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**IMPLICATION AND CHALLENGES IN CONSERVING BIOLOGICAL DIVERSITY UNDER THE NORTHWEST FOREST PLAN**

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NWFP as an Ecosystem Management Plan — The Northwest Forest Plan (NWFP) was established in 1994 as an ecosystem management plan to provide for conservation of biodiversity associated with late successional and old-growth (LSOG) forests on federal public lands of Pacific Northwest U.S. Biodiversity is the variety of life and its processes and includes structure, composition, and function of multiple levels of biological organization across individuals, populations, species, communities, and ecosystems (Noss 1990).

History — The Forest Ecosystem Management Assessment Team evaluated 1120 LSOG species, which were further assessed in the 1994 Environmental Impact Statement (EIS) using 4 sets of criteria to determine conservation needs of the species. The 1994 EIS determined that 791 of these species did not require further specific action for their conservation beyond the NWFP guidelines. The remainder of species were further screened through a set of 23 mitigation guidelines presented in the 1994 record of decision (ROD) that instituted NWFP. One of the guidelines was the Survey and Manage (SM) species mitigation that recognized 404 individual species and 4 arthropod species groups, all potentially rare and little known, needing specific attention. A 2001 EIS and ROD revised the SM program and established Annual Species Reviews (ASRs), species management requirements, use of strategic species surveys, and an expanded classification of 6 species conservation categories.

ASRs held 2001-2003 reviewed significant new scientific data on SM species, resulting in 108 species being dropped from the SM species list, leaving 296 individual species and the 4 arthropod species groups remaining in the SM program. A new EIS in 2003 and its ROD in 2004 resulted in abolishing the SM program and relegated 152 of the 296 species to the Forest Service and Bureau of Land Management’s Sensitive Species and Special Status Species Programs (SSSSP).

Expectations — Initial expectations were that most LSOG species would be secure under NWFP provisions. Initial direction included development of a more comprehensive program for effectiveness and validation monitoring of biodiversity and rare species.

Outcome — NWFP focused mainly on the composition, amount, dispersion, and dynamics of old forest vegetation communities and the presence and persistence of specific LSOG-associated species. Currently a total of 67,891 species locations have been identified on all originally-listed 404 SM species. However, most of the funding and effort under the SM program went to pre-disturbance (pre-project) surveys in matrix lands (79% of all surveys conducted were pre-disturbance). Management decisions to defer projects because of pre-disturbance surveys and protection of SM species locations in matrix lands resulted in a far lower potential timber sale quantity than expected. A large amount of survey data on 399 SM species greatly reduced uncertainty on occurrence of many of those species. It revealed that 42% of the species are likely very rare, being known from 10 or fewer sites (6% of all sites); and about 5% were relatively frequently encountered as they account for most (2/3) of the sites and likely are not particularly rare. Arthropods were not surveyed by individual species but research was conducted to determine effects of thinning and burning on arthropod species groups and their recovery. Other strategic surveys and studies also were conducted to provide more balanced scientific data on a number of species. Overall, species surveys did not test the assumptions of persistence of the 791 LSOG species not originally included in the SM program, nor was there any monitoring done specifically on SM species’ persistence. No biodiversity monitoring program was developed and instituted.

Efficacy of the reserve and management system — Most SM and LSOG species likely are provided to some degree by the overall NWFP provisions for large and small late-successional forest reserves, riparian reserves, and other old-forest management guidelines. However, uncertainty remains on persistence of the more rare and little-known LSOG species. We have suggested activities and lessons from the SM program that may be useful in the SSSSP.
The Future of Biodiversity Conservation Under NWFP – It may be possible to return to the initial NWFP expectations of biodiversity monitoring, and to note that much of the SM program work had provided valuable databases and insights into some aspects of the rare species component of biodiversity. Biodiversity monitoring could be structured under a fuller set of ecosystem management principles (Szaro 1996) including recovery and conservation of threatened and endangered species, viable populations of native plant and animal species, a viable network of native biological communities and ecosystems, structural diversity, genetic diversity, ecosystem services and natural resources, and ecosystem integrity and ecological processes.


SYNTHESIS REPORT- Conservation Approaches

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