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## RECORD OF DECISION

for

### Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl

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## I. Summary

This Record of Decision is the culmination of an unprecedented effort in public land management. On April 2, 1993, President Clinton convened the Forest Conference in Portland, Oregon to address the human and environmental needs served by the federal forests of the Pacific northwest and northern California. The President, Vice-President and much of the Cabinet spent an entire day listening to all points of view and collecting information. The President then directed his Cabinet to craft a balanced, comprehensive and long-term policy for the management of over 24 million acres of public land. An interagency, interdisciplinary team of expert scientists, economists, sociologists and others was assembled -- the Forest Ecosystem Management Assessment Team led by Dr. Jack Ward Thomas. After three months of intensive work, which included the review of all fully-developed proposals for management of federal forests within the range of the northern spotted owl, the team produced a report assessing in detail ten options.

President Clinton announced his proposed "Forest Plan for a Sustainable Economy and a Sustainable Environment" on July 1, consisting of strategies for forest management, economic development, and agency coordination. The forest management and implementation portion of the strategy, which is the subject of this Record of Decision, was analyzed in a Draft Supplemental Environmental Impact Statement (Draft SEIS) issued in July that received over 100,000 public comments during a three month public comment period. A Final Supplemental Environmental Impact Statement (Final SEIS) was made available to the public in February 1994.

In this Record of Decision, we, the Secretary of Agriculture and the Secretary of the Interior, jointly amend the planning documents of nineteen National Forests and seven Bureau of Land Management Districts. This represents the first time that two of the largest federal land management agencies, the Bureau of Land Management and the Forest Service, have developed and adopted a common management approach to the lands they administer throughout an entire ecological region.

The management direction consists of extensive standards and guidelines, including land allocations, that comprise a comprehensive ecosystem management strategy. The strategy is based on Alternative 9 of the Final SEIS, except for minor modifications noted in this document or made in the attached standards and guidelines. The conservation measures included in this strategy are based upon the best available science and attempt to anticipate and forestall future

environmental problems, avoiding the severe economic dislocation and legal gridlock that occur when environmental problems are ignored.

There are more than 24 million acres of federal land in the planning area for our decision (defined as the range of the northern spotted owl). Approximately 30% of these acres have been set aside by Act of Congress. The remaining 70% is allocated by this management direction as: late-successional reserves (30%); adaptive management areas (6%); managed late-successional areas (1%); administratively withdrawn areas (6%); riparian reserves (11%); and matrix (16%). Standards and guidelines for each land allocation provide a coordinated ecosystem management approach to the planning area. Although certain thinning and salvage activities would be allowed in the reserves, programmed timber harvest would only occur in the 22% of the land designated as matrix or adaptive management areas, and only in compliance with standards and guidelines designed to achieve conservation objectives.

## **II. Introduction**

The controversy over the northern spotted owl and old-growth federal forests of the Pacific northwest has continued since the 1970s. At present there have been or are pending over a dozen lawsuits involving the northern spotted owl, marbled murrelet, and possible future timber harvesting in old growth. There are currently three separate court injunctions that have severely restricted new timber sale programs on federal forests in northern spotted owl habitat for the past three years.

The federal agencies most directly involved in the issues concerning the management of late-successional and old-growth forest within the range of the northern spotted owl are the U.S. Forest Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, National Biological Survey, National Marine Fisheries Service and the Environmental Protection Agency. The five major federal laws that apply to federal land management in the planning area are the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), National Forest Management Act (NFMA), Federal Land Policy and Management Act (FLPMA), and Oregon and California Lands Act (O&C Act).

President Clinton asked at the April 2, 1993, Forest Conference:

How can we achieve a balanced and comprehensive policy that recognizes the importance of the forest and timber to the economy and jobs in this region, and how can we preserve our precious old-growth forests, which are part of our national heritage and that, once destroyed, can never be replaced?

The President set forth five principles to guide the federal interagency effort to develop a management strategy to protect the old-growth related species and produce a sustainable level of timber:

First, we must never forget the human and the economic dimensions of these problems. Where sound management policies can preserve the health of forest lands, sales should go forward. Where this requirement cannot be met, we need to do our best to offer new economic opportunities for year-round, high-wage, high-skill jobs.

Second, as we craft a plan, we need to protect the long-term health of our forests, our wildlife, and our waterways. They are a ... gift from God, and we hold them in trust for future generations.

Third, our efforts must be, insofar as we are wise enough to know it, scientifically sound, ecologically credible, and legally responsible.

Fourth, the plan should produce a predictable and sustainable level of timber sales and nontimber resources that will not degrade or destroy the environment.

Fifth, to achieve these goals, we will do our best, as I said, to make the federal government work together and work for you. We may make mistakes but we will try to end the gridlock within the federal government and we will insist on collaboration not confrontation.

President Clinton summed up the Forest Conference:

We're here to begin a process that will ensure that you will be able to work together in your communities for the good of your businesses, your jobs, and your natural environment. The process we [have begun] will not be easy. Its outcome cannot possibly make everyone happy. Perhaps it won't make anyone completely happy. But the worst thing we can do is nothing.

The land allocations and standards and guidelines that are adopted here satisfy all of the objectives set forth by the President. They comply with the requirements of federal law, including the five statutes listed above. They are based on the best available science and are ecologically sound. They will protect the long-term health of the federal forests. They will provide for a steady supply of timber sales and nontimber resources that can be sustained over the long term without

degrading the health of the forest or other environmental resources. Moreover, they involve a commitment by the federal agencies to work together.

This decision marks the turning point from formulation to implementation. Initial standards and guidelines have been developed, subjected to public comment, modified slightly, and adopted by this decision. The next step is to apply the standards and guidelines and adapt management of federal forests to sustain both the old-growth ecosystem and a supply of timber. In order to coordinate the activities of the various federal agencies that are involved, we have established an interagency structure that includes the Regional Interagency Executive Committee (RIEC), the Regional Ecosystem Office (REO), and provincial teams. These groups will oversee the necessary monitoring and research to continuously seek new information and understanding of the complexities involved in managing the old-growth and late-successional forest ecosystem in the Pacific northwest.

We view the action of adopting these standards and guidelines as a beginning and not an end of the process of resolving the issues that have developed during the controversy over federal forest management. We expect and welcome the continuing involvement of the public in the management of these valuable resources.

### **III. Decision**

In this Record of Decision, we jointly adopt Alternative 9 of the Final SEIS, as modified by this decision, and as amplified in the attachment to this Record of Decision entitled "Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl" (Attachment A). This decision, as spelled out in Attachment A (sometimes referred to herein as "the Standards and Guidelines"), is to be applied to lands administered by the USDA Forest Service and the USDI Bureau of Land Management within the range of the northern spotted owl, as provided in this Record of Decision. The following discussion explains the decision but is not intended to cover every aspect of the Standards and Guidelines, which set forth the management direction adopted by this decision in a single document and are intended to facilitate the agencies' implementation of our decision.

The Standards and Guidelines apply to the land allocations that are identified on the official maps of the Final SEIS, as corrected for minor mapping errors. These maps are stored electronically in the spatially unified database (SPUD) maintained by the interagency geographic information system (GIS) staff in the Regional Ecosystem Office at 333 S.W. First Avenue, Portland, Oregon 97204. Maps at 1/2-inch to the mile scale showing the land allocations are available for each Forest Service and BLM administrative unit at the respective unit offices.

## **A. Statutory Basis For Ecosystem Management**

In setting forth our mission to develop a strategy for management of federal old-growth and late-successional forests that we adopt today in this decision, the President charged us to use an ecosystem management approach. In this vein, we defined the planning area for this strategy as the federally administered lands within the range of the northern spotted owl. We asked our scientists to assess not only effects on individual species of each of the alternatives, but also the likelihood that the alternatives would provide for a functional and interconnected old-growth forest ecosystem. We involved all the relevant federal agencies at an early point in the planning process and asked them to coordinate their efforts to the extent possible.

Such an approach proceeds from our statutory authority as set forth in statutes such as the Forest Service Organic Act, the Multiple-Use Sustained-Yield Act, the Endangered Species Act, and the Federal Land Policy and Management Act. These statutes invest in our Departments broad discretion to rely upon our expertise to manage the lands under our administrative authority in a manner deemed to best meet the purposes Congress has delineated. One such purpose is to provide for the long-term sustainability of all of the forests' many natural resources, including the species that inhabit them. Through its utilization of ecosystem management principles, our decision is designed to meet this purpose more effectively and efficiently than previous planning efforts associated with management of federal old-growth forests. Statutes such as the Forest and Rangeland Renewable Resources Planning Act, the National Forest Management Act, and the Federal Land Policy and Management Act, which outline various procedures to follow in federal public land planning, also authorize the employment of principles intrinsic to ecosystem management. For example, they call for planning to be interdisciplinary, coordinated among agencies, and based on the best available science. The National Forest Management Act explicitly directs that diversity of plant and animal species be considered in planning. Moreover, the Endangered Species Act directs the Secretary of the Interior, and the Secretary of Agriculture with respect to National Forest System lands, to establish and implement a program to conserve fish, wildlife, and plants, including those listed as threatened or endangered. Thus, our decision, while emergent in some important respects, is nevertheless firmly grounded in the authority reflected in our statutory schemes as well as the best federal land management agency tradition of crafting approaches that meld dynamic concepts with the legal duties under which we are charged to carry out our stewardship responsibilities.

Finally, the National Environmental Policy Act, while not imposing substantive duties on the agencies, recognizes "the interrelations of all components of the natural environment," "the critical importance of restoring and maintaining

environmental quality," and "the responsibilities of each generation as trustee of the environment for succeeding generations." 42 U.S.C. § 4331. Further, the cumulative impacts analysis required under NEPA's regulations supports a planning approach that incorporates an ecosystem perspective.

## **B. Land Allocations**

This decision specifically incorporates seven land allocation categories, as set forth below. There is considerable overlap among some designated areas. For consistency and for acreage display purposes, lands subject to such overlaps are reflected in only one category, according to the order of land allocations in the following descriptions.

**Congressionally Reserved Areas** comprise 7,320,600 acres, representing 30% of the federal land within the range of the northern spotted owl. These lands have been reserved by act of Congress for specific land allocation purposes. This decision can not and does not alter any of these congressionally mandated land allocations. Included in this category are National Parks and Monuments, Wilderness Areas, Wild and Scenic Rivers, National Wildlife Refuges, Department of Defense lands, and other lands with congressional designations.

**Late Successional Reserves** comprise 7,430,800 acres, representing 30% of the federal land within the range of the northern spotted owl. These reserves, in combination with the other allocations and standards and guidelines, will maintain a functional, interactive, late-successional and old-growth forest ecosystem. They are designed to serve as habitat for late-successional and old-growth related species including the northern spotted owl.

**Adaptive Management Areas (AMAs)** comprise 1,521,800 acres, representing 6% of the federal land within the range of the northern spotted owl. These areas are designed to develop and test new management approaches to integrate and achieve ecological, economic, and other social and community objectives. The Forest Service and BLM will work with other organizations, government entities and private landowners in accomplishing those objectives. Each area has a different emphasis to its prescription, such as maximizing the amount of late-successional forests, improving riparian conditions through silvicultural treatments, and maintaining a predictable flow of harvestable timber and other forest products. A portion of the timber harvest will come from this land. There are ten adaptive management areas.

**Managed Late Successional Areas** currently comprise 102,200 acres, representing 1% of the federal land within the range of the northern spotted owl. These lands are either (1) mapped managed pair areas or (2) unmapped protection buffers.



Managed pair areas are delineated for known northern spotted owl activity centers. Protection buffers are designed to protect certain rare and locally endemic species.

**Administratively Withdrawn Areas** comprise 1,477,100 acres, representing 6% of the federal lands within the range of the northern spotted owl. Administratively withdrawn<sup>1</sup> areas are identified in current forest and district plans or draft plan preferred alternatives and include recreational and visual areas, back country, and other areas not scheduled for timber harvest.

**Riparian Reserves** initially comprise 2,627,500 acres, representing 11% of the federal lands within the range of the northern spotted owl (acreage subject to change following watershed analysis). The calculation of riparian reserve acreage is done after all other designated areas. As a result, the acreage shown reflects only that portion of riparian reserves that is interspersed throughout the matrix. Riparian reserves are areas along all streams, wetlands, ponds, lakes, and unstable or potentially unstable areas where the conservation of aquatic and riparian-dependent terrestrial resources receives primary emphasis. The main purpose of the reserves is to protect the health of the aquatic system and its dependent species; the reserves also provide incidental benefits to upland species. These reserves will help maintain and restore riparian structures and functions, benefit fish and riparian-dependent non-fish species, enhance habitat conservation for organisms dependent on the transition zone between upslope and riparian areas, improve travel and dispersal corridors for terrestrial animals and plants, and provide for greater connectivity of late-successional forest habitat.

**Matrix** comprises 3,975,300 acres, representing 16% of the federal land within the range of the northern spotted owl. The matrix is the federal land outside the six categories of designated areas set forth above. It is also the area in which most timber harvest and other silvicultural activities will be conducted. However, the matrix does contain non-forested areas as well as forested areas that may be technically unsuited for timber production.

### **C. Standards and Guidelines**

The detailed requirements that describe how land managers should treat the forest lands within the range of the northern spotted owl are described in Attachment A, particularly section C. Some standards and guidelines apply to all lands, others to a specific land allocation. More than one set of standards and guidelines may

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The term "withdrawn" does not mean a withdrawal for purposes of Section 204 of the Federal Land Policy Management Act.

apply in some areas -- for instance riparian reserve requirements within a late-successional reserve. In such cases, the more restrictive standards and guidelines generally apply. Some standards and guidelines contain an initial implementation strategy that may differ in some respects from the long-term strategy. The following summaries briefly describe the major standards and guidelines. For a more comprehensive description of requirements, see Section C of Attachment A.

Current Plans: Existing plans for national forests and BLM lands contain standards and guidelines for all activities, from road and trail construction to visitor information rules. Except as otherwise noted in this ROD or Attachment A, the standards and guidelines of existing plans (or draft plan preferred alternatives) apply where they are more restrictive or provide greater benefits to late-successional forest-related species than do other standards and guidelines in Attachment A.

Late-Successional Reserves: Late-successional reserves are to be managed to protect and enhance old-growth forest conditions. For each late-successional reserve (or group of small reserves) managers should prepare an assessment of existing conditions and appropriate activities. No programmed timber harvest is allowed inside the reserves. However, thinning or other silvicultural treatments inside these reserves may occur in stands up to 80 years of age if the treatments are beneficial to the creation and maintenance of late-successional forest conditions. In the reserves east of the Cascades and in Oregon and California Klamath Provinces, additional management activities are allowed to reduce risks of large-scale disturbance. Salvage guidelines are intended to prevent negative effects on late-successional habitat. Non-silvicultural activities within late-successional reserves are allowed where such activities are neutral or beneficial to the creation and maintenance of late-successional habitat. Thinning or other silvicultural activities must be reviewed by the Regional Ecosystem Office and the Regional Interagency Executive Committee.

Adaptive Management Areas: Where congressionally reserved areas or late-successional reserves occur within adaptive management areas, the amended plans will apply the more restrictive standards and guidelines of the congressionally reserved areas or late-successional reserves; however, within the Finney and Northern Coast Range AMAs, the late-successional reserve designations may be changed by AMA plans. Standards and guidelines for riparian reserves and key watersheds in adaptive management areas may allow more flexibility. AMA planning groups will closely coordinate with the Regional Ecosystem Office.

Managed Late-Successional Areas: Managed owl pair areas are typically on the east side of the Cascade Range. Suitable owl habitat in areas surrounding owl activity centers will be maintained through time using various management

techniques. The location of this acreage may change over time. Protocols will be developed for the location of special protection areas.

Administratively Withdrawn Areas: These areas have already been designated in existing plans. The amended plans will apply the most restrictive applicable standards and guidelines, whether from Attachment A or from existing plans.

Aquatic Conservation Strategy: The aquatic conservation strategy contains four components: riparian reserves; key watersheds; watershed analysis; and watershed restoration. Each part is expected to play an important role in improving the health of the region's aquatic ecosystems.

1. Riparian Reserves: Attachment A designates initial reserve widths for protected riparian areas, as well as specific requirements for timber management, road construction and maintenance, grazing, recreation, minerals management, fire/fuels management, research, and restoration activities. Initial boundary widths for riparian reserves are as follows:

- Fish-bearing streams - the area on each side of the stream equal to the height of two site-potential trees, or 300 feet slope distance, whichever is greater;
- Permanently flowing nonfish-bearing streams - the area on each side of the stream equal to the height of one site-potential tree, or 150 feet slope distance, whichever is greater;
- Lakes and natural ponds - the body of water and the area to the outer edges of riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance, whichever is greater;
- Constructed ponds and reservoirs and wetlands greater than one acre - the area from the edge of the wetland or the maximum pool elevation to a distance equal to the height of one site-potential tree, or 150 feet slope distance, whichever is greater;
- Seasonally flowing or intermittent streams -- the area on each side of the stream to a distance equal to the height of one site-potential tree or 100 feet slope distance, whichever is greater;
- Wetlands less than one acre and unstable and potentially unstable areas -the extent of unstable and potentially unstable areas, and wetlands less than one acre to the outer edges of the riparian vegetation.

Riparian reserve initial boundary widths established by this decision will remain in effect until they are modified following watershed analysis. Guidance on boundary modifications is contained in Attachment A.

2. Key Watersheds: We are designating three categories of watersheds:

- Tier 1 key watersheds -- those to be managed for at-risk anadromous salmonids, bull trout, and resident fish (141 watersheds, 8,119,400 acres);
- Tier 2 key watersheds -- those where high water quality is important (23 watersheds, 1,001,700 acres); and
- non-key watersheds -- all other watersheds (15,334,200 acres).

3. Watershed Analysis: Watershed analysis is a systematic procedure to characterize the aquatic, riparian, and terrestrial features within a watershed. Managers will use information gathered during watershed analyses to refine riparian reserve boundaries, prescribe land management activities including watershed restoration, and develop monitoring programs.

4. Watershed Restoration: Watershed restoration is designed to restore currently degraded habitat conditions. The most important components are control and restoration of road-related runoff and sediment production, restoration of riparian vegetation, and restoration of in-stream habitat complexity. Restoration programs will initially focus on arresting road-related erosion and silvicultural treatments in riparian reserves to restore large conifer canopies. In-stream restoration is inherently short-term and will be accompanied by upslope and riparian restoration to achieve long-term watershed restoration.

Matrix: Most of the timber harvest will occur on matrix lands. Standards and guidelines assure appropriate conservation of ecosystems as well as provide habitat for rare and lesser-known species. Some of the major standards and guidelines for matrix lands are:

- a renewable supply of large down logs must be in place;
- at least 15 percent of the green trees on each regeneration harvest unit located on National Forest land must be retained (except within the Oregon Coast Range and Olympic Peninsula provinces); and
- 100 acres of late-successional habitat around owl activity centers that were known as of January 1, 1994, must be protected.

Survey and Manage: The standards and guidelines require land managers to take certain actions relative to rare species of plants and animals, particularly amphibians, bryophytes, lichens, mollusks, vascular plants, fungi, and arthropods. These include: (1) manage known sites of rare organisms; (2) survey for the presence of rare organisms prior to ground-disturbing activities; (3) conduct surveys to identify locations and habitats of rare species; and (4) conduct general regional surveys for rare species.

For many species and taxonomic groups, adequate survey techniques may not exist. The standards and guidelines provide an implementation strategy that includes a time line for developing protocols for the surveys and conducting the necessary survey work.

## **D. Application of Decision**

### **1. Application to Land and Resource Management Plans**

This decision amends current land and resource management plans with additional land allocations and standards and guidelines. The management direction set forth in this decision is incorporated upon the effective date of our decision into all existing plans and regional guides and will also be incorporated in plans for forests and districts that do not currently have approved management plans. Development of future plans will be closely coordinated with other agencies and with the Regional Interagency Executive Committee.

#### **a. Bureau of Land Management**

**Districts With Resource Management Plans** -- This decision amends the resource management plans for those portions of BLM districts within the range of the northern spotted owl with approved resource management plans. The Redding Resource Area, the Arcata Resource Area, and the King Range National Conservation Area, all within the Ukiah District of California, have approved resource management plans.

**Districts Without Resource Management Plans** -- This decision amends management framework plans and timber management plans for those portions of BLM districts within the range of the northern spotted owl without approved resource management plans. The BLM districts without resource management plans are Coos Bay, Eugene, Medford, Roseburg, and Salem Districts and the Klamath Resource Area of the Lakeview District. The units that do not have approved resource management plans have issued draft resource management plans, and the draft environmental impact statements for those draft plans have

been supplemented by the Final SEIS. BLM will proceed with completing those plans in accordance with this decision.

## **b. Forest Service**

**Regional Guides** -- This decision amends the regional guides for those portions of the Pacific Northwest Region (Region 6) and the Pacific Southwest Region (Region 5) within the range of the northern spotted owl.

**National Forests With Forest Plans** -- This decision amends the forest plans for those portions of National Forests within the range of the northern spotted owl that have approved forest plans. The National Forests with adopted plans within the range of the northern spotted owl are the Gifford Pinchot, Mount Baker-Snoqualmie, Mount Hood, Olympic, Rogue River, Siuslaw, Siskiyou, Umpqua, and Willamette National Forests. National Forests partially within the range include the Deschutes, Okanogan, Wenatchee, Winema, Lassen, and Modoc National Forests.

**National Forests Without Forest Plans** -- This decision amends the unit plans and resource management plans for those portions of National Forests without approved forest plans within the range of the northern spotted owl. The National Forests within the range of the northern spotted owl without approved forest plans are the Klamath, Shasta-Trinity, Mendocino, and Six Rivers National Forests. These forests have issued draft forest plans, and the draft environmental impact statements for these draft forest plans have been supplemented by the Final SEIS. The Forest Service will consider the management direction adopted in this decision when completing those plans.

## **2. Relationship of Standards and Guidelines to Existing Plans**

The existing land management plans contain many standards and guidelines that are not amended by this decision. Only those existing plan standards and guidelines in conflict with this decision are replaced. Where existing plans are more restrictive or provide greater benefits to late-successional forest related species than Attachment A, the existing plan standards and guidelines will continue. (Four exceptions to this rule are listed in Attachment A, p. C-3.)

For both Forest Service and BLM lands, an estimate of the probable quantity of forest products that may be offered for sale is provided in the Final SEIS. The allowable sale quantity for the existing forest plans and approved BLM resource management plans will be recalculated at the time of the next plan revision. The resulting allowable sale quantity for National Forests and BLM districts without approved management plans will be recalculated when the respective plans are adopted.

### **3. Application to Timber Sales**

This record of decision does not provide final authorization for any timber sale, nor does it compel that any timber sale be awarded. Rather, the decision amends various Forest Service and BLM planning documents; timber sales offered subsequent to the effective date of this Record of Decision must be consistent with these amended planning documents. In addition, timber sales must undergo appropriate site-specific analysis, and must comply with applicable regulatory requirements for public participation and administrative appeal.

Some previously-offered sales are located in late-successional reserves. If those sales proceed, the integrity of the late-successional reserves will not be substantially impaired, and the cumulative environmental effects of the sales will not be significantly different from the effects set forth in the Final SEIS. Between the Draft and Final SEIS, the size of late-successional reserves increased by 378,200 acres, to a total late-successional reserve acreage of 7,431,000. The amount of late-successional, old-growth habitat protected in various reserves (e.g., late-successional, riparian, and known owl activity centers in the matrix) increased by 240,900 acres, to a total of 6,864,100 acres. These increases more than offset the approximately 26,000 acres of previously sold and awarded or sold and unawarded sales located within proposed late-successional reserves. The late-successional and old-growth habitat in late-successional reserves that might be harvested (assuming that these areas meet ESA requirements) represents about one-third of one percent of the total of this habitat in reserves in the preferred alternative.

#### **a. Timber Sales Awarded Prior to the Effective Date**

Timber sales awarded prior to the effective date of this Record of Decision are not altered by this Record of Decision. At the time they were awarded, these timber sales were consistent with the planning documents then in effect, complied with the Endangered Species Act and other laws, and the environmental effects of these sales were considered as part of the baseline for the biological opinion for the Final SEIS.

Timber sales in key watersheds (as described in the Final SEIS) and inventoried roadless areas (as defined in the RARE II study) awarded prior to September 1993 were evaluated and adjusted, as needed, to eliminate or mitigate long-term, unacceptable effects on riparian and aquatic ecosystems. Sales were assessed to determine their effect on state water temperature standards, large woody debris, stream flow, sediment regime, aquatic organisms, and other aquatic resources. The criteria for this evaluation were developed by the scientific group assisting the implementation team. Since September 1993, sales awarded in proposed late-successional reserves have been limited to thinning and salvage, evaluated using

criteria developed by the scientific advisory group.

**b. Timber Sales Offered Subsequent to the Effective Date of the ROD**

Timber sales offered subsequent to the effective date of this Record of Decision must be consistent with the appropriate planning documents as amended by this Record of Decision. Where appropriate, timber sale planning documents may reference the analysis in the Final SEIS.

**c. Timber Sales Sold but Unawarded**

With one exception as described below, all planned and sold but unawarded timber sales were reviewed and adjusted as needed, following publication of the Draft SEIS, pursuant to the process described in paragraph (a) above. The review ensured that these sales would not prevent the attainment of the environmental objectives of the selected alternative.

The environmental effects of these timber sales were disclosed in site-specific NEPA documents and subsequent review. Some of these sales have subsequently been awarded and some have not yet been awarded.

This Record of Decision specifically provides that the remaining sales that have been offered but not awarded prior to the effective date of this Record of Decision, other than those sales referred to in paragraph (1) below, may be awarded after the effective date of this Record of Decision without further modification provided that they meet the requirements of the Endangered Species Act.

**(1) Timber Sales Sold, Unawarded but Enjoined**

Timber sales sold, unawarded, but enjoined prior to the effective date of the ROD have not been reviewed using the procedure described in paragraph (a) above, but must be consistent with the appropriate planning documents as amended by this Record of Decision. Where appropriate, timber sale planning documents may reference the analysis in the Final SEIS.

**d. Timber Sales Released from the Injunction in Seattle Audubon Society v. Lyons . . . . .**

On March 24, 1994, the court in Seattle Audubon Society v. Lyons modified the injunction to allow 24 timber sales in northern spotted owl habitat to be sold and awarded. These sales will be adjusted to conform to the amended planning documents resulting from our decision unless they are awarded prior to the effective date of this Record of Decision.



#### **4. Application to Other Contracts, Permits and Special Use Authorizations**

As plan amendments, the management direction provided by our decision applies to new contracts, permits and special use authorizations as required by Forest Service and Bureau of Land Management planning statutes and regulations.

The attached Standards and Guidelines that require adjustments to current contracts, permits, and special use authorizations will be applied in those cases where statutory or regulatory authority exists if the change is necessary to achieve the overall goals. In those cases where contracts, permits, or special uses may not be revised or amended prior to their expiration, the Standards and Guidelines will be applied at the time of renewal in a manner that reflects subsequent changes in the Standards and Guidelines, if any, if their application is necessary to achieve the overall goals. For many ongoing activities, we expect that current permit terms will be sufficient to meet the overall goals. We presume that currently existing and permitted ski areas will be allowed to continue under current permit terms.

#### **5. Application to Research Activities**

An important component of this decision is the facilitation of research activities to gather information and test hypotheses in a range of environmental conditions. Although research activities are among the primary purposes of adaptive management areas and experimental forests, this decision does not intend to limit research activities to these land allocations. Where appropriate, some research activities may be exempted from the standards and guidelines of this decision. However, every effort should be made to locate non-conforming activities in land allocations where they will have the least adverse effect upon the objectives of the applicable standards and guidelines. All research activities must meet the requirements of applicable federal laws, including the Endangered Species Act.

#### **6. Relationship to Other Plans and Proposals**

Standards and guidelines in plans that have been adopted for National Scenic Areas and Wild and Scenic Rivers continue to apply where they are more restrictive or provide greater benefits for late-successional species.

We expect and intend that the management direction and land allocations in this decision will constitute the federal contribution to the recovery of the northern spotted owl. We expect that future recovery plans for any listed species associated with the late-successional old-growth forest habitat in the Pacific northwest (including the final recovery plans for the northern spotted owl and the

marbled murrelet) will use the management direction adopted in this decision as a base from which to build a strategy for recovery.

The Fish and Wildlife Service is considering a proposal to issue a regulation under section 4(d) of the ESA that would revise the ESA protective measures for the northern spotted owl on certain non-federal lands. The proposal is intended to complement and be consistent with the management direction for federal lands provided in this decision. The Fish and Wildlife Service is preparing a separate EIS specifically to analyze the impacts of any revised 4(d) rule and alternatives. The effect of the proposed 4(d) rule (were it to be adopted as set forth in the scoping notice) has been considered under a contingency analysis in the Final SEIS. In turn, the Fish and Wildlife Service will consider this decision and Attachment A in making the final decision on the 4(d) rule.

The Forest Service and BLM have been engaged in a joint effort known as the "PACFish strategy" to develop a conservation plan to preserve and enhance stream habitat for wild anadromous fish stocks in the Pacific northwest on lands these agencies administer. The decision reflected in this ROD and Attachment A is consistent with the interim PACFish strategy, notice of which was recently published in the Federal Register. The Forest Service and BLM, in consultation with the Fish and Wildlife Service and the National Marine Fisheries Service (through the RIEC and REO), will review any information generated by the PACFish effort and determine whether subsequent changes to the standards and guidelines of planning documents are needed.

The Forest Service and BLM are also engaged in a joint effort known as the "Eastside Oregon and Washington Ecosystem Management Strategy Project" to assess the federal forest and old-growth ecosystems east of the Cascades Range. The eastside strategy project is being conducted separately from this decision because the conditions of the ecosystems east of the Cascades are substantially different from those west of the Cascades.

## **7. Relationship to Other Lands**

While the influences of activities on lands administered by the Fish and Wildlife Service, National Park Service, and Department of Defense were considered in the assessment of cumulative impacts in the Final SEIS, this decision does not adopt new management direction for those lands. This decision does not establish direction or regulation for state, tribal, or private lands.

## **IV. The Alternatives**

### **A. Alternatives Considered**

The objectives of complying with the requirements of the environmental laws, providing for the long-term health and continued functioning of late-successional and old-growth ecosystems, and maximizing economic benefits, defined the range of reasonable alternatives. The Forest Ecosystem Management Assessment Team (Assessment Team) considered all recent proposed and published strategies for management of northern spotted owl habitat or management of late-successional and old-growth forest ecosystems as potential alternatives. Forty-eight previously developed alternatives were considered, along with five hybrid alternatives containing mixtures of elements from existing plans, and an alternative with long timber harvest rotation (300 to 350 years) with no late-successional reserves.

After considering this range of 54 alternatives, and examining them in two selection processes, 46 were not analyzed further by the Assessment Team because it appeared that they would not meet all applicable statutory and regulatory requirements and the objectives articulated by President Clinton. Of the eight identified for further analysis, one was dropped because it was similar to another alternative, and three others were added, resulting in the ten alternatives studied in detail in the Draft and Final SEIS. This process and a description of the alternatives considered are discussed in some detail in Appendix A of the Final SEIS.

We have considered the Assessment Team's report, earlier analyses (including the report of the Interagency Scientific Committee (1990), Alternatives for Management of Late-Successional Forests of the Pacific Northwest (1991), the Final Draft Recovery Plan for the Northern Spotted Owl (1992), and the report of the Scientific Analysis Team (1993)), the Draft and Final SEIS, and all the submissions made by the public (including the timber industry) in response to both the Draft SEIS and the Final SEIS.

We agree with the judgment of the SEIS drafting team in focusing on the ten action alternatives identified in the Final SEIS, plus the "no-action alternative." Other alternatives that would have produced greater amounts of timber than the ten action alternatives would not have been likely to satisfy the requirements of the statutes and regulations that are discussed in section VIII below. For example, the Interior Department recovery team for the northern spotted owl gave significant consideration to an option presented to it by the BLM in 1991 incorporating a concept called "total forestry." This option did not formally include reserves but attempted to continuously maintain suitable habitat through time in the general forest landscape. Since evidence was not available to indicate that this option could be successful, the recovery team limited its subsequent consideration to

options that provided multi-pair areas (i.e., reserves) for owls. The recovery team also considered the "multi-resource strategy for the conservation of the northern spotted owl," proposed by the National Forest Products Association and the American Forest Council in 1991. The multi-resource strategy would have provided significant protection for owls only in about 20% of the owl's range, generally arranged in a narrow, linear band. The recovery team concluded that the strategy would not provide adequate assurance of recovery and the strategy was eliminated from further consideration.

In its initial screening process, the Assessment Team found that the multi-resource strategy rated low on all five biological criteria applied to it (spotted owls, marbled murrelets, at-risk fish stocks, other species closely associated with old-growth forests, and an interacting old-growth forest ecosystem). The same ratings were given by the Assessment Team to the existing forest plans and to both preservation plans for the northern spotted owl developed under Secretary Lujan in 1992. The Interagency Scientific Committee's conservation strategy was found to produce low or medium-low ratings for four of the five criteria, as was the Interior Department's "Jamison" strategy (1990). The Final Draft Recovery Plan for the Northern Spotted Owl was found to produce medium-low ratings for three of the criteria. BLM's preferred alternative, identified in draft resource management plans (1992) was similar. (See also the analysis of the BLM preferred alternative by the Scientific Analysis Team.)

The Assessment Team found that "to assure the viability of the threatened and at-risk species (and thereby satisfy the requirements of current law) some system of reserves was required" (FEMAT, p. II-6). Consequently, options that did not contain any reserves (such as a pure "long rotation" option) were not considered to satisfy the objectives of the analysis. However, a long rotation feature was incorporated into the selected alternative (e.g., 150-year rotations for some areas in Oregon on BLM land). Moreover, as the Final SEIS points out, research will continue to focus on the question of how best to perpetuate late-successional forest ecosystems, and some of the lands within adaptive management areas may be used to test a long rotation approach (Final SEIS, p. F-40). In addition to the information provided in the Assessment Team's report and in the Final SEIS, some other alternatives that would include higher levels of commodity production are analyzed in the underlying EISs that are supplemented by the Final SEIS.

Some of the ideas suggested during the public comment period on the Draft SEIS were already reflected in parts of the alternatives analyzed in the SEIS. Other commenters suggested additional alternatives based on the "constant change" theory of ecology. The Final SEIS acknowledges that there is controversy in the scientific community regarding theories of ecosystem process and function. Alternatives 2 through 10 in the Final SEIS are in fact a mix of the "constant change" and "steady state" theories. All public comments bearing on alternatives

were considered. A summary of each and responses to the comments are described in Appendix F of the Final SEIS.

## **B. The Action Alternatives**

The Final SEIS presents ten action alternatives. Based primarily on the "reserve" recommendations of previous efforts by the Interagency Scientific Committee, the Scientific Panel on Late-Successional Forest Ecosystems, and the Scientific Analysis Team, these alternatives present various mixes of late-successional reserves, managed late-successional areas, riparian reserves, and, in Alternative 9, adaptive management areas. These reserves are integrated with existing congressionally reserved areas, administratively withdrawn areas, and matrix to create a network of late-successional forests and watershed protection. These alternatives provide for various amounts and distributions of habitat for late-successional forest related species and result in various levels of social and economic benefits.

A summary and a comparison of land allocations, including acres and standards and guidelines, are presented in Table ROD-1. An estimate of the probable timber harvest level for each action alternative for the first decade was made. The estimate of that annual level for the first decade is expressed as the Probable Sale Quantity (PSQ). The PSQ levels estimated for each of the ten alternatives in the Final SEIS are shown in Figure ROD-1. Based on these estimated PSQ levels, estimates of the numbers of jobs that could be available in the timber industry were also projected. These estimates for the ten alternatives are shown by state and total in Table ROD-2.

The PSQ levels shown are estimates. They represent neither minimum levels that must be met nor maximum levels that cannot be exceeded. They are rough approximations because of the difficulty associated with predicting actual timber sale levels over the next decade, given the discretion that agency land managers possess in administering plans and deciding when and where to offer timber sales, as well as the complex nature of many of the standards and guidelines. They represent our best assessment of the average amount of timber likely to be awarded annually in the planning area over the next decade, following a start-up period.

During the first several years, it is unlikely that the annual PSQ estimates shown in Figure ROD-1 will be achieved. Our decision represents a new strategy that involves new land allocations and a new set of standards and guidelines. It will take time for the land management agencies to develop new timber sales that conform with the planning amendments effected by our decision. In addition, our decision contains requirements to perform various levels of analysis or survey work prior to awarding timber sales in certain areas.

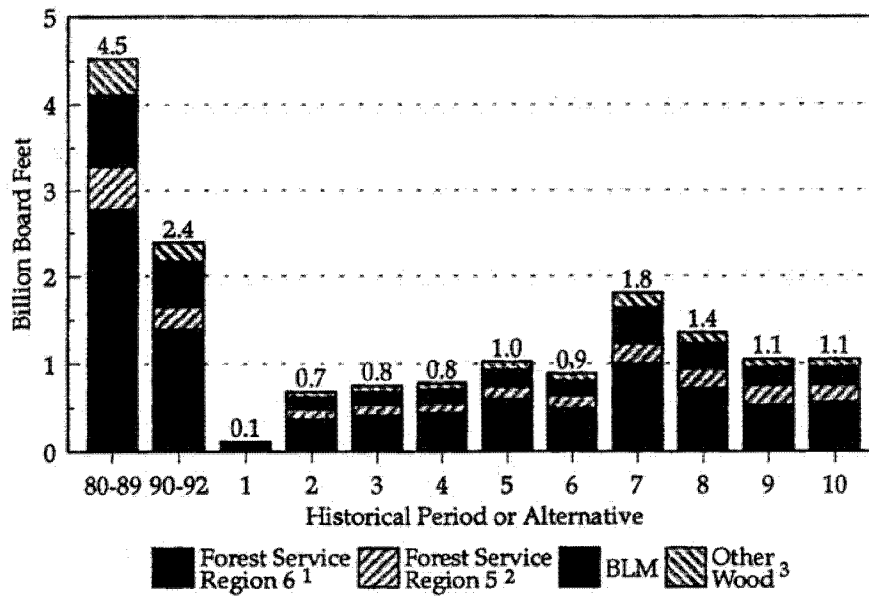
**Table ROD-1.** Summary and comparison of land allocations and standards and guidelines among alternatives.

	Alternative	1	2	3	4	5	6	7	8	9	10
Congress. Res.	Million acres	7.321	7.321	7.321	7.321	7.321	7.321	7.321	7.321	7.321	7.321
Late-Successional Reserves	Million acres	11.402	8.951	7.359	8.066	6.376	7.501	5.423	7.501	7.431	7.501
	Timber harvest/salvage	None	Treatment of stands less than 50 years old. Very limited salvage	Same as Alternative 2	Treatment of stands and salvage per Northern Spotted Owl Recovery Plan	Same as Alternative 4	Same as Alternative 2	Same as Alternative 4	Treatment of stands in Murrelet Zone 1 up to 50 years. Other stands up to 180 years.	West - Treatment of less than 80 years old. East - Manage to reduce risk of catastrophic loss.	Same as Alternative 2
	Protection for sites occupied by marbled murrelets outside reserves	Yes	Yes	Yes	Yes	Yes	Yes	No <sup>2</sup>	No <sup>2</sup>	Yes	Yes
	Protection of SAT species closely associated with old growth	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
Managed Late-Successional Areas or Adaptive Management Areas (Alt. 9 only)	Million acres	0	0	1.700	0.238	0.381	0	0.381	0	1.522 (AMA) 0.102 (MLSA)	0
	Timber harvest/salvage	N/A	N/A	West - Long rotation, 50 percent retention East - Long rotation, or uneven-age management	Treatment of stands and salvage per Northern Spotted Owl Recovery Plan	Same as Alternative 4	N/A	Same as Alternative 4	N/A	Adaptive Management Areas and some Managed Late-Successional Areas	N/A
Administratively Withdrawn Areas	Million acres	1.080	1.509	1.499	1.652	2.067	1.828	2.282	1.828	1.477	1.828
Riparian Reserves	Million acres	1.880	2.164	2.134	2.896	2.674	2.513	0.622	1.503	2.628	2.513
	Widths <sup>1</sup>	2:1:1	2:1:1 in Tier I Key Watersheds, 2:1 1/2 other watersheds	Same as Alternative 2	Same as Alternative 1	Same as Alternative 2	Same as Alternative 2	Variable, usually no reserves on intermittent streams	2 1/2:1 1/2:1/6	Same as Alternative 1	Same as Alternative 2
Matrix	Million acres	2.773	4.511	4.443	4.284	5.637	5.293	8.428	6.303	3.975	5.293
	50-11-40	Yes	Yes	Yes	Yes	Yes	Yes	Natl. Forest-Yes BLM-modified	No	No	No
	Snags:logs:green trees per acre	2:2:6	2:2:6	Support 40% pop: West - 12, East - 2:10:4	Variable on National Forests. BLM - 2:2:6-9	Same as Alternative 4	2:2:6	Same as Alternative 4	Same as Alternative 4	Coastal areas WA/OR: 2:8-12:0 Other areas 2:8-12:15%	2:2:6

<sup>1</sup> Riparian Reserve Widths (e.g., 2:1:1), are expressed as multiples of the height of a maximum site-potential tree, measured on each side of fish-bearing streams, nonfish-bearing streams, and intermittent streams, respectively (see text).

<sup>2</sup> Not specifically required in the alternative, but currently required under the Endangered Species Act.

Figure ROD-1. First decade probable average annual timber sale levels (PSQ) by historical period and alternative.



<sup>1</sup> Region 6 = Pacific Northwest Region

<sup>2</sup> Region 5 = Pacific Southwest Region

<sup>3</sup> Includes cull, submerchantable material, firewood and other products.

Table ROD-2. Historical and projected employment (in thousands of jobs) in the timber industry in the next decade, by state and alternative, within the range of the northern spotted owl. This includes self-employed individuals in the solid wood products and pulp and paper sectors. Wage and salary employment is approximately 7.5 percent less than total employment.

State	1990 actual	1992 (est.)	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8	Alt. 9	Alt. 10
WA	57.9	51.3	48.1	48.7	48.7	48.7	48.7	48.8	48.7	49.0	48.4	48.8
OR	73.1	62.8	51.2	54.7	54.9	55.4	56.6	54.4	61.3	58.2	56.4	56.4
CA	13.9	11.3	10.2	10.6	10.7	10.6	10.7	10.8	10.8	10.9	11.1	10.9
Total	144.9	125.4	109.5	114.0	114.3	114.7	116.0	114.0	120.8	118.1	115.9	116.1

We have considered the ten alternatives presented in the Final SEIS, as well as the no-action alternative required by 40 CFR 1502.14(d). Summary descriptions of these alternatives follow.

### **Alternative 1**

This alternative protects essentially all existing old-growth forests. It was designed to offer the highest probability of meeting five biological objectives: (1) viability of northern spotted owls, (2) viability of marbled murrelets, (3) viability of fish species and stocks at risk, (4) viability of other species associated with old-growth forests and (5) maintenance of functional and interconnected late-successional forests on federal lands. It would protect forests adjacent to streams to conserve aquatic resources and spotted owl dispersal habitat. Some forest cover would be retained in areas where timber harvest is allowed.

Congressionally reserved areas: 7,320,600 acres  
Lands in late-successional reserves: 11,402,400 acres  
Lands administratively withdrawn: 1,079,900 acres  
Lands in riparian reserves: 1,879,700 acres  
Lands in matrix: 2,772,700 acres

Estimated annual probable sale quantity: 0.1 bbf  
Anticipated regional timber employment: 109,500 jobs

### **Alternative 2**

This alternative is designed to protect ecologically significant old-growth forests and additional areas considered to be valuable habitat for the northern spotted owl. Management of intervening lands would be focused on providing successful owl dispersal. Limited salvage and silvicultural practices would be allowed within the late-successional reserves, and a high level of protection for forests adjacent to streams is prescribed. To protect spotted owl dispersal habitat, some forest cover would be retained in areas where timber harvest is allowed.

Congressionally reserved areas: 7,320,600 acres  
Lands in late-successional reserves: 8,951,000 acres  
Lands administratively withdrawn: 1,509,300 acres  
Lands in riparian reserves: 2,164,000 acres  
Lands in matrix: 4,510,500 acres

Estimated annual probable sale quantity: 0.7 bbf  
Anticipated regional timber employment: 114,000 jobs



### **Alternative 3**

This alternative is designed to protect ecologically significant old-growth forests, while at the same time allowing for limited harvest of forest products from some managed late-successional forests. Land allocations and management prescriptions would vary by physiographic province; the drier provinces would be treated differently from the other physiographic provinces. A high level of protection for forests adjacent to streams is prescribed and, to permit owl dispersal, some forest cover would be retained in areas where timber harvest is allowed.

Congressionally reserved areas: 7,320,600 acres  
Lands in late-successional reserves: 7,359,300 acres  
Lands in managed late-successional areas: 1,699,700 acres  
Lands administratively withdrawn: 1,498,700 acres  
Lands in riparian reserves: 2,134,200 acres  
Lands in matrix: 4,443,200 acres

Estimated annual probable sale quantity: 0.8 bbf  
Anticipated regional timber employment: 114,300 jobs

### **Alternative 4**

This alternative is designed to protect the most ecologically significant late-successional forests, significant late-successional forests near the coast, and additional areas identified to protect northern spotted owls. It would protect forests adjacent to streams to provide for endemic species protection, and provide for the retention of some forest cover in areas where timber harvest is allowed.

Congressionally reserved areas: 7,320,600 acres  
Lands in late-successional reserves: 8,066,100 acres  
Lands administratively withdrawn: 1,651,500 acres  
Lands in riparian reserves: 2,896,100 acres  
Lands in matrix: 4,283,600 acres

Estimated annual probable sale quantity: 0.8 bbf  
Anticipated regional timber employment: 114,700 jobs

### **Alternative 5**

This alternative is based on the multi-species conservation strategy developed by the Forest Service Scientific Analysis Team, which layers conservation measures

benefitting over 500 species. Accordingly, it presents increased likelihood of providing habitat to support the continued persistence of certain species but does not provide as much protection of old-growth systems as other alternatives. It offers high riparian protection, marbled murrelet protection and endemic species protection beyond that described in the *Final Draft Recovery Plan for the Northern Spotted Owl*.

Congressionally reserved areas: 7,320,600 acres  
Lands in late-successional reserves: 6,376,400 acres  
Lands in managed late-successional areas: 381,100 acres  
Lands administratively withdrawn: 2,067,000 acres  
Lands in riparian reserves: 2,673,800 acres  
Lands in matrix: 5,636,500 acres

Estimated annual probable sale quantity: 1.0 bbf  
Anticipated regional timber employment: 116,000 jobs

## **Alternative 6**

This alternative is designed to protect the most ecologically significant late-successional forests, significant late-successional forests near the coast for marbled murrelets, and additional areas for northern spotted owls. A high level of protection for forests adjacent to streams is prescribed. To enhance spotted owl dispersal, some forest cover would be retained in areas where timber harvest is allowed.

Congressionally reserved areas: 7,320,600 acres  
Lands in late-successional reserves: 7,500,900 acres  
Lands administratively withdrawn: 1,828,400 acres  
Lands in riparian reserves: 2,512,600 acres  
Lands in matrix: 5,292,900 acres

Estimated annual probable sale quantity: 0.9 bbf  
Anticipated regional timber employment: 114,000 jobs

## **Alternative 7**

This alternative is intended to reflect the most likely management direction that would have been implemented if the Forest Service and BLM had continued their present land and resource management planning processes as described in current or draft plans, and if they had adopted the elements of the *Final Draft Recovery Plan for the Northern Spotted Owl*. It provides the lowest level of riparian

protection of the 10 action alternatives and provides for some limited retention of forest cover where timber harvest is allowed.

Congressionally reserved areas: 7,320,600 acres  
Lands in late-successional reserves: 5,422,800 acres  
Lands in managed late successional Areas: 380,500 acres  
Lands administratively withdrawn: 2,281,800 acres  
Lands in riparian reserves: 622,300 acres  
Lands in matrix: 8,427,600 acres

Estimated annual probable sale quantity: 1.8 bbf  
Anticipated regional timber employment: 120,800 jobs

## **Alternative 8**

This alternative is designed to protect the most ecologically significant late-successional forests and significant late-successional forests near the coast. It provides for a minimum level of protection of forests near streams. Retention of forest cover in areas where timber harvest is allowed would be based on current plans and draft plan preferred alternatives.

Congressionally reserved areas: 7,320,600 acres  
Lands in late-successional reserves: 7,500,900 acres  
Lands administratively withdrawn: 1,828,400 acres  
Lands in riparian reserves: 1,502,600 acres  
Lands in matrix: 6,303,900 acres

Estimated annual probable sale quantity: 1.4 bbf  
Anticipated regional timber employment: 118,100 jobs

## **Alternative 9 - The Preferred Alternative**

Alternative 9 builds on a number of elements from previous attempts to conserve late-successional and old-growth forests and protect associated species. Like a number of other alternatives, it provides for designation of a system of well-distributed reserves to protect large blocks of old-growth forests and provide habitat for species that depend on those forests. However, under Alternative 9, the emphasis is on locating late-successional reserves in key watersheds, in order to serve the dual objectives of efficiency and resource protection. This alternative uses four principal components as the basis of its riparian protection scheme: key watersheds, riparian reserves, watershed analysis, and watershed restoration. The riparian reserve system will conserve aquatic resources as well as provide dispersal

habitat for spotted owls and suitable habitat for numerous species. Alternative 9 designates "adaptive management areas" to encourage testing of technical and social approaches to achieving ecological, social, and economic objectives.

Congressionally reserved areas: 7,320,600 acres  
Lands in late-successional reserves: 7,430,800 acres  
Lands in managed late-successional areas: 102,200 acres  
Lands administratively withdrawn: 1,477,100 acres  
Adaptive management areas: 1,521,800 acres  
Lands in riparian reserves: 2,627,500 acres  
Lands in matrix: 3,975,300 acres

Estimated annual probable sale quantity: 1.1 bbf  
Anticipated regional timber employment: 115,900 jobs

## **Alternative 10**

This alternative is designed to protect ecologically significant late-successional forests, significant late-successional forests near the coast for marbled murrelets, and some additional areas for northern spotted owls. A high level of protection for forests adjacent to streams is prescribed. This alternative is identical to Alternative 6 except that it provides for retention of less forest cover where timber harvest is allowed.

Congressionally reserved areas: 7,320,600 acres  
Lands in late successional reserves: 7,500,900 acres  
Lands administratively withdrawn: 1,828,400 acres  
Lands in riparian reserves: 2,512,600 acres  
Lands in matrix: 5,292,900 acres

Estimated annual probable sale quantity: 1.1 bbf  
Anticipated regional timber employment: 116,100 jobs

## **C. No-Action Alternative**

For both BLM and the Forest Service, the no-action alternative consists of management direction and plans in place immediately before the release of the Interagency Scientific Committee's *A Conservation Strategy for the Northern Spotted Owl*. As considered in the Final SEIS, the no-action alternative is the same as that described in the Environmental Impact Statements that the Final SEIS supplements, and is consistent with Council on Environmental Quality (CEQ) requirements to present "no change" from current management direction or level of

management intensity. However, because of the listings of the marbled murrelet and the northern spotted owl as "threatened", concern over declining fish stocks, and other recent information regarding the habitat for other late-successional forest related species, the no-action alternative is no longer biologically or legally feasible. It does not meet the requirements of the Endangered Species Act or the National Forest Management Act. Additional discussion, including the rationale for not further considering the no-action alternative, is included in Chapter 2 of the Final SEIS.

#### **D. Environmentally Preferable Alternative**

CEQ's regulations require that the Record of Decision specify "the alternative or alternatives which were considered to be environmentally preferable." (40 CFR 1505.2(b)) CEQ's "Forty Questions" document (46 Federal Register, 18026, March 23, 1981) clarifies that "The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources."

Alternative 1 would allow for the smallest amount of directly human-induced effects on the physical environment. It would exclude management activity from all old-growth forest stands, preserving them from human management actions. It would create more late-successional reserves than any other alternative -- 11.4 million acres. Alternative 1 would designate 2.8 million acres of land as matrix, the least of any of the alternatives. Based on the probable sale quantity estimates, Forest Service and Bureau of Land Management forests in the planning area would have produced about 100 million board feet of timber annually under Alternative 1. The assessment panels used by the Assessment Team generally found that Alternative 1 would provide habitat somewhat more likely to support the continued persistence of more species of animals and plants than any other alternative. Based on these factors, we conclude that Alternative 1 is the "environmentally preferable alternative."

#### **V. The Selected Alternative**

As indicated in the Final SEIS, the proposed action responds to multiple needs, the two primary ones being the need for forest habitat and the need for forest products.

The need for forest habitat is the need for a healthy forest ecosystem with habitat that will support populations of native species and includes protection for riparian areas and waters. This need was reflected by President Clinton at the Forest Conference when he spoke of the need "to protect the long-term health of our forests, our wildlife, and our waterways."

The need for forest products from forest ecosystems is the need for a sustainable supply of timber and other forest products that will help maintain the stability of local and regional economies, and contribute valuable resources to the national economy, on a predictable and long-term basis. At the Forest Conference President Clinton spoke of "the human and the economic dimensions" of the problem and asked for a plan that would "produce a predictable and sustainable level of timber sales and nontimber resources."

The congressionally directed purposes for managing the National Forests and the Bureau of Land Management-administered lands include both conserving the ecosystems upon which species depend, and at the same time providing raw materials and other resources that are needed to sustain the health and economic well-being of the people of this country. To balance these sometimes conflicting purposes and plan for management of ecosystems that cross the administrative boundaries of both the major federal land-managing agencies, we adopt the alternative that will both maintain the late-successional and old-growth forest ecosystem and provide a predictable and sustainable supply of timber, recreational opportunities, and other resources at the highest level possible. Alternative 9, as slightly modified herein, best meets these criteria.

Alternative 9, like all of the other action alternatives, applies the same criteria for management of habitat on both Forest Service and BLM lands. This was done in order to accomplish most efficiently the dual objectives discussed above -- that is, achieving the biological results required by law, while minimizing adverse impact on timber harvests and jobs. The inefficiencies involved in applying different criteria on Forest Service and BLM land have been noted in previous analyses. For example, in the Report of the Scientific Analysis Team ("SAT Report"), the team found that BLM's plans were relatively high-risk, when compared to the plans of the Forest Service, in terms of conserving the northern spotted owl. As a result, the SAT found that in order for the Forest Service to "make up for significantly increased risks," it would have to dramatically increase the size of protected areas on Forest Service land (SAT Report, pp. 12-13).

We have reviewed the alternatives discussed in the Final SEIS, their predicted environmental, economic and social consequences, and the risks and safeguards inherent in them. Alternative 9 in the Final SEIS is the best alternative for providing a sustainable level of human use of the forest resource while still meeting the need to maintain and restore the late-successional and old-growth forest

ecosystem. We therefore select Alternative 9 as reflected in Attachment A as the management direction that best responds to the legal requirements and the policies enunciated by the President.

We base our conclusion on a number of factors. Although management under Alternatives 7, 8, or the no-action alternative would provide somewhat higher levels of timber supply than Alternative 9, those alternatives would not provide adequate assurance that the processes and functions of late-successional and old-growth forest ecosystems would be maintained and restored, and would not provide adequate assurance that the riparian habitat essential for many aquatic and terrestrial species would be maintained and restored. All alternatives except Alternatives 7 and 8 would "reverse the trend of degradation and begin recovery of aquatic ecosystems and habitat" (see Report of Forest Management Assessment Team [hereafter "FEMAT Report"], p. II-41; Final SEIS, p. 2-70). The likelihood the marbled murrelet (listed as a threatened species under ESA) would remain well-distributed across its range was low under both Alternative 7 and Alternative 8 (FEMAT Report, pp. IV-153 and IV-168).

As to the no-action alternative, that alternative is based on plans that existed prior to the listing of both the northern spotted owl and the marbled murrelet, and it makes no specific provision for the recovery of those species. In addition, it reflects a lower level of riparian habitat protection than any of the other alternatives. In view of these factors, we think it is unlikely that Alternatives 7 and 8 and the no-action alternative would be deemed to satisfy the requirements of the Endangered Species Act or the National Forest Management Act and its implementing regulations.

Alternative 10 would produce approximately the same level of timber supply as Alternative 9 but would provide somewhat less protection for riparian-dependent species and less connectivity between reserves that aid in the dispersal of terrestrial species. According to the Final SEIS, "the likelihood of achieving an outcome with sufficient quality, distribution and abundance of habitat to allow riparian-dependent plant and animal species to stabilize, well distributed across federal lands, is lower" for Alternative 10 than for Alternative 9, as modified in the Final SEIS (p. 2-70). Alternative 10 also would provide less assurance of a functional system of old-growth forests.

Alternatives 1 through 6 would provide a reduced timber supply when compared to Alternative 9 as it appeared in the Draft SEIS. Based on the habitat assessments made by the Assessment Team, Alternatives 1 through 6 would in many cases provide higher levels of assurance of the continuation of the diversity of plant and animal communities in the planning area than Alternative 9. However, Alternative 9 has been modified to provide additional habitat and species protection. Between

the Draft and Final SEISs, approximately 775,000 acres were reclassified as either additional late-successional reserve or additional riparian reserve.

The impacts to many species, and groups of species, of fish, wildlife and plants are complex and difficult to summarize in this Record of Decision. They are described in detail in the Final SEIS. Based upon the Final SEIS and all of the information in the record, we have determined that Alternative 9, as modified by this decision, will continue to meet the needs of species influenced by federal land management activities. We find it meets the requirements of the National Forest Management Act to provide for a diversity of plant and animal communities, and the requirements of the Endangered Species Act for the conservation of listed species. It also meets the requirements of laws directing the management of these forests for sustainable multiple uses, including the National Forest Management Act, the Federal Land Policy and Management Act, and the Oregon and California Lands Act. Moreover, it meets the requirements of acts that protect elements of the environment, and requirements for coordinated planning and consultation.

In addition, Alternative 9 offers one advantage that the other alternatives do not -- its inclusion of adaptive management areas. Adaptive management involves experimentation, identifying new information, evaluating it, accounting for it in discretionary decisions, and determining whether to adjust plan direction. The object is to improve the implementation and achieve the goals of the selected alternative. Each of the alternatives incorporates the principles of adaptive management to some extent, but Alternative 9 is the only one that specifically allocates ten adaptive management areas, which may be used to develop and test new management approaches to achieve the desired ecological, economic, and other social objectives. These AMAs offer the opportunity for creative, voluntary participation in forest management activities by willing participants. We recognize that this will take time, effort, and a good-faith commitment to the goal of improved forest management. Many of the potentially participating communities and agencies have different capabilities for joining this effort. Our approach to implementing this initiative will recognize and reflect these differences as we seek to encourage and support the broadest possible participation.

Moreover, Alternative 9 allows silvicultural activities, such as thinning young monoculture stands, in late-successional reserves when those activities will enhance late-successional conditions. Even when compared to Alternative 1 (which in the short-term protects more old growth than Alternative 9), Alternative 9 may in the future provide a better connected network of old-growth forests. According to the Final SEIS, Alternative 1 did not rate as high as Alternative 9 in providing the likelihood "of maintaining and enhancing late-successional ecosystems at levels that approach typical long-term conditions," because Alternative 1 "lacks restoration silviculture in the reserves" (Final SEIS, p. 2-69).



## **VI. Mitigation**

### **A. Mitigation Measures Adopted**

Many of the components of the standards and guidelines of the selected alternative are mitigation measures. Singularly and collectively, they avoid, rectify, reduce, or eliminate potentially adverse environmental impacts of forest management activities. For example, there are standards and guidelines for riparian reserves, green tree retention, owl activity centers, managed late-successional areas, monitoring, and "survey and manage" requirements.

The standards and guidelines of the selected alternative mitigate the impacts to plant and animal species and their interrelated ecosystems. The standards and guidelines for the land allocations of this decision will improve current conditions and alter certain past practices detrimental to late-successional species by protecting large blocks of remaining late-successional and old-growth forests, and by providing for the regrowth and replacement of previously harvested late-successional forest stands. Between the Draft SEIS and the Final SEIS, the amount of land in late-successional reserves and riparian reserves was substantially increased. Late-successional reserves were increased by 378,000 acres, and riparian reserves were increased by 397,000 acres. The result is an increase of reserves by 775,000 acres. Within the range of the northern spotted owl, only 22 percent of federal land will be available for timber harvest from matrix and AMA lands. The remaining 78 percent (which includes 30 percent set aside by Congress) is designated as some type of reserve or otherwise not available for programmed timber harvest.

Green tree retention, owl activity center protection, and the riparian reserves in particular mitigate timber harvest effects by providing for well distributed patches of late-successional forest that serve for dispersal of mobile species such as the northern spotted owl, and serve as refugia for species that disperse only short distances.

Further mitigation will be identified as necessary through monitoring and will be implemented through the adaptive management process under the coordination and review of the Regional Ecosystem Office and the Regional Interagency Executive Committee.

### **B. Mitigation Measures Not Adopted**

Some suggestions that were made on the Draft and Final SEIS, while presenting a reasonable basis for providing special protection for specific areas, will be better and more appropriately considered at the planning unit level in accordance with current land and resource management planning procedures.

The Soda Mountain area near Medford, Oregon is an example. This decision recognizes the special biological qualities of this unique area and directs the BLM to evaluate carefully the values of the Soda Mountain area as a biological connectivity corridor and propose any additional management protection necessary, including a special designation, through the BLM resource management plan, to protect those values.

The following additional mitigation measures were identified but not adopted as part of the selected alternative. The reasons why it was not necessary to adopt these particular mitigation measures are also described.

## **1. Vertebrates**

The potential mitigation measures that could benefit fish are to remove all lands in Tier 1 key watersheds from programmed timber harvest, to build no new roads in Tier 1 key watersheds, and to remove inventoried roadless areas from the programmed timber harvest. These potential mitigation measures were not adopted because standards and guidelines described in Attachment A will provide adequate habitat on federal lands for these species. The adoption of riparian reserve scenario 1 (see Attachment A, pp. C-30 to C-38) is of particular benefit to fish because of its increased protection of seasonally-flowing and intermittent streams. In addition, under the Standards and Guidelines, new roads will not be allowed within inventoried roadless areas in key watersheds. As funding is made available, the existing road mileage in key watersheds will be reduced through the decommissioning of roads. In any event, there will be no net increase in roads in key watersheds. For non-key watersheds that contain roadless areas, watershed analysis is required before management activities can occur within those roadless areas (see Attachment A, p. B-19).

For northern spotted owls, possible additional mitigation measures are to provide managed late-successional areas corresponding to the owls' home range or to manage known and future spotted owl activity centers in the matrix as reserved pair areas. This mitigation was described as a possible response to the demographic results indicating a declining spotted owl population. If ongoing monitoring of the owl population indicates that this measure would be appropriate, adjustments can be made in future planning to address the need. Another possible mitigation is that the rate of timber harvest in the matrix could be controlled (such as with the 50-11-40 rule) to provide additional dispersal habitat for spotted owls. This measure was not adopted, in part, due to the acreage of late-successional and other reserves well-distributed in the matrix, which is greater than what had been proposed for reserves when the 50-11-40 rule was developed. Moreover, the reserves are closer together than previous plans. Also, this will protect larger amounts of nesting, roosting, and foraging owl habitat, which will be higher quality than what the 50-11-40 rule would have done (see Appendix G, part 3 of the Final

SEIS). In addition, it was our judgment that Alternative 9 as modified by this decision would adequately provide for the continued viability of the northern spotted owl on federal lands as required by NFMA and furthermore would provide the federal lands contribution to recovery of the northern spotted owl under ESA.

For marbled murrelets, possible mitigation measures are to retain all suitable habitat contiguous with occupied sites that are protected in the matrix, regardless of distance from nest site or to retain all old-growth habitat within marbled murrelet zone 1. The selected alternative is expected to provide the major federal land contribution for murrelet conservation and is expected to make the additional mitigation unnecessary.

To benefit the black-backed and white-headed woodpeckers, and Williamson's sapsucker in the Eastern Cascade Range, potential mitigation measures would be to reduce harvest and salvage in old-growth areas. Because of the strength of late-successional reserves under the selected alternative, standards and guidelines limiting salvage and thinning in those reserves, and matrix management standards and guidelines that specifically incorporate mitigation for white-headed and black-backed woodpeckers, we conclude that these potential mitigation measures are not necessary.

Possible mitigation measures that could benefit bats are to gate cave entrances in such a way that air flow patterns are maintained, people are excluded, and bats can freely enter and exit. Gating of cave entrances is a decision that would be more appropriately addressed in local planning efforts, where site-specific issues can be assessed. In addition, we decided not to adopt these measures because standards and guidelines described in Attachment A will successfully provide habitat conditions for these species. In particular, the adoption of matrix management provisions, protection of caves, mines and other roost sites, and providing equivalent riparian protection in AMAs (see Attachment A, pp. C-40 to C-44) adequately provide for these species.

## **2. Invertebrates and Plants**

The possible mitigation measure that could benefit arthropods is to eliminate burning as a means of site preparation after timber harvest to avoid negative impacts to arthropods that are associated with the removal of coarse woody debris, and the litter and soil layers. The standards and guidelines for matrix management were modified to specifically reduce the impact of burning as a site preparation measure. The complete elimination of burning was not considered appropriate at this scale of decisionmaking because it is likely to continue to be an appropriate and valuable tool under some conditions. Also, some other (non-arthropod) species were specifically identified as benefitting from burning under controlled conditions.

Mitigation measures that could benefit bryophytes include: regulating commercial moss collecting to prevent overharvest; managing additional forest land along the coast for old-growth Sitka spruce; protecting cold springs as important resources for biological diversity; maintaining water quality at Waldo Lake (to protect the population of *Marsupella emarginata* var. *aquatica*); leaving windfalls in place to provide structurally diverse habitat for *Schistostega pennate*; and leaving windfirm buffers of green retention trees along fog-drenched ridges to maintain biological diversity. The opportunity to regulate commercial moss collecting remains open. Such a decision for bryophytes was not appropriate at the scale of this decision, which focuses on habitat, but it may be made in future plans. Recognition of cold springs as important sources of biodiversity has largely been accomplished through adoption of riparian reserve scenario one. While water quality at Waldo Lake may be an issue, it is a local issue that can be decided upon with local planning documents, making a specific mitigation decision unnecessary with this ROD. Leaving windfalls in place to provide structurally diverse habitat for *Schistostega pennate* is an unnecessary mitigation measure because existing standards and guidelines resulted in this species receiving high marks under the selected alternative. Managing for additional old-growth Sitka spruce falls into the category of measures that were not adopted due to large cost and uncertain benefit, but most of the species that would have benefitted from the measure will benefit from the survey and manage measure. Species that would have benefitted by leaving green retention trees on fog-drenched ridges will benefit by both the green tree retention standard and the survey and manage measures that were incorporated.

The possible mitigation measures that could benefit fungi include: identifying additional stands for development into old-growth forest in areas where late-successional or old-growth stands are limited; determining appropriate levels of sustained harvest for commercial species; and providing a mosaic of forest, age-class distributions, successional stages and habitat types in the matrix. Regulation of commercial harvest of fungi was not appropriate at the scale of this decision. The opportunity to regulate commercial harvesting remains open. Identification of stands for development into old-growth conditions and for maintaining a mosaic of conditions in the matrix will be partially accomplished through the standard and guideline to retain at least 15% of federal land in each watershed.

The possible mitigation measures that could benefit lichens include: designating botanical special interest areas or areas of critical environmental concern to protect habitat and key populations of rare and local species; developing management plans to address rare lichen species to provide biological and habitat information, management direction, and recommendations for selecting and monitoring key populations; and retaining trees on ridgelines (which would mimic the retention patterns of natural fire) to optimize dispersal of some lichen species. The standards and guidelines were not amended to designate special interest areas or areas of critical environmental concern, but such sites, and the species that would

have been protected in them, will receive significant benefit from the survey and manage measures. Development of specific management plans for lichens was not appropriate in this document, which is primarily focused on habitat, but such plans are a requirement of ongoing agency programs such as the Forest Service sensitive species program. Retention of trees on ridgelines will be partially accomplished through the green-tree retention standards, and the species that would have benefitted from such mitigation will benefit from the survey and manage standards and guidelines.

The possible mitigation measures that could benefit vascular plants include: designating botanical special interest areas and areas of critical environmental concern to protect habitat and key populations of rare and local populations (e.g., *Aster vialis*, *Bensoniella oregana*, *Cimicifuga elata*, *Corydalis aquae-gelidae*, *Frasera umpquaensis*, *Poa laxiflora*, and *Streptopus streptopoides*); developing, updating, and implementing conservation strategies for species, species groups, and habitats to reduce risk for many sensitive species; implementing well-designed monitoring studies for species with limited distribution and occurrence; conducting basic inventories and studies to determine sustainable yields of special forest products to avoid overharvest; and initiating a consistent interagency inventory and classification of riparian plant associations.

Attachment A was not amended to designate special interest areas or areas of critical environmental concern for vascular plants. But as in the case of lichens, such sites, and the species that would have been protected in them, will receive significant benefit from the survey and manage measures. Also, the opportunity remains to do this in a local planning document. Development of specific management plans for vascular plants was not appropriate at the scale of this decision, but such plans are a requirement of ongoing agency programs such as the Forest Service sensitive species program. Consistent inventories, classifications and monitoring programs are objectives of this plan, and will be overseen by the Regional Ecosystem Office. Therefore, the actions taken pursuant to the standards and guidelines should help address those objectives. Closing roads to control root rot remains an option that could be adopted through local actions where the issue can be reviewed in site-specific planning.

In addition to the above-stated reasons for the individual species groups, many of the possible mitigation measures identified above were not adopted because for most of the species, the standards and guidelines that were adopted make the measure redundant in accomplishing the desired objective. In some cases, the possible mitigation measures were found to be too costly in relation to the uncertain benefits of the measure, the untested or ineffective nature of the measure, or the adverse effect of the measure on other resources or programs.

## **VII. Changes in Standards and Guidelines Between Final SEIS and this Record of Decision.**

The attached Standards and Guidelines for the selected alternative generally reflect Alternative 9 in the Final SEIS. Changes made to the Standards and Guidelines between the Final SEIS (see Chapter 2, App. B and I) and Attachment A to this Record of Decision include the following. Except as specifically noted, these changes do not alter the analyses of effects described in the Final SEIS.

- The Final SEIS provided (p. 2-5) that Endangered Species Act consultation for the northern spotted owl will not be required for activities that are consistent with Attachment A and that avoid incidental take. Under this decision, consultation that may be required but that does not involve take is expected to be informal. Where incidental take would occur, incidental take statements will be provided through formal consultation (see Attachment A, p. A-3). This procedure is consistent with statutory and regulatory requirements.
- The requirement for a management "plan" for each late-successional reserve and managed late-successional area on page 2-23 of the SEIS has been changed to a management "assessment" to avoid adding another unnecessary planning level (see Attachment A, p. C-11).
- The requirement to develop and apply protocols for surveys for species for which protection buffers are required, from page B-64 of the Final SEIS, has been edited to provide timelines for implementation of protocols that are consistent with those described for the "survey and manage" standards and guidelines. It is included on pages C-19 and C-27 of Attachment A. This change gives the agencies time to develop protocols and information needed to implement these standards and guidelines.
- The requirement to retain old-growth fragments in watersheds where little remains, on page B-148 in the SEIS, has been edited to specify that the 15 percent retention standard applies to the federal forest lands within the watershed, not the entire watershed (see Attachment A, pp. C-44 and C-45). This change will have little or no effect in watersheds that are predominantly federal ownership (and not within AMAs). Implementation of the proposed alternative will include project-level NEPA analysis of effects on these remaining late-successional forests and, where otherwise required, watershed analysis. Benefits to species will be greater than those projected under the Draft SEIS because the revised measure put into place by this decision was not part of the Draft SEIS. In addition, the leader of the Species Analysis Team has commented that many of the species that benefit from the retention requirement also benefit from the "survey and manage" measure

that was not part of the Draft SEIS. He concluded it is unlikely that the change "will significantly change activities out on the ground." In light of the foregoing, we conclude that the likelihood of significant change from the outcomes projected in the Final SEIS, based on this modification, is low.

- Language has been added to the planning discussion to require administrative units to disaggregate and display PSQ for key and non-key watersheds. This change is made because the probable sale quantity (PSQ) effects displayed in the Final SEIS do not differentiate between key and non-key watersheds. The aquatic conservation strategy objectives and the requirement to do watershed analysis before management activities can take place implies a higher level of uncertainty regarding future sale levels within key watersheds.
- The role of the Regional Ecosystem Office (REO) regarding review or approval has been clarified to show that approval authority for proposed changes to the Standards and Guidelines rests with the Regional Interagency Executive Committee (RIEC). Where standards and guidelines specify review or approval by the REO, that office reviews, exempts from review, or designs and coordinates a review process, in order to provide recommendations to the RIEC. The RIEC may delegate authority to the REO. This change affects the first paragraph on page 2-14 of the Final SEIS. The new language is on page E-16 of Attachment A. Various standards and guidelines in the Final SEIS attributing decision-making authority to the REO have been clarified.

There are several references in this decision, and in the Standards and Guidelines, to authority to be exercised by the RIEC and the REO. We do not intend to suggest that the RIEC and REO may exercise the decision-making authority that is vested in any of the land management agencies or the consultation agencies. Instead, a primary role of the RIEC and REO is to review proposed actions and determine whether those actions are consistent with the objectives of this decision. In making those determinations, the RIEC and the REO function in an advisory capacity, and the land management agencies and consultation agencies retain the decision-making authority that is vested in them by statute.

- The "green tree retention" requirement to leave on National Forest land 15 percent of the largest, oldest trees associated with each timber sale unit in the matrix (Final SEIS p. 2-62) has been clarified to apply to regeneration harvests (p. C-41 of Attachment A). This limitation does not apply to intermediate harvests (thinnings) in even age young stands because leaving untreated portions of young stands would retard stand development and be detrimental to the objective of creating late-successional patches. It does not apply to BLM lands, which have different green tree retention requirements.

- The Final SEIS provided that green tree retention in the matrix should generally be patches "larger than 1 hectare (about 2.5 acres, unit size permitting)" and that of the total area to be retained, "at least 70 percent should be in patches greater than 1 hectare (unit size permitting)" (Final SEIS, p. D-146). Under this decision, the general guide will be that "70% of the total area to be retained should be in aggregates of moderate to larger size (0.2 to 1 hectare or more) with the remainder as dispersed structures (individual trees, and possibly including smaller clumps less than 0.2 ha)." (Attachment A, pp. C-41,42 ). The reason for the change is our conclusion that a mixture of dispersed and aggregated retention is most likely to achieve the full array of ecological objectives. The optimal mix of dispersed and aggregated retention and the appropriate size of aggregates will vary with site conditions and specific objectives and should be addressed in watershed and project analyses. The change will provide flexibility in making those determinations.
- Language requiring completion of a management plan for the Snoqualmie Pass AMA before conducting any activities has been changed to permit minor non-silvicultural activities such as those categorically excluded under NEPA and watershed restoration programs prior to the completion of a management plan. This change permits low-risk activities to proceed.
- The standard and guideline to protect sites from livestock grazing (Final SEIS p. B-149) has been changed to apply only to the mollusks mentioned in the Final SEIS and the vascular plant Pedicularis howellii. Litter dwelling arthropods were deleted from this standard and guideline because the total acreage of late-successional reserve and riparian reserve habitat, and other measures provided for in the Draft SEIS, adequately provided for this species group. Moreover, late-successional reserve and riparian reserve acreage increased between the Draft and Final SEIS. Other matrix standards (such as the retention of late-successional fragments and the distribution requirements of the green tree retention standard) included in the selected alternative will provide additional benefits to this species group.
- The standards and guidelines for "survey and manage" (Final SEIS App. B-11) have been revised. See Attachment A, pp. C-4 through C-6. There are no changes to the requirement to manage known sites. In addition, there are no changes to the requirement that vertebrates listed on page C-59 will have surveys conducted prior to ground disturbing activities that will be implemented in FY 1997 or later. The survey strategy 3 and 4 surveys<sup>2</sup> will

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Survey strategies: 1 = manage known sites; 2 = survey prior to activities and manage sites; 3 = conduct extensive surveys and manage sites; 4 = conduct general regional surveys.



be initiated no later than FY 1996, and the category 4 surveys are to be completed within 10 years. For other species addressed by Species Analysis Team, the time lines for the implementation of survey requirements have been changed.

Survey protocols will be developed and implemented for the 71 remaining species under survey strategy 2 listed on pp. C-49 through 61 as soon as possible. In all cases, these surveys must be completed prior to ground disturbing activities that will be authorized or implemented in FY 1999 or later. This will provide agencies a maximum of four full fiscal years (FYs 1995, 1996, 1997, and 1998) in which to develop and apply survey protocols for these species. Agencies are to begin implementation of this requirement with available resources in FY 1994. Work to establish habitat requirements and survey protocols may be prioritized relative to the estimated threats to the species.

Annual status reports are to be submitted to the REO for review beginning at the end of FY 1995. As experience is acquired with these requirements, agencies may propose changes to the REO for analysis. These changes could include changing the schedule, moving a species from one survey strategy to another, or dropping this mitigation requirement for any species whose status is determined to be more secure than originally projected. The REO will forward such proposals, along with recommendations, to the RIEC for action. The RIEC may recommend such changes as appropriate in order to assure the continuing attainment of the purposes of the plan and the conservation requirements of all laws applicable to the affected species.

These changes reflect the magnitude of the task, coupled with the lack of species information and skilled personnel. The changes affect only the species subject to survey strategy 2, and within that category it would not affect the amphibian or mammal species. The greatest potential effect for the other species is a delay by up to two additional years in the detection and protection of currently unknown sites. However, as recognized in the SEIS, harvest levels in the first years of implementation are expected to be modest, which would reduce the potential threat to these species. Moreover, other agency policies that are already in place should also be considered when gauging the effect of this proposed change. This includes designation as "sensitive species" by the Forest Service, or as "candidate," "assessment," or "tracking" species by the BLM. In addition, the outcomes for these species would improve over those projected in the Draft SEIS because of measures that were not part of that draft, including: (1) the fact that all these

species are also covered by survey strategy 1 and benefit from requirements of that measure; (2) other fungus and lichen species are subject to survey strategy 3, which calls for more extensive surveys that will be underway by 1996; (3) 19 mollusk species are strongly riparian associated and benefit from riparian reserve scenario 1; and (4) the charge directs agencies to begin implementation in 1994, proceed as quickly as possible, and file annual progress reports.

- The marbled murrelet zone lines illustrated on the federal land allocation map that accompanied the Final SEIS extend further inland in some areas than described in the text of the Final SEIS. If the standards and guidelines of the Final SEIS were followed, this would require murrelet surveys outside of the documented range of the species. Since this is not the intent of the standard and guideline, the following change is hereby made:

The marbled murrelet zone lines will be remapped to more closely parallel the coast line and therefore more clearly illustrate the area where murrelet surveys need to be conducted. The new mapping of the marbled murrelet zone lines will be added to the administrative record of the SEIS and will be provided to all federal offices involved in management of those lands affected.

This change is reflected on pages A-6 and C-10 of the attached Standards and Guidelines. It does not affect any of the conclusions of the analysis of effects in the Final SEIS, nor does it affect the conclusions of the FWS Biological Opinion.

## **VIII. Findings**

### **A. Court Injunctions**

Since 1991, federal courts have enjoined the Forest Service and BLM from holding most timber sales within the range of the northern spotted owl. Courts have held that the agencies failed to meet the various requirements of NFMA, NEPA, and ESA. The courts found that:

- Forest Service and BLM failed to take into account the consequences of BLM's plans for protecting northern spotted owls on BLM property (Seattle Audubon Society v. Moseley, 1992);
- Forest Service failed to adequately consider the effect of the spotted owl strategy on other species dependent on old-growth forests (Seattle Audubon Society v. Moseley, 1992);

- Forest Service failed to consider the most recent demographic information on the northern spotted owl (Seattle Audubon Society v. Moseley, 1992);
- Forest Service failed to develop revised standards and guidelines for management of northern spotted owl habitat in a manner that allowed for public participation and response to the concerns of outside experts (Seattle Audubon Society v. Evans, 1991);
- BLM failed to adequately consult with the Fish and Wildlife Service regarding its spotted owl conservation strategy (Lane County Audubon Society v. Lujan, 1992); and
- BLM failed to assess in an environmental impact statement new information on the northern spotted owl (Portland Audubon Society v. Lujan, 1992).

This decision meets all of the deficiencies pointed out by the courts. The Forest Service and BLM have a coordinated spotted owl conservation strategy that addresses owls and other old-growth dependent species. They have considered all the most recent information on spotted owl populations. They have obtained public comments by preparing a supplemental EIS, conducting public hearings, and considering the thousands of comments that were submitted. They have consulted with the Fish and Wildlife Service on their coordinated conservation strategy. The Fish and Wildlife Service has indicated that land allocations and standards and guidelines of Alternative 9, as modified by this decision, fulfill the obligations of the Forest Service and BLM with respect to the recovery of the northern spotted owl. The land management agencies are fully discharging their consultation responsibilities.

## **B. Legal and Regulatory Compliance**

The Forest Service and the Bureau of Land Management plan and manage the national forests and BLM districts within the range of the northern spotted owl under congressional multiple use and sustained yield mandates. This is an unprecedented ecosystem approach to establishing interagency standards and guidelines to protect the northern spotted owl and other old-growth species. Eight federal agencies -- the Forest Service, Bureau of Land Management, Fish and Wildlife Service, National Marine Fisheries Service, National Park Service, Environmental Protection Agency, National Biological Survey, and Bureau of Indian Affairs -- have cooperated to produce those standards and guidelines.

In this section we consider each of the major laws involved in this programmatic level decision.

## **1. National Environmental Policy Act (NEPA)**

The NEPA requires that federal agencies prepare detailed statements on proposed actions that significantly affect the quality of the human environment. The BLM and Forest Service have both integrated NEPA reviews with their land management planning regulations. For each agency, an environmental impact statement (EIS) accompanies its land management plans. The Forest Service and BLM will tier to the Final SEIS in NEPA documents on specific activities. The Final SEIS also presents alternative strategies for amending existing land management plans to protect the northern spotted owl and other old-growth related species.

NEPA's requirement to prepare an environmental impact statement is designed to serve two major functions: to provide decision makers with a detailed accounting of the likely environmental effects of a proposed action prior to its adoption; and to inform the public of, and allow it to comment on, such effects. The process leading up to this decision has fulfilled both functions. First, the responsible agencies have compiled and generated an enormous amount of information relevant to the effects of each of the alternatives considered in the SEIS. Such information builds on the data and analysis set forth in the documents to which the SEIS is a supplement and which it incorporates by reference. Thus, we have had at our disposal a wealth of information. Second, there has been extensive opportunity for public involvement in the process. The Draft SEIS was sent out to a lengthy list of those who have shown an interest in the issues affecting management of the land subject to this decision. Notices of availability were published to allow people to request a copy of the Draft SEIS and copies were also made available in public reading rooms throughout the region. A 90-day comment period was provided to the public and other entities to comment on the Draft SEIS. Six public hearings were held throughout the region to allow Department officials to hear first hand the views of the public on the proposed action. More than 100,000 comments were received on the Draft SEIS. The agencies responded to each of the major substantive points raised in these comments, and these responses were included in a 214-page appendix to the Final SEIS.

Moreover, we find that the process also complied with each of the major elements of the requirements set forth in the regulations that the Council on Environmental Quality has promulgated to implement NEPA.

First, the SEIS considered a broad range of reasonable alternatives. Fifty-four alternatives were considered in all, including all recently published strategies for management of owl habitat or late-successional and old-growth forest ecosystems generally. This list was pared down to ten alternatives for detailed study in the SEIS in light of the purpose and need of the proposed action, shaped in large measure by the policy goals set forth by President Clinton at the Forest Conference. Among the most important of these is to maintain the long-term

health of late-successional forest ecosystems, and the species that depend on them, while at the same time maximizing economic and social contributions, especially for timber-dependent communities. Within these parameters, the ten alternatives analyzed in the SEIS provide for varying balances among the multiple uses served by our federal forests. There is an eighteen-fold difference among probable average annual timber sale levels under the alternatives, and an equally wide array of conservation measures represented. Even though some alternatives reflect somewhat similar balances of multiple uses, they prescribe different methods for achieving such outcomes.

The likely timber volume of each of the alternatives considered in detail in the SEIS represents a sharp drop from the levels that prevailed during the 1980s. This is because previous harvest levels have severely limited the options that are available today if the environmental laws are to be complied with. Alternatives that would have provided greater timber volume levels were examined (e.g., the "no-action" alternative), but were dropped from detailed consideration because they failed to meet the purpose and need of the proposed action and the requirements of existing law.

Second, the Final SEIS reflects consideration of cumulative effects of the proposed action and all other past, present, and reasonably foreseeable future actions within the range of the owl. Indeed, effects on species have been estimated out to 100 years and more. Moreover, although non-federal lands are outside the scope of the SEIS, effects from their management have been considered in the SEIS to a degree appropriate for a programmatic NEPA document at this scale.

Third, the SEIS made use of the best available information. A special application of geographic information system (GIS) known as the "spatial unified database" was constructed especially for this effort and contains 50 layers of information on federal lands in Oregon, Washington, and California. The views of experts in relevant fields, including sociology, economics and biology, were solicited and considered in rendering an evaluation of the effects of the alternatives. The government sponsored a workshop that gave rise to a new owl demographic analysis incorporating the most recent data from 1992 and 1993 field studies, the results of which have been fully considered. Government biologists have made several runs of a spatially explicit computer model in an attempt to simulate the relative population effects of changing habitat conditions under the preferred and other alternatives. Notwithstanding the prodigious amount of data reflected in the Final SEIS's analysis, we acknowledge that there is less than perfect information about many of the relationships that lie at the heart of the effects assessment.

Nevertheless, we find that there is sufficient information to allow us to make a reasoned choice among the alternatives.

Finally, we recognize that certain new information has come to light since the release of the Draft SEIS. We have fully considered all of it to the extent possible, and indeed, the Final SEIS incorporated the vast majority of it in its analysis. Such information has been useful in clarifying the analysis of effects in the Draft SEIS. It has not, however, altered the effects analysis in the Draft SEIS in any significant manner. Thus, we conclude that there is no need to prepare another Draft SEIS or to provide for additional public comment. Instead, such information should be viewed as a natural outgrowth of the ongoing research and monitoring the government will continue to conduct. New information will be considered, and supplements will be prepared and amendments adopted as the need arises.

The decision here does not authorize timber sales or any other specific activity on federal lands. There is a requirement for additional public involvement and NEPA, ESA and other environmental law compliance before decisions are made to offer timber sales in the matrix lands or conduct other land management activities. There are also opportunities for administrative appeals of site-specific decisions that would have environmental consequences.

## **2. National Forest Management Act**

NFMA is an amendment to the Forest and Rangeland Renewable Resources Planning Act. In NFMA Congress established a comprehensive notice and comment process for adopting, amending and revising land and resource management plans ("forest plans") for units of the National Forest System. At the time of enactment of NFMA, ecological concepts and practices did not address ecosystem scales of the magnitude dealt with in this decision. The 24.5 million acres of land administered by the federal government within the range of the northern spotted owl is far beyond the "planning unit" focus of NFMA. 16 U.S.C. §§ 1604 and 1611.

The approval of a forest plan establishes direction so that all future decisions in the planning area will include an "interdisciplinary approach to achieve integrated consideration of physical, biological, economic and other sciences." 16 U.S.C. § 1604. The forest plan provides direction to assure coordination of multiple-uses (outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness) and sustained yield of products and services.

Within the range of the northern spotted owl there are lands that will be administered pursuant to two regional guides and nineteen forest plans. Under

Forest Service planning regulations, National Forest planning and decision-making occurs at four levels: nationwide, regionwide, forest plan, and project.

Planning is continuous at each level and between the levels rather than sequential. Continuous monitoring, evaluation and adjustment through amendment and revision is required by NFMA for forest plans. Despite the multiple levels of disclosure, all activities remain subject to site-specific and continuing compliance with federal environmental law such as the Endangered Species Act, National Environmental Policy Act, Clean Water Act, Clean Air Act and others.

#### **a. Diversity Provision and Viability Provision of Fish and Wildlife Resource Regulation**

The National Forest Management Act requires the Secretary of Agriculture to promulgate regulations to guide Forest Service planning. One of the statutory requirements is "specifying guidelines for land management plans developed to achieve the goals of the Program which provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives." 16 U.S.C. § 1604(g)(3)(B). In accord with this diversity provision, the Secretary promulgated a regulation that provides in part: "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area." 36 C.F.R. § 219.19.

Because of the enormous complexity and dynamic nature of the ecosystems managed under the NFMA, there is no specific or precise standard or technique for satisfying these requirements, as recognized by the scientific community and many courts. The Committee of Scientists that provided scientific advice to the Forest Service on the crafting of NFMA regulations stated that "it is impossible to write specific regulations to 'provide for' diversity" and "there remains a great deal of room for honest debate on the translation of policy into management planning requirements and into management programs" (44 Fed. Reg. 26,600-01 & 26,608).

We agree with numerous courts that have also recognized that NFMA does not create any concrete standard for diversity.<sup>3</sup> In fact, the court in Seattle Audubon

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See also Sierra Club v. Robertson, 784 F.Supp. 593, 609 (W.D. Ark.1991); Sierra Club v. Robertson, 810 F.Supp. 1021, 1027-28 (W.D. Ark. 1992, on appeal to Eighth Circuit); ONRC v. Lowe, 836 F.Supp. 727 (D. Ore. 1993, on appeal to the Ninth Circuit); Glisson v. USFS (S.D. Ill. August 26, 1993, on appeal to the Seventh Circuit); Sierra Club v. Marita (E.D. Wisc. February 9, 1994, on appeal to the Seventh Circuit); Kirchbaum v. Kelly (W.D. Va., February 9, 1994); Sierra Club v. Robertson (E.D. Wisc. March 7, 1994, on appeal to the Seventh Circuit), Sierra Club v. Robertson (S.D. Ohio, March 11, 1994).

Society v. Moseley (W.D. Wash. 1992) stated that the Forest Service must use common sense and apply its fish and wildlife expertise in implementing these requirements. The court also stated that, "The Forest service argues that it should not be required to conduct a viability analysis as to every species. There is no such requirement. As in any administrative field, common sense and agency expertise must be applied."

Relevant factors include the life history of species, the current amount and distribution of habitat, the amount and distribution of species' ranges within the planning area, and other reasonably foreseeable protective measures. Our approach involves complex projections regarding the likely fate of species over the next 50 to 100 years, or more; certainty is not possible. There is no way to avoid all risk to the continued persistence of species. Even absent any human-induced effects, the likelihood that habitat will continue to support species' persistence can vary among species. For example, the continued persistence of local rare endemic species whose entire range may comprise only a few acres is intrinsically insecure. Thus, compliance with the regulation is not subject to precise numerical interpretation and cannot be fixed at any one single threshold.

By its own terms, the regulation applies only to vertebrate species. Nevertheless, consistent with the statutory goals of providing for diversity of plant and animal communities and the long-term health of federal forests, as well as the agencies' conservation policies, our decision satisfies a similar standard with respect to non-vertebrate species to the extent practicable.

Although NFMA regulations apply to lands administered by the Forest Service, the fish and wildlife resource regulation was used as a criterion in the development of the alternative we select today, which includes direction for management of BLM lands. Use of the regulation's goals in developing alternatives applicable to BLM lands served the important policy goal of protecting the long-term health and sustainability of all of the federal forests within the range of the owl and the species that inhabit them. This is in accordance with direction and authority provided in the Multiple-Use Sustained-Yield Act, the Federal Land Policy and Management Act, the Oregon and California Lands Act, and the Endangered Species Act.

In making a determination of compliance with the NFMA fish-and-wildlife resource regulation, we may consider existing or reasonably foreseeable conservation



measures. No one strategy or decision can for all time provide for the habitat needs of all species that exist in the planning area. Measures that may be considered include analyses and activities undertaken pursuant to internal policy directives (e.g., the Forest Service's sensitive species program) and steps taken at differing layers of planning. Regardless of the measures in place, actual on-the-ground conditions also should be considered to the extent practicable given available data.

The fish-and-wildlife-resource regulation does not require species-specific assessments. Rather, in accord with the theme of ecosystem management, a decision-maker may place reasonable reliance upon assessments of (1) species with habitat needs that are roughly the same; (2) a group of species generally thought to perform the same or similar ecosystem functions; and/or (3) the continued integrity and function of ecosystem(s) in which a species is found. Flexibility in selecting methodology is especially appropriate in this context, given the expertise and knowledge of local forest officials concerning the lands they manage, the variety of complex issues involved, and the often-limited resources available. For example, the Assessment Team's approach to evaluating the alternatives, while sound, is not a controlling precedent for how such assessments need to be conducted in the future. That approach, which endeavored to identify and assess impacts on more than one thousand species across all major categories of taxa that exist in the planning area, has been unique. It was the most comprehensive initiative of its kind ever undertaken.

Based on the statute, regulation, case law, and examination of the record, we find that this decision satisfies the requirements of the statute and its implementing regulations because it will provide an amount and distribution of habitat adequate to support the continued persistence of vertebrate species in the planning area. We also find that our adoption of these standards and guidelines will not jeopardize the continued existence of any listed species under the Endangered Species Act. We base our determinations on the following findings and all of the evidence contained in the record.

First, our decision results in approximately 80 percent of the approximately 8.5 million acres of medium and large late-successional conifer forests in the planning area being within land allocations that do not allow for programmed timber harvest (Final SEIS at 3&4-41). In addition, some 42 percent of the areas within the late-successional reserves designated under our decision are dominated by such forest types. Late-successional reserves will provide large contiguous blocks in which silvicultural treatments are severely limited, protecting species associated with late-successional and old-growth forest habitat against potential adverse effects thought to result from fragmentation and edge effects. The Assessment Team gave strong marks to the original version of Alternative 9 regarding the projected likelihood that it would provide for late-successional forest ecosystem conditions

representative of a hypothesized long-term average. Our decision contains measures in addition to those in the original Alternative 9 that are likely to further enhance the attributes of late-successional and old-growth forest ecosystems (Final SEIS at 3&4-48&49). As a result, we find our decision will allow for the maintenance of functional and interconnected late-successional forest ecosystems within the planning area.

Second, the aquatic and riparian subsystems within the range of the owl also receive significant protection under our decision. It places all riparian areas -- including rivers, streams, wetlands, lakes, and ponds -- within variously-sized reserves and establishes standards and guidelines that limit activities within the reserves (Final SEIS at 3&4-66). The Assessment Team concluded that Alternative 9 as originally designed would work to reverse the trend of degradation and begin recovery of aquatic ecosystems on federal lands within the range of the owl (Final SEIS at 3&4-65&66). Our decision provides even greater protection to aquatic ecosystems.

Third, our decision will provide for habitat of an amount and distribution that will support the continued persistence of the northern spotted owl. Of the nearly 7.5 million acres of extant suitable spotted owl habitat on federal lands within the planning area, the selected alternative protects all but about 20 percent from programmed timber harvest (Final SEIS at 3&4-222). Our decision also contains elements that provide for owl dispersal habitat, including wide riparian reserves and allocation of unmapped late-successional reserves that will protect 100 acres of habitat around the nest sites or activity centers of known owl pairs and resident single owls in the matrix (Final SEIS at B-148).

Approximately two and one-half percent of the extant amount of spotted owl habitat likely will be harvested per decade under our decision. Some have opined that even this level of harvest of owl habitat ought not be permitted. We have considered carefully such views, and the data upon which they are based. While the results of some recent research call for a certain amount of caution, they do not compel a moratorium on all further harvest of suitable owl habitat (Final SEIS at 3&4-229 to 235). Our decision today, while not risk-free, reflects a conservative approach, allowing for a limited amount of harvest of owl habitat in matrix lands while protecting large reserve areas from programmed timber harvest.

As to marbled murrelets, under our decision less than ten percent of the more than 2.5 million acres of suitable murrelet nesting habitat on federal land is in the matrix (Final SEIS at 3&4-222). Even that habitat in the matrix will be protected from harvest as a late-successional reserve under our decision if determined to be occupied in mandatory pre-project surveys (Final SEIS at 2-28).

A variety of vertebrate species that use early-successional forests as primary

habitat also exist in the planning area (Final SEIS at 3&4-203 through 205). Although our decision primarily provides standards and guidelines for management of habitat of species associated with late-successional forests, it will support the continued persistence of species that use early-successional habitat. The amount of early-successional forest in the planning area probably is greater now than at any time in the past (Final SEIS at 3&4-203). Our decision will provide for additional early-successional forest through allowance of harvest of some late-successional forest stands in the matrix.

Eighty-seven other vertebrate species, races, or groups were assessed in addition to the northern spotted owl and murrelet in the process leading up to this decision. With three exceptions, the Assessment Team gave the original Alternative 9 relatively high marks for providing habitat to support stable populations of each of these vertebrates, either well-distributed when measured against their historic range on federal lands or with significant gaps in that range (Final SEIS at 3&4-174, 179, 184, 188 & 197). The gaps that may exist in the historic distributions of species under our decision do not preclude a finding of compliance with the fish and wildlife resource regulation, especially because most such gaps are already present. Distribution cannot be evaluated on a monolithic scale for all species.

The three vertebrates that do not fit within the category described above are all amphibians: (1) the Columbia torrent salamander; (2) the Coastal and Olympic Peninsula populations of the Van Dyke's salamander; and (3) the Shasta salamander (Final SEIS at 3&4-174). The first two of these exist almost exclusively on non-federal land. Our decision meets the objective of the fish and wildlife resource regulation with respect to these species because, of the amount and distribution of habitat adequate to support their continued persistence on all lands, the decision provides a portion that is roughly commensurate with, or greater than, the fraction of the species' range in the planning area.

The Shasta salamander is an extremely local endemic whose habitat sites are essentially fully protected by our decision. In the context of the natural bounds on the range of this salamander and in light of research showing that the presence of rare local endemic species generally is consistent with diverse ecosystems, we find that our decision complies with the resource regulation.

For all of the above reasons, we have determined that this decision, amplified in the Standards and Guidelines, fully meets our statutory and regulatory requirement regarding fish and wildlife resources.

## **b. Regional Guide and Forest Plan Amendments**

Regional guide and forest plan amendments are used to keep the management

direction up to date. The amendment process includes programmatic compliance with NEPA and other environmental laws. If a proposed amendment is a significant change in the regional guide/forest plan, an environmental impact statement (EIS) must be prepared, as we have done with this decision. The Forest Service planning regulations include the same planning steps for approval of a "significant change" in a forest plan as for approval of the plan itself (except for roadless evaluations).

In this decision the amendments are being made to existing forest plans in the range of the northern spotted owl. As we move into ecosystem approaches to environmental issues, especially plant and animal issues, it is likely that the multiple forest plan amendment approach will have to be used. We believe that utilizing a single decision to effect multiple plan amendments is consistent with the applicable statutes and is sound policy.

Commenters on the Draft SEIS stated that the "Draft SEIS violates the National Forest Management Act because amendments to existing plans are 'significant' amendments and the procedures of NFMA and the NEPA regulations, including seeking public input and participation, have not been completed." Final SEIS, Appendix F-111. As summarized in the Final SEIS response to the comment, the amendments are a significant change in the existing forest plans. The requirements of NFMA as to notice and comment for the amendments were fully met through the Draft SEIS, public comment and the Final SEIS. The amendments were included in the Draft SEIS for public comment (see Chapters 2, 3&4 and Appendix B).

In the context of the ecosystem approach to the northern spotted owl and other old growth related species, the NFMA planning processes were fulfilled. There are some features of NFMA and the planning regulations' **individual** forest plan focus that will have to be completed at the time of forest plan revision. The determination of suitable timber lands for the national forests within the range of the northern spotted owl will be controlled by the standards, guidelines and land allocations of the amended plans.

### **3. Federal Land Policy and Management Act**

The principles of multiple use and sustained yield have been applied in the development of this decision. This is evident by the designation of reserves where benefits to late-successional forest related species and uses are emphasized, and the designation of matrix lands where the economic and social benefits of timber harvest are emphasized on a sustainable basis. In addition, the designation of some adaptive management areas allows the development of innovative human uses of the forests that are compatible with wildlife habitat needs. The opportunity for

utilization of resources from the lands under the standards and guidelines of this decision is in accordance with the principles of multiple use and sustained yield (see 43 U.S.C. § 1712(c)(1)).

The lands included in the reserves under the selected alternative constrain, but do not exclude, timber use. Thinning or other silvicultural treatments inside late-successional reserves are subject to review by the Regional Ecosystem Office and approval by the RIEC to ensure that the treatments are beneficial to the creation of late-successional forest conditions. Because this use is not totally eliminated, this management decision will not be subject to the reporting requirement in 43 U.S.C. § 1712(e)(2).

#### **4. Oregon and California Lands Act**

The management of the O&C lands is governed by a variety of statutes, including the O&C Lands Act, FLPMA, the Endangered Species Act, and the Clean Water Act. The O&C Lands Act requires the Secretary of the Interior to manage O&C lands for permanent forest production; however, such management must also be in accord with sustained-yield principles. Further, that Act requires that management of O&C lands protect watersheds, regulate streamflow, provide for recreational facilities, and contribute to the economic stability of local communities and industries. The Act does not require the Secretary to harvest all old-growth timber or all commercial timber as rapidly as possible or according to any particular schedule. The Secretary has discretion to determine how to manage the forest on a sustained-yield basis that provides for permanency of timber production over a long-term period. The Secretary must necessarily make judgments, informed by as much information as possible, about what kind of management will lead to permanent forest production that satisfies the principle of sustained yield.

O&C lands must also be managed in accordance with other environmental laws such as the Endangered Species Act and the Clean Water Act. Some provisions of these laws take precedence over the O&C Lands Act. For instance, the Endangered Species Act (ESA) requires the Secretary to ensure that management of O&C lands will not likely result in jeopardy to listed species or destruction or adverse modification of critical habitat. The ESA directs the Secretary and all federal agencies to utilize their authorities to carry out programs for the conservation and recovery of listed species. Section 5(a) of the Act also directs: "the Secretary, and the Secretary of Agriculture with respect to the National Forest System, shall establish and implement a program to conserve fish, wildlife, and plants, including those which are listed as endangered species or threatened species pursuant to Section 4 of this Act." 16 U.S.C. § 1534(a). Although several northern spotted owl recovery plans have been proposed, the Secretary has not yet adopted final recovery plans for either the northern spotted owl or the marbled murrelet. Alternative 9's late-successional and riparian reserve concepts

are important building blocks in the development of recovery plans to achieve the conservation and recovery of those species.

One of the purposes of the Endangered Species Act is the preservation of ecosystems upon which endangered and threatened species depend. A forward-looking land management policy would require that federal lands be managed in a way to minimize the need to list species under the ESA. Additional species listings could have the effect of further limiting the O&C Lands Act's goal of achieving and maintaining permanent forest production. This would contribute to the economic instability of local communities and industries, in contravention of a primary objective of Congress in enacting the O&C Lands Act. That Act does not limit the Secretary's ability to take steps now that would avoid future listings and additional disruptions.

Protection of watersheds and regulating streamflow are explicit purposes of forest production under the O&C Lands Act. Riparian reserves, including those established on O&C lands by this decision, are designed to restore and maintain aquatic ecosystem functions. Together with other components of the aquatic conservation strategy, riparian reserves will provide substantial watershed protection benefits. Riparian reserves will also help attain and maintain water quality standards, a fundamental aspect of watershed protection. Both riparian reserves and late-successional reserves will help regulate streamflows, thus moderating peak streamflows and attendant adverse impacts to watersheds.

## **5. Endangered Species Act**

Consultation on the preferred alternative in the Final SEIS was conducted with the Fish and Wildlife Service in accordance with Section 7 of the Endangered Species Act. The biological opinion of the Fish and Wildlife Service determined that adoption of the preferred alternative is not likely to jeopardize the continued existence or destroy or adversely modify the critical habitat of any listed species. The National Marine Fisheries Service (NMFS) has also concurred in the determination that the preferred alternative would not affect any of the listed anadromous fish species present in the planning area, meaning that section 7 consultation was not required. See Appendix G of the Final SEIS for more information.

This decision is intended to aid in the recovery of listed species and to avoid action that would cause any species to become listed under the Endangered Species Act.

The Endangered Species Act requires reinitiation of consultation if new information reveals effects of the action in a manner or to an extent not previously considered or if the identified action is modified in a manner that causes effects not previously considered. The BLM and Forest Service, through the interagency SEIS Team, has

provided the U.S. Fish and Wildlife Service (FWS) with a complete list and discussion of major new information and proposed changes to Alternative 9, as well as the basis for their determination that reinitiation of consultation in accordance with Section 7 of the ESA is not required. The SEIS Team conferred with the FWS as to whether new information, or changes proposed from the Final SEIS in the ROD, reveal effects on listed species or critical habitat not previously considered in the biological opinion already issued, or have modified the proposed action to the degree that reinitiation of consultation would be required. The FWS has concurred with the determination made by the BLM and Forest Service that reinitiation is not required.

## **6. Coastal Zone Management Act**

Implementation of the preferred alternative is expected to meet or exceed the federal and state standards and policies adopted in federally approved, state coastal management programs and coastal nonpoint pollution control programs. Appropriate consultation will occur on subsequent plans and activities to ensure consistency under the Coastal Zone Management Act and Coastal Zone Act Reauthorization Amendments. In addition to the existing planning processes under Forest Service and BLM planning regulations, and NEPA analysis for planning and site-specific decisions, the preferred alternative includes provisions to ensure that subsequent federal actions will be consistent with statewide planning goals and local comprehensive plans. We make this finding based on the selected alternative's implementation framework and the commitment it provides to ensure appropriate consultation during subsequent planning and implementation.

## **7. Executive Order 11990 - Protection of Wetlands**

The selected alternative complies with Executive Order 11990 by incorporating procedures and measures for identification, assessment and protection of wetlands. All practicable measures to minimize harm to wetlands will be implemented. The primary measures that ensure compliance include the designation of riparian reserves and key watersheds, the watershed analysis process, and watershed restoration. These measures ensure that wetlands on lands administered by the Forest Service and BLM within the range of the northern spotted owl will be maintained as natural systems providing public health, safety, welfare, and other public interest values.

## **8. Clean Air Act**

At the scale of a programmatic plan such as this, the overall level of activities proposed under this decision are not anticipated to degrade air quality or violate state implementation plans. This finding is based on information presented in the Final SEIS regarding the projected reduction in estimated aggregated annual

emissions from activities under the preferred alternative compared to the 1985 to 1992 baseline. The large geographic scope and programmatic nature of the SEIS precluded quantification of impacts, a necessary component of conformity determinations under the Clean Air Act. Conformity determinations and more detailed air quality impact analyses will be made at subsequent levels of planning and analysis where emissions can be more accurately quantified and reasonably forecasted, and local impacts can be assessed.

## **9. Clean Water Act**

Full implementation of the preferred alternative is expected to maintain and improve water quality. We base this finding on the extensive water quality protection provided by the preferred alternative's comprehensive watershed-based approach. The system of late-successional reserves and riparian reserves, watershed restoration, and the other components of the preferred alternative's aquatic conservation strategy provide a sound framework for meeting Clean Water Act requirements. The system of riparian reserves provide protection zones around streams, wetlands, and waterbodies minimizing the potential for sediment, temperature, and dissolved oxygen problems. The riparian reserves will contribute to protecting or restoring the physical, chemical, and biological integrity of waters of the United States, the major goal of the Clean Water Act. Analysis to support subsequent levels of planning and site-specific projects and implementation of monitoring and adaptive management will be required to demonstrate compliance with the Clean Water Act and state water quality standards.

## **10. Federal Advisory Committee Act (FACA)**

On March 21, 1994, the U.S. District Court for the District of Columbia found in Northwest Forest Resource Council v. Espy that the process for developing the FEMAT report had not met the requirements of the Federal Advisory Committee Act (FACA). The Court found that FEMAT was an "advisory committee" and that FEMAT had not met FACA's standards for open meetings and balanced participation. We view any violation of law as a serious matter.

The District Court decision presents us with a dilemma. The FEMAT report played an important role in the development of the alternatives analyzed by us in the Draft SEIS and Final SEIS. Although the Court did not enjoin us from using or considering the FEMAT report, the Northwest Forest Resource Council has urged us not to adopt any alternative that was developed or analyzed by FEMAT. However, the Forest Service is under Court order to promulgate by April 14, 1994, management guidelines that cure the defects found in the NEPA process in Seattle Audubon Society v. Moseley.



We resolve this dilemma by considering the underlying purposes of FACA: to ensure open procedures, full opportunity for public comment, and public participation so as to avoid undue influence of special interests. We have met these goals through the NEPA process for this plan. We provided all interested parties, including the NFRC plaintiff, 90 days to comment on the Draft SEIS. We responded in the Final SEIS to all of the substantive comments we received and made appropriate changes to the plan. We also invited comments on the Final SEIS. The FEMAT report was widely circulated prior to and during the public comment period on the SEIS. NFRC provided comments during the public comment periods. We ensured that those who wanted to participate were given the opportunity to do so. We took their contributions seriously and reviewed them closely. They improved our plan.

We have carefully considered the implications of the NFRC decision. We have determined to proceed with this decision because we believe, for the reasons set forth above, that our consultation and decision-making process has, taken as a whole, satisfied the objectives of FACA.

By proceeding with this decision, we are not condoning any violation of law. We are taking the necessary steps to ensure that all of the implementation groups established by this decision comply fully with FACA. One prominent feature of the implementation regime we contemplate for our decision is the thorough inclusion of many different communities and perspectives in long-term forest management in the region. We strongly believe that broadened participation will strengthen and improve forest management from an ecological, social and economic perspective. Even though FACA's requirements can be cumbersome in this context, we will see that all non-federal participation in the forest management process will accord with the strictures of the Act.

## **IX. Implementation**

### **A. Interagency Coordination**

The implementation of this decision calls for a high level of coordination and cooperation among agencies. A formal procedure for interagency coordination has been created by a Memorandum of Understanding for Forest Ecosystem Management that has been entered into by the White House Office on Environmental Policy, Department of the Interior, Department of Agriculture, Department of Commerce and the Environmental Protection Agency (see Appendix E of the Final SEIS).

The Memorandum of Understanding created several coordinating groups, including the Interagency Steering Committee, Regional Interagency Executive Committee,

and Regional Ecosystem Office. A detailed description of these groups is included in Attachment A, Section E, Implementation.

## **B. Planning and Analysis**

This decision facilitates ecosystem management under the current statutory and regulatory framework by requiring a variety of assessments, analyses and other activities sometimes referred to as "planning", designed to address various components of ecosystem management. Legal requirements, including public participation, consultation, and environmental analysis, must be met prior to administrative decisions. The responsibility for implementing the decision made in this Record of Decision rests with the managers of the Forest Service and BLM units in the planning area.

## **C. Consultation and Coordination**

Future consultation under the Endangered Species Act will emphasize an integrated ecosystem approach. This will include involving the Fish and Wildlife Service and the National Marine Fisheries Service when the land management agencies begin to develop their plans for a particular area so the views of consulting agencies can be made known. Actions proposed to implement this plan will undergo consultation, either formal or informal, as appropriate. Consultation for the northern spotted owl on activities that are consistent with the standards and guidelines of this decision and that would not result in "take" of a listed species is expected to be informal. If take would result, incidental take statements will be provided through formal consultation.

Concurrent coordination with the Environmental Protection Agency on water quality standards and beneficial use requirements of the Clean Water Act will minimize project impacts.

## **D. Protection of Tribal Treaty Rights and Trust Resources**

This decision provides a higher level of protection for American Indian trust resources on public lands than the plans that it amends, and does not impair or restrict the treaties or rights of tribes. It is conceivable, however, that subsequent implementation of standards and guidelines could directly affect American Indian practices and activities -- for example, a prohibition against the collection of certain plant material or trees in late-successional reserves that are subject to tribal treaty off-reservation gathering rights. Under such circumstances, the exercise of these tribal treaty rights will not be restricted unless the Regional Interagency Ecosystem Office determines that the restriction is (1) reasonable and necessary for

preservation of the species at issue, (2) the conservation purpose of the restriction cannot be achieved solely by regulation of non-Indian activities, (3) the restriction is the least restrictive alternative available to achieve the required conservation purpose, (4) the restriction does not discriminate against Indian activities either as stated or as applied, and (5) voluntary tribal conservation measures are not adequate to achieve the necessary conservation purpose.

Future analysis and planning efforts to implement this decision on lands administered by the BLM and Forest Service will identify Indian trust resources that would be affected, and identify potential conflicts between proposed federal actions and treaty rights or tribal trust resources. Consultation with the recognized tribal government with jurisdiction over the trust property that the proposal may affect, the Bureau of Indian Affairs, and the Office of the Solicitor will be conducted early in the planning process. The consultation with affected tribes will occur on a government-to-government basis. Conflicts will be resolved collaboratively with affected tribes involved in the planning process, consistent with the federal government's trust responsibilities.

### **E. Initial Implementation of this Decision**

This decision sets forth a new way of managing BLM and FS lands. In addition to new land allocations, it requires new techniques of analysis, new decision-making forums, new kinds of interagency collaboration, new approaches to scientific oversight and monitoring, new survey procedures, new public participation strategies, and new standards and guidelines.

The implementation of this new way of doing business will proceed as quickly as possible. But it cannot be instantaneous. A transition period is needed to allow for procedures and analysis techniques to be developed; for training to occur; for budgets to reflect the new kind of work required; and for completion of the surveys, analyses and planning to support project proposals.

One choice is to stop all projects and activities until these new requirements are developed, funded, and completed. A better choice is to recognize a transition that provides for implementation of certain interim procedures in order to realize the goals and objectives of the management strategy while making project decisions with reasonable promptness that do not preclude long-term options or impair resources sought to be protected.

Toward this end, the following direction is adopted. The effects of the proposed projects and activities will be disclosed through appropriate NEPA analyses.

1. Watershed Analysis - In the initial years of implementation, the process for watershed analysis is expected to evolve to meet long-term goals described in the

Final SEIS. However, some projects proposed for the first few years of implementation are in areas that require watershed analysis prior to approval of the projects (i.e., key watersheds, riparian reserves, and inventoried roadless areas). In fiscal years 1994-1996, watershed analysis done for these projects may be less detailed than analyses that are completed in later years. Regardless, analysis done during the initial years (FY 1994-1996) will comply with the following guidance:

- The goal of the analysis is to determine whether the proposed actions are consistent with the objectives of the Standards and Guidelines.
- Existing information will be used to the greatest extent possible, with new information collected, to the maximum extent practicable, to fill crucial data gaps.
- Analysis will address the entire watershed, even though some areas may be analyzed at a lower level of precision, and the analysis of issues may be prioritized.
- Information from the analysis will flow into the NEPA documentation for specific projects, and will be used where practicable to facilitate ESA and Clean Water Act compliance.
- Restoration opportunities will be identified.

As described in the Final SEIS, watershed analysis is an ongoing, iterative process. This was recognized during development of the watershed analysis concept, and the aquatic conservation strategy. The environmental effects of the initial phases of implementation are expected to be as described in the Final SEIS because all projects in areas that require watershed analysis prior to approval will be reviewed to ensure consistency with the objectives of the Standards and Guidelines. Watershed analyses will expand as appropriate to consider additional available information, changing conditions and potential effects associated with long-term management issues and needed actions.

2. Green Tree Retention Requirements - National forest timber sales already laid out at the time of the ROD may use the green tree retention requirements in the Draft SEIS if this eliminates the need to rework, redesign, or recruise a sale. Because sales levels in the first years of implementation of this plan are expected to be smaller than the annual PSQ levels set forth above, and the adjustment of the green tree retention requirement between Draft and this ROD (Attachment A) is subtle, the environmental effects of this initial measure are expected to vary little from those described in the Final SEIS. All sales laid out after the date of this ROD will comply with green tree retention requirements in Attachment A.

3. Assessments for Late-Successional Reserves -- Projects and activities within late-successional reserves (including restoration, recreation, projects for public safety, thinning and salvage) may proceed in fiscal years 1994-96 using initial late-successional reserve assessments done at a level of detail sufficient to assess whether the activities are consistent with the objectives of the late-successional reserves. Non-silvicultural projects and activities are addressed by the late-successional reserve standards and guidelines in Attachment A. The environmental effects of this initial implementation of these activities should vary little from those displayed in the Final SEIS because silvicultural activities must demonstrate benefit to late-successional habitat conditions and these activities are subject to review by the Regional Ecosystem Office and approval of the RIEC.

#### **F. Fiscal Year 1994 Watershed Restoration Program**

Congress has allocated \$27 million in watershed restoration funding for fiscal year 1994. Projects implemented under this program will have had a "preliminary watershed restoration assessment" completed and considered prior to beginning construction. The preliminary watershed restoration assessment will identify restoration goals and provide a risk assessment showing that benefits outweigh the risks of proceeding with a project. Watershed restoration projects need not be completed prior to the initiation of other projects. After fiscal year 1994, watershed restoration will be based on watershed analysis and planning. As described in Appendix B of the Final SEIS, the magnitude of restoration needs will be based on watershed analysis. The implementation of the watershed restoration program in fiscal year 1994 is consistent with the analysis of effects in the Final SEIS.

#### **G. Monitoring**

This decision includes the monitoring plan discussed in Attachment A, pages E-1 to E-12. Monitoring is an essential component of the selected alternative. It ensures that management actions meet the prescribed standards and guidelines and that they comply with applicable laws and policies. Monitoring will provide information to determine if the standards and guidelines are being followed (implementation monitoring, Attachment A, pp. E-4 to E-6), verify if they are achieving the desired results (effectiveness monitoring, Attachment A, pp. E-6 to E-10), and determine if underlying assumptions are sound (validation monitoring), Attachment A, pp. E-10 to E-11.

Information obtained through monitoring, together with research and other new information, will provide a basis for adaptive management changes to the selected alternative, including changes in the Standards and Guidelines. In addition, the monitoring plan itself will not remain static, but will be evaluated periodically to

ascertain whether the monitoring questions and standards remain relevant, and will be adjusted as appropriate.

Monitoring will be conducted at multiple levels and scales, ranging from site-specific projects to the planning area or region to allow localized information to be compiled and considered in a regional context. The monitoring plan provides standards that monitoring at any scale should meet in order to achieve this goal (page E-3 of Attachment A). Monitoring will be coordinated among agencies and organizations to enhance the effectiveness and usefulness of monitoring results.

Monitoring under the selected alternative will build on present monitoring efforts. Current monitoring plans will continue, where appropriate. Specific new monitoring protocols, criteria, goals, and reporting formats will also be developed.

## **H. Authority to Amend or Modify this Decision**

This decision amends current National Forest and BLM district plans as described in this Record of Decision. Amendments of forest or district plans that would modify the standards and guidelines or land use allocations established by this Record of Decision will be coordinated through the Regional Interagency Executive Committee and the Regional Ecosystem Office established by the Memorandum of Understanding for Forest Ecosystem Management (see Appendix E of the Final SEIS). Although decisions concerning implementation or modification of these standards and guidelines are subject to review by these interagency groups, the Memorandum of Understanding for Forest Ecosystem Management acknowledges the line authorities of individual agencies.

## **X. Public Involvement**

The issues surrounding the management of late-successional and old-growth forest ecosystems have been before the public and discussed for a number of years. Congress has held extensive hearings on these issues. A report entitled *Alternatives for Management of Late-Successional Forests of the Pacific Northwest* was prepared at the request of the Agriculture Committee and the Merchant Marine and Fisheries Committee of the U.S. House of Representatives in October 1991.

The Forest Service has completed forest plans for most of the national forests within the range of the northern spotted owl, and has prepared draft forest plans for the remaining forests. Additionally, scoping for these Forest Plans and the *Final Supplement to the Environmental Impact Statement for an Amendment to the Pacific Northwest Regional Guide* included issues regarding management of

late-successional and old-growth forests, and served to focus the public on the issues. The Forest Service more recently received extensive public comment on the *Final Environmental Impact Statement on Management for the Northern Spotted Owl in the National Forests*.

The Bureau of Land Management is in the process of preparing resource management plans for its districts in western Oregon, and has completed plans for the lands it administers in California within the range of the northern spotted owl. Scoping for these plans identified issues surrounding the management of late-successional and old-growth forest ecosystems. Between 1986 and 1992, the Bureau of Land Management conducted scoping and solicited and received public comments regarding these issues.

The Fish and Wildlife Service elicited comments when it proposed listing the northern spotted owl and marbled murrelet. It also held public hearings during the summer of 1991 on the proposed designation of critical habitat for the northern spotted owl, and has more recently held public meetings, hearings, and received comments on the *Recovery Plan for the Northern Spotted Owl - Draft*. During the spring of 1992, there was public comment and discussion in connection with the hearings conducted by the Endangered Species Committee ("the God Squad") on a proposed exemption to the Endangered Species Act.

President Clinton's Forest Conference served as a focal point to discuss the issues surrounding management of late-successional and old-growth forests on federal lands within the range of the northern spotted owl. At the conclusion of that conference, he directed the members of his Cabinet to prepare a comprehensive strategy for forest management and economic development. Following the Forest Conference, representatives of the Clinton administration held meetings with interested parties to solicit their ideas. In addition, the Forest Ecosystem Management Assessment Team received and considered numerous submissions from interested groups and members of the public. The Forest Conference, subsequent meetings, and submissions served to confirm and specify the scope of the issues, potential effects, and appropriate analysis.

All of these efforts, including those of Congress and the relevant land and resource management agencies, coupled with the actions during and after the Forest Conference, have served to offer ample and continued opportunity for the public to identify the issues.

#### **A. Public Comments on the Draft SEIS**

The Notice of Availability for the Draft SEIS was published in the *Federal Register* on July 30, 1993 (58 FR 40444 - 40445) and in numerous papers of general circulation in Washington, Oregon, and California. The comment period closed

October 28, 1993. Approximately 102,000 public comments were submitted during the three month public comment period on the Draft SEIS.

Public hearings were held in Redding, California; Salem, Oregon; and Olympia, Washington, September 27 to October 1, 1993. A total of 359 individuals presented oral comments.

## **B. Summary of the Comments Received**

Approximately 10,000 comments were individually prepared -- some of them extensive and detailed. The rest were form or modified-form letters. The documents came from all 50 states and several foreign countries. They came from schools, small towns, big cities and rural areas. Most of the interest groups that are parties to the litigation that has resulted in the court injunctions halting the federal timber sale programs in the Pacific northwest also filed extensive substantive comments. Many people sent personal, emotional letters.

The distribution of comments demonstrates that the BLM and Forest Service proposal raised national interests. Approximately 40 percent of the comments came from east of the Mississippi River, 25 percent from California, 5 percent from Oregon, and 20 percent from Washington.

The comments indicated that the feelings and issues surrounding the management of the National Forests and the BLM-administered lands in the Pacific northwest and northern California are still intense and still reflect all sides of the issue. Many commenters wanted the preferred alternative (Alternative 9) prescriptions on timber harvest, thinning, and salvage in old-growth forests to be more restrictive. Others felt that the level of timber that could be produced under Alternative 9 was far too low to support the people and communities in the region. The comments reflected a change in focus in the public discussion. In contrast to earlier plans to manage habitat for the northern spotted owl or other individual species, comments on this plan reflected concerns with the forest ecosystem as a whole.

Alternatives 1 and 9 were the focus of comments. Of those people who responded and specifically referred to Alternative 1, approximately 95 percent commented favorably on the management direction of that alternative, while the remaining 5 percent sought even more environmental protection. Most respondents who specifically addressed Alternative 9 either sought more environmental protection (45 percent) or wanted less environmental protection. Only 2 percent of people commenting on Alternative 9 said they liked that alternative.



## C. Response to Comments on the Draft SEIS

Based on the comments received on the Draft SEIS, numerous changes and corrections were made to the Final SEIS. The key changes are identified at the beginning of each chapter and the appendices in the Final SEIS. Summaries of the comments on the Draft SEIS and responses to those comments appear in Appendix F of the Final SEIS. The following summary addresses some of the major concerns raised by the public and some of the litigating parties and provides brief responses to each.

**1. Concern:** Whether sufficient old-growth is being retained and whether the management regimes proposed can maintain or enhance the ecosystem. This concern was voiced uniformly by plaintiff groups in Portland Audubon Society v. Lujan, Lane County Audubon Society v. Jamison, and Seattle Audubon Society v. Moseley.

**Response:** Alternative 9, as proposed in the Draft SEIS, rated the third highest among the ten alternatives analyzed in terms of ecosystem quantity and quality (abundance, diversity, processes, functions, and connectivity). Conservation measures in Alternative 9 were strengthened in the Final SEIS by designating an additional 775,000 acres as reserves. These reserves included the addition of riparian reserve scenario 1 (additional protection of intermittent streams), known northern spotted owl activity centers, known species habitat, managed pair areas in eastern Washington and northern California, and the retention of late-successional fragments where little remains. Alternative 9 was not re-rated against other alternatives after the adoption of the changes reflected in the Final SEIS.

**2. Concern:** Whether the expected timber harvest volume resulting under Alternative 9 is balanced against the needs of the communities and the species involved. This concern was raised by the Association of O&C Counties, the Northwest Forest Resources Council and numerous citizens.

**Response:** Implementation of Alternative 9 will provide the highest sustainable timber levels from Forest Service and BLM lands of all action alternatives that are likely to satisfy the requirements of existing statutes and policies (see p. 27 above). Alternative 9 will provide sustainable timber harvests as well as healthy old-growth ecosystems and adequate populations of fish, wildlife, and plants. It is a "balanced" alternative.

**3. Concern:** Whether the economic and social analysis was sufficient.

**Response:** Many views were expressed in public comments on how to assess the economic and social impact of this decision, particularly in the assessment of

indirect effects, effect of exports, and local vs. regional impacts. The Final SEIS presented an extensive discussion of the economic effects, displayed the information using several different views of the impacts, and disclosed its assumptions and methodology. The Final SEIS corrected an error in the economic analysis of the Draft SEIS, which affected the consideration of direct, indirect and induced employment effects. We believe that the analysis was sufficient.

**4. Concern:** Whether the role of non-federal lands was appropriately considered. Plaintiff groups including, the Portland Audubon Society, and Oregon Natural Resources Council noted this alleged deficiency in their comments.

**Response:** The current state of non-federal lands and possible future activities on non-federal lands were considered in the design of the alternatives, analysis of the environmental impacts of the alternatives, and the cumulative effects in the Final SEIS. This decision does not direct any changes in the management of non-federal lands. However, apart from this decision, the U.S. Fish and Wildlife Service is considering issuance of a proposed regulation under Section 4(d) of the ESA to address NSO habitat on non-federal land.

**5. Concern:** Whether the protection afforded in watersheds would result in degradation of water quality and the abundance and distribution of fish dependent on that quality. Plaintiff groups such as Lane County Audubon Society, Wilderness Society, Seattle Audubon Society, Oregon Natural Resources Council, and the Portland Audubon Society urged that 100 foot buffers be protected along intermittent streams.

**Response:** Protection of watersheds under Alternative 9 was increased between the Draft and Final SEIS to provide 100 foot reserves along intermittent streams outside Tier 1 key watersheds. This protection exceeds the Best Management Practices currently approved to meet Clean Water Act standards. The initial riparian reserves in Alternative 9 are consistent with or exceed other current scientifically accepted strategies for riparian resource conservation.

**6. Concern:** Whether salvage or thinning should be allowed in reserves. This was also a concern of plaintiff groups, including particularly the Oregon Natural Resources Council, and the Wilderness Society among others.

**Response:** Alternative 9 as proposed in the Draft SEIS rated the third highest among the 10 alternatives analyzed in terms of ecosystem quantity and quality (abundance, diversity, processes, functions, and connectivity). This rating was partly based on the ability to manage late-successional reserves to maintain or enhance old-growth structure, diversity, and function. This type of management is especially important in the dry provinces and in young overstocked plantations, where some management can protect and enhance old-growth conditions. The

Assessment Team found that "without restoration silviculture [which includes thinnings], late-successional conditions would be retarded in development." (Final SEIS, pp. 34-46). Silvicultural treatments are limited to those that will be beneficial to late-successional forest conditions. Salvage activities must be intended to prevent negative effects on late-successional habitat. Ecological Principles for Management of Late-Successional Forests was added to Appendix B of the Final SEIS and provides the rationale for management of these reserves.

**7. Concern:** Whether existing inventoried roadless areas were adequately protected. Plaintiff groups such as Seattle Audubon Society, Headwaters, and Lane County Audubon Society urged the preservation of these areas from timber harvesting. Oregon Natural Resources Council asked that such protection be extended to include any roadless area greater than 1,000 acres.

**Response:** The comprehensive system of withdrawn lands and reserved areas, along with the specified standards and guidelines, meets the need to protect the overall ecosystem while providing for other management opportunities. The standards and guidelines of this decision preclude road construction in unroaded portions of inventoried roadless areas within key watersheds, and require the preparation of watershed analyses prior to management activities in such roadless areas outside key watersheds.

**8. Concern:** Whether the adaptive management areas could provide adequate management through research and local involvement. Lane County Audubon Society, Wilderness Society, and Seattle Audubon Society in particular were concerned about these adaptive management areas and recommended that they be eliminated. Lane County Audubon Society suggested in the alternative that they be severely limited in scope and be given firm regulatory constraints.

**Response:** Plans for adaptive management areas will be developed with extensive public participation in compliance with laws governing public participation. Monitoring will be conducted to help assure the objectives of each adaptive management area are accomplished. The adaptive management process will be used in these areas. Research will provide information needed to improve implementation. Also, the location and size of the adaptive management areas were designed so that any setbacks in these areas would not impede the success of the overall regional strategy.

**9. Concern:** Whether the uniqueness of northern California ecosystems was appropriately recognized.

**Response:** Public comments on the Draft SEIS objected to a broad application of a 180-year rotation in the matrix on lands administered by the Forest Service in northern California. The SEIS Team analytically compared the effects on forest

structure and the number of acres in late-successional condition under the 180-year rotation with the rotations outlined in the draft forest plans. This analysis indicated little difference in the amount of acreage in each seral stage over time as a result of the 180-year rotation.

In the Final SEIS, the 180-year rotation for National Forests in California was dropped from Alternative 9 and replaced with the direction to use the rotations in the appropriate draft or final forest plans. These rotations vary in order to accommodate different forest types and scope of management objectives. This is the same approach taken in Alternative 9 regarding rotation lengths on other federal forest lands.

The 100-year rotation for hardwood forests under Alternative 9 was also dropped in deference to forest plan standards and guidelines. The forest plans do not include a regular harvest of hardwoods. Therefore, no rotation length is set and no hardwood volume is included in the calculation of probable sale quantity (PSQ).

**10. Concern:** Whether new information available on northern spotted owl population trends was considered. Plaintiff environmental groups, in particular, raised this issue.

**Response:** The most current information on northern spotted owl population trends has been incorporated into the analysis in the Final SEIS. This new information includes *Estimation of Vital Rates of the Northern Spotted Owl* by K. P. Burnham, D. R. Anderson and G. C. White, 1994, which is an update of *Demographic Analysis of Northern Spotted Owl Populations* by D. R. Anderson and K. P. Burnham, 1992.

Several features of this decision address the population concerns discussed in these analyses: (1) larger reserves, (2) standards and guidelines for the matrix that are beneficial to the northern spotted owl, and (3) managed late-successional areas for known owl activity centers in the Washington Eastern Cascades and the California Cascades Provinces. The 1994 study report was included in Appendix J of the Final SEIS, and a lengthy discussion of the results and their implications was included in Chapter 3&4 of the Final SEIS.

In addition, a spatially-explicit model was run to simulate owl population dynamics for a sample of three of the SEIS alternatives, plus a no-harvest scenario, in order to explore possible northern spotted owl population response under a variety of demographic assumptions. The results are consistent with and generally lend support to the hypothesis that the owl reasonably may be expected to achieve population stability across its range notwithstanding additional loss of its habitat at a conservative rate such as that projected to occur under our decision. The modeling results are also presented in Appendix J3 of the Final SEIS.

**11. Concern:** The Northwest Forest Resources Council and other commenters suggested that additional alternatives based on the "constant change" theory of ecology be considered. In particular, they suggested a new alternative developed by Dr. Chad Oliver, of the University of Washington.

**Response:** The Final SEIS acknowledges that there is controversy in the scientific community regarding theories of ecosystem process and function. The Assessment Team discussed the more active approach to forest management with Dr. Oliver and others in formulating its alternatives. Each of the 10 alternatives that were considered in detail contain elements that are based on the constant change theory. The alternatives vary in the amount of acres allocated to reserves and to the matrix and in the degree of active management proposed in the various land allocations to achieve desired conditions. In the view of the Assessment Team, the need to provide late-successional and old-growth forest habitat requires a system of reserves on the federal lands. Early stages of forest succession are and will be well represented on non-federal ownerships. However, recognizing the uncertainty in current knowledge and the need to monitor, learn, and change, the selected alternative also relies on adaptive management and provides an opportunity in the matrix and particularly in adaptive management areas to test more aggressive landscape management approaches under the "constant change" theory. Given the limited amount of late-successional and old-growth forest presently within the range of the northern spotted owl at this time, it would not be prudent or reasonable to apply the active landscape management approaches suggested by the "constant change" theorists to the majority of the remaining late-successional and old-growth forest stands across the federal landscape.

#### **D. Response to Comments on the Final SEIS**

We have reviewed and considered all comments that were received during the 30-days following the Notice of Availability of the Final SEIS. The comments summarized here represent the major substantive ones that: (1) were not addressed in the Final SEIS as a comment received on the Draft SEIS, (2) addressed a change in the Final SEIS from the Draft SEIS, and (3) were received by the SEIS Team by April 4, 1994. A more comprehensive discussion of all comments received on the Final SEIS is available from regional offices.

- **Comment:** Northern California forests must not be sacrificed. Reinstate the 180-year harvest rotation. Allowing higher harvest levels from these forests will lead to logging in areas currently set aside for habitat protection.

**Response:** The response to the last comment on page F-39 in Appendix F of the Final SEIS discusses the rationale for dropping the 180-year rotation in northern California and deferring to Forest Plan standards and guidelines. That response remains valid. The application of other standards and guidelines of the selected

alternative, plus the retention of all standards and guidelines from the Forest Plans, will result in lower, not higher, levels of harvest than envisioned in the Forest Plans. Further, PSQ levels are presented as an effect, not a goal, of the standards and guidelines. Therefore, harvests within areas specified for habitat protection will be greatly curtailed.

- **Comment:** Establish late-successional reserves between the Snow Mountain and Yolo-Bolly/Middle Eel Wilderness on the Mendocino National Forest to provide connectivity.

**Response:** The standards and guidelines specify a network of late-successional reserves. Dispersal between those reserves is facilitated in part by the riparian reserves and the matrix standards and guidelines. The suggested changes are not needed to meet the objectives of Alternative 9. If management direction for these areas should be changed for other objectives, such changes should be pursued through the forest planning process now taking place on the Mendocino National Forest.

- **Comment:** Salvage logging is the most nebulous category in practice and agency standards and guidelines leave too much to be determined by whim. Therefore, confine all salvage logging to adaptive management areas.

**Response:** To ensure that salvage in late-successional reserves is consistent with the intent of the standards and guidelines, salvage is subject to review by the Regional Ecosystem Office and approval by the Regional Interagency Executive Committee. Salvage is not required to be beneficial, but is designed to permit the recovery of timber volume in those instances where catastrophic events clearly kill more trees (resulting in more snags and down logs in the short and long term) than are needed to maintain late-successional conditions. For example, if a major blowdown event leaves dead trees 15 feet deep over the landscape, a determination could be made that only a portion of those logs are needed to meet the objectives of the reserve. The rest, after consideration of the impacts of the harvest systems themselves, including any required roading, might be available for salvage. Salvage of individual dead trees within the landscape is not intended within late-successional reserves under the salvage guidelines. Work of the Regional Ecosystem Office and adaptive management related to case-by-case examples will continue to define where salvage is appropriate.

- **Comment:** Amend standard and guideline LH-4 (p. B-127). This standard and guideline addresses issuance of leases, permits, rights-of-way, and easements to avoid adverse effects that retard or prevent attainment of aquatic conservation strategy objectives. It should be amended to allow more flexibility for Tier 2 key watersheds and non-key watersheds.

**Response:** LH-4 has been clarified to reflect that it applies to leases, permits, rights-of-way, and easements other than for surface water developments. LH-2 applies to surface water developments only, and the difference between the two standards and guidelines is intentional and appropriate.

- **Comment:** The language in the Final SEIS Summary leads the casual reader to believe that the aquatic conservation strategy does not apply to wild and scenic rivers. Please clarify this language.

**Response:** We have clarified the management direction for wild and scenic rivers in the Record of Decision. Congressional requirements take precedence over the standards and guidelines, the same as for wilderness areas. However, where legislation defers to a site-specific management plan for management decisions, the standards and guidelines of the selected alternative will apply along with that management plan direction, whichever is more restrictive or provides greater benefits to late-successional conditions. This parallels the direction for national scenic areas.

- **Comment:** Standards and guidelines such as those for matrix, key watersheds, and riparian reserves in adaptive management areas should be permanent and not subject to local, politically pressured, change.

**Response:** The primary purpose of the adaptive management areas is to encourage development of non-traditional techniques to meet management objectives. The standards and guidelines outside of the adaptive management areas represent our best effort to provide appropriate levels of protection for late-successional and old-growth forest related species. Inside the adaptive management areas, the activities and the standards and guidelines are presented essentially as a starting point, to help describe the objectives, and then local teams may either use such direction or develop something different. Matrix standards and guidelines for green-tree retention, snags and coarse woody debris need to be met in adaptive management areas.

- **Comment:** Late-successional reserve plans should include a road obliteration plan for the purpose of reducing fragmentation of the forest ecosystem within these reserves.

**Response:** The 1992 Spotted Owl FEIS which this SEIS supplements states that "roads which are no longer needed are identified for restoring to a natural state through such methods as planting trees and shrubs, mulching and seeding grasses, or roadbed obliteration. Roads which are not needed for ongoing or short-term projects can be proposed for closure in order to reduce conflicts with other resources or to reduce use and hence maintenance needs." Since timber management-related funds are used for the maintenance of many existing roads,

we expect the obliteration of roads not needed for other management purposes. Those that remain, while perhaps distracting somewhat from late-successional reserve objectives, will be used for fire protection, beneficial silvicultural activities, watershed restoration, inventories, and other uses beneficial to objectives, as well as facilitating existing and new uses neutral to late-successional reserve objectives. Standards and guidelines for Alternative 9 require that new road construction be substantially limited. Any road construction associated with silvicultural treatments inside late-successional reserve would be subject to the overall "beneficial" requirement for such activities. That is, if the value of a thinning was negated by the habitat lost through road construction to the thinning, the activity should not proceed.

- **Comment:** The Record of Decision should require that an interim timber sale program be implemented that would direct activities to begin first in the least environmentally sensitive, least controversial areas, in order to minimize confrontation and expense.

**Response:** We expect that the agencies will work first in areas that are least environmentally sensitive, and that initial sales offerings will be outside of key watersheds and inventoried roadless areas. However, the team sees a need to proceed with implementation of all of the standards and guidelines on all of the areas, which includes aggressive development of watershed analysis techniques, salvage where salvage is needed and consistent with the standards and guidelines, and aggressive planning for adaptive management areas. We believe the standards and guidelines appropriately protect all aspects of the environment.

- **Comment:** NFRC draws our attention to NFRC v. Espy, Civ. No. 93-1621 (D.D.C., March 21, 1994), and urges the Secretaries not to adopt Alternative 9 which is "irrevocably tainted by the illegality of the FEMAT process and report" and which would be unlawful.

**Response:** We decided to proceed in decision-making on the alternatives presented in the SEIS because we believe that the results obtained by FEMAT would not have been any different had FEMAT been organized and conducted as an advisory committee under the Federal Advisory Committee Act (FACA). Judge Jackson said, "There is nothing in the record to suggest that the FEMAT Report, or its advice and recommendations to the President, would have in any way been altered had FACA been complied with to the letter."

Furthermore, the contents of the FEMAT report were reviewed and commented upon in a subsequent open and public process, in which the federal government received over 100,000 comment documents. The



FEMAT report was incorporated by reference as Appendix A of both the Draft SEIS and Final SEIS. It was widely circulated prior to and during the 90-day comment period on the Draft SEIS.

The decisions being made at this time are based on the entire administrative record, which includes the FEMAT report and also the Draft SEIS, the comments received on the Draft, the Final SEIS, and additional elements of the administrative record obtained by government studies and the work product of government employees. The administrative record as a whole justifies a decision at this time. See also the discussion in section VIII.B.10 above.

- **Comment:** The conservation restrictions described on pages 3&4-316-317 in the Final SEIS apply to federal lands as well as state lands.

**Response:** In response to these comments by the Confederated Tribes of the Warm Springs Reservation of Oregon, the SEIS Team has corrected the language in the Record of Decision to more accurately reflect the applicable legal standards in regard to the exercise of tribal treaty rights.

Pages 51 and 52 of the ROD specifically address these issues.

- **Comment:** The Sweet Home decision illustrates that the cumulative effects analysis used in the Final SEIS was an inadequate treatment of the land that makes up nearly half of the land within the planning area.

**Response:** We note the recent decision of the Court of Appeals for the District of Columbia in Sweet Home Chapter of Communities for a Greater Oregon v. Babbitt, No. 92-5255, \_\_\_ F.3d \_\_\_ (D.C. Cir. March 11, 1994). The Secretary of the Interior has filed a motion seeking to stay issuance of the mandate in this matter and has recommended requesting rehearing by the full Court of Appeals. The Secretary believes that the case is wrongly decided and, most importantly, that it is contrary to the law in the Ninth Circuit, as set out in Palila v. Hawaii Department of Land and Natural Resources, 852 F.2d 1106 (1988). Thus, we have determined that the Sweet Home decision has no impact on Alternative 9.

- **Comment:** The Sweet Home decision will lead to less protection of spotted owl habitat on non-federal lands and therefore should be compensated by additional owl protection on federal lands.

**Response:** Based on the response to the previous question, the owl habitat provided by the selected alternative will be adequate to meet the objectives of the decision. No change is necessary.

- **Comment:** The current situation for marbled murrelets would lead a decision-maker to protect all murrelet habitat on federal lands.

**Response:** The Marbled Murrelet Recovery Team has continued its work on these topics. Since publication of the Final SEIS, preliminary demographic analysis of marbled murrelets has been completed as part of the ongoing conservation assessment of the species (Beissinger, pers. comm.). The possibility that such analysis might be completed prior to execution of the ROD was noted in the Final SEIS (page 3&4-246). The analysis has not yet been peer reviewed, and is subject to change. Because few quantitative population data are available for marbled murrelets, much of the analysis was based on studies of other species in the same family. The model is not specific to a particular period of time or a geographic area. However, the data specific to marbled murrelets that could be used in the analysis were taken from British Columbia in 1993 and from the central coast of Oregon in 1988 through 1991. Since none of the demographic rates for marbled murrelets are known with certainty, sensitivity analysis was used to look at the effect of the various assumptions.

We have examined the results of the preliminary analysis. Under the parameters the author considers most likely, the analysis yielded estimates that murrelet populations are declining at a rate of at least 4 percent per year. The cause, or causes, for such a decline are not addressed by the modeling effort, so the role played by habitat can not be determined from this effort. The possibility of a population decline in this range was disclosed in the Final SEIS (page 3&4-245), and the likelihood that murrelet populations were generally in decline was a key consideration in the cumulative effects analysis in this SEIS and the Assessment Team report. Nevertheless, the rate of decline suggested by the results of the preliminary analysis is quite steep. We will continue to track this analysis as it is completed, and review the results as part of the adaptive management strategy that forms an important component of our decision.

- **Comment:** Some commenters attached a paper prepared by three respected scientists (Lande, Orians and Weins) who have interpreted the results of the demographic workshop (Burnham et al. 1994) and have concluded that the only appropriate response is to protect all remaining spotted owl habitat. In a related letter, nineteen scientists are on record as calling for protection of all remaining owl habitat.

**Response:** Commenters criticize agency interpretations of owl population conditions. This continues to be a point of disagreement within the scientific community. Some scientists, including those who have been involved with this planning initiative, continue to express confidence that the owl

population is in a condition that will allow it to survive the transition period until it reaches a new stable equilibrium under the habitat levels projected to result from this decision. While not immune to the fact that the results of demographic analyses indicate the owl faces some degree of risk, including that of extirpation, they nevertheless take the view that strong reasons exist to believe that owl populations will stabilize widely distributed across federal lands under our decision. A useful analysis of the relevant factors is set forth at pages 3&4-229 - 3&4-235 of the Final SEIS. The new analyses have not led these scientists to change their opinions.

Conversely, other well respected scientists continue to express concern that federal land management proposals (including adoption of Alternative 9) are not an appropriate response to demographic results. While not directly involved in spotted owl population and habitat management, these scientists are qualified to review and comment on the technical aspects of the data and present an opposing viewpoint.

In consideration of this disagreement within the scientific community, we have greatly restricted the timber harvest in owl habitat. It should also be considered that the harvest will occur in a range of habitat types and prescriptions, from commercial thinning to regeneration harvest of old-growth.

- **Comment:** The Sierra Club Legal Defense Fund, Inc. attached to its comments a comparison by Schumaker and Doak of the use of the owl population simulator. Schumaker and Doak conducted an additional run of the model using different assumptions for demographic parameters. Their results conclude that the Forest Service "assumption of a 95% adult survival is impossibly optimistic, and regardless of the values assigned to other classes of territories, it artificially guarantees the owl's persistence."

**Response:** The parameters used for the simulation analysis reported in the SEIS consisted of three alternative rule sets. In each, adult survival was varied as a function of habitat quality. Results of Bart and Forsman (1992) indicated that owl density and reproductive success rise with increasing percent of suitable habitat. Work by Bart and Earnst indicated this is also true of persistence.

Although Bart and Earnst have inferred that adult survival is similarly related to percentage of suitable habitat, studies have not been done to determine this relationship. This lack of knowledge was, in part, the rationale for using alternative rule sets in the analysis for the SEIS.

Schumaker and Doak are correct in noting that studies have not

demonstrated rates of survival as high as 95 percent. It is important to note that, while all three rule sets used in the SEIS analysis could pass a test for reasonableness, this analysis does not demonstrate that these or any other rule sets represent the true set of parameters. The rule set used by Schumaker and Doak could also be considered reasonable, and would yield a different weighted survival value for adult spotted owls.

- **Comment:** Ed Whitelaw and Ernie Niemi commented on the economic analysis of the Final SEIS in "Economic Critique of the Final SEIS on Management of Old-Growth Habitat." They point out that the Final SEIS overestimates economic impacts of reduced timber from federal lands by emphasizing negative impacts on rural timber-dependent communities and not accounting for the meaningful contribution of unlogged federal forests to the stability of local and regional economies.

**Response:** Economists use a variety of assumptions to predict economic impacts of a proposed action. The Final SEIS uses a traditional forest resource approach to evaluate alternatives. The commenters prefer to use an approach that relies on less quantifiable terms and applies them over a broader regional base. Had we adopted their assumptions, a more positive regional economic impact would have been shown, but the fundamental analysis and assessment of Alternative 9 would not have changed.

- **Comment:** A member of the Assessment Team commented that in his view the changes made between Draft and Final SEIS to the matrix management prescription on green tree retention are contrary to the original intent of overall connectivity in the harvested environment.

**Response:** The prescription has been rewritten to describe the intent of the green-tree retention, which is to leave a mixture of dispersed and aggregated retention to achieve a full array of ecological objectives (see p. 35 above).

- **Comment:** A Wilderness Society submission, written by four fisheries scientists, argues that refugia located within key watersheds are inadequately protected and that they will be subject both to a legacy of disturbance and to new disturbance through an untested watershed analysis process.

**Response:** Key watersheds are one aspect of the aquatic conservation strategy. The other key components of the strategy include riparian reserves and their standards and guidelines, the watershed analysis process, and watershed restoration programs.

The Assessment Team identified a network of 164 key watersheds. Alternative 9 as described in the Final SEIS establishes key watersheds on

over nine million acres, or 37 percent of the federal forest land within the range of the northern spotted owl. Recognizing the importance of these areas as refugia, any new human disturbance will be greatly restricted on over seven and a half million acres, or 84 percent of these key watersheds -- because those acres are co-located in Congressionally reserved areas, late-successional reserves, administratively withdrawn areas, or riparian reserves. This area comprises 31 percent of the federal forest land within the range of the northern spotted owl. Within the 16 percent of the key watersheds in matrix, AMAs or managed late-successional areas, the highest quality areas will also receive protection. No new roads will be constructed in inventoried roadless areas within key watersheds, the amount of existing system and nonsystem roads within key watersheds should be reduced (through decommissioning), and watershed analysis must be completed for all watersheds containing inventoried roadless areas before management activities can proceed. Over 50 percent of the inventoried roadless areas on National Forests within the range of the northern spotted owl occur in key watersheds.

Watershed restoration is designed to address past disturbances by treating roads (decommissioning, upgrading, modifying drainage, etc.), restoring riparian vegetation, and restoring instream habitat structure.

Watershed analysis is not designed to encourage new human disturbance, but is focused on the collection and compilation of information about the watershed, in areas where management activities are permitted, that is essential for making sound management decisions.

## **XI. Review and Approval**

### **A. Administrative Review**

A decision by the Secretary of Agriculture is not subject to administrative appeal under the Forest Service regulations. A decision by the Secretary of the Interior is not subject to administrative appeal under BLM regulations. Therefore, this decision is the final agency action for the amendment of these land allocations, standards and guidelines into the applicable formal planning documents.

This decision does not constitute the final agency action for any timber sale or other project. Before a decision document for a timber sale or other project is authorized, applicable procedures must be complied with, including applicable project-level NEPA analysis and administrative appeal procedures.

## **B. Effective Date**

This decision shall take effect 30 days after publication of notice in the Federal Register.

## **C. Administrative Record**

Planning records documenting the preparation and review of the Standards and Guidelines are available for public review at the BLM Reading Room in Portland, Oregon. An index to the planning record has been prepared and is available upon request. We have incorporated by reference copies of existing Forest Service and BLM planning documents and environmental impact statements.

## **D. Signatures**

By signing this Record of Decision together, we exercise our respective authorities over only those portions relevant to our authority.

\_\_\_\_\_  
Mike Espy, Secretary  
U.S. Department of Agriculture

Dated:

\_\_\_\_\_  
Bruce Babbitt, Secretary  
U.S. Department of the Interior

Dated: