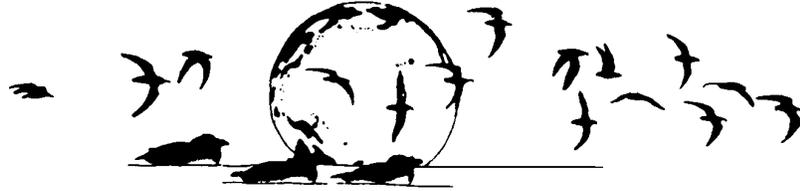


Pacific Seabird Group



DEDICATED TO THE STUDY AND CONSERVATION OF PACIFIC SEABIRDS AND THEIR ENVIRONMENT

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Public Comments Processing
Attn: FDMS-FWS-R1-ES-2008-0095
Division of Policy and Directives Management
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive, Suite 222
Arlington, VA 22203

SUBJECT: Comments on the 90-Day Finding on a Petition to Remove the California, Oregon, and Washington Population of the Marbled Murrelet (*Brachyramphus marmoratus*) from the List of Endangered and Threatened Wildlife (Federal Register: Volume 73, Number 192, October 2, 2008)

On behalf of the Pacific Seabird Group (PSG), we express extreme concern about the proposal from the U.S. Fish and Wildlife Service (USFWS) to delist the Washington, Oregon, and California (tri-state) population of Marbled Murrelets (*Brachyramphus marmoratus*), which is currently listed as threatened under the federal Endangered Species Act (ESA; USFWS 1992). In our letter to you several years ago, 12 November 2004, we expressed our collective professional opinion that the tri-state Marbled Murrelet population does indeed constitute a Discrete Population Segment under the 1996 policy, contrary to the findings of the USFWS 5-year Review. In this letter, we explain not only how the tri-state population is discrete, both genetically and internationally, but also how it is still threatened with extinction and very much in need of protection. We describe how the tri-state population makes up a significant portion of the range of the entire species. Lastly, we relate evidence of the species' decline in Alaska and British Columbia (BC) and highlight the threats that may be contributing to this decline. Our recommendation based on the best available scientific information is that the tri-state population be reclassified from threatened to endangered, and the Alaska and BC populations be listed as a species of special concern. Such action would emphasize the need for comprehensive fully-funded population surveys and research in Alaska to determine state-wide trends and causes for declines. Without these protections Marbled Murrelet populations are at risk of extinction throughout their entire range.

PSG is an international, non-profit organization that was founded in 1972 to promote the knowledge, study, and conservation of Pacific seabirds. It has a membership drawn from the entire Pacific basin, including Canada, Mexico, Russia, Japan, China, Australia, New Zealand, and the USA. Among PSG's members are biologists and scientists who have research interests in Pacific seabirds, government officials who manage seabird refuges and populations, and individuals who are interested in marine conservation. For two decades, PSG has taken an active lead in resolving many scientific aspects of the biology and conservation of Marbled Murrelets. PSG has served as an unbiased forum for government, university, and private sector biologists to discuss and resolve such issues.

The Washington, Oregon, and California population is a Discrete Population Segment

The tri-state population qualifies as a distinct population segment (DPS) under USFWS policy (61 FR 4722; February 7, 1996) as recognized by USFWS Region 1 during the 5-year review. The final 5-year review was counter to USFWS DPS policy, incorrect (as admitted by USFWS in 73 FR 57318), and a product of political interference. The USFWS has recognized populations as discrete if there are differences across an international border, including significant differences in regulatory mechanisms, habitat management, and status of a species. We argue that the tri-state population is a DPS and discrete based on genetics, differences in management and regulatory mechanisms between the US and Canada, and the status of the species in BC.

(A) *Genetically* – The DPS policy states that a segment of a vertebrate species may be considered discrete if it is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. It also states that quantitative measures of genetic or morphological discontinuity may provide evidence of this separation.

A recent genetic analysis by Friesen et al. (2005) examined DNA sequence variation in mitochondrial DNA, four nuclear introns and three microsatellite loci among 194 Marbled Murrelets sampled from 11 breeding populations from the Aleutians to central California (not including Washington or Oregon). Their data were analyzed using both traditional statistics (*e.g.*, Wright's F_{ST}) and more sophisticated, recently developed approaches (*e.g.*, assignment tests).

All types of analyses on all three types of DNA markers indicated significant population genetic structure. Nine private control region haplotypes and three private intron alleles occurred at high frequency in the Aleutians and California, suggesting restricted gene flow between these regions and more central populations. Global estimates of F_{ST} (or the appropriate analog) and most pairwise estimates involving the Aleutians and/or California were statistically significant, indicating significant genetic differences among populations. Marked isolation-by-distance was also found, indicating that genetic divergence increases with distance between populations. Hierarchical analyses suggested that Marbled Murrelet populations sampled constitute three genetic units: (1) western and central Aleutians; (2) eastern Aleutians to northern California; and (3) central California (Piatt et al. 2006). Genetic divergence of Aleutian and California populations is consistent with their low densities (McShane et al. 2004), fragmented habitat (Nelson 1997), and peripheral locations. Loss of any of these populations would result in loss of a portion of the species' genetic resources and local adaptations, and may compromise its long-term viability (Piatt et al. 2006).

New research by Peery et al. (in review) on the central California population found that: (1) the genetic difference between central California and other populations has developed recently (within the last 100 years) and is likely due to habitat loss and fragmentation; (2) immigration occurs into central California, but this may have masked declines in the resident population; (3) immigrants do not reproduce at a rate high enough to sustain the central California population or prevent genetic differentiation; and (4) as a result the population is virtually extinct and will almost certainly disappear completely within a generation without immediate and extensive protection of all remaining habitat and minimization of threats (e.g., predation, disturbance by humans, oil spills).

(B) Management and Regulatory Mechanisms Across an International Boundary – The DPS policy states that a segment of a vertebrate species may be considered discrete if it is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the Act. We argue that the Species at Risk Act (SARA) in Canada is not equivalent to the ESA, is much weaker legislation, and only provides protection to a species residence (nest tree in this case) and not protection of occupied or nesting stands. However, currently there is no SARA-compliant recovery strategy, designation of critical habitat, or recovery action plan in BC which limits meaningful comparisons between SARA implementation in BC and the ESA. Please see letters submitted by Dr. Alan E. Burger, University of Victoria and Dr. David B. Lank, Simon Fraser University in addition to the information below.

Management of Marbled Murrelet habitat in BC is very different than in the United States. The Species at Risk Act was enacted by the Canadian **Federal Government** in June 2003 (www.sararegistry.gc.ca/sarredirect/). The Act established Schedule 1 as the first official list of wildlife species at risk. It classifies those species as either extirpated, endangered, threatened, or a special concern. Once listed, the measures to protect and recover a listed wildlife species are to be implemented. The Marbled Murrelet was included on Schedule 1 because it was listed as Threatened by the Committee on Status of Endangered Wildlife in Canada (COSEWIC) in 1990. Loss of nesting habitat in forests was identified as the main threat, and oil spills and gill nets as significant secondary threats (Hull 1999, Canadian Marbled Murrelet Recovery Team 2003). For the British Columbia **Provincial Government**, the Marbled Murrelet is on the BC Red-list (species legally designated or being considered for legal designation as Endangered or Threatened), and is one of the Identified Wildlife Species within Forest and Range Practices Act (FRPA).

The application of SARA to Marbled Murrelets in Canada cannot be considered as complimentary to the ESA for numerous reasons:

1. SARA is directly enforceable only on lands and waters under the jurisdiction of the federal Canadian government, which in the case of the Marbled Murrelet constitutes less than 10% of the existing nesting habitat in BC.
2. At least 80% of the existing nesting habitat in BC is under provincial jurisdiction as “Crown Land”, most of which is leased to logging companies for timber extraction. SARA can be enforced on land under provincial jurisdiction only if the Federal Minister responsible (Minister of Environment) can show that the laws of the province or territory do not effectively protect the critical habitat of the listed species. Because of historical federal-provincial conflicts over

jurisdictional rights, it is likely that the federal government will override provincial forest management to enforce SARA only in extreme cases. The lack of federal intervention in the case of Spotted Owls, despite their drastic decline from 30 to fewer than 10 known pairs and the persistence of clearcut logging in owl habitat in BC, illustrates this point

(www.env.gov.bc.ca/wld/documents/spowtrend_supp.pdf;
www.davidsuzuki.org/Forests/Canada/BC/Spotted_Owl.asp).

3. Under federal-provincial agreements when SARA was drafted, provinces were expected to provide matching protection for threatened listed species. Some provinces, e.g., Nova Scotia, have Endangered Species Acts that match fairly closely the federal regulations under SARA. BC does not have a matching act. Instead protection for Marbled Murrelets and similar listed species falls under the Identified Wildlife Management Strategy (IWMS) within the Forest and Range Practices Act. The IWMS guidelines for Marbled Murrelet are available at www.env.gov.bc.ca/wld/frpa/iwms/index.html. It should be clear that IWMS provides guidelines only and not enforceable regulations. There are no penalties for lack of compliance, and there are no provisions for protecting “critical habitat” and a species “residence”, the two key habitat elements identified by SARA. Neither of these terms or any analogs are used in the Marbled Murrelet IWMS account.

4. The mechanisms and details of how SARA will be applied to Marbled Murrelets in BC have not been finalized. Under SARA, a Recovery Strategy has to be drafted and approved by the responsible Federal Minister. The Recovery Strategy has to provide a broad overview of how recovery will be achieved, and the detailed mechanisms for recovery are to be laid out in one or more Recovery Action Plans identified in the Recovery Strategy. Neither the SARA-compliant Recovery Strategy nor any Recovery Action Plans have been accepted or approved for Marbled Murrelets, and the complete recovery package is not likely to be in place before 2010. Under SARA, species like Marbled Murrelets, which were on Schedule 1 when the act came into law (June 2003), were supposed to have Recovery Strategies in place within four years (i.e., June 2007) and one is still not in place as of December 2008

(www.sararegistry.gc.ca/document/default_e.cfm?documentID=1290). Details on the Recovery Strategy and Action Plans are available at: www.sararegistry.gc.ca/archives/Guide_e.cfm. It is impossible to make a direct comparison of the protection provided to Marbled Murrelets under SARA with the ESA until the Recovery Strategy and Action Plans are in place.

5. SARA does not provide any habitat protection for the murrelet beyond the nest tree. SARA only requires that “no person shall damage or destroy the residence” of any threatened or endangered species. A residence is defined under SARA as: “a dwelling-place, such as a den, nest or other similar area or place that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding or hibernation”. The application of the “residence” requirement for Marbled Murrelet has not yet been decided.

6. Responsibility for providing additional protected nesting habitat to meet the Canadian Marbled Murrelet Recovery Team guidelines (and likely Recovery Strategy goals) rests almost entirely on the BC Provincial Government. This government has shown great reluctance to establish meaningful reserves of nesting habitat, as enabled by IWMS and other provincial legislation. In 1999, the province’s Chief Forester restricted the protection of forest habitat for all IWMS species

to less than 1% of the mature timber harvest land base (in which most murrelet habitat occurs; Canadian Marbled Murrelet Recovery Team 2003). The 70% retention of nesting habitat recommended by the Canadian recovery team is therefore unattainable until this provincial restriction is lifted.

7. The pace of establishing protected nesting habitat for murrelets in BC falls far short of the rate of habitat removal. As of January 2008, about 490,000 hectares (25% of the total habitat available in 2002, approx. 2 million hectares) were in some way protected. This falls far short of the 70% retention of habitat recommended by the Canadian Marbled Murrelet Recovery Team (2003). Protection of murrelet habitat in Wildlife Habitat Areas (the principle method for protecting habitat under the IWMS) in November 2008 amounts to only 20,535 hectares (1.0% of the 2002 habitat area). The slow pace of protecting habitat in the face of ongoing and widespread clear-cutting of this habitat has been investigated by the BC Forest Practices Board (FPB), an independent body set up to review the application of forestry practices and laws within BC. The FPB commissioned a study to investigate this problem, which is available at www.fpb.gov.bc.ca/special/reports/SR21/MAMUBackgroundReport_AugustFinalVersion.pdf. In 2003-2008, the FPB released five reports on Marbled Murrelets (all available at www.fpb.gov.bc.ca). Four of the five reports have criticized the BC government for lack of direction and action in protecting Marbled Murrelet nesting habitat. In particular, in March 2005, the board issued a strongly worded condemnation of the provincial government, stating that "there is a systemic failure in government policy to protect threatened species such as Marbled Murrelets on crown forest lands." This full report is available at www.fpb.gov.bc.ca/news/releases/2005/03-03.htm. The most recent report from the Forest Practices Board in April 2008 repeats its criticism of the provincial government, citing a lack of clear objectives in conservation and management of murrelets in BC: <http://www.fpb.gov.bc.ca/news/releases/2008/04.17.08.htm>

8. Unlike the ESA, neither the Canadian SARA nor the BC provincial IWMS are directly applicable to habitat on private land. There is no wording in SARA dealing explicitly with private land and any possible application of the act to private land is uncertain and open to challenge. Similarly, the FRPA (covering IWMS) and other provincial legislation for protecting Marbled Murrelet habitat are not applicable to private land. At present the proportion of the remaining Marbled Murrelet nesting habitat on private land in BC is not known but is relatively small. Most of this privately-owned habitat, however, is within the two regions where habitat loss has been greatest and habitat protection is most urgently needed: Southeast Vancouver Island and the Southern Mainland (Kaiser et al. 1994, Canadian Marbled Murrelet Recovery Team 2003). These are the two regions in BC which are adjacent to Washington State, and actions here directly affect the ability of murrelets from BC to supplement populations in the tri-state area.

(C) Conservation Status Across an International Boundary – The conservation status of the Marbled Murrelet differs significantly between the United States and Canada. Population numbers are different in the US and BC (24,000 vs. 66,000) and threats to the murrelet from terrestrial habitat loss and gill-net mortality are higher in BC (and Alaska) due to less stringent habitat protections as discussed above. The distribution of murrelets in BC (and Alaska) overlaps with gill-net and other fisheries. While annual bycatch is unknown, hundreds of murrelets are thought to be killed each year (Piatt et al. 2006). Adult mortality can have significant impacts on population viability (McShane et al. 2004).

The Washington, Oregon, and California Population Represents a Significant Portion of the Range of the Species

The listed Marbled Murrelet population is significant according to the 1996 DPS Policy because a loss of the DPS would result in a substantial gap in the range. This gap is significant because the Washington, Oregon, and California area constitutes a large portion of the range, roughly 18% of the total coastal distribution, encompassing 17 degrees of latitude (McShane et al. 2004). Because threats to the murrelet have not changed significantly since listing (see below), their population remains likely to become an extinct species within the foreseeable future throughout all or a significant portion of its range.

The Washington, Oregon, and California Population Should be Reclassified from Threatened to Endangered

The Washington, Oregon, and California populations of the murrelet continue to decline, the amount of suitable habitat has continued to decrease, and threats to the species still persist, therefore we recommend that the status of the Marbled Murrelet in the tri-state area be changed from threatened to endangered.

(A) Marbled Murrelet Populations Continue to Decline – The Washington, Oregon, and California murrelet population is estimated to be 22,000 birds (McShane et al. 2004). Population modeling indicates that this population is declining and will be extinct in Oregon and California within 100 years without changes in the amount and quality of nesting habitat, and in demographic trends (McShane et al. 2004). Current population estimates based on at-sea surveys conducted as part of Effectiveness Monitoring under the Northwest Forest Plan also show a downward trend, especially in SW Oregon, NW California, and central California. Low fecundity levels across Washington, Oregon, and California as measured through nest success indicate a population that cannot currently maintain itself (McShane et al. 2004, Beissinger and Peery 2003). Lower nest success is caused primarily by nest predation, which in turn is affected by forest fragmentation and proximity to human developments (McShane et al. 2004, Raphael et al. 2002). Thus, in order to diminish the threat of nest predation and increase murrelet reproduction, management of the landscape of our forests and their surroundings must be changed in ways that will take careful planning and generations to achieve.

The status of the central California population is tenuous (Peery et al. 2008 a,b). New research by Peery et al. (in review) highlights the fact that “the movement of individuals among populations is *per se* no cure against endangerment and ultimately extinction, the key factor being the successful recruitment of immigrants into the imperiled breeding population. Monitoring population size and even migration rates may be inadequate to prevent local extinctions in fragmented populations.” This has implications for all murrelet populations in the tri-state area that are becoming more and more isolated, fragmented, and subjected to an increasing number of threats. Low fecundity and low and declining populations mean murrelets will not recover quickly from these perturbations. The current threatened listing has not protected murrelets from endangerment. A reclassification

from threatened to endangered will be the only means for preserving and protecting the imperiled tri-state murrelet population.

(B) Suitable Habitat Continues to Decline – Despite the listing of the Marbled Murrelet as threatened in 1992 and the implementation of the Northwest Forest Plan in 1994 (NWFP; USDA and USDI 1994a,b), the amount of suitable murrelet habitat has continued to decline throughout their range. The loss and degradation of habitat has resulted from: (1) harvesting on private and state lands; (2) federal/private land exchanges; (3) thinning in suitable and occupied habitat, and buffers to suitable habitat; (4) habitat conservation plans (HCPs); (5) fragmentation effects from adjacent harvests and thinnings; and (6) a variety of natural and anthropogenic causes including fire, windthrow, and disturbance. The total loss of suitable nesting habitat between 1992 and 2003 was estimated to be about 10% or 226,000 acres of the estimated of 2.2 million acres of suitable habitat (2003 estimate; McShane et al. 2004). Of this habitat, most was lost as a result of actions taken following formal consultations with the USFWS (92%), 80% on private land (71% on lands covered by HCPs) and 17% (34,951 acres) on federal land. More than 7,370 acres of occupied habitat were lost, while thousands of additional unsurveyed acres also likely contained murrelets. Under the NWFP, HCPs, and other habitat management plans, new murrelet habitat will not be suitable for 50-200 years. The proposed BLM Western Oregon Management Plan (WOPR), HCPs on private and state lands, and changes to critical habitat (73 FR 44678-44701; 31 July 2008) throughout the tri-state area will add significantly to the logging and fragmentation of murrelet habitat. In addition to the WOPR, HCPs, and critical habitat revisions, the USFWS has allowed logging of known occupied sites in Oregon on Oregon Department of Forestry lands. At least 4 sites have been heavily thinned and 2 have been destroyed by winter storms, one following logging. With a limited amount of suitable and contiguous habitat in Oregon, this logging has contributed to the fragmentation of murrelet populations. The inability to create new murrelet habitat in the short term combined with the continued harvesting of occupied and suitable habitat ensures a downward trend in suitable murrelet habitat and populations into the future.

The amount of mature and old-growth habitat suitable for murrelet nesting in coastal areas is significantly below historic minimums. For example, using a model based on historic fire size and historic fire frequency, Wimberly et al. (2000) estimated the mean percentage of old growth and late successional forest in the Oregon Coast Range during the last 3000 years. At the province scale, the mean percentage of old growth and late successional forest in the Oregon Coast Range was estimated at between 39 and 55%, and 66 and 76%, respectively. Currently the entire Coast Range province contains only approximately 5% old growth and 11% late successional forests.

An objective of the Marbled Murrelet recovery plan is to stabilize the population at or near 1997 levels by maintaining and/or increasing productivity and removing and/or minimizing threats to survivorship (USFWS 1997). But (1) murrelet populations continue to decline through low fecundity and high predation rates; (2) even with the current system of reserves (NWFP) and critical habitat, loss of occupied and suitable murrelet habitat is continuing; and (3) murrelet habitat declines will accelerate in the future with proposed changes to the NWFP (e.g., BLM WOPR) and HCPs. Continued habitat loss and the continued fragmentation of habitat will increase the risk of extinction of this unique seabird. We agree with the Evaluation Report on the 5-Year Status Review for the murrelet that:

“It is unrealistic to expect that the species will recover before there is significant improvement in the amount and distribution of suitable nesting habitat” (McShane et al. 2004: 6-34).

(C) Threats to the Population are Ongoing – Murrelets in the tri-state area are still subjected to a variety of threats that continue despite listing, including destruction of habitat, predation, oil spills, gill-net fishing (in Washington), a reduced and altered prey base, and disease (McShane et al. 2004). All of these threats combined are having significant impacts on murrelet populations and they are currently in danger of extinction, especially in Oregon and California.

Marbled Murrelet Population Declines and Threats are Evident in Alaska and British Columbia

The best available data from BC and Alaska indicate that populations are declining and a myriad of threats could be affecting population viability (Piatt et al. 2006). We recommend that the Alaska and BC populations be listed as a species of special concern and that USFWS make it a priority to conduct comprehensive fully-funded population surveys and research in Alaska to determine state-wide trends and causes for declines.

Alaska – The best available information indicates that the total population of Marbled Murrelets in Alaska is more than half a million birds (estimated range 655-1236 thousand; Piatt et al. 2006). However, population trends, assessed in locations where repeated surveys have occurred, show significant declines. For example, at Glacier Bay in SE Alaska (where 100,000s of murrelets resided historically), summer populations of murrelets declined by 79% between 1991 and 1999/2000, with an 11.8% per annum rate of decline (Robards et al. 2003, Piatt et al. 2006). In addition, in Prince William Sound (10,000s of murrelets), summer populations have declined by 60% from 1989 to 2005 (a 6.7% per annum decline; Sullivan et al. 2005, Piatt et al. 2006). Populations are thought to have declined based on a variety of threats (see below). If these and other trends summarized in Piatt et al. (2006) could be applied to regional populations then the total murrelet population in Alaska may have declined by more than 50% since the early 1990s. These data are cause for concern about the status of the species in Alaska. State-wide, extensive surveys (especially of SE Alaska, the center of abundance for the species) are needed to verify these trends and provide a clearer picture of population trends throughout Alaska. This should be a high priority for the USFWS. Without keeping a careful eye on the Alaska populations they may become threatened in the foreseeable future.

Murrelets in Alaska are subjected to a variety of threats including destruction of habitat, predation, oil spills, gill-net fishing, vessel disturbance, a reduced and altered prey base, and disease (see Piatt et al. 2006 for more details). There are also newly identified potential threats to murrelet survival in Alaska that warrant investigation. These new threats include: (1) the recent deployment of high speed ferries in SE Alaska. These ferries travel in 60 km/hr and could suck up birds through their intake jets, which are unscreened, pump 1,000+ gallons/sec, and are 3 m long by 1 m wide by 1-2.5 m deep. These ferries have been observed traveling through and over flocks of seabirds, including Marbled Murrelets; (2) Nelson et al. (2008, pers. comm.) found that nest success of murrelets in SE Alaska remains very low despite the availability of suitable nesting habitat. They documented only

a 13% nest success rate (defined as successful fledging) based on 37 nests monitored at Port Snettisham. This rate is well below that of the tri-state area (25.9%; McShane et al. 2004) and significantly less than that of other alcids (e.g., Common Murres [*Uria aalge*] 88%; DeSanto and Nelson 1995); (3) the health of murrelets in SE Alaska, based on a variety of blood parameters, appeared good relative to central California, however in some years, birds were subjected to elevated amounts of stress, possibly related to overwinter health (e.g., food availability), weather conditions, or both (Newman et al. 2008). In years of high stress nest initiation was very low and nest failure rates high for birds that did nest. Depending on the frequency and source of murrelet stress, this could have a significant impact on nest initiation, nest success, and subsequently population viability; and (4) Nelson (pers. comm.) recorded a least two observations of Humpback Whales (*Megaptera novaeangliae*) rising to the surface to capture a capelin ball and in the process accidentally taking Marbled Murrelets and other seabird species. On one occasion, 10 or more birds may have been consumed by the whale. Humpback Whale populations are thought to be increasing more than 7% per year and have reached or are above historic levels (<http://hawaiihumpbackwhale.noaa.gov/science/splashinfo.html>). The effect of these interactions is as yet unquantified, but as fish populations decline (see Piatt et al. 2006 for details), competition between seabirds and whales may become a threat to murrelet population viability.

More research is needed, especially in SE Alaska, to determine the effects and extent of these threats on the status of the Alaska population.

British Columbia – There are insufficient data to determine the extent of murrelet population changes in BC. However, all of the anecdotal information and most of the quantitative data indicate declines in populations rather than stable or increasing populations (Burger 2002, Piatt et al. 2006). The most current analysis of trends is in Piatt et al. (2006: Appendix E), which analysed data from 8 census routes repeatedly sampled within the period 1979 to 2006. All six data sets with >10 years of data show declines in densities of murrelets and these trends were statistically significant at four sites. Annual rates of change ranged between -5.8% and -14.6%. Other published sources on murrelet numbers or relative activity in BC summarized in Piatt et al. (2006: Appendix E) also indicate declines over the past century and particularly in the past 20 years.

Loss of nesting habitat due to logging is thought to be responsible for most of the population declines in BC (Burger 2002, Canadian Marbled Murrelet Recovery Team 2003, Piatt et al. 2006). Overall, areas of nesting habitat in BC have declined by more than 33% since the start of industrial logging (Burger 2002, pp. 88-92). The BC regions which have experienced the greatest habitat loss are those that border Washington, namely the Southern Mainland (46-70% reduction in 3 forest districts) and East Vancouver Island (77% loss) (Burger 2002). A recent analysis in the Sunshine Coast Forest District (Southern Mainland) showed an 80% loss of former forest cover (Zharikov et al. 2006). Please see the letter submitted by Alan E. Burger, University of Victoria, for more information on threats to murrelets in BC.

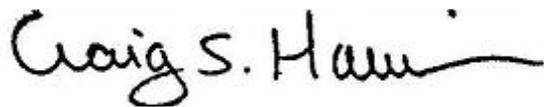
SUMMARY

We are extremely concerned about future of the Washington, Oregon, and California population of Marbled Murrelets. We believe the proposal from USFWS to delist the tri-state population from the federal Endangered Species List is not appropriate considering the current status of the population

and threats posed to the entire population at this time. We recommend that the Marbled Murrelet tri-state Discrete Population Segment continue to be listed and reclassified from threatened to endangered or it is likely to become extinct in the listed range in the foreseeable future.

We are also extremely concerned about the future of the BC and Alaska populations of murrelets. Every indication is that populations are declining and many threats are contributing to these declines. We recommend that, at the very least, the USFWS list Marbled Murrelets as a species of special concern in BC and Alaska and spend research dollars to look into population declines and the seriousness of the threats to the species. With low reproductive rates and declining populations, murrelets in BC and Alaska may not be able to recover quickly from the variety of perturbations that plague them. Proactive and immediate action is needed to prevent these populations from becoming threatened (Alaska) or endangered (BC).

Sincerely,



Craig S. Harrison
Vice-Chair for Conservation

cc: Ken Berg, Manager, Western Washington Fish and Wildlife Office
Deanna Lynch, Wildlife Biologist, Western Washington Fish and Wildlife Office

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