

FSC[®]
Management Plan



From the Land and Spirit of the Haida

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 &KLHI)RUHVWHU, Taan Forest

 Date (dd/mm/yy)

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Introduction

Taan Forest Limited Partnership (Taan) is a forest management company owned by the Haida Nation that is committed to striving to create a successful forest economy on Xaayda Gwaay.yaay Haida Gwaii based on the management principles of the Strategic Land Use Agreement with the goal of maximizing the benefits from the forest resource for the Haida Nation and balance the interests of all communities. Specifically, manage for long term sustainability, increase the number of local logging and manufacturing jobs on Xaayda Gwaay.yaay Haida Gwaii, extract the best value possible from the areas harvested, and manage the business prudently and effectively.

Purpose

The FSC Management Plan has been designed to ensure forest management activities are consistent with corporate commitments of Taan to health and safety, environmental protection and sustainable forest management under the requirements of the Forest Stewardship Council® (FSC). Applicable FSC Standards, as amended from time to time, include (for current versions visit www.fsc.org):

- FSC National Forest Stewardship Standard of Canada (The National Standard)
- FSC Requirements for Use of Trademarks for Certificate Holders

The FSC Management Plan is an important supporting document to existing Corporate Management Systems (CMS), Forest Stewardship Plans (FSP) and other existing agreements (refer to Table 4 for a list of existing documents and plans applicable to the Management Unit).

The FSC Management Plan does not include requirements that are previously documented within the other supplemental plans and agreements. Where other supplemental documents are utilized to achieve specific criteria related to FSC Management Plan requirements, the management plan will include a specific reference to the document.

The Certification Matrix (Appendix 1) also includes documentation of the various sources of information, procedures, evidence and responsibilities to demonstrate conformance with the FSC Forest Management.

Scope

The FSC Management Plan applies to all Taan forest tenures (the Management Unit) and all forest management activities conducted on behalf of Taan by employees, contractors, sub-contractors and other tenure holders, within the Management Unit.

The FSC Management Plan will typically only be referenced by Management and Planning personnel.

Crews conducting field activities will refer to the relevant Standard Operating Procedures and the approved Plan/ Map for the work area (these key documents that guide site level activities will incorporate the specific FSC requirements that are applicable for each site).

Conflicts Between Legal Requirements & FSC

There are no conflicts known to exist between the applicable legal requirements and the FSC Principles and Criterion at this time.

Review & Revision

Assistance in the development of the monitoring component and some of the management strategies within this management plan was provided by Laurie Kremsater, M.Sc., RPF, RP.Bio.

The management plan will be periodically reviewed and revised as required (minimum once every five years) to facilitate adaptive management that incorporates the results of monitoring and assessments, the results of audits, any changing circumstance or new information that becomes available (e.g., technical, scientific, environmental, social, economic, High Conservation Values, etc.), and the incorporation of comments and suggestions made through the FSC Engagement Process (including the Haida Nation and the public), as deemed applicable by Management.

Major revisions to the management plan or specific supporting assessments are incorporated into the Public Consultation process (as applicable).

For inquiries or concerns relating to the FSC Management Plan or supporting documents, please contact the Taan CMS Administrator (info@taanforest.com). Printed copies can also be provided upon request.

Summary of Revisions

This edition of the FSC Management Plan includes the following changes from the previous version(s); changes have also been identified in purple font to assist with review:

Revision Date	Description of Change
Feb 2022	<ul style="list-style-type: none"> Updates to the protected area landbase within or Adjacent to the DFA to reflect updated mapping – refer to the Protected Areas Table on page 9. Update to the FSC Monitoring Plan section to identify that the Monitoring Report shall be completed annually by July 31st (for the previous year’s operations) – refer to page 39.

Management Commitment

Taan is committed to adhering to the relevant FSC Policies and Standards (including the FSC Principles and Criteria) over the long-term across the Management Unit. This management plan has been signed off to acknowledge the commitment.

Taan also maintains Health, Safety and Sustainability Statements that documents the corporate commitments to ensuring the health and safety of forest workers while ensuring forest management activities are consistent with applicable legal requirements and sustainable forest management principles. Corporate Statements are posted on the website.

Taan recognizes and respects the customary and legal rights of the Haida Nation over their lands, territories and resources and acknowledge that on-going communication and consultation with the Haida Nation is an integral component of our business to ensure continued support of the Haida Land Use Vision (refer to the FSC Engagement section for further details).

Taan will not offer or receive bribes in money or any other form of corruption and shall comply with anticorruption legislation where this exists. In the event that any corruption activity is reported or otherwise made known to Taan, an Investigation will be completed, including generation of corrective actions to prevent re-occurrence.

Sphere of Influence

There are several indicators in the FSC National Standard that make reference to “sphere of influence”, where an organisation may not have direct management control over a particular indicator or requirement and a collaborative effort may be required. This is defined as:

- When required by Indicators to work within one’s sphere of influence, The Organizations and forest managers shall interact with the Haida Nation, their colleagues, other professionals, businesses and agencies, including government Ministries, Departments and other agencies, to achieve the Indicators’ objectives.
- The expectation for working within Taan’s sphere of influence is that Taan demonstrates meaningful and sincere attempts, often over a sustained period, to work in a professional manner with colleagues and associates outside of Taan to achieve the intent of the Indicator.
- Some examples include:
 - Resolution of complaints and disputes in relation to Taan Tenures that Taan may not be directly involved in
 - Management of species at risk
 - Designation of “Conservation Areas” as defined under the FSC Standard
 - Implementation of sustainable levels of activity for hunting, fishing and trapping (if known concerns)
 - Landscape level connectivity
 - Road deactivation and access management

Haida Nation

Xaayda Gwaay.yaay Haida Gwaii (“islands of the people”) is the ancestral home of the Haida Nation. The Xaayda Haida have an asserted traditional territory of the entire archipelago of Xaayda Gwaay.yaay Haida Gwaii Islands and surrounding waters (no overlapping or shared territory with other nations).

In 1993, the Haida Nation began treaty negotiations with the governments of Canada and British Columbia. In 2002, the Xaayda Haida filed a statement of claim with the Supreme Court of BC asserting their rights and title to the Islands and surrounding waters.¹

In September 2007, the Council of the Haida Nation (CHN) signed a landmark Strategic Land Use Agreement (SLUA) with the Province of BC marking a commitment to establish a significant number of additional protected areas on Xaayda Gwaay.yaay Haida Gwaii (resulting in approximately half of the islands being protected) in addition to ensuring sustainable forest management and economic well-being of the local communities through the development and implementation of a Land Use Order based on the principles of ecosystem based management (EBM). The Land Use Order, intended to implement the SLUA, was brought into force December 2010.

Recently an incremental step in the process of the reconciliation of the Xaayda Haida and Crown titles has been made with the introduction of the Haida Stewardship Law and the Haida Gwaii Reconciliation Act which gives effect to the Kunst'aa guu - Kunst'aayah Reconciliation Protocol between the Haida Nation and British Columbia (December 11, 2009). Integral to the Haida Stewardship Law and the Haida Gwaii Reconciliation Act is shared and joint decision-making between the Council of the Haida Nation and the Province of BC regarding land and natural resource management on Haida Gwaii. The joint decision-making falls under the authority of the Haida Gwaii Management Council (HGMC).

Some of the joint decision making under the authority of the HGMC include, but are not limited to, the following:

- Implementation and amendments to the Haida Gwaii Strategic Land Use Agreement (2007);
- Establishment, implementation and amendment of the Land Use Objectives Order;
- Determination and approval of the Annual Allowable Cut (AAC) for Xaayda Gwaay.yaay Haida Gwaii;
- Approval of management plans for protected areas; and
- Developing policies and standards for the identification and conservation of heritage sites and other strategic level management matters that the Parties delegate to the HGMC.

Xaayda Laas Haida people make up half of the 5000 people living on the islands. Xaayda Haida reside throughout the islands but are concentrated in two main centers, Gaw Tlagee Old Massett at the north end of Xaayda Gwaay.yaay Linagwaay Graham Island and HIGaagilda Skidegate at the south end. Besides these two communities there are many more Xaayda Haida scattered throughout the world. T'agwan Vancouver (770 km south of Xaayda Gwaay.yaay Haida Gwaii) has a large population as does Kxeen Prince Rupert (100 km east across Hecate Strait)².

¹ Haida Gwaii – Queen Charlotte Islands Land Use Plan Socio-Economic Base Case Final Draft, Gary Holman Consulting Economist with assistance of Steve Nicol Lion's Gate Consulting Inc. March 2004

² Haida Gwaii – Queen Charlotte Islands Land Use Plan Socio-Economic Base Case Final Draft, Gary Holman Consulting Economist with assistance of Steve Nicol Lion's Gate Consulting Inc. March 2004

Management Unit Description

Xaayda Gwaay.yaay Haida Gwaii is an isolated group of over 200 islands totaling 1,006,792 hectares (large and small islands) located roughly 100 kilometers west of the northern coast of British Columbia.

The geography of the Islands is very similar to that of coastal British Columbia, with mountainous terrain and deep inlets, temperate rain forests, sub-alpine tundra and salmon spawning streams. However, the ecology of the Islands is quite unique; there are at least 39 species and sub-species of plants and animals unique to the Islands.³

The islands are divided into three physiographic units - the rugged, steep terrain of the Queen Charlotte Ranges dominates the west coast of Xaayda Gwaay.yaay Linagwaay Graham Island, the Juu Çawça Skidegate Plateau located in the center of the island and the relatively flat and poorly drained Queen Charlotte Lowlands dominate the east side of the island.

Harvesting has been taking place on Xaayda Gwaay.yaay Haida Gwaii since the 1920's, under the administration of the Haida Gwaii Forest District Office, Ministry of Forests, Lands and Natural Resource Operations and Rural Development.

Tenure Description

BC Timber Sales has been issued an annual volume allocation within the Taan Forest Haida Tenure (FLTC A87661) and is considered an overlapping tenure on the management unit (consistent with the FSC Standard).

The Management Unit (MU) includes the following tenures but excludes any federal lands, private lands, parks and municipalities:

Table 1: Management Unit Area and Sustainable Harvest Level

Licensee	Tenure	Total Area (ha) ⁴	THLB (ha)	Allowable Annual Cut (AAC) ² m ³	Long Term Harvest Level (LTHL) ¹ m ³
Taan Forest	TFL 60	134,507	48,365	340,000 (cedar 133,000)	342,462
	FLA87661	58,606	27,045	120,000	
BCTS	FLA87661 apportionment	-	-	14,210	135,605
Total		193,113	75,410	474,210	478,067

The THLB above was updated based on the TSR 2019 data. A new AAC was announced May 5, 2020 at 804,000m³ for all of Xaayda Gwaay.yaay Haida Gwaii (previously was 929,000m³). The Chief Forester's allocation to the specific tenures is expected to be released later in 2020 and will be updated in the next FSC Management Plan

¹ Long Term Harvest Level as indicated in the Haida Gwaii Management Council TSR Analysis Package (January 2012), before non-recoverable losses are removed.

² The new Haida Gwaii AAC was announced in April 2012 which significantly reduced the AAC to a total of 929,000m³ for all of Xaayda Gwaay.yaay Haida Gwaii. The AAC for TFL 60 and the entire TSA was announced September 20, 2012 and includes an expectation of average maximum cedar (*Ts'u red cedar* and *SQaahlaan yellow cedar*) harvest level.

³ Haida Gwaii – Queen Charlotte Islands Land Use Plan Socio-Economic Base Case Final Draft, Gary Holman Consulting Economist with assistance of Steve Nicol Lion's Gate Consulting Inc. March 2004

TFL 60 is located on Graham Island (the northernmost of the two major islands) with smaller portions located on Louise Island and Moresby Island. The TFL has undergone numerous ownership changes in the last 50 years. The original TFL 39 was acquired by the Powell River Company in 1961. In the early 1960s the Powell River Company merged with MacMillan and Bloedel Ltd. to form MacMillan Bloedel and Powell River Ltd., simplified to MacMillan Bloedel Ltd. in 1966. On November 1st, 1999 MacMillan Bloedel became part of Weyerhaeuser. The coastal operations were known as the Weyerhaeuser B.C. Coastal Group (BCCG) which later became Cascadia Forest Products (2005). Western Forest Products Inc. acquired Cascadia Forest Products in 2006. Taan Forest completed the purchase of TFL 60 (formerly TFL 39 Block 6) and associated assets from Western Forest Products Inc. (WFP) on June 29, 2012.

The Haida Gwaii/ Queen Charlotte TSA lies entirely within the Xaayda Gwaay.yaay Haida Gwaii Islands. The timber supply area is primarily located on the east and west sides of Xaaydaga Gwaay.yaay Lingwaay Graham Island, with a smaller portion on northwest T'aaxwii Xaaydaga Gwaay.yaay Linagwaay Moresby Island and covers approximately 339,063 hectares of which roughly 23% is considered to contribute to the Timber Harvesting Land Base (2019. HG TSR Data Package). The Taan Forestry License to Cut (FLTC) A87661 is located within the Xaayda Gwaay.yaay Haida Gwaii TSA. Upon transfer of the Taan FLTC tenure to a First Nations Woodland Tenure (area based), the FLTC will be removed from the TSA. The TSA was significantly reduced when new protected areas were created as part of the Land Use Planning process and the Haida Gwaii Land Use Objectives Order.

Taan continues to work towards combining TFL 60 and FLA87661 into an area based First Nations Woodland Tenure.

The Environmental Values Assessment (Zimmfor 2020) contains a more detailed description of the Management Unit in terms of ecosystems and seral stages.

Exclusions from the MU

There are no exclusions from the Management Unit, all of Taan Forest tenures are included in the certified area.

Excisions from the MU

In 2017, an additional 0.84ha was removed from the MU FLTC 187661 for the BC Hydro sub-station in Sandspit.

In 2013, a small area (1.05 hectares) has been removed/ excised from the management unit in FLTC A87661 for a Ministry of Transport gravel pit (#6403273).

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Figure 1: Map of the Management Unit

Additional maps describing various aspects of the Management Unit are included in related documents such as the Forest Stewardship Plan and the FSC Assessment Reports.

Harvest Systems

There are three harvest systems typically utilized on the coast of BC:

- Ground based (typically 30-35% slopes)
- Cable (typically 60%+ slopes)
- Aerial (typically helicopter, very steep slopes, inaccessible areas)

The choice of system is based on a combination of factors, including, but not limited to: slope, terrain conditions, soil type (sensitivity to disturbance), log size and grade, yarding/ skidding distance and piece size, silviculture system (level of retention and number of entries planned) along with consideration other resources, accessibility and road costs, future management and the balance of production costs with economic limits.

For the purposes of cutting authority for crown land under the Forest Act in relation to Cutting Permits, harvest systems have been classified as conventional and non-conventional. The actual methods to be used for each opening are assessed and prescribed in the site level plans (e.g., Harvest Instructions, Site Plan).

Harvesting History

Major commercial tree species and historical harvest profile of *Xaayda Gwaay.yaay Haida Gwaii* are *K'aang western hemlock* (30-40%), *Ts'uu western red cedar* (30-50%), *Sgaahlaan yellow cedar/ cypress* (5-10%), and *Kayd Sitka spruce* (20-30%)⁴. Harvest levels in the past have been significantly lower than the Annual Allowable Cut as a result of poor economic conditions and curtailed operations as well as from implementation of the Land Use Order.

Table 2: Harvesting History of the MU

Tenure	Year	AAC m ³⁵	Actual Harvested ⁶ m ³	Indicated LTHL ⁷ m ³
Haida Tenure	2010	120,000	26,000	-
TFL 60	2010	1,082,616	26,000 (Taan)	1,040,000
	2009	1,150,000 ⁸	56,465	
	2008	789,616	477,665	
	2007	789,616	404,769	
	2006	1,039,616	519,269	
	2005	1,039,616	394,202	

For a summary of more recent harvesting in the MU, refer to Appendix 3 – Annual Monitoring Report.

⁴ Taan Wood Marketing Plan (April 8, 2010)

⁵ Ministry of Forests and Range, Forest Analysis & Inventory Branch, Current AAC: <http://www.for.gov.bc.ca/hts/aac.htm>.

Current AAC calculations include the Designated Areas that have been deferred from any harvesting. Historical AAC reported are sourced from Western Forest Products Inc. Summary of Block 6 Changes in AAC Contributions and include removal of the Designated Areas. In addition, several changes occurred over the time frame reported, often times mid-year. Numbers reported above for a given year were taken from the AAC reported for the majority of the year.

⁶ Western Forest Products Inc. Summary of AAC Allocation & Volume Harvested (May 2009) & TSA Information from MoF Harvest Billing System.

⁷ Haida Gwaii/ Queen Charlotte Islands LUP Timber Supply Analysis-Analysis of Base Cases, Cortex Consulting (November 2004)

⁸ MFLNRO Rationale for AAC Determination for TFL 39 (Weyerhaeuser) TSR2 (November 2001)

Protected Areas

There are several protected areas (or designated under Part 13 of the Forest Act) located within or adjacent to the MU.

The protected areas were amended in the spring of 2012 to add in several foreshore areas and marine areas to the existing parks and conservancies and the information has been updated below consistent with the amendment.

Table 3: Protected Areas within or Adjacent to the DFA¹

Park/ Reserve	Summary of Management Objectives	Land Area (ha)	Marine Area (ha)	Total Area (ha)
Daawuuxusda Heritage Site/ Conservancy	Protection of Haida heritage sites (e.g., villages and seasonal camps); Maintenance of biological diversity, natural environmental values and recreation opportunities.	70,498.5	45,784.7	116,283.2
Damaxya Heritage Site/ Conservancy	Protection of cultural values (CMTs and Archaeological Sites) Recreation – Louise Dover Trail. Spatial connectivity to other protected areas. Includes a marine protected area.	823.0	6.9	829.9
Duu Guusd Heritage Site/ Conservancy	Maintenance of biodiversity through representation of all three terrestrial eco-sections of <i>Xaayda Gwaay.yaay Haida Gwaii</i> and contains cultural/ archaeological sites, identified bird nests and nesting habitat for species at risk, some significant geological formations and 18 estuaries (Linang herring spawning, Ts'aats'idga kelp and T'aanuu eel grass).	143,610.3	84,180.1	227,790.3
Kamdis Heritage Site/ Conservancy	Protection of an internationally significant intertidal estuarine wetland complex that provides habitat for waterfowl, shorebirds and salmonids and protection of cultural/ archeological sites. Important area for cultural, social and economic purposes for the <i>Xaayda Haida</i> . Has a marine protected area component.	1,895.9	826.7	2,722.6
Kunxalas Heritage Site/ Conservancy	Protection of cultural values, villages and heritage sites, recreation trails and camp sites, unique ecosystem complexes, seabird colonies, species at risk nesting/ breeding areas and a marine protected area.).	3,352.9	12,358.4	15,711.4
K'uuna Gwaay Heritage Site/ Conservancy	Protection of cultural values (food collection areas, villages and seasonal camps), important monitoring area for the Research Group on Introduced Species (RGIS) and the Laskeek Bay Conservation Society for seabirds, shorebirds, marine mammals, cavity nesters and plant inventories. Rare and unique ecosystems.)	2,104.7	13,155.1	15,259.8
Naikoon Park	Protection of recreation values (campgrounds, ATV use, hiking) and wildlife (migratory bird route).	66,898.5	2,113.8	69,012.3
Nang Xaldangaas Heritage Site/ Conservancy	Protection of cultural values, villages and heritage sites, important foraging and nesting habitat for species at risk and critical habitat for waterfowl, rare plants, protection of biodiversity and natural environmental values. Marine protected area component.	6,897.2	9,798.3	16,695.5
Pure Lake Park	Important recreation area for swimming, canoeing and picnicking.	141.8	0.0	141.8
Sgaay Taaw Siwaay K'adjuu Heritage Site/ Conservancy	Maintain the ongoing social and ceremonial use of cultural features, focusing on protecting harvesting and hunting areas and their associated cultural and biological values. Important medicinal plants, rare and endangered plants.)	596.6	0.0	596.6

Park/ Reserve	Summary of Management Objectives	Land Area (ha)	Marine Area (ha)	Total Area (ha)
Tlall Heritage Site/Conservancy	Protection of cultural values (e.g., food gathering), villages, heritage sites and seasonal camps, habitat for variety of birds (including species at risk), rocky mountain elk.	16,209.4	21.9	16,231.3
Yaaguun Gandlaay Heritage Site/Conservancy	Protection of cultural values (e.g., social, spiritual), important food fish gathering area, villages, heritage sites, CMTs and archeological sites and seasonal camps, rare plants. Contains component of marine protected area.	2,499.8	224.9	2,724.7
Yaaguun Suu Heritage Site/Conservancy	Protection of cultural values (e.g., social, spiritual), important food fish gathering area, forage and nesting habitat for species at risk, recreation trails, research area for medicinal plants. Recreation trails link to other important areas.	7,970.2	0.0	7,970.2
Drizzle Lake Ecological Reserve	Ecosystem representation and protection (allowing research and educational activities). Protection of undisturbed lake and bog ecosystems (research on stickleback populations and their predators).	813.6	0.0	813.6
Rose Spit Ecological Reserve	Ecosystem representation and protection (allowing research and educational activities). Protection of sandy coastal marine environment & associated flora and fauna.	201.5	0.0	201.5
Tow Hill Ecological Reserve	Ecosystem representation and protection (allowing research and educational activities). Protection of sand beach, dune ecosystems and inland moor bogs.	450.0	69.0	518.9
Vladimir j. Krajina (Port Chanal) Ecological Reserve	Ecosystem representation and protection (allowing research and educational activities). Protection of representative ecosystems, rare genetic resources and outstanding biological phenomena in remote coastal setting.	8,059.6	0.0	8,059.6
Gwaii Haanas National Park	Haida Heritage Site and National Park that is managed jointly by the Haida Nation and the Government of Canada through establishment of a Management Agreement, Management Plan and Management Board. Largest protected area on <i>Xaayda Gwaay.yaay Haida Gwaii</i> (representing 15% of the Islands). Protection of cultural values, villages, recreation area for kayaking, important breeding area for about 750,000 seabirds and migratory stop for birds and grey whales.	145,977.9	348,306.8	494,284.7
Lepas Bay Ecological Reserve	Lepas Bay Ecological Reserve was established for the preservation of nesting seabirds, mainly petrels, and their habitat. Consumptive activities like hunting, freshwater fishing, camping, livestock grazing, removal of materials, plants or animals are prohibited by regulation in ecological reserves. Landing on the unnamed island in Lepas Bay Ecological Reserve is restricted to protect sensitive wildlife and habitat. Permission to land is required.	1.5	0.0	1.5
Total		479,003.0	516,846.4	995,849.4
		(-4,876.3)	+170,759.7)	

Note: Adjustments to the areas of the protected areas reflect updated mapping and line adjustments related to land versus marine areas, as well as some additions to the marine areas.

The Protected Areas were created and are managed for a variety of different objectives. The Haida Nation and the Province of BC through the Haida Gwaii Management Council have the management plans on their webpage: <http://www.haidagwaiimanagementcouncil.ca/protected-areas/>

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Figure 2: Map of Haida Gwaii Protected Areas

Local Communities

The local communities associated with the Management Unit are K'il Lnagaay *Sandspit*, Dajing Giids *Queen Charlotte City*, Gamadiis *Port Clements*, Tll.aal *Tlell*, Gaw Tlagee *Masset/ Old Massett* and HlGaagilda *Skidegate*.

Local communities use the local forests for many activities and benefits, including but not limited to recreation, hunting, gathering, non-timber forest products, etc.

Stakeholders

The Taan CMS Administrator is responsible to maintain a "Stakeholder Contact List" and ensure consistency with the legal tenure rights contacts obtained from the Crown Registry and Geographic Base Branch at: <http://geobc.gov.bc.ca/>. Information is maintained in Geographic Information Systems (GIS).

Legal & Customary Rights

The legal and customary rights referred to in the FSC Canada Standard are not captured in language consistent with the language used by the *Xaayda Haida*. As such, the existing processes for engagement with the *Xaayda Haida*, will be established by the *Xaayda Haida* to ensure that the *Xaayda Haida* rights as defined by the *Xaayda Haida* are respected. Once the processes are defined, the *Xaayda Haida* will provide their documentation to Taan.

Currently, there are no customary rights for non-Indigenous communities established within Canada.

Within the management unit, there are several legal tenure and use rights holders, including mineral tenures, water tenures, and trap lines, (associated maps are available upon request, where applicable).

There are also general rights to access public lands within the Management Unit by stakeholders, interest groups and local communities.

Sustainable Harvest Rates

Timber Supply Review and Allowable Annual Cut

Under the Reconciliation Protocol (and associated legislation *Haida Stewardship Law* and *Haida Gwaii Reconciliation Act*), the *Haida Gwaii Management Council (HGMC)* was established, and one of the mandates of the council is to establish the AAC for all of *Xaayda Gwaay.yaay Haida Gwaii*.

A new Timber Supply Review was completed by the HGMC in 2019. The AAC determination was released May 5, 2020 and Chief Forester allocation is pending.

The first Timber Supply Review incorporating the new Land Use Order requirements was completed by the HGMC in 2011 for all of *Xaayda Gwaay.yaay Haida Gwaii*. The AAC determination by the HGMC was announced April 4, 2012 at 929,000m³. Harvest levels were significantly reduced (48%) from the previous AAC (as a result of the Land Use Order).

As a result of the Land Use Order and the ecosystem based management objectives, there are no anticipated significant reductions to the timber supply and AAC as a result of the implementation of the FSC requirements.

Background Information

Requirements relating to Timber Supply Review and establishing Allowable Annual Cut for crown land are specified within the Forest Act (section 8). For *Xaayda Gwaay.yaay Haida Gwaii*, specifications are also outlined within the Reconciliation Protocol and the Terms of Reference.

The current and historical Timber Supply Reviews and AAC determinations relating to the Management Unit can be viewed at: <http://www.for.gov.bc.ca/hts/analysis.htm>.

For more information on the Timber Supply Review (TSR) and determination of the AAC refer to the [Haida Gwaii Management Council](#) website and/ or the [Ministry of Forests, Lands and Natural Resource Operations and Rural Development](#), [Forest Analysis and Inventory Branch](#) website.

Sustainable Harvest Rates

Taan is responsible to ensure that the actual annual timber harvest is recorded and the averaged level of harvest over a defined period (maximum of 10 years) does not exceed the allowable cut.

An indicator has also been developed within the Monitoring Report to track and report on sustainable harvest rates in relation to the AAC.

Engagement Processes

Solutions Table

- Under the Haida Stewardship Law and the Haida Gwaii Reconciliation Agreement between the Haida Nation and the Government of BC, provisions are included to establish shared decision making called the Solutions Table to oversee technical and operational aspects of forest management. The Solutions Table consists of two *Xaayda Haida* and two provincial representatives. They have full access to a broader set of experts who they are able to bring in advice as needed. The Solutions Table reviews applications and makes a recommendation to decision makers. The application and recommendation is then passed to both the *Xaayda Haida* and the Provincial decision maker for a decision. Both decision makers must concur on the decision.

A summary of the process is as follows:

- All applications received by the province are referred to Front Counter Haida Gwaii.
- Applications are given to a small sub-table consisting of the *Xaayda Haida* and Provincial Co-Chairs to determine whether they are Scenario 1 and go onto the Decision Makers or whether they will be reviewed by the whole table. A specific list of applications suitable for Scenario 1 has been compiled and only those applications on the list that meet the Haida Gwaii Land Use Order Objectives and have no controversial components may be submitted for decision as Scenario 1.
- If an application is Scenario 1 and is passed directly to the decision makers of both the *Xaayda Haida* and the Province for approval or rejection, both decision makers must concur on the outcome. The goal is that a Scenario 1 application will be signed within 14 days of submission.

- Applications that are not Scenario 1 are labeled Scenario 2 and are sent to the full Solutions Table. The Solutions Table reports to the Haida Gwaii Management Council (a collaboration of Xaayda Haida and BC government to apply joint decisions making on Xaayda Gwaay.yaay Haida Gwaii, including for example establishing legal objectives for forest management and determining the Allowable Annual Cut for Xaayda Gwaay.yaay Haida Gwaii).

Tenure Management Plans

Under the Forest Act, crown land tenure agreement Management Plans includes a legislated review and comment period for members of the Xaayda Haida, stakeholders and the public. In addition, site specific referrals/ consultation of proposed forest management activities with the Xaayda Haida (information sharing) and the “Intergovernmental process” under the Land Use Order is required.

Forest Stewardship Plan

Forest Stewardship Plan (FSP) process includes a legislated review and comment period for members of the Xaayda Haida, stakeholders and the public. In addition, site specific referrals/ consultation of proposed forest management activities with the Xaayda Haida (information sharing) and the “Intergovernmental process” under the Land Use Order is required.

A summary of the Information Sharing requirements in the FSP is as follows:

- Land Use Order Intergovernmental Process, specific to the relevant Results and Strategies in the Forest Stewardship Plan, as required.
- Annual information sharing process (including overview of planned forest management activities/ locations)
- Cutblock and road referral process (maps) of proposed developments areas for a 30-day period.

Periodic referrals of specific cutblocks and roads may also take place to review reconnaissance locations, “pro-forma” calculations and potential issues/ concern.

Taan is also responsible to maintain records of consultation related to our specific forest management activities (e.g., FSP, Cutting Permit/ Road Permit, etc.).

Taan Advisory Group

An advisory group consisting of representatives from Taan and the Xaayda Haida was formed to facilitate engagement of the Xaayda Haida Leadership well in advance of business and operational developments and to foster direct lines of communication. There are two levels of the Advisory Group – Strategic and Operational. Members of the TAG include: CHN President, CHN Vice President, CHN Heritage and Natural Resource Department Manager, CHN Solutions Table Co-Chair, Old Massett Village Council Chief Councillor and Skidegate Band Council Chief Councillor.

The strategic level group targets quarterly meetings. Operational TAG targets meetings approximately every 6 weeks. Locations alternate between Gaw Tlagee Masset/ Old Massett and HIGaagilda Skidegate.

FSC Engagement

In addition to the public engagement process noted above, the FSC Standard requires culturally appropriate engagement related to the following:

- FSC Management Plan (and management activities),
- Legal (& customary) rights, interests, benefits/ goods and services of the forests as well as any areas of conflict affecting or related to Taan activities for the local communities,
- High Conservation Values (HCV) Assessment,
- Environmental Values Assessment,
- FSC Monitoring Plan and results.

Key Definitions

For the purposes of this section, the following terms are defined by FSC (asterisks noted below indicate that a formal definition of the term used is included within the FSC Standard):

Engagement	The process by which The Organization* communicates, consults and/or provides for the participation of interested and/or affected stakeholders* and Indigenous Peoples*, ensuring that their concerns, desires, expectations, needs, rights and opportunities are considered in the establishment, implementation and updating of the management plan*.
Culturally Appropriate	Means/approaches for outreach to target groups that are in harmony with the customs, values, sensitivities, and ways of life of the target audience.
Affected Stakeholder	Any person, group of persons or entity that is or is likely to be subject to the effects of the activities of a Management Unit*. Examples include but are not restricted to (for example in the case of downstream landowners), persons, groups of persons or entities located in the neighbourhood of the Management Unit*. The following are examples of affected stakeholders: <ul style="list-style-type: none"> – Local communities* – Indigenous Peoples* – Workers* – Forest dwellers – Neighbors – Downstream landowners – Local processors – Local businesses – Tenure* and use rights* holders, including landowners – Organizations authorized or known to act on behalf of affected stakeholders, for example social and environmental NGOs, labor unions, etc.
Interested Stakeholder	Any person, group of persons, or entity that has shown an interest, or is known to have an interest, in the activities of a Management Unit*. The following are examples of interested stakeholders. <ul style="list-style-type: none"> – Conservation organizations, for example environmental NGOs; – Labor (rights) organizations, for example labor unions; – Human rights organizations, for example social NGOs; – Local development projects; – Local governments; – National government departments functioning in the region; – FSC National Offices; – Experts* on specific issues, for example High Conservation Values*.
Complaint	The expression of dissatisfaction or concern by any person or organization presented to The Organization* (i.e., Taan), relating to its management activities* or its conformity with the FSC Principles* and Criteria*, where a response is expected.

Dispute	Represents a formal disagreement, after the initial attempts to resolve a complaint have not been achieved.
Free, Prior and Informed Consent (FPIC)	A legal* condition whereby a person or community can be said to have given consent to an action prior to its commencement, based upon a clear appreciation and understanding of the facts, implications and future consequences of that action, and the possession of all relevant facts at the time when consent is given. Free, prior and informed consent includes the right to grant, modify, withhold or withdraw approval.

The CMS Administrator (with assistance from Taan Management and the HaiCo Executive Assistant/ Communication Manager) is responsible for coordinating the FSC Engagement program. Taan welcomes suggestions from the *Xaayda Haida* and the local communities in regard to additional or alternative ways to conduct culturally appropriate engagement and will amend the processes noted below to address any suggestions received.

The FSC Management Plan and a summary of the FSC Monitoring Report are posted to the Taan website. Further, the High Conservation Values (HCV) and the Environmental Values (EVA) Assessments are publicly available upon request. Taan’s website provides a direct link to message the company related to any questions, comments or concerns. All shared documents will exclude proprietary information.

Engagement with the Haida Nation, communities and stakeholders will occur on an on-going basis, as well as at the following minimum key stages:

- Formal FSC Management Plan engagement process will be initiated by written notification to the Haida Nation, local communities and other stakeholders (per the Stakeholder Contacts) and a link to the Taan website. Hard copies will also be made available at the Taan office in *Xaayda Gwaay.yaay Haida Gwaii*. Comments may be received at any time following the initial consultation; however, to ensure feedback is incorporated into the first version of the plan, the review and comment period will be set at 2 weeks.
- Additional meetings may be held with key parties to review and discuss the key documents, as requested (records maintained on file).
- Updates to documents will be posted to the internet as they occur. Significant updates or changes may also include notification to the *Xaayda Haida* and stakeholders and/ or be reviewed at meetings with key parties.
- Additional forums may be considered (e.g., workshops, open houses, focus meetings).
- Input that is received during the Public Engagement Process (from Haida Nation, members of the public, local communities, local businesses, stakeholders, and directly affected persons) are reviewed and considered by Taan Management and where applicable, interests and concerns are forwarded to the Taan CMS Administrator for consideration for incorporation into the relevant documents.
- Records of all input/ comments received in addition to any responses or changes to the documents or planned management activities to address the input is documented and maintained on file by the Taan CMS Administrator.
- Taan provides access to the Dispute Resolution Process (Appendix 4) on the website.

Free, Prior and Informed Consent

Free, Prior and Informed Consent is obtained prior to management activities that affect the legal and/ or customary rights identified through a process that:

- Engages the Xaayda *Haida* in the assessment of the economic, social and environmental values of the forest management resource (e.g., through Taan and the Haida Enterprise Corporation engagement);
- Documents an approach to identifying the goals and aspirations of affected rights holders related to management activities;
- Includes a mutually agreed upon dispute resolution process;
- Supports dialogue regarding the rights and responsibilities of Xaayda *Haida* to the resource;
- Informs affected Xaayda *Haida* of their right to withhold consent or modify consent to the proposed management activities to the extent necessary to protect rights, resources, lands and territories; and
- Supports decision making by affected Xaayda *Haida* that is free of coercion, manipulation or intimidation.

When Free, Prior and Informed Consent has not been obtained, Taan demonstrates best efforts to support a culturally appropriate engagement process with affected Xaayda Laas *Haida* people that is advancing in good faith with the intent of reaching an agreement based on Free, Prior and Informed Consent.

Free, prior and informed consent (refer to the definition above) is achieved through a combination of the existing consultation processes (i.e., the Land Use Order consultation and public involvement processes, the Solutions Table and the review and “recommendations for approval” of the Forest Stewardship Plan and site level plans for each development area (cutblock and roads), as well as through the FSC Engagement process (outlined above).

Free, prior and Informed consent is demonstrated by evidence of implementation of the Engagement requirements (outlined above) and no resulting evidence of un-resolved disputes by the Haida Nation, local communities or stakeholders (definition provided above).

Conversely, consent may be withdrawn for management plans by notifying Taan, in writing. In the event that consent is withdrawn, Taan is responsible to work cooperatively with the other party to strive for amicable resolution of the issues and re-instatement of consent.

The primary objective is that upon receipt of a complaint or dispute that the parties will successfully resolve the issues through the Complaints & Dispute Resolution Process (Appendix 4), thereby avoiding a situation of withdrawn consent.

Complaints & Disputes

In the event that workers, individuals or organisations have a complaint related to Taan management activities, conformance with FSC Standards (including but not limited to applicable laws, customary laws) or working conditions, they must notify Taan (and their employer where applicable) of the complaint (in writing is preferred; info@taanforest.com).

Where complains cannot be resolved through engagement, they will be elevated to a “Dispute”.

The Taan Complaints & Dispute Resolution Process is located within Appendix 4.

Forest Management Objectives & Strategies

The following management objectives and strategies have been identified as measures to conserve or restore values identified through the FSC National Standard, through engagement process with the Xaayda Haida, local communities and stakeholders, as well as through the HCV Assessment and the Environmental Values Assessment.

Links to Existing Strategies & Objectives

The following existing management plans, agreements, policies, visions, values, strategies and/or objectives that are currently in place and provide direct and indirect support to the FSC Management Plan:

Table 4: Existing Management Plans, Documents & Agreements

Document	Source	Summary
Haida Gwaii Strategic Land Use Agreement	Integrated Land Management Bureau – Haida Gwaii Strategic Land Use Agreement	Agreement between the Haida Nation and the Province of BC outlining a collaborative approach to Land Use Planning for Xaayda Gwaay.yaay Haida Gwaii, confirms land use zones and EBM parameters.
Haida Gwaii Land Use Objectives Order (LUO)	Implementation	Establishes objectives for implementation of Ecosystem Based Management on Xaayda Gwaay.yaay Haida Gwaii.
HaiCo Strategic Plan	HaiCo Website (summary)	Establishes long term mission, vision, values and goals for HaiCo, including employment, environment, profitability and enterprise. These goals are consistent with the FSC Canada Forest Stewardship Standard.
HGMC TSR 2011/2012 Timber Supply Reviews, Data Packages & MFLNRORD Determinations	Haida Gwaii Management Council TSR 2011/2012 Ministry of Forests, Forest Analysis and Inventory Branch	Provides historical information for the tenure areas, background information supporting the Haida Gwaii Management Council's determination of the Allowable Annual Cut (e.g., ecosystems, timber inventory, constraints to harvesting, timber supply analysis, etc.). The AAC is apportioned to each tenure holder and BCTS by the Chief Forester.
HGMC TSR 2019	HGMC website	
TFL 60 & First Nation Woodland License Management Plan-Taana	Taan Corporate Files	Management Plans are required under the Forest Act to support Timber Supply Review and will be developed as required.
License Agreements – TFL, FNWL	Taan Corporate Files	Sets out the legal requirements and commitments related to the tenure, defines rights and obligations.
Taan Forest Stewardship Plan	Taan website	Legally required high level plan for Taan tenures that contains results and strategies for meeting the LUO and FRPA.
Corporate Management Systems	Taan Corporate Files	Corporate Policies, CMS Manual (training, applicable legal requirements and international protocols/ agreements, standard operating procedures, petroleum and hazardous materials, etc.)
Site Level Plans & Assessments	Taan Corporate Files	Harvest & Road Instructions/ Maps, Site Plans, Silviculture Treatment Regimes & associated assessments (e.g., cultural, riparian, windthrow, etc.)
Inventories & Assessments	Taan Corporate Files/ GIS	High level assessments (e.g., watersheds) and GIS inventories (terrain stability, riparian, ecosystem, etc.)

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Haida Gwaii Land Use Objectives Order

The Haida Gwaii Land Use Objectives Order (LUO) is higher level plan that significantly changes the forest management strategies on Xaayda Gwaay.yaay Haida Gwaii.

Xaayda Gwaay.yaay Haida Gwaii was one of three areas included in the Coast Sustainability Protocol Agreement signed in April 2001 by First Nations, government, the forest industry, communities and environmental organizations. The protocol agreement included a commitment to implementing ecosystem-based management, intended to ensure the co-existence of healthy communities and healthy ecosystems on the coast. The Xaayda Gwaay.yaay Haida Gwaii/Queen Charlotte Islands planning process included review of independent, science-based information developed by a coast information team with respect to defining Ecosystem Based Management.

In September 2003, a community based strategic land use planning process was initiated and led by the Council of the Haida Nation and the Province of British Columbia. The process was based on framework developed under protocol agreements signed in April 2001 that outlined the commitment to cooperatively develop a strategic land use plan based on an ecosystem based management framework designed to protect areas of critical significance and to establish forest management objectives for cultural, aquatic, biodiversity and wildlife values.

The Strategic Land Use Agreement (SLUA) was signed by the Haida Nation and the government of BC in December 2007, further cementing the commitment to collaborative land use planning processes.

The Strategic Land Use Agreement planning process lasted several years between 2003 and 2007 and included collaboration with Haida Nation, government, industry, ENGO's, tourism and recreation, etc. The draft Land Use Objectives Order was released spring 2010 and underwent an extensive public review and comment period that included stakeholder meetings and open houses.

The Land Use Objectives Order was brought into force December 2010 and establishes legal objectives for forest based values to support implementation of ecosystem based management. The objectives protect important Haida cultural values, support ecosystem integrity and provide environmental benefits by maintaining the diversity and abundance of organisms on Xaayda Gwaay.yaay Haida Gwaii. Human well-being will be maintained through policies and initiatives designed to achieve socioeconomic benefits, including carbon values, and timber harvest levels that will support a viable forest industry⁹.

The Order establishes legal objectives for forest-based values to support implementation of EBM and sets objectives for:

- Cultural features [traditional heritage features, traditional forest features, cedar & yew & CMT/monumental Cedar retention] (identification, certification of surveyors, reserve zones)
- Aquatic Habitats [Type I & II fish habitat, active fluvial units, upland streams, sensitive watersheds] (protection & reserve zones)
- Biodiversity [forested swamps, site series representation/old forest, red/blue listed spp.] (retention targets & strategies)
- Wildlife [black bear dens, MaMu nest habitat, QC Goshawk habitat, Blue Heron nest habitat, Northern Saw-whet Owl nest habitat] (% protection, reserve & buffer zones etc.).

Various amendments have been made to the LUO as part of adaptive management and continual improvement processes.

⁹ Haida Gwaii Land Use Objectives Order-Draft for Public Review, Preamble.

Taan Forest Stewardship Plan (FSP)

Taan maintains a Forest Stewardship Plan (FSP), as is legally required under the Forest Act, to address the requirements under the LUO as well as under the Forest and Range Practices Act (FRPA).

The FSP contains results and strategies for achieving the LUO objectives and meeting practice requirements under FRPA, including but not limited to some of the following topics:

- LUO Objectives (Cultural, Biodiversity, Riparian, Wildlife, etc.)
- Social Objectives (Information Sharing, Public Engagement)
- Recreation Areas and Trails
- Visual Quality
- Soil Disturbance and Permanent Access Limits
- Invasive Plants measures
- Important Bird Areas and Migratory Birds
- Climate Change
- Stocking Standards for regeneration (species selection and stocking levels)

Taan Corporate Management System (CMS)

As part of our corporate commitments, Taan maintains a Corporate Management System (CMS) that includes Standard Operating Procedures with best management practices for both safety and environmental protection for all of our forest management activities such as:

- Planning & Engineering
- Forestry & Silviculture
- Operations (harvesting and Road construction, maintenance and deactivation)
- Emergency Preparedness and Response
- Shops/ Maintenance & Hazardous Materials Handling

Climate Change

Climate change commitments are included within the Taan FSP and includes support for yellow cedar dieback research, engagement with the *Xaayda Haida* and the province of BC regarding monitoring of forest health, ongoing discussions of yellow cedar decline and promotion of the Off-Road Compressions-Ignition Engine Emissions Regulations application for machine replacement of retro-fit repairs.

In 2019, Taan also supported studies at UBC examining carbon sequestration and fertilization research on *Xaayda Gwaay.yaay Haida Gwaii* cedar stands including greenhouse gas release studies.

Environmental Values

The Environmental Values Assessment (Zimmfor 2020) assesses the risk levels of selected values and indicators (coarse filter and fine filter) in relation to forest management activities and the Range of Natural Variation (RONV). All of the values and indicators were determined to not be at significant risk as a result of forest management activities, largely as a result of the recent Land Use Order (based on the principles of Ecosystem Based Management). Refer to the Assessment for further details.

Range of Natural Variation (RONV)

The Environmental Values Assessment (Zimmfor 2020) includes a summary of the management strategies under the existing legal requirements (Land Use Order and FRPA) that support maintenance of stand structures that do not pose a significant risk of being incompatible with the estimated Range of Natural Variation (RONV). The Risk Assessment also includes rationale/ analysis that demonstrates that the current management regime, under the new Ecosystem Based Management concepts of the Land Use Order supplemented by FRPA, do not compromise ecosystem integrity in the broader context.

Analysis and monitoring has been completed to ensure that forest management maintains or restores a distribution of seral stages, patch sizes and interior habitat that are compatible with the range of natural variability over time (as full implementation of the new Land Use Order is achieved). Several indicators have been developed under the monitoring plan to assess potential changes to seral stage distribution, patch sizes and interior habitat over time as a result of forest management.

High Conservation Values (HCVs)

The High Conservation Values Assessment (Zimmfor 2020) contains a description of the HCVs identified in the Management Unit and the associated conservation attributes. Associated maps and data are also provided (except in specific cases where the information is deemed sensitive in nature or confidential). The report describes the current management strategies applied under the Land Use Order and the Forest Stewardship Plan and evaluates the associated risks to the identified HCVs as a result of forest management activities.

In all cases, in the event that Taan management activities are found to be inconsistent with the management strategies developed to protect HCVs, actions will cease immediately and plans for restoration and protection of the HCVs and HCV areas will be undertaken.

There are some categories of HCV that have been determined to require additional management strategies over and above the Land Use Order requirements that have been included in the FSC Management Plan:

- Category 1 – species at risk, endemic species, critical habitat for seasonal concentrations of species or regionally significant species/ high priority species
- Category 2 – large landscape level forests
- Category 3 – rare ecosystems
- Category 4 – agriculture land reserves

Category 1: Wildlife/ Species at Risk

In general, wildlife species are managed through a Coarse Filter approach under the Land Use Order and FRPA through Wildlife Habitat Areas, Protected Areas, LUO forest reserves, Type 1 and Type 2 fish habitat reserves, cedar stewardship areas, Ts'allang.nga *Marbled Murrelet* habitat retention, ecosystem representation targets, red and blue listed ecosystem protection, etc.

The Forest Stewardship Plan contains species specific (Fine Filter) management strategies for the following species that have been identified through the Land Use Order as being of particular importance and at risk as a result of forest management activities:

- Marbled Murrelet
- Northern Goshawk
- Northern Saw-whet Owl
- Great Blue Heron
- Black Bear

The FSP also contains management strategies for Migratory Birds, including consideration of Canada's designated Important Bird Areas that are located adjacent to the Management Unit.

Species at risk are identified and mapped (known occurrences) within the High Conservation Values Assessment (Zimmfor 2020) to the extent that available information permitted. Analysis was completed to review all of the species at risk classifications (e.g., red listed, regionally important, etc.). The various species listed under the risk classifications were then grouped into one single table. For all of the species listed, their dependence on old forests and threats from forest harvesting were also indicated (refer to HCV Assessment for the full list).

The resulting short list of species at risk found to be dependent on old forest is summarized in the HCV Assessment. Five of the old forest dependant species have been included in the Land Use Order and the Forest Stewardship Plan and are listed above (Ts'aw.was *marbled murrelet*, Stads K'un *northern goshawk*, St'aw.was *northern saw-whet owl*, HIGuu *great blue heron* and Taan *black bear*).

The species associated with old forest dependant or patch sizes, or stand structures that may be at risk from forest harvest not directly named and managed under the LUO and FSP and should be considered for stand level retention where encountered are:

- Barrow's Goldeneye (Bird)
- Brown Creeper (Bird)
- Steller's Jay ((Bird)
- Hairy Woodpecker (Bird)
- Ancient Murrelet (Bird)
- Pine Grosbeak (Bird)
- Long Eared Myotis (formerly Keen's Myotis) (Mammal)
- Little Brown myotis (mammal)
- *Fomitopsis officinalis* (Moss)
- Oldgrowth specklebelly (Fungus)
- Haida Gwaii Slug (Mollusc)
- Western Toad (Amphibian)

Western Toad was added as an HCV species at the request of the Council of the Haida Nation. All species at risk known to occur on the Management Unit have been allocated to Species Accounting Groups within the Monitoring Report (Species at Risk indicator), including detailed discussions on each grouping in regard to existing protection in place and related management strategies. In general, the species noted above are managed through coarse filter strategies that include protection and retention of old forests through established Protected Areas and through the Land Use Order (e.g., forest reserves, riparian area reserves, cedar stewardship areas, ecosystem representation targets, protection of red and blue listed ecosystems, etc.). There are no species specific additional fine filter management strategies proposed at this time.

These key old forest dependant species will also be managed on a case by case basis as they are identified in the Management Unit. Additional management strategies and recommendations for wildlife and species at risk are documented within the Corporate Management System (CMS) Standard Operating Procedures.

Planning personnel complete training on species at risk under the CMS.

Beaver

The Ts'ing *Canadian Beaver* is an introduced species to *Xaayda Gwaay.yaay Haida Gwaii* that has no known predators. Ts'ing *Beavers* can have a significant negative impact to forest operations by causing blocked culverts and ditches, leading to higher costs related to increased road maintenance activities required to ensure the culverts and ditches are functioning and fish passage is not impeded. Impacts to drainage can also damage regenerated cutblocks as a result of flooding.

Where Ts'ing *beaver* dams are identified in the Management Unit as causing impacts and changes to natural drainage patterns, appropriate management strategies will be implemented to attempt to mitigate the impact/ damage (e.g., utilization of culvert guards designed to restrict/ prevent blockages, trapping under an approved permit/ license, *Kal alder* management, etc.).

Category 2: Large Landscape Level Forests

The HCV Assessment identifies two areas of regionally important landscape level forests (>50,000 ha) on *Xaayda Gwaay.yaay Haida Gwaii*, or Intact Forest Landscapes (IFLs):

- IFL 1 (very small overlap with the MU)
- IFL 3 (no overlap with the MU)

IFL 2 (48,894ha) previously identified within the HCV Assessment 2016 no longer meets the criteria for intact forest landscapes due to harvesting activity in the Timber Supply Area north of Masset Inlet (outside of the management unit).

FSC International Implemented Motion 65 regarding intact forest landscapes and determined that in the absence of a specific indicator noted in the standards (current FSC National Standard does not include any indicators for IFLs), that a default threshold for disturbance permitted within an intact forest area is 20% of the area within the MU (or 80% protection of the portions of the intact forest within the MU).

Table 5: Large Landscape Level (IFL) Forests of Haida Gwaii

IFL on the Haida Gwaii		IFL within Protected Areas & Conservancies		IFL within the MU (ha)		Allowable Disturbance (Motion 65)		IFL within other tenures	
ID	(ha)	(ha)	%	(ha)	%	(ha)	%	(ha)	%
1	115,119	113,077	98	1,342	1.2	268.4	20	0.8	-
3	69,420	55,687	80	0	-	-	-	13,733	20

Intact Forest Polygon 1

The largest polygon of intact forest is located on the western side of Graham Island and is largely contained within the boundaries of the Duu Guusd Protected Area (98%). There are extremely small segments of intact forest located within the boundaries of TFL 60, along the edges of the intact polygon (1%).

The core area identified for protection from forest management activity under Motion 65 (noted above) is 80% of the portion within the MU. 20% of the portion of the intact forest within the MU is then available for harvest, or 268.4ha.

To date, Taan has not completed any harvesting within the intact forest polygon in the MU.

Intact Forest Polygon 3

This polygon of intact forest is located in the north section of Graham Island, just above and east of Gaauu Kaahlii Masset Inlet and adjacent to Naikoon Park. A fairly significant portion of the intact forest is located in protected areas (80%) and the remaining 20% is located in the working forest of the Timber Supply Area, but outside the Management Unit.

Category 3: Rare/Unique Ecosystems

In general, unique ecosystems and other site-specific unique features (e.g., karsts/ caves/ limestone areas, nests, mineral licks, sites of importance to the Haida Nation, trappers values, etc.), are identified and managed through the Forest Stewardship Planning process and are regularly monitored through the existing management systems (inspections and audits).

Site specific values are tracked in the GIS and receive appropriate management prescriptions in site level plans. Non-forested ecosystems are typically targeted for retention patches or excluded from the harvesting areas as they typically prove to be challenging and expensive to attempt to reforest (all harvested areas require establishment of free growing stands that meet the density and minimum height requirements per the approved stocking standards in the Forest Stewardship Plan).

The HCV Assessment (Zimmfor 2020) identifies the red listed ecosystems and associated Biogeoclimatic Zone associations that are known to occur on Xaayda Gwaay.yaay Haida Gwaii. The Land Use Order includes objectives and ecosystem representation targets for all of the listed ecosystems. The Forest Stewardship Plan contains the associated management strategies and identification/ protection of these ecosystems is addressed at the site level through the Site Plan.

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The HCV Assessment identifies the following red and blue listed ecological communities that are not included within the LUO and therefore require special consideration by Taan and will be addressed within Site Level planning where they are identified:

- *Thuja plicata* - *Picea sitchensis* / *Lysichiton americanus* (Blue listed)
- *Xanthocyparis nootkatensis* - *Tsuga mertensiana* / *Streptopus lanceolatus* (Blue listed)
- *Leymus mollis* ssp. *mollis* - *Lathyrus japonicus* (Red listed)
- *Salix sitchensis* - *Salix lasiandra* var. *lasiandra* / *Lysichiton americanus* (Red listed)

The HCV Assessment also identifies the following locally important ecosystem types that are managed/ protected through the Land Use Order and FSP Commitments:

- Sitka Spruce Riparian Forests (addressed through Type 1 and Type 2 Riparian reserves)
- Sitka Spruce-Sea Spray/ Fog Forests (none located within the MU)
- Limestone Areas (addressed though FSP Karst commitments)

Category 4: Agriculture Land Reserves

Where Taan tenures are located within 100m of adjacent agriculture land reserves (1,087.2ha) that are being utilized for agriculture production (refer to the HCV Assessment), special consideration must be applied for potential impacts to the crops from exposure as a result of removal of forest cover from development activities on the Taan MU. Engagement with the land owner is also required during planning to accommodate any concerns.

Landscape Level Biodiversity

Taan has developed several indicators for monitoring Landscape Level Biodiversity within the FSC Monitoring Report, including but not limited to landscape unit old forest, interior forest, connectivity, stand level retention and road networks.

As part of the monitoring, some adaptive management strategies have been developed and implemented:

- Minimize construction of new roads within the Massett and the Skidegate LU
- Maintain stand level retention target average of 20% in the Skidegate LU
- Consideration of connectivity during planning within the Sewell LU
- Ensuring LUO Ecological Representation targets are adhered to
- Ensure thresholds for allowable harvesting within the Large Landscape Level Forests identified in the HCV Assessment are adhered to
- Conduct windthrow monitoring to assess effectiveness of windthrow treatments

Social & Economic

The *Xaayda Haida* and local communities have expressed interest and concern in the social and economic wellbeing of the communities in *Xaayda Gwaay.yaay Haida Gwaii* for many years. Various studies and forums have occurred over the years, including but not limited to the Land Use Planning Process Social and Economic Base Case Study (G. Homlan and S. Nicol, 2004).

More recently, the Haida Gwaii Management Council (HGMC) also initiated the development of a Forest Strategy from 2013-2015, that included several public forums with the objective of obtaining advice on priorities and opportunities for increasing the delivery of social and economic benefits to the island communities from the forests of *Xaayda Gwaay.yaay Haida Gwaii*.

In terms of forestry specific calls to action, the priorities were identified as

- Local control and access to forests.
- Value added manufacturing.
- Local employment.

A Socio-Economic Analysis was also completed to support the Timber Supply Review (Crane Management Consultants 2019) and summarizes similar key concerns expressed from the Forest Strategy forums, as well as a description of the challenges and barriers for local processing on *Xaayda Gwaay.yaay Haida Gwaii* (high cost logging, access to fibre, etc.).

Social & Economic Development Opportunities

Taan is committed to supporting projects and other activities that contribute to local social and economic benefits and are relative to the scale of the socio-economic impact of forest management activities.

To support this commitment Taan has completed the following:

- Implemented long-term contracts on the TFL (5 years) in order to provide some certainty to local contractors to aid in their economic and social stability.
- Use of local mills to produce cedar stakes for browse protection of cedar and cypress seedlings.
- Commitment to sell logs locally at Vancouver market value (minus transportation costs). Taan also records local sales within the FSC Monitoring Report.
- In 2018, Taan initiated an opinion to determine the feasibility of establishing a value added/small sawmill on *Xaayda Gwaay.yaay Haida Gwaii*. The report received in 2019 was not relevant to HaiCo so the HaiCo Board at the February 2020 Quarterly Meeting created a small committee made of the HaiCo Chair, 2 HaiCo Directors with forestry experience, Taan Forest Planning Manager, Taan Log Marketing Manager and the HaiCo Controller to identify those currently in value added businesses and recommend an on island value added program. The Situational analysis will be submitted to the September 2020 HaiCo Board Quarterly meeting for review.

Training & Skills Development

As part of the CMS, Taan maintains a Training Matrix that outlines all of the training required to meet legal requirements, corporate objectives and certification requirements. This includes CMS training at two levels, Supervisors and crew. The training includes information on the CMS requirements, FSC Certification, and species at risk.

Taan's FSP also contains training commitments for various topics such as Cultural Features Inventory Surveyors, Alluvial Fans, Stads K'un *Goshawk*, HIGuu *Blue Heron*, Invasive Plants, etc.

Taan also facilitates and supports other training initiatives with staff and local contractors when needed such as Bear Den identification, karst identification, and windthrow management.

Local Employment, Goods & Services

Taan is committed to encouraging local employment and the use of local goods and services. Where cost, quality and capacity of non-local and local options are at least equivalent, local goods, services, processing and value-added facilities are used.

General Management strategies include local advertising on Xaayda Gwaay.yaay Haida Gwaii for all new hires, requests for proposals, and contract tendering processes (i.e., local newspaper or other media). All other criteria being equal, preference is given to Xaayda Haida, local workers and contractors.

Recreation

The management objectives in relation to recreation values are to conserve the key features and values that are identified through legal requirements, local knowledge, FSC Assessments, or through the FSC Engagement Process.

Measures to address/ manage designated Recreation sites and trails are included within the Forest Stewardship Plan (FSP). In addition, strategies to protect trails and canoe runs are included within the FSP under the category of Traditional Heritage Features under the Land Use Order. The FSP also contains commitments to non-designated recreation areas:

- Papa Johns Campsite, Yaagun Gandlaay Yakoun River (popular campsite during the small island deer hunting and steelhead season)
- Gawu Kuns Siiwaay Mosquito Lake (rare plants, recreation trails, karsts, viewsapes, etc.)

The Gawu Kuns Siiwaay Mosquito Lake area is important to the Mount Moresby Adventure Camp (MMAC) for many values, including but not limited to, hiking trails, camping sites, rare plants, karsts and HIGaa K'aats'idxas limestone, old growth forests, viewsapes, etc. In 2015, the Haida Nation has protected the watershed through Resolution 2015-04.

Recreation areas identified to be of particular importance (through Engagement Processes), and not managed through the Forest Stewardship Plan are as follows:

- Gaauu Kaahlii Masset Inlet (Hiking and viewing [scenic lagoons, bays and estuaries], boating, fishing, bird hunting (Oct – Jan), beachcombing, boat touring and backcountry touring).

For the other recreation sites listed above, and where additional recreation sites or trails are identified through site level planning or consultation, Taan will address on a case by case basis and ensure management strategies/ site level plans consider the specific recreation values and address concerns.

Non-Timber Forest Products

Taan is committed to working with the Haida Nation, local stakeholders and interested parties regarding communication and access to the Management Unit for non-timber forest products.

An analysis of the socio-economic base case was completed by an economist as part of the Haida Gwaii Land Use Plan (March 2004). The following is an excerpt from the report:

There are a number of botanical or non-timber forest products such as wild mushrooms, berries and other wild foods, plants used in wildcraft and medicinal plants that are harvested on the Islands. Some of these non-timber forest products have a long history of use by the Haida. Mushrooms are the most significant botanical from a commercial perspective, and currently they provide an important income supplement to the Haida and other Islands residents. In an average year (production can easily vary by 40%), it is estimated that up to 300 pickers (one - third locals) can earn several thousand dollars per year, harvesting 250,000 pounds of mushrooms (90% chanterelles) on the Islands.

Mushroom picking centres on the Islands include the Skidegate Lake area in the northern half of Moresby Island, Masset Inlet and the Yakoun River Valley.

Currently, commercial harvesting of other plants, such as floral greenery and medicinal, occurs at only a very small scale. However, non-commercial harvesting of NTFPs such as berries and plants for sustenance, cultural and medicinal purposes occurs across the land-base. The Haida and other locals also rely on hunting, trapping and fishing.

The high cost of transportation from Xaayda Gwaay.yaay Haida Gwaii presents challenges for large scale market development of all non-timber forest products (other than local markets/ use). The Haida Nation have also expressed concerns with increased commercialization of non-timber forest products and the harvesting of culturally important trees and plants (Pierce Lefebvre Consulting. 2006. Socio-Economic Assessment of the Haida Gwaii Land Use Viewpoints).

Mushrooms

Kaagan daajing *Mushrooms* have been identified as particularly significant to Xaayda Gwaay.yaay Haida Gwaii and are identified as High Conservation Value (HCV Assessment, Zimmfor 2020), warranting special consideration.

In addition to the Kaagan daajing *Mushroom* Management Areas identified within the HCV Assessment Report, past studies and habitat suitability mapping has been done noting the specific habitat attributes associated with chanterelles (CWH wh1 01 ecosystem, low elevation sites (typically 100m or less), comprised of second growth K'ang hemlock and Kayd sitka spruce stands (typically 35-50 years old)).

Taan is committed to consideration of Kaagan daajing *mushroom* habitat (Mushroom Management Areas identified within the HCV Assessment) during site level planning and engagement processes to consider timing of operations consistent with Kaagan daajing *mushroom* season (e.g., timing operations to permit picking to occur prior to harvest). While harvesting of second growth can be viewed to be in conflict with Kaagan daajing *mushroom* management areas, a balance of age class distributions can also help ensure Kaagan daajing *mushroom* habitat is available in the long-term, by maintaining suitable areas of 35-50 age class.

At the request of the Haida Nation, Taan also monitors the Kaagan daajing *mushroom* habitat and seral stage distribution in the K'aasda Siiwaay Skidegate Lake Landscape Unit, refer to the FSC Monitoring Report for details.

Cedar Bark

Cedar bark (*Ts'uu western red cedar* and *SGaahlaan yellow cedar*) is of particular importance to the Haida Nation for weaving and basketry, fulfilling both an artistic/ ceremonial as well as functional role (e.g., masks, jewelry, clothing, blankets, hats, baskets).

Taan is committed to responding to requests to access to cedar bark in our tenures and facilitating bark stripping in areas that are planned for harvesting so that the bark can be removed just prior to harvesting.

Western Yew

Access to *HIGiid* Yew wood has been identified by representatives of the Haida Nation as especially important for ensuring continued education and use for the youth (e.g., making bows). In response, Taan is now ensuring that *HIGiid* yew wood is yarded to roadsides for easier access.

Timber Forest Products

Timber

Taan's primary timber objectives include striving to maximize the value of the forest resource and targeting the diversity of customers both locally and globally to increase the benefits to the Haida Nation and to *Xaayda Gwaay.yaay Haida Gwaii*.

Optimal Use

Taan is committed to ensuring optimal utilization and value of the forest resource while ensuring minimal waste and avoiding high grading the forest resource.

To help improve optimal utilization and value of the forest resource, Taan maintains a salvage program for damaged and downed timber, as well as minor forest products such as cants, shakes and shingles, etc.

Silviculture Systems

The primary silviculture system implemented by Taan is the clearcut with reserve system (even aged system).

Alternative silviculture or harvest systems that may be used to address ecological or social values on a site-specific basis include:

- Patch cut with reserve (patches are typically less than 1ha in size).
- Intermediate cutting/ commercial thinning harvest systems.
- Retention system.

Stand Level Retention

In addition to the legislated stand level retention requirements outlined within the FSP, the FSC National Standard requires Taan to establish targets for post-harvest forest composition. Site Plans that are prepared by the forest professionals prior to harvesting will need to consider and document how the FSC retention requirements are met.

Because windthrow is so prevalent on *Xaayda Gwaay.yaay Haida Gwaii*, in most cases single tree retention will not be prescribed. Instead, retention will generally be achieved through small patches or leave areas.

For larger cutblocks, Taan considers addition of retention patches that are located internal to the block and/ or connected to the edge to increase forest influence.

Taan has established targets for stand level retention within the FSC Monitoring Report (Appendix 3), within the Stand Level Biodiversity Indicator (based on the Forest and Range Evaluation Program).

Numerical targets have not been established in relation to size and distribution of live and dead trees and species composition within the retention patches, however Site Plans will describe the stand composition in relation to the cutblock area to determine if the retention areas are of similar composition. In some cases, stand type in retention areas will be similar to the harvest area (e.g., LUO feature reserve/ management zone patch) or in some cases it may be slightly different (e.g., riparian reserves/ management zones). This variability is desired from a biodiversity perspective. Large size snags are included within the Stand Level Biodiversity targets, as this is an important feature for biodiversity monitoring.

Forest Influence

Taan is also monitoring levels of forest influence on a cutblock basis as part of the Site Plan assessments which will allow for another avenue to monitor impacts of forest management on stand level biodiversity and determine benchmarks of current status.

Taan has not developed any specific management strategies or targets at this time.

Adaptive Management Strategies

Skidegate Landscape Unit

As part of the adaptive management process for landscape biodiversity overall “health”, the Skidegate LU was identified as a high rating for vulnerability. As a result, Taan will ensure that a minimum average of 20% stand level retention is achieved in the Skidegate LU. This will be measured on an annual basis for all cutblocks harvested in the year as part of the Annual Monitoring Report and is also a consideration in the Site Plan (FSC Considerations section).

Cultural Resources

Management strategies relating to Cultural Heritage Resources, Haida Traditional Heritage Features and Haida Traditional Forest Features are outlined within the Forest Stewardship Plan.

The importance of cedar bark to the Haida Nation is also discussed under Non-Timber Forest Products.

Unique/ Special Sites

The Land Use Planning process and Land Use Order include provisions for the key unique/ special features that have been identified by local communities and the Haida Nation (e.g., traditional heritage features and traditional forest features (which encompass many different features), cedar, wildlife habitat for key species, rare ecosystems, etc.).

Any additional sites of special cultural, ecological, economic, religious or spiritual significance that are identified through engagement processes will be managed/ protected during site level planning. Identification of these sites may be deemed confidential or sensitive in nature by the Xaayda Haida or stakeholders, and as such may not be displayed on maps.

Riparian Management

In general, riparian functions and values are managed through the Forest Stewardship Plan which contains the results and strategies for riparian management consistent with the Land Use Order and other legal requirements under FRPA.

In addition to the legal requirements, best management practices are also included within the Taan Standard Operating Procedures related to planning aspects as well as operational considerations for wildlife, biodiversity, water quality, sediment management, etc.

Reforestation

Regeneration

Forests will be regenerated using natural regeneration or planting utilizing seed or stock from local provenances, consistent with legal requirements under the Forest and Range Practices Act and the Chief Foresters Standards for Seed Use (and approved under the Forest Stewardship Plan, Stocking Standards).

Species selection will be completed to ensure maintenance of tree species diversity and use of ecologically suitable species, per the regeneration objectives and ecosystem types (e.g., stocking standards) as defined in the Site Plan and/ or Silviculture Treatment Regime (or equivalent). Taan consistently plants at densities well above the minimum that is legally required.

Where applicable, seed trees and advanced regeneration will be utilized to enhance regeneration objectives of maintenance of species and genetic diversity, through the prescriptions developed under the Site Plan, Silviculture Treatment Regime and corresponding operational plans.

Silviculture monitoring activities may include a combination of reconnaissance surveys and established plots to monitor successful regeneration and free growing status, consistent with legal requirements.

Site preparation activities for reforestation purposes is typically not be required. In the event that the Forester determines site preparation is desired to achieve regeneration objectives, treatment prescriptions will be developed that includes measures to address soil disturbance concerns.

Fertilizers

In general terms, the FSC Standard requires that fertilizer use is minimized or avoided, recognizing that in some specific cases, it may be desired.

Per the Planning & Silviculture SOPs, when fertilizers are used, measures are employed to avoid contamination of surface and ground waters through no treatment zones along streams, rivers, ocean, etc., protect non-timber forest values and maintain long-term soil health (e.g., maintenance of soil organic matter, pH balance).

Browse Protection

Ungulate browse in *Xaayda Gwaay.yaay Haida Gwaii* is extensive and poses challenges to reforestation as well as in later seral stages in relation to understory vegetation.

Browse control on reforested areas is required on Xaayda Gwaay.yaay Haida Gwaii (and in other regions in BC) in order to achieve the reforestation objectives and legally required stocking standards and obligations to achieve free growing stands. The Forest Stewardship Plan and Supporting Information package contains the approved stocking standards for reforestation in accordance with legal requirements, including provisions for browse control/guards for Ts'uu *cedar* and SGaahlaan *cypress* regeneration.

Browse guards require periodic maintenance to ensure they remain upright and main stem of the seedling remains located inside the guard. Guards are typically removed from the seedlings when the tree height reaches the same level as the top of the guard and is likely to survive any future browse. Removed guards are typically re-used on new plantations. In the event that they are damaged or no longer useable, they are properly disposed of at licensed/ permitted facilities.

Restrictions on the MU

Conversion

In the event that Taan considers conversion of forest lands to non-forest uses (not including roads, landings and other infrastructure directly related to forest management, power transmission lines or highways), a conversion evaluation will be completed per FSC requirements using a qualified specialist. Any areas of new conversion must meet the requirements of FSC (e.g., do not exceed 5% of the THLB, do not occur in HCV areas, etc.).

The Taan Planning Manager (with assistance from the CMS Administrator) is responsible to ensure that any objectives or measures identified in the results of the evaluation are incorporated into the Management Plan and other relevant documents and are implemented in the operations.

Chemical Use

Chemical brushing and weeding is not conducted by forest management companies on Xaayda Gwaay.yaay Haida Gwaii (at the request of the Haida Nation).

In the event that pesticides are prescribed in future to address invasive species, all requirements of the FSC Standard will be adhered to (e.g., rationale, exploration of alternative treatment options, preference for non-pesticide treatment, use of least hazardous pesticide) and use of any identified Highly Hazardous Chemicals is prohibited.

Exotic Species

In general, exotic species are not introduced into the Management Unit.

In the rare event that this is considered (e.g., climate change research or adaptation), Taan must ensure that exotic plant or animal species are only introduced to the Management Unit after a scientific evaluation that determines that they are not invasive and will bring environmental benefits without entailing significant adverse ecological impacts.

Genetically Modified Organisms

Genetically modified organisms shall not be utilized in the Management Unit, consistent with provincial legislation and the Chief Forester's Standards for Seed Use and FSC requirements.

Biological Control Agents

Exotic biological control agents are not utilized on the Management Unit.

In the rare event that biological control agents are considered, Taan must ensure all requirements of the FSC Standard are adhered to (e.g., minimize use, monitor and strictly control use, prevention/ mitigation of damage to any environmental values, record retention, etc.

Taan Forest also will follow the House of Assembly Resolution 2017-33 that requires the House of Assembly to vote by resolution all requests for permission to the Council of the Haida Nation to approve the introduction of any biological control agents.

Taan must also work within its sphere of influence to minimize the use of biological control agents by other parties in the Management Unit.

Where biological control agents are used, there is compliance with relevant provincial laws, national laws and internationally accepted scientific protocols, including the provincial *Plant Protection Act and the federal Pest Control Products Act, Plant Protection Act and Canadian Environmental Protection Act.*

Monitoring

The FSC National Standard requires regular monitoring activities for specific items, the frequency and intensity of which should be determined by the scale and intensity of forest operations as well as the relative complexity and fragility of the affected environment.

The scope of monitoring can range from day to day operations (e.g., implementation monitoring under existing management systems), effectiveness monitoring that assesses whether the implementation of the management strategies are effective in producing the desired results, to research projects that focus on specific aspects of forest management and impacts to key focal species or ecosystems. As such, a wide range of costs can be associated with monitoring.

An effective monitoring plan must therefore balance the need to collect meaningful results in order to effectively assess impacts of forest management on the wildlife and ecosystems, while at the same time balancing level of effort and associated costs with the assessed risk. Adaptive management is also a key component to a successful monitoring plan.

Taan has the overall responsibility for implementing and maintaining the Monitoring Plan and is coordinated by the CMS Administrator. However, other staff play a key role in assisting in development, implementation and annual reporting (and provide resources as required).

The FSC monitoring program is comprised of a combination of the following initiatives:

- Existing monitoring processes such as the Forest and Range Evaluation Program (refer to table below for complete list) that supports implementation and effectiveness monitoring components;
- Land Use Order Effectiveness monitoring through the Haida Gwaii Management Council (currently under development);
- FSC Monitoring included in this Management Plan that includes a component of implementation monitoring and effectiveness monitoring and periodic review and re-assessment for Environmental Values, High Conservation Values as required by FSC (typically completed every five years); and
- Adaptive management plan as it specifically relates to monitoring results and HCVs per the FSC Standard requirements.

Links to Existing Monitoring

Table 6: Existing Monitoring

Document	Source	Summary
Implementation & Effectiveness Monitoring		
Haida Gwaii Land Use Objectives Order	MFLNRORD Haida Gwaii Strategic Land Use Agreement Implementation website	Monitoring Program is under development by the Haida Nation and the provincial government of BC. A monitoring technician was hired in the spring of 2012 to develop a program (with initial efforts supporting the FREP program). The first program was announced April 2012 (email to licensees) involving a review of the LUO requirements for 'S4' streams, including implementation and effectiveness monitoring. Subsequent monitoring has included implementation and effectiveness of the LUO for protection of HIGiid yew trees.
MFLNRORD – Forest and Range Evaluation Program (FREP)	Government of BC - FREP Website	Collaboration between several BC Ministries (MFLNRORD, MFML, MOE). FREP objectives are to: assess the effectiveness of forest and range legislation in achieving stewardship objectives; determine whether forest and range practices are achieving government's objectives, with a focus on biological function and social values (visual quality and cultural heritage); identify forest and range resource value status and trends, and identify opportunities for continued improvement of British Columbia's forest and range practices, policies and legislation. The FREP program consists of components: indicator and protocol development, field data collection, results, enhancing knowledge and information sharing, legislation and policy change and continual improvement. Monitoring includes stand level biodiversity, riparian protection, cultural values, soils, timber, forage and associated plant communities, recreation and resource features. FREP has established sampling protocols that include annual sampling requirements, of which a portion is allocated to Haida Gwaii Forest District. The FREP program produces regular publications summarizing the results of the program and is working on development of an information database.
Implementation Monitoring		
Forest Act & Timber Marking Regulation	MFLNRORD Legislation & Regulations	Timber marking and scaling requirements per legal requirements (weigh scale and stick scale), including government 'check scales' on sampled load. Data submitted to MoF and maintained in the Harvest Billing System.
Taan Forest Stewardship Plan	www.taanforest.com	Equivalent clearcut areas in relation to Sensitive Watersheds and Upland Streams, regeneration and free growing obligations including cedar regeneration commitments, wildlife nests and dens, invasive plants measures, etc. (refer to the FSP & Supporting Information for details). MOF RESULTS database (compliance with Silviculture Obligations). Where proposed harvesting is nearing LUO Sensitive Watershed or Upland Stream thresholds, watershed level assessments will be required.
MFLNRORD - Growth & Yield	MFLNRORD Research Branch – Growth & Yield Program	Monitoring and measurement program is administered by the MoF.

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Document	Source	Summary
Taan Forest TFL 60 Growth & Yield Plots	GIS	Taan has obtained the G&Y data from WFP and have identified active plots. A re-measurement plan has not yet been developed..
Taan CMS	Taan Corporate Files	Internal & External Inspections, Investigations & Audits to monitor conformance with system requirements and procedures which evaluate implementation of certification standards, the FSC Forest Management Plan and compliance with legal requirements. Action plan tracking.
Conservation Data Center (CDC)	http://www.env.gov.bc.ca/cdc/	The British Columbia Conservation Data Centre (CDC) systematically collects and disseminates information on plants, animals and ecosystems (ecological communities) at risk in British Columbia. This information is compiled and maintained in a computerized database which provides a centralized and scientific source of information on the status, locations and level of protection of these organisms and ecosystems. The CDC database includes BC Listed, Global Listed and COSEWIC listings.
BC Nature - Important Bird Areas	http://www.bcnature.ca/pages/stewardship_projects/IBA.html	BC Nature is working towards long term conservation of BC's Important Bird Areas. IBA Canada also maintains a fully interactive map of the identified IBAs. IBAs are addressed in the HCVF Assessment.
Ministry of Environment – Ecological Reports Catalogue website	http://www.env.gov.bc.ca/ecocat/	MOE database (searchable) that contains reports and database records, map files, etc. for various FIA funded projects. There are 63 reports listed for Queen Charlotte Islands and 31 listed for <i>Xaayda Gwaay.yaay Haida Gwaii</i> search results (some overlap).

The Forest and Range Evaluation Program (FREP)

The Province of BC Forest and Range Evaluation Program (FREP) is briefly described above in [Table 6](#). The program includes implementation and effectiveness monitoring and measurement activities for each forest district in the province. As such, there is some valuable monitoring occurring on *Xaayda Gwaay.yaay Haida Gwaii* under the FREP program that can contribute significantly to the FSC monitoring requirements (particularly in relation to effectiveness monitoring).

Currently, the program includes monitoring of soil conservation effectiveness, stand level biodiversity effectiveness, riparian and stream channels effectiveness, water quality effectiveness and karst resource features to evaluate effectiveness of the current legal requirements/ management regimes.

[FREP reports](#) are periodically completed and strongly support the effectiveness monitoring requirements under FSC through provision of results, indicators and benchmarks. Some examples include:

- Watershed Status Evaluation (FREP Report #39)
- Provincial Water Quality Effectiveness Evaluation (FREP Report #35)
- Soil Conservation Effectiveness (FREP Report #31)
- Stand Level Biodiversity Effectiveness (FREP Report #30)
- Riparian Protection Effectiveness (FREP Report #27)
- Water Quality Effectiveness (FREP Extension Note #22)

Indicators have been selected for inclusion in the Monitoring Plan and Annual Reporting process to further monitor and report on the results of the effectiveness monitoring, utilizing data specific to the Management Unit (as provided by FREP representatives). The indicators and results are discussed in more detail within the Monitoring Annual Report for each related indicator.

Table 7: FREP Program Indicators

Category	Objective	Indicators	Sample Size per Forest District
Stand Level Biodiversity (Effectiveness)	Assess whether stand level retention is effective at maintaining species diversity	<ul style="list-style-type: none"> - Tree species and size (height and diameter) - Wildlife tree class 1 and 2 (live trees) and 3+ (standing dead trees) - Invasive plants - Amount and type of coarse woody debris (size, species and decay class) - Amount of windthrow - Harvesting constraints and ecological attributes used to anchor retention 	15 cutblocks
Water Quality (Effectiveness)	Quantify the impact on forest management on water quality (total fine sediment contribution m ³ to a stream in a given year)	<ul style="list-style-type: none"> - Fine sediment - Connectivity to water course - Depth of erosion 	10 drainages
Stand Level – Soils (Effectiveness)	To determine whether Forest and Range Practices Act (FRPA) standards and practices governed by regulation are achieving the desired result of protecting soils.	<ul style="list-style-type: none"> - Lost productivity due to access construction - Landslides, erosion and drainage diversion - Dispersed soil disturbance in the NAR - Green tree retention - Dead wood 	5 cutblocks
Fish/ Riparian and Stream Channel Monitoring (Effectiveness)	Determine if fish values are being protected and if the channel and riparian functions are working at an acceptable level	<ul style="list-style-type: none"> - Channel bed disturbance - Channel bank disturbance - LWD processes (jams) - Channel morphology - Aquatic connectivity - Fish cover diversity - Moss abundance and condition - Fine sediments - Aquatic invertebrate diversity - Windthrow frequency - Riparian soil disturbance - LWD supply - Shade and micro-climate - Disturbance-increaser plants - Vegetation vigor, form and structure 	15 streams
Karst Resource Features (Effectiveness)	Determine whether forest practices are adequately protecting and maintaining the structure, function and ecological integrity of the surface and sub-surface elements of karst systems	<ul style="list-style-type: none"> - Removal of native forest cover - Reduction of shade - Soil disturbance - Post-harvest windthrow - Debris pile up from slash or roads - Burning 	5 sample sites

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Category	Objective	Indicators	Sample Size per Forest District
Visual Quality (Effectiveness)	Evaluate the effectiveness of FRPA at maintaining visual quality objectives – are forest practices meeting the objectives and are the existing policies and guidelines resulting in the desired objectives	- No specific indicators have been developed, this component of evaluation includes field/ office review of the achieved VQC in relation to the VQO	Complete
Recreation	To collect baseline information on the current state of Forest Service recreation sites in British Columbia.	- In site roads - Erosion - Waste Management - Safety - Environmental Quality (forest health, invasive plants)	120 recreation sites (across BC)
Landscape Level Biodiversity (Effectiveness)	To evaluate whether ecosystems are represented across the landscape in time and space	- Pilot Project in progress	
Cultural Heritage Resources	Understanding and evaluating the processes of information-sharing regarding cultural heritage resources as well as the actual outcomes or impacts of forest practices on cultural heritage resources on the ground	- Pilot Project in progress	
Landscape Level –Soils (Effectiveness)	To determine whether Forest and Range Practices Act (FRPA) standards and practices governed by regulation are achieving the desired result of protecting soils.	Under development	
Wildlife (Effectiveness)	Evaluate the effectiveness of FRPA at maintaining wildlife habitat and species across their natural ranges and over time	Under development	
Fish (Watershed)	A watershed based fish values monitoring protocol for watersheds with high fish values.	Under development	

FREP representatives have expressed an interest in working with Taan in regards to sharing information and developing the program further to aid in meeting FSC certification requirements. Taan has been cooperating with the MFLRNO FREP representatives to provide support and/ or cooperation to assist the FREP Program (e.g., field personnel to assist).

Research Projects

An indicator has been developed within the Monitoring Report to summarize and report on support for applicable research projects.

Land Use Order Monitoring

Under the Land Use Objectives Order pre-amble, it states that 'the implementation of ecosystem-based management will be monitored and, if monitoring indicates that the objectives for ecosystem integrity, Haida cultural values or socio-economic considerations included in the SLUA are not being met, the Order may be reviewed and replaced by new land use objectives established by the Haida Gwaii Management Council. In addition, there are some specific objectives under the Order that permit deviation from the specified objective where the licensee develops, implements and monitors an approved Adaptive Management Plan (e.g., working within St'aw.was *saw-whet owl* zones). Therefore, under the LUO there is opportunity to develop Adaptive Management Plans that can complement those developed under the FSC Monitoring Plan.

The Council of the Haida Nation (CHN) continues to work with the provincial government to develop the monitoring plans in relation to the Land Use Order. The CHN has also hired a monitoring technician to initially assist in the FREP program on *Xaayda Gwaay.yaay Haida Gwaii* with plans to work towards a broader LUO effectiveness monitoring program.

The first project, announced in April 2012, involved a review of the implementation and effectiveness of the LUO requirements for the old S4 stream class while considering impacts to the timber harvesting land-base from implementation. The Integrated Stewardship Monitoring Program has been developed to complete the review and monitoring program. The second project included a review of the implementation and effectiveness of the LUO requirements for the protection of HIGiid yew trees in development areas.

Taan will continue seek on-going communication and cooperation during the development of this integrated program and ensure the FSC Management Plan and monitoring plan is updated as required to report on the progress.

FSC Monitoring Plan

FSC requires development of monitoring plans, indicators and benchmarks for a variety of criteria in the standard. Annual reporting is also required.

The FSC Monitoring Plan is comprised of the plan outlined below as well as the annual Monitoring Report which provides valuable information and is an integral component of the monitoring plan. Existing monitoring plans (e.g., FREP, LUO Monitoring) that are described above also play an integral role, and where applicable, have been incorporated into the FSC indicator set that is located within the annual Monitoring Report.

The FSC Monitoring Plan includes the development of indicators, benchmarks and performance targets for key areas required by FSC, considers the results of the Environmental Values Assessment, High Conservation Values Assessment, and existing monitoring (e.g., FREP program) in consideration of the scope and complexity of the monitoring program and focuses efforts on addressing any gaps between existing monitoring programs and FSC requirements.

Consultation of both the Monitoring Plan and Annual Monitoring Report is completed through implementation of the FSC Consultation process outlined earlier in the FSC Management Plan. **The Monitoring Report shall be completed annually by July 31st (for the previous year's operations).**

Elements to be Monitored

FSC requires monitoring of the following elements:

- Implementation of Management Strategies
- Significant environmental impacts from management activities
- Social and environmental aspects of management activities
- Significant changes to environmental conditions caused by forest management activities
- Status of HCVs/ HCV Areas and attributes, including effectiveness of management strategies and actions for the protection of HCVs, to fully maintain and/ or enhance the HCVs

Indicators, benchmarks (current status at the time of initiating FSC Certification and results of the first annual monitoring report) and targets (performance targets that are established through the Monitoring Report in order to monitor performance over time) have been established for the identified elements to be monitored (above) and are recorded within the Appendix 3 - Annual Monitoring Report.

HCV Monitoring

In addition to the general purposes of monitoring of the categories identified by FSC and described above, HCV are noted to be of particular importance and as such, monitoring plans must also include measures to identify and assess changes to HCV as well as evaluate the changes or potential changes under current management strategies in order to “adapt” the management strategies as needed to ensure positive outcomes or results to the HCV. Many other aspects of monitoring can be captured within the HCV monitoring such as growth rates, regeneration and condition of the forest and composition in changes to flora and fauna.

HCV monitoring will include the following implementation and effectiveness elements:

Table 8: HCV Monitoring

Category		Monitoring Plan
1	Significant Concentrations of Biodiversity Values	Annual Report Indicators: Stand Level Biodiversity, Landscape Level Biodiversity (Overview of seral stage, forest interior, roads, etc., Connectivity, Ecosystem Representation and Large Landscape Level Forests), Invasive Species, Species at Risk, Sensitive Species Habitat and Windthrow Management Effectiveness
2	Large Landscape Level Forests	Annual Report Indicators: Landscape Level Biodiversity (Connectivity, Ecosystem Representation and Large Level Landscape Forests)
3	Rare Ecosystems	Land Use Order Ecosystem Representation Targets & monitoring under the Forest Stewardship Plan (FSP) – initial analysis and monitoring/ updates to reflect planning development areas Annual Report Indicators: Landscape Level Biodiversity (Ecosystem Representation)
4	Services of Nature	Annual Report Indicators: Watershed Disturbance, Watershed Quality Effectiveness
5	Fundamental Needs of Local Communities	Annual Report Indicators – Non-Timber Forest Products
6	Traditional Cultural Identity	Annual Report Indicators: Land Use Order/ FSP Reporting – Cultural Objectives

Several indicators have been developed under the HCV category of assessing Landscape Level Biodiversity and effectiveness of management strategies over time:

- Landscape Level Biodiversity Overview (The status of basic indicators such as seral stage, forest interior, and roads in the main land classes (THLB, NCLB, and Protected Areas), gives a broad indication of the vulnerability or risk level of a particular Landscape Unit).
- Landscape Connectivity (linkages of habitats, species and processes throughout an area that allows the flow of energy, nutrients, organisms, and genes at many scales).
- Ecosystem Representation (One of the key principals of conservation ecology is to keep all the pieces (Aldo Leopold)). Representation of each ecosystem in an unmanaged state provides areas where natural processes can proceed, gives us areas to use as benchmarks to assess how managed areas compare, and provides habitat for the variety of plants and animals across the management area. Ecosystem representation is measured by several categories to provide a full picture over the landscape: by site series, productivity class and elevation class).
- Large Landscape Level Forests (based on the FSC requirements to identify large landscape level intact forests within the Management Unit as part of the HCV Assessment and then establish management strategies consistent with the precautionary approach to ensure maintenance of the values).
- Windthrow Management Effectiveness (indicator to assess the effectiveness of the windthrow management strategies applied as they relate to maintain the integrity of reserve and management zones that have been established to protect various key features and habitat).

As the monitoring plan progresses for HCV and analysis is completed, the monitoring plans for HCV will be re-visited and revised where required to fine tune direction and focus and incorporate the results from the initial round of monitoring.

Adaptive Management

Adaptive Management (AM) is a systematic process for continually improving management policies and practices by learning from the outcomes of operational programs (Forests for Tomorrow Extension Note #1 Introduction to Adaptive Management¹⁰).

In general, AM can be described under two potential categories, as described in the Forest for Tomorrow Extension Note #1 Introduction to Adaptive Management:

- Passive AM - is an approach whereby, faced with uncertainty, managers implement the alternative they think is 'best' (with respect to meeting management objectives), and then monitor to see if they were right, making adjustments if desired objectives are not met.
- Active AM - is an experimental approach whereby, when faced with uncertainty, managers implement more than one alternative as concurrent experiments to see which will best meet management objectives. It is characterized by "actively probing" the system in order to distinguish between competing hypotheses (where the different hypotheses suggest different "optimal" actions). The key is that there are alternatives that can be more confidently compared.

Active AM is the preferred approach to use when there is a high level of uncertainty about the effectiveness of the management actions to meet the management goals and objectives and when learning quickly is more important.

¹⁰ Forest For Tomorrow – Extension Note #1: Introduction to Adaptive Management (April 2008): http://forestsfortomorrow.com/fft/sites/default/files/Forests-for-Tomorrow-%20ExtNote1_Apr-29-2008.pdf

Passive AM is a less costly choice that may be most practical when there is little uncertainty about the management action, or when the institutional structure prevents management experimentation”.

The adaptive management process under the FSC Monitoring Plan is largely based on the passive approach outlined above; whereby Taan monitors implementation and outcomes of the management strategies under the legal framework of the new Land Use Order and the *Forest and Range Practices Act*. The key to establishing the passive adaptive management scenario is to establish indicators so that baselines or benchmarks can be determined in order to facilitate evaluate changes over time as a result of the implementation of the management objectives and adapt management as needed where results differ significantly from the anticipated outcomes of the management strategies. Performance targets must also be established in order to facilitate success in relation to the benchmarks over time. Performance targets can be based on legal requirements, FSC certification requirements or corporate objectives (refer to Appendix 3 for the indicators, benchmarks and targets and associated rationale for selection). The annual Monitoring Report outlines a summary of the management strategies for each indicator for easier reference during consultation. While some of those strategies report typical business operations to achieve indicators, some outline how practices should change in light of specific results of monitoring. Those latter strategies form the adaptive management backbone of monitoring efforts.

Although Taan understands that an effective Adaptive Management Plan should include elements of both passive and active approaches. With the implementation of the new Land Use Order underway, there is little ‘experimentation’ occurring in terms of proposing AMs under the LUO. As well, experimentation at the landscape scale (where most of the issues surrounding forest management occur) is fraught with complications that preclude simple designs, interpretation or learning from results. Passive AM, as outlined in the management strategies of the annual monitoring report is more effective at the landscape scale.

A review was completed of various existing/ completed monitoring, research and Adaptive Management Plans and it was determined that the following areas contain the most significant knowledge gaps and should be the focus of Passive AM. These have since been developed and addressed, refer to the current version of the Monitoring Report for results:

- Species at Risk – development of a species accounting system to group species with similar habitat requirements and focus management strategies on those groups that are most at risk and are likely to be sensitive to forest harvesting as well as focus monitoring efforts on coarse filter attributes that captures the needs of key species and highlight those species best suited to fine filter monitoring in the event that coarse filter monitoring indicates that specific thresholds for attributes may not be achieved.
- Landscape Level Biodiversity – analysis and forecasting of landscape level connectivity, ecosystem representation and large landscape level forests (HCV) (including forecasting of seral stage representation, patch size and interior forest conditions) and windthrow management effectiveness These indicators provide for monitoring of coarse filter surrogates for general forest ‘health’ and representation of natural levels of old forest to provide for assessment of impacts of forest management activities both now and in the future to facilitate adaptive management in the event that analysis indicates forest management is not resulting in established thresholds being achieved.

Land Use Order Adaptive Management

It is important to note that the Haida Nation and the provincial government are also working on establishing a monitoring program that includes an adaptive management component. Group members will continue to assess the development of that program and incorporate the results into our monitoring plans and AM plan.

The Land Use Objectives Order also includes some provisions for deviations from the specified objectives for select categories, provided that licensees design and implement an Adaptive Management Plan that is reviewed with the Solutions Table. Where AM is developed by Taan under the LUO and Forest Stewardship Plan, they will form part of the Monitoring and AM Plan for FSC purposes. For example, Taan has initiated in some preliminary discussions with a biologist regarding potential work to develop some adaptive management plans for working within Stads K'un *Northern Goshawk* and St'aw.was *Saw-whet Owl* Management Areas.

Performance Reporting

Annual Reporting – Indicators & Benchmarks

The indicators, benchmarks and targets have been compiled into the Monitoring Report (FSC MP Appendix 3) and are updated annually as part of the reporting requirements to incorporate results of implementation and effectiveness monitoring (e.g., inspections, investigations, audits, and FSC monitoring adaptive management process).

Taan (typically the CMS Administrator) ensures the required data is collected and maintained and an annual monitoring report is prepared and made publicly available through the Taan website and through the FSC Consultation process. Support to provide the evidence is provided by key representatives of each group member, as required.

The annual report is reviewed as part of the Taan CMS Management Review process.

Feedback received from the FSC Consultation process is considered during all subsequent revisions and updates. A summary of changes made to the FSC Management Plan and annual Monitoring Report are included within the introduction of each report and is updated with each release.

Monitoring records and data are retained on file by Taan. Refer to the annual Monitoring Report (Appendix 3) or specific references to applicable database/ storage for each indicator.

5-Year Reporting – FSC Assessments

At a minimum of once every five years (2015, 2020, 2025, etc.), a full review and update will be completed for the HCV and Environmental Risk Assessments. Resulting changes will be incorporated into the FSC Management Plan to ensure monitoring of the related indicators and benchmarks and form part of the adaptive management cycle.

Additional reviews/ updates may be completed in the interim in the event that there are any significant changes to existing management practices and/ or legal requirements or to the Management Unit.

Management Review Process/ Feedback Loop

Periodic review and update of the Environmental Risk Assessment, HCV Assessment and the FSC Management Plan are crucial to ensuring continual improvement and adaptive management in response to the results of monitoring. In general, the FSC assessments and the FSC Management Plan will be fully reviewed at a minimum of once every five years through the Taan Corporate Management System (CMS) Management Review Process.

It is anticipated that the Monitoring Plan will change over time as a result of adaptive management, advances in science and technology, changes to legislation and or FSC Canada National Standard and as a result of public consultation of the FSC Management Plan and results of monitoring.

Adaptive management is facilitated through the Taan CMS, including annual review of results of monitoring, audit results, inspection results and review of the CMS and Management Plan in relation to the results.

Potential Future Monitoring

The recent Xaayda Gwaay.yaay Haida Gwaii Timber Supply Review indicated some potential areas where monitoring could be improved over time to provide better results for incorporation into the Timber Supply Review process:

- Monitoring of regenerated stands for comparison of actual and potential yields from TIPS and G&Y models (potential for use of LIDAR technology);
- Review PSP for Hw and Ss to see if contribute to G&Y estimates for future TSRs; and
- Review of current status for the 40 G&Y plots established for cedar in 2008.

Taan will explore options for cooperation and support for these, and other, monitoring ideas as they develop.

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Taan FSC Management Plan – Appendix 3: Annual Monitoring Report