**Update October 11, 2011**

**MATERIAL SUPPORTING THE NOTICE, BUT NOT PART OF THE NOTICE.**

**INFORMATION CONCERNING WILDLIFE HABITAT FOR THE SURVIVAL OF SPECIES AT RISK IN THE CAMPBELL RIVER NATURAL RESOURCE DISTRICT**

This document provides background information and support to the legal framework of the Notice[[1]](#footnote-1) of indicators of the amount, distribution and attributes of wildlife habitat required for the survival of species at risk in the Campbell River Natural Resource District (hereafter referred to as the District). This document is not part of the legal Notice. Its purpose is to provide additional information for consideration by delegated decision makers and by those persons required to prepare results and strategies consistent with section 7(1) of the *Forest Planning and Practices Regulation* or Act in a manner consistent with section 9(3) of the *Woodlot Licence Planning and Practices Regulation*. This background document is an update to and replaces the previous background document provided October 25, 2004.

[PDF map](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/Figures/District_Boundaries/dcr.pdf)

1. **BACKGROUND INFORMATION**

For an updated list of identified wildlife, updated species accounts and updated procedures for implementing the IWMS consult the following webpage.

[Identified Wildlife Management Strategy](http://www.env.gov.bc.ca/wld/frpa/iwms/iwms.html)

The 1% impact budget associated with the Identified Wildlife Management Strategy (1% IWMS budget) identified in this document is directed at the short-term timber supply. For the purpose of this Notice the short-term timber supply impact budget represents 1% of the total mature timber harvesting land base (THLB) in age classes older than 60 years at the time of TSR2. Within the District the short-term timber supply impact budget is 2491 ha. Current to April 12, 2011, all approved wildlife habitat areas account for an impact of 1826 ha to the mature THLB. Therefore, the remaining available budget for the short term timber impact is **665 ha**.

**Summary of mature THLB impacts for amounts included in the Notice and approved WHAs in the Campbell River Natural Resource District.**

For a summary of the remaining THLB budget consult the following webpage for approved WHAs within the District.

<http://www.env.gov.bc.ca/cgi-bin/apps/faw/wharesult.cgi?search=forest_region&forest=Campbell+River&submit2=Search>

Indicators of amount, distribution and attributes included in the Notice are based on existing data, current knowledge of species distribution, inventory efforts, and species biology, including territory size and intraspecific competition. In many cases, comprehensive inventories have not been completed. Where inventory work generates a greater number of known occurrences and suitable habitat, the Notice may be amended to reflect a greater number of anticipated wildlife habitat areas. Any amendment to the Notice will be consistent with the policy direction on timber supply impacts.

Species accounts for each of the species mentioned in the Notice can be obtained from the Identified Wildlife Management Strategy website:

<http://www.env.gov.bc.ca/wld/frpa/iwms/accounts.html>

**Central Coast LUO**

It is recognized that upon complete implementation of the Central Coast Land Use Order (CCLUO), the Campbell River Notice will be re-evaluated to address any land use decisions, including Conservancies, that may affect the 1% impact budget and the amounts included in the Notice.

Unfortunately, it is not possible to estimate exactly how many additional WHAs will be established in the CC LUO portion of the District because of the ongoing Strategic Landscape Reserve Design Process (SLRD). WHAs may be established utilizing the 1% IWMS budget if they are not protected through the SLRD process. The SLRD process may result in establishment of soft and hard reserves which could subsequently receive legal designation in the form of WHAs. It is recommended that distribution of habitat protection in FSPs in response to the Section 7 notices should occur in such gap areas first where these are/become obvious.

1. **Coastal (“Queen Charlotte”) Goshawk (*Accipiter gentilis laingi*)**

***Amount:***

|  |  |  |
| --- | --- | --- |
|  | Gross amount (ha) | THLB amount (ha) |
| Section 7 Notice | 1743 | 764 |
| Established WHAs (12) | 4349.3 \* | 893.1 |
| Proposed WHAs (0) | 0 | 0 |

\*includes foraging area of WHA 1-005 (2592.2 ha total)

Due to the ongoing SLRD planning in the mainland portion and OGMA planning in the Vancouver Island portion of the District, we presently are not able to predict the exact number of potential future WHAs for the District.

Since the amount stated in the section 7 notice has been surpassed, the section 7 notice for Coastal Goshawk is “turned off” - FSP authors are not required to write results and strategies for the protection of this species. Even though the section 7 notice amount has been exceeded it does not preclude the consideration of future WHAs for this species.

Information on modelled nesting habitat for the District is available through the section 7 ftp site.

Information on modelled nesting habitat for the mainland portion of the District is available through the following link:

[NOGO Model (mainland): ESRI raster file](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/GIS/NOGO/cc_nhsi/)

Information on modelled nesting habitat for the island portion of the District is available through the following link:

[NOGO Model (island): ESRI raster file](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/GIS/NOGO/cc_nhsi_nont/)

1. **Marbled Murrelet (Brachyramphus marmoratus)**

***Amount:***

|  |  |  |
| --- | --- | --- |
|  | Gross amount (ha) | THLB amount (ha) |
| Section 7 Notice | The amount equal to the Suitable habitat in NC plus THLB amount | 1431 |
| Established WHAs (68) | 6791.6 | 754 |
| Proposed WHAs (17) | 916.2 | 200 |

Landscape Unit Planning has been completed for many of the Landscape Units within the District. It is intended that forest tenure holders will continue to identify old growth management areas that overlap suitable Marbled Murrelet nesting habitat consistent with the Landscape Unit Planning Guidelines and Marbled Murrelet habitat requirements outlined in the species account for Marbled Murrelet in the Accounts and Measures for Managing Identified Wildlife (Identified Wildlife Management Strategy Version 2004).

The Marbled Murrelet Letter of Clarification, (Dec 1, 2005) outlines current policy for the management of Marbled Murrelet nesting habitat; establishment of Old Growth Management Areas, the available portion of the District 1% budget and the non-contributing landbase. Amounts included in the Notice for Marbled Murrelet are considered additive to one another. Follow the link below to access the letter of clarification:

[Letter of clarification](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/Figures/MAMU/letter_clarification/)

Due to the ongoing SLRD planning in the mainland portion and OGMA planning in the Vancouver Island portion of the District, we presently are not able to predict the exact number of potential WHAs for the District.

***Distribution:***

Field verified polygons/potential WHAs, air photo interpretation, low level aerial assessments, and MMRT[[2]](#footnote-2) modelled polygons may be used to satisfy notice requirements. Certainty about habitat quality is highest for field verified - and lowest for modelled polygons. For prescribing and/or implementing results and strategies to meet the Notice requirements, it is thus suggested to use field verified polygons with higher certainty before using (modelled) polygons with lower certainty. From the air photo interpretation, outputs of very high, high and moderate (classes 1-3 respectively) may be used to satisfy the Notice requirements. Consult Table 1 below for an overview of available information on Marbled Murrelet.

**Table 1: Overview of Marbled Murrelet nesting habitat data (available through section 7 ftp site unless otherwise noted in table) that may be used to satisfy notice requirements.**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of Data** | **Data type**  | **Data quality/habitat type**  | **Available for Campbell River District?**  | **Available for Campbell River District?**  |
|  |  |  |  |  |
| WHA1\_419\_to\_426\_Mar31\_10 (2010)  | ESRI shp file  | field verified (proposed WHA)  | yes (mainland)  | no  |
|  |  |  |  |  |
| SCC\_mamu\_airphoto (2009)  | ESRI shp file  | airphoto interpretation  | yes (mainland)  | yes  |
|  |  |  |  |  |
| Aerial surveys public (not available through ftp – see link in text below for access)  | “Mash up” (no GIS file available)  | low level aerial assessment  | Yes (Vancouver Island)  | yes  |
|  |  |  |  |  |
| MMRT (2008)  | ESRI shp file  | Modelled  | yes  | yes  |

Follow the links below to shp files for the proposed WHAs.

[CRRD proposed WHAs](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/GIS/MAMU/proposedTier1_WHA/) (SCC LUO, WHA 1 419-426)

[CRRD proposed WHAs](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/GIS/MAMU/pWHAs/) (remainder of CRRD)

**Marbled Murrelet Inventories**

Air-photo interpretation is available for the area of the District covered by the South Central Coast Order. The spatial information can be accessed here:

[South Coast airphoto interpretation](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/North_Island_Central_Coast_FD/Supporting_Info/GIS/MAMU/SCC_mamu_habitat_ratings/)

(Air-photo interpretation should be used before MMRT modelled polygons.)

Low level aerial assessment polygons are available for the Vancouver Island portion of the District. The link below leads to a “mash up” for these assessments.

<http://littleearth.ca/moe/mamu/>

The MMRT model has been developed and field verified with the support of the Marbled Murrelet Recovery Team to identify potential suitable Marbled Murrelet nesting habitat at a coarse scale. This model serves as a useful tool for identifying potential habitat at a coarse scale, but should not be used to identify individual habitat polygons at an operational scale. The model should be used where field verified polygons (including low level aerial assessments) and airphoto interpretation are not available. Follow the link below to access the MMRT shp file:

[MMRT model](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/GIS/MAMU/MMRT/)

There are 68 MaMu WHAs approved in the District with a 754 ha THLB impact.

1. **Red-legged Frog (Rana aurora)**

***Amount:***

|  |  |  |
| --- | --- | --- |
|  | Gross amount (ha) | THLB amount (ha) |
| Section 7 Notice  | 50 | 30 |
| Established WHAs (0) | 0 | 0 |
| Proposed WHAs (6) | 68.8 | TBD |

Estimates of mature timber supply impacts are based on estimates provided in the “Estimated Impact of the Identified Wildlife Management Strategy (Version 2004) on Provincial Timber Supply”.

***Distribution:***

**Red Legged Frog Inventories**

Limited inventories have occurred on the Vancouver Island portion of the District, and on the mainland coast in the Fulmore and Quadra LU. Breeding ponds have been recorded in the Nootka, Tlupana, Sayward, Salmon, Fulmore and Quadra LUs.

Much less is known about the terrestrial habitat requirements of Red-legged frogs and WHAs are designed to protect the integrity of breeding habitats. To what extent the terrestrial habitat needs of Red-legged frogs are addressed by WHAs is unknown.

Information on survey results and known locations of Red-legged frog breeding habitats can be obtained through the Ministry of Environment’s Wildlife Species Inventory (SPI) database and/or the BC Conservation Data Centre.

**Link to SPI:** [**http://www.env.gov.bc.ca/wildlife/wsi/siwe.htm**](http://www.env.gov.bc.ca/wildlife/wsi/siwe.htm)

**Link to BC CDC:** [**http://www.env.gov.bc.ca/cdc/**](http://www.env.gov.bc.ca/cdc/)

No Red Legged Frog WHAs exist in the District. There are 6 proposed WHAs in the District that can be found at the link below:

[CRRD proposed WHAs](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/GIS/MAMU/pWHAs/)

**Keen’s Long-eared Myotis (Myotis keenii)**

***Amount:***

|  |  |  |
| --- | --- | --- |
|  | Gross amount (ha) | THLB amount (ha) |
| Section 7 Notice  | 40 | 30 |
| Established WHAs (1) | 29.1 | 26 |
| Proposed WHAs (1) | 53 | TBD |

The amount in the Notice is based on the anticipated need for 1 wildlife habitat areas for Keen’s Long-eared Myotis. Information is available from the Ministry of FLNR. Estimates of mature timber supply impacts are based on estimates provided in the “Estimated Impact of the Identified Wildlife Management Strategy (Version 2004) on Provincial Timber Supply”.

Since this species is data sensitive please contact FLNRO for details.

[CRRD proposed WHAs](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/GIS/MAMU/pWHAs/)

1. **Great Blue Heron (Ardea herodias fannini)**

***Amount:***

|  |  |  |
| --- | --- | --- |
|  | Gross amount (ha) | THLB amount (ha) |
| Section 7 Notice  | 160 | 24 |
| Established WHAs (0) |  |  |
| Proposed WHAs (0) |  |  |

The amount in the Notice is based on the anticipated need for 2 future wildlife habitat areas for Great Blue Heron. Estimates of mature timber supply impacts are based on estimates provided in the “Estimated Impact of the Identified Wildlife Management Strategy (Version 2004) on Provincial Timber Supply”. Due to data sensitivity concerns heron nest sites are not spatially depicted. For information on the location of heron nest sites and future wildlife habitat areas please contact FLNRO, Nanaimo.

No Great Blue Heron WHAs exist in the District.

1. **Coastal Tailed Frog (Ascaphus truei)**

Results and strategies are not necessary for management units without habitat polygons as apparent in the GIS information for tailed frog referenced below (Distribution section).

***Amount:***

|  |  |  |
| --- | --- | --- |
|  | Gross amount (ha) | THLB amount (ha) |
| Section 7 Notice  | 80 | 20 |
| Established WHAs (0) |  |  |
| Proposed WHAs (0) |  |  |

The amount in the notice was originally based on the anticipated need for 5 wildlife habitat areas for coastal Tailed Frog, on the mainland portion of the Campbell River Natural Resource District. However, due to the ongoing SLRD planning in the mainland portion of the District, we presently are not able to predict the exact number of potential future WHAs for the District. (see details in background information above).

***Distribution:***

Significant strides have been made since 2006 to develop a model estimating the habitat suitability for Coastal Tailed Frog on the Coast of British Columbia. Modelled frog streams for the CCLUO area can be found at the section 7 ftp site at the following link: <http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/GIS/TAFR/>

Efforts to verify and validate the model in the District have been limited. Modelled estimates should be used in prescribing and/or implementing results and strategies that may satisfy the Section 7 notice requirements in the District. From the modelled frog streams, habitat classes 1 and 2 (ruggedness 30%-70% and 70%- 120% respectively) may be used to satisfy Notice requirements.

Further details can be found in Michelfelder et al. 2008.

[Section 7 ftp:report](http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/Approved_FRPR_sec7_WLPPR_sec9_Notices_and_Supporting_Info/Species_at_Risk/Campbell_River_FD/Supporting_info_CRFD_revised_August_2011/Docs/TAFR/TAFR_Report.pdf)

For best management practices related to tailed frog streams including recommended stream buffers and basin management consult Daust *et al.* 2010.

No Coastal Tailed Frog WHAs exist in the District.

**Northern Pygmy-Owl (Glaucidium gnoma swarthy)**

Currently, there is no notice given for Northern Pygmy Owls. It is, however, listed as a species at risk under the *Government Actions Regulation* and licensees may find new inventory information available for Northern Pygmy Owls useful as part for their Forest Stewardship Planning and Operations. In 2008, an ongoing inventory for Northern Pygmy-Owls was initiated in the District. Surveys consist mainly of call-playback surveys augmented by nest searches. Due to their inconspicuous nature, small size and the difficulty locating small cavity nests, multiple detections of birds are used to confirm breeding habitat and establish residency.

Continuing inventory efforts are filling knowledge gaps on habitat suitability and the distribution and size of populations of Northern Pygmy-Owls in the Campbell River Natural Resource District. This information will inform management decisions around their conservation needs.

Information on survey results and known detections of Northern Pygmy-Owls can be obtained through the Ministry of Environment’s Wildlife Species Inventory (SPI) database and/or the BC Conservation Data Centre.

**Link to SPI:** [**http://www.env.gov.bc.ca/wildlife/wsi/siwe.htm**](http://www.env.gov.bc.ca/wildlife/wsi/siwe.htm)

**Link to BC CDC:** [**http://www.env.gov.bc.ca/cdc/**](http://www.env.gov.bc.ca/cdc/)

Literature cited

Daust, D., L. Kremsater, C. Apps, K. Brunt, A. Burger, F. Doyle, K. Dunsworth, L. Dupuis, P. Friele, G.MacHutchon, T. Mahon, E. McClaren, V. Michelfelder, B. Pollard, D. Seip, J.D. Steventon, L. Waterhouse. 2010. Focal Species Risk Thresholds for BC’s North and Central Coast. Report to the Joint Coastal Landand Resource Forum Technical Liaison Committee. Integrated Land Management Bureau, Nanaimo, B.C.

Michelfelder, V., R. van der Marel, K. Dunsworth. 2008. Proposed Wildlife Habitat Areas for the Coastal Tailed Frog *(Ascaphus truei)* on the Central Coast of British Columbia. Draft Report. Ministry of Environment, Environmental Stewardship and Protected Area Division. Hagensborg, BC.

1. Signed July 27, 2004. Hereafter referred to as the Notice. [↑](#footnote-ref-1)
2. MMRT = Marbled Murrelet Recover Team [↑](#footnote-ref-2)