

Chapter 1

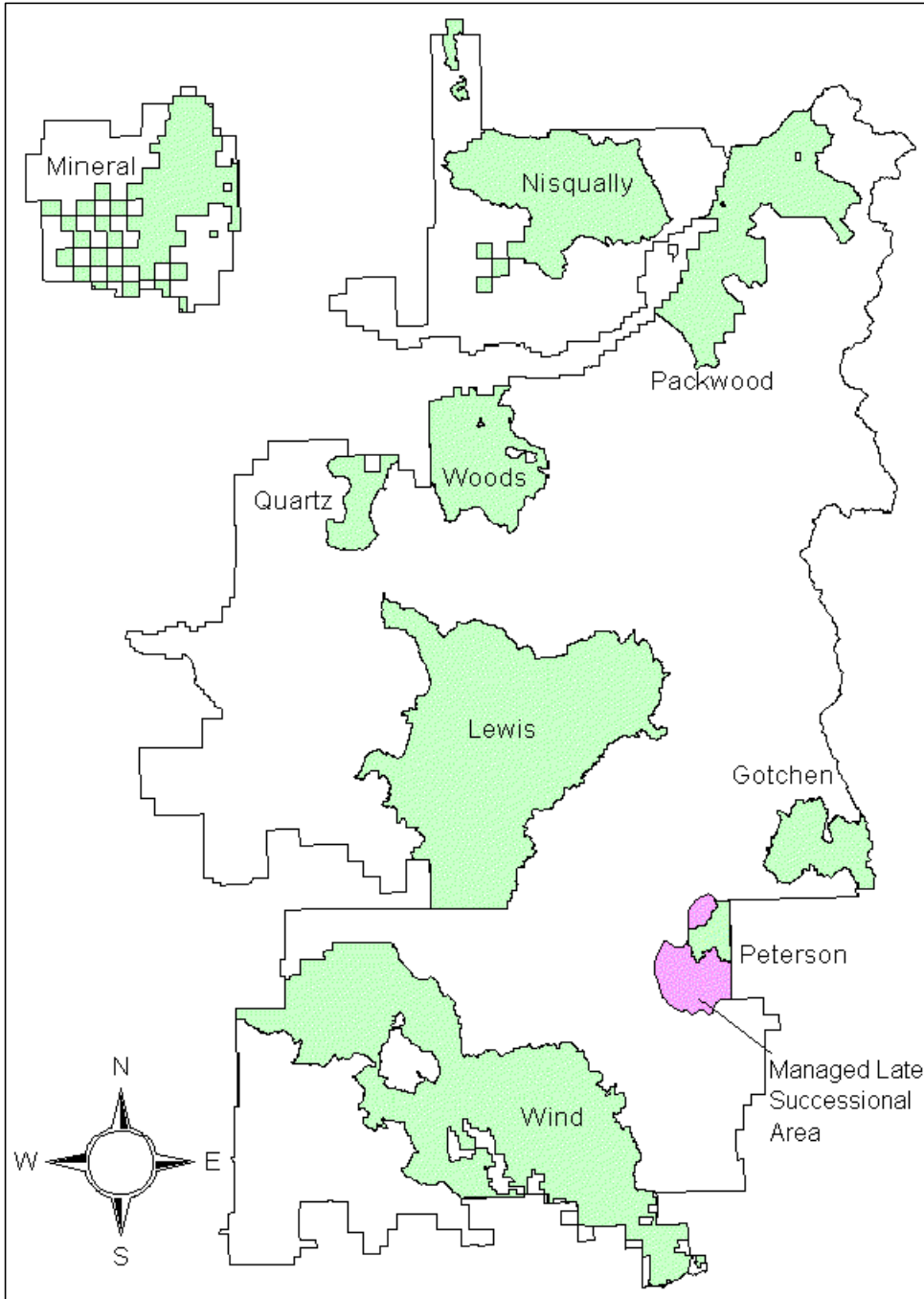
Introduction and Highlights

Chapter 1

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Map 1-1 Late-Successional Reserves Map



Chapter 1

Introduction

In 1994 the Northwest Forest Plan (NWFP) designated a network of Late-Successional Reserves (LSR) with the object of protecting and enhancing conditions of late-successional and old-growth forest ecosystems. As part of its strategy for protecting these ecosystems, the NWFP directs us to prepare an assessment of conditions and the functions of each LSR. This Assessment was prepared by an interdisciplinary team comprised of Forest Service resource specialists and managers. A biologist from the U.S. Fish and Wildlife Service also participated on the team. A list of prepares is included at the end of the document.

Its purpose is to describe the ecological framework within which projects will be designed to ensure they will meet LSR standards and guidelines and further LSR objectives. Decisions on where, when and how projects will be implemented are made through project level environmental analysis, not in this Assessment.

The Regional Ecosystem Office (REO) exemption letter is reproduced beginning on page 1-5. This letter describes the types of projects which are subject to review by the REO prior to implementation.

The emphasis of this document is on terrestrial habitats in the LSRs. Aquatic habitats are analyzed in watershed analyses. To obtain the total picture of the ecosystem and its functions, the

watershed analyses should be examined concurrently with this Assessment.

For the purposes of this Assessment, there are nine Late-Successional Reserves including one Managed Late-Successional Area on the Gifford Pinchot National Forest. The LSRs comprise about 450 thousand acres, which is nearly one third of the Forest. See Map 1-1. They range in size from about 9 thousand to 125 thousand acres.

Seven of the LSRs are on the west side of the Cascade Range. The Peterson and Gotchen LSRs in the drier east side present a different set of management concerns and opportunities. The Managed Late-Successional Area in the Peterson LSR has the same objectives as the Late-Successional Reserves but was identified by the FEMAT scientists as an area in a drier province where regular and frequent fire is a natural part of the ecosystem. In Managed Late-Successional Areas, a wider range of silvicultural treatments may be appropriate to help prevent stand destruction by fire or insects and disease.

Through site-specific analyses of the LSRs, the Gotchen LSR was found to be the driest of the nine LSRs and better fit the FEMAT description for the Managed Late-Successional Area than the Peterson area.

All Late-Successional Reserves and the Managed Late-Successional Area are addressed in this province-wide assessment. Unless otherwise noted, we use the acronym LSR to apply generically to the Late-Successional Reserves and the Managed Late-Successional Area.

1-1 Management Objectives

The objective of the Late-Successional Reserve system is to protect and enhance conditions of late-successional and old-growth forest ecosystems which serve as habitat for late-successional and old-growth related species, including the northern spotted owl. The reserves are designed to maintain a functional, interacting, late-successional and old-growth forest ecosystem. They were designed to provide distribution, quantity and quality of old-growth forest habitat sufficient to avoid foreclosure of future management options. (ROD p. B-5). They provide habitat for viable, well-distributed populations of species including spotted owl and marbled murrelets. They will help ensure that the full range of late-successional biodiversity will be conserved. (FEMAT p. IV-31)

1-2 Approach to the Assessment

The assessment begins with broad-scale discussions of the Southwest Washington Province in Chapter 2 and becomes more site specific as the emphasis shifts to stand level treatments in Chapter 5. Each chapter takes a hierarchical approach by presenting information from up to four scales: Province, Forest, plant zone, and LSR.

Chapter 2 provides context for the assessment by describing the relationship of the vegetation and management objectives of the Gifford Pinchot National Forest to the other lands and ownerships in the Southwest Washington Province. This chapter contains province-scale discussions of landscape patterns and connectivity.

Beyond Chapter 2, we follow the model common to environmental analyses:

- Chapter 3 - Desired Conditions
- Chapter 4 - Existing Conditions
- Chapter 5 - Treatments
- Chapter 6 - Fire Management Plan
- Chapter 7 - Monitoring

Chapter 3 describes desired LSR conditions and functions. This chapter interprets the broad goals and objectives outlined in the NWFP in terms of the late-successional structure, function, wildlife habitat relationships and human uses for the Gifford Pinchot LSRs.

Chapter 4 assesses the existing condition and functions parallel to the descriptions of desired conditions in Chapter 3. Also discussed in Chapter 4 are plant and animal species in the LSRs with special status and unique habitats.

The focus of Chapter 5 is on any disparity between desired and existing conditions and how through management we can bring the existing condition closer to desired. Criteria are developed to describe conditions, which would trigger management activities.

Chapter 6 is the plan for managing fire within the LSRs. Fire behavior is described for each fire group. Fire groups are analogous to the plant zone scales applied in Chapters 3 and 4. Fire hazards are assessed and guidelines are provided for appropriate fire suppression response. The fire plan describes historical fire occurrence and cause in each LSR over the past 25 years.

The final chapter summarizes monitoring questions raised throughout the document. These questions provide the foundation for developing monitoring programs which will assist in ensuring projects are implemented as intended and achieve the desired results.

We intend that this be a dynamic document. With Regional Ecosystem Office (REO) concurrence, we will update or amend it as conditions change and new information becomes available.

1-3 Highlights of the Assessment

1. The Forest provides most of the late-successional habitat in the SW Washington Province. This relationship is not expected to change in the future because of the predominantly private ownership in the province. See page 2-1.
2. Site of the only known nesting sites of marbled murrelets on the Forest, the Mineral LSR is recognized as an important island of late-successional vegetation at the province scale. See page 3-17.
3. The LSRs contain over half the Forest's deer and elk winter range. There will be a reduction in the quality of deer and elk habitat as LSR vegetation matures. Forage

enhancement is recommended where it does not retard development of late-successional habitat and is consistent with LSR objectives. See pages 4-25 and 5-10.

4. Where they provide necessary habitat for species which are federally listed or sensitive, meadows may be maintained through fire or mechanical methods. See page 5-47.
5. Within the LSRs there are many opportunities to accelerate development of late-successional characteristics through:
 - Young Stand Thinning - see page 5-1
 - Commercial Thinning of stands less than 80 years old - see page 5-6
 - Older Stand Structural Enhancements - see page 5-11
6. All LSRs are low fire risks in general but have localized areas of moderate risk. See page 6-11.
7. There is a concern in the Gotchen LSR, that if left unchecked, the combination of the relatively dry environment, abundance of fire intolerant tree species and endemic levels of insect and disease will pose significant risk of catastrophic stand replacing fire in the future. Vegetation management and risk reduction treatments are proposed in the Gotchen LSR to reduce the risk of large scale stand replacing fires. See pages 3-15, 4-41, and 5-14.

8. The Managed Late-Successional Area was combined with the adjacent Peterson LSR for assessment. The assessment team found the Gotchen LSR to be a drier environment with a greater fire risk than the Managed Late-Successional Area (MLSA). The Gotchen LSR conditions more closely resemble NWFP description of an MLSA. See pages 4-41 and 4-82.
9. Revised guidelines for snags and down wood are developed for application in LSRs. See pages 5-22 and 5-26.
10. NWFP salvage guidelines are refined to acknowledge the functions of insects and disease and to incorporate refinements to the snag and down wood standards developed in this Assessment. See page 5-43.

Literature Cited

[FEMAT] Forest Ecosystem Management Assessment Team. 1993. Forest ecosystem management: an ecological, economic, and social assessment. Portland, OR: US Department of Agriculture; US Department of the Interior [and others].

[NWFP] Record of decision for amendments to Forest Service and Bureau of Land Management planning documents within the range of the northern spotted owl. 1994. Portland OR: US Department of Agriculture; US Department of the Interior [and others].

1-4 REO Exemption Letter

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MORANDUM

DATE: November 18, 1997

TO: Robert W. Williams, Regional Forester, Region 6, Forest Service

FROM: Donald R. Knowles, Executive Director

SUBJECT: Regional Ecosystem Office Review of the Gifford Pinchot National Forest Forestwide Late-Successional Reserve Assessment

Summary

The Regional Ecosystem Office (REO) and the interagency Late-Successional Reserve (LSR) Work Group have reviewed the Gifford Pinchot National Forest Forestwide Late-Successional Reserve Assessment (LSRA). The REO finds that the LSRA, with the assumptions and modifications explained below, provides sufficient framework and context for future projects and activities within the LSR. Future silvicultural activities described in the LSRA (as discussed below) that conform to the LSRA criteria and objectives and are consistent with the Standards and Guidelines (S&Gs) in the Northwest Forest Plan (NFP) are exempt from further project-level REO review. In addition, future salvage activities less than 1,000 acres in size that are described in the document and that conform to the LSRA criteria and objectives and are consistent with the S&Gs in the NFP are exempt from further project-level REO review.

Basis for the Review

Under the S&Gs for the NFP, a management assessment should be prepared for each large LSR (or group of smaller LSRs) before habitat manipulation activities are designed and implemented. As stated in the S&Gs, these assessments are subject to the REO review. The REO review focuses on the following:

1. The review considers whether the assessment contains sufficient information and analysis to provide a framework and context for making future decisions on projects and activities. The eight specific subject areas that an assessment should generally include are found in the NFP (S&Gs, page C-1 1). The REO may find that the assessment contains sufficient information or may identify topics or areas for which additional information, detail, or clarity is needed. The findings of the review are provided to the agency or agencies submitting the assessment.

2. The review considers potential treatment criteria and treatment areas addressed in the LSRA. When treatment criteria are clearly described and their relationship to achieving desired late-successional conditions are also clear-- subsequent projects and activities within the LSR(s) may be exempted from the REO review, provided they are consistent with the LSRA criteria and S&Gs. The REO authority for developing criteria to exempt these actions is found in the S&Gs (pages C-12, C-13, and C-18).

Scope of the Assessment and Description of the Assessment Area

The REO reviewed the LSRA for conformity with the eight subject areas identified in the S&Gs (page C-11). Several initial questions regarding proposed silvicultural, salvage, and risk-reduction treatments were resolved by meetings and conference calls between the work group and staff of the Gifford Pinchot National Forest. The LSRA was revised to reflect the results of those meetings and conversations and the revised portions of the LSRA were resubmitted by the Forest. The REO finds that the revised LSRA, with the assumptions and modifications discussed below, provides a sufficient framework and context for making future decisions on projects and activities within the LSR.

The LSRA addresses approximately 450,000 acres within eight LSRs and one Managed Late-Successional Area (MLSA) across the entire Forest. Individual reserves range in size from 9,000 to 125,000 acres. All of the LSRs in the Southwest Washington Province occur in this Forest. Plant zones across all LSRs include: silver fir (48% of total LSR acres), western hemlock (41 %), grand fir (6%), mountain hemlock (5%), and subalpine fir (>1%). Approximately 25% of the LSRs is in stands >200 years old.

The assessment addresses LSR management at several scales, beginning with a provincial scale, then stepping down to the stand level for proposed treatments. The assessment describes habitat conditions for several wildlife guilds in an attempt to address connectivity within and between LSRs, across the forest. The assessment details desired future conditions at several different levels, including a forest-wide scale, by individual LSRs, and for each plant zone. Detailed information on existing condition is presented for each individual LSR.

Assumptions and Clarifications

Members of the work group visited with the assessment team as the LSRA was being developed. The work group visit looked at potential treatment areas. Upon receipt of the assessment for review, work group members held meetings and phone conversations with LSRA team members to clarify portions of the assessment. The Forest submitted an addendum revising portions of the LSRA in response to these meetings and discussions. Additional assumptions and clarifications not found in this addendum or the originally submitted LSRA are noted below.

- The LSRA, as originally submitted, proposed silvicultural treatments for the enhancement of late-successional characteristics in stands between 80 and 100 years. However, REO has not made any finding on whether such projects that meet the criteria described in this assessment would meet the purposes of LSRs and the intent of the NFP. Any projects proposing to do non-risk-related silvicultural treatments in stands over 80 years old would, therefore, require review by REO prior to implementation.
- Several places in the document discuss projects that may provide enhancement opportunities for elk forage. Any enhancement of elk forage will only be incidental to the project's primary purpose, which is to enhance late-successional conditions.
- In Section 5-2 *Commercial Thinning*, under the heading "Treatments Description," reference is made to the portion of the REO memo (Criteria to Exempt Specific Silvicultural Activities in Late-Successional Reserves and Managed Late-Successional Areas dated July 9,

1996) that describes criteria for leaving small openings and heavily thinned patches to increase diversity (viz., Treatment Standard #4). This standard was amended by REO memo (dated September 30, 1996) to modify the size and extent of the patches. REO assumes that this amendment will be incorporated into the treatment criteria for commercial thinnings within this LSR.

- In Chapter **5-2 Commercial Thinning**, REO assumes that all snags and down wood existing prior to treatment will be retained. Any snags that pose a hazard to safe operations may be felled but will be left on site.
- In Chapter **5-4 Treatments to Reduce Fire Risk and Maintain Late-Successional Forest in Gotchen LSR**, under "Treatments Description," the Group 6 treatment for fully stocked stands that contain large, old-growth early seral tree species will be applied throughout the Gotchen LSR. Also in this section, activities under the Group 7 treatment within fully stocked stands that contain few or no large, early seral tree species, REO assumes that any existing large early-seral trees will be retained.
- In Chapter **5-6 Down Wood Management, Figure 5-1** (Down Wood Decision Tree) is modified as follows: the decision box that reads "Emphasize CWD at >low level" is changed to "Emphasize CWD at >low level." We assume that the CWD levels to be retained in these circumstances will, to the degree possible, equal or exceed those levels identified as "moderate."
- In Chapter **5-11 Salvage and Risk Reduction**, three treatment situations are described under the section "Refinements to NWFP Salvage Guidelines, Guideline 2." In treatment group 3, which describes possible treatments in laminated root rot and dwarf mistletoe infection centers, REO assumes that conversion of green trees to snags would only occur if reforestation by host or susceptible species is necessary to meet LSR objectives. The following, or similar, edit is suggested to help clarify the intent to this treatment:

In the last sentence under the group 3 treatment description, replace "Where reforestation options are limited," with "Where reforestation of non-host or non-susceptible species will not meet attainment of desired future late-successional conditions, ..."

Conclusions

Based on the discussion presented in the final LSRA, the REO finds that it provides sufficient framework and context for future projects and activities within the LSR. Silvicultural activities, risk reduction activities, and salvage activities less than 1,000 acres described in the LSRA which are consistent with the S&Gs and the treatment criteria identified in the assessment, as discussed above, are exempted from future project-level REO review. Because of the issues surrounding the management of CWD at the levels proposed in this document, the LSR work group is interested in seeing if a project with these levels meets the work group's expectations. Please inform me when such a project is completed so that the work group may arrange a site visit. I would also appreciate a copy of the revised final LSRA.

cc:

REO, RIEC

Lisa Freedman

Gifford Pinchot NF

1041/ly