



March 9, 2017

Via E-mail (sepacenter@dnr.wa.gov) and Regular Mail

Washington Department of Natural Resources
SEPA Center
P.O. Box 47015
Olympia, WA 99504-70115

**Re: Comments on the Draft Environmental Impact Statement on a
Long-Term Conservation Strategy for the Marbled Murrelet
File No. 12-042001**

To Whom It May Concern:

Please accept these comments on behalf of the American Forest Resource Council (“AFRC”) and its members on the draft environmental impact statement (DEIS) on a Long-Term Conservation Strategy for the Marbled Murrelet, which was jointly prepared by Washington Department of Natural Resources (“DNR”) and the U.S. Fish & Wildlife Service (“USFWS”).

AFRC applauds DNR and the USFWS for finally bringing the process of adopting a long-term conservation strategy for the marbled murrelet much closer to conclusion. AFRC members own the forest products mills that are the primary market for DNR’s timber. They have, in turn, invested hundreds of millions of dollars in those mills and depend on a stable supply of timber from DNR. In 1997, when the state lands Habitat Conservation Plan (HCP) was adopted, beneficiaries and AFRC members were promised it would offer stability and predictability. But over the years the failure to complete the long-term marbled murrelet long-term conservation strategy has instead led to reduced harvests and repeated controversy.

DNR has met the requirements of the interim marbled murrelet interim conservation strategy (HCP at IV 39—40) and has conducted significant field research that provides the solid foundation for a long-term conservation plan, which was missing in 1997. Turning field research into a long-term plan has been hampered because of the desire of well-meaning individuals to devote more trust land to wildlife conservation uses than the science supports or that a trustee for income beneficiaries can justify. As the manager of trust land for income beneficiaries, DNR cannot set aside land for wildlife conservation except as required to comply with federal law.

AFRC urges both the Board of Natural Resources (Board) and the USFWS to adopt the marbled murrelet long-term conservation strategy that best meets DNR’s explicit legal obligations under the HCP while also meeting DNR’s legal and fiduciary obligations to the trust beneficiaries, and to do so promptly. Of the alternatives considered in the DEIS, the only alternative that meets these two parameters – consistency with the HCP while fulfilling DNR’s trust mandate – is Alternative B. Therefore, Alternative B must be selected.

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Background on the marbled murrelet long-term conservation strategy

In 1997, when DNR received approval of its multi-species HCP and an incidental take permit (“Permit”) from USFWS and the National Marine Fisheries Service (NMFS), essentially nothing was known about how, if at all, marbled murrelets use DNR-managed trust lands for nesting. As a result, the HCP called for an extremely conservative “interim” strategy, which could be carried out while DNR conducted field research to understand murrelet use of DNR-managed lands, which would in turn inform a long-term strategy. DNR proceeded to conduct the agreed-upon research. The underlying premise of the HCP’s treatment of the marbled murrelet was that the long-term strategy would be based on the data from the science, as data was gathered, rather than being premised on the suppositions that existed in 1997. And, over the course of the following 20 years, researchers gathered additional data that also informs the long-term conservation strategy for the marbled murrelet on DNR-managed trust land.

Today, DNR has put forward five action alternatives in the DEIS for a long-term marbled murrelet conservation plan. **None of the alternatives result in an increase in incidental take of marbled murrelets.**

The HCP includes a broad range of requirements to enhance habitat for several listed and unlisted species over the 70-year life of the HCP. The DEIS describes alternatives for the Board to consider in requesting an amendment to the HCP. The amendment will include a long-term conservation strategy for the marbled murrelet, but **will not alter** the range of non-murrelet specific habitat protections in the HCP that also protect the marbled murrelet.

The USFWS and NMFS will consider the Board’s request for an amendment to the HCP under the Implementation Agreement (Appendix B to the HCP), not under the standard of 16 USC §1539(a) that applies to the initial approval of an HCP. Section 25.3(c) of the Implementation Agreement provides that HCP amendments that do not increase the level of incidental take already permitted in the Incidental Take Permit do not require an amendment to the Permit. The implication of evaluating the amendment under the Implementation Agreement is that, having already determined the amount of mitigation necessary for the issuance of the Permit, no additional mitigation will be necessary unless the proposed HCP amendment increases the level of incidental take.

As described above, when the Permit was granted and the HCP adopted, very little was known about the marbled murrelet or its habitat. *Intra-Service Concurrence Memorandum and Biological Opinion for the Washington Department of Natural Resources’ Habitat Conservation Plan* (“Bi-Op”) at 140 (Jan. 27, 1997). As a result, the HCP adopted an interim marbled murrelet conservation strategy that protected occupied sites and “reclassified habitat,” which, taken together, provided more forest cover than was actually necessary to support marbled murrelets. This overprotection allowed DNR to conduct studies to better understand the actual habitat marbled murrelets use and to base its long-term murrelet conservation strategy on those studies. Bi-Op at 11. Under the Permit, low quality “marginal” habitat was released for harvest, even though it was assumed at the time to contain five percent of all occupied sites.

Since the adoption of the 1997 HCP, the research has clearly and convincingly shown that restricting management of “marginal” habitat is not valuable as a long-term conservation tool. This is because studies have confirmed that the marbled murrelet nests almost exclusively in inland mature and old-growth coniferous forests with the following characteristics: timber stands generally over 90 years of age with trees larger than 32 inches at diameter breast height (dbh); trees with horizontal limbs seven inches or more in diameter and more than 50 feet off the ground; multiple canopy layers and canopy gaps to provide openings for marbled murrelets to enter. Murrelets do not have a choice about that; their inability to land by perching or take off without falling means the nest branch must be high off the ground; the fact that they don’t build nests but simply lay their eggs on a horizontal branch means that the branch must be large. The fact that the murrelet needs weather and predator protection from the tree above the nest branch means that the branch must not be at the top of the tree. (Nelson, S. K., and T. E. Hamer. 1995. *Nesting Biology and Behavior of the Marbled Murrelet*.) Taken together, the life-history qualities of the murrelet mean that the marbled murrelet is truly an old-growth dependent species. Nothing else will do.

DNR’s trust lands are almost entirely second growth managed commercial stands.¹ “Marginal” habitat on DNR-managed trust lands contain small, tightly spaced trees for the reported age of the stand, have crowns that are small, and horizontal branches that are smaller than necessary for nesting. Therefore, most DNR trust lands lack the biologically necessary attributes critical to marbled murrelet habitat. (DEIS Appendix H at H-18.)

DNR has also confirmed that “marginal” habitat will not develop attributes critical to becoming murrelet habitat within the 50 years remaining in the life of the HCP. At the time of the adoption of the HCP, USFWS understood that the development of stands with old-growth characteristics necessary for murrelets is expected to take at least 100 to 200 years. (Bi-Op). According to the analysis included in DEIS Appendix E, present stands will not mature into murrelet habitat within the life of the HCP unless those stands are already 80 years old (hemlock) or 200 years old (Douglas fir). (DEIS at E-7)² Forest stands on DNR lands that are already old enough to become murrelet habitat by 2067 are very likely already protected, either as old growth or occupied sites. Releasing marginal habitat will not result in additional take of the murrelet.

Only Alternative B in the DEIS Meets the Project Objectives and DNR’s Trust Mandate.

Any management plan for trust lands, including an amendment to the HCP, must be consistent with the principles of trust management, an obligation the DEIS appropriately identifies as its

¹ The only significant exception to this is within the Olympic Experimental State Forest, where other DNR policies protect remaining old growth.

² Eighty-two percent of DNR-managed forestlands are in the competitive exclusion stage. (DNR. 2016. *Draft Environmental Impact Statement on Alternatives for Establishment of a Sustainable Harvest Level for Forested State Trust Lands in Western Washington*, at 3-16, 3-24.) These lands are likely to continue in this stage for more than a century. (DNR. 2004. *Final Environmental Impact Statement on Alternatives for Sustainable Forest Management of State Trust Lands in Western Washington*, at 4-19.) This implies these stands, many of which are included in Emphasis and Special Management Areas, will not become habitat in the 50 years left in the HCP.

first objective for the development of the long-term conservation strategy. DEIS at 1-2. *See also, County of Skamania v. State*, 102 Wn.2d 127 (1984). The Board is required to establish policies that are “based on sound principles designed to achieve the maximum effective development and use of [trust] lands and resources.” RCW 43.30.215(2) (emphasis added). Acting on behalf of the trustee for the state forest land, DNR has the duty to produce long-term and short-term income for the trust beneficiaries while preserving the productivity and protecting the forest land. *State Owned Forests v. Sutherland*, 124 Wn. App. 400 (2004). Although trust lands may be managed for multiple uses, multiple use management is only allowed if additional uses are compatible with the DNR’s financial obligations to trust beneficiaries. RCW 79.10.120; *see also Chuckanut Conservancy v. Dep’t of Natural Resources*, 156 Wn.2d 274 (2010).

The constraints placed on DNR by its fiduciary duties are recognized by USFWS. In approving the 1997 HCP, USFWS rejected an alternative proposed by the environmental caucus even though that alternative would have resulted in greater conservation of lands and was described by USFWS as “the environmentally preferable alternative.”³ USFWS rejected this alternative because it would result in lower harvest volumes and lower revenues for the trust beneficiaries and adversely affected regional employment and income, and because the alternative proposed by DNR met the statutory criteria for a permit under the Endangered Species Act (ESA). *See* ROD at 26.

In preparing the alternatives described in the DEIS, DNR and USFWS have already confirmed that each alternative complies with the statutory criteria imposed by the ESA, that the potential for take under any alternative is low, and that all the alternatives described in the DEIS meet the project’s adopted need, purpose, and objectives. Therefore, consistent with DNR’s paramount duty of undivided loyalty to the trust beneficiaries, the Board may only adopt the alternative that yields the highest annual volume of sales for the trust (Alternative B).

Substantial existing protections provide such suitable mature and old-growth habitat as DNR lands are capable of providing within the remaining life of the HCP.

DNR’s actions, through the adoption of the HCP in 1997, its removal of acres under the Trust Land Transfer program, and other programs and policies, such as the Forest Riparian Restoration Strategy, have already surrendered a substantial portion of the long-term productivity of the state’s trust lands. Since 1997, the number of operable acres on the Western Washington DNR land base has dropped by 32 percent.⁴ In particular, the species protections granted by the HCP and land set asides for other conservation purposes—for instance, Natural Area Preserves and Natural Resources Conservation Areas—already result in the development of old forest

³ That alternative, Alternative C, would have allowed no harvest of marginal habitat and no harvest of surveyed unoccupied habitat until the long-term conservation plan was adopted. *USFWS and NMFS Record of Decision for the Department of Natural Resource Habitat Conservation Plan* dated Jan. 27, 1997 (“ROD”) at 9.

⁴ At the same time as there has been a significant loss of “operable” state trust lands, there has also been a loss of total state trust lands, which have declined by 16 percent since the 1997 HCP. *Compare* 1997 FEIS for the HCP with DEIS at 2-7. Combined, the loss of operable and overall state trust lands substantially impairs DNR’s ability to meet its trust obligations and threatens the continued existence of logging and milling infrastructure and the livelihoods of family wage earners in the forest products industry across Western Washington.

conditions over time in riparian areas, on steep and unstable slopes, and on other areas covered by the HCP.⁵ All of these efforts are unaltered by the long-term conservation strategy alternatives, and provide conservation benefits to the marbled murrelet, including 583,000 acres of DNR land that has already been set aside.⁶ These existing policies and programs also require that the selection of a long-term conservation strategy result in no additional decrease in the harvests from trust lands covered by the HCP.

Unoccupied sites will not become marbled murrelet habitat during the life of the HCP.

The second objective of the proposed action is to “provide forest conditions in strategic locations on forested trust lands that minimize and mitigate incidental take of marbled murrelets,” with the expectation that this objective will “make a significant contribution to maintaining and protecting marbled murrelet populations.” (DEIS 2-1.) As described above, because there is no additional take beyond that authorized by the Permit, additional minimization and mitigation is not necessary or legally required to obtain approval by USFWS. Accordingly, any action to satisfy this objective will result in setting aside trust lands that DNR would otherwise be authorized and required to harvest and therefore violates the trust mandate.

Moreover, because the development of stands with old-growth characteristics will not occur during the life of the HCP, the inclusion of areas that are not presently occupied by the marbled murrelet with the thought that they will become marbled murrelet habitat during the life of the HCP would be futile and is unwarranted.

The DEIS identifies marbled murrelet-specific conservation areas in a range of alternatives. Each alternative protects “occupied sites,” where surveys show signs of occupancy by nesting murrelets, even if no murrelet has been observed.⁷ The six alternatives differ in the extent to which they include other types of set asides to create a network of long-term forest cover in which active management opportunities are limited or entirely foreclosed.⁸ Alternatives C, D,

⁵ The area of land managed by DNR as Natural Area Preserves and Natural Resources Conservation Areas has almost doubled since 1997, from 45,000 to 85,000 acres. *Compare* 1997 FEIS of the HCP with 2016 DEIS at 2-10.

⁶ The 583,000 acres are principally composed of long-term conservation commitments for other species (479,000 acres), Natural Area Preserves and Natural Resources Conservation Areas (85,000 acres), and existing high quality northern spotted owl habitat (19,000 acres). *See* DEIS at 2-10.

⁷ The alternatives also vary by which occupancy survey was utilized or whether an actual field survey was conducted. Alternative A uses actual DNR field surveys done between 1997 and 2002. The other alternatives use an estimation of site occupancy based on Raphael, et al, 2008. *Recommendations and Supporting Analysis of Conservation Opportunities for the Marbled Murrelet Long-Term Conservation Strategy* (the 2008 Science Team Report). This results in 2,000 additional acres being termed “occupied” than under the DNR field surveys. Because the 2008 Science Team Report treats both surveyed and unsurveyed areas as “occupied,” its classification of “occupied” sites is over-inclusive, as is any alternative that relies on the 2008 Science Team Report.

⁸ As the depictions in Figure 2.2.2 (DEIS at 2-13) make clear, the areas of Long-term Forest Cover will also result in “landlocked” parcels whose use and value will be effectively destroyed because management options, such as road building, will be limited or foreclosed entirely in the surrounding land through which access is critically necessary. The DEIS lacks any guiding policy on how DNR will address new roads that may need to go through emphasis areas, special habitat areas, and marbled murrelet management areas, in order to reach unrestricted stands. The DEIS says only that DNR will “consult” with USFWS. This omission needs to be addressed, particularly whether “consultation” will lead to road building options or entirely foreclose road building. If the latter is the likely result,

and E include “special habitat areas,” which contain “habitat” and “non-habitat” surrounding occupied sites that, in combination, “may” function as security forests. “Habitat” is not presently habitat, but describes the result of a modeling exercise that approximates “current and future potential habitat.” DEIS Appendix E. Alternatives C and E include “emphasis areas,” which are even larger set-asides that include a 0.5-mile buffer around occupied sites, but with no intent that the buffer will become habitat. Alternative F includes the “marbled murrelet management areas,” which are even larger geographic areas designated in the 2008 Science Team Report. Alternatives C and E include “high quality habitat,” which are forest stands in the later stage of development towards old growth but that are not occupied. There is no discussion of the length of time this higher quality habitat will require to develop old growth characteristics or whether marbled murrelets, which tend to return to existing habitat, will even occupy these presently unoccupied sites in the future.

The inclusion of set aside areas that are not currently occupied will not impact or promote the survival or the recovery of the murrelet. What is described and set aside as “marbled murrelet habitat” will almost certainly not become actual marbled murrelet habitat during the remaining 50 years of the HCP. These expanded set asides are designed to reduce edge and fragmentation that were, at the time of adoption of the HCP, thought to impair murrelet activity. But since the HCP was adopted, an in-depth review of data concerning marbled murrelet populations found that where there was abundant old-growth at the 13-hectare (32-acre) scale and late-seral forests at the 50-hectare (124-acre) scale, murrelet activity increased with high-contrast edges (such as clearcuts). (S. Horton. 2008. *Ecology and Conservation of Marbled Murrelets on the Western Olympic Peninsula: Temporal and Spatial Variation in Inland Activity and Implications for Forest Management*.) This suggests that forest fragmentation resulting from forest management does not present the issues originally thought. The DEIS does not identify or examine any new long-term studies about the interrelationship between edge effects, fragmentation, and corvid behavior, nor about corresponding marbled murrelet responses.

There is no demonstrated correlation between increasing or decreasing habitat and murrelet population trends.

Although conducted by others, not DNR, important research since 1997 has shown that the basic assumption that led to the listing of the marbled murrelet as threatened in 1992 may have been only partly correct at best. The most critical factor affecting murrelet populations is likely ocean conditions and the decline of high-trophic level forage fish. A 2009 report assembled four separate research studies regarding the marbled murrelet diet, which collectively suggest that changes in diet quality caused by changes in marine habitat quality limit population growth of the murrelet more than the presence or absence of nesting habitat. (Janssen et al. 2009. “*Reconstructing Historic Diets and Population Demography of the Marbled Murrelet*,” at 3).

Reservation of land for development into habitat without regard to whether and where high quality foraging opportunities actually exist will not increase the chances of survival or recovery

the DEIS needs to quantify and examine the impact of the acreage lost to inability to build roads to access unrestricted, but “landlocked,” timber in all alternatives other than B, which does not present this issue.

of the murrelet. Studies conducted where there was no shortage of suitable nesting habitat found that the substantial majority of adult murrelets at sea never attempted to nest, and that the dominant cause of failure of eggs to hatch and young to fledge was malnutrition. (Bloxtton and Raphael. 2009. *Breeding Ecology of the Marbled Murrelet in Washington State*.) Providing additional nest trees – if DNR could do that – would not do anything to address the principal threat to the murrelet or enhance its population. Nesting habitat is not the limiting factor on marbled murrelet survival and recovery. Rather, the best available science reveals that survival of the species is driven by ocean conditions and ocean forage quality and availability.

The DEIS acknowledges that given the average annual decline of 4.4 percent in the marbled murrelet population, “it is uncertain whether the murrelet population will respond to increased habitat on federal or state lands in the future under any alternative.” DEIS at 2-58. But the DEIS then analyzes the alternatives and future impacts from the starting assumption that “distribution and trends in marbled murrelet populations is linked to the amount and configuration of nesting habitat,” (*id.*) and from this, the secondary assumption that it is both necessary and possible to recruit additional habitat. These assumptions are contrary to the studies that confirm that the marbled murrelet is an old-growth species that is limited, in particular, by the absence of sufficient food.

Although the DEIS acknowledges significant uncertainty that murrelet populations will increase if there is an increase in habitat, the DEIS relies heavily on a model to suggest that they will. But the model on which the DEIS principally relies is a newly-developed, not-yet-peer-reviewed, population viability analysis built by Dr. Peery to compare the effects of the alternative proposals. (DEIS 2-58; DEIS Appendix C.) Drs. Peery and Jones’ analysis is fatally flawed in two ways that make reliance on its conclusions problematic. First, Peery and Jones assume that current population declines are a function of loss of nesting habitat—in other words, the study intended to show whether nesting habitat impacts murrelet populations is itself based on the same assumption that nesting habitat is the limiting factor to population trends. Such clearly circular reasoning belies the sort of scientific rigor necessary to justify the management actions that DNR cites it to support. Second, Peery and Jones assume that other stressors to the murrelet, for instance ocean conditions, will be “ameliorated” and “will not impede recovery.” This assumption has no scientific support and blithely ignores the growing body of evidence, including the studies described above, that have concluded that the lack of prey and malnutrition have significant impacts on murrelet populations.

Drs. Peery and Jones’ flawed analysis is compounded by DNR’s presentation of the analysis in Table 4.6.5, Enhancement Analysis for Simulated DNR Sub-Population, by Alternative (DEIS at 4-48), which purports to show the absolute “mean” number results of the model. Not only is this number entirely hypothetical, it is contrary to statistical theory. If the DNR correctly displayed the results of hypothetical numbers with a mean and standard deviation, the results would demonstrate that there is no statistical difference between any of the population trends that results from any of the different alternatives. (See Figure 4.6.6 (DEIS at 4-49) which shows the overlap of 95% confidence intervals.)

Other murrelet stressors that cannot be ameliorated during the life of the HCP make set asides of unoccupied habitat futile.

Factors unrelated to forest management, including marine foraging conditions and the availability of high quality food, impact the marbled murrelet. These factors must be understood to determine whether any of the alternatives presented in the DEIS will have any impact on the likelihood of survival and recovery of the marbled murrelet. As Drs. Peery and Jones acknowledge, whether forest management poses a risk to the murrelet or contributes to its recovery is “complicated by the fact that by [their] analytical framework, habitat on DNR lands contains only about 15% of the carrying capacity for murrelets in Washington...and multiple, poorly understood environmental stressors likely impact murrelet populations regionally.” DEIS Appendix C at C-3.

As the studies cited above confirm, new scientific evidence casts serious doubts on whether the adequacy of nesting habitat is the primary cause of murrelet population declines. Ocean conditions may be resulting in inadequate prey being available to allow murrelets to breed, and when they breed, to successfully fledge young. If ocean conditions are the culprit, more nesting habitat may provide little to no benefit to the murrelet.

When the murrelet was listed in 1992, there was no evidence that marine conditions were affecting the population except for gill nets or oil spills. 57 Fed. Reg. 45330. But by the time of USFWS’s 2009 5-year review of the murrelet, a very different picture was emerging. In 2008, long-time DNR biologist Scott Horton completed his doctoral thesis, with an in-depth review of data concerning marbled murrelet populations on the Olympic Peninsula and its habitat on the Olympic Peninsula and Southwest Washington. *See Horton, 2008, supra*. Dr. Horton observed a strong covariation between ocean conditions and nesting activity. *Id.* at 21. The Final 2009 5-Year Review for the Marbled Murrelet found that most murrelets captured and banded at sea failed to attempt to nest, and of those that attempted nesting, lack of prey and malnutrition were important factors in nest failure. (USFWS. 2009. *Marbled Murrelet 5-Year Review*, at 22-23.) The 2009 study by Bloxton and Raphael (*supra*) documented the results of capturing 168 murrelets at sea in the Strait of Juan de Fuca over five years, attaching radio transmitters and then following those birds to find their nests. Those murrelets had ample old-growth nesting opportunities on the Olympic Peninsula and Vancouver Island. Only 18 of the 168 tracked birds appear to have attempted nesting. All but three of the nests failed. The nest failures were primarily because the egg never hatched, or because the chick starved.

These studies suggest that lack of prey at sea may be a major reason for decline in the murrelet population. The declines in Pacific herring stocks have forced adults to deliver more, smaller fish to their young, requiring more flights back and forth from the ocean, which the adults can not necessarily make. Thus, changes in the marine environment that reduce prey quality and quantity during the pre- and breeding seasons resulting in lack of nest initiation or nest abandonment may cause the very low reproduction rates that are observed in murrelets. (USFWS. 2009. *Marbled Murrelet 5-Year Review* at 23, 39-45.)

Protecting unoccupied sites in Southwest Washington would be futile and would significantly harm those communities.

USFWS has always recognized that Southwest Washington has essentially no old-growth forests. *See*, listing decision, “between Tillamook County, Oregon, and the Olympic Peninsula (a distance of about . . . 120 miles), where nearly all older forests has been removed near the coast.” (57 Fed. Reg at 45329; *Final Merged Environmental Impact Statement, Habitat Conservation Plan* dated October 1998 at 4-109) (observing that Southwest Washington is “nearly devoid of suitable habitat”). Since the execution of the HCP, studies have shown that DNR cannot create the old-growth conditions that are essential to high quality murrelet habitat in Southwest Washington, at least during the remaining 50 years of the HCP.

The long-term plan protects all stands that have been determined to be “occupied” for the life of the HCP—whether or not they remain occupied. DNR also protects 5,588 acres of likely or potential old growth that exist in DNR’s Columbia and South Coast units under its Policy on Old Growth Stands in Western Washington. Definition and Inventory of Old Growth Forests on DNR-Managed State Lands, June 2005, Section 2 at 10-15. *See also*, DNR. 2006. *Policy for Sustainable Forests* at 33—35. But DNR has no ability to recruit additional habitat in Southwest Washington.

DNR conducted a habitat relationship study in Southwest Washington, as required by the HCP, during which it located 25 occupied sites. (Prenzlow Escene. 1999. *Marbled Murrelet Forest Habitat Relationship Studies*.) It examined the differences in habitat qualities between these 25 occupied sites and 81 unoccupied sites of potential habitat. DNR’s study showed that the most significant difference between occupied and unoccupied sites in Southwest Washington was the presence of western hemlock trees in the 22” dbh class (occupied stands averaged 21 hemlock trees per acre ≥ 22 ” dbh, while unoccupied stands averaged 8 trees per acre), and the absence of Douglas fir trees in the 22” dbh class (occupied stands averaged 4 Douglas fir trees per acre ≥ 22 ” dbh, while unoccupied stands averaged 20).⁹ The next area of significant difference was that occupied stands had nearly eight times as many western hemlock platform trees per acre as unoccupied stands, and six times as many western hemlock platforms per acre as unoccupied stands. In Southwest Washington, marbled murrelets occupy stands that have very large old growth hemlock stands.¹⁰

Dr. Scott Horton examined the question of whether DNR’s management of forestlands in Southwest Washington could materially increase the murrelet population there. (Horton 2008 at 96-106.) His analysis suggests that regardless of what DNR does, the 2067 population in Southwest Washington would likely be around 100 females (*id.* at 99) and subpopulations may

⁹ Occupied stands averaged 63 square feet of basal area of hemlock trees ≥ 32 ” dbh, while unoccupied stands averaged 16 square feet—the occupied stands had not just large hemlock trees, but very large hemlock trees.

¹⁰ Murrelets nest in different trees in different parts of their range. On the Olympic Peninsula, murrelets regularly nest in Douglas fir. In parts of Alaska and British Columbia, they nest on the ground. (J. F. Piatt and R. G. Ford. 1993. “Distribution and Abundance of Marbled Murrelets in Alaska” in *The Condor* Vol. 95, No. 3 (Aug., 1993), pp. 662-669.) But the habitat relationship study in Southwest Washington showed that there was a strong negative correlation between the presence of large Douglas fir trees and occupied habitat. (Prenzlow Escene. 1999.)

be “extinct or nearly so.” *Id.* at 101, 106-11. Under either land management scenario he tested, DNR would have, under the best circumstances, less than a thousand acres of high quality murrelet habitat in Southwest Washington by the end of the HCP in 2067. *Id.* at 118.

Population simulations under current conditions suggest [the Southwest Washington] segment of the population is much less likely than that in the [Olympic Experimental State Forest] to be self-sustaining. Patterns of land ownership and land use in southwestern Washington preclude substantial habitat reserves such as those on the Olympic Peninsula. With this in mind, DNR’s draft strategy took an aggressive approach towards increasing the abundance and security of murrelet habitat on state forests in SWWA. Although this approach, in concert with changes projected from other policies for state and private forests, resulted in a predicted doubling of regional *K* [the marbled murrelet carrying capacity of the land], projected population trajectories still suggested that the stability of this segment of the population is likely to be equivocal. The draft DNR strategy focused on those state forests judged most likely to meet its conservation goals [citation omitted.] Given existing patterns of land ownership, few additional opportunities remain there to improve the performance of the draft SWWA strategy.

Horton 2008 at 112-13.

A necessary implication of these results is that marbled murrelet populations in Southwest Washington will continue to be at risk, regardless of whatever efforts DNR makes on behalf of their conservation. Thus, there is a very serious legal question as to what, if anything, DNR can adopt as its long-term murrelet strategy in Southwest Washington given its fiduciary obligations to the trust beneficiaries. As Dr. Horton said in his thesis:

Marbled murrelet conservation entails substantial tradeoffs in outcomes from managing state forests. Prominent among these tradeoffs is the opportunity to produce revenue from timber harvests to support the beneficiaries of these trust lands, in whose interest DNR is legally mandated to act with “undivided loyalty” [citation omitted.]

Horton 2008 at 113.

DNR has no ability to grow more stands with the large hemlock trees required by marbled murrelets within the remaining 50 years of the HCP. The stands that are occupied within Southwest Washington uniformly have histories that explain the existing presence of large hemlock trees. But the vast majority of DNR-managed stands in Southwest Washington are second growth, most of which are in the competitive exclusion stage. Hemlock is shade tolerant, which means that overstocked stands will remain overstocked for easily 100 years or more, and remaining overstocked, they will not develop the very large hemlock trees that DNR’s research since the signing of the HCP shows are essential to occupancy. Therefore, putting more stands off-limits will not increase the amount of murrelet habitat in Southwest Washington within the duration of the HCP. Instead, it will damage the interests of the trusts, which DNR is legally prohibited from doing.

Beyond its inability to recruit additional habitat in Southwest Washington in the life of the HCP, DNR has a special obligation to the trust beneficiaries in Southwest Washington. Revenue from the trust lands in Southwest Washington is a significant part of the revenue of the beneficiaries, particularly Wahkiakum County and Pacific County, which are relatively sparsely populated, have small tax bases, and rely heavily on revenue generated from DNR-managed trust lands for their operating budgets. Because of these concerns, the HCP permitted the release of all surveyed unoccupied habitat if at least 12 months passed after initiation of negotiations of the draft long-term plan without completion of those negotiations. HCP at IV.40. The Bi-Op was clear that USFWS anticipated that the surveyed and unoccupied habitat in Southwest Washington would be protected for only four years. Bi-op at 11.

Of the alternatives, only Alternative B adequately accounts for the inability of DNR to generate any additional murrelet habitat in Southwest Washington and mitigates the significant impacts on Southwest Washington communities, including Wahkiakum and Pacific counties. The DEIS states that under Alternative C through F, Pacific County and Wahkiakum County state forest trust lands are “adversely impacted.” Moreover, “under Alternatives C, D and E, forest tax distributions from timber harvests on trust lands are expected to *decrease significantly* in Pacific and Wahkiakum County.” The impact under Alternative F to Pacific and Wahkiakum County is even greater. DEIS 4-89.

Conclusion

AFRC appreciates the opportunity to comment on the DEIS for the Marbled Murrelet Long Term Conservation Strategy. As stated in the beginning of these comments, AFRC also appreciates that DNR and the USFWS have brought adoption of a long-term marbled murrelet conservation strategy a major step closer to conclusion.

It will soon be time for a decision. That decision must be guided first and foremost by the duty of undivided loyalty to trust beneficiaries that is DNR’s overarching responsibility. In light of the science that DNR and others have developed, and the realities of DNR-managed second growth forests, Alternative B provides the best, indeed the only, choice for the Board to adopt.

Sincerely,



Travis Joseph
President

Appendix: Literature Cited

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