Chapter 1 — Introduction, Purpose, and Need

Introduction

This supplemental environmental impact statement (SEIS), prepared jointly by the U.S. Department of the Interior (USDI)-Bureau of Land Management (BLM) Oregon/Washington State Office and U.S. Department of Agriculture (USDA)-Forest Service (FS) Region 6, assesses management alternatives for Port-Orford-cedar within BLM districts and one national forest (NF) in Oregon. A decision selecting one of the Action Alternatives from this SEIS would amend the land and resource management plans for the Coos Bay, Medford, and Roseburg BLM Districts, and the Siskiyou NF. The responsible officials are the BLM State Director for Oregon/Washington and Forest Supervisor for the Rogue River and Siskiyou NFs. The Klamath NF, Six Rivers NF, and Shasta-Trinity NF of Region 5 are Cooperators.

Changes Between Draft and Final

The following changes were made to Chapter 1 between the draft and final SEIS. Minor corrections, explanations, and edits are not included in this list.

Changes/edits were made to:

- Acknowledge the role past Federal management has had in the spread of PL;
- clarify the relationship between the Ninth Circuit Court decision and the existing resource management plan direction; and
- clarify that meeting applicable laws is part of the Purpose.

Background

Port-Orford-cedar (*Chamaecyparis lawsoniana* [A. Murr.] Parl.) (Port-Orford-cedar will hereafter be abbreviated POC) is an ecologically and economically important tree species. Its natural range is geographically limited to southwestern Oregon and northwestern California (Figure 1-1), but within that area, it occupies a broad environmental range. Except in the northern part of its range where it is widespread, POC grows primarily along streams and in areas with year-round seepage. It often grows within the active stream channel, where, as large, old trees, it provides shade and long-lasting stream structure (Hansen et al. 2000b). POC can be found on ultramafic soils (serpentines) as well as on nonultramafic soils. Its unique ability to grow well on ultramafic soils makes it the largest tree on many sites, and therefore important for contributing shade and coarse wood in certain stream systems, and for contributing snags and large logs to terrestrial habitats. POC occurs in association with many rare plants, most notably in plant associations on ultramafic soils where it plays a prominent

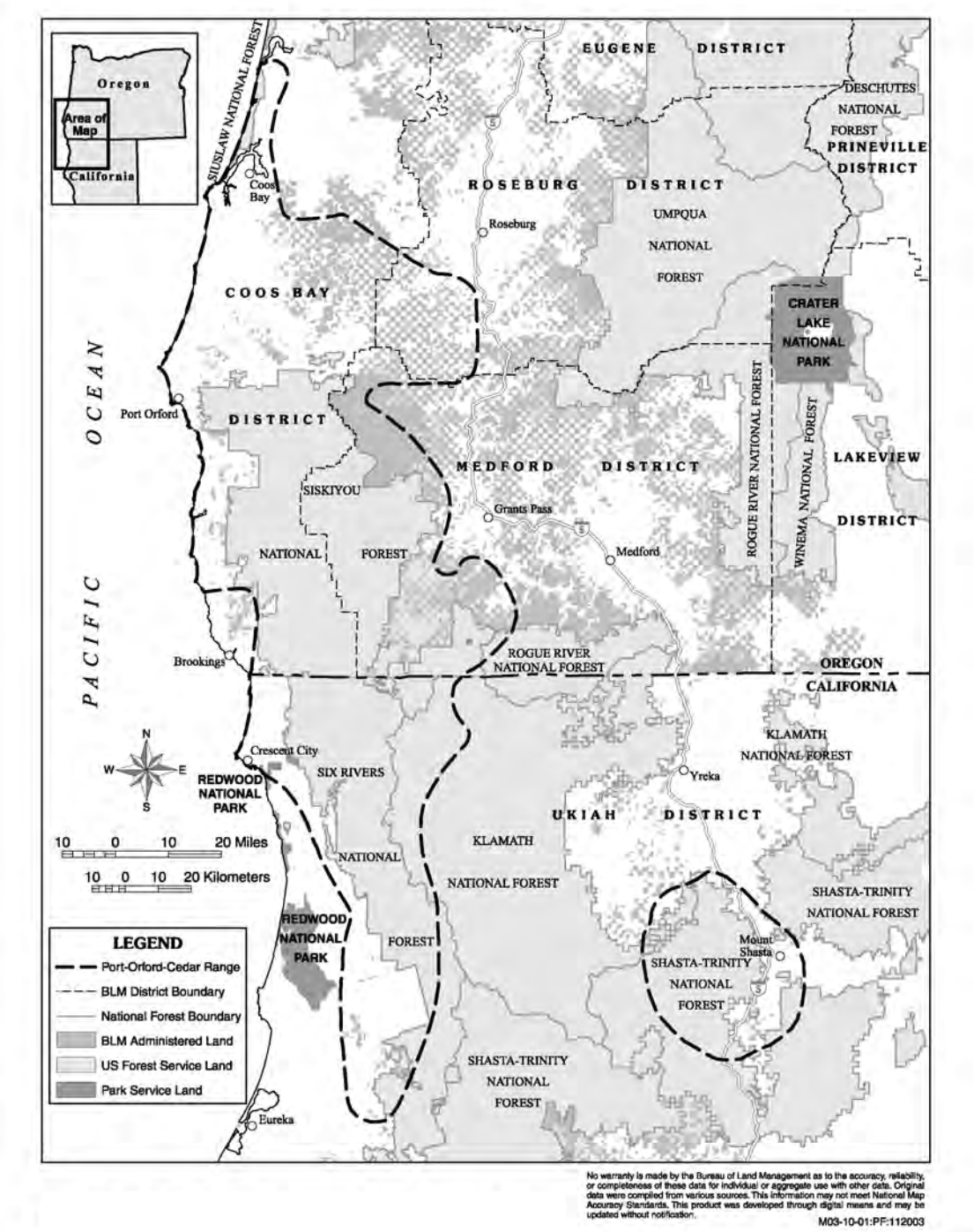

Figure 1-1.—*The natural range of Port-Orford-cedar*

role in the overstory. By recycling calcium onto the surface soil, POC may help improve soil fertility, an important quality in harsh ultramafic environments (Ullian and Jules 2000).

Top quality POC logs are currently valued at $2,500 per thousand board feet, and have been valued as high as $12,000 per thousand board feet. Properties of POC wood that make it valuable are its precise machining capability, decay resistance, resistance to chemical corrosion, and aromatic quality. POC is valued in Japan where it is used as a substitute for Hinoki

cypress (*Chamaecyparis obtusa*) in traditional construction and in the reconstruction of temples and shrines (Hansen et al. 2000b).

POC plays a significant role in the cultural, medicinal, and religious life of many Tribes that live within its range. Because of its durability, POC is still used to construct living and sweat houses, both of which hold ceremonial functions. American Indians use many parts of the POC tree: Shoot tips are used to heal lungs, throats, and toothaches; leaves are used to treat coughs; and bark and twigs are used to treat kidney problems. Regalia items used in religious ceremonies are made from the wood. Other items, such as feathers and hides, are stored in POC trunks because the oils and aroma of the wood repels insects (Heffner 1984).

POC is affected by an exotic root pathogen, *Phytophthora lateralis* (*Phytophthora lateralis* will hereafter be abbreviated PL), which was first documented in a nursery near Seattle, Washington, in 1923. Nearly always fatal to the trees it infects, research shows the spread of the pathogen is linked, at least in part, to transport of spore-infested soil by human and other vectors. Water-borne spores then readily spread the pathogen downslope and downstream. Other vectors include animals, but the spread associated with them is slower and more localized. The pathogen spread south from Seattle via infected nursery stock and infested soil, and was first reported in the natural range of POC in 1952 near Coos Bay, Oregon. By 1960, infected trees were found on the Siskiyou NF, and surveys in 1964, 1974, 1983, and 1986 showed increasing levels of infestation and tree mortality. Infected trees were first identified in California in 1980. During that time, scientists and publics began recommending disease-control actions. In part because the disease was spreading uncontrolled throughout private lands in the Coos Bay area, Agency response at that time was limited and irregular. The pathogen now infests about 9 to 15 percent of the federally-administered POC acreage within the range. Most of this acreage is on sites, such as along streams and roads, at high risk to spread the pathogen. Although the disease has spread throughout much of the range and continues to infect more trees in drainages where it is present, approximately 85 to 91 percent of Federal POC acreage is currently uninfested. This is in part because the disease does not readily move above roads or upslope from streams unless carried by some vector, and some trees have a natural resistance to the disease.

In the late 1980s and early 1990s, public awareness of POC and the root disease affecting it reached a high level. In response to public interest and the Agencies' own concerns, the FS and BLM greatly increased their efforts to reduce new occurrences of PL and to maintain POC as an ecologically and economically significant species. Specific management direction was added to each Agencies' land and resource management plans. In general, this direction relies on site-specific analysis at the project level to decide what disease-control practices are needed in each situation. Available practices include:

- Washing equipment and Agency and contractor vehicles traveling between infested and uninfested areas;
- closing roads to prevent nearby stands from becoming infested;
- limiting access and activities to the dry season;
- treatment of water drawn for roadwork or fire suppression;

- removing POC from along roads to reduce the likelihood of spreading the infestation;
- planting on low-risk sites;
- eradicating the host cedar around infections in order to isolate the infested area; and
- selective breeding to take advantage of the natural resistance exhibited by some trees.

These practices appear to be substantially slowing the spread of the disease and reducing its adverse effects to POC's ecological and economic significance. But while agency actions can reduce the rate of disease spread, factors outside of the agencies control will continue to spread the disease. PL is persistent in the soil for several years, and can be transported by animals, hunters, and other vectors, even to areas that have no roads. On wetter areas in the northern part of the range, infected and uninfected POC are well-distributed across the landscape and regenerate readily on disturbed sites, including road cuts and fills. Where such conditions exist on "checkerboard" Federal lands intermingled with private lands, timber hauling and other use may be unrestricted on public and permit roads across Agency lands. Hence, many of the techniques the Agencies might use, including washing vehicles, removing host trees adjacent to roads, or limiting activities to the dry season, are not available or are less effective on these checkerboard ownerships, or are not cost-efficient given the relatively small gain in protection. However, even without active agency management, it is unlikely the disease will kill all POC trees. This is because (1) they produce massive amounts of seed, (2) many trees are located upslope from roads and streams or on drier areas unfavorable to the pathogen, or (3) some are naturally resistant to the disease. A passive-management alternative is included in the SEIS to examine the likely rate of spread and environmental effects.

A small percent of POC appear resistant to the disease. In resistance tests as old as 16 years, a majority of tested seedlings continue to survive in infested soil. An operational resistance breeding program started by the FS and BLM in 1997 has developed resistant populations. Breeding is advancing relatively quickly, in part because POC can develop seed cones at 4 or 5 years of age or sooner in nursery conditions. Resistant seed has been sown in nurseries to be used to restore areas burned in the 2002 Biscuit Fire in southwest Oregon. The BLM began outplanting resistant stock there in November 2003.

In 2002, a decision by the U.S. Court of Appeals for the Ninth Circuit found that a BLM project-specific environmental analysis (EA) and the underlying resource management plan environmental impact statement (EIS) to which it was tiered, did not adequately consider cumulative effects to the health of POC over its entire range in light of the reasonably foreseeable actions of the Agencies and others. The decision stated that there needs to be consideration of the cumulative range-wide effects of the current management direction and other reasonably foreseeable actions, not just a consideration of the effects within the immediate geographic area affected by the proposed project. Although the Court's decision did not say the current direction is inadequate, and a cumulative effects discussion of that direction is arguably all that is required, it follows that potential alternatives to the current direction need to be considered as well. This SEIS examines the current POC management direction and alternative strategies designed to maintain POC at desired levels in the ecosystem and mitigate the root disease damage.

The Need

The Need to which the Agencies are responding remains the same as in the late 1980s and early 1990s when the Agencies adopted their current management direction. The Agencies have a need for maintenance of POC as an ecologically and economically significant species on BLM and NF lands. POC plays a key role in some forest ecosystems, provides culturally significant products for Tribes, and provides unique forest products.

This Need arises from the presence of an introduced pathogen that has a high potential to spread over much of the range of POC, and 50 years of spread facilitated by various management activities and forest uses, both public and private. The Agencies have an opportunity to affect how fast the disease will spread to remaining uninfested stands and areas at least in the short term, and in most areas whether it will reach some trees at all. The Agencies also have an opportunity to mitigate some of the damage caused by the disease by developing disease-resistant planting stock to replace disease-killed trees, and by planting POC where it does not currently exist.

The Purpose

To meet the need for maintenance of POC as an ecologically and economically significant species on BLM and NF lands, the Agencies are seeking a management strategy that will slow the spread of the root disease enough to maintain POC's significant ecological and economic functions, without the cost of the management strategy exceeding its effect on the value of these functions.

Since the ecological and economic significance of POC is not a yes/no question, but is best represented as relative value points on a continuum, the analysis needs to provide two types of information so that a cost/benefit decision can be made about each alternative. On the one hand, the analysis needs to identify and discuss what *is* the ecologic and economic significance of POC in the landscape and how various levels of mortality negatively affect those values. On the other hand, the analysis needs to examine what factors affect the spread of the disease, what management techniques can minimize those factors and thus reduce disease spread, and therefore what are the costs and benefits of implementing an appropriate mix of disease-reducing management techniques in terms of direct financial costs, maintaining the ecological and economic value of POC itself, and in terms of the positive and negative effects to other (non-POC) resource values or uses.

To put the alternatives in context: The root disease will continue to spread—more quickly under passive agency management, and more slowly under maximum control efforts. Various levels of effort between these two extremes will result in various rates of disease-spread. The SEIS seeks to describe the expected loss in ecological and economic function for each alternative, and compare that with the costs (and benefits) of implementing each alternative in terms of both financial and lost-opportunities (as well as benefits to other resources).

Issues

The following Issues are part of the above Purpose, but are more specifically itemized here to help direct the affected environment and effects discussions in Chapter 3&4. The issues are grouped here to show how the resultant analysis answers the two questions key to the cost/ benefit consideration of each alternative by the decision-makers.

Question 1. What is the ecological and economic significance of POC in the landscape and how is this affected by various levels of POC mortality?

Considerations include:

- The role of POC in stream function and fish habitat;
- the role of POC in terrestrial habitats for listed, rare, or unique plants;
- the role of POC in terrestrial habitats for listed, rare, or unique animals;
- the role of POC for contemporary Tribal uses;
- the role of POC for boughs and specialty woods;
- the role of POC in maintaining and improving soils;
- whether significant genetic resources are at risk of loss; and
- the role of POC in ecosystem function and the maintenance of significant plant associations.

Question 2. What factors affect the spread of the disease, what management techniques can minimize those factors, and what are the costs and benefits of implementing an appropriate mix of disease-reducing management techniques in terms of (a) direct financial costs, (b) maintaining the ecological and economic value of POC itself, and (c) the positive and negative effects to other (non-POC) resource values or uses?

Considerations include:

- Identification of the current management practices and other factors that may spread the root disease, and their relative importance. These include timber harvest, special forest product collection, off-highway vehicle travel and other recreation activity, mining, fire suppression and fuels treatments, livestock grazing, and activities on private lands.
- Identification of management practices that can reduce disease spread, and their relative effectiveness (these are included in the alternatives).
- Identification of forest uses or management needs that will be constrained by implementation of various management practices, either because of cost or because of reduced access (this is the same list as in bullet one above).

- Identification of forest resources (other than POC) that will also benefit from implementation of various disease-reducing management practices.

Information about these issues and how each is affected by the alternatives is included in the effects discussions in Chapter 3&4.

Scoping

Scoping is the term used to identify issues, concerns, and opportunities associated with the proposed action in an EIS. Public involvement in the scoping process began when the Notice of Intent to prepare this SEIS was published in the *Federal Register* (68[27]:6709–6710) on February 10, 2003. The Notice of Intent announced the SEIS would develop alternative management strategies for the Oregon portion of the POC range and analyze effects of those strategies throughout the entire natural range of the species. The Notice described scoping as the time to identify interested and affected individuals and groups, and to identify issues associated with the management of POC. The Notice of Intent and scoping letter was posted to the SEIS website on February 10, 2003, at http://www.or.blm.gov/planning/Port-Orford-cedar_SEIS/. Also on February 10, the Agencies distributed news releases to approximately 68 newspapers or radio stations within or near the range of POC, and began mailing approximately 600 scoping letters to individuals, groups, government agencies, and Tribes identified from district and forest "interested publics" lists as potentially interested in the management of POC on Federal lands in Oregon (see the Culturally Significant Products for American Indian Tribes section in Chapter 3&4 for more detail about Tribes). The letter provided additional detail about the need and the analysis, explained how to remain on the Agencies' mailing list for the draft SEIS and related documents, gave the SEIS website address, and again invited public input.

The Agencies received 77 letters or e-mail messages asking to be on the mailing list; 63 of those also contained other scoping-related comments. These scoping letters helped define the issues and design the alternatives presented in Chapter 2 of this SEIS.