

VII. SUMMARY AND CONCLUSIONS

Several management concepts were developed during the LSRA process. They are summarized below.

Basing Prescriptions on Ecological Principals

1. There are differences in the composition and structure of young, mature, and old-growth forests. Site prescriptions need to acknowledge these differences. In general:
 - Older forests have large, shade-tolerant tree species in the overstory
 - Diverse vertical distribution of vegetation
 - Large amounts of CWD
2. Silvicultural treatments should be aimed at “keeping all the pieces”, i.e., not focusing on growing larger trees or developing an understory at the expense of other stand characteristics.
3. Silvicultural prescriptions should use the natural successional pathways that occur based on disturbance regime, and sub-series environment as a guideline to achieve LSR objectives.
4. Management objectives vary by seral stage of vegetative development. Prescriptions should employ objectives which are attainable given the seral stage of the vegetation.

Management Guidelines / Sideboards

1. Both the spotted owl and marbled murrelet draft recovery plans emphasize the need for a variety of silvicultural treatments to promote the natural diversity and variability found on the landscape.
2. Owls frequently use younger stands (i.e., natural stands 50-80 yrs old) for roosting and foraging. Thus, it is not recommended to treat these stands if they are located within 1.5 miles of a known owl activity center
3. The ROD emphasizes the need for the Riparian Reserve network to provide dispersal habitat for owls and other terrestrial species. All proposed activities which alter dispersal habitat should assure that adequate dispersal habitat exists prior to implementation.

Prioritizing the Landscape

1. The LSR assessment process identified the need to secure the “best” habitat areas first before devoting limited funding and resources in more degraded areas. This strategy affirms the aquatic conservation/restoration strategy objectives and priorities developed by the Northwest Forest Plan.
2. Based on the current condition, amount and distribution of remaining late-successional habitat within the LSR and ownership patterns, three primary zones were identified.
 - 1. The Core LSR Zone is designed to serve as the genetic pool or seed source for late-successional forest-dependent species.
 - 2. The Corridor LSR Zone will serve primarily to connect this LSR to adjacent LSRs to the North (Hebo) and East (Cascades)
 - 3. The Buffer LSR Zone consists primarily of checkerboard BLM lands in the central eastern portion of the assessment area. This area is vital for maintaining small patches of late-successional forest habitat.
3. From these zones, Landscape Cells were developed. Prioritization was based on securing the best habitat first, blocking up large patches and connecting isolated patches.
 - Priority 1 = Landscape Cell #1 (areas colored in dark green on **Map 12**)
 - Priority 2 = Landscape Cell #2 and #4 (areas colored in light green and red on **Map 12**)
 - Priority 3 = Landscape Cell #3 and #5 (areas colored in brown and purple on **Map 12**)
 - Priority 4 = Landscape Cell #6 (areas colored in light blue on **Map 12**)
4. At the watershed scale, the terrestrial priorities and restoration emphasis areas outlined above will be integrated with other resource concerns, such as aquatic and social needs.

Opportunities for Restoration and Potential Conflicts to Meeting LSR Objectives

1. The LSRA identified that certain areas, i.e., the Connectivity/Diversity blocks to the southeast of LSR RO267, the blocks of matrix in the Five Rivers, and the Big Elk areas are important for maintaining: connectivity to the Cascades; the integrity of the CORE; and connectivity to other LSRs, respectively. When finer-scale assessments, i.e., watershed analysis are done which evaluate Riparian Reserve widths, this importance should be considered. Until that time, as the ROD states (C-30,31), 1-2 tree height buffer recommendations should be maintained.
2. There has not been any site-specific identification of areas for changes in land use allocation. This assessment provides the manager with some guidance of where those changes would be appropriate should they be proposed in the future. Land Use Allocation (LUA) changes should be considered where they would assist in the ability of the LSR to function. The highest priority is in the Core and Connectivity LSR Zones and in Landscape Cell #4. The Buffer LSR Zone would have areas where like-kind changes in LUA (i.e., change LSR to Matrix in this area for

Matrix to LSR in other areas) would be appropriate if it would benefit the functioning of other higher priority areas. Although change proposals should assess the ecological value of these isolated blocks.

3. Land ownership exchanges or acquisitions of lands should be considered when it would facilitate the ability of the LSR to function. The ROD (C-17) itemizes legitimate reasons for land exchanges providing the benefits are equal or greater to current conditions of the LSR either in area distribution or habitat quality. The priorities of these exchanges are as follows.
 - Priority 1 = linkage areas, i.e., "Landscape Cell" #4
 - Priority 2 = strategic points in the "Corridor" LSR Zone
 - Priority 3 = other strategic places within the LSRs
 - The "Buffer" LSR Zone has the lowest priority for blocking ownership

It is not the intent of this document to prescribe activities on lands other than LSR allocations. REO requested (January 1996) that LSRAs consider the condition of adjacent lands and understand how they may influence the function of the LSRs.

Limitations of the LSRA and Analysis Needs at the Watershed Scale

The late-successional reserve assessment was 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.

Several limitations were encountered during the analysis process which will need to be refined at the watershed analysis level. For example,

1. We were unable to analyze the current condition of vegetation within the riparian reserves across ownership lines. This limited our ability to determine the condition of dispersal habitat within the riparian reserve network.
2. We were not able to determine how much of the mature stands were remnant old-growth (i.e., what portion of the LSR currently met the desired future condition). The vegetation analysis will thus need to be further refined at the watershed level in order to assess these biological "hot-spots" or refugia.
3. Due to limitations in the vegetation coverages, the interior forest habitat analysis included a 500-foot buffer around all mature conifer patches. This results in a worse case assessment of the interior forest habitat condition. This analysis can be much more refined when done at the watershed scale and variations in edge severities and types are taken into consideration (buffer distances will vary, depending on edge type).
4. The TE&S species analysis was instrumental in determining priority restoration areas, refugia, and future recovery potential of owls and murrelets on the landscape scale. At this scale and given the limitations of matching survey efforts and species coverages, only the "big picture" pattern and distribution on the landscape was analyzed. Survey coverage, data gaps, locations of other TE&S

species, and the condition of individual sites (reproductive viability, etc.) will need to be further analyzed at the watershed scale.

5. Special habitats were not mappable at the LSR scale. Wetlands, meadows, and other unique features on the landscape will need to be addressed at the watershed scale.

6. 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 H** provides information, attained through this assessment process, by 5th field watershed so that it can be utilized for finer-scale assessments.