

Executive Summary

Introduction

Elliott State Forest — The Elliott State Forest covers approximately 93,000 acres in the Oregon coast range, approximately one-third of one percent of Oregon’s total forest land base. The closest cities and towns are Coos Bay and North Bend southwest of the Elliott, and Reedsport northwest of the Elliott.

Most of the Elliott State Forest (90.5%) is Common School Forest Land (CSFL), owned by the State Land Board. The remaining lands (9.5%) are Board of Forestry lands. They were deeded by the counties to the Board of Forestry during the 1930s and 1940s. The Oregon Department of Forestry (ODF) manages all lands on the Elliott. ODF manages the Common School Forest Lands under an agreement with the State Land Board.

The primary standard of management on Common School Forest Lands is the maximization of long-term revenues for the Common School Fund, consistent with sound techniques of land and timber management. Consideration is given to the need to protect soil, streams, wildlife habitat, recreational opportunities, and other environmental values. Board of Forestry lands are managed to provide income for counties and local taxing districts, with these lands to “secure the greatest permanent value to the states,” as defined by the statutes. The legal and policy mandates for management of the Elliott are discussed in detail in Appendix J.

Historically, timber sales have been the main source of revenue for the Elliott. Over the past twenty years, timber harvest from Common School Forest Lands has produced over \$230 million for the Common School Fund.

Events leading to a new forest plan — In 1990, the U.S. Fish and Wildlife Service listed the northern spotted owl as a threatened species. When the spotted owl was listed, the Department of Forestry began conducting intensive surveys for owls on the Elliott, and took steps to protect spotted owl habitat. These actions had a substantial impact on the timber sale program.

In December 1991, the State Land Board passed a motion initiating a new long-range management plan for the Elliott State Forest. The Department of Forestry was directed to work with the Oregon Department of Fish and Wildlife, the Division of State Lands, and other state agencies to develop the plan. It was stipulated that the plan must depart from the circle management of spotted owls (see Appendix A, Glossary), address the entire forest ecosystem, and be consistent with the timber management contract between the State Land Board and the Department of Forestry. The result is the Elliott State Forest Management Plan: a comprehensive, integrated forest management plan that takes into account a wide range of forest values, including timber, threatened and endangered species, wildlife, fish, water quality, recreation, and other resources.

The habitat conservation plan — The Department of Forestry must also comply with the federal and state Endangered Species Acts (ESAs), in addition to meeting State Land Board direction and Constitutional and statutory mandates for the Elliott. Therefore the Department of Forestry is applying for an incidental take permit on the Elliott from the U.S. Fish and Wildlife Service, under Section 10(a) of the federal ESA, for take of spotted owls for 60 years, and marbled murrelets for harvest of up to 2380 acres of unsurveyed potential habitat over 6 years. Incidental take may occur as a result of removing habitat for those species in the course of management activities. This habitat conservation plan has been prepared as part of the application for the permit. It includes mitigation and minimization measures that maintain and enhance essential habitat features for spotted owls and marbled murrelets. The plan is based on a strategic framework that includes management basins with varying harvest rotations from 80 to 240 years, and establishment of habitat conservancy areas, riparian reserves, and other reserve areas across the forest. Mitigation measures also include research, monitoring and adaptive management.

The habitat conservation plan presents a conservation strategy for the northern spotted owl and marbled murrelet on the Elliott State Forest. The conservation strategy's objective is to reconcile the goals of long-term timber management with protection of spotted owls and marbled murrelets. To meet that objective, the conservation strategy must be a long-term strategy, cover the entire forest, and look at the Elliott in a regional context.

Section I. The Planning Context and the Plan Area

Purpose of habitat conservation plan — The purpose of the HCP was just described in the Introduction of this Executive Summary. This part of Section I describes the purpose in more detail.

Land use classifications on the Elliott — The land use classification system applies to both Common School Forest Lands and Board of Forestry Lands. State forest lands are divided into two main categories: production and nonproduction. Production lands, which comprise 94.7% of the Elliott, are those areas where timber production is the primary use. Nonproduction lands, which comprise 5.3% of the Elliott, are those areas where timber production is not the primary use. Nonproduction lands include special use, conservancy, and noncommercial lands.

The timber program — The timber program is managed to maximize long-term revenues for the Common School Fund and to produce income for local governments over the long-term, consistent with cost-effective and ecologically sound forest resource management. The timber program is guided by the principle of sustained yield, which ensures that the Common School Fund and local governments will benefit from a perpetual source of revenue from a managed forest.

Regional context — The Elliott must be viewed in context with the national forests, Bureau of Land Management lands, and privately owned forest lands in the south Oregon coast region. To the north and east of the Elliott, there are existing and planned older, late successional forests on Siuslaw National Forest and Bureau of Land Management lands.

Many of these forests are in preserve or reserve status. To the south and west of the Elliott, there are younger, early successional forests on privately owned timber lands. The historical harvest patterns on these lands, and the Record of Decision for the Final SEIS on federal lands, have established the general development patterns for these two groups of lands for the foreseeable future (about the next 100 years) (USDA Forest Service et al. 1994a & b). The Elliott will provide a transition over time between these areas, by maintaining some quality habitat for nesting and survival of owls and murrelets, and by providing habitat that allows spotted owls to move from lesser quality habitat on private lands to higher quality habitat on federal lands.

The Elliott is very important socially and economically to the local communities dependent on the forest's resources. Most current economic activity generated by the Elliott is related to timber harvesting. The rural areas around the Elliott are still highly dependent on the forest products industry. The Elliott's resource outputs have the greatest economic impact on the lumber and wood products industries, while indirect and "ripple" effects are felt widely throughout local economies.

Regulatory framework for habitat conservation plan — The northern spotted owl was listed as a federal threatened species on July 23, 1990. The marbled murrelet was listed as a federal threatened species in Washington, Oregon, and California on October 1, 1992. Section 10(a) of the federal ESA includes provisions for the issuance of special permits for take that is incidental to but not the purpose of otherwise lawful activities. The Department of Forestry is applying for an incidental take permit for the Elliott, for spotted owls and marbled murrelets. While the Department of Forestry does not plan to knowingly harm, harass, hunt, or otherwise injure spotted owls and marbled murrelets, it does propose to remove some habitat for both species in the course of management activities.

Habitat conservation plan requirements and guidelines — To qualify for an incidental take permit, the applicant must prepare a habitat conservation plan (HCP) that specifies the impact that will likely result from such taking; what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being selected; and such other measures that may be required as necessary or appropriate for purposes of the plan. This subsection includes a complete list of HCP requirements.

Other legal requirements — The Department of Forestry must comply with the State of Oregon Endangered Species Act and the Oregon Forest Practices Act. The northern spotted owl was listed by the State of Oregon as a threatened species in 1987. The Fish and Wildlife Commission voted in May 1995 to list the marbled murrelet as threatened under the State ESA. The Department of Forestry is consulting with the Oregon Department of Fish and Wildlife on the proposed management of the Elliott. The Department of Forestry meets or exceeds all requirements of the Oregon Forest Practices Act. The Northwest Forest Plan is also discussed here.

Section II. Surveys and Studies

Part 1. Northern Spotted Owl

Literature review — This subsection includes a brief overview of existing literature on the northern spotted owl (*Strix occidentalis caurina*). Historically the northern spotted owl existed over a vast expanse of natural forest. Studies indicate that the owls tend to select mature or old growth forests, and are found less often in stands under 60 years old. Thomas and others have described loss of habitat, and fragmentation of remaining habitat due to timber harvest and other disturbance, as the greatest threat to the northern spotted owl. Analysis of five discrete populations for 5-8 years indicated that those spotted owl populations are declining an average of 7.5% each year in northern California and southern Oregon. (References are given in the literature review subsection).

History of surveys on the Elliott — Early surveys of the Elliott for spotted owls were done in 1982, 1986-1989, and 1990. Broad, intensive surveys were first conducted in 1991, and were also conducted in 1992 and 1993. Owl surveys were also conducted in 1994, but results were not fully analyzed in time to include in this Habitat Conservation Plan. Other studies related to spotted owl habitat and behavior are also being conducted on the Elliott.

As of September 16, 1993, there were 35 spotted owl sites on or within 1.5 miles of the Elliott. Of the 35 sites, 29 are occupied by pairs, 5 by resident single owls, and 1 site by 2 birds, pair status unknown. The activity centers for 24 sites are on state land, 8 are on private lands, and 3 on Bureau of Land Management lands. In addition, there are 4 sites where owls are present but residency is not yet determined. There are also 4 locations where non-territorial “floater” owls have been recorded. Thus, based on data collected in 1991-1993, 69 individual spotted owls have been recorded on or within 1.5 miles of the Elliott. Owl surveys were also conducted in 1994 but the results were not fully analyzed in time for this document.

Part 2. Marbled Murrelet

Literature review — This subsection includes a brief overview of existing literature on the marbled murrelet (*Brachyramphus marmoratus*). This robin-sized seabird feeds on fish and invertebrates in near-coastal waters, but nests inland in mature and old growth coniferous forests as far as 52 miles from the ocean. In Washington, Oregon, and California, murrelets nest on platforms or broad surfaces formed by large limbs, deformed branches, or similar structures, which are found most commonly on older trees. The U.S. Fish and Wildlife Service cited loss of nesting habitat as the primary reason for the decline in marbled murrelet populations. Other causes include gill net mortality and oil spills. Recent estimates of the population size in Oregon range from 2,000-5,780 murrelets. The historical population is thought to have been much larger. (References are given in the literature review subsection.)

Murrelet habitat on the Elliott and adjacent lands — The entire Elliott State Forest is within the breeding range of the murrelet. In 1993, 39,367 acres (42%) of the potentially forested lands within the Elliott were in stands in the 100 year age class or older. Regionally, potentially suitable nesting habitat exists in several areas adjacent to the Elliott,

including the Siuslaw National Forest to the north, and 2 Bureau of Land Management districts to the northeast and east. Occupied sites have been located on some of these nearby lands.

History of surveys on the Elliott — The first murrelet survey on the Elliott was done in 1989. Surveys were also done in 1992, 1993, and 1994. The surveys have focused on proposed sale areas, and have not covered the entire forest. Based on 1992-1994 survey data, there are 31 sites where murrelet occupied behavior was observed. No nests have been discovered. Nest site surveys have not been conducted yet on the Elliott, thus the reproductive status of the Elliott population is unknown.

Section III. Developing the Conservation Strategy

This section describes the elements considered in planning the conservation strategy. The elements are listed below and on the next page.

Goals for fish, wildlife, and timber — The goals for fish, wildlife, and timber are identified in the Elliott State Forest Management Plan, and repeated here. The forest plan also has goals for a wide range of other resources on the Elliott.

Identification of other species of concern — Three threatened species are known to be on the Elliott: bald eagle, northern spotted owl, and marbled murrelet. The peregrine falcon, an endangered species, has not been documented on the Elliott. North and South Umpqua River sea-run cutthroat trout are currently proposed to be listed as endangered by the National Marine Fisheries Service. The National Marine Fisheries Service has also received petitions requesting listing of coastal steelhead, coastal coho salmon, and chinook salmon. It is not known what the status is on the Elliott of the federal Category 2 candidate species. The status of the spotted owl and marbled murrelet on the Elliott is discussed in detail in Section II.

The conservation strategy will protect the active bald eagle nest on the Elliott, and any new eagle nests, with a site-specific management plan. A habitat survey will be done on the Elliott by 1995 to determine if there are any peregrine falcon eyries on the forest. If any eyries are found, a site management plan will be developed to provide protection to the eyrie. The conservation strategy does not propose any incidental take of bald eagles or peregrine falcons. Riparian and other reserves, as well as long rotation management of adjacent management basins, will provide protection for cutthroat trout and other fish species of concern. The habitat needs of Category 2 candidate species will be factored into planning at the project and basin level.

No rare, threatened, or endangered plants are known to be on the Elliott. Some sensitive plant species may occur in the general area, but are not known to occur on the Elliott. The Department of Forestry will provide legally required protection for T&E plants. Details are given in Section III.

Description of current forest conditions — The forest conditions on the Elliott today are the result of a combination of natural events and past forest management. These events have

created the forest's current age class distribution. Two age groups are currently predominant on the Elliott: stands 1-35 years old, and stands 76-125 years old. Stands 1-35 years old were created by the last 35 years of forest management. Stands 76-125 years old generated naturally after the Coos Bay Fire of 1868. The small number of older stands are the few stands that survived the 1868 fire.

Consideration of alternative strategies — The other alternatives to the conservation strategy are described and analyzed in the environmental assessment (EA), and are summarized in this subsection of the HCP. The list below and on the next page identifies the preferred alternative, and explains briefly why the other alternatives were not selected.

- **Alternative A** — The preferred alternative. Ecosystems on the Elliott would be managed to provide a range of habitat types and structural conditions at both the forest and stand level, through the manipulation of stand age, management of unit rotation length, species composition, and development of stand heterogeneity through creation of snags and retention of green trees. This alternative would manage the forest for integrated resource values, for biological diversity at both the landscape and stand levels, and in a manner that meets legal mandates and trust obligations. Management basins would serve as the basis to implement, monitor, and control timber harvest and habitat protection.
- **Alternative B** — This alternative would provide a higher contribution toward maintaining northern spotted owl and marbled murrelet populations through extensive reserves, but would allow the least availability for harvest.
- **Alternative C** — This alternative would assume that federal lands would be adequate to meet the need for protected spotted owl NRF (nesting-roosting-foraging) habitat and murrelet nesting habitat. This alternative would allow the greatest opportunity for harvest and would provide the smallest amounts of spotted owl NRF habitat and murrelet nesting habitat.
- **Alternative D** — This alternative would continue to use the interim plan used in 1992 and 1993, with modifications. While this alternative would maintain habitat for murrelets and spotted owls, the habitat would be fragmented. This alternative's low levels of timber harvest would not meet the direction of the State Land Board.
- **Alternative E, no action** — Alternative E is the take avoidance alternative. It assumes the U.S. Fish and Wildlife Service would not issue a Section 10(a)(1)(B) permit for incidental take to the Oregon Department of Forestry. Generally, the Department of Forestry would continue to operate under restrictions resulting from the current regulatory regime. Under federal law, the Oregon Department of Forestry would avoid potential take of northern spotted owls, using the rescinded USFWS guidelines; and marbled murrelets, using the Marbled Murrelet Management Plan for State Forest Lands, as provided to USFWS on August 16, 1994 (Oregon Department of Forestry 1994). The no action alternative would not meet the State Land Board's constitutional and statutory obligations for management of the Elliott State Forest, and would not maintain high quality habitat for spotted owls and marbled murrelets over the long term.

Section IV. The Conservation Plan

The conservation strategy — The conservation strategy uses an ecosystem-based landscape management approach to provide and maintain habitat for the northern spotted owl and marbled murrelet that recognizes both the coarse and fine filter components as described by Malcolm Hunter (Hunter 1990). The strategy manages ecosystems to provide a range of habitat types and structural conditions at both the forest and stand level. This objective is accomplished through the manipulation of stand age, management unit rotation length, species composition, and development of stand heterogeneity through creation of snags and retention of green trees. The strategy will develop the following landscape structures.

- Three successional forest types — older, late successional forests; middle-aged, mid-successional forests; and younger, early successional forests.
- Corridors linking the three forest types.
- Matrix conditions across the forest, ensuring a minimum mix of stand ages (minimizing fragmentation).
- Late successional reserves to protect and enhance biodiversity and T&E species habitat.

The 17 management basins on the forest serve as the basis to implement and monitor the strategy. Habitat Conservancy Areas (HCAs) are established in each management basin, to protect some T&E species sites or fisheries areas. HCAs, riparian reserves, and other reserves (such as scenic areas) total 18,060 acres, or 19% of the Elliott.

The basins use a mix of 240, 200, 160, 135, and 80 year rotations, varying by basin. Over time, from 13-66% of each management basin will be managed in NRF habitat for the spotted owl. Dispersal habitat for the spotted owl is provided using a variation of the 50/11/40 strategy. The variation is maintaining dispersal habitat by management basin instead of on a quarter township basis.

Scope of the incidental take permit — The Department of Forestry is seeking a 60 year incidental take permit for the northern spotted owl, and a 6 year permit for the marbled murrelet, with reviews and adjustments made as conditions change. Both permits will be reviewed annually for the first 5 years, through a meeting where the monitoring report will be reviewed. At the end of the first 5 years, a comprehensive review of the permit and HCP will be scheduled. Reviews will be scheduled at least every 5 years, after the first 5 year review. The permit would authorize incidental take of the northern spotted owl and marbled murrelet in connection with timber harvest as detailed in this Habitat Conservation Plan.

Level of incidental take and other impacts — See pages S-4-5 for a summary of the current status of owls and murrelets on the Elliott. It is estimated that over 60 years, 43 spotted owls could be incidentally taken by modification of habitat. Effects on spotted owl habitat are also discussed in this subsection.

Marbled murrelets are assumed to be taken when potential nesting habitat is harvested. No known nesting habitat will be harvested during the next 6 years. It is estimated that over the

6 years, approximately 2,380 acres of potential murrelet nesting habitat may be harvested. Other effects on murrelet habitat are also discussed in this subsection.

The forest's development over time — Using a computer model, the Department of Forestry has analyzed how the forest structure will change over the next 100 years, as the conservation strategy is implemented. Note that the analysis of the forest in this section is continued beyond the 60 year term of the HCP to illustrate important long term effects, although the analysis of take and mitigation focuses on the 60-year period covered by the permit request. Two trends stand out as particularly important; they are noted below. Section IV includes details, along with maps showing the habitat development through time and graphs showing the trends in owl and murrelet habitat over time.

- The net amount of stands in the 80 year age class and older decreases from the 1993 figure of 47,009 acres (50% of the forest) to a low point of 36,180 acres (39%) by the year 2033. The acres in this age class then increase to 43,463 (46%) by the year 2073, then generally level off.
- Late successional forests (stands 156+ years old) show a dramatic increase over the next 100 years. Late successional forests increase from only 410 acres (less than 1%) to 26,678 acres (29%) by the year 2063, and then level off.

While the amount of stands 80 years and older eventually levels off at an acreage near the current level, over time a much higher percentage of those stands would be 156 years and older. The 156+ stands provide higher quality habitat for spotted owls and marbled murrelets because of the expected increase in structural diversity and nesting opportunities. This forecast shows that the Elliott State Forest can sustain a final harvest of 4,600 acres during the next decade, while providing late successional habitat (156+ years) for northern spotted owls and marbled murrelets.

Mitigation measures and measures to minimize take — The Department of Forestry will implement measures to mitigate and minimize impacts to spotted owls and marbled murrelets, to the maximum extent practicable. The measures are listed below. They are discussed in detail in this subsection.

- Habitat management — management basins, reserve areas, habitat conservancy areas (HCAs), riparian reserves, other reserves, habitat management specific to spotted owls, habitat management specific to marbled murrelets.
- Habitat enhancement — reforestation, thinning and partial cutting, green tree retention, snag creation and retention, downed wood retention and creation, group selection of mature trees, timber sale planning.
- Continuing surveys and studies — spotted owl research, marbled murrelet research, monitoring, adaptive management.

Research and monitoring — Spotted owl and marbled murrelet research will be an important part of the conservation strategy. The Department of Forestry intends to spend \$500,000 over the next five years on a murrelet research program. The Department of Forestry will actively work with potential cooperators to maximize research benefits in

terms of money available for research, and consistency of research methodology. In addition to the annual monitoring reports, the Department of Forestry proposes that a comprehensive review of the habitat conservation plan and incidental take permit conditions be conducted at the end of the first five years.

The complete conservation strategy will provide for recovery enhancement for the northern spotted owl and marbled murrelet.

Implementation — This subsection describes who is responsible for implementing the conservation strategy, and how implementation will be carried out. The Coos District Manager has the overall responsibility for implementing the Forest Management Plan and the Habitat Conservation Plan.

Appendices

Supplemental information is included in a number of appendices. The appendices include a glossary; references; team members; species lists for plants and animals; timelines for the various timber rotations; legal and policy mandates; and the Oregon Department of Forestry murrelet habitat rating key.