



WASHINGTON STATE DEPARTMENT OF
Natural Resources
Doug Sutherland - Commissioner of Public Lands



Conserving Marbled Murrelet Habitat in Washington's State Forests

Enhancing marbled murrelet habitat on state trust lands

Protecting habitat for sensitive species on state trust lands is a major priority of the Washington State Department of Natural Resources (DNR). Forested state trust lands are home to several wildlife species that the federal government has listed as threatened or endangered under the Endangered Species Act. These species include the northern spotted owl (listed in 1990) and the marbled murrelet (listed in 1992).

Rather than taking an owl-by-owl or murrelet-by-murrelet approach to species protection, DNR takes a landscape approach that includes an emphasis on conservation in areas next to federal landowners who also have long-term protected areas and commitments.

Trust Lands Habitat Conservation Plan protects species, assures management flexibility

In January 1997, DNR signed a multi-species Habitat Conservation Plan (HCP) agreement with the U.S. Fish and Wildlife Service (USFWS) and NOAA Fisheries—collectively referred to as the “Services”—to meet its obligation under the Federal Endangered Species Act to conserve habitat.

The HCP guides management on 1.8 million acres of forested state trust lands, mostly in western Washington. It allows DNR to carry out management activities, including timber harvests, while emphasizing wildlife conservation and ecosystem health across the landscape.

DNR has a legal duty to produce long-term income for various specific trust beneficiaries, primarily schools and counties. This contract with the Services added greater certainty to DNR's ability to manage trust lands for the sustainable long-term revenue for the trust beneficiaries while protecting habitat needed by listed species.

When the HCP was signed, DNR did not have sufficient information about marbled murrelet ecology to create a credible long-term conservation strategy. In the absence of such information, DNR and the Services built into the HCP an interim strategy to be implemented while a long-term strategy was being developed.

Developing a long-term conservation strategy

The interim marbled murrelet conservation strategy described in the HCP outlined a step-by-step approach to focus research efforts and conservation measures. DNR took steps to:

- 1) Defer harvest of timber stands that meet interim structural definitions of habitat.
- 2) Develop predictive models—for each of six large,

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watershed-based planning units— that help predict the probabilities about which DNR-managed forest stands would be occupied by marbled murrelets.

3) Use the predictive computer model to help identify marginal habitat types expected to contain a maximum of five percent of that habitat found in occupied sites, and release those areas for other management activities. (No known occupied sites were released; they all were protected.)

4) Simultaneous with the release of marginal habitat, conduct a complete inventory survey to locate occupied sites in the stands predicted to contain 95 percent of the occupied sites in step 3. Certain unoccupied habitats would become available for other management activities.

5) Develop and implement a long-term conservation strategy for each HCP planning unit.

DNR has completed the first four steps of the interim strategy for four of the six western Washington HCP planning units (Straits, Olympic Experimental State Forest, South Coast and Columbia units). DNR now is undertaking Step 5 in developing the long-term conservation strategy.

In the remaining two planning units (North Puget and South Puget), DNR is completing Steps 1 through 4 of the interim strategy.

Life history of the marbled murrelet

The marbled murrelet (*Brachyramphus marmoratus*) is a small, dove-sized seabird that nests in coastal conifer forests along the Pacific Coast of North America. These extremely secretive birds spend most of their lives at sea, in small groups or pairs, on calm, protected coastal waters just beyond the breakers. They forage in near-shore waters using wing propulsion to ‘fly,’ chasing prey underwater to depths of 160 feet.

Until 1974, little was known about the birds’ nesting habits. Today, it is known that they nest as far as 50 miles inland in mature coniferous forests, usually 120 to 150 feet above ground. Because the nest itself is just a shallow depression in lichens or moss on a tree limb, they rely on tall, old trees with large limbs and a complex canopy to conceal their eggs.

Marbled murrelet populations range along the Pacific Coast from the Aleutian Islands in Alaska to central California. Historically, they inhabited the entire Washington Coast and the Puget Sound region. From at-sea surveys, population estimates currently place the number of murrelets at around

9,800 birds in Washington. Major gaps in the at-sea distribution of murrelets in Washington occur in southern Puget Sound and the southwestern coast (north of the Columbia River and off of Grays Harbor and Willapa Bay).

Marbled murrelet populations in Washington, Oregon, and California were federally listed as threatened in 1992. The listing decision was based on threats to the murrelet that included loss of nesting habitat due to timber harvest and mortality due to gill-net fishing and oil spills at sea. The USFWS estimates that marbled murrelet numbers are declining at a rate of about 4- to 7 percent per year. USFWS believes that the following phenomena are leading to the decline of marbled murrelet populations:

1) Timber harvest has reduced the amount of nesting habitat in older forests, thus decreasing the proportion of the population that is able to find nest sites.

2) Nests in old forests fragmented by logging are increasingly subject to edge effects, especially predation, which reduces their nesting success rate.

3) The diminished availability of prime nesting habitat forces murrelets to nest in lower-quality habitat.

4) Nesting murrelets pack into the diminished amounts of habitat at higher densities, thus encouraging area-restricted searching by predators, further reducing nest success.



Interdisciplinary science team develops recommendations for long-term conservation strategy

In 2004, university and federal scientific researchers, professional consultants, DNR staff researchers, and representatives from USFWS and

Washington Department of Fish and Wildlife began work to develop the scientific foundation for the marbled murrelet long-term conservation strategy.

The team’s analytical approach resulted in scientifically credible, comprehensive and forward-

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thinking recommendations for a conservation strategy. At the core of this approach are basic biological criteria.

The strategy includes land management practices that allow western Washington DNR-managed forests to support murrelet populations that are (1) stable or increasing, (2) well-distributed, and (3) resilient. These will be used as the fundamental biological criteria for DNR management of lands for conservation of the marbled murrelet.



Environmental review of proposed marbled murrelet amendment to the HCP

The USFWS will evaluate whether the proposed amendment to the HCP—a long-term conservation strategy for marbled murrelets—will cause significant environmental impacts under the National Environmental Policy Act (NEPA).

The Washington State Environmental Policy Act (SEPA) requires environmental review when a state agency proposes to undertake an action. An agency action includes any plans, policies, or rules that will set the direction of future on-the-ground environmental actions, such as timber harvest. DNR has identified some potential negative effects that might significantly impact the environment with implementation of a long-term marbled murrelet conservation strategy. Therefore, in an Environmental Impact Statement (EIS) conducted under SEPA, DNR will examine a range of alternative management proposals for habitat needed by the murrelet. Each alternative must substantively meet the following criteria:

- Biological contributions to marbled murrelet populations that are stable or increasing; well-distributed, and resilient;
- 1997 Trust Lands Habitat Conservation Plan conservation objectives and all the responsibilities defined in that agreement;
- DNR's fiduciary responsibility as defined by law; and
- All DNR policies, state and federal laws.

Within the EIS, environmental impacts associated with land management activities will not be assessed for any specific site. Instead, general impacts associated with the marbled murrelet long-term conservation strategy applied to the greater DNR-managed forest landscape will be assessed. DNR will examine likely environmental impacts at appropriate spatial scales (e.g., HCP planning unit, landscape, or Watershed Administrative Unit) for the proposed long-term conservation strategy.

Because both the USFWS and DNR believe that a detailed EIS is needed to identify likely significant impacts and their mitigation, the two agencies have agreed that environmental review under both NEPA and SEPA be considered together.

Timeline and opportunities for public input

There will be many opportunities for other agencies, tribes and the public to offer input through the NEPA/SEPA process. In the EIS, DNR will consider probable, significant adverse environmental impacts resulting from proposed actions.

Under NEPA/SEPA, the process begins with 'scoping,' the purpose of which is to listen to ideas and suggestions from scientists, agencies and the public about what should be considered in the environmental review and analysis—in essence, to help establish the scope of the environmental analysis.

Public scoping occurred in fall of 2006. Meetings were held throughout western Washington to inform the public of DNR's proposed action to develop a long-term marbled murrelet strategy, and to take comments. Written comments were accepted throughout the scoping period. DNR and USFWS also will solicit comments after publication of the Draft EIS, proposed for release in summer 2009. The USFWS also will take comments between the release of the Final EIS and the publication of the Record of Decision (both in 2010).

DNR encourages interested parties to contact the department about marbled murrelet long-term conservation, and will answer questions and address concerns throughout this entire process.

Photos

Page 1: Rich MacIntosh

Page 2: Nick Hatch, US Forest Service Pacific Northwest Research Station

Page 3: Tom Hamer