In order to motivate discussion and input, a very rough draft of a Forest Management Plan has been prepared that follows the outline of the content requirements.
A final plan would incorporate public input.
If a community forest is supported, a site specific forest stewardship plan would be constructed with the public in the future.

HAIDA GWAII
COMMUNITY FOREST

Haida Gwaii Community Forest

MANAGEMENT PLAN #1

Draft for Public Consultation and Input

January 2018

HGCF Executive Director: _____

RPF Signature and Seal: _____

haidagwaiicommunityforest.com

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Appendix 1: Community Forest Agreement K5F Timber Supply Analysis

Appendix 2: Determination by the Council of the Haida Nation

1 INTRODUCTION

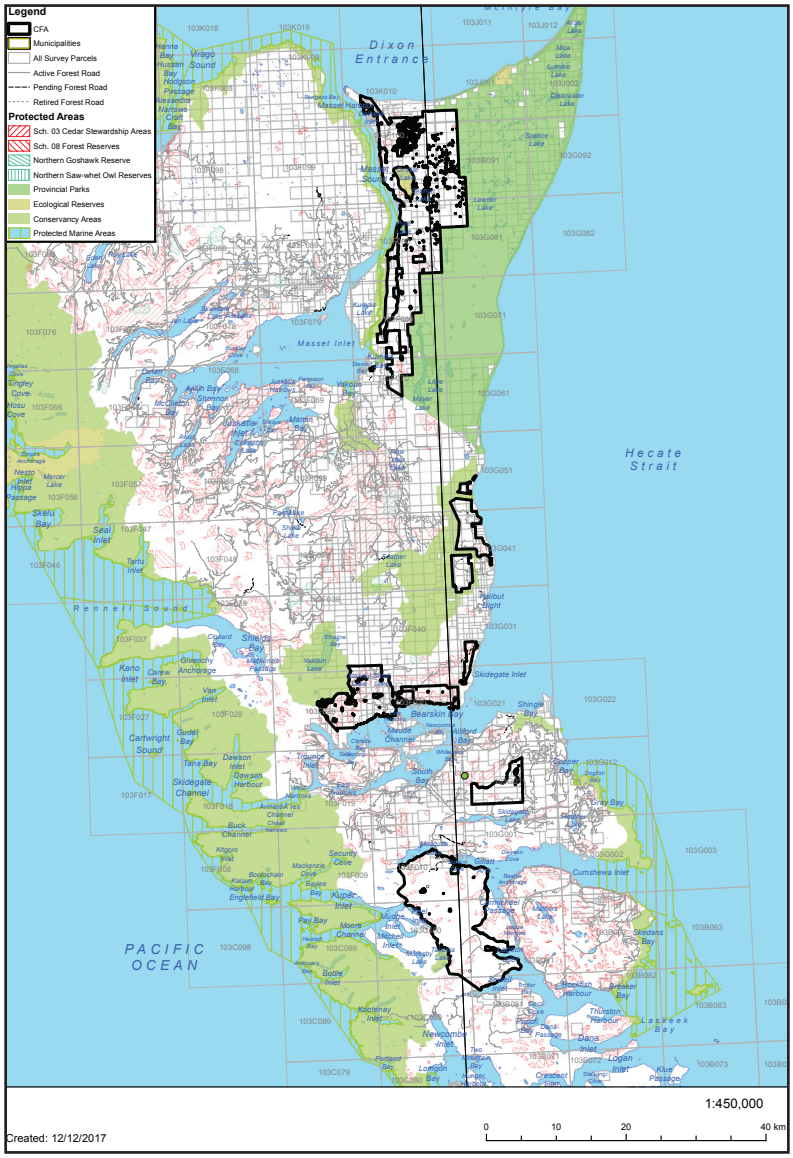
Community Forests are intended to provide communities with opportunities to have more control over how local forests are managed and to receive benefits from forest development occurring in their area.

On Haida Gwaii the means to acquiring a Community Forest is a unique process which includes a tenure issued under the authority of the Council of the Haida Nation, as well as through the Province of BC under the Forest Act. The area-based forest tenure issued by the BC Ministry of Forests, Lands and Natural Resource Operations and Rural Development (MFLNRORD) is called a Community Forest Agreement (CFA).

The Misty Isles Economic Development Society represents the communities in the development of a Community Forest Management Plan and the negotiations with the Ministry of Forests, Lands and Natural Resource Operations and Rural Development. The communities are grateful for the support of the Council of the Haida Nation in seeking a Community Forest that will provide benefits and a measure of local control over forest management.

British Columbia has proposed a Community Forest tenure for Haida Gwaii since 1996. The Misty Isles Economic Development Society and its Haida Gwaii Community Forest subsidiary (0994943BC Ltd.) received an invitation to apply for Community Forest Agreement K5F from the Ministry of Forests, Lands, Natural Resource Operations and Rural Development. The area of the proposed community forest are five areas on Moresby and Graham Islands, Haida Gwaii. From north to south they include the Drizzle Watt Loon Area (27,870 ha), the East Coast Area (4,697 ha) the Honna Area (8,321 ha) on Graham Island. Further south on Moresby Island, the Skidegate Lake Area (3,039 ha) and Sewell Tasu Area (16,916 ha) are within the proposed area. The total area is 60,843 hectares with an estimated Timber Harvesting Land Base (THLB) of 19,915 ha. Elevations range from sea level to1164 metres in the alpine at the peak of Moresby Mountain. A more complete area description is provided in **Appendix 1**.

Figure 1: Location of proposed Haida Gwaii Community Forest tenure



1.1 Scope and consistency with other plans

This Management Plan will describe Haida Gwaii Community Forest's management goals and objectives, describes existing forest inventories, and proposes an allowable annual cut (AAC) with discussion and rationale.

HGCF's Management Plan #1 will be submitted for approval during 2018. The goals and objectives in this Management Plan will be consistent with the Haida Gwaii Land Use Order and the community consultation on forest management principles.

It will also be consistent with forestry legislation, and higher level plans under the Forest and Range Practices Act (FRPA).

2 GUIDING PRINCIPLES

Haida Gwaii Community Forest's draft guiding principles formed as a result of collaboration with the Council of the Haida Nation and public consultations during the spring of 2017. These "made on Haida Gwaii principles" will guide community forest development in a direction that benefits communities and citizens.

Stewardship

- Protect the environmental and cultural values in the forest for future generations through implementing sustainable forest practices and adhering to the Haida Gwaii Land Use Objectives Order;
- Provide lasting security and incentives for sound stewardship and long term investments through an area-based tenure that has a good profile of forest age and species and is reasonably proximal to the communities;
- Aspire to high standards in forest management and accountability;
- Manage the forest using innovative silviculture strategies and ecologically based forest management to maintain, enhance, or restore healthy forests;
- Manage commercial access to cedar to ensure its availability throughout the transition to the harvesting of second-growth, including managing for old-growth red and yellow cedar and fire-origin second-growth cedar within the timber harvesting land-base;
- Minimize wood waste and support the utilization of salvageable wood;
- Support an active role in implementing ecosystem based management to achieve an adaptive, systematic approach to managing human activities, that seeks to ensure the co-existence of healthy, fully functioning ecosystems and human communities;
- Implement forest development that complements community based tourism values.

Benefits to the Communities

- Use the diversity of resources in the forest to generate economic benefits for communities, and offer employment for Haida Gwaii residents;
- Engage Haida Gwaii residents in broad level community collaboration in near term and long term forest management planning;
- Ensure respectful integration of Haida and community values into tenure management planning;
- Ensure that the forests are managed using sound business practices whereby profits are managed for the best-interests of all communities;
- Develop procurement policies that are cost effective and provide longer term opportunities for local suppliers;
- Provide forest access for the public through an access management strategy that ensures infrastructure is maintained to an extent that is appropriate to the scale and activities of the Community Forest operations;
- Explore opportunities for local value- added wood product manufacturing;
- Explore opportunities for education, research and testing innovative forest planning and practices, community resource stewardship, and climate change adaptation;
- Explore opportunities for economic diversification, such as non-timber forest products, forest carbon offsets, tourism, or bioenergy production
- Build upon and improve community relationships on Haida Gwaii.

3 ENVIRONMENTAL, SOCIAL, ECONOMIC AND OUTREACH GOALS

Haida Gwaii Community Forest has started with a preliminary draft of broad environmental, social, economic and outreach goals for public consideration:

3.1 Environmental goals

- Maintain fully functioning ecosystems at the landscape, watershed, and stand levels;
- Support ecosystem resilience in the face of climate change;
- Maintain, enhance, and protect biodiversity and wildlife habitat;
- Provide community environmental benefits, such as clean water, access to medicinal plants, wildcraft and traditional utilization of forest resources;
- Ensure sustainability of timber and non-timber resources;

3.2 Social and economic goals

- Sustainably manage forests for a variety of timber and non-timber products;
- Provide recreation and wildcrafting opportunities;
- Pursue making timber available to local lumber and value-added wood products manufacturing opportunities and markets;
- Provide and support local employment opportunities in the forestry, ecosystem management, and value-added sectors;
- Provide more jobs per cubic meter of timber harvested than the current provincial average;
- Pursue opportunities for economic diversification in the forestry, non-timber forest products, ecosystem management, and value-added sectors;
- Collaborate closely with the Council of the Haida Nation and be accountable to their tenure authorization as well as the Province of BC's tenure authorization;
- Consider how to align community input with the Timber Supply Review direction determined by the Haida Gwaii Management Council and submit it to the District Manager who will review and confirm the AAC;
- Implement effective strategies and demonstrate meaningful community participation.

3.3 Outreach, education and research goals

- Demonstrate sustainable and innovative forestry planning and practices;
- Support research related to community resource stewardship, alternative silviculture systems, and climate change adaptation;
- Support education opportunities for students, community members and visitors to Haida Gwaii including a demonstration forest which will showcase a variety of timber harvesting strategies from clear cuts to retention harvesting with the costs and benefits / opportunities documented and displayed over the long term period.

4 RESOURCE MANAGEMENT OBJECTIVES

Haida Gwaii Community Forest's specific resource management objectives are as follows:

4.1 Haida Gwaii Land Use Objectives Order

Implementation of the Strategic Land Use Plan

The Strategic Land Use Agreement (SLUA) was signed in 2007 and led to the designation of 11 new Heritage Site/Conservancies and the development of Management Plans for each. Currently 52% of the Islands are in some form of protection either as protected areas or parks.

The SLUA set objectives for forest management on Haida Gwaii for the protection of cultural, aquatic, wildlife and biodiversity resources on Haida Gwaii. In 2010 the Haida Gwaii Land Use Objectives Orders were signed and given authority through the Haida Nation's House of Assembly (Stewardship Law) and through an Order in Council by the BC Government.

The Haida Gwaii Land Use Objectives Order, or LUOO, is a set of objectives that derive their authority from the Haida Stewardship Law (CHN) and the Land Act (BC). The objectives regulate forest practices and management on Haida Gwaii, and are considered to be some of the strictest environmental policies regulating forestry in Canada. The LUOO was designed by the CHN and the Provincial government between 2008-2010, with objectives guided by the Haida Gwaii Strategic Land Use Agreement. The LUOO applies to all forest tenures on Haida Gwaii, and includes objectives for managing cultural, aquatic, wildlife and biodiversity resources. Under both Haida and BC law, the LUOO can only be amended by the Haida Gwaii Management Council.

For a full review of the LUOO, visit: http://www.haidagwaiimanagementcouncil.ca/land_use_orders.html

An outline of the Land Use Objectives that will be applied to the Haida Gwaii Community Forest follows:

Cultural Features Identification Program

The LUOO states that each development area (cutblock) needs to have an inventory completed to assess cultural features to a standard set by the Council of the Haida Nation. The CHN runs the Cultural Feature Identification (CFI) program that trains, certifies and audits surveyors who apply the CFI standards for the inventory process.

The Heritage and Natural Resource Committee runs the CFI process. Today, there are about 19 active CFI surveyors on Haida Gwaii, 15 of them are local people and 12 of those are Haida citizens.

The HNRC CFI program also hosts training courses which include instruction in cultural plant identification, monumental tree identification, archaeology training and survey training. Participants are tested with practical and written tests in order to obtain their certification. Twenty per cent of each surveyor's development areas are audited randomly by the CHN annually and reported to the Heritage and Natural Resource Committee. All CFI reports and data are submitted to the CHN.

Cedar Stewardship Areas

These make up approximately 25,000 hectares across Haida Gwaii, which are mostly old growth cedar forests that have been protected for long term Haida Cultural Use. These areas are outside of Heritage Sites/Parks or Conservancies. A small amount of commercial logging can occur in these areas but only with oversight of the CHN and Province. The CHN has approved a Cedar Stewardship Area Management Plan during the 2016 House of Assembly. The community forest would implement the Cedar Stewardship Area Management Plan within its boundaries.

Culturally Modified Trees

These are trees that have been modified for cultural use by the Haida prior to 1920. These trees are protected as a record of ancestral use and occupation throughout Haida Gwaii. CMTs may be identified by a field surveyor who is certified by the CHN, in addition, any site with CMTs also require intensive Archaeological Impact Assessments, conducted by professional archaeologists. CMTs get a buffer of about 1.5 tree lengths (about 60m) around them for protection.

Monumental Cedar

For the purpose of forest management on Haida Gwaii, monumental cedar is defined as visibly sound Western red-cedar or yellow-cedar that are greater than 100 cm in diameter and have log lengths of 7 meters or longer above the flare, with a least one face of the tree that is suitable for cultural use.

Further descriptions for identifying monumental are found within the CHN's Cultural Feature Identification Standards Manual. Monumentals are identified in the field by surveyors who are certified by the CHN. Monumentals greater than 120cm diameter and patches of monumental cedar (any size), are protected from harvesting. A proportion of smaller monumentals (100-120cm) are available for commercial harvesting, however, if cut they are all made available to the Haida Nation for cultural use. Monumentals get a buffer of about 1.5 tree lengths (about 60m) around them for protection.

Haida Traditional Forest Features

Haida Traditional Forest Features (HTFF's) are plants that have been identified as important for Haida cultural use and that may be damaged by logging. There are three classes of HTFF's, each with different management objectives.

Class 1 features are considered the most rare, and are threatened by introduced species or logging. They include ts'iihlinjaaw / ts'iihlanjaaw (Devil's club), Fairy slipper, Black hawthorn and Northern rice root. Class 1 features need to be protected from harvesting with a two tree length buffer around them.

There are 10 Class 2 Haida Traditional Forest Features, including Pacific crab apple, gwaayk'ah/ gwaayk'aa (Indian hellebore) and Stink currant. The LUOO requires that 50% of the features identified in a development area are protected from harvesting.

There are 31 Class 3 Haida Traditional Forest Features, including Northern maiden-hair fern, Single delight and Sitka columbine. These features are considered to be the most abundant out of the HTFF's and the least threatened by logging. Nevertheless, these features are inventoried in each development area and protected from harvesting when possible.

Haida Traditional Heritage Features

Haida Traditional Heritage Features (HTHF's) are archaeological features that are protected from logging. These are also broken down into different categories. Class 1 HTHF's include features like village sites, burial sites or oral history sites and require a minimum 500m buffer to protect them from logging. Class 2 HTHF's include features such as middens, canoe runs, rock shelters, lithic production sites or caves (to name a few) and they require a 100m buffer around them to protect them from logging.

Western red-cedar and Yellow-cedar retention

Forest Development Areas that contain mostly cedar need to have at least 15 per cent of the cedar retained (with a minimum area of 1 hectare) and the cedar has to have a range of sizes that are similar to the whole area being developed. In addition, whenever an area has more than 20 per cent cedar, then they have to plant an area and regenerate it to the pre-harvest composition levels.

Western Yew

Patches of yew trees (5 or more trees where each tree is within 5 metres of another) need to be protected. Individual yew trees should also be protected in stand level retention where such retention can be carried out in practice (i.e. where it is safe and practical for operators to work around them).

Type 1 Fish Habitat

Type 1 fish habitat includes the streams and floodplains for any watercourse (including lakes and wetlands connected to streams) that have any kind of fish in them and where stream gradient is less than 5 per cent. These require a reserve zone (no harvesting) with a minimum width of 2 tree lengths, measured from the outer edge of the habitat.

Type 2 Fish Habitat

These include streams and floodplains for watercourse (including lakes and wetlands connected to streams) that have any kind of fish in them and where the stream gradient is greater than 5 per cent. These requires a reserve zone (no harvesting) of 0.5 tree lengths, and a management zone (retaining 80 per cent of the trees or area) of another 1 tree length.

Active Fluvial Units

These are any kind of stream where the stream banks aren't confined- typically floodplains or fans. In this case a floodplain is measured by an estimated storm/flood event that may only occur once every one hundred years. Some floodplains on Haida Gwaii are over a kilometre wide. Disturbing these features can have long term consequences to a streams health or disrupt the natural variation of water quantity and quality in a watershed. Therefore, forest harvesting is required to stay a minimum of 1.5 tree lengths away from these features.

Upland Streams

Small streams that don't have fish living in them are still important for fish habitat and regulating the natural flows in a watershed. Watersheds can range in size from a few hectares to tens of thousands of hectares, and so forest managers have broken the landscape down relatively equal sub-basins that are about 500-2000 ha in size. On Haida Gwaii there are over 770 of them in the areas managed for commercial logging.

The goal of the objective is to make sure that at least 70 per cent of the forest in these sub-basins (outside of the fish-bearing stream buffers) maintains normal hydrologic function. This simply means that forests are regulating water in roughly the same manner as an old-growth forest does.

Sensitive Watersheds

The Land Use Objectives Order has listed 76 watersheds as 'sensitive', such as the Tlell watershed within the community forest.

These areas were designated as sensitive for a variety of reasons, both environmental and social. In all cases indicators were used to evaluate risks to watersheds. Some indicators included: whether it was a community watershed (a source for drinking water designated under the Forest and Range Practices Act), or; it was a major food fishery watershed. Some watersheds are at risk due to past logging practices, others due to their morphology or characteristics, for example the area is prone to landslides.

The list of sensitive watersheds was similar to what was recommended during the Land Use Plan community planning forum in 2003-2004. The LUOO limits logging in these watersheds so that 80 per cent of the watershed is hydrologically recovered.

Marbled Murrelets

Marbled Murrelets are small sea-birds that nest on large mossy platforms. These platforms are typically found inland in old-growth forests dominated by Sitka spruce. Major declines of this birds nesting habitat in coastal BC led the CHN to list this bird within the Haida Land Use Vision in 2004 as a species that needs special management. The BC and Federal governments also drew attention to this species by listing its status as 'threatened'.

In the mid-2000's Marbled Murrelet nesting habitat was mapped throughout all of Haida Gwaii by biologists. In turn, the LUOO set an objective of conserving 75 per cent of the highest class of habitat on Haida Gwaii. A series of reserves, making up over 35,000 hectares outside of Protected Areas, were identified to help meet these objectives and are listed under Schedule 9 of the LUOO.

Blue Heron

The Haida Gwaii Blue heron is a unique sub-species, different from any other Blue herons along the coast. On Haida Gwaii the birds typically build solitary, large stick nests in Western hemlock or Sitka spruce trees in interior forests. Very few of their nests have been located on Haida Gwaii, and biologists have raised concerns about their population. Blue heron was identified during the Haida Land Use Vision as a species that needs special management. Under the LUOO Blue Heron nests receive a 45-hectare reserve with a minimum of 350 metres from the edge of the nest to the edge of the reserve.

Black bear dens

Black bears den in cavities, sometimes as high as 25 metres off the ground, and almost always in old large cedars on Haida Gwaii. Each den requires a reserve zone a least 20 metres in width, and then a management zone with an average width of 1 tree length around the reserve zone.

Northern Goshawk

Northern goshawks, and specifically the laingi Goshawk (the Haida Gwaii sub-species) have been listed as Threatened on Haida Gwaii. They are listed for several reasons, including a small population with minimal reproduction, a reduced prey-base as a result of the introduction of deer which has impacted grouse and song-bird populations, and the loss of nesting and foraging habitat in old growth. Currently there are 20 known Goshawk breeding areas on Haida Gwaii. For known nests (or newly identified ones), the LUOO provides a 200-hectare nesting reserve of the best habitat around the nest.

Saw whet owl

Saw whet owl's on Haida Gwaii are also a rare sub-species. These small cavity nesting owls were identified as an important species to be managed under the Haida Land Use Vision. There are several known Saw whet owl nesting areas that were identified during the Land Use Planning process. All of these areas have been reserved from harvesting under the LUOO. Any additional nests identified each receive a 10-hectare reserve around them.

Red and blue listed ecosystems

Some types of forests are endangered within British Columbia, typically from logging or other industrialization, or urbanization. If there is a trend over time that the amount of habitat is continually shrinking, then the Province of BC identifies the ecosystem as red-listed (endangered), or blue-listed (threatened). On Haida Gwaii, under the LUOO, all floodplain forest communities are red-listed and cannot be logged. Up to 5 per cent of any given site can be altered if required for road access, or to address a safety concern. Blue listed ecosystems require 70% of their occurrences to be protected from logging.

Forested swamps

Forests of Sitka spruce and Western red cedar closed canopies where the forest floor is carpeted with skunk cabbage and pools of water are known as 'forested swamps'. These sites are very vulnerable to changes in the water table that result from logging. They have very sensitive soils, are prone to wind throw, and can be difficult to regenerate. They also serve an important ecological role – offering high quality spring-time foraging habitat for Taan (black bears). For these reasons, logging is prohibited in these types of forests, and the Community Forest will need to maintain a 1.5 tree length buffer around them to protect them.

Rare and common ecosystems

The Strategic Land Use Agreement says that if a plant community is 'rare' on Haida Gwaii, then 70 per cent of its occurrence should be protected from logging. Likewise, if a forest ecosystem type is considered 'common' on Haida Gwaii, then 30 per cent of its occurrence should be protected from logging. These targets are met by the Protected Areas and the reserves (such as the Cedar Stewardship Areas and Forest Reserves) set by the LUOO.

Monitoring

The Haida Gwaii Community Forest will participate in all forest practices monitoring activities on Haida Gwaii. The CHN's Heritage and Natural Resource Department conducts random audits on 20 per cent of all forest development areas before they are logged. This is done as part of the Cultural Feature Identification program. The CHN reserves the right to suspend or revoke a surveyor's certification if cultural features are not identified to CHN's standards.

CHN's Land Use Objectives Order Effectiveness Monitoring program conducts monitoring on forest development areas after they have been logged. Since 2014, staff has collected data on key objectives such as yew tree management, monumental tree management or logging impacts to Devil's club.

Information on the outcome – Did the Community Forest Manager do what they said they would? – are reported to the Heritage and Natural Resource Committee and the Haida Gwaii Management Council.

In 2016 the CHN began a program called Post-Harvest Incident Tracking. This program asks CHN and Provincial staff, and concerned public to report forest practices that may be against a law, policy or best practice.

The Haida Gwaii Natural Resource District (Province of BC) and the CHN work together monitoring logging to evaluate whether planning strategies worked to protect key values identified in the Forest and Range Practices Act. The monitoring follows protocols for Riparian health, water quality, visual quality, stand-level biodiversity and cultural heritage.

4.2 Water and Riparian areas objectives

- Maintain water quality, quantity, and timing of flow;
- Minimize the impacts of roads and timber harvesting on hydrological regimes;
- Minimize soil disturbance that could result in stream sedimentation.
- Identify and protect riparian areas during forest planning and operations;
- Maintain soil stability and stream channel integrity in riparian areas;
- Maintain forest connectivity along major riparian corridors, including all mainstem stream channels.

4.3 Biological diversity objectives

- Maintain biodiversity when planning and implementing forestry activities;
- Maintain and enhance forest structural diversity and biological legacies;
- Maintain and recruit old growth forests at a level compatible with the range of natural variability, while considering climate change impacts;
- Identify and protect rare, threatened and endangered ecosystem types.

4.4 Wildlife habitat objectives

- Manage for forest composition and structures compatible with the habitat needs of a wide range of wildlife;
- Maintain habitat for keystone, vulnerable, threatened and endangered wildlife species.

4.5 Soil objectives

- Maintain the productivity and hydrological functioning of forest soils.

4.6 Wildfire protection objectives

- Improve community wildfire protection;
- Attempt to lower the risk of catastrophic wildfires.

4.7 Forest health objectives

- Maintain resilient and healthy forests that address HGCF's broad environmental and social goals.

4.8 Visual objectives

- Minimize the visual impact of harvesting and road building activities.

4.9 Recreation objectives

- Maintain and, where possible, improve recreation opportunities in the community forest.

4.10 Timber objectives

- Maintain sustainable timber harvest rates, while considering ecosystem resilience and climate change projections;
- Manage forests for a diverse range of wood products, including sawlogs, peelers, building logs, poles, firewood, pulp and specialty wood products;
- Provide logs suitable for milling and value-added processing in the Haida Gwaii community.

4.11 Non-timber forest products objectives

- Continue to explore opportunities for sustainable management of non-timber forest products, including medicinal herbs, wild foods, wildcrafting materials, and florals.

5 RESOURCE INVENTORIES

5.1 Vegetation Resource Inventory

- The VRI Phase 1 was implemented by the MoFLNRO, in partnership with the Council of the Haida Nation (CHN) and Parks Canada with the intent to produce a seamless Phase 1 VRI for all of Haida Gwaii.
- The VRI is a strategic level inventory designed to support, among other things, the Timber Supply Review (TSR) process, and is the current Provincial standard for forestry inventory.
- The VRI is a strategic level inventory designed to support, among other things, the Timber Supply Review (TSR) process, and is the current Provincial standard for forestry inventory. Commenced on July 28, 2011 and was completed in December, 2013.
- Objectives of this project are: Create a complete, seamless, reliable Phase I (photo-interpreted) inventory which meets provincial VRI standards for the entire land area of Haida Gwaii. Next steps include conduct Phase II sampling with a New Volume Adjustment Factor (NVAF) component to audit the accuracy of the new photo-interpreted attributes and inventory volumes and develop statistically accurate tree volume adjustment factors.
- Total project area covers all 1.004 million ha of Haida Gwaii and involves 127 BCGS 1:20,000 map sheets.
- All Quality Assurance methodology used to conduct the QA reviews of the major work phases to the Ministry of Forests, Lands, and Natural Resource Operations' Vegetation Resources Inventory Photo Interpretation Quality Assurance Procedures and Standards document (version 3.4, April 2011).

5.2 Terrestrial Ecosystem Mapping

- The TEM strategic plan was prepared by Madrone Environmental Services Ltd. (Madrone) for the Ministry of Forests, Lands and Natural Resource Operations (FLNRO), the Ministry of Environment (MoE), and Council of the Haida Nation (CHN), and was funded by FLNRO.
- The focus of this project was to develop a strategic plan for completion of seamless, standardized Terrestrial Ecosystem Mapping product (TEM) for of the entire land base of the Haida Gwaii archipelago to current TEM standards (RIC 1998 and RISC 2004), and BEC classification site series descriptions (Banner et al. 2014). Most of the TEM mapping is done to a Survey Intensity Level 4 (visitation of 15%-25% of mapped polygons)
- Strategic Plan for Haida Gwaii Seamless Terrestrial Ecosystem Mapping completed on April 27, 2017. The objectives of this project include:
- Assessing the existing TEM products to determine the availability of original data and the work required to bring these products up to current standards;
    1. Determining the feasibility and methods for updating TEM products;
    2. Prioritizing areas for updating existing/generating new mapping;
    3. Discussing the long-term values of TEM with bioterrain attribution and increased field verification of ecosystem polygons

4. Developing a schedule for proposed completion of the TEM seamless product, using the new BEC classification (Banner et al. 2014) and current BC provincial mapping standards; and
5. Forecasting the costs for completing and upgrading TEM at SIL 4.

- The project area for the Strategic Plan applies to all of Haida Gwaii. The total land area of the archipelago of Haida Gwaii, including all fresh water bodies, but excluding salt water inlets, covers just over one million hectares (ha) (HG VISP 2011). It should be noted than when mapped, Haida Gwaii covers one hundred and sixteen (11) 1:20,000 scale BCGS map sheets.
- Producing a seamless TEM SIL 4 product for Haida Gwaii is meant to improve the reliability and quality of the baseline ecosystem mapping available to support the Ecosystem-based management approach that is legally established under the LUOO (FLNRO 2010). TEM project planning and execution should follow the most current provincial ecosystem mapping standards. SIL 4 is the minimum sampling effort considered acceptable for an ecosystem mapping project to be included in the final seamless TEM SIL 4 product. Qualified professionals completing the ecosystem mapping should follow the quality assurance guidelines laid out for TEM (RISC 2003) and should complete an internal QA process in line with these guidelines prior to submitting the mapping product to FLNRO.

5.3 Terrain Mapping

- Terrain Mapping datasets have been produced for: Husby Forest Products, Ministry of Environment, MacMillan-Bloedel/Weyerhauser, Western Forest Products, Geological Survey of Canada and Parks Canada.
- The Terrain Classification System of BC has 4 basic geological descriptors and associated modifiers. These include Terrain Texture, Surficial Material, Surficial Expression and geomorphological Process. Additionally, all chosen projects had an associated drainage class. For the biophysical models, Terrain Texture, Surficial Material, and Drainage class were reviewed for inclusion.
- TEM has been undertaken since 1978 continuing until 2005.
- The British Columbia Terrain Classification system is an underlying standard for terrain datasets on Haida Gwaii; however, projects differ in terrain survey intensity, data storage, and mapping extents which reflect forest tenure boundaries. Surficial deposits are known to be an important role in the biological and physical nature of ecosystems (Banner et. al) and can be an equally important predictive model indicator for ecosystem mapping (Meidinger, Jones)
- The CFA covers the Drizzle Watt Loon Area (27,870 ha), the East Coast Area (4,697 ha) the Honna Area (8,321 ha) on Graham Island. Further south on Moresby Island, the Skidegate Lake Area (3,039 ha) and Sewell Tasu Area (16,916 ha) are within the proposed area. The total area is 60,843 hectares with an estimated Timber Harvesting Land Base (THLB) of 19,915 ha.
- Some TEM datasets have not had any Accuracy Assessment but others are sourced from the Ecological reports Catalogue and follow the symbology conventions of the Terrain Classification System of BC.

5.4 Visual Quality Objectives Mapping

- Forest Stewardship Plan holders whose operations on the TSA or control of TFL could interfere with the VQOs for Scenic Areas.

- Visual Quality Objectives guide forest management activities on a landscape deemed to have scenic values which are explicitly identified by the Forest Range and Practices Act.
- VQOs established for Scenic Areas on Haida Gwaii (mapping consolidated for TSA and TFLs on December 5, 2005).
- Design of roads and cutblocks will adhere to the "Guide to Visual Quality Objectives" guidebook and District of Haida Gwaii Visual Policy. Plan holders will adhere to the following percent alteration limits for clear-cutting for set objectives on mid-ground landforms 1 to 8km from significant public viewpoints.
- Mapping was consolidated for TSA and TFLs on December 5, 2005 for Haida Gwaii
- The standards are maintained through FPPR 9.2, GAR s. 7(2), FRPA s. 180, 181 which provide guidance to TFL licensees on managing for visual quality.

5.5 Stream, Fish, and Fish Habitat Inventory

- Licensees operating on TSA or with a TFL and for Governments
- Attachment B of the 2007 Haida Gwaii Strategic Land Use Agreement (SLUA, 2007) specifies measures and targets for high value fish habitat and S1/S2/S3 streams, lakes, marshes and wetlands not classified as high value fish habitat.
- As per s.5 of SLUA, the Detailed Strategic Planning (DSP) Joint Technical Team (JTT) has used components of Attachment B to develop land use objectives for critical fish habitat. The DSP JTT attempted to connect Type I/II fish habitat by including a spatial representation in Schedule 4 of the Haida Gwaii Land Use Objectives Order (LUOO) (Broadhead 2009). Identification of Type I or Type II fish habitat in the field by a qualified professional would supercede this spatial presentation.
- The SLUA was first approved in 2007, the Defining Type I and Type II Fish habitat (DSP JTT Technical Document –AQ04) was completed in 2009 –as was the Riparian Fish Forest (RFF) on Haida Gwaii Report, produced by Gowgaia Institute and John Broadhead. The RFF fish distribution data have helped various agency analysis identify High Value Fish Habitat associated with new Ecosystem-Based Management (EBM) Objectives for protecting Aquatic Habitats.
- Freshwater fish habitat and riparian forests are key indicators of environmental condition and were identified as a priority information gap to address. Watersheds with culturally significant salmon runs were in urgent need of protection and restoration. The Community Planning Forum (2003-2005) requested explicit information about where freshwater streams and lakes are actually occupied by fish (or not), and to what extend they have been disturbed by logging. These inventories help meet EBM standards set by government (either within FRPA or the Ha
- The inventory produced in the Riparian Fish Forest on Haida Gwaii report created a 1:20,000 scale model of Haida Gwaii with sufficient accuracy for landscape-level planning to illustrate the distribution of fish in freshwater streams and lakes, the spatial pattern of the riparian forest zone and risk caused by logging.
- D: Streams are defined generally in Operational Planning Regulation and classified as S1-S6 under Sustainable Forest Management (SFM) protocols. Type I and Type II Fish habitat are defined within the DSP JTT Technical Document – AQ04 and subsequently within the Land Use Objectives Order (LUOO).

5.6 Archaeological Overview Assessments

- The Haida Tribal Society\Council of the Haida Nation, Ministry of Forests, Queen Charlotte District, Renewal Investment Corporation Ltd, J.S Jones Ltd., Weyerhauser Ltd., Husby Forest Products Ltd., Western Forest Products Ltd., and The Archaeology & Forests Branch of British Columbia.
- Deliverables for this project included seven ARCINFO GIS Coverages created from data review, three 1:20,000 scale TRIM base map sets with associated plot files, source documents and a final AOA report.
- An Archaeological Overview Assessment of Haida Gwaii, North of Gwaii Haanas was completed by Tina Christensen & Jim Stafford with contributions by Karen Church – a draft was submitted on Sept 6. 2002.
- Intending to be used as a starting point for further research and may be used to better predict where, and what type of, archaeological remains may be found in specific areas of Haida Gwaii.
- The study area comprises all the land and intertidal area of Haida Gwaii except Naikoon Provincial Park and Gwaii Haanas/South Moresby National Park Reserve. The study area is 796,510 hectares in size and in addition to Graham and the upper portion of Moresby Island, includes 1892 islands and islets.
- All siteforms for the sites in the study area were gathered and photocopied from the Archaeology Branch, Inventory Division, and the site location and type reconciled to the standards off the Archaeology Site Awareness Project Standards (Ministry of Resource Management).

5.7 Non-Timber Forest Products Inventory

6 TIMBER SUPPLY ANALYSIS AND ALLOWABLE ANNUAL CUT

6.1 Discussion of timber harvesting landbase and AAC modeling assumptions

Forest characteristics, timber harvesting landbase (THLB) netdowns, AAC modeling assumptions, and sensitivity analyses will be determined by a qualified Registered Professional Forester with expertise in timber supply analysis after public consultation and will be discussed in detail in Appendix 1: Timber Supply Analysis.

Initial Assumption

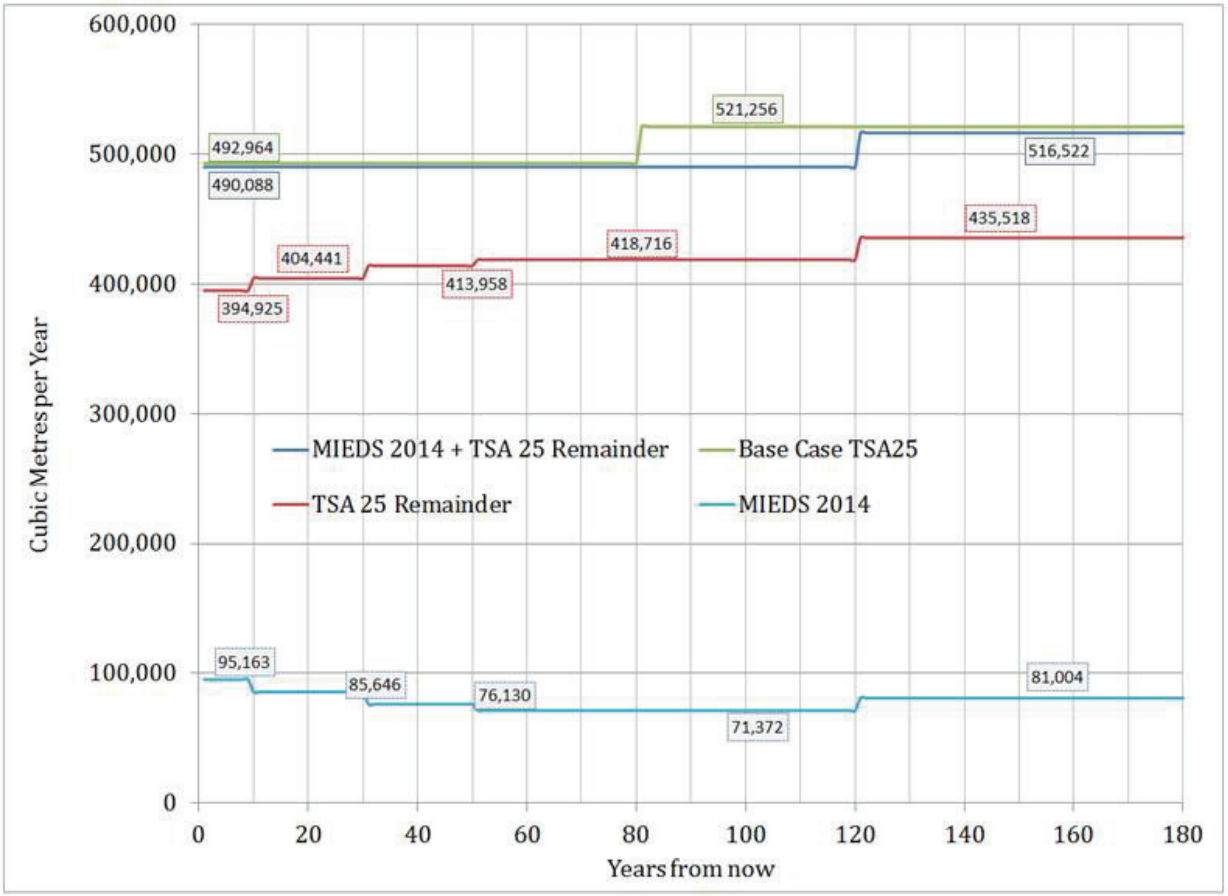
David Stuart RPF, Timber Supply Analyst with the BC government (MFLNRORD) worked on the Haida Gwaii Community Forest timber supply assessments for many iterations starting in 2014 and winding up in November 2017 when the invitation letter was sent by the Ministry to Misty Isles Economic Development Society. The analysis was supplemental to the timber supply review (TSR) analysis that supported the Haida Gwaii Management Council's (HGMC) first allowable annual cut determination for all of Haida Gwaii in 2012 and was based on the proposed boundaries in the invitation letter dated November 15, 2017.

The official documentation of the timber supply review and allowable annual cut determinations by the Haida Gwaii Management Committee (HGMC) and the Chief Forester of BC can be found at https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/timber-supply-review-and-allowable-annual-cut/allowable-annual-cut-timber-supply-areas/haida-gwaii-tsa They include a data package that details the net-down (or timber harvesting land-base (THLB) definition), an analysis report that includes the base case harvest projection and many other harvest projections to test the sensitivity of the timber flow to the adjustment of various pertaining factors. There are also rationale documents explaining the AAC decisions made by the HGMC and the Chief Forester which consider those analyses.

The analyses used a boundary that included 20,102 hectares of THLB or 15.78% of TSA25's THLB. Applying the same proportion of 15.78% to the TSA AAC gave an estimated AAC for the CFA's proposed boundaries 80,791 cubic metres per year.

HGCF Area Name	THLB (ha)	THLB %	AAC Affect (m^3/yr)
Drizzle Watt Loon Area	8,354	6.56%	33,577
East Coast Area	3,111	2.44%	12,503
Honna Area	3,443	2.70%	13,839
Sewell Tasu Area	3,566	2.80%	14,331
Skidegate Lake Area	1,628	1.28%	6,541
HGCF	20,102	15.78%	80,791
MU	THLB (ha)		AAC (M^3/yr)
TSA25	128,425		512,000

The calculations shown in the tables are ratio based and do not comprise a forecast result – although the AAC was determined based on TSR modeling. However, in addition to the ratio based assessments, a timber supply projection was done using the earliest set of CFA boundaries proposed in 2014. In this sensitivity test, the overall base case TSA targets were achieved for the first 80 years within 2876 m^3/yr (or 0.6%) while the CFA area and the non-CFA were modeled in separate compartments (492,964 m^3/yr in the base case and 490,088 m^3/yr in the CFA sensitivity).



In the sensitivity test projection shown above, over the first 50 years the CFA supports on average 83,314 m^3/yr, and the rest of the TSA supports on average 406,774 m^3/yr. If a 7% reduction in the Community Forest is assumed, then it would support 77,482. The difference of 5,832 cubic metres is added to the non-CFA portion of the TSA. The timber supply analyst then added 3.8% for the upward pressures (figure below) which is an excerpt from HGMC rationale regarding upward and downward pressures.

- The Haida Gwaii Community Forest would support 77,482 m^3/yr * 1.038 = 80,426 m^3/yr on average
- TSA outside the Haida Gwaii Community Forest would support 412,606 m^3/yr * 1.038 = 428.285 m^3/yr on average.
- These combined AACs total 508,711 m^3 which is 3,289 m^3 or 0.6% below the current TSA AAC of 512,000 m^3.

As of Dec 5, 2017 • units are (m^3/yr cubic metres per year				
	Initial CFA	93% of HGCF Initial		add 3.8%
HGCF	83,314	77,482	5,832	80,426
TSA	406,774	412,606		428,285
Total	490,088	490,088		508,711

6.2 Proposed Allowable Annual Cut

Haida Gwaii Community Forest will propose an allowable annual cut (AAC) to the District Manager who is responsible for the decision, after consulting with the public and engaging a timber supply analyst on contract to model options and assumptions.

6.3 Rationale for Allowable Annual Cut

This will be supplied in a future draft once options for the allowable annual cut (AAC have been modeled) including short term and long term projections and sustainability considerations.

6.4 First Nations

The Haida Gwaii Community Forest has worked closely with the Council of the Haida Nation who will be consulted on support for the tenure, and the draft Forest Management Plan for public input and consideration. Rather than just consulting and inviting participation in the process, we feel that it is important for the resource and the people of Haida Gwaii that there is true collaboration in the spirit of yahguudang. Yahguudang is a Haida teaching that influences all life and interactions, and guides us as we strive to achieve tll yah daa or balance in our lives and with the place we inhabit – Haida Gwaii.

The Council of the Haida Nation will be asked to comment on this draft Forest Management Plan in Appendix 2, as they deliberate on the Haida Gwaii Community Forest and a potential tenure.

6.5 Stakeholder groups

The Haida Gwaii Community Forest Draft Management Plan will be sent to all identified stakeholder groups for input, review and comment in the first quarter of 2018.

6.6 Community consultation

The Haida Gwaii Community Forest website http://www.haidagwaiicommunityforest.com was published mid January 2018. It will be widely publicized in social media and serves as a transparent record of information about the proposed community forest.

Haida Gwaii Community Forest will advertise and host meetings in the communities of Old Massett, Masset, Port Clements, Queen Charlotte, and Sandspit during the spring of 2018 to discuss the draft Management Plan and receive any comments and public feedback that may inform the scenarios and options that are modeled to inform the AAC process. AAC assumptions, methodologies, and options/scenarios will be presented for review and discussed in a further public process.

Haida Gwaii Community Forest will also advertise and mail out a community survey to all residents in the spring of 2018, to solicit residents' opinions on many aspects of Haida Gwaii Community Forest governance, management and operations, including views regarding forest management and AAC issues. Survey responses, both quantitative and qualitative, will be summarized and made public. Survey responses will also be closely reviewed and considered by the Haida Gwaii Community Forest board, a proposed advisory board and staff, prior to drafting the final Management Plan.

7 PROVINCIAL CFA PROGRAM OBJECTIVES

Haida Gwaii Community Forest is committed to meeting the Provincial Community Forest Agreement Program Objectives, as listed below.

1. Provide long-term opportunities for achieving a range of community objectives, values and priorities

HGCF is committed to addressing range of community objectives and values, including (from HGCF's Goals and Objectives in Sections 3 and 4):

- Provide community environmental benefits, such as clean water; provide recreation and wildcrafting opportunities;
- Pursue opportunities for economic diversification in the forestry, non-timber forest products, ecosystem management, and value-added sectors;

2. Diversify the use of and benefits derived from the community forest agreement area

HGCF is committed to diversifying the use of and benefits derived from our CFA area, including (from HGCF's Goals and Objectives in Sections 3 and 4):

- Continue to pursue local lumber and value-added wood products manufacturing opportunities and markets;
- Pursue opportunities for economic diversification in the forestry, non-timber forest products, ecosystem management, and value-added sectors;
- Improve community wildfire protection;

3. Provide social and economic benefits to British Columbia

HGCF is committed to providing social and economic benefits, including (from HGCF's Goals and Objectives in Sections 3 and 4):

- Provide recreation and wildcrafting opportunities;
- Continue to pursue local lumber and value-added wood products manufacturing opportunities and markets;
- Provide and support local employment opportunities in the forestry, ecosystem management, and value-added sectors;
- Provide more jobs per cubic meter of timber harvested than the current provincial average;
- Pursue opportunities for economic diversification in the forestry, non-timber forest products, ecosystem management, and value-added sectors;

4. Undertake community forestry consistent with sound principles of environmental stewardship that reflect a broad spectrum of values

HGCF is committed to sound principles of environmental stewardship that reflects a broad spectrum of values, including (from HGCF's Goals and Objectives in Sections 3 and 4):

- Maintain fully functioning ecosystems at the landscape, watershed, and stand levels;
- Support ecosystem resilience in the face of climate change; maintain, enhance, and protect biodiversity and wildlife habitat; provide community environmental benefits, such as clean water; ensure sustainability of timber and non-timber resources;

5. Promote community involvement and participation

As a community co-operation, HGCF is committed to promoting community.

- Involvement and participation, including (from HGCF's Goals and Objectives in Sections 3 and 4):
- Implement effective strategies and demonstrate meaningful community participation.
- Support education opportunities for students and community members.

6. Promote communication and strengthen relationships between Aboriginal and non-Aboriginal communities and persons

HGCF is committed to promoting communication and strengthening relationships between Aboriginal and non-Aboriginal communities and persons, including (from HGCF's Goals and Objectives in Sections 3 and 4):

- Maintain good working relationships with all Haida and non-Haida residents of Haida Gwaii;

7. Foster innovation

HGCF is committed to fostering innovation, including (from HGCF's Goals and Objectives in Sections 3 and 4):

- Demonstrate sustainable and innovative forestry planning and practices;
- Support research related to community resource stewardship, alternative silviculture systems, and climate change adaptation;

8. Advocate forest worker safety

HGCF is committed to advocating for forest worker safety, by following WorkSafe BC regulations and best management safety practices.

8 COMMUNITY REPORTING

Haida Gwaii Community Forest will report to the people of Haida Gwaii in the following ways;

- Holding a public Annual General Meeting of the Haida Gwaii Community Forest;
- Holding open public meetings annually to discuss HGCF's plans and activities;
- Maintaining our website haidagwaiicommunityforest.com with current information and any notices of plans; and
- Producing an annual spring newsletter and making opportunities for providing input via questionnaires and field tours.