

Appendix I

2007 and 2009 Concurrence Letters

These letters outline processes to be implemented under the interim strategy to identify marbled murrelet habitat in the North Puget and South Puget HCP planning units.



February 23, 2007

Mr. Ken Berg
U.S. Fish and Wildlife Service
510 Desmond Drive SE, Suite 102
Lacey, WA 98503-1273

Dear Mr. Berg:

I am writing in reference to our 1997 Washington Department of Natural Resources (DNR) Habitat Conservation Plan (HCP) for state trust lands relative to marbled murrelet conservation in the North Puget Planning Unit (NPPU). Mark Ostwald from your office, staff from the Washington Department of Fish and Wildlife (WDFW), Peter Harrison, DNR Biologist, and I have been participating in development of the interim marbled murrelet conservation strategy for the NPPU. This letter is intended to provide specific guidance for the successful implementation of the interim strategy and replace the former interim approach described in the November 18, 2002, letter to the United States Fish and Wildlife Service (USFWS) from the DNR HCP Implementation Manager.

A unique set of circumstances became apparent during the first two years of marbled murrelet inventory surveys in the NPPU. Areas of significantly higher quality marbled murrelet habitat were discovered scattered throughout areas in the planning unit. However, these pockets of higher quality marbled murrelet habitat were not identified by the predictive habitat model, and thus were not scheduled to be surveyed for marbled murrelet occupancy which put those areas at risk of harvest. This issue began a series of discussions between WDFW, USFWS, and DNR staff on how to resolve the issue. The first resolution was identified in the November 18, 2002 letter referenced above. This resolution is outlined in points 1 & 2 below:

1. A re-examination of the habitat predictive model that identified forested stands that should be selected for marbled murrelet inventory surveys (N=28,000 acres) resulted in an additional model run that identified approximately 6,000 acres of additional marbled murrelet habitat to be inventoried. This step significantly improved the habitat selection process for NPPU.
2. Beyond the model-identified habitat areas, the continuing occurrence of small areas (≥ 5 acres in size) containing residual large diameter conifer trees, isolated scattered dominant conifer trees, and hemlock stands with mistletoe nest platforms was also addressed. It was agreed to protect the first two of these habitat conditions in order to retain these structures for potential contribution to long-term marbled murrelet conservation. This step added additional protections to murrelet habitat because these types of habitat were not protected under the original interim conservation strategy for the marbled murrelet in the NPPU.

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Since 2002, DNR has been gaining more knowledge about murrelet occupancy patterns on state managed lands and how it integrates with other DNR management activities. As such, we are proposing to modify the current interim marbled murrelet approach with the approach described in this letter. It is our opinion that this new interim approach satisfies the objectives of the HCP and complies with the parameters of the Incidental Take Permit issued by your agency. These steps, and the process outlined in this letter, will result in significant improvements to the interim marbled murrelet conservation strategy for the NPPU by capturing areas containing pockets of higher quality marbled murrelet habitat and conducting a protocol inventory survey in order to determine occupancy rates. These steps will allow DNR to develop a more informed long-term strategy for marbled murrelets in the NPPU, and to successfully fulfill the overall commitments in the HCP for marbled murrelet conservation.

Our revised interim strategy is described below. We propose that this document replace the interim approach described in the November 18, 2002, letter. Similar to this previous document, the process described in this letter is intended only for the interim period prior to the development of the long-term marbled murrelet conservation strategy for the NPPU.

1. Identification of Potential Suitable Marbled Murrelet Habitat

All areas identified by the various sources (predictive modeling efforts, local knowledge, and professional judgment) are mapped as "**potential habitat**". These are areas *expected* to meet the HCP definition of suitable marbled murrelet habitat (containing an average of 2 platforms per acre, \geq five-acre patches, and within 50 miles of marine water; HCP chapter IV pages 40-42), but which have not been verified in the field to determine suitability.

Potential marbled murrelet habitat includes:

- a. All areas captured in the predictive model (Reclassified and Reclassified Plus).
- b. Other potential habitat identified by DNR foresters and biologists, as well as representatives from WDFW, USFWS and local Tribes. These areas are identified from field knowledge and other sources.

The original source of each polygon of potential habitat (modeled, field knowledge, or other) will be retained in a GIS marbled murrelet habitat database.

To date, approximately 40,224 acres (see map) of potential marbled murrelet habitat have been identified in the Northwest Region of the NPPU. Identification of potential marbled murrelet habitat for the South Puget Sound Region portion of the NPPU has been initiated. DNR, WDFW, and USFWS biologists have agreed that this process is likely to capture a sufficient proportion of the potential marbled murrelet habitat to advance the interim and long-term marbled murrelet conservation strategies for this planning unit.

Although DNR attempted to locate all potential habitat in the NPPU, there may be potential habitat in this planning unit not previously identified. The term “**newly identified suitable habitat**” is defined as habitat that was not located during the original selection process for potential marbled murrelet habitat. Hereafter, any newly identified suitable habitat blocks of 5 acres or more will not be surveyed for murrelet occupancy, but will be deferred from harvest during this interim period. During this interim period any newly identified suitable habitat blocks of 5 acres or more will not be required to have a buffer adjoining the habitat patch or a harvest timing restriction in adjacent unsuitable habitat.¹ The contribution of these unsurveyed newly identified suitable habitat blocks to the conservation strategy will be considered in the long-term marbled murrelet conservation planning process.

It is our opinion that the lack of a buffer and timing restriction for certain newly identified suitable habitat is a low risk element of this interim process due to the frequency of this type of unidentified suitable habitat occurring on the landscape. Additionally, if this does occur, it is our belief that it will most likely be low quality habitat – with a low chance of occupancy. If new information becomes available regarding occupied sites in the NPPU, the adaptive management process will be used to inform any further guidance on this issue.

One habitat type that will require special attention in newly-identified suitable habitat blocks is described as relatively young hemlock stands in which incipient, mistletoe-induced witches brooms comprise essentially the only platform structures in the stand; this is in distinction to older stands with mixed species and an array of platform types, including well-developed mistletoe brooming. USFWS, DNR, and WDFW staff biologists met to review this issue and agreed to work directly with WDFW staff when evaluating this habitat type.

2. Field Verification of Potential Marbled Murrelet Habitat Suitability

DNR staff biologists, foresters, or trained contractors will review each potential marbled murrelet habitat polygon in the field to verify and map the extent of **suitable marbled murrelet habitat**.

Contiguous areas of suitable habitat extending outside the original (potential marbled murrelet habitat) polygon will be incorporated in the suitable habitat delineation. Any area without contiguous suitable habitat as defined above will be classified as “**unsuitable habitat**”. Following this field evaluation, each potential habitat polygon will be fully resolved into suitable or unsuitable habitat areas. DNR’s GIS marbled murrelet habitat layer will be maintained to reflect this field-based habitat status determination.

3. Release of Unsuitable Marbled Murrelet Habitat

Areas that have been field-verified and identified as unsuitable habitat will be candidates for immediate release within the framework of the HCP.

¹ See one exception to this requirement in this document under “Timing Restrictions Required”.

- a. The HCP/Science Section of the DNR Land Management Division will be notified before unsuitable habitat is released; the HCP/Science Section will then notify USFWS staff in a timely manner. This release process requires documentation, both written and mapped, that will be sent to both NW Region and Region WDFW Biologists and the HCP/Science Section. Once the proper documentation has been received by the HCP/Science Section, the unsuitable habitat is officially released for the full range of management activities. Release acreages will be documented in the HCP Annual Report to the Services.
- b. Some previously surveyed and unoccupied modeled habitat polygons may contain unsuitable habitat. These polygons will also be released (following the process outlined above) if field assessments deem appropriate. For surveyed polygons that contain a mixture of suitable and unsuitable habitat, with no occupancy, the suitable habitat will be deferred from harvest, while the unsuitable habitat will be released for the full range of management activities.

4. Protection and Survey of Suitable Marbled Murrelet Habitat

All suitable marbled murrelet habitat will receive inland protocol surveys using methods approved by the Pacific Seabird Group or other methods approved by the USFWS, with the exception of suitable habitat in Natural Resource Conservation Areas and Natural Area Preserves. In these areas the DNR will survey a sample of the suitable habitat. Appropriate sampling design will be developed mutually between the DNR and the USFWS. It is likely that sampling will occur at a rate between 20-50%.

- a. All suitable marbled murrelet habitat (field delineated) will be protected with a 300-foot managed buffer (as per WAC 222-16-080 (1)(j)(v)) or a 165-foot no touch buffer until surveys are completed. Lesser buffers may be sufficient in certain topographic situations (i.e., buffers generally need not extend over a ridge top onto opposite slope). Timing restrictions will not be applied to management activities. These buffers are to be applied to the suitable habitat areas delineated from the currently identified and mapped potential habitat (40,224 acres) and immediately adjacent to proposed fiscal year 2008 sales and beyond.
- b. Buffers will not be required for unsurveyed suitable habitat immediately adjacent to any timber sales sold fiscal year 2007 and earlier.
- c. Once surveys are complete, buffers and timing restrictions are not required for unoccupied, suitable marbled murrelet habitat areas.

5. Protection of Occupied Sites

All occupied sites will be protected until the long-term conservation strategy for the NPPU is finalized. Occupied site boundaries will be determined on a case-by-case basis and in

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collaboration with USFWS and WDFW staff. Occupied sites will be protected by a 300-foot managed buffer, or a 165-foot no touch buffer (as above). Timing restrictions will also be applied to occupied sites.

6. Management of Suitable Marbled Murrelet Habitat per WAU

As per Step. 4 of the HCP Interim Marbled Murrelet Conservation Strategy (HCP Chapter IV p.40), some unoccupied suitable marbled murrelet habitat will be released for harvest. This follows successful completion of surveys in all suitable habitat below 3000' elevation in the north half of the NPPU (defined as the WAU division between the North Stillaguamish and South Stillaguamish WAU's, see attached map). DNR and the USFWS will consider further release of unoccupied suitable marbled murrelet habitat in the south half of the NPPU once those surveys are complete.

Surveyed unoccupied marbled murrelet habitat will be released for harvest if it is not within 0.5 miles of an occupied site and, after harvest, at least 50% of the suitable habitat on DNR-managed lands in the WAU would remain. This release process will require collaboration and concurrence by the USFWS prior to scheduling any management activities.

7. Allowable Operational Access in the Form of Roads and/or Yarding Corridors in Newly Identified Suitable Marbled Murrelet Habitat.

The DNR has a timber sale program consistent with the HCP in the NPPU. It has a high dependency on road access for timber harvest operations. Infrequently, these roads may conflict with newly identified suitable habitat. For the purpose of the interim time frame, operational access in the form of roads and/or yarding corridors will be allowed in **newly identified** suitable marbled murrelet habitat that meets the following criteria. This allowance for management in lower quality habitat types follows the guidelines in Step 2 of the HCP's marbled murrelet interim strategy (HCP IV.40). Data to develop these criteria were derived from current marbled murrelet occupied sites found within the North Puget Planning Unit.

Criteria 1

- Habitat \geq 5 acres but \leq 10 acres with \leq 10 platforms per acre **OR**
- Habitat $>$ 10 acres but \leq 20 acres with \leq 5 platforms per acre

As described under Criteria 1, if all or part of a suitable habitat block is within 0.25 miles of an occupied site, a two year protocol survey of the stand must be completed. If the stand is found to be unoccupied, operational access will be acceptable.

Criteria 2

- After a two year marbled murrelet protocol survey the stand is found to be unoccupied **AND**
- Habitat \geq 5 acres but \leq 10 acres with $>$ 10 platforms per acre **OR**

- Habitat > 10 acres but \leq 20 acres with > 5 platforms per acre **OR**
- Habitat > 20 acres with \leq 15 platforms per acre

Harvesting of Platform Trees

In all cases under Criteria 1 & 2, loss of platform trees **will** be minimal while allowing access needs. Where loss of platform trees is operationally unavoidable, highest priority must be given to retention of multi-platform trees (trees with \geq 4 platforms). USFWS and WDFW will be consulted to ensure that the loss or damage to platform trees is minimal.

Timing Restrictions Required

When operating within newly identified suitable habitat, yarding or operation of heavy machinery, felling or bucking **will not** be allowed during the daily peak activity periods within the critical nesting season. The critical nesting season is April 1st through August 31st. The daily peak activity period is defined as one hour before official sunrise to two hours after official sunrise and one hour before official sunset to one hour after official sunset.

No management will be allowed in newly-identified suitable habitat that meets the following criteria:

Criteria 3

- Habitat \geq 20 acres with > 15 platforms per acre
- Where this high quality habitat condition occurs, buffers and timing restrictions will be applied to these stands during the interim strategy period.

Pre-Approval Required

As early as possible in the presale planning process, the Region will submit documentation that describes the need for operational access through newly identified suitable habitat as described in Criteria 1 and 2. Any request for access through Criteria 2 areas will have completed murrelet occupancy survey results available. Adequate documentation must identify why access through suitable habitat is justified. Submit requests to the Land Management Division, HCP/Science Section for review and written approval.

Throughout the interim strategy outlined above, the Land Management Division's HCP Implementation Data Steward will be responsible to maintain and update the corporate marbled murrelet habitat GIS layers to reflect the current status of all habitat areas.

Summary

This agreement is for the interim marbled murrelet conservation strategy for DNR's HCP in the NPPU and is not intended to preclude future options for the long-term conservation strategy. If there is new empirical data related to murrelet occupancy on DNR-managed lands in the NPPU

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indicating that the measures outlined above fall short of the HCP commitments, we agree to make the necessary modifications to ensure the HCP objectives are met.

It is our opinion that this interim approach is consistent with the HCP. We note that the application of buffers and timing restrictions in many situations, intensive field inspections to determine murrelet habitat suitability, close oversight of marbled murrelet occupancy surveys, collaboration with WDFW and others to locate potential murrelet habitat all contribute to making this an appropriate interim conservation strategy. We also believe this interim approach improves upon the memo dated November 18, 2002. With this interim strategy we believe that we are maintaining substantial opportunities for credible long-term conservation planning for marbled murrelets and are complying with our Incidental Take Permit.


Please signify your concurrence with this agreement by signing below.

Sincerely,



Tami Miketa, HCP/Science Section
Assistant Division Manager
Land Management Division
WA Dept. of Natural Resources

I concur with the approaches outlined above:



Ken S. Berg, Manager
Western Washington Office
U.S. Fish and Wildlife Service

Date: 3/9/07

cc: Gretchen Nicholas, Land Management Division Manager
Jed Herman, Product Sales and Leasing Division Manager



July 16, 2009

Mr. Ken Berg, Manager
Washington Fish and Wildlife Office
U.S. Fish and Wildlife Service
510 Desmond Drive SE, Suite 102
Lacey, WA 98503-1273

Mr. Berg,

I am writing in reference to the WA Department of Natural Resources (DNR) 1997 Habitat Conservation Plan (HCP) for state trust lands relative to marbled murrelet conservation in the HCP South Puget Planning Unit (SPPU). Mark Ostwald, from your office, Peter Harrison, DNR Wildlife Biologist, Alan Mainwaring, South Puget Sound Region Biologist, and I have been participating in the development of an alternate interim marbled murrelet conservation strategy (ICS) for the SPPU. This letter is intended to provide specific guidance for the successful implementation of Step 2 of the HCP interim marbled murrelet conservation strategy using alternative methodology in lieu of the habitat relationship study as the ICS describes.

Background

The 145,000 acre SPPU is located in the Puget Sound Basin and was subjected to harvest early in Euro-American settlement in the late 1800's and extensive rail logging in the early 1900's. Typically, stands were clear cut, burned and allowed to naturally regenerate. Today, suitable marbled murrelet habitat occurs in areas with scattered remnant old-growth, older western hemlock stands infected with dwarf mistletoe, and areas of steep inaccessible terrain with pre-settlement forest conditions. Suitable murrelet habitat comprises less than one percent of the DNR managed forest land in SPPU.

The SPPU is unique within the DNR's HCP planning units, in that although it is within the breeding range of marbled murrelets, the adjacent offshore population of murrelets is extremely low. It is estimated that there are less than 200 birds located offshore during the breeding season. Low population numbers and limited suitable habitat indicate that the probability of inland detections of murrelets is very low. This suspicion is corroborated by the fact that murrelet detections on non-DNR lands, adjacent to the SPPU, have also been low. Without an adequate number of inland detections, the habitat relationship study outlined in the HCP is ineffective. This has been shown to be true for the North Puget Planning Unit (NPPU), where low numbers of detections during the habitat relationship study resulted in an ineffective habitat model. In lieu of the habitat relationship study, the DNR has developed alternate methodologies that we believe effectively identifies potential murrelet habitat in the SPPU. This alternate methodology applies known features of murrelet habitat to existing forest inventory data to develop models and screening tools that identify areas of potential murrelet habitat. This alternate methodology also

incorporates local and historical knowledge of known habitat areas. A similar process has been approved and applied in the NPPU with great success.

The purpose of this alternate approach to identify suitable marbled murrelet habitat is to adapt the current ICS to the unique circumstances in the SPPU while still meeting the overall intent of the HCP for murrelet conservation. It will also maintain conservation options for the forthcoming long-term conservation strategy, while keeping within the guidelines of the Incidental Take Permit issued to the DNR by your agency. We believe the following approach satisfies these objectives.

With the alternate interim marbled murrelet strategy outlined below, this document will supersede and replace the current interim marbled murrelet strategy for the SPPU (DNR HCP, IV pg. 39-46). The process described in this letter is intended for the interim period prior to the development of the long-term marbled murrelet conservation strategy for the SPPU. It is important to note this guidance follows the intent of the ICS five-step approach to implement the interim conservation strategy for the marbled murrelet. Implementation steps are detailed below.

1. Identification of Potential Suitable Marbled Murrelet Habitat

The following sources were used to identify “Potential Suitable Habitat”:

- DNR’s Weighted Old Growth Habitat Index,
- FRIS Age Data,
- Low level aerial surveys (Burger 2004),
- Forest Practices Board Manual Inventory Model Method for identifying marbled murrelet habitat, and
- local knowledge and professional judgment

The above sources were used to identify “Potential Suitable Habitat”. Suitable habitat contains at a minimum, an average of at least 2 platforms per acre, in greater than or equal to a five-acre patch, and within 50 miles of marine water (HCP chapter IV pages 40-42),. “Potential Suitable Habitat” has not been field verified to determine whether it qualifies as suitable habitat.

A. Definitions of Source Data to Identify “Potential Suitable Habitat”

1. Weighted Old Growth Habitat Index¹ (WOGHI)

The WOGHI is a scientifically derived screening tool developed and used by DNR to assess potential old growth. This indexing approach to old growth assessment is based on stand-level structural variables identified below and derived from the Forest Resource Inventory System (FRIS) data. This Geographic Information System (GIS) based tool has helped direct remote sensing review toward areas with large trees and structural complexity associated with murrelet nesting habitat. Variables of the WOGI include:

- Large trees (number of trees per acre > 40 inches dbh).
- Large snags (number of standing dead trees per acre > 20 inches dbh and >16 feet tall).
- Volume of down woody debris (cubic feet per acre).
- Tree size diversity – which is an indicator of multiple canopy structure

¹ Franklin, J. F., T. Spies, R. Van Pelt, T. Riepe, S. Hull, and W. Obermeyer. 2005. Definition and inventory of old-growth forests on DNR-managed state lands. Washington State Department of Natural Resources, Olympia, Washington.

2. FRIS Age Data

Stands recorded as 100 years or older were reviewed with digital orthophotos or aerial photos for canopy structure indicative of older forest.

3. Forest Practices Board Manual for Marbled Murrelet Inventory Model Method

This sampling method utilized the Board Manuals Inventory Model Method-WAC 222-12-090(15) (b). Using DNR's FRIS data DNR queried for stands likely to contain murrelet habitat characteristics utilizing the manuals Platform Units per Tree table which were incorporated into a GIS tool.

4. Low-Level Aerial Surveys

Remote areas of the SPPU and NPPU were evaluated for habitat quality utilizing Alan Burger's *Standard Methods for Identifying and Ranking Nesting Habitat of Marbled Murrelets in British Columbia* (Burger 2004) using Air Photo Interpretation and Low-Level Aerial Surveys.

5. Local Knowledge and Professional Judgment

Experienced state lands foresters and wildlife biologists examined landscape maps and delineated known and potential murrelet habitat based their expert opinion and their local knowledge of the sites. All proposed management activities are also evaluated for the presence of "Potential Suitable Habitat" prior to management activities taking place.

B. Existing Data

To date, approximately 7,853 acres of potential marbled murrelet habitat have been identified in the SPPU. DNR and USFWS biologists have agreed the habitat definition is likely to capture a sufficient proportion of the potential marbled murrelet habitat to advance the interim and long-term conservation strategies.

Over the last several years DNR Biologists and private contractors have field assessed 5,722 acres of the potential habitat (7,853 acres). The remaining 2,131 acres of potential habitat will be field assessed for habitat suitability as time and budget permits. Identified potential habitat will be treated as occupied to include buffers and timing restrictions while in the interim conservation strategy or until field assessments are completed and a habitat determination is made. The table below summarizes the planning unit habitat status to date.

Table 1. Habitat Status by Area and Acreage (see attached maps for SPPU Tiger, Elbe, Black Diamond, and Belfair)

Area	Suitable Habitat	Unsuitable Habitat	Occupied Habitat	Potential Habitat
Tiger Mt.	142	559	0	0
Elbe/Tahoma	96	816	468	1,377
Black Diamond	355	2,524	111	0
Belfair/Kitsap	81	570	0	754
Totals:	674	4,469	579	2,131
Total acres of habitat identified in SPPU				7,853

C. Newly Identified Suitable Habitat

Hereafter, any newly identified suitable habitat blocks of 5 acres or more containing an average of 2 platforms per acre and within 50 miles of marine waters will not be required to be surveyed, but will be deferred from harvest during the ICS. The term “newly identified suitable habitat” is defined as, potential habitat that was not found during the original selection process for potential marbled murrelet habitat. It is expected that the long-term marbled murrelet conservation strategy will make determinations regarding how these newly identified suitable habitat areas may contribute to murrelet conservation. Any newly identified suitable habitat blocks of 5 acres or more will have a forested buffer applied to the habitat patch and a timing restriction applied. DNR will maintain a record of newly identified suitable habitat and report the acreage to the Services annually.

A habitat condition that will require special attention in newly-identified suitable habitat blocks is described as relatively young western hemlock stands in which incipient, mistletoe-induced witch’s brooms comprise essentially the only platform structures in the stand; this is in distinction to older stands with mixed species and an array of platform types, including well-developed mistletoe brooming. USFWS, DNR and WDFW staff biologists met to review this issue and agreed to work directly with WDFW staff when field assessing this habitat condition.

2. Field Verification of Potential Marbled Murrelet Habitat Suitability

DNR staff biologists, trained foresters, or trained contractors will review each potential marbled murrelet habitat polygon in the field to verify and map the extent of suitable habitat.

Contiguous areas of suitable habitat extending outside the original (potential marbled murrelet habitat) polygon will be incorporated in the suitable habitat delineation. “Potential Habitat” not meeting the suitable habitat definition as defined above, will be classified as “unsuitable habitat”. Following this field assessment, each potential habitat polygon will be fully resolved into suitable or unsuitable habitat areas. DNR’s GIS marbled murrelet habitat layer will be maintained to reflect this field-based habitat status determination.

3. Release of Unsuitable Marbled Murrelet Habitat

Areas that have been field-verified and identified as unsuitable habitat will be candidates for immediate release within the framework of the HCP. The Ecosystem Services Section of the DNR Land Management Division will be notified before unsuitable habitat is released. This release process requires documentation, both in writing and identified on maps. Once the proper documentation has been received by the Ecosystem Services Section, the unsuitable habitat is officially released for the full range of management activities. Released acreages of unsuitable habitat will also be documented in the HCP Annual Report to the Services. Areas that meet the definition of suitable habitat will not be released at this time, regardless of occupancy status.

4. Protection of Suitable Marbled Murrelet Habitat

All suitable marbled murrelet habitat (field delineated) will be protected with a 300-foot managed buffer (as per WAC 222-16-080 (1) (j) (v)) or a 165-foot no touch buffer. Lesser buffers may be sufficient in certain topographic situations (i.e., buffers generally need not extend over a ridge top onto the opposite slope).

5. Protection of Occupied Sites

All occupied sites will be protected until the long-term conservation strategy for the SPPU is completed. Occupied sites will be protected by a 300-foot managed buffer, or a 165-foot no touch buffer. Timing restrictions will also be applied.

Summary

Throughout the interim strategy outlined above, the Land Management Division's Ecosystem Services Section will be responsible to maintain and update the corporate marbled murrelet habitat GIS layers to reflect the current status of all habitat areas.

If new information on marbled murrelet ecology becomes available relevant to the SPPU, and it conflicts with the intent of the HCP conservation goals, this letter will be modified or replaced. At no time will the HCP conservation goals described for marbled murrelets be compromised. It is DNR's opinion that the approaches described in this document meet the intention of the HCP and USFWS decision documents. Any future information that contradicts this will be closely analyzed by the DNR and USFWS to determine alternative approaches.

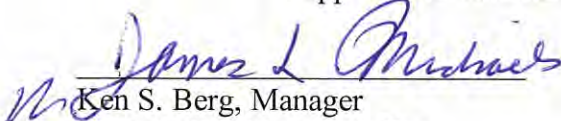
Please signify your concurrence with the approach outlined above by signing each of these two originals. Please return one original to me and retain the other original for your records. It is always a pleasure to work with you and your staff.

Sincerely,



Tami Miketa
Assistant Division Manager
Ecosystem Services Section
Land Management Division
WA Dept. of Natural Resources

I concur with the approaches outlined above:



Ken S. Berg, Manager
Western Washington Office
U.S. Fish and Wildlife Service

Date: 7/17/09

Attachment: Accompanying maps showing areas of potential, suitable, and unsuitable habitat. Known occupied areas are also identified.

cc: Gretchen Nicholas, Land Management Division Manager
Jed Herman, Product Sales and Leasing Division Manager
Randy Acker, South Puget Sound Region Manager

References

Burger, Alan E. 2004. *Standard Methods for Identifying and Ranking Nesting Habitat of Marbled Murrelets (Brachyramphus Marmoratus) in British Columbia Using Air Photo Interpretation and Low-Level Aerial Surveys* Report to Ministry of Water, Land and Air Protection Biodiversity Branch Victoria, BC and Ministry of Forests Vancouver Forest Region, Nanaimo, BC. 31 March 2004

Washington State Department of Natural Resources. 1997. *Final Habitat Conservation Plan*. Olympia, WA.

**SOUTH PUGET SOUND REGION
NORTH PUGET PLANNING UNIT
AND TIGER UNIT (South Puget Planning Unit)
MARBLE MURRELET HABITAT**

Eight Miles to North in Marckworth State Forest:
13 Unsuitable Polygons, 249 Acres

N. PUGGET



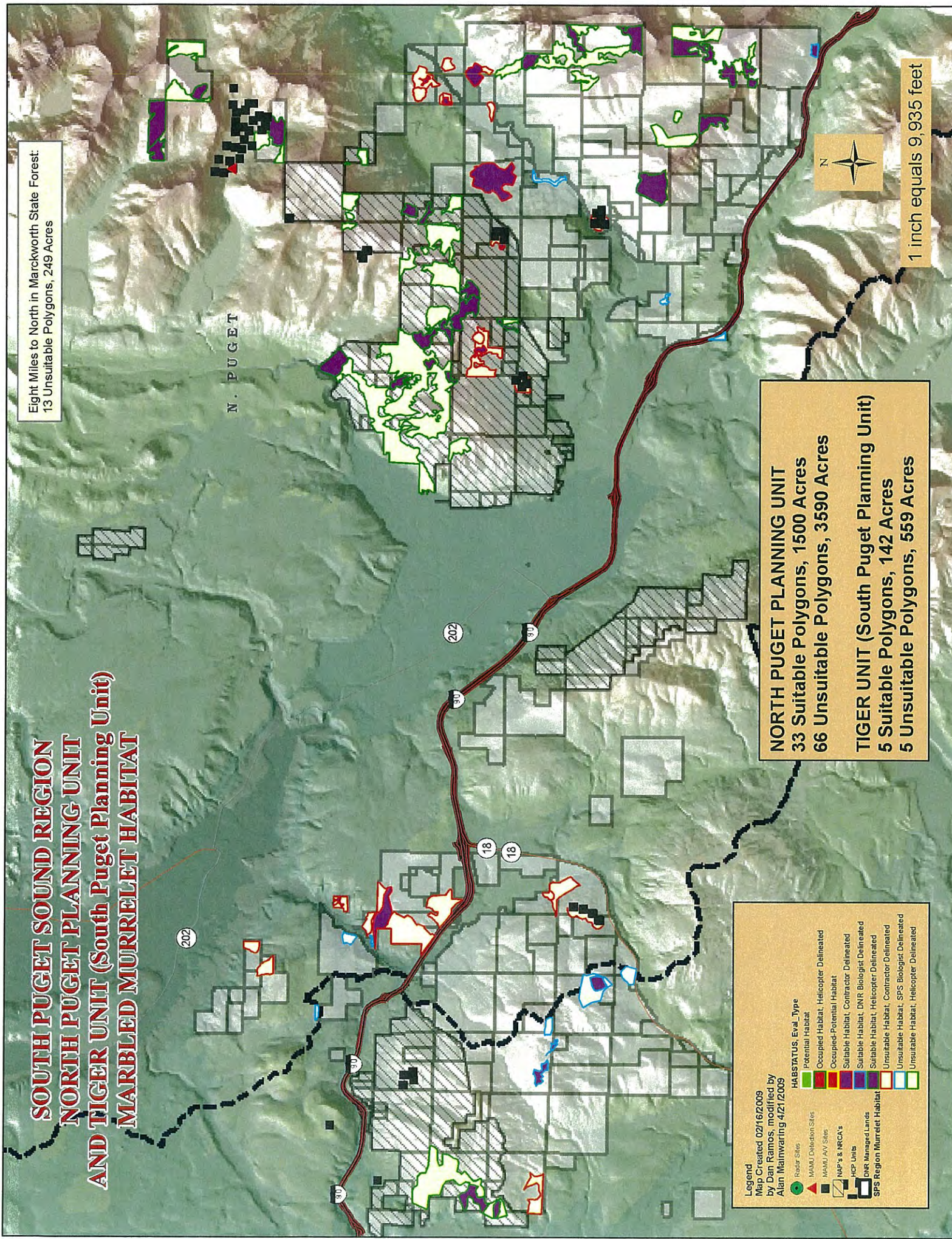
1 inch equals 9,935 feet

Legend
Map Created 02/16/2009
by Dan Ramos, modified by
Alan Mainwaring 4/21/2009

	Road Sites		Potential Habitat
	MAMU Deletion Sites		Occupied Habitat, Helicopter Delineated
	MAMU AV Sites		Occupied-Potential Habitat
	NAP's & NRCA's		Suitable Habitat, Contractor Delineated
	HCP Units		Suitable Habitat, DNR Biologist Delineated
	DNR Managed Lands		Suitable Habitat, Helicopter Delineated
	SPS Region Murrelet Habitat		Unsuitable Habitat, Contractor Delineated
			Unsuitable Habitat, SPS Biologist Delineated
			Unsuitable Habitat, Helicopter Delineated

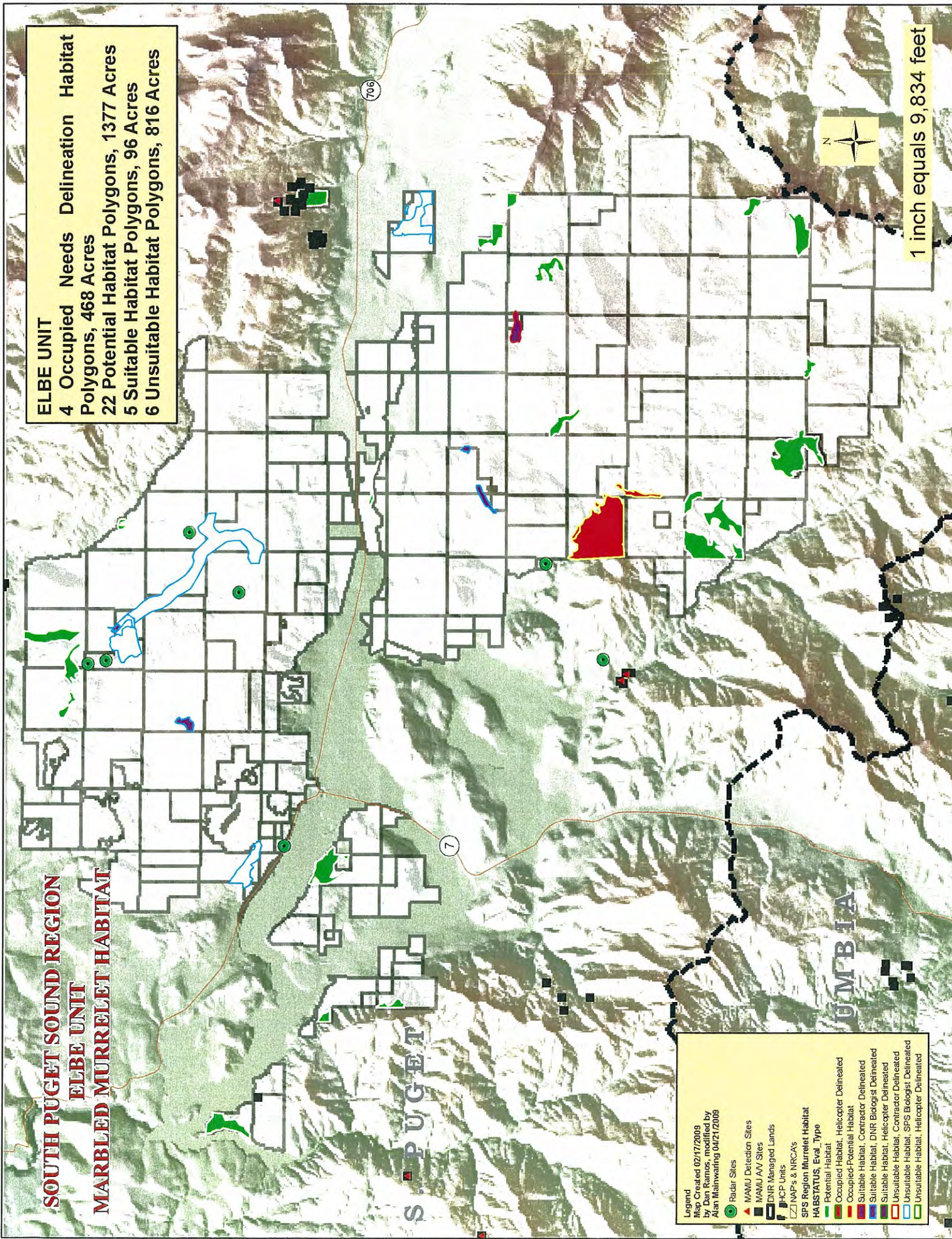
NORTH PUGET PLANNING UNIT
33 Suitable Polygons, 1500 Acres
66 Unsuitable Polygons, 3590 Acres

TIGER UNIT (South Puget Planning Unit)
5 Suitable Polygons, 142 Acres
5 Unsuitable Polygons, 559 Acres



**SOUTH PUGET SOUND REGION
ELBE UNIT
MARBLED MURRELET HABITAT**

ELBE UNIT
 4 Occupied Needs Delineation Habitat Polygons, 468 Acres
 22 Potential Habitat Polygons, 1377 Acres
 5 Suitable Habitat Polygons, 96 Acres
 6 Unsuitable Habitat Polygons, 816 Acres



1 inch equals 9,834 feet

Legend
 Map Created 02/17/2009
 by Dan Ramos, modified by
 Alan Mainwaring 04/21/2009

- Radar Sites
- MANU Detection Sites
- MANU AVV Sites
- DNR Managed Lands
- BFCP Units
- NAP's & WRCA's
- SPS Region Murrelet Habitat
- HABSTATUS, Eval_Type
- Potential Habitat
- Occupied Habitat, Helicopter Delineated
- Occupied-Potential Habitat
- Suitable Habitat, Contractor Delineated
- Suitable Habitat, DNR Biologist Delineated
- Suitable Habitat, Helicopter Delineated
- Unsuitable Habitat, Contractor Delineated
- Unsuitable Habitat, SPS Biologist Delineated
- Unsuitable Habitat, Helicopter Delineated

**SOUTH PUGET SOUND REGION
BLACK DIAMOND UNIT
MARBLED MURRELET HABITAT**

BLACK DIAMOND UNIT
1 Occupied Polygon, 111 Acres
17 Suitable Polygons, 355 Acres
29 Unsuitable Polygons, 2524 Acres

To West in Isolated Holdings:
 5 Unsuitable Polygons, 229 Acres, 2, 6, and 10 miles away.

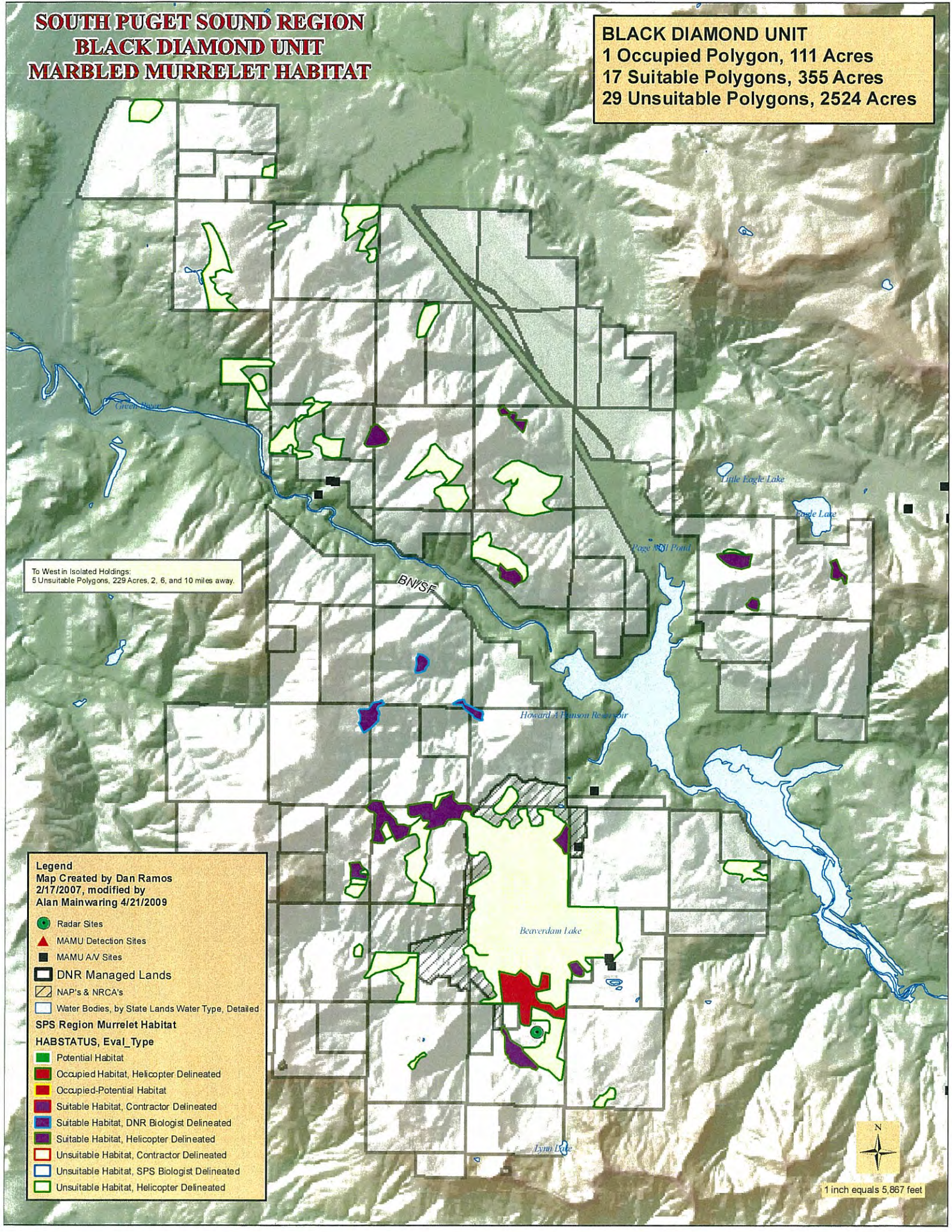
Legend
 Map Created by Dan Ramos
 2/17/2007, modified by
 Alan Mainwaring 4/21/2009

- Radar Sites
- ▲ MAMU Detection Sites
- MAMU AV Sites
- ▭ DNR Managed Lands
- ▨ NAP's & NRCA's
- Water Bodies, by State Lands Water Type, Detailed

SPS Region Murrelet Habitat

HABSTATUS, Eval_Type

- Potential Habitat
- Occupied Habitat, Helicopter Delineated
- Occupied-Potential Habitat
- Suitable Habitat, Contractor Delineated
- Suitable Habitat, DNR Biologist Delineated
- Suitable Habitat, Helicopter Delineated
- Unsuitable Habitat, Contractor Delineated
- Unsuitable Habitat, SPS Biologist Delineated
- Unsuitable Habitat, Helicopter Delineated

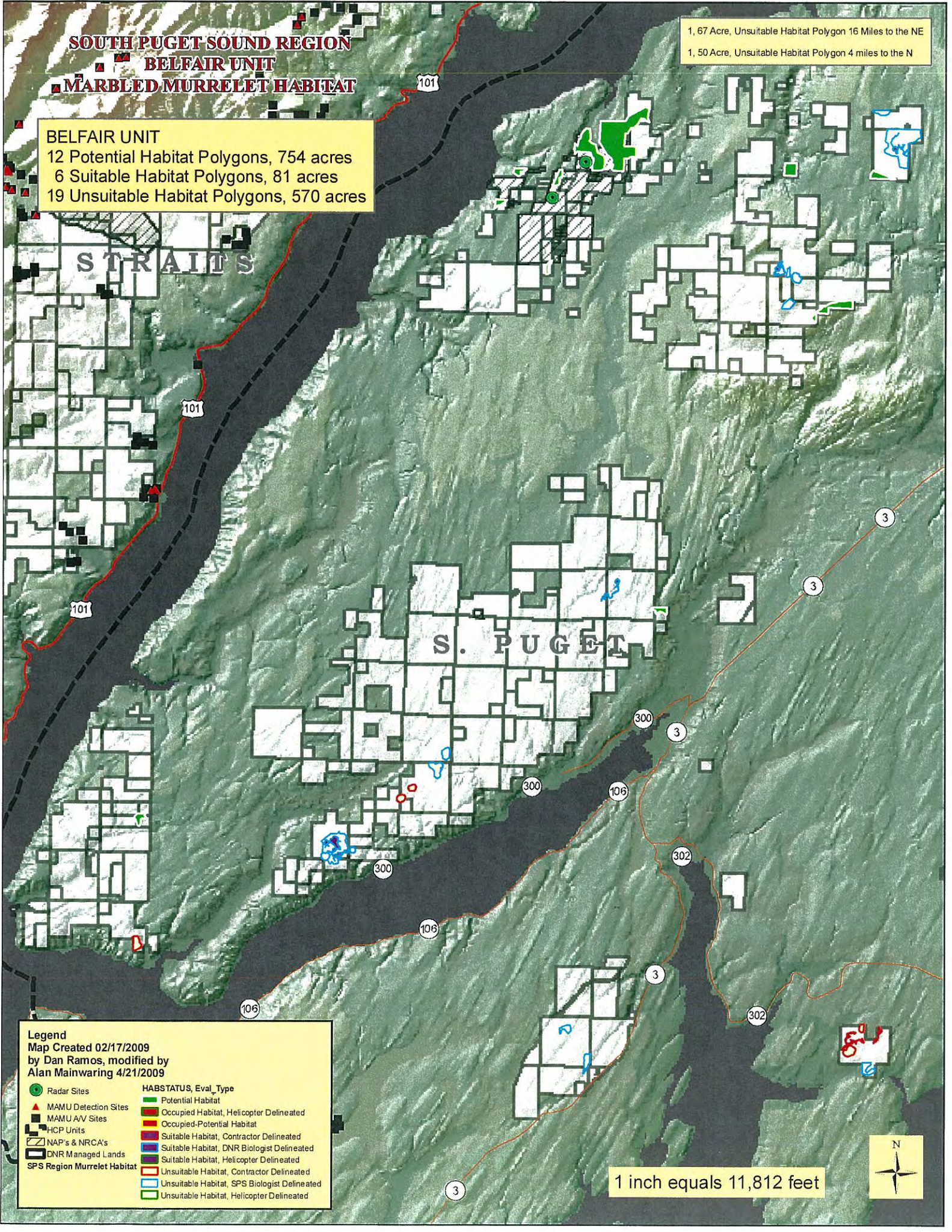


1 inch equals 5,867 feet

**SOUTH PUGET SOUND REGION
BELFAIR UNIT
MARBLED MURRELET HABITAT**

1, 67 Acre, Unsuitable Habitat Polygon 16 Miles to the NE
1, 50 Acre, Unsuitable Habitat Polygon 4 miles to the N

BELFAIR UNIT
12 Potential Habitat Polygons, 754 acres
6 Suitable Habitat Polygons, 81 acres
19 Unsuitable Habitat Polygons, 570 acres



Legend
Map Created 02/17/2009
by Dan Ramos, modified by
Alan Mainwaring 4/21/2009

- | | |
|-------------------------------|--|
| ● Radar Sites | HABSTATUS, Eval_Type |
| ▲ MAMU Detection Sites | ■ Potential Habitat |
| ■ MAMU A/V Sites | ■ Occupied Habitat, Helicopter Delineated |
| ■ HCP Units | ■ Occupied-Potential Habitat |
| ■ NAP's & NRCA's | ■ Suitable Habitat, Contractor Delineated |
| ■ DNR Managed Lands | ■ Suitable Habitat, DNR Biologist Delineated |
| ■ SPS Region Murrelet Habitat | ■ Suitable Habitat, Helicopter Delineated |
| | ■ Unsuitable Habitat, Contractor Delineated |
| | ■ Unsuitable Habitat, SPS Biologist Delineated |
| | ■ Unsuitable Habitat, Helicopter Delineated |

1 inch equals 11,812 feet

