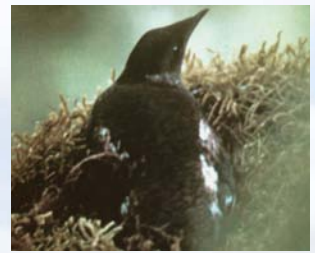
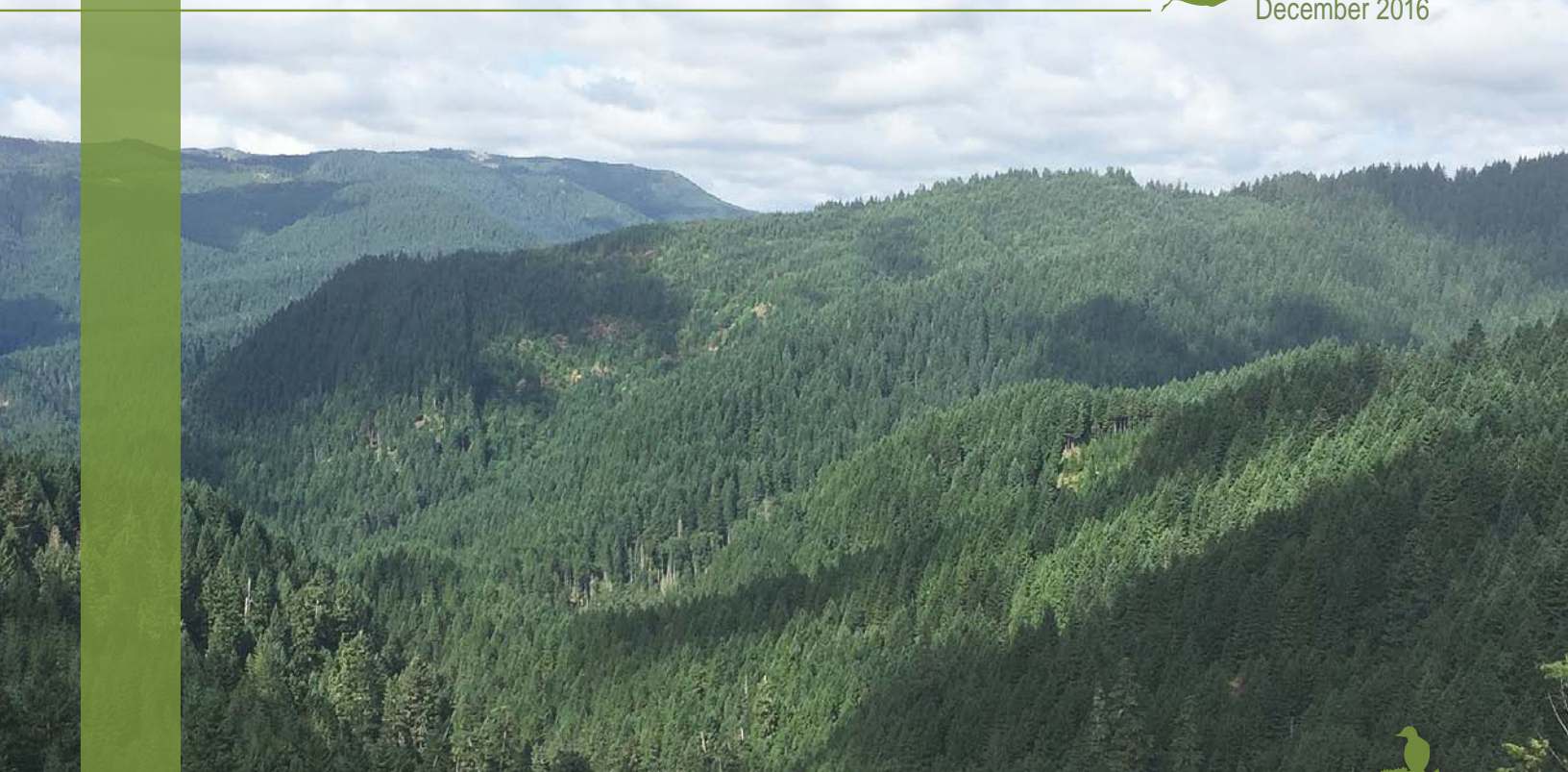


Long-Term Conservation Strategy for the Marbled Murrelet

Draft | ENVIRONMENTAL
IMPACT STATEMENT



December 2016



WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES



December 2016

Dear Interested Party,

The Washington Department of Natural Resources (DNR) is developing a long-term conservation strategy for the marbled murrelet. Once a long-term strategy is approved by the Board of Natural Resources, DNR intends to amend the State Trust Lands Habitat Conservation Plan (1997 HCP) and apply for a new incidental take permit for the marbled murrelet under the Endangered Species Act (ESA). A long-term strategy will replace the current, interim strategy for the marbled murrelet, but it is not intended to change any of the other conservation strategies being implemented under the 1997 HCP.

The marbled murrelet is federally listed as a threatened species under the Endangered Species Act. These small, fast-flying seabirds spend most of their lives in the marine environment, but nest inland on large limbs of Douglas fir and western hemlock trees in western Washington. Marbled murrelet population decline in Washington has been linked to the loss of inland nesting habitat, as well as threats in the marine environment. Uncertainty about the location and extent of important nesting habitat on state trust lands has created challenges for DNR as we conduct forest management activities and implement the current HCP. A long-term strategy is intended to better identify strategically important murrelet nesting habitat on DNR-managed lands, provide long-term certainty for timber harvest and other management activities on forested state trust lands, and contribute to long-term conservation of the species.

This Draft Environmental Impact Statement (DEIS) evaluates five alternative long-term strategies along with a no action alternative (the current, interim strategy). Each action alternative provides a unique approach to murrelet habitat conservation, designating varying amounts of habitat for conservation and applying conservation measures to ensure long-term protection of forestlands important to the murrelet.

This document was produced collaboratively with the U.S. Fish and Wildlife Service and is intended to satisfy the environmental review requirements of both the State Environmental Policy Act (SEPA) and National Environmental Policy Act (NEPA).

We invite you to provide comment on this DEIS through March 1, 2017. Further information is posted at www.dnr.wa.gov/mmltcs.

Thank you for your interest in habitat conservation for the marbled murrelet and the sustainable management of state trust lands.

Sincerely,

A handwritten signature in blue ink, appearing to read "Peter Goldmark", is written over a horizontal line.

Peter Goldmark
Commissioner of Public Lands

DRAFT

Environmental Impact Statement

on a

Long-Term Conservation Strategy for the Marbled Murrelet

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Published:

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Cover Sheet/Fact Sheet

Title: Draft Environmental Impact Statement on a Long-term Conservation Strategy for the Marbled Murrelet

Description of Proposal: This is a joint Draft Environmental Impact Statement between U.S. Fish and Wildlife Service and Washington State Department of Natural Resources to satisfy both the National Environmental Policy Act and the State Environmental Policy Act. This proposal involves amending the Washington State Department of Natural Resources 1997 *Habitat Conservation Plan for State Trust Lands* with a long-term conservation strategy for the marbled murrelet. Six alternatives, including a no action alternative, are analyzed. There is not a preferred alternative.

Proponent: Washington Department of Natural Resources

Legal Mandate: Endangered Species Act of 1973; National Environmental Policy Act; State Environmental Policy Act

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Date of Issue of DEIS: December 2, 2016

Comment Period:

The comment period for this Draft EIS is **December 2, 2016, through March 1, 2017.** Comments are due to the SEPA Center no later than 5:00 PM on Wednesday, March 1, 2017.

Public Meetings:

January 10, 2017 (6-8 p.m.)
NW Region Office – NW Conference Center
919 N Township
Sedro Woolley, WA 98284

January 12, 2017 (6-8 p.m.)
Whitman Middle School – Auditorium
9201 15th Ave NW
Seattle, WA 98117

January 17, 2017 (6-8 p.m.)
Port Angeles High School – Commons/Lunch
Room
304 E Park Ave
Port Angeles, WA 98362

January 19, 2017 (6-8 p.m.)
Julius A Wendt Elementary School –
Multipurpose Room
265 S 3rd St
Cathlamet, WA 98612

January 24, 2017 (2-3 p.m.)
Webinar – link will be available at:
www.dnr.wa.gov/mmltcs

Anticipated Issuance of Final EIS: unknown

Notice of Availability:

This DEIS is posted online at:
www.dnr.wa.gov/mmltcs

Copies will be sent to: the Board of Natural Resources; affected local government planning departments (city and county); affected Tribes; all state and federal agencies with jurisdiction; academia; Washington newspapers; libraries; and other interested parties.

A limited number of additional print copies and computer print CDs will be available at no charge. After these are distributed, copies will be available for the cost of printing or CD production. Requests can be sent to the DNR contact address.

Location of supporting documents:

Supporting documents for this DEIS including the 1997 *Habitat Conservation Plan for State Trust Lands* can be found online at www.dnr.wa.gov, and are available for review at the DNR SEPA Center at 1111 Washington Street SE in Olympia, Washington.

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Appendix B. Analytical Framework Focus Paper

Appendix C. Population Viability Analysis (Peery and Jones 2016)

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Appendix E. P-Stage Focus Paper

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SUMMARY

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Summary

This draft environmental impact statement (DEIS) is a joint document produced by the Washington Department of Natural Resources (DNR) and the U.S. Fish and Wildlife Service (USFWS). This document is intended to satisfy the requirements of the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA) for environmental review. The proposed action under review is an amendment to DNR's 1997 *State Trust Lands Habitat Conservation Plan* (1997 HCP). The amendment will replace the interim conservation strategy for the marbled murrelet (*Brachyramphus marmoratus*) with a long-term conservation strategy. The amendment is limited to this subject and does not change other conservation strategies of the 1997 HCP.

Need, Purpose, and Objectives

Need: DNR needs to obtain long-term certainty for timber harvest and other management activities on forested state trust lands, consistent with commitments in the HCP and DNR's fiduciary responsibility to the trust beneficiaries as defined by law.¹ USFWS needs to provide for conservation of the marbled murrelet by ensuring that the HCP meets permit issuance criteria under the Endangered Species Act (ESA) Section 10(a)(1)(B).

Purpose: The purpose of the proposed action is to develop a long-term conservation strategy for marbled murrelets on forested state trust lands in the six west-side planning units, subject to DNR's fiduciary responsibility to the trust beneficiaries as defined by law, and USFWS's responsibilities under the ESA, which achieves all of the following objectives:

- **Objective #1, Trust Mandate:** Generate revenue and other benefits for each trust by meeting DNR's trust management responsibilities. Those responsibilities include making state trust lands productive, preserving the corpus of the trust, exercising reasonable care and skill in managing the trust, acting prudently with respect to trust assets, acting with undivided loyalty to trust beneficiaries, and acting impartially with respect to current and future trust beneficiaries.
- **Objective #2, Marbled Murrelet Habitat:** Provide forest conditions in strategic locations on forested trust lands that minimize and mitigate incidental take of marbled murrelets resulting from DNR's forest management activities. In accomplishing this objective, we expect to make a significant contribution to maintaining and protecting marbled murrelet populations.
- **Objective #3, Active Management:** Promote active, innovative, and sustainable management on state trust lands.
- **Objective #4, Operational Flexibility:** Provide operational flexibility to respond to new information and site-specific conditions.

¹ Trust duties are discussed in more detail in Chapter 1, Section 1.2.

- **Objective #5, Implementation Certainty:** Adopt feasible, practical, and cost-effective actions that are likely to be successful and can be sustained throughout the life of the HCP.

The Alternatives

Six alternatives are analyzed in this DEIS, including a no action alternative. There is not a preferred alternative expressed in the DEIS. These alternatives represent a range of approaches to long-term marbled murrelet habitat conservation. The alternatives differ in the amount and location of DNR-managed forestland designated for long-term conservation and also include a combination of conservation measures proposed to protect marbled murrelet habitat. These forestlands all occur within 55 miles of marine waters. This 55-mile line is the same as was used in the Northwest Forest Plan (USDA 1994) and is used by USFWS as an estimate of the inland range of the marbled murrelet in Washington. The total acreage of DNR-managed lands within this analysis area is approximately 1.37 million acres.

Acres proposed for continued conservation include lands already protected as long-term forest cover by DNR, such as old-growth forests, high-quality owl habitat, riparian areas, natural areas, and other conservation commitments of the 1997 HCP and *Policy for Sustainable Forests*. These areas provide conservation benefits to the marbled murrelet either by supplying current and/or future nesting habitat or by providing security to that habitat from predation, disturbance, and other threats. The alternatives also delineate additional forestlands with specific importance for marbled murrelet conservation. The range of acres proposed for conservation are summarized in Table S-1.

Table S-1. Summary of Conservation Acres Proposed Under Each Alternative (Alt.)

	Alt. A (no action)	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F
Acres of existing conservation that may provide benefits to marbled murrelets depending on forest condition	583,000	583,000	583,000	583,000	583,000	583,000
Acres of additional, marbled murrelet-specific conservation	37,000	10,000	53,000	51,000	57,000	151,000
Total approximate acres of long-term conservation (long-term forest cover)	620,000	593,000	636,000	634,000	640,000	734,000

All of the alternatives release certain amounts of marbled murrelet habitat for timber harvest. These acres are not part of the conservation acres shown in Table S-1 and will continue to be managed under the 1997 HCP and *Policy for Sustainable Forests*. The total acres released is shown in Table S-2.

Table S-2. Estimated Acres of Marbled Murrelet Habitat Released for Harvest, by Alternative

	Alt. A (no action)	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F
Estimated marbled murrelet habitat released	36,000	49,000	35,000	42,000	34,000	25,000

■ Marbled murrelet conservation areas

Marbled murrelet conservation areas include all of the occupied sites currently protected under the interim strategy, additional occupied site acreage based on recommendations from the 2008 *Recommendations and Supporting Analysis of Conservation Opportunities for the Marbled Murrelet Long-Term Conservation Strategy* (Science Team Report), and a variety of areas proposed specifically for strategic marbled murrelet conservation under different alternatives. These proposed marbled murrelet conservation areas are summarized in Table S-3 and mapped in Appendix F.

Table S-3. Summary of Marbled Murrelet-Specific Conservation Areas Proposed Under Each Alternative

Alternative	Conservation areas
A (no action)	<ul style="list-style-type: none"> Existing occupied sites (not including those recommended for addition by the Science Team Report) Occupied site buffers (100 meters) Habitat identified under the interim strategy
B	<ul style="list-style-type: none"> Occupied sites (including those delineated in the Science Team Report)
C	<ul style="list-style-type: none"> Occupied sites (including those delineated in the Science Team Report) Occupied site buffers (100 meters, except in the Olympic Experimental State Forest (OESF), where sites 200 acres or larger have 50-meter buffers) Special habitat areas: discrete areas of marbled murrelet habitat and adjacent security forest within which active management and other land uses are restricted Emphasis areas: enhanced (0.5-mile) buffers on occupied sites within the emphasis area, current and future marbled murrelet habitat, and areas of active management Isolated stands of high-quality marbled murrelet habitat
D	<ul style="list-style-type: none"> Occupied sites (including those delineated in the Science Team Report) Occupied site buffers (100 meters, except in OESF, where sites 200 acres or larger have 50-meter buffers) Special habitat areas: discrete areas of marbled murrelet habitat and adjacent security forest within which active management and other land uses are restricted

Alternative	Conservation areas
E	<ul style="list-style-type: none"> • Occupied sites (including those delineated in the Science Team Report) • Occupied site buffers (100 meters, except in OESF, where sites 200 acres or larger have 50-meter buffers) • Emphasis areas (as described under Alternative C) where both habitat protection and active management area are allowed • Special habitat areas where active management and other land uses are restricted. There are fewer acres of special habitat areas proposed under Alternative E than under Alternative D • Isolated stands of high-quality marbled murrelet habitat
F	<ul style="list-style-type: none"> • Occupied sites (including those delineated in the Science Team Report) • Occupied site buffers (100 meters) • Marbled Murrelet Management Areas (MMMA) as delineated in the Science Team Report and additional MMMA in the North Puget planning unit; these areas allow some management activities consistent with habitat development and protection

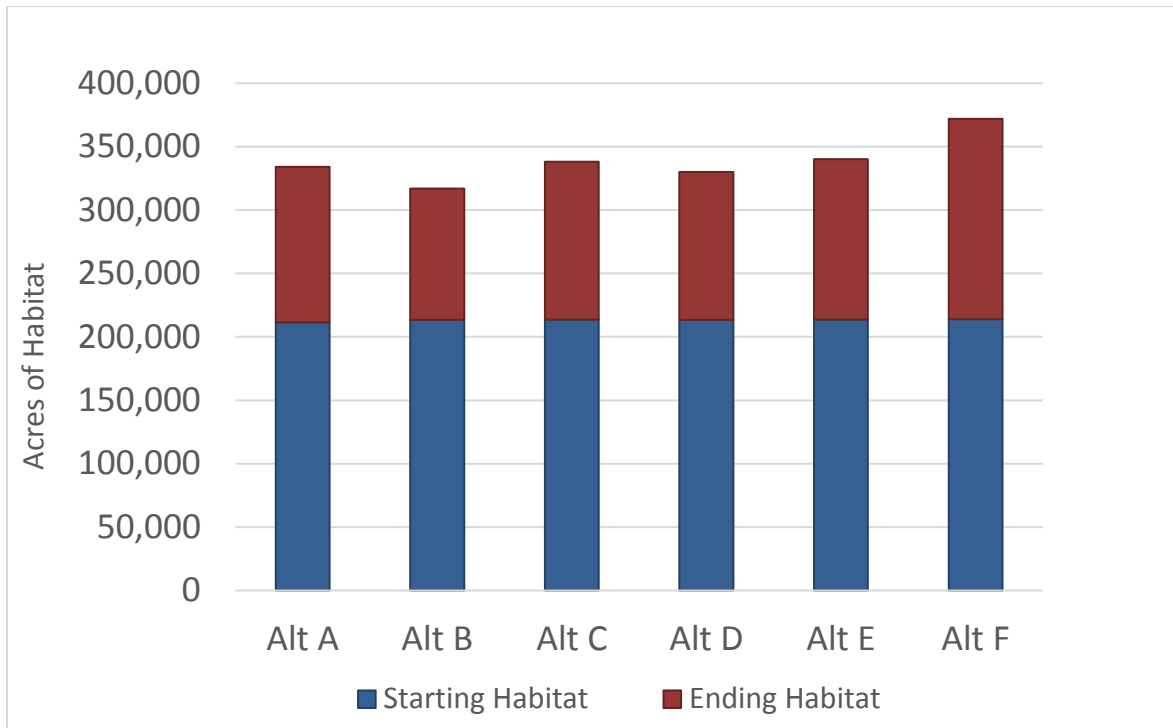
These conservation areas are geographically distributed throughout the analysis area and focus on the protection of current habitat and development of future habitat.

Alternatives C through F focus new conservation in southwest Washington, protecting more marbled murrelet habitat there than is protected under the no action alternative. Alternative F protects the most habitat in southwest Washington (and throughout the analysis area), while Alternative B protects significantly less habitat than the no action alternative.

Alternatives C through F also emphasize murrelet conservation in important areas west of National Forest lands in the North Puget HCP planning unit (within close proximity to marine waters). Alternatives C, D, and E provide more murrelet conservation near the Strait of Juan de Fuca compared with the other alternatives.

Under all alternatives, marbled murrelet habitat within these proposed conservation areas and throughout long-term forest cover is expected to increase over the life of the long-term strategy (through 2067), as illustrated in Figure S-1.

Figure S-1. Growth of Habitat Through Time, by Alternative (acres not adjusted for habitat quality)



New Conservation Measures

The action alternatives also establish new conservation measures that would be added to the 1997 HCP to minimize impacts from new or expanded forest management and land use activities within marbled murrelet habitat. These measures are based on current understanding about activities that could disturb nesting murrelets and/or result in habitat loss. The measures limit harvest within long-term forest cover, limit thinning activities within and near habitat, prohibit or limit road construction in marbled murrelet conservation areas, apply daily timing restrictions to potentially disturbing management activities such as road construction or aerial operations during nesting season, limit development of new or expanded recreational facilities in marbled murrelet conservation areas, and minimize the impacts of other non-timber harvest activities.

How the Proposed Long-Term Strategy Relates to Other DNR Conservation Commitments

Many of the existing 1997 HCP conservation strategies provide conservation benefits to the marbled murrelet. These include riparian strategies, old-growth strategies, and northern spotted owl strategies. In addition, the *Policy for Sustainable Forests* provides for conservation of forestland for wildlife diversity, protecting genetic resources and uncommon habitats, and other specific conservation objectives. The action alternatives are intended to work in concert with these strategies and policies. Where proposed conservation areas would overlap areas conserved for other reasons (for example, an occupied site within a riparian management zone), the most protective management policy or measure would apply.

Summary of Potential Impacts to Elements of the Environment

Impacts evaluated in this DEIS relate primarily to the acres of long-term forest cover provided by each action alternative and the proposed conservation measures (for example, measures proposed for thinning, recreation, and road construction).

Compared with the no action alternative, Alternative B would decrease the area of long-term forest cover by 27,000 acres (approximately 2 percent of DNR-managed forestland in the analysis area). Alternatives C through E would increase long-term forest cover by 14,000 to 20,000 acres, and Alternative F would increase this area by 114,000 acres. Figure S-2 provides a summary of how these acres change from Alternative A (no action), reported by geographic planning units (as defined in the 1997 HCP).

Figure S-2. Estimated Change in Long-term Forest Cover Acres from Alternative A (No Action), by HCP Planning Unit



■ Natural environment: Earth, climate, aquatic resources, vegetation, wildlife, and marbled murrelets

Forests within long-term forest cover are expected to become more structurally complex through time and experience less active management. Elements of the natural environment are not expected to be adversely impacted by these changes. Soil resources and areas subject to landslide hazards would continue to be protected by existing DNR regulations, policies, and procedures. The alternatives are not expected to exacerbate climate change impacts on any element of the environment, and carbon sequestration is expected to be greater than emissions under all alternatives.

Existing riparian protection strategies remain in place under all the alternatives, and aquatic functions are expected to be maintained or enhanced under all alternatives. Minor, localized impacts to microclimate are possible under Alternative B.

Some limitations on thinning (Alternatives C, D, and E) could delay some riparian or natural areas from meeting their restoration objectives within a shorter time frame. However, overall HCP, OESF, and natural areas management objectives are not impacted.

Many wildlife and plant species would benefit from an increase in structurally complex forest that will occur in long-term forest cover over the planning period. Some local changes in habitat conditions may have temporary negative impacts on some species, but overall abundance and distribution of species, including that of listed and sensitive species, would remain stable or increase on DNR-managed lands.

In areas where land would be “released” from its current conservation status (including 27,000 acres under Alternative B and between 2,000 and 3,000 acres in the Straits HCP planning unit under Alternatives C through F), the existing framework of regulations, policies, and procedures designed to minimize the environmental impacts from active management would remain in place.

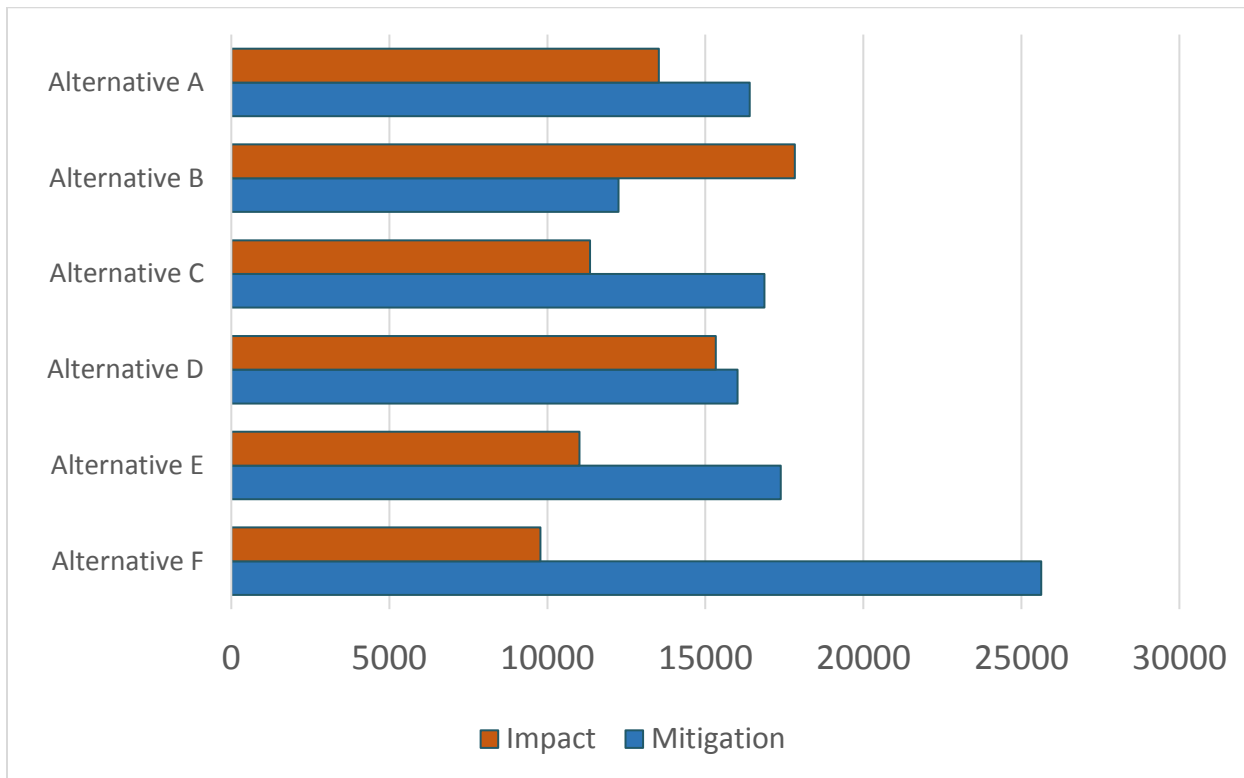
Impacts to marbled murrelet habitat and populations

The marbled murrelet population has declined at an average annual rate of 4.4 percent in Washington since monitoring began in 2001. Given this declining trend, it is uncertain whether the murrelet population will respond to increased habitat on federal or state lands in the future under any alternative. However, the distribution and trends in marbled murrelet populations is linked to the amount and configuration of nesting habitat. The alternatives recognize the importance of protecting existing occupied marbled murrelet habitat and recruiting additional habitat in specific areas. The alternatives vary by providing differing levels of habitat protection and recruitment, coupled with some short-term habitat loss. The intent is to improve current population trends through conservation and recruitment of additional nesting habitat on DNR-managed lands.

Two analytical approaches were used to estimate alternative-specific impacts to marbled murrelet habitat and populations. The acreage, quality (as influenced by stand condition and edge effects), and timing of habitat harvested and developed under each alternative provide a relatively direct measure of impacts. Potential impacts to the Washington murrelet population were evaluated with a mathematical population viability analysis model based on two different assumptions about the relationship of the murrelet population with forest habitat and other environmental factors: 1) insufficient forest habitat compounds negative effects of other factors, and 2) insufficient forest habitat is the principal negative influence on the murrelet population.

For all alternatives, habitat loss in the short term (the first decade of the planning period, due to harvest of habitat outside of long-term forest cover) is expected to be mitigated over time by the recruitment of more and higher-quality habitat and an increase in interior habitat in strategic locations within long-term forest cover. When the acres of this habitat are adjusted for quality and timing, the cumulative adverse impacts expected to marbled murrelet habitat are exceeded by the mitigation expected under every proposed alternative except Alternative B. Figure S-3 compares impacts to mitigated acres by the end of the 50-year planning period.

Figure S-3. Acres of Habitat Loss (Impact) and Gain (Mitigation) by the End of the Planning Period, by Alternative and Adjusted for Quality



Population viability analysis suggests that regardless of alternative, habitat conservation on DNR-managed land can do little at the statewide scale to influence either the risk of local declines or likelihood of population increases if other environmental factors are limiting, such as marine conditions. Assuming that nesting habitat is the primary limitation on murrelet population trends allows the analysis to evaluate the influence of habitat on DNR-managed land on local murrelet populations. The statewide population is projected to stabilize under all alternatives, while focusing just on DNR-managed lands suggested local population increases that vary in timing and magnitude were possible under all alternatives.

In summary, the population viability analyses suggest that Alternative B results in the highest risk of local declines and the lowest likelihood of local population increases during the modeled planning period. Alternative F is projected to result in the lowest risk of local declines and the highest likelihood of local population increases, with intermediate results projected under Alternative A and Alternatives C through E.

■ Human environment: Recreation, forest roads, public services and utilities, environmental justice, cultural resources, and socioeconomics

Some localized impacts to elements of the human environment are expected as a result of increasing the acres of marbled murrelet conservation and implementing proposed conservation measures.

Cumulatively, these impacts are expected to be minor for all elements of the human environment except socioeconomics (refer to the following section), considering the scale of the analysis area and the availability of other DNR-managed lands for these land uses. Impacts are similar across all action alternatives.

Compared with the no action alternative, adding acres of marbled murrelet conservation would result in local reductions in the land available for new or expanded recreation facilities or non-timber leases/easements, shifting demand to lands elsewhere within the analysis area. Existing facilities, easements, leases, and land uses would remain largely unaffected, although the timing of some maintenance activities could be impacted.

Where conservation measures limit road development, compensatory increases in road miles may occur nearby, but overall road density in the analysis area is unlikely to increase as a result of the alternatives. Increased road abandonment in conservation areas would likely occur, which in turn could affect recreational use and access within these areas. Continued access to and use of cultural resources is unlikely to be significantly affected, however, and existing DNR policies and procedures for tribal consultation and cultural resource protection remain in place.

No environmental justice impacts under any alternative are anticipated from this conservation strategy, although local economic impacts in two counties could be adverse (as discussed in the next section).

Socioeconomic impacts

NEPA requires an examination of socioeconomic impacts of the proposed action. Socioeconomic impacts in this analysis concern the relationship of DNR-managed land to local economies, including county revenues, state trust revenues, employment, and local tax generation. These impacts were measured both qualitatively, by considering how activities on DNR-managed land contribute broadly to the local economy, and quantitatively, by attributing assumed values to the acres that would be available for harvest under each alternative.

The change in the value of “operable” acres was found to be relatively small at the scale of the analysis area. The overall change in operable acres ranges from a 4 percent increase under Alternative B to a decrease of between 1 and 4 percent for Alternatives C through F.

The federally granted trusts would experience minor gains in operable acres under Alternative B (increases between 1 and 6 percent) and minor reductions under Alternatives C through F (decreases between 1 and 6 percent). Exceptions would be the University Grant (original and transferred) Trust,

which would see a larger reduction (between 11 and 18 percent) under Alternatives C through F, and the Scientific School Grant, which would see a 16 percent reduction under Alternative F. Counties benefiting from State Forest Trust lands would experience either no change or an increase in operable acres under Alternative B (increases up to 20 percent). Several counties would experience small changes in operable acres under Alternatives C through F (from decreases of 5 percent to increases up to 6 percent). Exceptions include Pacific County (13 to 23 percent decreases in operable acres) and Wahkiakum County (9 to 25 percent decreases) under Alternatives C through F. Under Alternative F, Whatcom and Pierce counties would experience reductions of operable acres of 22 percent and 11 percent, respectively.

Alternative B, by increasing the number of operable acres available for harvest as compared with Alternative A, is expected to result in stable or increased harvests levels on all trusts and in all counties in the analysis area, stable or increased revenue for all trust beneficiaries with lands within the analysis area, and stable or increased tax revenue and employment in counties within the analysis area.

Alternatives C, D, E, and F, by decreasing the number of operable acres available for harvest, are expected to result in stable or decreased harvest levels on most trusts and in all counties in the analysis area, stable or decreased revenue for most trust beneficiaries with lands within the analysis area, and stable or decreased tax revenue and employment in counties within the analysis area.

Pacific and Wahkiakum counties are most likely to be adversely impacted by Alternatives C, D, E, and F. These counties are more heavily dependent on timber harvest for local government revenue and have below-average economic diversity, compared with other counties in the analysis area. The economies of Pacific and Wahkiakum counties are therefore less able to tolerate the reduction in harvest volume anticipated under Alternatives C through F because of their low socioeconomic resiliency.

Some of the adverse economic effects due to reduced timber supply in the near term could be offset over time by the cumulative benefits of improved efficiencies and effectiveness in forest management, additional opportunities for thinning (which is more labor intensive), more regulatory certainty under the Endangered Species Act, and potential use of the State Forest Trust Land Replacement Program in Pacific and Wahkiakum counties.

■ Impacts on DNR operations

The establishment of discrete marbled murrelet conservation areas under the action alternatives will improve operational certainty (for example, in HCP implementation, harvest planning, road construction, leasing, and recreation planning) as compared with the no action alternative, which includes operational uncertainty about the exact location and extent of protected habitat. The conservation measures largely acknowledge the need for most DNR routine operations to continue to occur within long-term forest cover and limit restrictions or prohibitions to within specific marbled murrelet habitat areas. This means that active management of forest resources can largely continue, following clear parameters for seasonal timing restrictions, disturbance buffers, and need for consultation. For four types of operations within long-term forest cover (thinning, roads, blasting, and recreation), the conservation measures differ among alternatives, with some limiting DNR management activities more than others. Site-specific consultation with USFWS is expected under the proposed conservation measures for some forest management activities.

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