

**ENVIRONMENTAL ASSESSMENT**  
**and**  
**HABITAT CONSERVATION PLAN**

For The

Issuance of an Incidental Take Permit  
Under Section 10(a)(1)(B) of the Endangered Species Act

For

Scofield Corporation Property near Leavenworth, Washington

U.S. Fish and Wildlife Service  
Pacific Northwest Habitat Conservation Plan Program  
3773 Martin Way East; Building C, Suite 101  
Olympia, Washington 98501

February 9, 1996

## TITLE PAGE

**Lead Agency:** U.S. Fish and Wildlife Service, Department of Interior

**Legal Authority:** Endangered Species Act of 1973, as amended, Section 10(a), as implemented by 50 CFR 17.32(b)(1). National Environmental Policy Act of 1969, as implemented by 40 CFR 1500, *et seq.*

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**Abstract:** This habitat conservation plan for the Scofield Corporation property was developed in consultation with the U.S. Fish and Wildlife Service to obtain an incidental take permit for the northern spotted owl (*Strix occidentalis caurina*). The project area is approximately 40 acres located 4 miles northwest of Leavenworth, Washington. This project is adjacent to and due east of U.S. Highway 2 and is vegetated with mature ponderosa pine (*Pinus ponderosa*)/Douglas-fir (*Pseudotsuga menziesii*) forest. The area covered by the proposed plan lies within the median annual home range (1.82 mile radius circle) of a pair of spotted owls. The implementation of the timber-management plan may result in some take of spotted owls by either habitat modification or by disturbance. The expected level of take is low because of the retention of portions of the forested habitat and the documented low use by owls. The small project area and adjacent habitat on U.S. Forest Service lands also contribute to the low impact. The plan includes a one-time, selective timber harvest using helicopters to remove the cut timber. No roads currently exist in the stand and no road construction would occur in the project area to conduct this harvest. Although the term of the permit is 1 year to allow time to complete the harvest, under the terms of the HCP the remaining timber would be unavailable for future timber harvest, thus the conservation benefits would last in perpetuity. The proposed action is analyzed and compared to the No Action alternative in the Environmental Assessment, included in this document.

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## **I. INTRODUCTION**

### **A. Background**

The Scofield Corporation of Chelan, Washington (Applicant) seeks an incidental take permit from the U.S. Fish and Wildlife Service (Service) pursuant to Section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended (Act). The permit would authorize take of the northern spotted owl (hereinafter spotted owl or owl) as a result of timber harvest and related activities on the Applicant's land. The Applicant's project area is described in Section VI.

### **B. Service Goals**

The Service, through its Habitat Conservation Plan (HCP) Program, is striving to conserve habitat for many species. The following principles guided the Service's role in the development of the proposed action and alternatives considered in this document:

- (1) Protect natural functions necessary for ecosystem health and biodiversity.
- (2) Develop and maintain habitat which may be of limited availability in surrounding landscape, especially mature forest with structure, and other existing unique habitats.
- (3) Provide healthy riparian areas which will protect water quality.
- (4) Retain economic incentives for landowners, while meeting the above conservation goals.

Because of economic and market conditions and disincentives to provide habitat for listed species, shorter timber harvest rotations have become a prevalent timber management strategy. To ameliorate the negative effects associated with shorter rotations and simplified forest structure, and to benefit many forest-dwelling wildlife species, the Service has encouraged land managers to lengthen rotations, develop structure during the rotation and, subsequently, maintain some portion of that structure into the next rotation by retaining snags, coarse woody debris, and legacy trees. In addition, the Service encourages landowners to adopt timber management plans

which do not involve drastic regeneration harvests, such as low volume thinnings and partial cuts that may retain wildlife habitat in all or part of the activity area. The Service also seeks to provide the necessary protection to ensure healthy riparian and wetland systems.

## **II. PURPOSE AND NEED**

### **A. Regulatory Environment**

Section 9 of the Act prohibits the "take" of Federally listed species of wildlife unless authorized under the provisions of section 7, section 10(a), or section 4(d) of the Act. Section 3 of the Act defines take as "to harass, harm, pursue, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Section 10(a)(1)(B) defines "incidental take" as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity."

Federal regulation defines the terms "harass" and "harm" as follows: harass means, "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering"; harm means "an act which actually kills or injures wildlife" and "may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." A section 10 permit constitutes an exception to the taking prohibition of section 9.

Pursuant to section 10(a)(2)(A), the Applicant has submitted a HCP (Sections VI. - VIII. of this document) with an application for an incidental take permit for the spotted owl. The HCP is a statutory requirement of the permit application, that estimates the level of incidental take expected to occur during the proposed activities, and specifies how the impacts of the taking would be minimized and mitigated. The proposed taking would be incidental to the Applicant's otherwise legal timber-harvest operations.

The section 10 permit would authorize the incidental take of the spotted owl. Under this section 10 permit, take is expected in the form of harm or harassment; direct take (e.g., killing) of spotted owls is not anticipated.

The Service is the Federal agency charged with overseeing administration of the Act with respect to spotted owls. Accordingly, it is responsible for processing and ruling on section 10 applications, and issuing incidental take permits. In issuing a section 10 permit, the Service must comply with the National Environmental Policy Act (NEPA) (National Environmental Policy Act, 42 USC 4331, *et seq.*) and its implementing regulations (40 CFR part 1500, *et seq.*). NEPA ensures that the agency, in reaching its decision, will have available and will carefully consider detailed information concerning significant environmental impacts. The NEPA process also guarantees that the relevant information will be made available to the public, who may provide written comments on the action.

At least two primary documents are typically associated with an incidental take permit: (1) a HCP; and (2) an environmental assessment (EA) or an environmental impact statement (EIS). Both of these have been incorporated into this single document. The EA or EIS is required of the Service by NEPA, and compares the expected effects of the proposed action and other alternatives to a no-action alternative. NEPA requires this information be disclosed for the decision maker and the interested public. The proposed action was generated by the Applicant and agency, and can be refined to reflect public review and comment.

Although this is a combined HCP/EA, the EA was conducted and prepared solely by the Service. The Applicant had no input regarding the content of the EA portions of this document. However, the HCP (Sections VI. - VIII. of this document) was developed by the Applicant and negotiated with the Service, which provided technical assistance.

## **B. Purpose and Need**

The purpose of the proposed action is to authorize incidental taking of the spotted owl by disturbance and habitat modification associated with this timber harvest. Such authorization is necessary because the Applicant has applied for a permit and activities associated with the proposed action may result in take of owls, despite the minimization and mitigation measures proposed by the Applicant in the HCP. Therefore, to conduct lawful business activities on the Applicant's property, an incidental take permit is necessary to avoid conflict with the prohibitions against take under the Act. The Applicant and the Service consider implementation of the HCP in connection with a section 10(a)(1)(B) permit to be an effective means to reconcile the proposed activity with the section 9 prohibition and other conservation mandates under the Act.

The needs of the Service in responding to this application are:

- (1) To conserve wildlife species and their habitats during the proposed action.
- (2) To ensure compliance with the Act and other applicable Federal laws and regulations.
- (3) To provide a regulatory environment which will encourage the Applicant to manage said property so as to develop wildlife habitat without fear of negative economic consequences.

## **C. Proposed Action and Decisions Needed**

The proposed action is issuance of a permit by the Service to allow incidental take of listed species during the subject timber harvest. Pursuant to section 10(a)(2)(B) of the Act, which contains the issuance criteria for incidental take permits, decisions to be made by the Service are:

- (1) Is the proposed take incidental to an otherwise lawful activity?
- (2) Are the impacts of the proposed taking minimized and mitigated to the maximum extent practicable?

- (3) Has the Applicant ensured that adequate funding will be provided to implement the measures proposed in the HCP?
- (4) Is the proposed take such that it will not appreciably reduce the likelihood of the survival and recovery of the species in the wild?
- (5) Are there other measures that should be required as a condition of the permit, and does the HCP contain procedures to deal with unforeseen circumstances?

During the early scoping and planning phase of HCP development, two issues arose that are associated with the proposed issuance of an incidental take permit. The first was the potential take of owls or suitable owl habitat, and the second was the potential loss of the aesthetic scenic value of the forested landscape along U.S. Highway 2. These issues are addressed in the HCP and evaluated in the EA.

In reaching a decision on the permit application, the Service may choose to issue a permit conditioned on implementation of the HCP as submitted by the Applicant, to issue a permit conditioned on implementation of the HCP as submitted together with other measures specified by the Service, or to deny the permit.

### **III. AFFECTED ENVIRONMENT**

#### **A. Climate**

The project area is located near Leavenworth, Washington at an elevation of 344 m (~1100 feet). The climate is characterized by a short growing season and minimal summer precipitation; 4.4 cm June through August. Average annual precipitation is 59 cm (~23 inches), much of it falling as winter snow. Diurnal summer temperatures fluctuate widely, with hot days and cold nights. Average annual temperature is 8.4° C (~47° F) (all information, Franklin and Dyrness 1987).

## **B. Geology and Soils**

The north Cascades is a topographically mature area of great relief. Valleys are uniformly very deep and steep sided. Mountains in the northern Cascades are to a large extent comprised of ancient sedimentary rocks, most of which are folded and at least partially metamorphosed. Intrusions of large granitic batholiths are also common. The Cascade Range was gradually uplifted during the Pliocene epoch. Prior to this time, however, large quantities of granitic rocks intruded the preexisting strata. Large masses of these rocks outcrop near the crest of the range in both the southern and northern portions. Older mesozoic granite rocks occupy large areas to the east. During the Pleistocene epoch, glacial till was deposited in virtually every major valley. These deposits are highly variable and may range from fine to coarse texture (all information, Franklin and Dyrness 1987).

Soils east of the Cascade crest reflect the drier conditions under which they were formed. Probably most abundant are Haploxerolls formed on a variety of parent materials but generally influenced to some extent by volcanic ash and, in some area, loess. Textures range from stone-free silt loams to very cobbly loams. Other soils present in the eastern portion of the Cascades include Xerochrepts and Haploxeralfs (all information, Franklin and Dyrness 1987).

Mass wasting is a general term for the dislodgement and downslope transport of soil and rock under the direct application of gravitational stress (i.e., without major action of water, wind, or ice); mass movement. In watershed analysis, this class of erosion processes is divided into three categories: shallow-rapid landslides, deep-seated failures, and debris torrents (Washington Forest Practices Board 1995a). Mass wasting is a natural watershed process that occurs to some extent in most forested basins in the Pacific Northwest. The mass wasting potential of the project area is rated medium (WDNR 1995a).

## **C. Hydrology**

There is one Type 5 stream that flows periodically along the northern boundary of the project area; between the project area and adjacent Scofield Corporation property to the north. The eastern boundary of the project area is approximately 200 feet from the Wenatchee River.

## **D. Vegetation and Forest Health**

### **1. Forest Type and Plant Associations**

The project area is in the *Pinus ponderosa* Zone which, at the upper limits, may grade into forests of Douglas-fir, grand fir (*Abies grandis*), or subalpine fir (*A. lasiocarpa*) depending on the locale. Community composition in ponderosa pine stands varies widely with geographic location, soils, elevation, aspect, and successional status. The history of stand disturbances, such as by fire and logging, influence overstory density which, in turn, can have profound effects on understory composition and density. Many ponderosa pine stands on the eastern slopes of Washington's Cascade Range have an understory dominated by *Calamagrostis rubescens* (pinegrass) or mixed *Calamagrostis* (reedgrasses) and *Carex geyeri* (elk sedge). Almost without exception, ponderosa pine is seral to Douglas-fir or grand fir in these stands where a principal understory dominant is *Calamagrostis* (all information Franklin and Dyrness 1987).

The project area is forested by mature ponderosa pine and Douglas-fir approximately 80-120 years old with remnant trees exceeding 200 years old. Mature conifer forest consists of older trees and, often, a secondary canopy of younger trees. This stand has an understory consisting of small patches of immature Douglas-fir 30-40 years old, with some sparsely distributed understory vegetation and grasses. There are three types of forested conditions in the project area: (1) old trees with no other structure; (2) dense pockets of younger trees; and (3) multi-structure with mixed age classes. There is sufficient structure in terms of age classes and defective trees, a few snags, and sparsely scattered downed logs and other coarse woody debris, to provide marginal

habitat for spotted owls and other species dependent upon the drier, mature east-side forests. The lack of abundant coarse woody debris suggests several fires have occurred within the past 120 years that have been of high enough intensity to destroy large fallen trees, and clear the stand of much of the understory. The frequency with which these fires burned was reported to be 10 to 25 years, and of low intensity (Agee 1994) (see section 4. Fire below). Fire suppression occurring in the past 60 years has resulted in successional advancement, which has allowed the development of habitat structures used by spotted owls and other species associated with closed canopy, late-successional forests (Bill Gaines, U.S. Forest Service (USFS), pers. comm., January 26, 1996).

## 2. Wetlands and Riparian

There is one Type 5 stream that flows periodically along the northern boundary of the project area; between the project area and adjacent Scofield Corporation property to the north. The eastern boundary of the project area is approximately 200 feet from the Wenatchee River. There are no other forested or non-forested wetlands in the project area.

## 3. Unique Plant Communities

There are no known unique plant communities in the project area; however, two plants, showy stickseed (*Hackelia venusta*) and Seely's silene (*Silene seelyi*), that are candidates for federal listing are known to occur on adjacent private and USFS land (WDNR 1995b). No known surveys have been undertaken to confirm the presence or absence of these candidate species in the project area. The adjacent USFS lands have been federally designated as the Tumwater Botanical Area.

## 4. Fire

Before fire control was initiated about 1900, fires burned through ponderosa pine stands at intervals variously reported as 8 to 20 years. Generally, these were ground fires which consumed only surface organic debris, including branches and down trees, a portion of the understory vegetation, and many of the young tree seedlings, maintaining an open, park-like appearance (Franklin and Dyrness 1987, Agee 1994). Because ponderosa pine is more fire resistant than most associated tree species, past fires have had a profound effect on its distribution. Although young ponderosa pine seedlings are readily killed by fire, older trees possess thick bark which offers effective protection from fire damage. As a result, production of understory species in these forests is inversely related to tree density and cover (Agee 1994). Competing tree species, such as Douglas-fir, are considerably less fire tolerant. Thus, periodic fires in the past served to maintain ponderosa pine in ecotonal areas where, without fire disturbance, the climax tree species would have attained dominance (Franklin and Dyrness 1987). Fire-control activities during the past 60 to 70 years have, on the moister sites, resulted in gradual replacement of ponderosa pine by several species, including Douglas-fir.

The project area is comprised of mature Douglas-fir and ponderosa pine with remnant old-growth trees that likely survived past fires. The fact that most of the trees appear to be 80-120 years old suggests a high-intensity fire occurred in the area during that time. Another high-intensity fire may have occurred 40 years ago, since an understory cohort of that age exists in patches. This condition, however, could be due to the development of openings in the canopy, created where trees blew down or where older trees have grown to a height which allows more light to the forest floor. This area sustained a high-intensity fire in 1994 that cleared much of the understory and downed woody debris, and damaged or killed outright numerous trees in the project area. This condition leaves very little fuel for fires in the near future, however, the standing dead trees would eventually fall and become fuel for potential fires in the long-term. The high-intensity fire burned the upper-most portion the project area to the extent that many of the mature and older ponderosa pine have suffered severe damage. Other trees, including some of the larger Douglas-fir trees, scattered throughout the project area also sustained fire damage severe enough to cause

death within a year or two. Periodic low-intensity fires have created the sparse understory condition that currently exists.

## 5. Windthrow

Windthrow potential is a function of many interrelated factors: species of tree, form and history of tree, depth of rooting, soil characteristics, soil-moisture saturation, severity and frequency of wind storms, stand-level characteristics, and position on the landscape. Windthrow can have positive and negative effects for wildlife, but mostly has negative effects economically. The potential for windthrow in the project area is rated low (WDNR 1995a).

## 6. Insects and Disease

There are dozens of insect and disease concerns in forests of the Pacific Northwest. However, only several diseases and one insect can be expected to cause serious loss, and therefore are of concern to the typical forest-land owner. Those of most concern in the northeastern Cascades are (1) dwarf mistletoes (*Arceuthobium spp.*), (2) red ring rot, (3) Douglas-fir beetle, (4) western spruce budworm, and (5) pine bark beetle.

As a general rule, forest pathogens afflict individual trees or stands that have been stressed by some other cause such as logging, ice, or wind damage; suppression and crowding; moisture; or senescence. Some of these damages are beyond the control of the forest manager, such as moisture, wind, and ice damage. However, maintaining a diversity of tree species within a stand, and careful thinning to keep individual stems growing vigorously, will generally reduce susceptibility to infection or infestation.

From a wildlife perspective, diseases and insects often introduce much needed diversity into otherwise monotypic single-aged stands. However, insects and disease often represent a negative economic impact to the landowner. Little is known about the factors that determine when,

where, and to what extent such an outbreak may occur. For the most part, management practices typically employed by a single non-industrial private landowner are not likely to precipitate an outbreak of a forest pathogen. Landscape-scale management practices, coupled with climatic conditions, are generally the causes behind widespread insect and disease outbreaks. Large epidemics have the potential to engulf a small landowner's stand on a stochastic basis, and for the most part, site-specific management practices, unless they are extreme, could be ineffective in forestalling loss of timber in these instances.

Most of the older Douglas-fir overstory is heavily infected with dwarf mistletoe. The disease is causing mortality in these trees and is threatening the younger Douglas-fir understory. Dwarf mistletoe in the ponderosa pine is generally low to moderate.

## **E. Wildlife**

A list of threatened and endangered species, and candidate species, which may be present on or in the vicinity of the project area is provided in Appendix 1. These species and their likelihood of occurrence are described below.

### **1. Listed Species**

#### **a. Northern Spotted Owl (*Strix occidentalis caurina*)**

Northern spotted owls tend to select mature or old-growth forests. Owls in managed forests usually occupy areas with structural diversity and a high degree of canopy closure, containing large diameter or residual old trees, in stands more than 60 years old (USDI 1992). Stand structure suitable for nesting is a crucial habitat requirement for the spotted owl (USDI 1992). Forest stands used by owls for nesting are typically those with diverse structures (Spies and Franklin 1991), including large snags and downed logs. The stands have been found to be multi-storied with many small trees and fewer large trees per acre, and often have mixed species, with

two or more age classes resulting from disturbances such as fire, windthrow, and root diseases. The overstory in owl habitat on the eastside of the central Cascades may include species of ponderosa pine, Douglas-fir, western hemlock, and grand fir.

Breeding season generally begins in March or April. Spotted owls often nest in cavities (Forsman et al. 1984, Thomas et al. 1990), however, on the east-side of the Cascades, nests are predominately in abandoned northern goshawk (*Accipiter gentilis*) nests or mistletoe brooms (Buchanan et al. 1993, USDI 1992). Spotted owls are long-lived, territorial birds, often spending their entire adult life in the same territory. In high-quality habitat, pairs are typically spaced about 1 to 2 miles apart (USDA and USDI 1994a). The size of their home range may be related to the availability of prey, including the number of prey and effectiveness of hunting (Carey et al. 1992, Forsman et al. 1984). They feed on a variety of forest mammals, birds, and insects.

Information concerning spotted owls in or near the project area is provided in Section VI.C. of this document.

b. Bald Eagle (*Haliaeetus leucocephalus*)

There are no known bald eagle nests or winter roost sites within a mile of the project area (WDFW 1995). However, bald eagles may occasionally hunt or perch along the Wenatchee River adjacent to the project area because salmonids are known to occur in this reach of the river, and there are sufficient large trees along the river to function as perch sites. The project area occurs in a recovery territory identified in the Species Management Guide for Bald Eagles on the Wenatchee National Forest (Rees 1989).

c. Gray Wolf (*Canis lupus*)

There are no known gray wolf den sites in the project area, and no documented observations of gray wolves within 1 mile of the project area. Several low-reliability wolf observations have been reported in the Alpine Lakes Wilderness in townships immediately northwest and southwest

of the township containing the project area (WDFW 1993). A more recent confirmed wolf observation (howl) was reported to have occurred in the Alpine Lakes Wilderness in the township immediately west of the project area township (Bill Gaines, USFS, pers. comm., January 10, 1996; Gaines et al. 1995).

d. Grizzly Bear (*Ursus arctos*=*U.a. horribilis*)

There are no known grizzly bear den sites in the project area, and no documented observations of grizzly bears within 1 mile of the project area. Grizzly bear observations in the Chiwaukum Mountains in the Alpine Lakes Wilderness west of the project area were recorded in the 1960s, and a recent confirmed observation (footprint) in the lower Ingalls Creek drainage approximately 10 miles due south of the project area was reported in 1991 (Almack et al. 1993; Bill Gaines, USFS, pers. comm., January 10, 1996). The project area is within The North Cascades Recovery Zone for the grizzly bear (U.S. Fish and Wildlife 1993).

2. Species of concern

The only federal candidate species that is known to occur in or near the project area is the northern goshawk (WDFW 1995). Goshawk nest stands typically have a high density of large trees and relatively high degree of canopy cover (Reynolds et al. 1982). Preferred habitat during the breeding cycle is in older, tall coniferous forests (also deciduous and mixed) where goshawks can maneuver below or in the canopy while foraging and make use of large trees to build their bulky nest (Reynolds 1989). The home range size required by a pair of goshawks is approximately 6,000 acres and includes nest sites ranging from 12 to 30 acres (Reynolds et al. 1992). Two adult goshawks with young were observed in T25N R17E S32, within 1-2 miles of the project area, on two separate occasions in 1989. In 1993, a report of a goshawk was recorded in T25N R17E S33, within 1 mile of the project area. No goshawk nests are known to be in the project area (all location data WDFW 1995).

Two plant species, showy stickseed and Seely's silene, are federal candidates for listing, and are known to occur on private and federal lands adjacent to the project area in sections to the north, east, and south (WDNR 1995b). No known surveys have been conducted to confirm the presence or absence of these plant species in the project area. USFS lands adjacent to the project area have been federally designated as the Tumwater Botanical Area.

## **F. Air Quality**

The Federal Clean Air Act was designed to reduce air pollution, protect human health, and preserve the Nation's air resources. Several air quality programs under the Clean Air Act regulate prescribed burning and other practices. The Clean Air Act also requires each State to develop, adopt, and implement a State Implementation Plan (SIP) to ensure that national standards are attained and maintained. In Washington State, the SIP is based upon existing laws, regulations, resources of concern, and DNR's Smoke Management Plan. State and local governments have the authority to adopt their own air quality rules and regulations. These rules can be incorporated into the State SIP if they are equal to, or more protective than Federal requirements. Washington has a SIP that has been approved by the Environmental Protection Agency (EPA) which regulates criteria pollutants emitted from prescribed burning.

The Clean Air Act established the Prevention of Significant Deterioration program, which prevents areas that currently have clean air from being degraded. The nearby Alpine Lakes Wilderness area west of the project area is designated Class I, which essentially allows no degradation of air quality or visibility. Standards for USFS and private forestlands in the project area are designated Class II. As a result, air quality in the project area in the Wenatchee Mountains is generally very good. However, there are occasions when air quality is affected due to deliberate burning of timber harvest slash piles according to State regulations, and accidental burning by wildfire. Road building and road use may also contribute to lowering of air quality through creation of fugitive dust.

## **G. Water Quality**

There is one Type 5 stream that flows periodically along the northern boundary of the project area; between the project area and adjacent Scofield Corporation property to the north. The Wenatchee River flows north to south due east of the project area within 1/8 mile. The water quality of the Wenatchee River is rated AA; water quality of this class shall markedly and uniformly exceed the requirements for all or substantially all uses (Hindes 1994).

## **H. Land Uses**

### **1. Project Area**

The project area was purchased as part of a larger contiguous piece of land on both sides of U.S. Highway 2 with the intent of conducting timber harvest, and developing cabin sites on the parcel north of the project area. The intended use of the project area is for timber harvest.

### **2. Adjacent Landowners**

Nearby landowners consist of (1) private ownership to the northeast (section 27) and due west across the Wenatchee River (section 33) from the project area; and (2) USFS ownership due east, south, and north of the project area. Management allocations within adjacent USFS lands include maintaining high scenic quality (USFS 1991), and providing late-successional habitat (USDA and USDI 1994b). The highway right-of-way of 100 feet from the center line is owned and managed by Washington Department of Transportation (DOT) (WDOT 1936).

## **I. Cultural Resources**

Cultural resources are the remains of sites, structures, or objects used by humans in the historic or prehistoric past. Prehistoric sites in Washington, Oregon, and California include, among other

things, lithic reduction sites, campsites, village sites, rock shelters, quarries, peeled trees, petroglyphs, pictographs, cairns, burial sites, kill sites, and shell middens. Prehistoric sites may have religious, historic, or associated values to Native American Communities and others. Burial sites have been a particularly sensitive issue. Researchers also value prehistoric sites for the information they provide about lost cultures, through scientific, archeological studies of the sites. Historic resources also include remains of European-americans as they explored and settled the region.

There are no known cultural resources in the project area (Sarah Steel, State Historic Preservation Office, pers. comm., December 11, 1995). However, there are three Chinese bake ovens located in the northwest part of the 40-acre parcel of land immediately adjacent to the project area (Doug Kuehn, WDFW, pers. comm., December 1, 1995).

## **J. Socio-Economic Issues**

Volume of harvest is a factor which has direct economic impacts to the landowner, and has induced or indirect effects to other members of the community. In general, increased volumes will yield greater benefits to the community. Other factors affecting the level of benefit include the quality and size of the wood, the amount of labor the Applicant contracts or the amount contributed himself, sale destinations, and the type of harvesting systems. Labor-intensive harvesting systems, such as selective harvesting, may generate greater economic benefits to the community than other systems, such as clearcutting. The amount of road construction and maintenance involved is another factor influencing economic effects to the landowner and the community.

The amount of economic benefit generated for the local community has a direct effect on the quality of the social environment. Other factors associated with the quality of the social environment that may be affected by timber harvest include the health of other industries such as fishing and hunting, the quality of air and water, and aesthetic values such scenic vistas.

The project area is not used for fishing because there are no streams in the stand. Big game hunting may occur, but is unlikely due to the proximity of the project area to the highway and the lack of roads. Since the project area is in close proximity to a state highway, there is scenic value to the highway corridor. Viewed from the highway, the project area is an undiscernible portion of a larger contiguous mature forest that includes adjacent USFS land.

#### **IV. ALTERNATIVES**

The proposed action (HCP) alternative is described in Section VI.C. The No Action alternative, and other alternatives considered, are described in Section VI.D. of this document.

#### **V. ENVIRONMENTAL CONSEQUENCES**

##### **A. Climate**

Neither the No Action alternative nor the HCP alternative are expected to impact temperature or precipitation in the local area.

##### **B. Geology and Soils**

No Action Alternative - Under the No Action alternative, no geological alterations are expected. However, a road may be built according to Washington Forest Practices Rules which would disturb soils in the project area. In addition, the timber may be harvested using a cable-yarding system, which may include dragging logs along the forest floor causing major disturbance to the substrate and understory vegetation. This activity may facilitate erosion and cause soil compaction. The No Action alternative may contribute to the mass-wasting potential, especially

if the stand undergoes a clearcut harvest. This harvest method would remove trees that may otherwise maintain slope stability.

HCP Alternative - Although no roads would be built in the project area, under this alternative, a short spur road (about 200 feet) and landing would be constructed on the property immediately adjacent to the project area. The effects of this activity, and the timber harvest method utilizing a helicopter to lift the logs out, would result in little dirt-moving activity in the project area.

Erosion and soil compaction would be minimal under the proposed action because tree felling is expected to occur in winter when project area is covered with snow, and the logs would be lifted out of the project area by helicopter from where they are felled. The effects of the proposed action are expected to contribute minimally to any mass-wasting event because trees remaining after harvest would continue to help stabilize the slope. Because the felled logs would be lifted out of the project area by helicopter, ground disturbance, such as gouged skidding trails formed by dragging logs to a landing, would not occur. This type of activity would, therefore, not contribute substantially to the mass-wasting potential of the slope. In addition, because there would be no road building in the project area, no contribution to a mass failure is expected. Impacts to the topography and soils in the project area would be less than what would occur under the No Action alternative.

### **C. Hydrology**

No Action Alternative - In the short-term, the project area will remain unharvested while owls remain in the vicinity, and no immediate impacts to the Type 5 stream or the Wenatchee River are anticipated. However, when any of the conditions described under this alternative occur, a clearcut timber harvest may be conducted, which would likely include most trees adjacent to the Type 5 stream at the north end of the project area, since protection of Type 5 streams is not required under Washington Forest Practices Rules. In addition, it is likely that some sediment delivery to the Wenatchee River would occur because timber harvest would include all trees to

the edge of the highway right-of-way, although the highway may act as a buffer to reduce the impacts of sediment delivery to the river.

HCP Alternative - The effects to the Type 5 stream in the northwest corner of the project area would be minimized because not all trees would be removed adjacent to the stream, and trees marked for harvest would be felled away from the stream. Under the HCP alternative, the retention of approximately 70 percent of the trees in the project area, the absence of exposed soils from road building, skid trails, and landings, and the buffer established along U.S. Highway 2, would minimize the potential for sedimentation delivery to the Wenatchee river. The effects to the stream and river would be less than under the No Action alternative.

#### **D. Vegetation and Forest Health**

##### **1. Forest Type and Plant Associations**

No Action Alternative - In the short-term, the project area will remain unharvested while owls remain in the vicinity, allowing the stand and its associated vegetation, as well as owl habitat, to remain intact. However, in the long-term, when any of the conditions described under the No Action alternative occur, the expectation would be that the project area would retain no spotted owl habitat, very little habitat for other wildlife, and aesthetic scenic value of a forested landscape would be lost.

HCP Alternative - Under the proposed action, the Applicant would conduct a selective harvest of individually marked trees. Substantially more spotted owl and other wildlife habitat would be retained in the project area under the proposed alternative than under the No Action alternative. In addition, the no-harvest buffer would serve to create a visual barrier to the harvested area and effectively preserve some of the scenic value that the project area contributes to the overall landscape. Under the HCP alternative, the selective harvest would result in a variety of age classes, including mature Douglas-fir trees, being distributed throughout the project area

eliminating any appearance of a clearcut or large patches of forest without trees. The HCP alternative guarantees the composition and appearance of the stand, and that spotted owl and other wildlife habitat would be retained; more snags and bigger leave trees would be retained compared to the No Action alternative. In addition, the HCP alternative guarantees that wildlife habitat conditions would improve and be retained in the future as it continues to grow and develop naturally in perpetuity.

## 2. Wetlands and Riparian

There is one Type 5 stream at the northwest boundary of the project area. Under the No Action alternative, a clearcut harvest on the steep slopes in the project area may facilitate the runoff of sediment created by ground disturbance as a result of this harvest method. This condition may impact the Wenatchee River or its associated riparian ecosystem. However, there is a 100-foot highway right-of-way that extends out each side of the highway from the center-line. The highway and right-of-way would likely serve as a buffer to minimize sedimentation delivery to the riparian ecosystem. Under the proposed action, the impacts to the Wenatchee riparian ecosystem are expected to be minimal because of the additional no-harvest buffer averaging 300 feet, and the harvest method that minimizes ground disturbance and retains approximately 70 percent of the total number of trees.

## 3. Unique Plant Communities

There are no known unique plant communities in the project area. The two species of plants that are federal candidates for listing located on adjacent ownership would not be affected by actions in the project area under either alternative. Since plant surveys are not known to have been conducted in the project area, impacts are unknown.

#### 4. Fire

No Action Alternative - Under this alternative, the probability that fire may occur in the project area would remain the same as the surrounding landscape for as long as the stand remained unharvested. If the project area is clearcut, after regulatory restrictions are lifted, the resultant condition would eliminate any chance of a crown fire, however, substantial woody debris would remain to provide fuel for a low- to medium-intensity ground fire, and to aid the spread of fire to adjacent stands. Overall, under this alternative, the project area would likely not contribute more to the landscape fire potential than adjacent lands.

HCP Alternative - Under this alternative, approximately 45 percent of the volume of the largest trees in the project area would be retained; many of these trees would be fire-resistant ponderosa pine and Douglas-fir which would reduce the risk of high intensity fires in the area in the short-term. Although the harvested trees would be helicopter logged, some woody debris would accumulate on the forest floor making fuels available for a low-intensity ground fire. In the long-term, the proposed action would help to return the project area to a more natural condition, i.e. open, park-like ponderosa pine forest. Recent fires have removed most of the understory and much of the coarse woody debris. Removal of approximately half of the mature trees, many of which would die as a result of the most recent fire in 1994, would complement the current understory condition to approximate naturally occurring stands in the drier eastside landscapes. This condition would likely reduce the risk of catastrophic fire, but less than if the project area was clearcut under the No Action alternative.

#### 5. Windthrow

The potential for windthrow in the project area is low and would remain the same under the No Action alternative. Most of the trees in the project area are mature ponderosa pine and Douglas-fir that are relatively wind-firm. Since the potential for windthrow is low, selectively removing

less than 30 percent of the stems in the project area under the HCP alternative would not likely be a significant effect contributing to windthrow.

## 6. Insects and Disease

Under the No Action alternative, a clearcut would remove most, if not all, threats of disease or insect infestation in the project area. However, until such time as a clearcut harvest is conducted, many of the fire-damaged trees would be susceptible to both insect and disease infestation.

Under the HCP alternative, infestation by disease or insects is less likely because fire-damaged trees and some trees heavily infected with dwarf mistletoe would be removed resulting in a healthier stand. In the long-term, the HCP alternative would create a healthier mature forest stand than the No Action alternative.

## E. Wildlife

### 1. Listed Species

#### a. Northern spotted owl

Information concerning spotted owls in or near the project area is provided in Section VI.C. of this document.

No Action Alternative - Under this alternative, if the owl moves or the site center is abandoned, there would be no immediate effect on spotted owls. However, a clearcut harvest of the project area would remove all suitable habitat for use by owls in the near future, and until the stand regrows into suitable habitat over 100 years from harvest. There is no guarantee that owl habitat would be allowed to grow in the future under the No Action alternative.

HCP Alternative - Under this alternative, there would be minimal disturbance to owls due to the timing of harvest activity in winter. Effects to the spotted owl would be in the form of reduction of suitable habitat within one owl pair territorial circle that historically has had some reproductive success. Suitable owl habitat in the owl circle in 1994, prior to the fire, was 1229 acres. The post-fire suitable owl habitat acreage was 309 acres, in 1995. In the short-term, approximately 55 percent of the mature trees in the 40-acre project area would be removed which would further reduce the availability of potential nesting, roosting, or foraging sites for owls. However, the adverse effects on this owl pair due to loss of habitat would likely be low because the habitat is marginal Type C (young forest marginal) at best, and surveys in the project area suggest low use by owls. In addition, the no-harvest buffer ensures that less than 40 acres would be affected by the proposed action, which is a small portion of the suitable habitat that has been available for use by owls in the past.

Under this alternative, about half of the mature trees and 28 percent of the total number of trees in the project area would be harvested. The harvest would not occur over the entire 40-acre project area; a substantial no-harvest buffer along the highway would remain intact. This selective harvest would result in retention of different size and age classes of trees that would contribute to stand structure and species diversity; important components to owl habitat. Thinning the stand would allow younger age-class trees to grow, and continue to contribute to the multi-layer structure of the stand. Since the project area would be allowed to grow and develop into perpetuity, suitable owl habitat would be available in the future. This potential habitat would complement habitat that is likely to occur on adjacent USFS lands being managed as late-successional forest. In the long-term, the potential for the project area to become owl habitat and remain in that condition is substantially greater than under the No Action alternative, if the owl pair were to move or abandon the site.

b. Bald eagle

There are no known bald eagle nests or winter roost sites within a mile of the project area, however, migrating or wintering bald eagles may occasionally perch nearby along the Wenatchee River as they forage for salmon. Harvesting timber under either alternative may cause bald eagles to move from the area but this effect would be short-term. Direct effects to eagles or their nests are not anticipated under either alternative. If a bald eagle nest is located within 0.5 mile of the project area, the Applicant would be required to adhere to Washington Forest Practices Rules restricting timber harvest activities between January 1 and August 15.

c. Gray wolf

There are no known gray wolf den sites or documented wolf observations within miles of the project area. Timber harvest under either alternative would be relatively small and of such short duration that effects on wolves would be minimal. If gray wolves should utilize this area in the future, while in a transient mode for example, any visual buffer provided by the current condition of the stand would be removed under the No Action alternative, whereas, the selective harvest and no-harvest buffer under the proposed action would provide some visual and security cover.

d. Grizzly bear

There are no known grizzly bear den sites or documented grizzly bear observations within miles of the project area. Timber harvest under either alternative would be relatively small and of such short duration that effects on grizzly bears would be minimal. If grizzly bears should utilize this area in the future, while in a transient mode for example, any visual buffer provided by the current condition of the stand would be removed under the No Action alternative, whereas, the selective harvest and no-harvest buffer under the proposed action would provide some visual and security cover.

## 2. Species of concern

Although no goshawk nests are known to be in the project area, a goshawk was observed within 1 mile of the project area. If no harvest is conducted, under the No Action alternative, then goshawks would not be affected. However, under either alternative if a timber harvest was conducted, then the effect on goshawks could be in the form of removal of some habitat.

Because goshawks have territorial home ranges of approximately 6,000 acres, the anticipated effect of harvesting less than 0.1 percent of potential goshawk habitat would be minimal. The HCP alternative would retain approximately 70 percent of the trees in the project area and leave intact much of the understory, providing roost sites and habitat for potential goshawk prey, which is greater than what would be provided under the No Action alternative.

### **F. Air Quality**

Under the No Action alternative, the Applicant would comply with the General Burning Requirements of the DNR Smoke Management Plan. This should result in the avoidance of burning on days of limited air quality. The amount of slash burning would consist of debris accumulated at the landing from timber harvest in the project area and the adjacent land containing the landing. Some dust may be created from construction and use of a small road on the land adjacent to the project area which would reduce air quality minimally.

Under the HCP alternative, the Applicant would comply with the General Burning Requirements of the DNR Smoke Management Plan and no effect to air quality is anticipated. Debris piles would not be created in the project area, thus eliminating the need or desire to burn slash in the project area. However, some burning of slash would occur at the landing constructed on the adjacent land. The amount of slash burning would be relatively small consisting primarily of tree limbs that are removed at the landing, and would be limited to slash piles at the landing. Some dust may be created from construction and use of a small road near the project area which would reduce air quality minimally.

## **G. Water Quality**

No Action Alternative - Under this alternative, a clearcut harvest would likely increase runoff from the slope, and sedimentation to the river. This would be caused by removing trees, by constructing roads, and by disturbing the ground during harvest. Sedimentation delivery to the Wenatchee River may be reduced by the potential buffering affect of the highway.

HCP Alternative - Under this alternative, the selective timber harvest would result in retention of over 70 percent of the total number of trees and nearly half the volume of large, mature trees. In addition, all felled trees would be removed by helicopter thus minimizing disturbance to the ground and sediment delivery to the Wenatchee River. The effect of these methods of timber harvest, and the no-harvest buffer averaging 300 feet, on the nearby Wenatchee River would be considerably less than under the No Action alternative.

## **I. Land Uses**

### **1. Project Area**

Under either alternative, now or in the future, some level of timber harvest would be conducted, which was the Applicant's original intent for purchasing the land. However, in the short-term, under the No Action alternative, the Applicant would not harvest timber until such time as regulatory release is provided, the owl site center is moved so as not to include the project area, or the owl site is demonstrated to have been abandoned. Thus, the Applicant's original intent for use of the land is stifled in the short-term, under the No Action alternative.

### **2. Adjacent Landowners**

No Action Alternative - Under this alternative, a clearcut timber harvest would directly affect adjacent property by reducing the scenic view of private landowners across the highway from the

project area, and the public travelling along U.S. Highway 2. In addition, the creation of edge along the harvest boundary may increase the potential for windthrow on adjacent USFS lands. However, because the windthrow potential in this area is low, the effect under this alternative is anticipated to be minimal.

HCP Alternative - Under this alternative, adjacent private property and USFS lands would not be affected by timber harvest in the project area. Low windthrow potential already exists, and a selective harvest is not anticipated to increase the windthrow potential of adjacent ownership. The reduction in scenic value would be minimal under this alternative as a result of selective harvest of approximately 55 percent of the volume comprising 28 percent of the total number of trees. In addition, a no-harvest forested buffer would be retained between the harvested portion of the project area and the highway. These measures would complement USFS management plans, to maintain high scenic quality and provide late-successional habitat, more than the No Action alternative.

## **J. Cultural Resources**

The Service has consulted with the State Historic Preservation Office. There are no cultural resources on or in the project area. Therefore, no impacts to cultural resources would occur under either alternative. Should any historical artifacts be present in the project area, little impact is expected upon such artifacts because little dirt-moving activity would occur as a result of the removal of felled logs by helicopter, and trees would likely be felled while the ground is snow-covered.

Although no cultural resources have been identified, a contingency plan would be followed. Brief visual surveys would be conducted prior to the harvesting of timber which may disturb the subsurface soil layers. In the event that any cultural resources are detected, the Applicant would contact the Service. The Service would work with the Applicant to minimize impacts to those cultural resources.

## **K. Socio-Economic Issues**

No Action Alternative - Under this alternative, the economic benefit to the community would be more than under the HCP but would still be low because the harvest would be for a small number of acres, and would require few workers. A small road would likely be built but the economic benefit of this activity would also be insignificant. Some aesthetic scenic value would be lost under the No Action alternative because a clearcut would effectively cut a section out of what is currently a large contiguous mature forest along US Highway 2.

HCP Alternative - Under this alternative, less economic benefit would be realized than under the No Action alternative because timber harvest would be limited to a selective cut, and no roads would be constructed. However, the economic benefit under the proposed plan would be more immediate and certain because under the No Action alternative, harvest could not begin until conditions existed that allowed legal entry into the project area. Other factors associated with the quality of the social environment include the health of other industries such as fishing and hunting, and other aesthetic values. The proposed action seeks to strike a balance of environmental and economic values which would benefit wildlife, and the local community. The selective harvest would retain many large, mature trees, and the allow the stand to grow and develop into perpetuity. This action would minimize the effects to aesthetic scenic values and allow the scenery to improve. Aesthetics are important to tourists, who inject money into the local community.

## **L. Cumulative Impacts**

The project area consists of 40 acres adjacent to private and USFS lands. The land north of the project area is owned by the Applicant and will sustain a partial harvest. USFS lands in the Tumwater Canyon area will be managed to provide late-successional habitat. Therefore, there would be minimal cumulative impacts under the proposed action.

The following Sections VI., VII., and VIII. are the Applicant's HCP as part of, and as described in, their permit application dated February 9, 1996.

## **VI. HABITAT CONSERVATION PLAN**

### **A. Term of Permit**

Permit length would be 1 year from the date of issuance, however, the HCP mitigation measures and the provision for no future harvest would continue in perpetuity.

### **B. Plan Area**

The project area is approximately 40-acres square adjacent to and east of U.S. Highway 2 approximately 4 miles northwest of Leavenworth, Washington, in Chelan County (T25N, R17E, S33) (Figures 1, 2 in Appendix 3). The project area is forested by mature ponderosa pine and Douglas-fir approximately 80-120 years old with remnant trees exceeding 200 years old. This stand has an understory consisting of small patches of immature Douglas-fir 30-40 years old, with some sparsely distributed understory vegetation and grasses. There are three types of forested conditions in the project area: (1) old trees with no other structure; (2) dense pockets of younger trees; and (3) multi-structure with mixed age classes. There is sufficient structure in terms of age classes and defective trees, a few snags, and sparsely scattered downed logs and other coarse woody debris, to provide marginal habitat for spotted owls and other species dependent upon the drier, mature east-side forests.

The fact that most of the trees appear to be 80-120 years old suggests a high-intensity fire occurred in the area during that time. Another high-intensity fire may have occurred 40 years ago, since an understory cohort of that age exists in patches. This area sustained a high-intensity fire in 1994 that cleared much of the understory and downed woody debris, and damaged or killed outright numerous trees in the project area. The high-intensity fire burned the upper-most

portion the project area to the extent that many of the mature and older ponderosa pine have suffered severe damage. Other trees, including some of the larger Douglas-fir trees, scattered throughout the project area also sustained fire damage severe enough to cause death within a year or two. Periodic low-intensity fires have created the sparse understory condition that currently exists.

There is one Type 5 stream that flows periodically along the northern boundary of the project area; between the project area and adjacent Scofield Corporation (Scofield) property to the north. The eastern boundary of the project area is approximately 200 feet from the Wenatchee River. There are no other forested or non-forested wetlands in the project area.

### **C. Proposed Activity and Impacts to Owls**

The project area is within the median annual home range (1.82 mile radius circle) of the Slide Creek-Wenatchee River spotted owl pair, Site Center #431 (Tom Cyra, Washington Department of Fish and Wildlife (WDFW), pers. comm., September 6, 1995). The amount of suitable owl habitat in this owl circle prior to the 1994 fire was 1229 acres, which was 18.5 percent of the total acreage (6657 acres) in a 1.82 mile radius circle; the current post-fire amount of suitable owl habitat in this owl circle is 309 acres (Susan Piper, USFS, pers. comm., January 7, 1996). Because this owl circle contains less than 40 percent suitable habitat, the Service believes that any timber harvest activity within the project area that removes suitable owl habitat from this owl circle would place Scofield at risk for take of the owl, a federally-listed threatened species.

The forested area containing the Scofield project area is in Type C or Young Forest Marginal (Hanson et al. 1993) habitat within the owl circle. Although the project area is considered marginal spotted owl habitat, it is included in the DNR-designated "Best 500 Acres" (Washington Forest Practices Board 1995b) because so little habitat remains in the owl circle.

Extensive owl surveys have been conducted by the National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI) and the USFS since 1987, when a single owl was located. NCASI began including this owl site in their eastside demography study in 1991. In 1992, a pair of owls was documented for the first time in T25N R17E S33 SW. A pair with two young was documented in 1993 also in T25N R17E SW, and this location became the Slide Creek-Wenatchee River site center. In 1994, only a single male was observed. In 1995, three observations of single birds or a pair were made in T25N R17E S04 NW, however, the site center remains at the 1993 location (all observation information, Tom Cyra, WDFW, pers. comm., September 6, 1995). Surveys have resulted in no locations of owls in the project area (Bill Gaines, USFS, pers. comm., January 31, 1996), suggesting low use of Scofield's property by owls.

The Slide Creek-Wenatchee River site center is the southern-most of a cluster of at least 8 site centers in Townships 25 North, Range 17 East, and 26 North, 17 East. There are additional owl site center clusters to the west in the Alpine Wilderness Area, to the east in Townships 25 and 26 North, Ranges 18 and 19 East, and to the south in Townships 23 and 24 North, Range 17 and 18 East (WDFW 1995). Current suitable habitat in surrounding owl circles closest to the Slide Creek-Wenatchee River owl pair ranges from 60 acres to 1820 acres (Susan Piper, USFS, pers. comm. February 8, 1996).

Impacts to owls are expected to be limited to the Slide Creek-Wenatchee River owl pair only, which would be in the form of harm, i.e. habitat modification. Impacts to this owl pair are expected to be minimal because habitat on Scofield property within the owl circle is marginal in quality and small in size, and, under the HCP, Scofield would conduct a one-time entry for selective timber harvest, after which the project area would be left to grow and develop naturally, in perpetuity. In addition, some owl habitat within the 40-acre project area would be retained in the no-harvest buffer, and Scofield would implement a variety of additional measures described below to minimize and mitigate impacts to spotted owls and other species. Given the minimal

impacts to this owl pair, impacts to the surrounding owl population are likewise expected to be very low, if they occur at all.

The following is a description of the HCP development and implementation:

1. Method of Tree Selection for Harvest - All trees marked for harvest were selected based on a sample of trees marked during a site exam by a planning team, which was comprised of representatives of the Scofield Corporation, WDFW, USFS, and the Service. This was a cooperative effort to determine the criteria by which trees would be selected for harvest. This sample was based on an assessment of the context of the immediate area, the availability of merchantable and wildlife trees, and the feasibility of falling the tree in a manner that would be least disturbing to nearby trees, snags, and the forest floor. All trees selected for harvest were  $\geq 14$  inches dbh. In nearly all cases, large Douglas-fir with numerous limbs were retained. Many trees selected were burned or were dying. Collectively, agency biologists estimated that 40-50 percent of the mature Douglas-fir and ponderosa pine were marked for harvest. The final results of the tree-marking phase of this plan are provided in Appendix 2. After the entire project area had been marked, representatives from WDFW and DNR examined the stand at the request of the Service to confirm that the remainder of the project area had been marked according to the criteria established by the planning team during the initial sample marking exercise.

2. Highway Buffer - During the initial site visit by the planning team, a variable distance no-harvest buffer along U.S. Highway No. 2 was established and marked off with flagging. The buffer would average approximately 300 feet from the edge of the highway right-of-way. The minimum horizontal distance of the buffer would be approximately 200 feet at the north end of the project area. This no-harvest zone was partially determined by a break in the slope near rock outcroppings that occurred along a contour parallel to the highway. Consideration was given to natural contours, retention of wildlife trees, and to establishing a visual buffer between the highway and the harvest area.

3. Road Construction and Landing - A small road, approximately 200 feet, will be constructed near the northwest corner of the project area on adjacent land to the north. A landing will be established on a bench above the highway on the adjacent land at the end of the road. No road would be constructed in the project area.

4. Snags and Other Wildlife Habitat - All snags, small diameter trees  $\leq 14$  inches dbh, and downed logs would be retained. Some snags may require felling for safety reasons. Pockets of unmarked trees, 30 to 40 years old, would be retained for wildlife habitat.

5. Method of Logging - If possible, all trees would be felled during the winter when there is snow cover on the ground to prevent damage to trees and the forest floor. Trees to be felled would be limbed prior to felling. These limbs would remain on the forest floor to function as coarse woody debris. Where practicable, all trees would be felled upslope to minimize movement downward. Trees would be felled away from the Type 5 stream. All felled logs would be removed by helicopter. There would be no timing restriction on the helicopter logging unless surveys indicate direct impacts to spotted owls would occur; this determination would be made by a qualified Service biologist or their designee.

6. Timing of Activity in Project Area - Timber harvest would be conducted upon approval of plan and issuance of incidental take permit. Timber harvest is expected to be conducted during the winter of 1996 with an anticipated completion date of April 1, 1996. However, the term of the permit would be for one year from the date of issuance to allow for unforeseen circumstances that may affect the timing of the harvest.

7. Future Activity - No future harvest activity would occur in the project area under this plan. No re-planting, or application of herbicides and pesticides, would be conducted. The project area would be allowed to grow and develop naturally in perpetuity. Scofield would place a deed restriction on the land that would prohibit any future logging or tree removal on the post-harvest

condition of the project area. Scofield would notify the Service in writing prior to any pending sale, trade or exchange of the project area.

#### **D. Other Alternatives**

State forest-practices regulations shall be implemented as a minimum in all cases and shall apply in situations where there are no applicable guidelines herein. All other Federal and State regulations shall be adhered to. Whenever an area is subject to two or more sets of guidelines or prescriptions, due to its own characteristics or its location relative to other areas or features, the more-restrictive shall apply.

##### **1. No Action Alternative**

Under this alternative, the most likely scenario is that the timber stand would not be harvested for several years, at which time it could be clearcut. No harvest will be conducted in the project area until (1) the owl site center is moved such that the project area is outside the territorial circle, or (2) the owl territorial circle has been changed to historic status after 3 consecutive years of protocol surveys have resulted in no owl detections, or (3) regulatory release is provided, such as a 4(d) special rule of the Act providing an exemption for small landowners, or (4) forests on surrounding USFS or other lands regenerates or develops to provide  $\geq 40$  percent habitat within the 1.82 mile radius owl circle. At that time, timber harvest could range from that described in the proposed action to a complete clearcut in accordance with Washington Forest Practices Rules. The latter cutting regime may be necessary to cover lost opportunity costs of a delayed harvest. Under this alternative, once the regulatory constraint is lifted, there is no guarantee that any wildlife habitat will be left after harvest other than the leave tree and snag requirements of Washington Forest Practices Rules. Scofield may conduct a clearcut harvest in the project area which, at best, may result in the retention of 80 wildlife trees and 80 green recruitment trees. The retention of the wildlife trees (e.g. snags) is conditioned on meeting certain safety standards (76.04 RCW and 49.17 RCW), and in all likelihood not all of the sparsely scattered snags would

be retained. The 80 green recruitment trees represent approximately 3 percent of the 2,330 total number of trees determined to be in the project area. A clearcut harvest could include all trees to the property boundary where it meets the highway right-of-way. Under the No Action alternative, Scofield may choose to retain some portion of the stand that is substantially greater than what is required by Washington Forest Practices Rules. However, subsequent entries into the stand could be made to harvest any trees left from a selective cut, or to clearcut harvest the stand when it reaches its rotation age.

The Scofield Corporation's original intent in purchasing the land containing the project area was to conduct timber harvest to realize an economic return. However, under the current regulatory environment, it is uncertain when a timber harvest will be possible. Recent fires have damaged many trees in the project area and many will die soon, reducing the volume of timber available for future harvest. As a result, this alternative was not selected because Scofield will unlikely be able to harvest the standing timber nor the fire-damaged trees on the project area in the near future.

## 2. Other Alternatives

In years past, Scofield proposed to the U.S. Forest Service to transfer the project area to the public by means of a trade for comparable land elsewhere, or a purchase, at the fair market value. Scofield has determined within the past year that a potential land transfer was not likely to occur in the near future. Therefore, this alternative was considered to be infeasible.

### **E. Monitoring & Reporting**

Future long-term monitoring and reporting of harvest or silvicultural activities would be unnecessary because these activities would not be permitted. However, Scofield shall provide a post-harvest report documenting (1) the timing and duration of the harvest, (2) the number of

trees remaining by species and total number of trees, and (3) the volume of trees remaining by species and the total volume on the project area.

The project area would be bound by a deed restriction which will allow the forest to grow and develop naturally in perpetuity following the proposed harvest. Additional minimization and mitigation activities would not be required because minimization measures were addressed by the planning team in the selection process of trees to be harvested, and the deed restriction suffices as adequate mitigation for take of owl habitat. The deed restriction would be bound to the land and transfer with the sale, trade or exchange of the property. Scofield would notify the Service in writing of any proposed transfer of ownership of the project area.

#### **F. Funding**

The Scofield Corporation has funding to conduct the selective timber harvest as described above. Additional funding to implement this HCP would be unnecessary because no additional activities in the project area are required.

#### **G. Amendments**

Amendments to the permit and HCP, including measures to be used to deal with unforeseen circumstances, will be conducted in accordance with 50 CFR 13.23.

#### **H. Other Measures**

This HCP specifies the actions to be taken to contribute to the conservation of the northern spotted owl and other species. Scofield will place a deed restriction on their property, within 30 days of permit issuance and before the proposed timber harvest, that prohibits timber harvest or tree removal beyond that proposed in the HCP. The deed restriction will be worded as follows:

To conduct the proposed timber harvest on the below described property, it became necessary for the owner to obtain an Incidental Take Permit from the U.S. Fish and Wildlife Service. The Incidental Take Permit incorporates a Habitat Conservation Plan (HCP) for the property that minimizes and mitigates for the take of the northern spotted owl while conducting otherwise legal timber harvest on the property. Terms of the HCP shall be binding on all future owners of all or a portion of the property. As a condition of the Permit and the Habitat Conservation Plan, once the Grantor has completed the timber harvest as outlined in the permit and HCP, the property described below may never again be logged nor may any of the trees be further removed. This restriction shall apply to the Grantor and all future successors in interest to the property described below. In addition, should the property or a portion ever be sold, the Seller and all future Sellers, must notify in writing the Purchaser of this restriction, and the U.S. Fish and Wildlife Service Regional Office in Portland, Oregon of this sale. This restriction shall apply to the following described property.

All of Government Lot 2 lying east of the easterly right-of-way line of the state highway EXCEPT an area described as follows. Commencing at the northwest corner of Government Lot 2 and the easterly right-of-way line of the state highway thence 300 feet east along the north line of Government Lot 2; thence south 300 feet; thence west 300 feet to the easterly right-of-way line of the state highway; thence north along said right-of-way line to the point of beginning, all in Sec. 33, Township 25N, Range 17E, Chelan County, Washington.

## **VII. HCP SUMMARY**

The Scofield Corporation of Chelan, Washington will implement the following measures to minimize and mitigate impacts that may result from incidental take of the spotted owl under this HCP:

- (1) Conduct selective harvest of 54 percent of the volume of ponderosa pine, Douglas-fir and grand fir which comprises 28 percent of the total number of trees in the project area;
- (2) Retain a no-harvest buffer averaging 300 feet in width between the highway right-of-way and the project area;
- (3) Fell marked trees upslope when possible, and fell away from the Type 5 stream;
- (4) Remove all felled trees with a helicopter;
- (5) Retain all trees  $\leq 14$  inches dbh, and all snags when practicable;
- (6) Time the harvest to preclude disturbance to spotted owls and other wildlife;
- (7) Place a deed restriction on the project area that prohibits future harvest or tree removal.

## **VIII. REVIEW OF ISSUANCE CRITERIA**

### **A. Take Will be Incidental**

Any taking of spotted owls covered by the permit would be incidental to the otherwise lawful activity of timber harvesting.

### **B. Minimized/Mitigated to Maximum Extent Practicable**

The mitigation measures contained herein include specific measures to compensate for the loss of habitat to the spotted owl. In addition, the mitigation would occur concurrent with management activities and continue in perpetuity.

### **C. Assurance of Funding**

Scofield has the ability to fund HCP implementation. Because the mitigation is an integral part of the proposed action, no additional funding would be required.

### **D. Jeopardy/No Jeopardy**

The Service will review issuance of the proposed permit in a biological opinion prepared in accordance with section 7 of the Act. In order to issue the proposed permit, the Service must find that the taking will not appreciably reduce the likelihood of the survival and recovery of the owl in the wild.

#### **E. Other Measures**

A deed restriction will ensure that the conservation benefits of the HCP for the spotted owl and other wildlife species will be attached to the land in perpetuity.

#### **F. Other Assurances**

The Service (or their designees) may conduct pre-harvest or post-harvest site visits to the project area to verify compliance with the measures in the HCP.

Issuance of the permit will constitute approval of the HCP by the Service, and bind the agreement between Scofield and the Service to implement the minimization and mitigation measures, as well as allow Scofield to take the threatened spotted owl incidental to otherwise lawful activities. The restriction regarding future timber harvest and tree removal must be recorded on the deed within 30 days of permit issuance and prior to the proposed timber harvest.

## **IX. CONSULTATION AND COORDINATION WITH OTHERS**

### **A. Agencies and Individuals Consulted for HCP Development**

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### **C. Distribution List**

List of persons and organizations who received a copy of the draft or final EA and those who requested a copy during the public comment period.

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## **XI. APPENDICES**

Appendix 1. Letter from Curt Smitch, U.S. Fish and Wildlife Service, to Jerry Scofield, Scofield Corporation; Listed and proposed endangered and threatened species and candidate species that may occur on or in the vicinity of Scofield Corporation lands in Chelan County, Washington.

Appendix 2. Memo from Arnie Arneson, Cascade Woodlands, to Craig Hansen, U.S. Fish and Wildlife Service; Results of Timber Marking Phase of HCP.

Appendix 3. Figure 1. General location of project area. Figure 2. Project area shown as Government Lot 2.