreational stops. Traffic from boaters, hikers, bikers and other recreators along these highways is high during the summer months. Parking lots fill quickly and there are often a good number of visitors walking or biking near the roadways. Although the winter traffic is not as busy, there are still many recreators that use the highways for trips to the snow parks and ski areas. Hunting season also brings traffic to the highways for those visiting the Willamette National Forest and for those heading east. Highway 126 is also heavily used by the local community including those who commute to and from town.

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 State and U.S. Highways within the upper McKenzie River Watershed. Streams within the vicinity of these sites include the McKenzie River, Lost Creek, and smaller tributaries of each stream. Portions of the McKenzie River between Clear Lake and Scott Creek have been designated as a Recreation River in the National System of Wild and Scenic Rivers. In

addition, the McKenzie River below Trail Bridge 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 McKenzie River provides drinking water for the City of Eugene.

The upper McKenzie River is a large, mountainous stream that flows through recent volcanic terrain that is generally very stable and not prone to excessive sediment yield. Consequently, the river has a stable bank and channel configuration with most substrate material consisting of small boulders and cobbles. Lost Creek also flows through stable volcanic terrain, but flows at a low gradient from a large spring source at the base of a lava flow. Because of its low gradient and steady, spring based flows, Lost Creek retains smaller, pebble sized substrate as well as the larger materials.

Threatened, Endangered, and Sensitive Species

Wildlife:
The McKenzie Ranger District provides habitat for twenty Threatened, Endangered, or Sensitive wildlife species. Within the project area there is potential habitat for eight of these, including: the spotted owl, peregrine falcon, bald eagle, Baird's and Pacific shrews, Pacific fringe-tailed bat, Oregon slender salamander, and Cascade torrent salamander. These species occupy a wide range of habitat, from cliffs to headwater streams. Land management projects could potentially impact these species through noise associated with mechanical equipment; removal of habitat components, such as standing trees or rotten downed wood; or the compaction and disturbance of ground cover.

Plant Species:
Three potential habitats are present in the project area: mixed conifer forest, riparian area, and rocky slope. The mixed conifer forest and riparian area habitats present do not support potential habitat for sensitive species. The rocky slope habitat, however, is potential habitat for the sensitive plant species *Romanzoffia thompsonii*. There is one known occurrence of the species within Area 21.

Fish Habitat:
There are numerous-fish bearing, perennial non-fish-bearing, and intermittent streams in the upper McKenzie Watershed as well as numerous lakes and ponds.

Fish species that inhabit the upper 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*)**
- Brown trout (*Salmo trutta*)**
- Atlantic salmon (*Salmo salar*)**
- Kokanee (*Oncorhynchus nerka*)**

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

The upper McKenzie Watershed is designated as a "Tier 1 Key Watershed" in the Northwest Forest Plan due to the presence of at-risk fish stocks (i.e. Spring Chinook salmon and bull trout) and water quality.

Locations of importance to Spring Chinook salmon are the main stem McKenzie River up to Tamolich Falls, Lost Creek, and to a lesser degree lower Deer Creek (Upper McKenzie Watershed Analysis, 1995). 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.

Important locations in the upper McKenzie for bull trout are; the main stem McKenzie River up to Tamolich Falls, Lost Creek, Anderson Creek, Ollalie Creek, and Sweetwater Creek. Spawning and early rearing habitat for the bull trout sub-population that inhabits the main stem McKenzie below Trail Bridge consists of Anderson and Ollalie Creeks (Upper McKenzie Watershed Analysis 1995). These creeks provide excellent water quality, woody material, and cover for bull trout. Above Trail Bridge Dam, foraging and rearing habitat consists of Trail Bridge pool, main stem McKenzie to Tamolich pool, and lower Smith River. Spawning and early rearing habitat for the Trail Bridge sub-population of bull trout consists of Sweetwater Creek and the upper McKenzie River from the head of Trail Bridge Reservoir upstream to the gradient change near the confluence of Kink Creek. Adults and sub-adults utilize all habitats in the main stem and tributaries while foraging, and their temporal and spatial distribution is determined by concentrations and behavior of prey species as well as intra-specific competition.

Rainbow trout and Coastal cutthroat trout can be found throughout the upper McKenzie Watershed in the main stem river, in smaller tributaries, in the reservoirs, 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 and other introduced fish species can be found primarily in the reservoirs, ponds, and lakes above Trail Bridge Dam. Brook trout were introduced into the watershed in the early 1900's (Upper McKenzie Watershed Analysis, 1995). Naturally barren high mountain lakes lacking opportunity for downstream migration are the only

locations currently used for brook trout stocking by Oregon Department of Fish and Wildlife. 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.

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 airsheds, which include wilderness and other sensitive airsheds. 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

The McKenzie River and its adjacent lands are a favorite location for fishing, hunting, hiking, biking, photography, picnicking, and boating. The Spot Salvage Project area receives high recreational use within and around the river corridor. Clear Lake Resort is along State Highway 126 and has very high use during the summer. Sahalie and Koosah falls are also popular recreational spots located along the highway.

The McKenzie River National Recreation Trail runs adjacent Highway 126 and is within most of the project area.

Paradise, Ollalie, Ice Cap, Fish Lake, and Limber Lost are all developed campgrounds located within the project area. Many dispersed campsites are also located along the highways and within the project area.

Portions of Highway 126 is part of the McKenzie Pass-Santiam Pass National Scenic Byway and the West Cascades National Scenic Byway. Highway 242 is also included in the McKenzie Pass-Santiam Pass National Scenic Byway.

Oregon State Scenic Waterway

The project area includes a portion of the Oregon State and Scenic Waterway from Paradise Campground eastward along the McKenzie River. The Oregon Rivers Initiative, a statewide ballot measure, was passed in 1998 and added the upper McKenzie River to the State Scenic Waterway program.

The Upper McKenzie River Management Plan (1992), a joint federal and state plan, provides for protection and enhancement of resource values in the river corridor and allows public use and enjoyment of those resources. Management goals include striving for a balance of resource use and protection, and permitting other activities to the extent that they protect and enhance the river's special attributes.

Wild and Scenic River

The upper McKenzie Wild and Scenic River extends from the outlet of Clear Lake to its confluence with Scott Creek. It is classified as a recreation river with the following Outstandingly Remarkable Values: scenery, fisheries, geology and hydrology, recreation, and water quality. The river's "recreation" classification under the Wild and Scenic Rivers Act provides that all management activities be accomplished to meet Visual Quality Objectives of Retention and Partial Retention. Approximately five acres of the project area lie within each of these classifications on which 87 trees have been designated for felling. Eleven of the trees have been designated as leave trees; they will remain on site after felling to function naturally within the floodplain and riparian areas.

Heritage Resources

<u>Prehistoric Settlement</u>
The Spot Salvage Project area contains a moderate density of prehistoric lithic (stone tool) archeological sites. That density relates to the likely position of the McKenzie River and Lost Creek corridors 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. Lost Creek corridor (Hwy. 242 area) was probably a natural travel corridor into and possibly out of the Obsidian Cliffs, while the upper McKenzie (Hwy. 126 area) was a natural travel and connecting route to points east and northeast.

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 Spot 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 lifeways 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 lifeways in the upper McKenzie 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. But perhaps the most significant historic development within the Spot Salvage Project area was the construction of travel routes over the mountains. These usually followed Indian horse trails, with the Scott "road" being the first documented, dating to 1862. The Scott Road was supplanted in the 1870's by a toll road up Lost Creek, established by the McKenzie Salt Springs and Deschutes Wagon Road Company (commonly called the McKenzie Toll Road). Tolls were collected until 1895.

Historic travel up the McKenzie River corridor was by trail until the 1930's, when the CCC stationed at Camp Belknap constructed the Clear Lake Road, the first motor travel route along the upper McKenzie. The Clear Lake Road has been evaluated and found eligible for the NRHP. Much of its length was covered over by the present Hwy 126.

Another highly significant historic development near the project area was Belknap Hot Springs, which has been a major public recreational attraction since the 1870's, operating almost continuously since that time. It is unlikely that there would be any archeological materials on Forest Service ground relating to the early historic development of Belknap Hot Springs, however.

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.

Key Issues

Public Safety and Protection of Property

Alternative A – No Action

The impact on public safety and protection of property that would be 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 (Hazard Tree Removal with a Timber Sale)

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 highway 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 (Hazard Tree Removal with a Timber Sale)

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

The only potential impact on water quality and aquatic resources that can be associated with the Alternative A is that failure to treat the hazard could increase the risk of vehicle accidents due to road blockage from fallen trees on these highways. Vehicle accidents often result in spillage of gasoline and other petroleum products, and potentially other hazardous materials. The increased risk of accidents results in a corresponding increase in the risk that these substances could find their way into soils and streams adjacent to the highways.

Alternative B - Action (Hazard Tree Removal with a Timber Sale)

Spills

By eliminating the roadside hazard, either through cutting and leaving hazard trees on the site, or by salvaging them, the risk of vehicle accidents on these highways would be reduced. Since vehicle accidents often result in spillage of gasoline and other petroleum products, and potentially other hazardous materials, the reduced risk of accidents results in a corresponding reduction in the risk that these substances could find their way into soils and streams adjacent to the highways.

Sediment and Turbidity

Since ground-disturbing equipment would be confined to the existing roadways, soil displacement and compaction, and the resultant potential for erosion would be minimal. With the potential for erosion minimized, there is little likelihood that measurable amounts of sediment or turbidity would be introduced into the McKenzie River, Lost Creek, or their tributaries.

Coarse Wood

Trees within Riparian Reserves that are needed to provide coarse wood material are being retained on site. The retained trees 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 Upper McKenzie Watershed Analysis (USDAFS, 1995). Where possible, and where other safety concerns permit, they would be felled toward or into the stream or wetland. As a result of these precautions and the low intensity of this treatment, measurable effects

on the short term or long term supply of large wood to the streams or wetlands in the project area are not anticipated.

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

Flow Conditions
Removal of the hazard trees would have no meaningful impact on the structure and density of the streamside forests. Existing patterns of interception, storage, and runoff of rain and snowfall will be maintained, and there will be no measurable effects on streams.

Threatened, Endangered, and Sensitive Species

Alternative A - No Action

Wildlife:
There are no expected affects to threatened, endangered, or sensitive wildlife species associated with implementation of Alternative A because there would be no mechanical habitat alteration or disturbance. These trees will fall naturally over time, which may alter habitat or impact individual animals, however, the extent of this impact is unknown and unpredictable.

Plant Species:
There are no direct impacts to sensitive plant species associated with Alternative A. No hazard trees occur in close proximity to occurrences of sensitive plants. Felling of hazard trees could have an indirect effect on *Romanzoffia thompsonii* if on site water flow patterns are altered.

Fish Habitat:
In general, Alternative A would have no direct or indirect effect on fish habitat for species in the action area. This is because natural processes will continue to take place on the landscape at "natural" temporal and spatial scales. Hazard trees may or may not fall in a fish-bearing stream where they could provide a physical feature to shape fish habitat. 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 (Hazard Tree Removal with a Timber Sale)

Wildlife:
Alternative B would have no effect to threatened, endangered, or sensitive wildlife species in this project area because 1) the removal of individual trees would not substantially alter the function of their habitat; 2) seasonal restrictions will be in place during critical nesting periods to minimize disturbance from mechanical equipment; 3) some of the trees would be felled and left on site to supplement existing large woody material, enhancing the quality of the existing habitat. There is potential that sensitive species could be impacted if falling trees land on their nests or resting areas. However, the Alternative B is not likely to contribute to a trend towards Federal Listing or a loss of viability to these populations or species because of the limited amount of area associated with this project. Some of the trees would be felled and left on site to supplement existing large woody material, enhancing the quality of the existing habitat for these sensitive species.

Plants:
There are no anticipated direct or impacts to sensitive plant species associated with Alternative B. No hazard trees occur in close proximity to occurrences of sensitive plants. Felling and removing trees could have an indirect effect on *Romanzoffia thompsonii* if on site water flow patterns are altered.

Fish Habitat:
Sediment and Turbidity

Since ground disturbing equipment would be confined to the existing roadways, soil displacement and compaction, and the resultant potential for erosion would be minimal. With this potential minimized there is little likelihood that measurable amounts of sediment or turbidity would be introduced into the McKenzie River, Lost Creek, or other stream channels. Therefore, there would 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 would be retained on site. Where possible, and where other safety concerns permit, they would be felled toward stream channels. This would 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, it would 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.

Stream Temperatures

The falling and removal of the hazard trees would have no meaningful impact on the structure and density of streamside forests. Therefore existing stream shade levels and the corresponding ability of the remaining streamside forests to moderate stream temperatures will be maintained. Due to these reasons there would 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 falling and removal of some of the trees in the action area, there would be no meaningful impact on the structure, density, and canopy cover across the Upper McKenzie Watershed. Therefore existing patterns of interception, storage, and runoff of rain and snowfall would be maintained. Due to these conditions and the limited scope of this action there would 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 (Hazard Tree Removal with a Timber Sale)

Alternative B would create short-term, immediate increase in the fire hazard by 95 tons in the zero to three inch diameter size classes, and a long-term decrease in fire hazard following fuels treatment. Piling and burning of woody debris generally produces fewer emissions per ton of fuel due to a more efficient heat transfer process. The estimated emission in the 2.5 particulate mater (PM) size class is 18.6 tons.

Because of the dispersed location of the areas within the Spot Salvage Project area, smoke would not be concentrated enough to cause an intrusion that would exceed the National Ambient Air Quality Standards (NAAQS) for PM 2.5 in the designated area of Bend Oregon over 60 miles away. Pile burning would occur outside the July 1 through September 15 smoke restriction in the Oregon State SIP for Mt Washington and Three Sisters Wildernesses, which are both Class I airsheds. Air quality visibility in the near vicinity would be affected by smoke during the burning operations for approximately 1 to 2 hours after completed ignition.

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 highways. 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 (Hazard Tree Removal with a Timber Sale)

Alternative B is consistent with the McKenzie Pass-Santiam Pass Scenic Byway Management Plan. 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.

Oregon State and 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 (Hazard Tree Removal with a Timber Sale)

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 upper McKenzie River or its Outstandingly Remarkable Values for which it was designated a Wild and Scenic River.

Alternative B - Action (Hazard Tree Removal with a Timber Sale)

Alternative B will not change the free-flowing character of the river from the conditions that existed at the date of its designation. 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 boating 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 either a boater's or motorist's perspective.

Alternative B will not have a direct and adverse effect on the values for which the upper McKenzie River was designated a Wild and Scenic River.

Heritage Resources

Alternative A - No Action

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

Alternative B - Action (Hazard Tree Removal with a Timber Sale)

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

Archeological field surveys were undertaken in the spring of 1995 and 1996 for areas within which hazard tree removal has been identified. Additional survey and inspection to further specify heritage site areas for avoidance took place this spring 2001 using Willamette National Forest guidelines. Surveys did not identify any previously undiscovered heritage resources.

Archeological survey reports specifying survey methods and findings are being prepared for review by 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" or "No Adverse Effect" determinations for the Spot 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 blowdown, and will safely preserve the heritage values of below ground archeological sites. Hazard trees in the Clear Lake Road would be managed according to the SHPO approved management plan outlined in the evaluation for that feature. Yarding systems will be customized to minimize damage to the road's integrity, such that the cumulative effects of the project do not exceed the threshold prescribed for the historic road.

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, 2000. 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 Upper McKenzie Watershed, where the Spot Salvage Project is located, is included in those waters designated as EFH for spring Chinook salmon by the PFMC.

The proposed action is not likely to adversely affect aquatic systems, recreational fisheries, or designated Essential Fish Habitat. The effects that are likely to occur are based on sound aquatic conservation and restoration principles for the benefit of recreational fisheries, as directed by Executive Order #12962. Since the project is not likely to 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. Based upon this rationale, this project will not adversely modify designated critical habitat for spring Chinook salmon. Critical habitat has not been designated for bull trout, however implementation of the project design criteria will prevent any adverse effects to habitat that could be designated as "critical" in the future.

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 Upper McKenzie Watershed Analysis (1995); 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.

References Cited

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

U.S.D.A. Forest Service. 1994. Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional Old-Growth Forest Related Species within the Range of the Northern Spotted Owl.

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

U.S.D.A. Forest Service. 1994. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl.

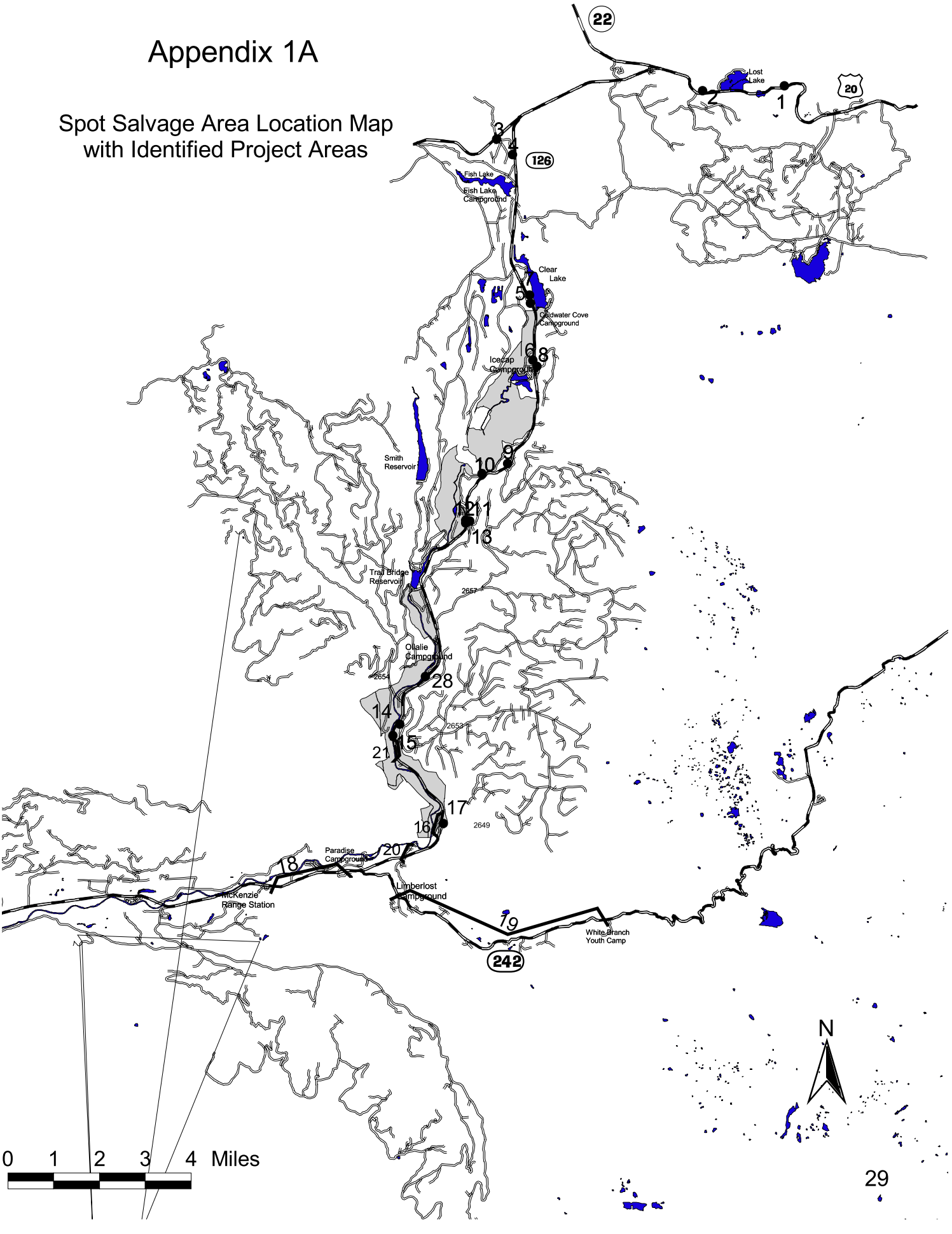
U.S.D.A. Forest Service. 2001. Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines.

U.S.D.A. Forest Service and Oregon State Parks and Recreation Dept. 1992. Upper McKenzie River Management Plan. McKenzie Ranger District. McKenzie Bridge, OR.

U.S.D.A. Forest Service. 1995. Upper McKenzie Watershed Analysis. McKenzie Ranger District. McKenzie Bridge, OR.

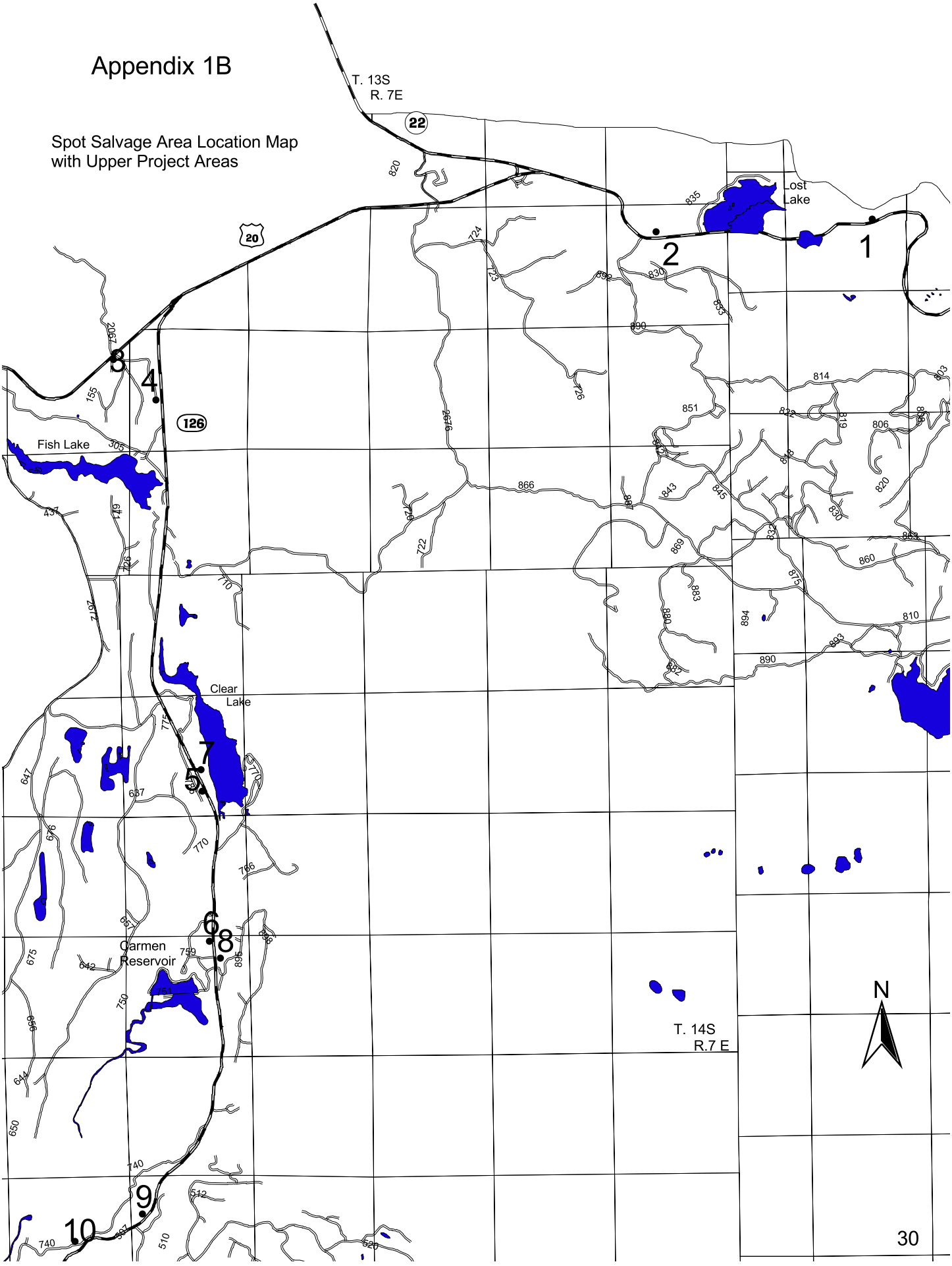
Appendix 1A

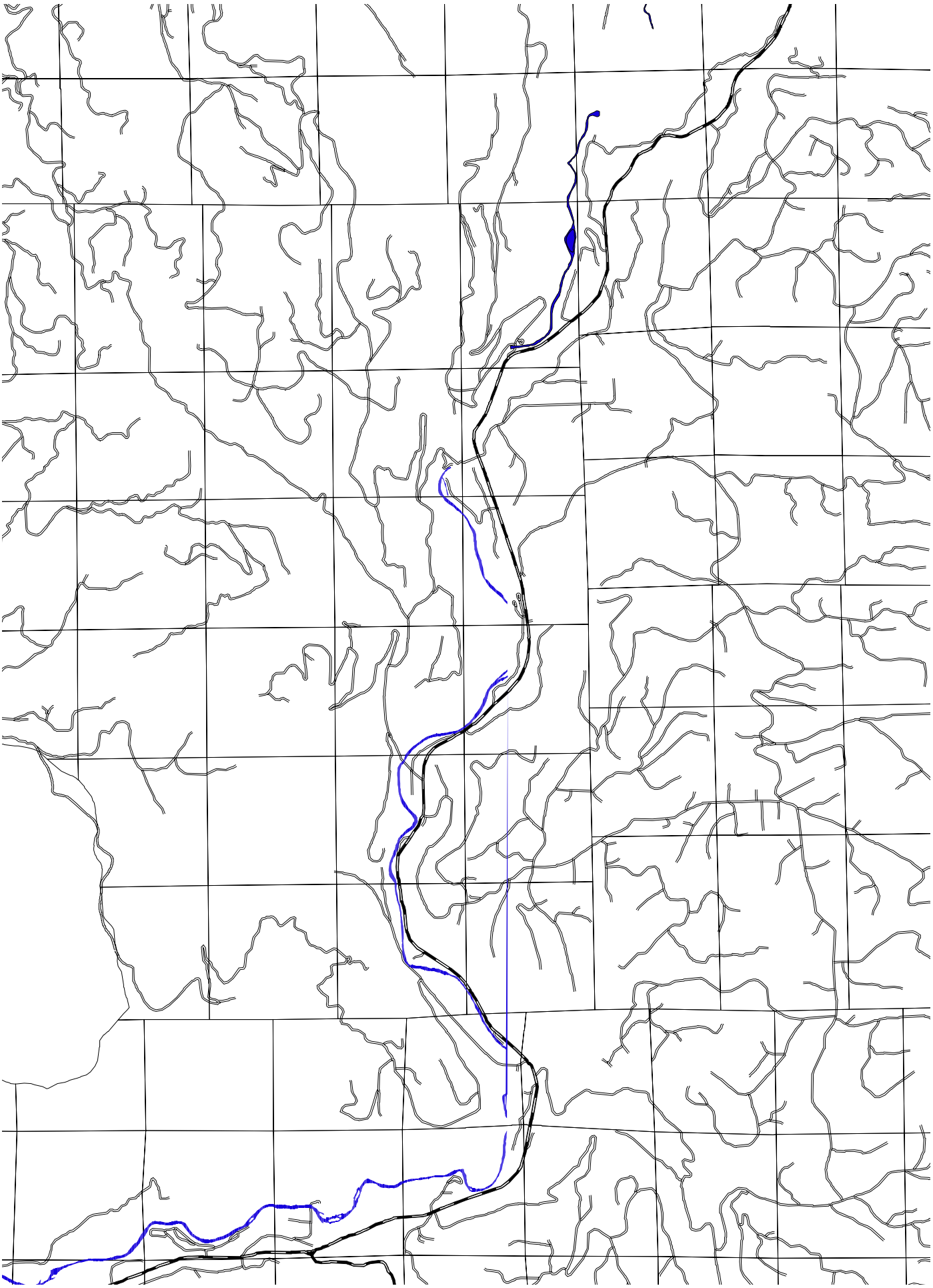
Spot Salvage Area Location Map with Identified Project Areas

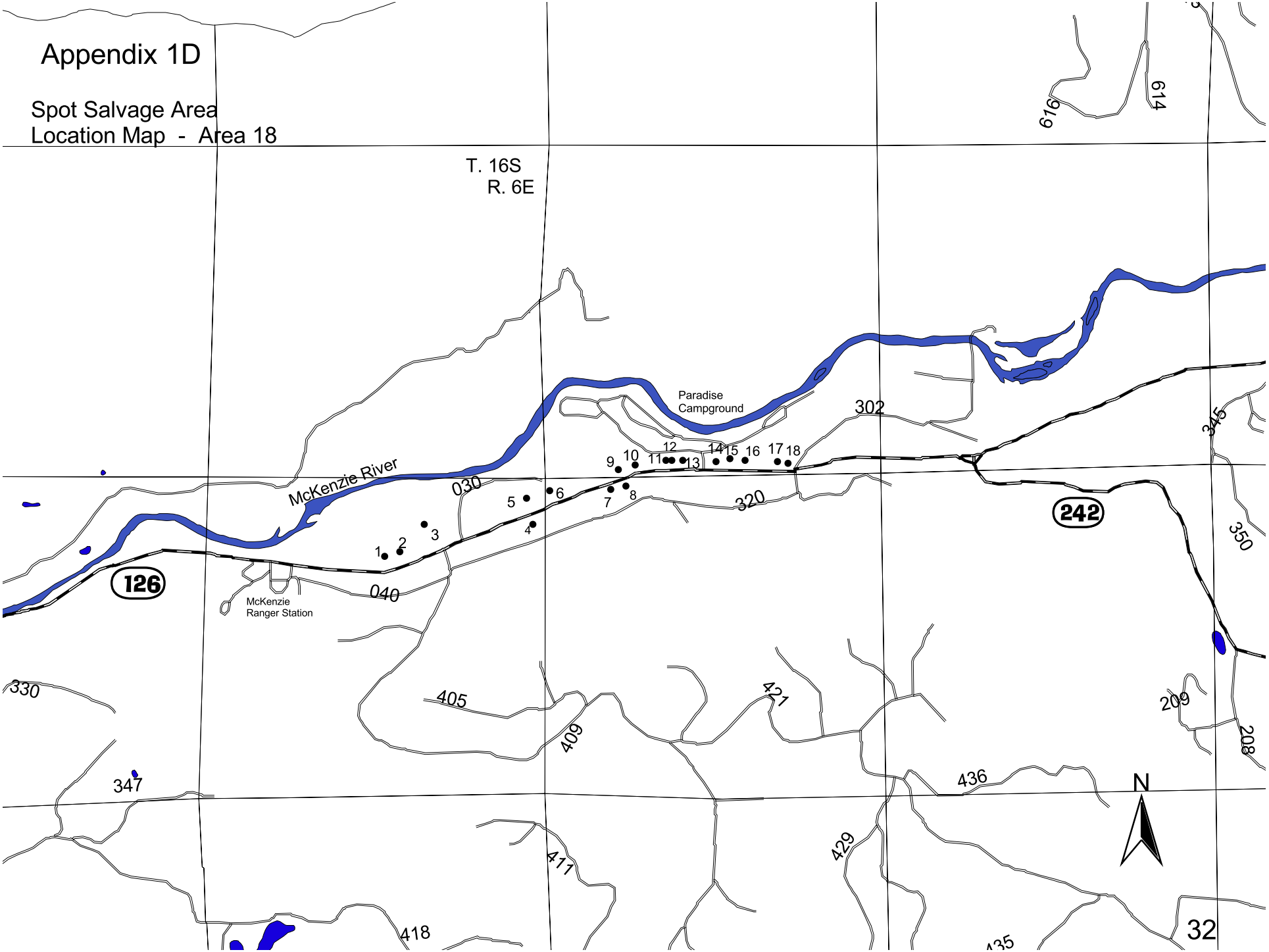


Appendix 1B

Spot Salvage Area Location Map
with Upper Project Areas






Appendix 1D
Spot Salvage Area
Location Map - Area 18
T. 16S
R. 6E
McKenzie River
Paradise
Campground
McKenzie
Ranger Station
126
242
030
040
302
320
345
350
330
347
405
409
411
418
421
429
436
209
208
616
614
1
2
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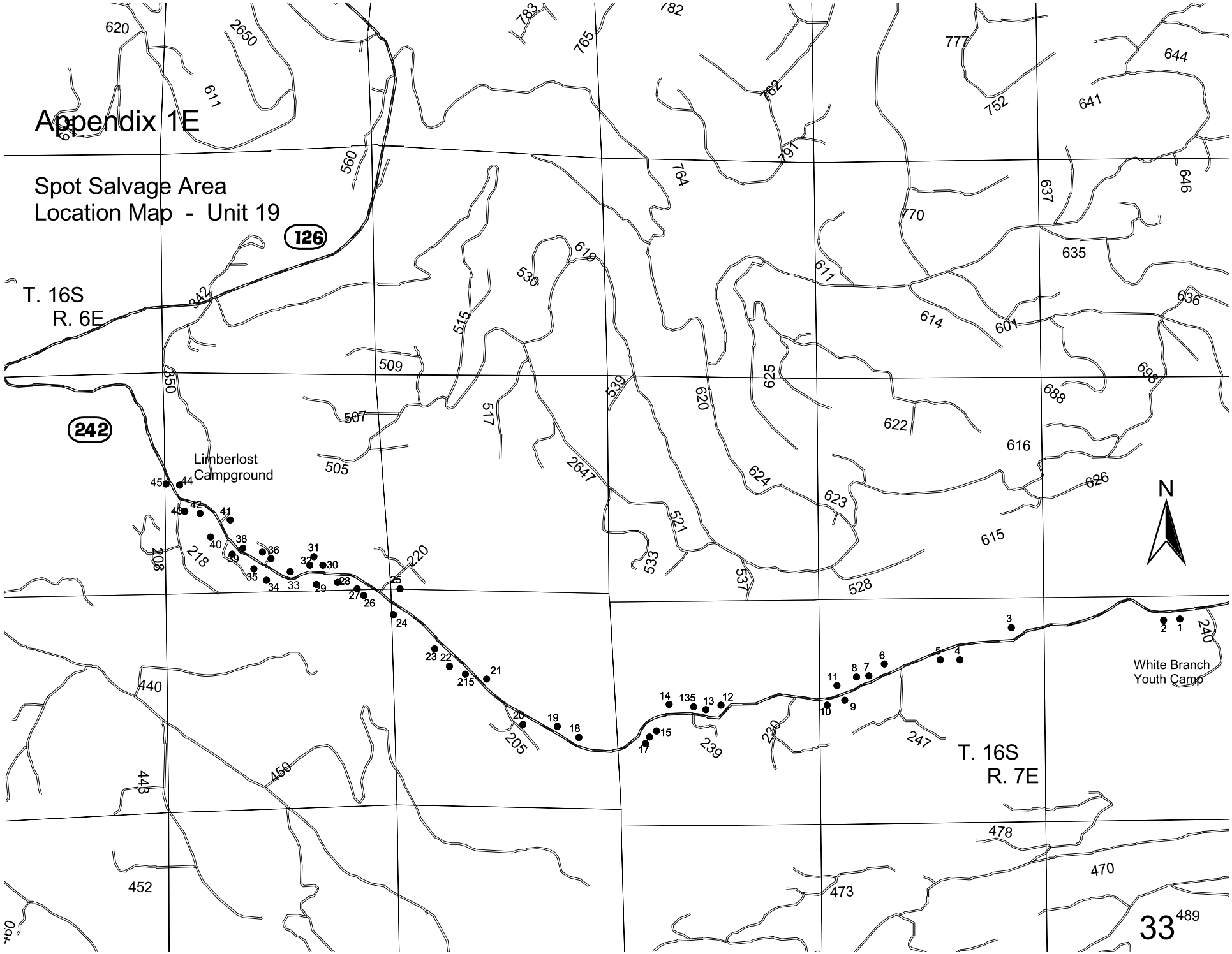
Appendix 1E
Spot Salvage Area
Location Map - Unit 19
126
242
T. 16S
R. 6E
Limberlost
Campground
White Branch
Youth Camp
T. 16S
R. 7E
N
33

Appendix 2A

SPOT SALVAGE
PRESCRIPTION FOR ACTION

NOTE: NO SALVAGE OF EXISTING DOWN MATERIAL WILL BE INCLUDED IN THIS PROJECT. ALL MACHINERY WILL STAY ON THE ROADSIDE.

Hwy. 126

AREA	TREE FATE	RESOURCE ISSUE
1	SALVAGE 3	
2	LEAVE 1 OF 3	LWD SUPPLEMENT
3	SALVAGE 8	
4	SALVAGE 2	
5	LEAVE 2 OF 14	LWD SUPPLEMENT. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING. PEREGRINE
6	LEAVE 2 OF 11	LWD SUPPLEMENT. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING. PEREGRINE
7	LEAVE 2 OF 6	LWD SUPPLEMENT. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING. PEREGRINE
8	LEAVE 1 OF 2	LWD SUPPLEMENT. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING. PEREGRINE
9	LEAVE 2 OF 9	LWD SUPPLEMENT. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING. PEREGRINE
10	LEAVE 2 OF 6	LWD SUPPLEMENT. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING. PEREGRINE
11	SALVAGE 13	LWD SUPPLEMENT. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING. PEREGRINE. DIRECTIONAL FALLING
12	SALVAGE 3	RIPARIAN RESERVE
13	SALVAGE 10	LWD SUPPLEMENT. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING. PEREGRINE. RIPARIAN RESERVE
14	SALVAGE 5	
15	LEAVE 1	LWD SUPPLEMENT FOR OWL SITE. NO SEASONAL RESTRICTOIN NEEDED. RIPARIAN RESERVE
16	LEAVE 2 OF 24	LEAVE 2 BETWEEN HWY. AND GRAVEL ROAD OF LARGEST AVAILABLE SIZE. LWD SUPPLEMENT. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING
17	LEAVE 1 OF 5	LWD SUPPLEMENT. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING. PEREGRINE
18	LEAVE 4 OF 18	LEAVE 2 ON RIVER SIDE OF HWY AND 2 ON THE SOUTH SIDE OF THE HWY
20	LEAVE 1 OF 10	LEAVE 1 FOR LWD SUPPLEMENT NORTH OF THE COUNTY ROAD. SEASONAL RESTRICTION ON HELICOPTER AND BLASTING. PEREGRINE
21	SALVAGE 2	
28	LEAVE 2 OF 5	LWD SUPPLEMENT. RIPARIAN RESERVE

LWD = Large Woody Debri

Appendix 2B

Unit 19

Note: ALL OF THESE UNITS HAVE SEASONAL RESTRICTIONS ON HELICOPTERCOPTER AND BLASTING USE.

Hwy. 242 :

TREE	TREE FATE	RESOURCE ISSUE
1	LEAVE	LWD SUPPLEMENT
2	SALVAGE	
3	SALVAGE	
4	LEAVE	LWD SUPPLEMENT
5	LEAVE	LWD SUPPLEMENT
6-8	SALVAGE	SEASONAL RESTRICTION ON CHAIN SAW ACTIVITY. PEREGRINE
9	SALVAGE	SEASONAL RESTRICTION ON CHAIN SAW ACTIVITY. PEREGRINE
10	SALVAGE	SEASONAL RESTRICTION ON CHAIN SAW ACTIVITY. PEREGRINE
11-13 AND 13.5	SALVAGE	SEASONAL RESTRICTION ON CHAIN SAW ACTIVITY. PEREGRINE
14	SALVAGE PORTION	LWD SUPPLEMENT. SALVAGE PORTION IN ROAD PRISM ONLY. FALL DIRECTIONALLY ACROSS ROAD.
15-17	SALVAGE	SEASONAL RESTRICTION ON CHAIN SAW ACTIVITY. PEREGRINE
18	SALVAGE	SEASONAL RESTRICTION ON CHAIN SAW ACTIVITY PEREGRINE. RIPARIAN RESERVE
19	LEAVE	LWD SUPPLEMENT FOR PEREGRINE. SEASONAL RESTRICTION ON CHAIN SAW ACTIVITY PEREGRINE. RIPARIAN RESERVE
20-21 AND 21.5	SALVAGE	SEASONAL RESTRICTION ON CHAIN SAW ACTIVITY. PEREGRINE
22	SALVAGE PORTION	LWD SUPPLEMENT. SALVAGE PORTION ON ROAD PRISM ONLY. FALL DIRECITIONALLY ACROSS ROAD.
23-29	SALVAGE	
30	LEAVE	LWD SUPPLEMENT SPOTTED OWL. SEASONAL RESTRICTION ON CHAIN SAW FOR SPOTTED OWLS
31	LEAVE	
32	LEAVE	LWD SUPPLEMENT SPOTTED OWL. SEASONAL RESTRICTION ON CHAIN SAW FOR SPOTTED OWLS
33	LEAVE	LWD SUPPLEMENT SPOTTED OWL. SEASONAL RESTRICTION ON CHAIN SAW FOR SPOTTED OWLS
34-36	SALVAGE	
37	LEAVE	DIRECTIONAL FALL TO WEST
38	SALVAGE PORTION	LWD SUPPLEMENT. SALVAGE PORTION IN ROAD PRISM ONLY. FALL DIRECITIONALLY ACROSS ROAD. SEASONAL RESTRICTION ON CHAIN SAW FOR SPOTTED OWLS
39-40	SALVAGE	
41	LEAVE	FELL INTO RIPARIAN RESERVE, AWAY FROM CAMPGROUND. RIPARIAN RESERVE
42-44	SALVAGE	
45	LEAVE	FELL AS CLOSE TO POND AS POSSIBLE. RIPARIAN RESERVE

Seasonal Restriction Periods:
Spotted Owls: March 1 – July 15
Peregrine Falcons: January 15 - July 31

Appendix 3

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).