

**Homfray Landscape Unit Plan**  
For Old Growth Management Areas



**Ministry of Forests, Lands and  
Natural Resource Operations**

**South Coast Region**

December 2014

## Acknowledgements

The Ministry of Forests, Lands and Natural Resource Operations recognises the following participants and contributors, without which the completion of this Landscape Unit Plan would not have been possible:

Interfor Corporation (previously known as International Forest Products Limited):  
Brynna Check, RPF; Mike Landers, RPF; RPBio; Wayne Wall, RPBio

Tania Pollock, RPF; Brian Smart, RPF, RPBio

Province of British Columbia: Chuck Anderson, RPF; Cris Greenwell; Lew Greentree;  
Alan Shaw, RPF, Steve Gordon, RPBio

## Executive Summary

The Homfray Landscape Unit is situated on the eastern side of Homfray Channel and south-eastern side of Toba Inlet on the Southern Mainland Coast. The Landscape Unit covers a total of 41,630 hectares (ha) and is within two ecosections<sup>1</sup>.

A small part at the southern end (includes Desolation Sound Marine Provincial Park) is within the Lower Mainland Ecoregion, while the remainder of the Landscape Unit is within the Pacific Ranges Ecoregion. The Landscape Unit includes the Coastal Western Hemlock (CWH) and Mountain Hemlock (MH) Biogeoclimatic Ecosystem Classification (BEC) zones and natural disturbance types (NDT) 1 and 2. There is also a significant amount of high elevation non-forested areas in NDT5<sup>2</sup>. The Homfray Landscape Unit has been assigned an Intermediate Biodiversity Emphasis option (BEO). Old seral forest representation targets are based on a percentage of productive forest by BEC unit. Old seral representation targets have been achieved through the spatial delineation of Old Growth Management Areas (OGMA) that are a combination of old forest and recruitment forest. The amount of old forest retained is based on a percentage of the amount of forested area existing in a specified BEC variant in a Landscape Unit. Areas within Desolation Sound Marine Park that were identified as having suitable characteristics for biodiversity conservation have been identified and contribute to the old forest targets for the Homfray Landscape Unit. Although these areas contribute to meeting the old forest targets, they are not established as OGMA as part of the Landscape Unit planning.

The old seral forest representation target for the CWH dm is 655 ha and 692 ha have been delineated in OGMA. An additional 164 ha of suitable old forest representation has been identified in the Desolation Sound Marine Provincial Park.

The old seral forest representation target for CWH vm1 is 580 ha and 585 ha have been delineated in OGMA.

The old seral forest representation target for CWH vm2 is 672 ha and 700 ha have been delineated in OGMA.

The old seral forest representation target for CWH xm is 67 ha and 89 ha of suitable old forest representation have been identified in the Desolation Sound Marine Provincial Park.

The old seral forest representation target for the MH mm1 is 669 ha and 735 ha have been delineated in OGMA.

---

<sup>1</sup> Demarchi, D. 1996. An introduction to the ecoregions of British Columbia. Wildlife Branch, Ministry of Environment, Lands and Parks, Victoria. Ministry of Sustainable Resource Management. Update March 2004. British Columbia; Ecoregion Ecosystem Classification Units, Ver. 2.01

<sup>2</sup> NDT1 encompasses those ecosystems with rare stand-initiating events. NDT2 includes ecosystems with infrequent stand initiating events. NDT5 is Alpine Tundra or other parkland ecosystems that are not considered forested. For a more complete description of NDTs see the *Biodiversity Guidebook* (1995).

To mitigate potential negative impacts on the future timber supply, areas with potential future harvest opportunity were identified. Ungulate Winter Ranges (UWR) for mountain goats were established for the Sunshine Coast Timber Supply Area in 2012. An effort was made to reduce the impact on the future timber supply by collocating OGMA's with these UWR areas where suitable forest exists. Areas identified as Class 1, 2 or 3 marbled murrelet habitat, both in the THLB and in the non-contributing (NC) were also given high priority for inclusion as OGMA's.

# Table of Contents

Acknowledgements .....	ii
Executive Summary .....	iii
<b>1.0 Introduction</b> .....	<b>6</b>
<b>2.0 Homfray Landscape Unit Description</b> .....	<b>7</b>
2.1 Biophysical .....	9
2.2 Summary of Land Status .....	9
<b>3.0 Key Resource Tenure Holders</b> .....	<b>11</b>
3.1 Forest Tenure Holders .....	11
3.2 Mining Tenure Holders .....	11
<b>4.0 Significant Resource Values</b> .....	<b>12</b>
4.1 Wildlife and Fisheries .....	12
4.2 Timber Resources .....	13
4.3 Water Quality .....	13
4.4 Recreation .....	13
4.5 Mineral Resource Values .....	13
<b>5.0 Existing Higher Level Plans</b> .....	<b>13</b>
<b>6.0 First Nations</b> .....	<b>14</b>
<b>7.0 OGMA Methodologies</b> .....	<b>14</b>
7.1 Selection of OGMA's .....	14
7.2 Boundary Mapping .....	16
7.3 Assessment and Review .....	16
7.4 Amendment Policy .....	16
<b>8.0 OGMA Mitigation of Timber Supply Impacts</b> .....	<b>17</b>
<b>9.0 OGMA Analysis</b> .....	<b>17</b>
<b>APPENDIX 1. OGMA Summary and Rationale</b> .....	<b>20</b>
<b>APPENDIX 2. Public Consultation Summary</b> .....	<b>23</b>

## List of Tables

TABLE 1. Land Status of the Homfray Landscape Unit .....	10
TABLE 2. Land Status using Crown Forest Land Base Classification within the Homfray Landscape Unit....	10
TABLE 3. Old Growth Management Areas: Targets and Established.....	19

## List of Figures

FIGURE 1. Location of the Homfray Landscape Unit .....	8
--	---

## 1.0 Introduction

Landscape Unit plans are to provide direction on biodiversity particular to old forest retention at both the landscape and stand levels. Biodiversity is defined as: *the diversity of plants, animals and other living organisms in all their forms and levels of organisation, and includes the diversity of genes, species and ecosystems as well as the evolutionary and functional processes that link them*<sup>3</sup>.

Planning for Old Growth Management Areas (OGMAs) is recognized as a high priority for the province. Landscape Unit planning is an important component of the *Forest Range and Practices Act* (FRPA) that provides the legal framework for legal establishment of objectives to address landscape and stand level biodiversity values. Managing for biodiversity through retention of old growth forests is considered important not only for wildlife, but also provides important benefits including the protection of water quality, soils, and ecosystem processes. Although not all elements of biodiversity can be, or should be managed on every hectare, a broad geographic distribution of old growth ecosystems is necessary to help sustain the genetic and functional diversity of native species across their historic ranges.

The Homfray Landscape Unit has been assigned a Biodiversity Emphasis Option (BEO) rating of intermediate. This report describes the biodiversity conservation management strategy for the Homfray Landscape Unit and associated OGMA objectives consistent with priority biodiversity as outlined in the Landscape Unit Planning Guide.

Reference material on government policy, planning processes and biodiversity concepts associated with Landscape Unit planning include:

Ministry of Sustainable Resource Management, Coast Region, Lower Mainland:  
Landscape Unit Planning Standards, March 2004

1995 Biodiversity Guidebook

<http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/biodiv/biotoc.htm>

1999 Landscape Unit Planning Guide

[http://ilmbwww.gov.bc.ca/lup/srmp/background/lup\\_landscape.html](http://ilmbwww.gov.bc.ca/lup/srmp/background/lup_landscape.html)

Sustainable Resource Management Planning Framework: A Landscape-level Strategy for Resource Development

<http://ilmbwww.gov.bc.ca/lup/srmp/doc/SRMPI-May1-Final-Web1.pdf>

1999 Vancouver Forest Region Landscape Unit Planning Strategy, Vancouver Forest Region Landscape Unit Planning Document, Nanaimo, BC

---

<sup>3</sup> from BC Ministry of Forests and BC Environment. 1995. Biodiversity Guidebook.

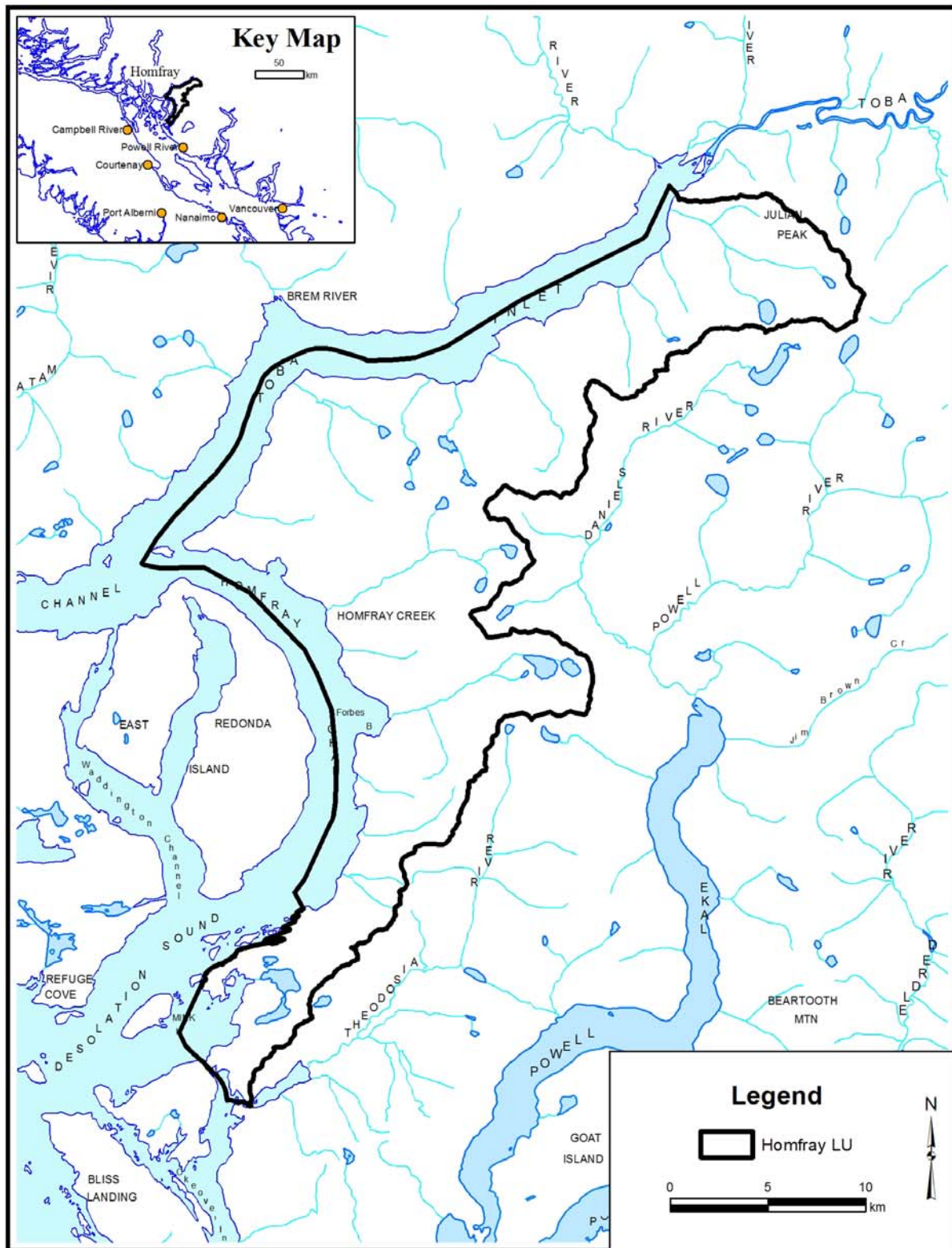
## **2.0 Homfray Landscape Unit Description**

The Homfray Landscape Unit is situated on the eastern side of Homfray Channel and south-eastern side of Toba Inlet on the Southern Mainland Coast (see Figure 1). The Landscape Unit covers a total area of 41,630 ha and includes several stream systems including Chusan, Mack, Nor, Forbes and Homfray Creeks.

The Landscape Unit is characterized by rugged topography with steep mountainous terrain, deep river valleys and marine coastline along Toba Inlet. A large portion of this Landscape Unit is undisturbed due to its steep, rugged terrain while the lower elevations are characterized by early mature stands, created by fire and harvesting history.

Of the total area 21,299 ha (50%) are within the Crown Forested Land Base (CFLB) with 10,571 ha in the Timber Harvesting Land Base (THLB) and 10,728 in the Non-Contributing Land Base (NCLB). The remaining 20,331 ha of the Landscape Unit are classified as non-forested or non-Crown (rock, alpine tundra, water, private land, etc.) and have been excluded from OGMA target calculations. There are some instances where portions of OGMA are within areas incorrectly classified as non-forested.

FIGURE 1. Location of the Homfray Landscape Unit



**HOMFRAY LANDSCAPE UNIT**



## ***2.1 Biophysical***

The Landscape Unit is separated into two Ecoregions. A small part at the southern end (includes Desolation Sound Marine Provincial Park) is within the Lower Mainland Ecoregion, which is represented by the Georgia Lowland ecosection. The remainder of the Landscape Unit is within the Pacific Ranges Ecoregion (Demarchi 1996). The Coastal eastern portion located along Homfray Channel lies within the Outer Fiordland ecosection while the coastal northern portion along Toba Inlet lies within the Central Pacific Ranges ecosection<sup>4</sup>.

Predominantly its climate is maritime, with warm, dry summers and wet winters. The majority of precipitation occurs in the fall and winter, which at higher elevations creates a snow pack that feeds the Landscape Unit stream network.

There are six Biogeoclimatic (BEC) subzones or variants, which fall within three natural disturbance types (NDTs) Coastal Western Hemlock Zone – submontane very wet maritime variant (CWH vm1) and montane very wet maritime variant (CWH vm2) as well as the Mountain Hemlock Zone – windward moist maritime variant (MH mm1) fall within NDT 1. Two Coastal Western Hemlock zones – dry maritime subzone (CWH dm) and very dry maritime subzone (CWH xm) are within NDT 2. The Homfray Landscape Unit also has a substantial high elevation non-forested area in NDT5<sup>5</sup>.

In the lower elevation variants, the Homfray Landscape Unit has sustained substantial levels of disturbance. Forested stands on lower elevation productive sites (typically on slopes with low to moderate gradient) have been disturbed by forest fires and past timber harvesting. A significant portion, 28%, of the forest within the Landscape Unit is comprised of stands that are between 40 and 100 years old.

The Homfray Landscape Unit has several complex ecosystems including wetlands, numerous avalanche tracks providing herbaceous forage, and natural meadows.

## ***2.2 Summary of Land Status***

Land status within the Homfray Landscape Unit is summarised in Table 1. There are 314 ha of private land and 26 ha of Indian Reserve within the Homfray Landscape Unit which has been excluded from the OGMA selection process.

---

<sup>4</sup> Demarchi, D. 1996. An introduction to the ecoregions of British Columbia. Wildlife Branch, Ministry of Environment, Lands and Parks, Victoria. Ministry of Sustainable Resource Management. Update March 2004. British Columbia; Ecoregion Ecosystem Classification Units, Ver. 2.01/

<sup>5</sup> NDT1 encompasses those ecosystems with rare stand-initiating events. NDT2 includes ecosystems with infrequent stand initiating events. NDT5 is Alpine Tundra or other parkland ecosystems that are not considered forested. For a more complete description of NDTs see the *Biodiversity Guidebook* (1995).

TABLE 1. Land Status of the Homfray Landscape Unit

Code	Ownership Class	Total Area (ha)	Total of LU (%)	Crown Forested Land Base (ha)
40N	Private	314	1%	0
50	Federal Reserve	2	0	0
52N	Indian Reserve	26	0%	-
62C	TSA or PSYU	38,237	92%	18814
63N	Provincial Parks - Class A	3051	7%	2485
Totals		41,630	100	21,299

Table 1 includes area that is not reported on in subsequent tables because it does not contribute to OGMA targets. This excluded land base primarily consists of non-Crown, non-forest, and non-productive forest.

TABLE 2. Land Status using Crown Forest Land Base Classification within the Homfray Landscape Unit

BEC Unit	Total Area (ha)	Crown Forested Land Base (ha)	Timber Harvesting Landbase (Ha)	Non-Contributing Landbase (Ha)	Excluded Land Base	OGMA Target	
						%	Ha.
CWH dm	8,618	7,276	4,064	3212	1342	9	655
CWH vm 1	5,016	4457	3058	1399	559	13	580
CWH vm 2	7,331	5,171	2,847	2324	2160	13	672
CWH xm 1	909	740	2	738	169	9	67
MH mm 1	11,045	3,519	600	2,919	7,526	19	669
CMAunp	8,714	136	0	136	8,575	0	0
<b>TOTAL</b>	<b>41,634</b>	<b>21,299</b>	<b>10,571</b>	<b>10,728</b>	<b>20,331</b>		<b>2,643</b>

note: differences in totals ( $\leq 1$  ha) are due to rounding

Table 2 provides a summary based on biogeoclimatic ecosystem classification (BEC) variant. Old seral representation targets (which are the basis of OGMA's) described later in this report (Table 3) are applied by BEC variant to ensure the OGMA's are distributed across each BEC variant thereby ensuring adequate protection of each variant. Targets are determined and applied based on the Crown forest area in each BEC variant.

Table 2 also describes land base classification used in Timber Supply Review 3. These classifications attempt to estimate the amount of forest area that is expected to contribute to timber supply – this is the area frequently referred to as the Timber Harvesting Land Base (THLB). This information is used in Landscape Unit planning and OGMA delineation to minimize impacts on timber supply. It is important to note, however, that operationally the harvestable area does not correlate one-to-one with the THLB. While the THLB and the actual harvestable area would ideally be the same, the reality is that the inventories and assumptions used to identify the THLB area are not always accurate and/or correct at an operational scale. The reality is that the inventories and assumptions

used to identify the THLB area are not always accurate and /or correct operationally. This problem is further complicated by the economics of timber harvesting which change often and can vary significantly from one year to the next. This makes the process of identifying Old Growth Management Areas that have the least impact on timber supply challenging. Harvesting frequently occurs in the forest that did not contribute to timber supply forecast used in the last AAC determination. In the Homfray Landscape Unit approximately 31% of the harvest historically comes from land base outside the THLB. As a result it is possible that OGMA delineation can have an impact on timber supply greater than that anticipated based on a “THLB impact” assessment.

CMAunp is included in Table 2 to account for all area in the Landscape Unit. Old growth targets are not set for this ecotype as it is predominantly non-forest and does not make up part of the productive forest land base. However, it is possible that small forested areas may be captured in the alpine, and where analysis determines that they are suitable for biodiversity conservation, they may be selected as OGMAs.

### **3.0 Key Resource Tenure Holders**

The planning process included the identification of other key resource(s) tenure holdings including those administered by agencies such as the Ministry of Forests Lands and Natural Resource Operations (FLNR) and the Ministry of Energy and Mines.

#### ***3.1 Forest Tenure Holders***

The majority of the Homfray Landscape Unit’s Crown forested land base is subject to Forest Licenses held by International Forest Products Limited, BC Timber Sales, A&A Trading Limited and Northwest Hardwoods.

The OGMAs described in this report were selected to minimize OGMA placement in areas identified as future harvest opportunities by major tenure holders operating within the Landscape Unit.

#### ***3.2 Mining Tenure Holders***

There are 5 mineral tenures within the Homfray Landscape Unit. Exploration and development activities are permitted in OGMAs. The preference is to proceed with exploration and development in a way that is sensitive to the old growth values of the OGMA; however, if exploration and development proceeds to the point of significantly impacting old growth values, then a suitable replacement OGMA will be identified.

## 4.0 Significant Resource Values

### 4.1 Wildlife and Fisheries

*The Identified Wildlife Management Strategy (2004)* includes a list of 85 wildlife species and subspecies that are considered to be at risk. These species require special management of critical habitat to maintain or restore populations or distributions. The primary mechanisms for protecting this habitat are through the designation of Wildlife Habitat Areas (WHA) or Ungulate Winter Ranges (UWR) established under the Government Actions Regulation. Not all 85 of these species have a range that is within the geographic area covered in this plan. Wildlife resources of primary management concern in the Homfray Landscape Unit include marbled murrelet (*Brachyramphus marmoratus*), mountain goat (*Oreamnos americanus*) grizzly bear (*Ursus arctos*) and Northern Goshawk (*Accipiter gentilis laingi*).

Potential marbled murrelet nesting habitat was mapped within the Homfray Landscape Unit consistent with the *Standard Methods for Identifying Marbled Murrelet Habitat in British Columbia Using Air Photo Interpretation and Low-level Aerial Survey*<sup>6</sup>. Stands suitable for marbled murrelet nesting habitat have attributes that also make them suitable for selection as OGMA's. They are typically old growth stands or mature stands that have old growth attributes. Overlap with wildlife habitat such as marbled murrelet is a coarse filter consideration in OGMA delineations and where appropriate it has occurred.

The Homfray Landscape Unit is also an important area for mountain goats and Columbia black-tailed deer (*Odocoileus hemionus columbianus*). Winter range habitat for mountain goats was legally established as Ungulate Winter Range (UWR) in 2012. Established UWRs containing stands suitable for old forest representation were considered for selection as OGMAs to maximise conservation benefits while minimising overall impacts.

The river systems within the Homfray Landscape Unit support populations of resident cutthroat trout (*Oncorhynchus clarki clarki*), rainbow trout (*Oncorhynchus mykiss*), Dolly Varden char (*Salvelinus malma*) and both summer and winter steelhead (*Oncorhynchus mykiss*) trout runs. Anadromous salmon also spawn in the Homfray River and Forbes Creek, including coho (*Oncorhynchus kisutch*), chinook (*Oncorhynchus tshawytscha*), pink (*Oncorhynchus gorbuscha*) and chum (*Oncorhynchus keta*) salmon. Current regulations applicable to riparian areas under the Forest Planning and Practices Regulation (FPPR) along with Forest Stewardship Plan (FSP) riparian results and strategies will manage for the effectiveness and function of the riparian values associated with these and other riparian areas within the Landscape Unit. OGMAs have been delineated in or adjacent to riparian areas where suitable forest stand structure exists.

---

<sup>6</sup> Burger, A.E. 2003. Standard methods for identifying and ranking nesting habitat of Marbled Murrelets in British Columbia using air photo interpretation and low-level aerial surveys. Ministry of Water, Land and Air Protection Biodiversity Branch, Victoria B.C.

## ***4.2 Timber Resources***

The THLB in the Homfray Landscape Unit is estimated at 10,571 ha. Removals from the productive forest land base include inoperable terrain, avalanche tracks, riparian reductions and WHAs. Despite the history of timber harvesting and fire disturbance, harvesting opportunities still exist and are complemented as second growth timber harvesting becomes more prevalent.

Tree species in the Homfray Landscape Unit include Douglas-fir (*Pseudotsuga menziesii*), western redcedar (*Thuja plicata*), western hemlock (*Tsuga heterophylla*), lodgepole pine (*Pinus contorta*), amabilis fir (*Abies amabilis*), subalpine fir (*Abies lasiocarpa*), sitka spruce (*Picea sitchensis*), yellow-cedar (*Chamaecyparis nootkatensis*), mountain hemlock (*Tsuga mertensiana*) and deciduous species [such as bigleaf maple (*Acer macrophyllum*) and red alder (*Alnus rubra*)].

## ***4.3 Water Quality***

There are no community watersheds in the Homfray Landscape Unit.

## ***4.4 Recreation***

Recreation opportunities include, but are not limited to rock-climbing, mountaineering, angling, hunting, kayaking, sailing and wildlife viewing.

Part of Desolation Sound Marine Provincial Park lies on the southern portion of the Homfray Landscape Unit. The marine park is popular for scuba diving and the forested upland offers a shady refuge of trails, lakes and wilderness tent sites. Tenedo's Bay is a major destination that is located in the Homfray Landscape Unit. Nearby Unwin Lake is accessed by a short ten-minute hike from Tenedo's Bay.

## ***4.5 Mineral Resource Values***

Subsurface resources (minerals, coal, oil, gas and geothermal) and aggregate resources are valuable to the province, but are difficult to characterize. Exploration and development activities related to mineral and gas extraction are permitted in OGMA's and therefore establishment of OGMA's will not impact the status of these permits or tenures.

## **5.0 Existing Higher Level Plans**

Landscape Unit Plan objectives must be consistent with direction in established higher level plans applicable to the plan area. There currently is no designated higher level plan for the Sunshine Coast Forest District that pertains to the Homfray Landscape Unit.

## 6.0 First Nations

The Homfray Landscape Unit is located within the traditional territory of the Klahoose, Homalco and Sliammon First Nations and the consultation area of the Nanwakolas Council<sup>7</sup>. These First Nations have been consulted with regarding this Landscape Unit Plan and associated Order and OGMA's.

Establishment of OGMA's will not affect First Nations Aboriginal rights and title, or affect traditional cultural activities.

There is one Indian Reserve in the Landscape Unit located at Forbes Bay.

## 7.0 OGMA Methodologies

### 7.1 Selection of OGMA's

The Landscape Unit Planning Guide (LUPG), dated March 1999 provides direction for selecting suitable OGMA candidate stands which maximizes their value to biodiversity conservation. Ecological suitability, managing Identified Wildlife species, ungulate winter range and ecosystem representation are priority selection criteria. An important part of the OGMA selection process, is to ensure that separate planning processes complement each other.

In addition to including areas with specific habitat requirements, other factors, such as patch size, distribution and connectivity were considered during OGMA delineation. Due to the fragmented nature of the Homfray landscape at higher elevations, opportunities to recruit larger patches to provide for forest interior conditions were favoured over smaller patches. Efforts were made to ensure OGMA's were distributed throughout the Landscape Unit.

#### Recruitment:

In the lower elevation biogeoclimatic zones, such as CWH dm and CWH vm1, the past disturbance history required a recruitment strategy to be developed. The strategy is based on a detailed helicopter survey that was conducted on July 30, 2008, by Brian Smart, RPF, RP.Bio. He was accompanied by Wayne Wall, RP.Bio and Marlon Todd, RPF, both from International Forest Products Limited. During this survey flight, it was observed that "Old growth was located in many areas outside of age class (AC) 9 polygons as veterans, as secondary layers, and as smaller subunits within age class 8 polygons that are a mosaic of different age classes." Based on this survey information, OGMA's were delineated that are considered suitable for other outstanding biodiversity features such as the presence of numerous visible raptor nests, riparian habitat complexes and concentrations of veteran trees<sup>8</sup>. Some younger age class forest has been included as OGMA to provide buffer such as along the length of riparian old growth OGMA's<sup>8</sup>.

---

<sup>7</sup> The Nanwakolas Council includes the Kwiakah, We Wai Kai and Wei Wai Kum First Nations.

<sup>8</sup> As specified in the letter from Brian Smart dated August 7, 2008.

Where OGMA were delineated based on this field assessment by Brian Smart, RPF, RP.Bio this is noted in the OGMA rationale in Appendix 1.

Although connectivity is not a primary objective in biodiversity planning (see *Landscape Unit Planning Guide*), it was considered when delineating OGMAs in the Homfray. Connectivity opportunities from lower to higher elevations may only exist in a few areas due to the contiguous lower elevation disturbance history. Also, the inaccessible and higher elevation areas are largely old growth. With the inclusion of the younger aged stands in the constrained forest, such as within riparian reserve zones, the connectivity between lower and higher elevation OGMAs will be maintained and improve over time.

Wildlife:

Certain wildlife species are particularly susceptible to mortality in winter and connecting or aggregating OGMAs may help facilitate movement. There are currently no established WHAs in the Homfray Landscape Unit.

Ungulate Winter Ranges (UWRs) for mountain goat were established for the Sunshine Coast in 2012. Although a large portion of these areas are currently classified as part of the THLB, once UWRs are established, these areas will no longer be available for timber harvesting. Efforts have been made to co-locate OGMAs with UWRs in order to minimize the impact on timber supply while maximizing the conservation value of OGMAs. This resulted in 67 ha of UWR being selected as OGMA.

Areas identified as Class 1, 2 or 3 marbled murrelet habitat, both in the THLB and in the non-contributing portion of the landbase, were also given high priority for inclusion as OGMAs.

Timber Supply Impacts:

To mitigate substantial effects on the future timber supply, timber that is viewed as operationally uneconomical for timber harvesting due to its high accessibility cost and low timber value located within the THLB was targeted for inclusion in OGMAs. OGMAs were selected, where ecologically suitable, to overlap with areas that are otherwise unavailable for timber harvesting such as within or adjacent to proposed ungulate winter range or high value marbled murrelet habitat. This resulted in larger patches being designated as OGMA, which provides greater opportunity to maintain connectivity between adjacent patches, thereby providing movement corridors to aid wildlife dispersal and minimize the impacts to the timber supply.

By incorporating on the ground knowledge, old growth targets were easily achieved in the CWH vm2, and MH mm1. Most of these OGMAs were delineated to be contiguous with OGMAs in the adjacent lower elevation CWH vm1 variant. The OGMAs in these BEC variants significantly increases the biological value of this plan by increasing OGMA patch size, connectivity and distribution over the Landscape Unit.

## ***7.2 Boundary Mapping***

Forest cover polygons were found to be too inaccurate to be used for Landscape Unit planning purposes. Forest cover polygons, when overlaid with satellite images and TRIM data were seen to include large areas of non-forested land, and the forest polygon boundaries were not aligned properly. The misalignment was not due to a GIS projection or coordinate shift. Data associated with these forest cover polygons was, therefore, not spatially correct and will not represent the contents of the delineated OGMA polygons.

OGMA boundaries were delineated using satellite images, TRIM-based mapping, and information provided by Brain Smart, RPF, RPBio from the old growth helicopter survey conducted in July 2008. OGMA boundaries were mapped to natural features (i.e. streams, slides, etc.) as well as edges of forest stands wherever possible to ensure they could be located on the ground. OGMA boundaries were also delineated to include complete forest stands wherever possible to reduce operational uncertainty and increase ease of OGMA mapping.

## ***7.3 Assessment and Review***

OGMAs were selected in the Homfray Landscape Unit based on a review of stand attributes in an effort to maximize their value from a biodiversity standpoint while minimizing timber supply impact. Spatial distribution throughout the Landscape Unit was also a selection criterion. Satellite images, aerial photography and input from field staff with a great deal of local knowledge were used to designate OGMAs to verify the presence of desirable old seral characteristics. Structural attributes of the stand were used to determine its sufficiency as OGMA rather than forest cover information. Specific rationale for the selection of each OGMA is in Appendix 1.

## ***7.4 Amendment Policy***

A FLNR Coast Region policy provides direction to forest tenure agreement holders when applying for amendments to OGMA legal objectives. Amendment procedures cover such things as minor or major amendments for resource development (e.g. roads, bridges, boundary issues, rock quarries and gravel pits), or relocation of OGMAs. The policy also discusses acceptable management activities and review procedures. The amendment policy forms an integral part of this plan.

In general, most OGMA boundaries are not 'permanently fixed', they can be moved over time so long as biodiversity objectives are maintained. Replacement OGMAs are required to be equivalent or better than the original. As stand succession proceeds, some currently unsuitable forests may become good OGMA candidates and as such periodic assessment or revision to the OGMAs may occur.



## 8.0 OGMA Mitigation of Timber Supply Impacts

During delineation of OGMAs it was a priority to avoid short and long-term impacts on timber supply. OGMAs were delineated first in the forest least likely to be harvested. Where this component of the forest did not satisfy the requirements to address suitable representation of old forest, portions of the harvestable land base which includes THLB were assessed and included as OGMAs. Generally, more harvestable land base was required in the lower elevation variants due to greater disturbance history. In some circumstances younger stands were selected over older ones where the conservation value was assessed and determined to be equal or greater than that of the older stands. This recruitment strategy was instrumental in mitigating the future impacts to the timber supply while meeting the biodiversity objectives in the Homfray Landscape Unit.

During the LU planning process, careful consideration was made to mitigate loss of future timber supply. Access corridors were left out of OGMAs and OGMA boundaries were delineated to simplify adjacent management. Old forest stands that have been approved for harvesting were excluded from candidate OGMAs following direction outlined in the *Landscape Unit Planning Guide*.

## 9.0 OGMA Analysis

The Homfray Landscape Unit was ranked as an Intermediate biodiversity emphasis through the biodiversity value ranking process completed for the Sunshine Coast<sup>9</sup>. This Intermediate designation along with the BEC variant determines the percentage of the Crown forest land base that will be designated as OGMA.

A rationale for OGMA designation for the Homfray Landscape Unit is provided in Appendix 1. The location of proposed OGMAs is identified in the maps that are a part of this plan.

Table 3 outlines the total amount of OGMA required in each variant and from which Crown forest category. The OGMAs delineated as part of the Homfray Landscape Unit Plan meet the old growth targets consistent with those targets specified in the Landscape Unit Planning Guide.

Areas within Desolation Sounds Marine Park that were identified as having suitable characteristics for biodiversity conservation have been identified and contribute to the old forest targets for the Homfray Landscape Unit.

Table 3 outlines the total amount of OGMA required in each variant and from which biogeoclimatic zone. The OGMAs delineated as part of the Homfray Landscape Unit Plan meet the old growth targets consistent with those targets specified in the Landscape Unit Planning Guide. The table illustrates that only 0.3% of the OGMAs delineated in the plan are located in the THLB. Part of the reason for this apparent low impact is that

---

<sup>9</sup> see the *Vancouver Forest Region Landscape Unit Planning Strategy*, 1999

Table 3 is derived from the most recent Timber Supply Review (TSR3) data which excluded the draft OGMA's from the THLB. The OGMA's delineated in this LUP are very similar to the draft OGMA's used in TSR3.

TABLE 3. Old Growth Management Areas: Targets and Established

BEC	Old Growth Target (%)	Old Growth Target (ha)	Established OGMA (ha)	OGMA in THLB		OGMA in NCLB & Excluded	
				(ha)	(%)	(ha)	(%)
CWH dm	9%	655	692.0	4.3	0.6	687.7	99.4
CWH vm 1	13%	580	585.4	3	0.5	582.4	99.5
CWH vm 2	13%	672	700.0	2.0	0.3	697.9	99.7
CWH xm	9%	67	89.1	0	0%	89.1	100
MH mm 1	19%	669	734.5	0.4	0.1%	734.1	99.9
<b>Total</b>		2,642	2,801.7	9.6	0.3%	2792.1	99.7

Note: Differences in totals (1 ha) are due to rounding.

## APPENDIX 1. OGMA Summary and Rationale

OGMA Number	Total Area (ha)	Comments
12	63.9	Chusan Creek riparian, field checked by Brian Smart, RP Bio., RPF
17	106.7	Class 2 and 3 marbled murrelet habitat, riparian, proposed marbled murrelet WHA #046
19	15.6	Old forest representation, Class 3 marbled murrelet habitat
23	20.6	Old forest representation, Class 3 marbled murrelet habitat, riparian, field checked by Brian Smart, RP Bio., RPF
24	64.4	Old forest representation, Class 3 marbled murrelet habitat, riparian, proposed marbled murrelet WHA # b-1, field checked by Brian Smart, RP Bio., RPF
25	3.8	Old forest representation, riparian
26	9.5	Old forest representation, Class 3 marbled murrelet habitat
28	4.9	Old forest representation, riparian
36	9.7	Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # b-3
37	17.1	Class 3 marbled murrelet habitat, age class 8, field checked by Brian Smart, RP Bio., RPF
38	22.2	Old forest representation, Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # 048, field checked by Brian Smart, RP Bio., RPF
40	51.5	Old forest representation, age class 8, Class 2 and 3 marbled murrelet habitat, field checked by Brian Smart, RP Bio., RPF
41	31.3	Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # b-3
43	36.4	Old forest representation, Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # 048, Toba Inlet shoreline, field checked by Brian Smart, RP Bio., RPF
47	77.9	Old forest representation, Class 2 and 3 marbled murrelet habitat, proposed marbled murrelet WHA # b-1, Nor Creek riparian
50	22.9	Old forest representation, Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # 047, field checked by Brian Smart, RP Bio., RPF
51	111.5	Old forest representation, age class 8, Class 3 marbled murrelet habitat, Toba Inlet shoreline, field checked by Brian Smart, RP Bio., RPF
52	21.9	Old forest representation, Class 3 marbled murrelet habitat
53	18.3	Old forest representation, age class 7, Class 3 marbled murrelet habitat, riparian, field checked by Brian Smart, RP Bio., RPF
55	24.3	Old forest representation, Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # b-1, headwaters of Nor Creek
56	8.1	Re cruitment, class 3 marbled murrelet habitat, shoreline, field checked by Brian Smart.
57	86.0	Old forest representation, Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # b-1, field checked by Brian Smart, RP Bio., RPF
58	42.6	Brettell Point shoreline, age class 8, field checked by Brian Smart, RP Bio., RPF
59	6.5	Homfray Channel shoreline, age class 8, field checked by Brian Smart, RP Bio., RPF
65	44.3	Old forest representation, Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # 045, adjacent Derwent Lake, riparian
66	40.8	Old forest representation, Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # 043
67	12.6	Attwood Bay shoreline, age class 8, field checked by Brian Smart, RP Bio.
68	67.3	Old forest representation, Class 2 and 3 marbled murrelet habitat, proposed marbled murrelet WHA # 043
71	204.2	Old forest representation, Class 2 and 3 marbled murrelet habitat, riparian, proposed marbled murrelet WHA # 039, Forbes Lake shoreline
73	52.3	Age class 8, riparian, field checked by Brian Smart, RP Bio., RPF
74	8.6	Old forest representation, Class 3 marbled murrelet habitat, riparian, proposed marbled murrelet WHA # 039, field checked by Brian Smart, RP Bio., RPF
77	9.2	Old forest representation, Class 3 marbled murrelet habitat, riparian, proposed marbled murrelet WHA # 039, Forbes Lake shoreline
80	139.0	Class 3 marbled murrelet habitat, riparian, proposed marbled murrelet WHA # 039, Forbes Lake shoreline
81	92.8	Class 3 marbled murrelet habitat, Forbes Creek riparian, field checked by Brian Smart, RP Bio., RPF
82	10.7	Old forest representation, Class 3 marbled murrelet habitat, riparian, proposed marbled murrelet WHA # 039, Forbes Lake shoreline
83	103.1	Old forest representation, Class 2 and 3 marbled murrelet habitat, riparian, proposed marbled murrelet WHA # 040
85	76.4	Old forest representation, Class 3 marbled murrelet habitat, riparian, headwaters of Lloyd Creek
86	37.4	Old forest representation, Class 3 marbled murrelet habitat, riparian, proposed marbled murrelet WHA # 044

OGMA Number	Total Area (ha)	Comments
87	5.4	Inside Desolation Sound Marine Park, field checked by Brian Smart, RP Bio., RPF, recruitment
90	24.5	Inside Desolation Sound Marine Park, age class 8, adjacent Melanie Cove, field checked by Brian Smart, RP Bio., RPF
91	25.5	Inside Desolation Sound Marine Park, recruitment, field checked by Brian Smart, RP Bio., RPF
93	56.0	Inside Desolation Sound Marine Park, recruitment, age class 5, 7, and 8, Desolation Sound shoreline, field checked by Brian Smart, RP Bio., RPF
96	8.7	Inside Desolation Sound Marine Park, recruitment, age class 5 and 8, Unwin Lake lakeshore, field checked by Brian Smart, RP Bio., RPF
97	18.9	Inside Desolation Sounds Marine Park, old forest representation, Tenedos Bay shoreline
98	8.4	Inside Desolation Sounds Marine Park, age class 5, island in Tenedos Bay, recruitment
101	23.6	Inside Desolation Sound Marine Park, recruitment, age class 6, Tenedos Bay shoreline, field checked by Brian Smart, RP Bio., RPF
103	5.3	Inside Desolation Sound Marine Park, recruitment, age class 4, Unwin Lake lakeshore, field checked by Brian Smart, RP Bio., RPF
105	5.8	Inside Desolation Sound Marine Park, recruitment, field checked by Brian Smart, RP Bio., RPF
106	8.2	Inside Desolation Sound Marine Park, recruitment, field checked by Brian Smart, RP Bio., RPF
108	73.5	Old forest representation, Class 2 and 3 marbled murrelet habitat, field checked by Brian Smart, RP Bio., RPF
112	15.9	Old forest representation
113	25.2	Old forest representation
115	32.4	Old forest representation
116	14.9	Old forest representation, Class 3 marbled murrelet habitat
117	34.1	Old forest representation
118	10.4	Old forest representation
119	14.1	Old forest representation
121	48.7	Old forest representation, Class 3 marbled murrelet habitat
122	13.2	Old forest representation, Class 3 marbled murrelet habitat, riparian, field checked by Brian Smart, RP Bio., RPF
124	12.5	Old forest representation, Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # 045, Homfray Creek riparian
125	77.6	Old forest representation, proposed mountain goat UWR # HF3
194	21.3	Age class 8, Toba Inlet shoreline, field checked by Brian Smart, RP Bio., RPF
195	8.0	Old forest representation, Class 3 marbled murrelet habitat, proposed marbled murrelet WHA # 045, Homfray Lake shoreline
198	12.5	Old forest representation, Class 3 marbled murrelet habitat
199	19.5	Old forest representation, Class 3 marbled murrelet habitat, riparian, proposed marbled murrelet WHA # b-1, field checked by Brian Smart, RP Bio., RPF
200	30.6	Old forest representation, age class 8, field checked by Brian Smart, RP Bio., RPF
202	99.0	Old forest representation, proposed mountain goat UWR # HF1, field checked by Brian Smart, RP Bio., RPF
204	8.7	Recruitment, field checked by Brian Smart, RP Bio., RPF
217	20.3	Old forest representation, field checked by Brian Smart, RP Bio., RPF
222	16.1	Age class 7, Toba Inlet shoreline, riparian, field checked by Brian Smart, RP Bio., RPF
227	24.2	Old forest representation, riparian
228	42.3	Old forest representation, Homfray Channel shoreline, field checked by Brian Smart, RP Bio., RPF
229	8.8	Attwood Bay shoreline, age class 8, field checked by Brian Smart, RP Bio., RPF
230	9.7	Homfray Channel shoreline, age class 7 and 8, field checked by Brian Smart, RP Bio., RPF
231	11.3	Attwood Bay shoreline, age class 5 and 8, field checked by Brian Smart, RP Bio., RPF, recruitment
233	22.4	Inside Desolation Sound Marine Park, recruitment, age class 5 and 9, field checked by Brian Smart, RP Bio., RPF
235	7.6	Inside Desolation Sound Marine Park, recruitment, age class 5, field checked by Brian Smart, RP Bio., RPF
236	28.6	Inside Desolation Sound Marine Park, recruitment, age class 6 and 9, field checked by Brian Smart, RP Bio., RPF
238	3.8	Inside Desolation Sound Marine Park, recruitment, field checked by Brian Smart, RP Bio., RPF
239	28.0	Old forest representation, field checked by Brian Smart, RP Bio., RPF, recruitment
240	7.6	Old forest representation

<b>OGMA Number</b>	<b>Total Area (ha)</b>	<b>Comments</b>
243	21.5	Old forest representation, riparian, headwaters of Homfray Creek, field checked by Brian Smart, RP Bio., RPF, recruitment
248	11.0	Recruitment, age class 5, field checked by Brian Smart, RP Bio., RPF
<b>Grand Total</b>	<b>2801.8</b>	

## APPENDIX 2. Public Consultation Summary

Advertising was placed in the following publications: BC Gazette (December 24, 2013), Campbell River Mirror (December 20, 2013), Powell River Peak (December 20, 2013), Sechelt Reporter (December 20, 2013). The public consultation period was set for December 20, 2013 to February 18, 2014. This period was extended until March 20, 2014 at the request of the Sunshine Coast Conservation Association. Copies of the Order, LU Plan and maps were made available on the internet as well as paper copies at the MFLNRO offices at Powell River and Campbell River. At the request of the Sunshine Coast Conservation Association, paper copies were also made available at the Provincial Parks office in Sechelt.

Date	Received From	Comment Summary	Reply
Jan. 16, 2014	Billy Griffith Egmont, BC	Support establishment of OGMA's.	Acknowledgement and thanks.
Feb. 17, 2014	Sunshine Coast Regional District	Recommendation to include overlays of areas designated for harvesting, a summary of OGMA's in Parks and "unharvestable" areas. Plan does not consider Grizzly Bear or Wolf Habitat.	Acknowledgement and thanks.
Feb. 18, 2014	Ken WU Ancient Forest Alliance	Support for expansion of OGMA's on the Sunshine Coast. Encourages establishment of OGMA's in lower elevations. As well as in yellow cedar stands such as Dakota Bowl (not part of these 5 LUs).	Minister's Response Letter: Acknowledgement and thanks. Explanation of OGMA Targets. Informing of recent establishment of 2 new OGMA's in the Dakota Bowl area.
Mar. 3, 2014	Dwight Yochim, RPF Truck Loggers Association	Working Forest already constrained. What is target for OGMA's? Is the OGMA coming from THLB or existing protected areas?	Explanation of the OGMA targets. Advised we have worked very closely with the licensees in order to meet the required targets without unduly reducing the timber supply. Advised OGMA's have been co-located in other constrained areas.
Mar. 20, 2014	Lannie Keller & Eve Flager Discovery Islands Ecosystem Advocacy	Extensive review comments largely on policy and procedures issues. A request to be advised if and when Draft plans will be revised.	Acknowledgement and thanks. Advised that revisions to Draft LUPs as a result of their comments not anticipated.
Mar. 20, 2014	Jason Herz Sunshine Coast Conservation Association	Extensive review comments largely on policy and procedures issues. Some Specific recommendations on Salmon LU.	Acknowledgement and thanks. Advised that revisions to Draft LUPs as a result of their comments not anticipated.