AMERICAN BIRD CONSERVANCY

Shaping the future for birds

October 26, 2015

Michael Bean
Principal Deputy Assistant Secretary for Fish and Wildlife and Parks
U.S. Department of the Interior
Washington, D.C. 20240

Public Comments Processing
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Dear Principal Deputy Assistant Secretary Bean,

Marbled Murrelet. Photo by Thomas Hamer.

Thank you for this opportunity to comment on the designation of critical habitat for the threatened Marbled Murrelet. Based on the best available science and a review of pending threats to Marbled Murrelet habitat, American Bird Conservancy (ABC) respectfully requests that the U.S. Fish and Wildlife Service (the Service) propose additions to designated critical habitat and require new protective measures to ameliorate continuing habitat loss and fragmentation from timber harvest on private, state and federal lands.

The small number of this distinct population segment, the significant population decline in Washington State, and past projections of likely extinction in California and Oregon within 100 years, are indications that current protections and efforts to restore old-growth forest habitat need to be augmented. This would aid in the recovery of the Murrelet, listed salmon stocks, and the threatened Northern Spotted Owl, and also benefit clean air, clean water, wild salmon runs, carbon sequestration and other ecosystem services uniquely provided by these irreplaceable late-successional forests.

ABC agrees with the Service that all 3,698,100 acres currently designated meet the definition of critical habitat and should be retained. In addition, ABC urges the Service to identify additional acres, including near shore areas, that are suitable for critical habitat designation, and to direct federal and state land management agencies to adopt more stringent habitat protection measures for the Marbled Murrelet, including larger buffers around timber management projects.

In addition, proposed regulatory and legislative changes threaten both Murrelet habitat and the conservation framework now in place on federal lands to provide for its recovery. There are also deficiencies in the 1996 rule, including a lack of adequate critical habitat designations on tribal, private, and state forest lands, and near shore areas that should be addressed by this proposal.

In conclusion, we urge your support for expanding the critical habitat designation and promote more aggressive habitat conservation measures for the murrelet on federally and state managed forests, as well as added conservation incentives for landowners and public acquisitions of private lands from willing sellers. Additional recommendations and relevant background information are contained below.

Thank you for your attention to these concerns.

Sincerely,

Steve Holmer
Senior Policy Advisor
American Bird Conservancy

Northwest Forest Plan is Conserving Marbled Murrelet Habitat, Just Not Enough

The Marbled Murrelet is an amazing seabird that in the Pacific Northwest nests in mature and old-growth trees. Due to extensive habitat loss caused by widespread logging near the coast of central to northern California, Oregon, and Washington State, a distinct population segment of the Marbled Murrelet is federally listed as threatened under the Endangered Species Act.

A region-wide court injunction against logging on federal lands and political gridlock prompted intervention in the ancient forest debate by incoming President Bill Clinton. A forest summit was held in Portland, Oregon in 1993, and agencies were directed to develop

the Northwest Forest Plan. This was a first of its kind, multispecies and ecosystem conservation plan intended to protect late-successional forests and riparian areas, as well as the Northern Spotted Owl, Marbled Murrelet, Pacific Salmon stocks, and 600 other old-growth-dependent species. The Plan went into effect in 1994 and it remains today the best available conservation framework of its kind.

The Northwest Forest Plan is first and foremost, a multispecies management plan for listed species including the Northern Spotted Owl, Marbled Murrelet and salmon stocks that provides the land management agencies with an "adequate regulatory mechanism" to comply with the Endangered Species Act, the National Forest Management Act, the Clean Water Act, and the National Environmental Policy Act. The Northwest Forest Plan promotes an ecosystem management approach with the specific goal of protecting those listed species and perpetuating and expanding the size of the region's late-successional forest ecosystem.

Studies show that the Northwest Forest Plan is working as intended to retain mature and old forests, and that the highly fragmented forest ecosystem is growing back into the large blocks of mature forest habitat needed to maintain water quality and recover threatened species such as the Northern Spotted Owl, Marbled Murrelet and Pacific salmon stocks. It is important to note that the Northwest Forest Plan is a 100-year plan, now in its 21st year, and significant habitat gains for Northern Spotted Owl and to a much lesser degree Marbled Murrelets are not anticipated until mid-century.

According to the Pacific Seabird Group:

> "significant thinning and logging is taking place within LSRs, which is further fragmenting the landscape and extending the time when large contiguous blocks of late seral habitat will exist on the landscape. In fact, under the NWFP, HCPs, and other habitat management plans, new murrelet habitat will not be suitable for at least 50 to 200 years. The inability to create new murrelet habitat in the short term combined with the continued harvesting of occupied and unoccupied habitat on state, federal and private lands ensures a downward trend in suitable habitat and murrelet populations into the future.
>
> The continued loss of murrelet nesting habitat threatens their survival by: (1) reducing the amount of nesting habitat which in turn decreases the proportion of the population that is able to find quality nest sites; (2) fragmenting occupied sites and subjecting them to harmful edge effects, especially predation, that reduce nest success rate; and (3) reducing the availability of quality nesting habitat forcing murrelets to nest in lower-quality habitat, which diminishes nest success (USFWS 1997, 2012)."

Overall, under the Northwest Plan, 97% of the Murrelet habitat on federal lands has been conserved. However, it is important to remember that the Northwest Forest Plan alone does not provide enough to provide habitat protection for Murrelet recovery. As the 1996 rule notes, the FEMAT viability assessment concluded: "We believe there is only about a 60 percent likelihood that the Marbled Murrelet population on federal lands would be stable and well distributed after 100 years, regardless of which option is selected." (p. 26262)

In the 2009 5-year status review, FWS stated that although the Northwest Forest Plan protects some murrelets, without critical habitat, "conservation benefits would not likely extend to all areas currently protected for the murrelet." In addition, the protections these birds enjoy under the Northwest Forest Plan may change as forest plans are revised. Both the Bureau of Land Management (BLM) and USFS are currently undertaking plan revisions in the region that seek to alter the Plan's management standards.

Marbled Murrelet 20-Year Monitoring Report (excerpts)

Annual population estimates for the entire NWFP area ranged from about 16,600 to 22,800 murrelets during the 14-year period, with a 2013 estimate of 19,700 (95 percent confidence interval: 15,400 to 23,900). At the conservation-zone scale, there was strong evidence of a linear decline in the two conservation zones in Washington: Conservation Zone 1 (3.9 percent decline per year), which includes the Strait of Juan de Fuca, San Juan Islands, and Puget Sound and Conservation Zone 2 (6.7 percent decline per year), which includes the outer coast of Washington. At the state scale, which combines conservation zones and portions of conservation zones, we found strong evidence for a declining linear trend in Washington (4.6 percent decline per year) and no evidence of a trend in Oregon. For the entire NWFP area the

trend estimate for the 2001 to 2013 period was negative, but here also the confidence interval for the estimate overlapped zero and the evidence for a trend was inconclusive. This result differs from the decline previously reported at the NWFP-scale for the 2001 to 2010 period. This difference was the result of high population estimates for 2011 through 2013 compared to the previous several years, which reduced the slope of the trend and increased variability. Continued monitoring should help to better understand population trends and to assess underlying factors that might explain trends and variability in annual estimates. The population monitoring results to date indicate that the NWFP goal of stabilizing and increasing marbled murrelet populations has not yet been achieved throughout the NWFP area.

Private lands, Washington State. Photo by Steve Holmer.

We found a net loss of about 2 percent of potential nesting habitat from 1993 to 2012 on federal lands, compared to a net loss of about 27 percent on nonfederal lands. In both analyses, we found that numbers of murrelets are positively correlated with amounts and pattern (large contiguous patches) of suitable nesting habitat, and that population trend is most strongly correlated with trend in nesting habitat although marine factors also contribute to this trend.

Model results suggest that conservation of suitable nesting habitat is key to murrelet conservation, but that marine factors, especially factors that contribute to murrelet prey abundance, play a role in murrelet distribution and trend. Conservation of habitat within reserves, as well as management actions that are designed to minimize loss of suitable habitat or improve quality of nesting habitat on all lands, should contribute to murrelet conservation and recovery.

Our findings indicate that the answer to this question is "no," the murrelet population associated with the NWFP area is not stable or increasing, at least not in Washington. We believe that the magnitude of the decline observed for Washington State and its two conservation zones, based on the 2001 to 2013 period, is sufficient to cause concern, and may merit a review of potential management implications and responses.

Both the NWFP (FEMAT 1993) and the species' recovery plan (USFWS 1997) anticipated a challenge in maintaining murrelet populations for 50 to 200 years, until new nesting habitat develops. In light of observed population trends, our findings underscore the importance of the short-term goal to maintain existing nesting habitat.

Intensive logging, Oregon Coast Range. Photo by Steve Holmer.

Loss of higher-suitability habitat was greatest on nonfederal lands (losses were 29.8, 21.1, and 21.8 percent of baseline in Washington, Oregon and California, respectively; Tables 2-9 and 2-10). On nonfederal lands, almost all loss (98 percent) was due to harvest (Tables 2-12 and 2-13). Losses were lower from federally reserved lands, totaling 1.7, 3.8, and 1.1 percent from the three states (Tables 2-9 and 2-10). The cause of loss varied by land ownership, based on the LandTrendr-verified losses. On federal lands, most of this loss of higher-suitability habitat (62 percent) was due to fire and about 23 percent due to harvest (Table 2-12). On federally reserved lands, wildfire accounted for 66 percent of losses (Table 2-12). Most of these losses (62 percent of all losses in reserves) occurred in the Oregon Klamath physiographic province, and from a single fire, the 2002 Biscuit Fire, which was Oregon's largest contiguous, single-year fire on record (Azuma et al. 2004).

Implications of Results

In the short term, the objective is to conserve all remaining habitat, and to that end the NWFP has conserved to date the large majority (greater than 97 percent) of suitable marbled murrelet nesting habitat that was present on the federal lands NWFP management at the inception of the plan in 1994.

While some future losses due to wildfire and natural disturbances are likely, harvest losses within federal reserves should drop or cease, with the completion of the 'grandfathered' timber sales approved prior NWFP implementation, but harvested after 1993. Over 90 percent of currently higher-suitability habitat on federal lands occurs within the various reserve land use allocations, but whether this continues is highly dependent on future management and political decisions.

However, rate of loss of higher-suitability habitat has been about 10 times greater (26.6 percent) on nonfederal lands, due mostly to timber harvest (Table 2-13). Conservation of the threatened murrelet is not possible if such losses continue at this rate into the future. If the amount of higher-suitability habitat for murrelets is to be maintained at its current level, and given that almost half of the higher-suitability habitat is on nonfederal lands, accomplishing this goal will require significant contributions from nonfederal lands.

The development of stands with old-growth characteristics necessary for murrelets is expected to take at least 100 to 200 years from the time of regeneration (USFWS 1997). For the many younger stands in the murrelet range that were clear-cut harvested in the past century, the benefits of habitat development are far into the future. However, if management for late-

successional and old-growth forests continues, projections show substantial increases of forest exceeding 150 years in age by 2050 on western federal lands (Mills and Zhou 2003).

Over the long run it is not unreasonable to expect to see some net increase in total amount of higher-suitability habitat, however in the short term conservation of the higher-suitability habitat (Classes 3 and 4) is essential. If losses of suitable habitat are reduced, old forest suitable for nesting is allowed to develop, and fragmentation of older forest is reduced throughout the reserved federal lands, then meeting murrelet population objectives will be more certain. Given declining murrelet population trends as well as habitat losses, in many areas, it is uncertain whether their populations will persist to benefit from potential future increases in habitat suitability. This underscores the need to arrest the loss of suitable habitat on all lands, especially on nonfederal lands and in the relatively near term (3-5 decades).

In Chapter 2 of this volume, we found that a relatively high proportion (typically two-thirds or more) of suitable nesting habitat occurs as small patches (lacking interior forest conditions that are more than 90 m from a patch edge) or as edges of larger habitat patches. In this chapter, we found that nesting habitat cohesion, which is the inverse of habitat fragmentation, is a strong predictor of murrelet abundance and trends. This result is not surprising because murrelets prefer larger patches, which also tend to have fewer nest predators (Malt and Lank 2007, Raphael et al. 2002).

A key feature of the NWFP is a network of late-successional reserves that have the management objective of protecting and enhancing late-successional forest ecosystems, which serve as habitat for late-successional forest species, including the murrelet. These reserves contain both older and younger forests, and over time, as more mature habitat develops around existing older forest in reserves, patch size should increase, and fragmentation and the prevalence of edges should decrease within reserves. However, it can take many decades for murrelet nesting habitat to develop, and in the short-term, protection of existing habitat will continue to be critical to minimize habitat losses, both within and outside of late-successional reserves.

Fragmentation increases blow down, further degrading murrelet habitat.

Near-term murrelet conservation should also consider habitat loss caused by windthrow. Windthrow is a natural phenomenon and an important process in coastal forests of the Pacific Northwest, but it can be highly influenced by human activities. Clearcut or heavy thinning harvests can increase the amount of windthrow on the landscape dramatically. This effect depends on complex interactions between biotic (e.g., forest age and condition) and abiotic (e.g., slope and aspect) factors operating at different spatial and temporal scales (Sinton et

al. 2000). Portions of forests can also be lost to windthrow after lighter thinning, but the magnitude of the effect depends on factors including topography and tree height-to-diameter ratios (Harrington et al. 2005, Roberts et al. 2007, Wilson and Puettmann 2007). Thus, thinning operations may accelerate the creation of forest conditions suitable to murrelet nesting in the long term (e.g., Maguire et al. 1994), but have short term negative impacts to murrelets to consider in management decisions (McShane et al. 2004).

Forest practices, natural forest disturbance and the interaction between these factors can increase the amount of forest edge. Increased edge resulting from forest fragmentation appears to have negative effects on murrelets. Malt and Lank (2007) found that murrelet nest sites at timber harvest edges had lower moss abundance than interior and natural edge nests sites (stream corridors and avalanche chutes) due to stronger winds, higher temperature variability, and lower moisture retention. Moss is an important nest substrate on large branches for murrelets in much of the NWFP area, therefore management actions adjacent to suitable murrelet nesting habitat can have implications for murrelets. Another negative impact to murrelets associated with edges, especially those that occur between clearcuts or large openings and forests, is increased nest depredation rates (Masselink 2001, Marzluff et al. 2004, Marzluff and Neatherlin 2006). This is especially true when edges are near human development such as campgrounds (Marzluff and Neatherlin 2006) or include berry producing plants such as elderberry (*Sambucus* sp.; Masselink 2001).

One conservation measure that is commonly used to minimize negative effects of forest edges is to provide forested buffers (USFWS 1997). The murrelet recovery plan includes as a short-term recovery action maintaining and enhancing buffer habitat around occupied nesting habitat, and suggests minimum buffer widths of 300-600 feet in this situation (USFWS 1997). Buffers around suitable nesting habitat (whether determined to be occupied or not) would help reduce fragmentation, risk of windthrow loss, and potentially reduce nest predation risk (USFWS 1997). Buffers are particularly important in the near-term while larger blocks of habitat develop on reserved lands. The details of such buffers are beyond the scope of this report. However, if not already accomplished, development and implementation of forest management practices that protect (short-term) and develop (long-term) suitable murrelet nesting habitat on NWFP lands within the murrelet range would be beneficial. For such practices, minimizing short term impacts, such as by avoiding harvest of suitable nesting habitat, providing buffers round suitable nesting habitat to minimize edge effects of management actions (such as from thinning or clearcuts), and minimizing fragmentation of suitable habitat, will likely improve the status of this threatened species.

As described in Chapter 2, a substantial amount of suitable nesting habitat occurs on state and private lands. The loss of habitat on those lands is occurring at a much more rapid rate than on Federal lands. Because of the strong relationship between murrelet populations and nesting habitat and because recovery of murrelet populations will likely require contributions of nesting habitat on state and private lands, at least in the short-term (as discussed in the murrelet recovery plan), there is a need for incentives for private forest landowners to avoid fragmentation and loss of high quality nesting habitat and to maintain blocks of interior nesting habitat on the landscape as well as buffers adjacent to suitable habitat on federal and state lands.

Several points bear repeating: (1) loss of higher-suitability habitat has been relatively low on Federal land compared to non-federal land since creation of the Northwest Forest Plan; (2) marbled murrelet declines are not related to the small loss of higher suitability habitat on Federal lands, but could be related to the lack of buffers and heavy thinning adjacent to murrelet habitat in the LSRs; and (3) there appears to be a strong relationship between murrelet population declines and the large loss of higher suitability habitat on non-federal land, especially in Zone 2.

Marbled Murrelet Population Trend and Long-Term Viability


Marbled Murrelet chick. Photo by USDA Forest Service.

Declining murrelet population trends and habitat losses documented in the 20-year monitoring report of the Northwest Forest Plan underscore the need to minimize the loss of suitable habitat, especially in the relatively near term (next 50 – 100 years), until re-growing forests develop the structure needed for marbled murrelet nesting. Previous studies came to similar conclusions.

The 2004, "Evaluation Report for the 5-Year Status Review of the Marbled Murrelet in Washington, Oregon, and California" [1] reported that the population of approximately 21,900 (3-state population estimate) individuals is declining and that the extinction risk for this species is at least 100% within 100 years in all areas that the species inhabits in the Washington, Oregon, and California, except zone 1 (Puget Sound Area). "Since the 1992 listing, suitable breeding habitat and number of occupied trees have decreased throughout the 3-state region". [1]

The importance of terrestrial habitat for both survival and recovery of Marbled Murrelets in Washington, Oregon, and California is clear from the status review conducted in 2004 which states "It is unrealistic to expect that the species will recover before there is significant improvement in the amount and distribution of suitable habitat".[1] A 2013 peer-reviewed study by the U.S. Fish and Wildlife Service (FWS) and U.S.D.A. Forest Service (USFS) found

[1] McShane, Hamer, Carter, Swartzman, Friesen, Ainley, Tressler, Nelson, Burger, Spear, Mohagen, Martin, Henkel, Prindel, Strong, and Keany. 2004. Evaluation report for the 5-year status review of the Marbled Murrelet in Washington, Oregon, and California. Prepared for U.S. FWS, Region 1.

that distinct population segment of the Marbled Murrelet had declined by 29% over the last decade.[1]

These findings, bolstered by the 20-year monitoring report, indicate that current measures to eliminate threats and protect habitat are inadequate and that additional measures are urgently needed. In addition, the Murrelet faces new threats in the form of inadequate regulatory mechanisms as a result of proposed changes to the resource management plans in Oregon, and legislation.

Threats to Marbled Murrelet Habitat

Proposals to increase logging in currently protected forests has also spawned opposition from scientists working to conserve the threatened Marbled Murrelet. The Pacific Seabird Group, an international, nonprofit organization that promotes the study and conservation of Pacific seabirds, sent a letter to President Obama stating, "we have a high level of concern about current proposals to increase logging in western forests, where the cumulative impacts of the patchwork landscape could exacerbate problems already faced by the Marbled Murrelet."

The group pointed out that plans to increase logging and create a timber trust on the Oregon & California Railroad (O & C) lands managed by the Bureau of Land Management would be particularly harmful to the murrelet. "Impacts on the Marbled Murrelet could be severe, because the lands that likely would be logged and fragmented include active murrelets and surrounding forest habitats."

H.R. 2647, passed by the House of Representatives, would create new categorical exclusions for large-scale logging, limit citizen involvement and oversight, and undermine protections of the Northwest Forest Plan. The administration is strongly opposing the bill which if passed could result in significant habitat loss. The proposed O & C Land Grant Act, S. 132, would increase the risk of habitat loss and fragmentation for the Marbled Murrelet. The bill, which the administration has also raised concerns about, could be improved by prohibiting ecoforestry and other even-aged management within the Murrelet's nesting area.

The 2012 Final Northern Spotted Owl Critical Habitat Rule misapplies the Northwest Forest Plan's ecosystem management approach to promote ecological forestry which has not been adequately field tested or monitored, and is likely to be detrimental to Northern Spotted Owls, Marbled Murrelets and listed salmon by increasing fragmentation and facilitating Barred Owl invasion.

[1] Recent Population Decline of the Marbled Murrelet in the Pacific Northwest. Authors: Sherri L. Miller, Martin G. Raphael et al. *The Condor*, Vol. 114 (November 2012), pp. 771-781. Cooper Ornithological Society. (http://www.fs.fed.us/psw/publications/miller/psw_2012_miller001.pdf)

The draft Northern Spotted Owl Critical Habitat Rule's Environmental Assessment found that "Active forest management that is in the vicinity of murrelet nesting stands may be detrimental to the species survival and recovery." (p. 61)

Federal forest in Oregon. Photo by Steve Holmer.

Logging (clearcutting and commercial thinning) increases fragmentation, opening the forests to nest predators such as crows, ravens, and jays.[2] Despite this, there was no prohibition in the final owl critical habitat rule on the proposed active management to ensure murrelet nesting stands will not be disturbed, and notably, the fact that active management may be detrimental to Murrelet nesting stands was not mentioned as it had been in the draft, a glaring omission that again raises concern that Murrelet conservation is not receiving adequate attention by the Service.

Western Oregon Plan Revision Threatens the Northwest Forest Plan

The draft 2015 Western Oregon Plan Revisions poses a significant threat to the Marbled Murrelet, in addition to the Northern Spotted Owl and Coho salmon. ABC's full comment is attached and some key excerpts follow.

As an initial amendment to President Clinton's Northwest Forest Plan, American Bird Conservancy is viewing this draft both in terms of its specific impacts to forests and wildlife in western Oregon, and how it changes the Northwest Forest Plan's regional restoration framework to provide additional habitat for and to conserve wide-ranging listed species including the Northern Spotted Owl and Marbled Murrelet.

A key principle we now reiterate is that the regional conservation framework of the Northwest Forest Plan needs to be retained and that the BLM and Forest Service need to work together to ensure forest plans comply with the best available science and legal obligations to protect endangered species, and to provide the public a fair and complete understanding of the changes being proposed to the Northwest Forest Plan. This fundamental principle is being ignored by BLM.

We are concerned that the draft alternatives reflect 1) an abandonment of the Northwest Forest Plan and the consistent regional management and restoration framework that it

[2] Marbled murrelet nest predation risk in managed forest landscapes: dynamic fragmentation effects at multiple scales, http://www.ncbi.nlm.nih.gov/pubmed/19688934

provides, 2) a significant weakening of protections for listed species, and water quality, by reducing riparian reserves and promoting clearcutting of mature forests including in Northern Spotted Owl critical habitat, and Marbled Murrelet nesting areas, and 3) an incomplete economic analysis that fails to recognize that recreation, clean water, carbon storage and other amenities provided by these federal forests are worth more in terms of jobs and overall economic contribution to society than an emphasis on increased timber production in endangered species habitat.

A key piece of new information is now available, the 20-year monitoring reports of the Northwest Forest Plan, is now available and should be considered. The reports indicate that the plan is working as intended, creating additional habitat for listed species, improving water quality, guiding needed restoration, and providing a stable supply of timber.

Western Oregon Plan Revision Threatens the Marbled Murrelet

The BLM and Forest Service are producing as much timber as Congress is funding. Approximately 757 million board is the estimated volume that can be produced in the Northwest Forest Plan area, and the agencies have been consistently producing over 600 million board feet. Any perceived shortfall is related to funding levels set by Congress and the administration, and not the result of litigation by conservation groups.

The timber industry had filed several challenges to BLM's management of O&C lands in the D.C. District Court, generally arguing in each case that BLM had failed to offer for sale sufficient timber to meet statutory requirements.[3] In August, the DC Court of Appeals rejected the first of these challenges, holding that the timber industry did not have standing to raise such a challenge because plaintiffs could not demonstrate that their claimed economic harm was linked to BLM's timber program, as opposed to the Great Recession, lower funding levels for BLM operations, and other factors. In September, the District Court dismissed three additional challenges on the same grounds. As a result, *there is no "court-ordered mandate" to increase timber harvest on O&C lands.*

Faulty No Action Alternative: The No Action Alternative is based on the Northwest Forest Plan as written, as opposed to how it is actually being implemented in 2015. As a result, it does not offer a useful baseline for analysis, particularly for the 50-year projections, or for comparison with the proposed draft alternatives. The draft misleads the public by claiming inflated timber outputs under the Northwest Forest Plan as written despite the fact there has been considerable adaptive management since 1994, and old growth logging projects in matrix were typically found by federal courts to be illegal. White House Council on

[3] *Swanson Group Mfg. et al. v. Jewell* (Civ. No. 13-5268 – challenge to BLM failure to sell 500 MMbf annually); *American Forest Resource Council et al. v. Jewell* (Civ. No. 14-368 – challenge to 1995 RMPs); *Carpenters Industrial Council et al. v. Jewell* (Civ. No. 13-361 – challenge to owl critical habitat); *Swanson Group Manufacturing et al. v. BLM* (14-211 – challenge to BLM failure to comply with prior order to sell timber). The same Plaintiffs filed a fifth, nearly identical, challenge to BLM's alleged failure to sell 500 MMbf of timber in the DC District Court in early September. *Swanson Group Mfg. et al. v. Jewell* (Civ. No. 15-1419, Sept. 2, 2015).

Environmental Quality guidance on this point is clear: "In these cases "no action" is "no change" from current management direction or level of management intensity."

In addition, the economic analysis was incomplete, but it did include significant evidence that non-timber values such as recreation, water, wildlife habitat and carbon storage are more valuable than timber. However it failed to assess the costs of proposed increases in mature forest logging as proposed in the DEIS, which would diminish those values. Details below are from the BLM DEIS.

Recreation Value: The 2012 value of recreation is estimated at $223 million, and annual recreation value is expected to increase over the next decade to $250 million annually in each alternative. BLM administers approximately 50 percent of all public land within 30-minute driving time of the 12 largest communities in western Oregon, and 34 percent within 60-minute driving time. There were 10.8 million participants in recreation, with wildlife/nature viewing, scenic driving, camping and picknicking, non-motorized trail use, and hunting all experiencing over one million participants (p. 489). BLM projects 16.5 million annual participants by 2060 (p. 491). It is estimated that hunting, including Migratory Game Birds generates $26 million annually, and that wildlife viewing adds another $31.5 million.

Carbon Storage Value: In 2012, the forests in the decision area fixed and stored a net total of about 673,000 metric tons of carbon (p. 501). While there are market that exist to provide payments for carbon storage, there is currently no such market operating in western Oregon, and BLM does not participate. Absent a market value, BLM has analyzed the social cost of carbon which attempts to put a monetary value on the likely costs of climate change. There is considerable debate about these costs, so BLM has provided a range of values. At the low end, is an estimate of $99 million dollars a year resulting from carbon storage on BLM managed lands. At the high end, $291 million (p. 502).

Source Water Protection: BLM-administered public lands capture, filter and convey water that people in western Oregon drink. Approximately 80 percent of Oregonians depend on drinking water from public water systems. There are approximately 80 source water watersheds in the planning area and 73 percent of BLM-administered lands are in areas the Oregon DEQ identifies as drinking water protection areas (TNC and WSC 2012) (p. 502-503).

Here there appears to be some missing analysis because there is no estimate provided for the value of the water coming off of the forests, or of the replacement cost if that water not available, or possible filtration costs if currently clean water supplies were to become degraded. The analysis notes that the economics literature on water-treatment costs includes studies that show a relationship between the quality of forest cover and treatment costs. However, no value estimates are provided for water.

Biodiversity Value: Markets do not yet exist for biodiversity, but there are a number of ways to estimate values for ecosystems services provided by biodiversity, and the value to people of having wildlife in the environment. Food crops, clean water, clean air, and aesthetic

pleasures depend in biodiversity as do the persistence, stability and productivity of natural systems (Millennial Ecosystem Assessment, 2005 p. 79). Biodiversity also supports basic ecosystem services including waste disposal, soil formation, nitrogen fixation, bioremediation of chemicals, crop and livestock breeding, biological control of pests, and pollination (Pimentel et al 1997, Krieger 2001) (p. 504). The economic value of these services is currently beyond accurate estimation, and the replacement cost likely is far beyond our ability to pay.

Scenic Amenities: While BLM divides lands into of one of four classes based on the quality of visual resources, no economic estimate is provided for the value to private property owners with views of BLM-administered lands. Studies do show that properties with pleasing views, increase in value from 1 to 89 percent depending on locations. Here the issue of regeneration harvest becomes particularly relevant. The amount and spacing of clearcuts will have a significant impact on the resulting views from private property.

In this instance, the Northwest Forest Plan as implemented, where regeneration harvest is relatively rare, may provide for a much more pleasing view than the clearcuts allowed for under all draft alternatives. However, there is no comparative analysis provided for the likely impact of these management activities on private land scenery values (p. 506).

Summary of Economic Values and the Need for Further Analysis: Table 3-159 on page 508 summarizes the economic value of goods and services. Resource uses on BLM-administration lands including energy production, grazing, minerals, and timber generated approximately $21 million of direct economic value in 2012. Carbon storage, recreation, and special forest products are valued at between $326 and $569 million. Other important values including water production, biodiversity, and scenery are not monetized in the report, but are likely beneficiaries of forest conservation and preservation.

Marbled Murrelet Put at Risk by DEIS

The DEIS puts the Marbled Murrelet at risk by proposing to increase logging, fragment habitat, and remove specific protection included in the Northwest Forest Plan. Under the Plan and current BLM RMPs, the agency must survey prior to logging in any potential Marbled Murrelet habitat. If there is any indication of occupancy, the agency protects a 0.5 mile radius of all contiguous existing and recruitment habitat (stands capable of becoming habitat in 25 years). These areas would be managed as LSR. Recruitment habitat is required to "protected and enhanced" by any silvicultural treatment. (Eugene RMP at 62).

The BLM's proposed DEIS alters this regiment in all alternatives as laid out below. In the preferred alternative, murrelet surveys are restricted to the first 35 miles from the coast, although marbled murrelet habitat can extend up to 55 miles inland. Additionally, survey habitat is much more strictly defined as detailed out below. Timber harvest is allowed without surveys if large legacy trees are withheld from harvest and habitat is "maintained."

*Alternative A: No surveys, protect existing sites, seasonal disruption restrictions

*Alternative B: Surveys 35 miles from Coast in "mature or structurally-complex coniferous forest" and "conifer forests under 80 years old with platform trees (must be within 35 miles of coast, conifer, dbh greater than 19.1, over 33 meters tall, potential structure over 10 meters from ground, and contains platform over 4 inches in diameter. If stand occupied protect all occupied habitat plus 300 foot buffer around occupied stand. In stands under 80 with platforms, no surveys needed if platform trees aren't removed; maintain habitat (need to define); seasonal restrictions during breeding season.
*Alternative C: surveys in conifer stands over 120 years old, protect sites same as above for 10 years, and existing site protection lasts 10 years
*Alternative D: surveys same as B (but no 35 mile limitation), buffer all contiguous habitat within .5 mile radius of occupied stand (no gaps wider than 100 meters in forest)

Existing Sites: Marbled Murrelets have high nest-site fidelity, and as such, the Pacific Seabird Group (PSG) protocol recommends treating all occupied Marbled Murrelet sites as occupied sites indefinitely. A murrelet site, due to the inability to locate an exact nest location, occupies the entire area of contiguous forest. Given that the BLM is under direction from the FWS to protect occupied habitat, a majority of BLM alternatives say that the BLM will protect existing sites, but it is unclear. Page 722.

Pursuant to the PSG Protocol and available murrelet studies, occupied habitat means all the trees in a contiguous stand, including platform and non-platform trees. Any logging within this occupied habitat opens up the stand to predators and fragments the bird's habitat, resulting in take.

The BLM states that under three of the four action alternatives, all existing murrelet sites would be "retained." Page 733. The BLM needs to elaborate on what this means. We assume it means that the entire survey area, i.e. contiguous forest stand, for each murrelet nest site is to be protected, off limits from any kind of logging. Marbled Murrelet nest sites are compromised by forest and canopy openings that can be created by thinning or adjacent clearcutting. The BLM if indeed it is committed to protecting existing occupied sites, needs to ensure that all these sites are off limits from commercial harvest of any kind, because logging will create forest edges and openings that will expose these nest sites to an increased risk of predation. Additionally, even if these sites are in reserves this does not guarantee their protection because of the logging permitted in reserves that can downgrade or remove older forest.

300 Feet: In two of the BLM Alternatives the BLM proposes to protect Marbled Murrelet nest sites with a buffer of 300 feet as opposed to a half mile. This results in marbled murrelet occupied sites are approximately 6.5 acres in size as opposed to approximately 500 acres in size. The BLM provides no analysis or scientific justification that these 300 feet buffers will ensure protection of the nest site. Almost assuredly, a 6 acre nest site for the murrelet will result in the failure or predation of that nest site. Therefore, the BLM's assumption in the

DEIS, that these sites will not be "taken" because of this 300 foot buffer is false and lacks scientific justification or rationale. This prescription will result in violations of the ESA, the MAMU Recovery Plan, the 5 Year Review Recommendations, and the NWFP Recommendations.

Potential or Suitable Habitat: We are concerned that the BLM is defining potential or suitable survey habitat for these alternatives too narrowly, and will accordingly miss certain types of Marbled Murrelet nest sites from this survey regiment. Murrelets will nest in younger stands if a single legacy tree is present, but the BLM is taking a stand level approach. When averaged, stands that provide nesting trees and habitat for murrelets could have average DBH, tree height, and various measurements that will not satisfy the BLM survey standards laid out above.

The BLM either needs to delete the DBH and height limitations or any limitations based on the number of platform trees present, or the BLM needs to factor in the percentage of nest sites that will occur outside of survey habitat and account for their loss and destruction in the modeling of the impacts. As an illustration, the BLM admits that over 10% of the existing occupied sites exist outside of what the agency has modeled or considered "nesting habitat." Page 733. The agency needs to take a hard look at this issue.

35 Mile Delineation: Please explain or provide ecological or scientific justification for the 35 mile mark in Alternative B. It seems entirely arbitrary and will result in the take of murrelet nesting areas.

Habitat "Maintenance": Under the alternatives where surveys are required in the future, we are concerned that the BLM's habitat maintenance program will not result in adequate protection of the newly discovered nest site, not make it safe to assume that new sites will be retained, or that Marbled Murrelets will continue to reproduce at these locations. The BLM is permitting logging, as long as the large legacy trees with platforms are not removed. Again, it is inadequate to just protect potential Marbled Murrelet nest trees in a stand. Logging trees that provide canopy closure around these legacy trees opens the stand up to corvids and will result in dramatic risk of nest predation and failure. The entire contiguous stand with large buffers needs to be protected in perpetuity to protect murrelets.

Large Block Habitat: The BLM should have considered blocking up large areas of habitat known to contain legacy and platform trees to provide refuges for the marbled murrelet. Aside from the no action alternative, it appears every alternative is reducing protections for the Marbled Murrelet. Given the species flat lining or declining population levels, coupled with an alarming drop in juvenile numbers which signal problems with reproduction, should implicate an alternative that strengthens protections for the species and creates special reserves for the species to guarantee viability of the species.

False Assumptions: In numerous places throughout the DEIS, the BLM assumes that murrelet populations are increasing. This is false as the 20-year monitoring indicates. Alternatives that

all reduce protections for the species because they are based upon this false assumption flaws the NEPA process.

Riparian Reserve Reductions: Marbled Murrelets depend disproportionately on lower slopes and riparian forests. FWS' 1997 Recovery Plan for the Marbled Murrelet says "With respect to slope, eighty percent of nests in the Pacific Northwest were located on the lower one-third or middle one-third of the slope." Hamer and Nelson (1995) show that the mean distance to streams from marbled murrelet nests in the Pacific Northwest is 159 meters.

In California, Baker et al. (2006) found that marbled murrelet nest sites "were located closer to streams, had a greater basal area of trees >120 cm dbh, and were located lower on slopes than random sites based on analysis of variance models." Baker (2006) states:
We found that nest sites were much closer to streams than would be expected based on randomly available sites within old-growth forests. Nest sites may have been located near streams because these sites afforded murrelets better access from at-sea flyways. Studies have found proximity to streams or other openings to be important for murrelet nesting in other regions as well (Hamer and Nelson 1995, Meyer et al. 2004, Zharikov et al. 2006).

Proposed increased clearcutting within riparian reserves in the BLM's DEIS is in direct conflict with FWS' 1997 Recovery Plan for the Marbled Murrelet which recommends that mature forests within "secured areas" (such as riparian reserves) be protected so they can serve as future nesting habitat for the marbled murrelet. This recovery plan recommendation is not about *existing* high quality habitat, but about mature forests that can serve as future recruitment habitat. These 80-120 year-old maturing forests are precisely those targeted for logging in many recent policy proposals, such as the BLM Secretarial Pilots, and the federal legislation.

BLM DEIS Should Be Withdrawn

For these reasons, American Bird Conservancy is requesting that the draft RMP/EIS be withdrawn, and that the BLM be directed to work with the Forest Service to develop a consistent regional strategy to protect, restore and manage the federal forests under the Northwest Forest Plan. We further urge the Service to encourage BLM to drop its current effort to reduce protections for the Marbled Murrelet and its habitat, and to designate additional critical habitat to compensate for this risk, and the extensive logging over the past decade on private and state lands in Oregon.

State Rules, HCPs, 1996 Rule are Inadequate to Protect the Marbled Murrelet

Loss and degradation of murrelet habitat on private, state, and federal lands continues despite the Northwest Forest Plan, the 1996 critical habitat rule, the 1997 recovery plan,

Habitat Conservation Plans (HCPs) and other conservation agreements. The 20-year monitoring indicates that loss of habitat on non-federal lands is a significant threat, and that remaining high quality habitat should be conserved.

The 1996 rule did not designated sufficient critical habitat on non-federal lands to conserve the population. A total of 870,300 non-federal acres were designated, approximately 22% of the murrelet's habitat. However, of the total, non-federal lands provide 41% of the known habitat indicating the designation should have been much larger. It is also important note that the loss of higher-suitability habitat was greatest on nonfederal lands. Losses were 29.8, 21.1, and 21.8 percent of baseline in Washington, Oregon and California.

Clearcut. Private lands in Washington State. Photo by Steve Holmer.

The Service noted in the 1996 rule that there was limited data about the amount of suitable nesting habitat on private lands. Since that time, new survey methods and modeling provide managers a better understanding making the identification of additional habitat possible. We urge the agency to inventory private lands to assess areas of suitable habitat to designate as critical habitat.

Meanwhile, where the species is declining at the steepest rate (5.1% per year), Washington State has failed to comply with its federally-approved Trust Lands HCP, which required it to develop a long-term marbled murrelet conservation strategy for approximately 1.6 million acres of state-managed trust lands within the range of the murrelet. And despite the Conservation Plan now being eighteen years overdue, Federal and state agencies in Washington continue to allow significant fragmentation to take place through timber extraction activities, as well as loss of mature forests needed to provide future additional habitat.

The 2008 Science Report contained recommendations to the Department of Natural Resources for southwest Washington, and the Olympic Experimental State Forest. MM Manage Areas were identified in both places and the team recommended that 100% of these critical habitat areas be retained in southwest Washington, and 50% on the OESF. The Report also called for a one-mile buffer for the area around Olympic National Park to be deferred from harvest and managed to develop old forest habitat.

The 50% protection recommendation for OESF now appears to be insufficient, and the team did not provide recommendations or identify critical areas for the Northwest Puget Sound or Straits of Juan de Fuca Planning Units. Since 2010, significant habitat losses of mature forest (3,400 acres) have occurred in the Straits Planning Unit. We urge critical habitat designation for all Washington State managed lands that currently host Murrelets, and additional areas

required to ensure that habitat will be provided for recovery.

In Oregon, no murrelet HCPs currently exist. It is notable that the Elliott State Forest, which was originally proposed for critical habitat designation was excluded from the murrelet's 1996 final critical habitat rule because the State of Oregon's HCP. Subsequently, the State of Oregon has pulled out of the HCP development process to increase timber production in murrelet habitat. Critical habitat needs to be designated for suitable habitat on Oregon State Forests, particularly the Elliott.

The Quinalt and Siletz tribal lands were not included in the 1996 designation, which states that if the rule is revised, that these areas should be reconsidered. We urge that these tribal areas be reevaluated and any remaining suitable habitat be designated.

2006 Critical Habitat Rule and 2012 Proposed Vacature

The Service's proposed vacature of Marbled Murrelet critical habitat in 2012 was unreasonable, and raised concern that conservation of this threatened population segment is not a priority for the Service. Similarly, in 2006 the Service proposed to revise the designation of critical habitat to 221,692 acres, a reduction of approximately 3,666,108 acres. This was followed by a proposal in 2008 to delist the distinct population segment.

And, while we appreciated concerns expressed in the 2012 Final Northern Spotted Owl Critical Habitat rule for the Murrelet and potential implications if its critical habitat were vacated (see excerpts from the rule below), we were very disappointed that this was proposed by the Service. Vacating critical habitat until 2018 as the Service proposed would likely have resulted in significant additional Marbled Murrelet habitat loss and degradation. Moreover, the final owl rule lacks discussion on potential negative consequences for the Murrelet of active management in owl habitat, and how adverse modification of owl habitat is in fact allowed by the Rule, and will not afford the Murrelet additional protection in that circumstance.

> "Currently 1,735,900 ac of the 2008 northern spotted owl critical habitat designation overlays critical habitat designated for the marbled murrelet. Critical habitat for the marbled murrelet is currently under litigation and may be vacated (see section 3.4.4 Cumulative Impacts). Should vacature occur, the nesting habitat components for marbled murrelets would generally be protected through avoidance or adverse modification of spotted owl PCEs in those areas where marbled murrelet critical habitat overlaps the 2008 spotted owl critical habitat. This 1.7 million acres of overlap will be a baseline from which to compare other alternatives to determine the amount of existing marbled murrelet critical habitat that may continue to be afforded incidental protections as a result of avoiding adverse modification of spotted owl critical habitat." (EA p. 90)

> Thus, critical habitat designation for the northern spotted owl may provide some ancillary benefits to marbled murrelets. However, in some parts of the spotted owl range, PCEs that provide for foraging in the form of dense shrub and hardwood openings, or low density patches of forest, particularly in the Klamath, Northern California Interior Coast Ranges, and Redwood Coast Critical Habitat Units, may not provide features beneficial to nesting murrelets. These vegetation pockets open up forest canopies and fragment the landscape for murrelets, inviting corvids (e.g., crows, ravens, and jays) and increasing the predation pressures on nesting murrelets, reducing the ability of this species to reproduce (Nelson et al. 2006). In these areas, protection of some spotted owl PCEs through the avoidance of adverse modification may not provide the habitat attributes needed by nesting marbled murrelets. Should the motion for remand of marbled murrelet critical habitat be granted, the protections of marbled murrelet critical habitat would not be in place in these areas. However, where spotted owl critical habitat overlaps murrelet critical habitat, it may provide incidental protections to habitat attributes necessary for nesting marbled murrelets through the avoidance of destruction or adverse modification of spotted owl PCEs that also support nesting murrelets.

In response to the proposed vacature and continuing habitat loss, ABC and large coalition of conservation groups sent President Obama a letter asking that planning be undertaken to provide additional conservation measures for the Marbled Murrelet. We are disappointed that the administration and Service is not addressing these concerns in the proposed critical habitat rule and would urge that a revised rule and additional conservation actions be undertaken in the near term.

Policies to Protect Marbled Murrelet Habitat

The NWFP requires surveys for and the protection of occupied marbled murrelet nesting sites. It is essential that this protective management requirement be retained. Similarly, the need to protect Marbled Murrelet habitat, including both occupied stands, and mature forest to be recruited as high quality nesting habitat indicates that all the mature forests within the range of the Marbled Murrelet should be conserved.

We urge that the Service re-evaluate their decision to include marine areas in the critical habitat designation for this species. As a seabird, murrelets are highly dependent on marine habitats throughout their life cycle. Oil spills, both acute and chronic, are a demonstrated threat to these birds. In addition, other potential threats include marine traffic, fisheries interactions, and contaminants.

The 1996 rule considered including five marine areas that supported the highest concentration of Murrelets during breeding season. Pacific Seabird Group states that *"Murrelets cannot survive without an abundant and available prey base near suitable nesting habitat. Designating marine CH will be critical to murrelet survival and recovery."* We urge the Service to reanalyze this issue and determine if these areas should be designated.

Bolster the Reserve Network on Federal Lands

The existing network of late-successional reserves on federal lands in the Pacific Northwest designated in 1994 to conserve old growth ecosystems, including Northern Spotted Owls and listed salmon stocks, are insufficient to recover the Marbled Murrelet. There is inadequate mitigation of the apparent negative effects of fragmentation and human disturbance on both public and private lands to nest survival. To supplement recovery efforts we urge the Administration to halt sales of mature and old-growth forests throughout the tri-state range of the Murrelet, and designate additional critical habitat for habitat in the range of the murrelet.

The 1997 Marbled Murrelet Recovery Plan,[4] page 143, recommends greater conservation of mature forests so they can grow and provide future murrelet nesting habitat:

> Consistent with the Forest Plan Record of Decision, thinning within Late-Successional Reserves should be restricted to stands younger than 80 years.... 3.2.1.2 Protect 'recruitment' nesting habitat to buffer and enlarge existing stands, reduce fragmentation, and provide replacement habitat for current suitable nesting habitat lost to disturbance events. Stands (currently 80 years old or older) that will produce suitable habitat within the next few decades are the most immediate source of new habitat and may be the only replacement for existing habitat lost to disturbance (e.g., timber harvest, fires, etc.) over the next century…Such stands should not be subjected to any silvicultural treatment that diminishes their capacity to provide quality nesting habitat in the future. Within secured areas, these "recruitment" stands should not be harvested or thinned.

Recommendations for Additional Marbled Murrelet Protections

Based on the ongoing decline of this species and the rarity of its remaining mature and old-growth forest habitat, we urge the Service to direct the USFS and BLM to adopt Marbled Murrelet conservation measures recommended by scientists and murrelet conservation experts. Restoring the Marbled Murrelet population will necessitate:

- Protecting existing suitable habitat, both occupied and unoccupied, from logging and other harms.
- Recruiting additional suitable nesting habitat, by letting mature and younger forests grow.
- Preventing fragmentation (including clearcutting or commercial thinning) of the land around suitable habitat, maintaining protective cover from nest predators.

[4] Marbled Murrelet Recovery Plan
http://www.fws.gov/arcata/es/birds/MM/documents/Recovery%20Plan%20for%20the%20Threatened%20MAMU%20in%20CA,%20OR%20and%20WA%201997-optimized.pdf

- Increasing the size of and strengthening the standards for buffers surrounding the nesting sites. We request the Service analyze the conservation benefits of a one-mile buffer.

Old Growth cedar. Mt. Baker-Snoqualmie National Forest, Washington State. Photo by Steve Holmer.