VIII. SUMMARY AND CONCLUSIONS

Use of Ecologically Based Silvicultural Prescriptions

Site specific prescriptions need to acknowledge the differences in the composition and structure of young, mature and old-growth forests In general, older forests have:

a) An overstory with a mix of shade tolerant and intolerant tree species
b) Diverse vertical distribution of vegetation
c) Large snags and down logs.

Prescription objectives should be attainable given the seral stage of the vegetation in the stand and adjacent landscape.

In general, silvicultural prescriptions should be based on natural successional pathways for the appropriate disturbance regime and sub-series environment. Other treatments may be selected to meet site specific objectives.

Use of Landscape Analysis

Based on ownership patterns, current conditions, and the amount and distribution of remaining late-successional habitat within the LSR, three primary zones were identified.

a) The Core Landscape Zone is designed to serve as the genetic pool or seed source for late-successional forest dependent species.

b) The Corridor Landscape Zone connects clusters of late-successional habitat north and east of the Core Landscape Zone and provides a limited connection (due to ownership patterns) with the adjacent LSR to the South (R0268).

c) The Buffer Landscape Zone consists primarily of BLM lands in a checkerboard ownership pattern in the central eastern portion of the assessment area. This area is vital for maintaining small patches of late-successional forest habitat and plant species diversity in the Valley Margin Zone.

Landscape Cells were identified within these Zones by grouping late-seral patches according to degree of fragmentation (greater than 50 percent in late-seral condition, between twenty and 35 percent in late-seral condition, and less than ten percent in late-seral condition). Prioritization was based on securing the largest patches first, filling-in and growing out from large patches, and connecting isolated patches.

The LSR assessment process identified the need to retain, improve and restore the best habitat areas before devoting limited funding and resources to areas which would take longer to achieve desired conditions. Priority areas for fish habitat restoration are listed in Table 6. The terrestrial and aquatic priorities and restoration emphasis areas will be integrated with other resource concerns at the level of watershed analysis.

Management Opportunities and Considerations

1. Consider land-use allocation changes where they would assist in the ability of the LSR to function. Although this assessment does not identify any site specific areas for changes in land-use allocation, it suggests where future changes might be appropriate.

2. Consider land ownership exchanges or acquisitions of lands when it would facilitate the ability of the LSR to function. The ROD (C-17) lists legitimate reasons for land exchanges providing the benefits are equal to or improve upon current conditions of the LSR, either in area distribution or habitat quality.

3. Where possible, block up federal lands to improve connectivity and increase the expansion of interior forest.

4. Where possible, connect late-successional habitat on federal lands to late-successional habitat on other public lands. For example, treat NF plantations to link late-successional habitat in the Sand Lake RNA to late-successional habitat at Cape Lookout State Park.

5. Where appropriate, use knowledge gained from the ongoing management of the Tillamook State Forest to help answer questions about managing federal lands, minimizing duplication of effort. For example, use monitoring information acquired by ODF harvest in and around murrelet nesting stands.

6. Provide small scale research opportunities throughout the AMA. For landscape level questions, provide large scale research opportunities in mature conifer stands within the Hebo Late-Seral and Upper Nestucca Mid-Seral Cells (primarily LSR); provide large scale research opportunities in deciduous mix stands within the Lower Nestucca block (primarily AMA with some LSR).

7. As a general guideline within the Core Landscape Zone, give first priority to treating young stands in the Little Nestucca Watershed and south to the Siletz River. These stands are crucial to blocking up or connecting existing high quality habitat. Give second priority to treatments which decrease fragmentation within and increase connectivity between late-seral cores in the Nestucca, Sand Lake and Agency Creek Watersheds.

8. Assessing levels of CWD on the landscape is proposed as an essential component of silvicultural treatments and salvage. Current field techniques to accurately measure CWD levels are so expensive and time consuming that they cannot be effectively applied. Reliable techniques for estimating CWD levels should be developed for use by interdisciplinary team members. Opportunities to develop a photo series similar to that developed for determining fuel loading in clearcuts should be investigated. Measurement should focus on CWD which is at least twenty inches in diameter and twenty feet long or longer, measured in cubic feet per acre.

9. Maintain and restore special habitats. This may involve extra efforts in noxious/invasive plant management.

10. Minimize the recreational impacts to T & E and "Survey and Manage" species and their habitats.

11. Establish an unified interagency strategy for management of RPAs by (1) finalizing all of the RPA designations proposed in this assessment by the end of calendar year 1998; (2) by the same date, clearly defining acceptable management opportunities within the RPAs; and (3) developing a strategy for monitoring occupancy and reproductive success.

12. Further develop project implementation scheduling.

Transportation System Planning

It was beyond the scope of this assessment to do a site specific road and trail plan for federal lands in the assessment area, because many other resource and management objectives need to be considered in that planning effort. However, this assessment provides Landscape Zone and Cell goals and objectives which can help guide the development of transportation system plans. The Siuslaw Access and Travel Management (ATM) guide has been completed and a cursory review by the team did not identify major conflicts with meeting LSR objectives. Transportation Management Objectives (TMOs) are being developed for the Salem District of the BLM. Integrated transportation system planning needs to be a cooperative effort between the two agencies. BLM is greatly constrained by mixed ownerships and reciprocal agreements for road construction and maintenance, requiring shared construction costs. and user fees fund many of the roads on BLM lands. The ROD (B-19 and C-16, 19, and 32) provides additional direction for roads within LSRs.

When conducting transportation system planning, the type of landscape cell should be considered. For instance, Late-Seral Cells in the Core Landscape Zones should be a high priority for road closures and road obliteration because of the potential to create large blocks of harassment-free landscapes which would benefit species sensitive to disturbance and edge-effects.

Limitations of the LSR Analysis

This Late-Successional Reserve Assessment is a landscape level look at terrestrial ecosystems, how they are currently functioning, how they could be functioning, and how to identify and prioritize habitat restoration needs for late-successional forest species. Limitations of the LSR analysis are described below.

1. We were not able to determine how much remnant old-growth was in the late-seral-stage stands (i.e. what portion of the LSR currently met the desired future condition). Accurate historical data is not available to provide a clear picture of the amount of late-successional habitat existing prior to the mid 1900s.

2. Many special habitats could not be mapped at the LSR scale. Wetlands, meadows and other unique features on the landscape will need to be addressed at the watershed scale.

3. Integration of the terrestrial system with the aquatic elements of an area is more appropriate at a smaller scale (i.e. watershed) and was not included in this LSR assessment. Appendix G provides a tentative schedule for watershed analyses by fifth field watershed.

4 The late-seral vegetation class data could not be broken into distinct classes, e.g. for 80-110 year old stands. Stands with late-successional characteristics could not be separated from young mature stands or stands with simple structure.

5. Many of the specific life history requirements for species dependent on late-successional habitat in the Oregon Coast Range are unknown, e.g. how sensitive they are to disturbance, how many acres of habitat they require, how many snags or down logs they require, what determines nest site selection.

6. Existing landscape levels in natural stands may not be reflective of historic CWD levels. Accurate data for determining specific amounts and distribution of CWD needed in this assessment area is not available. The ability to sustain and increase CWD levels will depend on funding restrictions.

7. Site specific implementation scheduling is more appropriate at the watershed analysis level. A tentative schedule for watershed analysis can be found in Appendix G.