



**Westcoast Connector
Gas Transmission**

Westcoast Connector Gas Transmission Project

Timber Salvage Strategy
Condition 30

Detailed Outline - Revision 1

January 2022

Prepared for:

Westcoast Connector Gas Transmission Ltd.

Prepared by:

GeoVerra Inc.



Westcoast Connector Gas Transmission Project

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Land Acknowledgement

We acknowledge that the Westcoast Connector Gas Transmission project (WCGT Project) area is in the Traditional and Ancestral Territory of many Indigenous Peoples, presently subject to the Nisga'a Treaty, Treaty 8, and vast areas of unceded Indigenous Traditional lands. These Indigenous groups include the Nisga'a Nation, Prophet River First Nation, Blueberry River First Nations, Doig River First Nation, Gitanyow Hereditary Chiefs, Gitxsan Hereditary Wilp, Halfway River First Nation, Kitselas First Nation, Kitsumkalum First Nation, Lake Babine Nation, Lax Kw'alaams First Nation, Wilp Luuxhon, Metlakatla First Nation, Saulteau First Nation, Takla Lake First Nation, Tsay Keh Dene First Nation, West Moberly First Nations, Nak'azdli First Nation, McLeod Lake Band, Gitxaala Nation, and the Métis Nation British Columbia

We acknowledge the many Indigenous Peoples who live on care for these lands and have for generations. We are grateful for the traditional Knowledge Keepers and Elders who are still with us today and those who have gone before us. We make this acknowledgement as an act of reconciliation and gratitude to those whose territory we reside on or are visiting.

Executive Summary

The British Columbia Environmental Assessment Office (BC EAO) issued an Environmental Assessment Certificate (Certificate) to Westcoast Connector Gas Transmission Ltd. (WCGT Ltd.) for the WCGT Project on November 25, 2014, and later granted a 5-year extension to the Certificate on April 25, 2019. The Certificate expires on November 25, 2024.

The WCGT Project approved in the Certificate includes the potential to build two 48-inch diameter natural gas pipelines within the same right-of-way along with compressor stations that could potentially service multiple liquefied natural gas (LNG) terminal sites starting at Cypress in northeast British Columbia (BC) and ending at Ridley Island on the north coast. The Certificate provided the flexibility to choose one of two routes to the Prince Rupert area—either through the Nass Valley (Nasoga Route) or north towards Kitsault (Kitsault Route).

WCGT Ltd. is actively developing the WCGT Project to build one express, single-purpose natural gas pipeline from a compressor station near Willow Flats in northeast BC to a delivery point at Wil Milit on the north coast to supply natural gas to potential LNG terminal sites (Project).

WCGT Ltd. is engaging with Indigenous Groups and relevant regulatory authorities (RRAs) in the development of this detailed outline to support the full build-out of the Timber Salvage Strategy (TSS or Plan). Through engagement, WCGT Ltd. is seeking collaboration in the development of the Plan and any information that can be shared to strengthen the Plan and the commitment to fulfilling Condition 30.

WCGT Ltd. acknowledges the inherent connection Indigenous Peoples have with the land and that while the Plan will satisfy the regulatory requirement, the Plan is intended to minimize impacts to timber salvage by incorporating Indigenous Knowledge and ensuring concerns are addressed during mitigation development.

The Plan is being prepared to address the requirements of Condition 30 for the Project and takes into account the BC Oil and Gas Commission's (BC OGC's) Fibre Utilization Plan Guideline.

This Plan includes:

- Timber volume estimates (cubic metres) for the area proposed to be cleared within the Project corridor;
- Marketing commitments and plans for the timber cleared;
- Salvage activities for the timber volume that will not be marketed; and
- A reconciliation report that includes a scaled volume comparison to the timber volume estimate to BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development and BC EAO on at least an annual basis until harvest activities are complete.

The TSS demonstrates WCGT Ltd.'s commitment to implement the appropriate timber management and hauling practices and recognize methods to mitigate and monitor the risk of forest health incidences.

WCGT Ltd. will implement the mitigation measures to cut, salvage, haul, and market salvageable timber that align with other Condition management plan objectives (e.g., Wildlife and Wildlife Habitat Management Plan and Restoration Plan). Mitigation measures and monitoring will be developed in accordance with WCGT Ltd. standards as well as industry and regulatory guidelines.

Table of Concordance

Table 0-1 describes how this Plan addresses the applicable Certificate Conditions.

Table 0-1. Concordance with Certificate Conditions

Certificate Condition	Section
<i>Social Effects: Condition 30 - Timber Salvage Strategy</i>	
The Holder must develop, in consultation with FLNR and OGC, and implement a Timber Salvage Strategy that takes into account OGC's 'Fibre Utilization Plan Guideline'.	Section 4
The strategy must include, and is not limited to: <ul style="list-style-type: none"> ▪ Timber volume estimates (cubic metres) for the area proposed to be cleared within the Certified Pipeline Corridor; 	Subsection 4.2
Marketing commitments and plans for the timber cleared;	Section 5
Salvage activities for the timber volume that will not be marketed; and	Section 2
A reconciliation report that includes a scaled volume comparison to the timber volume estimate to FLNR and EAO on at least an annual basis until harvest activities are complete.	Section 6
The Holder must obtain advice from a Qualified Professional regarding steps that must be implemented in respect of timber management and hauling practices and times to mitigate risk of forest pest spread.	Section 11

Notes:

FLNR updated to BC MFLNRORD = British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development

BC OGC = British Columbia Oil and Gas Commission

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Acronyms and Abbreviations

AMP	Access Management Plan
BC	British Columbia
BC EAO	British Columbia Environmental Assessment Office
BC MFLNRORD	British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development
BC OGC	British Columbia Oil and Gas Commission
Certificate	Environmental Assessment Certificate
CMMP	Caribou Mitigation and Monitoring Plan
CPC	Certified Pipeline Corridor
CWD	Coarse Woody Debris
DFO	Fisheries and Oceans Canada
<i>EPMR</i>	<i>Environmental Protection and Management Regulation</i>
FWQMP	Freshwater Water Quality Monitoring Plan
ha	hectare(s)
HWCP	Human-Wildlife Conflict Plan
km	kilometre(s)
LNG	liquified natural gas
m	metre(s)
m ³	cubic metre(s)
MLTC	Master Licence To Cut
MMP	Moose Monitoring Plan
NWRP	Nisga'a Watercourse Restoration Plan
OGMA	Old Growth Management Area
PCM	post-construction monitoring
Project	one express, single-purpose natural gas pipeline from a compressor station near Willow Flats in northeast British Columbia to a delivery point at Wil Milit on the north coast to supply natural gas to potential liquified natural gas terminal sites
QP	Qualified Professional
REP	Regional Engagement Plan
RP	Restoration Plan
RRA	Relevant Regulatory Authority
<i>SARA</i>	<i>Species at Risk Act</i>
SEEMP	Social and Economic Effects Management Plan

TCEMP	Terrestrial Construction Environmental Management Plan
TSS or Plan	Timber Salvage Strategy
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
VQMP	Visual Quality Management Plan
VQO	Visual Quality Objective
WCGT Ltd.	Westcoast Connector Gas Transmission Ltd.
WCGT Project	Westcoast Connector Gas Transmission Project
WMP	Wetlands Management Plan
WWHMP	Wildlife and Wildlife Habitat Management Plan

1. Introduction

The British Columbia Environmental Assessment Office (BC EAO) issued an Environmental Assessment Certificate (Certificate) to Westcoast Connector Gas Transmission Ltd. (WCGT Ltd.) for the WCGT Project on November 25, 2014, and later granted a 5-year extension to the Certificate on April 25, 2019. The Certificate expires on November 25, 2024. The Certificate granted for the WCGT Project is subject to 43 Conditions. The purpose of this TSS or the Plan is to address the requirements of Certificate Condition 30.

WCGT Ltd. is engaging with Indigenous groups and RRRAs in the development of this detailed outline to support the full build-out of the Plan. Through engagement, WCGT Ltd. is seeking collaboration in the development of the Plan and any information that can be shared to strengthen the Plan and the commitment to fulfilling Condition 30.

WCGT Ltd. acknowledges the inherent connection Indigenous Peoples have with the land and, that while the TSS will satisfy the regulatory requirement, the Plan is intended to minimize impacts by incorporating Indigenous Knowledge and ensuring concerns are addressed during mitigation development.

1.1 Project Description

The WCGT Project approved in the Certificate includes the potential to build two 48-inch diameter natural gas pipelines within the same right-of-way along with compressor stations that could potentially service multiple liquefied natural gas (LNG) terminal sites starting at Cypress in northeast British Columbia (BC) and ending at Ridley Island on the north coast. The Certificate provided the flexibility to choose one of two routes to the Prince Rupert area—either through the Nass Valley (Nasoga Route) or north towards Kitsault (Kitsault Route).

WCGT Ltd. is actively developing the WCGT Project to build one express, single-purpose natural gas pipeline from a compressor station near Willow Flats in northeast BC to a delivery point at Wil Milit on the north coast to supply natural gas to potential LNG terminal sites (Project) (Figure 1).

The new compressor station at Willow Flats will have the potential to connect to Enbridge Inc.'s Westcoast Energy Inc. pipeline system near Compressor Station 2 or TC Energy's NGTL system, eliminating the need for the pipeline corridor from Cypress to Willow Flats and the compressor station at Cypress. WCGT Ltd. will apply to the BC EAO to amend its Certificate to:

- 1) remove approximately 100 kilometres of the Certified Pipeline Corridor from Cypress to Willow Flats; and
- 2) change the location of the compressor station from Cypress to Willow Flats.

If WCGT Ltd. proceeds with construction of a second pipeline, it would also start near Willow Flats and would not use the corridor from Cypress to Willow Flats.

The new delivery point for the pipeline will be near Wil Milit. WCGT Ltd. will apply to the BC EAO to amend its Certificate to make routing changes along its approved Nasoga Route to end the first pipeline at Wil Milit. WCGT Ltd. will retain the option to expand the WCGT Project to the currently approved delivery point at Ridley Island at a later date.

WCGT Ltd. is developing condition plans for the Project with Indigenous groups and RRAs for submission to the BC EAO in accordance with its Certificate. The condition plans will address potential impacts from the Project, which includes the first pipeline from Willow Flats to Wil Milit, one compressor station at Willow Flats, and the necessary meter stations.

WCGT Ltd. does not have plans to build the second pipeline at this time; however, should it decide to construct a second pipeline, increase capacity by adding compressor stations or extend the first pipeline to Ridley Island, WCGT Ltd. will submit revised or new condition plans to the BC EAO in accordance with Condition 1 of its Certificate.



- Town/Village/Service Area
- Kilometre Marker
- WCGT Pipeline Route
- Railway
- Highway
- - - International Border
- Watercourse
- Water Body

ENBRIDGE
Westcoast Connector Gas Transmission

SCALE: 1:1,500,000

0 14,000 28,000 42,000 56,000 m
(All Locations Approximate)

FIGURE 1
REGIONAL OVERVIEW
WESTCOAST CONNECTOR GAS TRANSMISSION LTD.
WESTCOAST CONNECTOR GAS TRANSMISSION PROJECT

Jacobs

NAD 1983 BC Environment Albers
Hillshade Background: TERA Environmental 2008;
Highways/Roads: NRCAN 2015; Railways: NRCAN 2012; Hydrology: BC FLNRO 2008; Reserves: Government of Canada 2018; Legal Grid: TERA Environmental Consultants 2010; Watercourse Crossings: Jacobs 2021; Project Components: Enbridge 2021.

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Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.

2. Timber Salvage Strategy Overview

The Certificate is subject to 43 Conditions. The TSS is being developed to meet the requirements of Condition 30. The Plan will be developed in collaboration with the Indigenous groups, RRAs, and stakeholders.

The scope of the TSS includes:

- Linkages to other plans, purpose and objectives, roles and responsibilities, implementation schedule, and future updates (subsection 2.2);
- Methods for engaging the Indigenous groups, RRAs, and stakeholders, and a description of how engagement outcomes are reflected in the Plan;
- Regulatory requirements (including utilization standards) related to pre-construction, construction, and post-construction (operation phase) activities of the Project that may impact forest tenure holders (Section 3);
- A description of the TSS mitigation measures that may be implemented during pre-construction, construction, and post-construction activities of the Project (Section 7);
- A description of the monitoring program (Section 8);
- A description of the adaptive management program in relations to timber salvage utilization and forest health, including how the results of monitoring will inform adaptive management (Section 9);
- A plan for reporting on the implementation of the TSS including the schedule, content, and recipients of reports (Sections 10); and
- Professional Authentication of the TSS (Section 11).

2.1 Purpose and Objectives

The purpose of the TSS is to satisfy Certificate Condition 30. The overall desired outcomes of the TSS include the following:

- Provide an estimate of merchantable timber within the Project footprint and required supplemental activities
- Identify the market potential and commitments for utilization of salvageable volume with local and regional fibre processors, stakeholders, and buyers
- Identify and commence consultation with entities holding timber tenures along the Project route with respect to the TSS
- Summarize the options for utilization of merchantable volume that will not be introduced to the commercial market, and the parameters for exemptions for non-merchantable volumes
- Outline the approach, schedule, and reporting of actual salvaged volume reconciled against the estimated volumes outlined in this strategy
- Highlight the management and mitigation of forest pest spread with regards to storing, hauling, and movement of timber from the Project area to alternate storage locations, satellite yards, and identified fibre processing stockpiles

To determine whether the TSS meets the objectives, the TSS identifies goals that can be measured using several performance indicators. The performance indicators and targets that will be monitored and

measured to evaluate the effectiveness of timber utilization and forest pest mitigation measures in achieving the goals of the TSS will be described in Section 8.

2.2 Linkages to Other Condition Plans

Information on other condition plans prepared for the Project that have been considered in the TSS following Table 2-1.

Table 2-1. Linkages to Other Condition Plans

Plan	Description of the Plan	TSS Linkage
Condition 10 - Freshwater Water Quality Monitoring Plan (FWQMP)	Plan to address onsite water quality monitoring during Construction where works are planned for either in-stream or within the Riparian Reserve Zone of streams with a Riparian Class of S1, S2, or S3, under the <i>Environmental Protection and Management Regulation (EPMR)</i> under the Oil and Gas Activities Act, or in-stream or within 20 metres (m) of a stream with a Riparian Class of S4 under the <i>EPMR</i> , unless otherwise authorized by the BC Oil and Gas Commission (BC OGC) or Fisheries and Oceans Canada (DFO).	To be determined (TBD)
Condition 12 - Wetlands Management Plan (WMP)	The WMP purpose is to meet the objective of No Net Loss in wetland area and function, it: includes the results of pre-construction surveys; recommends mitigation measures to be implemented during Construction; outlines for the Post-Construction Monitoring (PCM) Program for wetlands; and plans to implement mitigation and compensation measures to address loss of wetland area and function identified. The WMP also includes consideration for the objectives of the Sensitive Area Plan for Mugaha Marsh as per Condition 26.	TBD
Condition 13 - Grizzly Bear Mitigation and Monitoring Plan (GBMMP)	The GBMMP objectives are to avoid sensory disturbance, and incremental mortality risk to grizzly bears during Construction and Operations. It provides strategies for achieving these objectives during Construction and Operations (including, but not limited to measures set Access Management Plan [AMP] and Human-Wildlife Conflict Plan [HWCP]); It also provides a plan for monitoring the success of these strategies, and whether the objectives are being achieved; and, describes the Adaptive Management Plan to respond to the required ongoing monitoring and assessments; and, Includes specific reporting requirements.	TBD
Condition 15 - Human-Wildlife Conflict Plan (HWCP)	The HWCP provides planning measures to avoid and minimize direct wildlife mortalities during Construction and Operations.	TBD

Table 2-1. Linkages to Other Condition Plans

Plan	Description of the Plan	TSS Linkage
Wildlife and Wildlife Habitat: Condition 16 - Caribou Mitigation and Management Plan (CMMP)	The CMMP outlines strategies to avoid in the areas identified by BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development (BC MFLNRORD) as the Graham, Moberly, Kennedy Siding, Scott, and Wolverine caribou ranges (caribou ranges). The CMMP provides details on displacement and sensory disturbance to caribou, avoid increased predation, and target objectives of no net loss of habitat. It also provides a plan for monitoring the success of the strategies, reporting requirements, and offsetting plans in the event the strategies are unsuccessful.	TBD
Condition 19 - Wildlife and Wildlife Habitat Management Plan (WWHMP)	The WWHMP includes all relevant wildlife mitigation as well as the TCEMP in one document. It provides specific information on how and when the mitigation will be implemented throughout the life of the Project; Includes the results of site assessment surveys for all indicators of habitat features of Schedule 1 <i>Species at Risk Act (SARA)</i> listed species within the Certified Pipeline Corridor (CPC) and propose mitigation to mitigate adverse effects of the Project on such habitat features; Provides information on the specific mitigation that will be implemented for habitat features that are encountered within the CPC; Provides a monitoring program to assess the effectiveness of the mitigation for moose populations (excluding moose in the Nass Wildlife Area) in the CPC during Construction and Operations; Describes the plan for reporting on the implementation of the Plan as part of the 5 year PCM Program.	TBD
Wildlife and Wildlife Habitat: Condition 22 - Access Management Plan	The AMP provides the means by which access will be controlled, the types and locations of access requirements, rationale to demonstrate the necessity of any new temporary or permanent access, access control management measures that will be implemented during Construction and Operations, and PCM requirements.	TBD
Vegetation: Condition 25 – Restoration Plan (RP)	The RP provides recommendations for soil handling, construction clean-up, erosion control measures, revegetation plans, and life of Project vegetation management.	TBD
Social Effects: Condition 28 - Visual Quality Management Plan (VQMP)	The VQMP provides a description of where the Project intersects areas with Visual Quality Objectives (VQOs) and recommendations to minimize effects on these areas.	TBD
Social Effects: Condition 29 – Old Growth Management Areas (OGMAs) Plan	The OGMA Plan describes the incursions, exceedances of thresholds and proposals for recruitment and replacement.	TBD

Table 2-1. Linkages to Other Condition Plans

Plan	Description of the Plan	TSS Linkage
Condition 33 - Social and Economic Effects Management Plan (SEEMP)	The SEEMP recommends mitigation measures for effective engagement related to community infrastructure and services, and roads and traffic. It also includes the approach to communicating employment and contracting opportunities, and methods for monitoring and reporting on the effectiveness of mitigation.	TBD
Environmental Management: Condition 35 – Terrestrial Construction Environmental Management Plan	<p>The TCEMP describes WCGT Ltd.'s environmental procedures and mitigation measures to field and Construction personnel. These environmental procedures and mitigation measures will be implemented during Construction of the Project to mitigate, avoid, or reduce potential adverse environmental effects. The TCEMP serves as reference information for Construction and inspection personnel to support decision making and to provide direction to more detailed information (i.e., resource-specific mitigation, management, and contingency plans).</p> <p>The TCEMP also includes mitigation measures to address additional Conditions:</p> <ul style="list-style-type: none"> ▪ Condition 23 – integrated pest management ▪ Condition 24 – Red- and Blue-listed plants and ecological communities ▪ Condition 27 – mitigation for Red- and Blue-listed or culturally important lichen and plant species within the Nisga'a Lava Bed Memorial Park ▪ Condition 34 – hunting, trapping, and fishing policy 	TBD

2.3 Implementation Schedule

TSS planning will continue through to the start of timber salvage activities and proceed as per the latest TSS implementation schedule. The TSS implementation schedule will be presented in this subsection.

The TSS will be implemented under the supervision of a Qualified Professional (QP).

2.4 Future Updates to the Timber Salvage Strategy

Revisions to the TSS could occur as a result of:

- Engagement programs with Indigenous groups
- Additional information becoming available
- Changes to Project planning (e.g., engineering changes)
- Commitments made during the regulatory review process
- Regulatory permits and authorization conditions
- Addressing resource-specific conditions that may arise during construction

WCGT Ltd. will not inform Indigenous groups and RRAs when minor revisions are made to the Plan (i.e., small changes that would not affect the scope and objectives of the Plan).

Indigenous groups and RRAs will be provided an opportunity to review and provide comment on material revisions to the Plan (i.e., changes to the scope or mitigation and monitoring requirements). A Document History table listing version, date, and distribution will be provide in this document.

3. Engagement

Throughout the development of the detailed outline, WCGT Ltd. is engaging to ensure the plans are reflective of Indigenous interests and concerns, meet the intent of the Certificate Condition, and align with regulatory requirements as informed by RRA reviewers.

WCGT Ltd. is engaging on the content and approach provided in this detailed outline. Through this review, WCGT Ltd. wants to ensure a collaborative approach at this early stage and that the outline captures, at a high level, the intent and expectation of the Certificate Condition, as well as interests and concerns raised by Indigenous groups and RRAs. The information that WCGT Ltd receives will inform the drafting of the full Plan. WCGT Ltd. will document and track all comments and recommendations received and provide a description on how this information has been considered and incorporated into the Plan.

4. Regulatory Framework

The legislation, regulatory guidelines, best management practices (BMPs), and policy documents that guided the development of the TSS are summarized in this section.

4.1 Federal Framework

Federal legislation, regulatory guidelines, BMPs, and policy documents that are applicable to the TSS include:

- *Species at Risk Act*
- *Fisheries Act*
- *Migratory Birds Convention Act*
- *Plant Protection Act*

4.2 Indigenous Framework

The legislation and policy documents that are applicable to the TSS on Nisga'a land are shown in the table below.

Responsible Authority	Legislation	Permit / Section
Nisga'a Lisims Government	<i>Nisga'a Forest Act</i>	Nisga'a Public Lands Licence
		Timber Harvesting Licence
		Timber Harvesting Permit
		Road Permit
		Road Use Permit
		Special Use Permit
	<i>Nisga'a Land Act</i>	Investigative Permit
		Licences of Occupation
		Permits of Occupation
		Statutory Rights-of-Way
		Leases

4.2.1 Indigenous Resource Management Plans

Indigenous land use planning documents provide strategic direction for resource management activities. These plans provide direction for areas with general and specific resource values that are managed to sustain cultural, sustenance, environmental, social, or economic values.

This section will contain Indigenous land use planning documents that include specific TSS objectives that are publicly available.

4.2.1.1 Indigenous Resource Management Permitting/Agreements

The Plan will summarize Indigenous Land and Resource Management permitting agreements and a summary of indicators affecting the TSS of this nature.

A list of any approvals or authorizations required from the Nisga'a Lisims Government in respect of activities on Nisga'a Lands and Indigenous resource management permitting agreements will also be provided in this section.

Table 4-1. Indigenous Land and Resource by Natural Resource Region and Traditional Territory

Nation Territory	Clan Territory	House Territory	Natural Resource Region	Resource Management Permits / Agreements
Summary of Indicators affecting TSS				

4.3 Applicable Federal Permits

This subsection will include a list of all applicable federal licences, permits, and approvals required for timber salvage operations.

4.4 Applicable Provincial Permits

This subsection will include a list of all applicable provincial licences permits, and approvals required for timber salvage operations.

5. Timber Utilization

5.1 Timber Merchantability Specifications

As per Condition 30, WCGT Ltd. must develop, in consultation with BC MFLNRORD and BC OGC, and implement a Timber Salvage Strategy that takes into account BC OGC's 'Fibre Utilization Plan Guideline'. The requirements have changed since the Certificate was granted with the release of the BC OGC Industry Bulletin 2015-26. A copy of the bulletin is provided in Appendix A.

Standard industry practices relating to timber utilization requirements on pipelines are now set as part of the Timber Merchantability Specifications located in the Appraisal Manuals for both the Interior and Coastal Regions. Specifically, they are as follows:

Table 1-2: Interior Timber Merchantability Specifications (Interior Appraisal Manual, July 1, 2021)

The following standard timber merchantability specifications must be used for all interior appraisals.

Stumps (Measured on the side of the stump adjacent to the highest ground.)
no higher than 30.0 cm

Diameter (outside bark) at stump height
lodgepole pine: all timber that meets or exceeds 15.0 cm
all other species: all timber that meets or exceeds 20.0 cm

Top diameter (inside bark or slab thickness)
for all species and ages, except cedar older than 141 years,
all timber that meets or exceeds 10.0 cm
for cedar older than 141 years,
all timber that meets or exceeds 15.0 cm

Minimum Length
log or slab 3.0 m

Table 2-1: Coast Timber Merchantability Specifications (Coast Appraisal Manual, April 1, 2021)

The following timber merchantability specifications must be used in all coastal appraisals.

- Mature Immature
1. Maximum stump height (measured from the top of the stump down to the highest ground level adjacent to the stump) 30.0 cm 30.0 cm
 2. Minimum slab thickness for cedar only 15.0 cm 10.0 cm
 3. Minimum top diameter (inside of the bark) 15.0 cm 10.0 cm
 4. Minimum length of a log or slab 3.0 m 3.0 m

5.2 Timber Volume

All phases of the timber volume estimates will be completed by a Qualified Professional utilizing the most up-to-date spatial data available from the BC Data Catalogue.

5.2.1 Estimate Methodology

Subsection 5.2.1 will summarize the methods, procedures, software, and datasets that were analyzed to calculate the area and estimated volumes in the final TSS.

Preliminary information provided will be collected as a desk exercise utilizing the most up-to-date spatial data available from the BC Data Catalogue.

Field data information will be collected and summarized according to BC Timber Appraisal processes.

Final data annual summaries will compare original estimates based on mapping analysis to actual scaled and billed summary information as per the Harvest Billing System Information available for Cutting Permits of the Master Licence Agreement.

5.2.2 Estimated Volume and Preliminary Information Results

This section will summarize in table format the total area and volume of merchantable and immature timber within each Forest District along the Project route.

TSA	Forest District	Total Area (ha)		Merchantable Timber (ha)		Non Merchantable Area (ha)		Mature Timber Est Volume (m ³)	
				Conifer	Deciduous	Conifer	Deciduous	Conifer	Deciduous

Notes:

ha = hectare(s)

m³ = cubic metre(s)

5.2.3 Non-Merchantable Timber

Non-merchantable fibre is defined as any fibre that does not meet the specifications of merchantable fibre in either the BC Interior Appraisal Manual or the Coast Appraisal Manuals appropriate for the region of inquiry. Non-merchantable fibre may also include timber with defects, defined in the Provincial Logging Residue and Waste Measurement Procedures Manual as unavoidable waste.

5.3 Project-Related Timber Utilization

The onsite timber utilization will outline acceptable methods and techniques to utilize salvage to assist construction or achieve other management objectives (e.g., corduroy for access, rollback, use of coarse woody debris [CWD]).

5.4 Timber Not Feasible for Utilization

This subsection will identify acceptable fibre utilization exemptions and methods and rationale used to justify these exemptions.

5.5 Timber Volume Reporting

This section will summarize the determined method for calculating and reporting the total volume of timber that has not been hauled off the Project site for commercial utilization. This will include volume used for:

- Project-related timber utilization
- CWD recruitment
- Waste
- Volume planned for BC OGC utilization exemption
- Timber provided for Indigenous Group and local community use

5.5.1 Scaled Volume Capture Methodology

This subsection will describe the scaled volume capture methodology.

5.5.2 Weigh Scale Methodology

This section will describe the weigh scale methodology.

5.5.3 Field Scale Methodology

This subsection will describe the field scale methodology.

5.6 Volume Reporting and Reconciliation

This subsection will outline the process for determining the total volume of salvaged timber that has been hauled off the Project sites to traditional timber buyers, local mills, and forest product producers.

The combined data from the weigh scale and field scale will be reconciled against the estimated volumes in the TSS and compiled in an annual report. The report will outline the volumes for each licence area (Master Licence To Cut [MLTC]) and be submitted to BC MFLNRORD, BC OGC, and BC EAO for review.

6. Timber Marketing Engagement

The TSS is being developed through continued engagement with the BC MFLNRORD, and the BC OGC. Indigenous groups, and forest tenure holders will be consulted at least 180 days (6 months) prior to the planned commencement of construction. A report will be provided to BC EAO on such consultation activities no less than 30 days prior to the planned date to commence construction.

6.1 Timber Market Engagement - Indigenous

TSS Project planning considerations provide opportunities to proactively engage, plan, and coordinate with potentially impacted Indigenous groups along the Project route, with specific regards to utilization of timber resources.

The TSS is intended to include engagement for the purpose of investigating and defining marketing commitment opportunities for salvage of merchantable fibre across the Project. This section will include potential commitments and outcomes from the Project engagement process. This may include commitments to Indigenous groups, communities or businesses for commercial uses, cultural products, and/or firewood.

6.2 Timber Market Engagement - Forest Tenure Holders

The TSS is intended to include all Project interactions and engagement with forest tenure holders for the purpose of investigating and defining marketing commitments for salvage of merchantable fibre across the Project.

Project planning considerations provide the opportunity to engage, plan, and coordinate with impacted forest tenure holders along the Project route.

A summary of the engagement that took place between WCGT Ltd. and forest tenure holders regarding the salvage volume and species utilization, interest in procurement, and procurement agreements will be provided in this section.

6.3 Timber Market Engagement - Community Engagement

Subsection 6.3 will include potential commitments and outcomes from the Project engagement process regarding utilization of timber resources. This may include commitments to community groups for commercial use, other products, and/or firewood.

7. Operational Planning

7.1 Standards and Certifications

Through the development of the TSS certification options will be explored and developed as appropriate.

Most, if not all, Major Forest Licences have some level of certification associated with their operations, the marketability of timber salvage volume may be directly effected by the certification requirements of their processing facilities.

7.1.1 Environmental Management System CSA/ISO 14001

The AMP (Condition 22), EMP (Condition 35), and WWHMP (Condition 19) provides management protocols for meeting operational and mitigation requirements for all the BC EAO Condition requirements and is the foundation in which operations for timber harvest and salvage will be guided.

This section will summarize all applicable setbacks pertaining to timber salvage activities including cultural, archeological, hydrologic, fisheries and water quality, wildlife, plants, and anthropogenic features.

This section will summarize all applicable timing windows and Restricted Activity Periods pertaining to timber salvage activities.

The TSS Environmental Management System will embrace requirements based on the internationally recognized CSA/ISO 14001 environmental management system standard. This management system ensures that requirements are fulfilled in a systematic and predictable manner that promotes continual improvement. This Standard includes the continuum of:

- a) establishing a policy
- b) planning
- c) implementation and operation
- d) checking and corrective action
- e) management review

7.2 Operational Plan Development

This subsection will outline the requirements and timeline for permit development to allow timber salvage operations to progress.

7.2.1 Master Licence to Cut

Regulation of timber harvesting for the purpose of oil and gas activities is by MLTC and Cutting Permit. Although these licences and permits have certain requirements for application and utilization, the Minister can ultimately add further stipulations that dictate how the planning and operational processes involved with harvesting Crown timber from oil and gas development sites are completed.

The BC OGC regulates timber harvest for oil and gas development by requiring Licensees to apply for an MLTC. All MLTCs are specific to the Forest District that encompasses an applicant's operational area.

7.2.2 Volume Reconciliation

A reconciliation report will be generated annually comparing billing history records (records of log scale data derived from a record kept by Timber Pricing Branch of log scale data reported on stumpage invoices issued by the Timber Pricing Branch for timber scaled under Section 94 of the Act) utilizing a Cut to Cruise Comparison Report – from the Harvest Billing System.

7.2.3 Pre-Construction Planning

This subsection will include a general summary of the planning process specifically regarding the Project needs and requirements for clearing execution. This will include a summary of required permits, authorizations, and approvals.

Table 7-1. Summary of Project Needs and Requirements for Clearing Execution

Regulatory Permit or Approval	Legislation	Lead Agency
Master Licence to Cut	<i>Forest Act</i> , Part 3, Div. 8.2	BC OGC
Cutting Permit	<i>Forest Act</i> , Section 47.5 (2)	BC MFLNRORD
Waste Assessment	<i>Forest Act</i> , Section 47.5	BC MFLNRORD
Wildfire Hazard Assessment	<i>Wildfire Regulation</i> , Section 12	BC MFLNRORD
Stumpage	<i>Forest Act</i> , Parts 6,7,8,9	BC MFLNRORD
Timber Marking	<i>Forest Act</i> , Part 5	BC MFLNRORD
Burning Registration Number (Burning Permit)	<i>Wildfire Act</i> , <i>Wildfire Regulation</i> , Part 4, Section 24	BC MFLNRORD

7.2.4 Timber Salvage Permit Processes

Once a MLTC is obtained, a Cutting Permit is required before harvesting operations can start. Cutting permits are issued by the respective Forest District Manager. Cutting Permit applications will be submitted by WCGT Ltd. following the requirements set forth in both the Interior and Coastal Appraisal Manuals. The appraisal data Submission will contain:

- information required by to determine the stumpage rate;
- the forest professional's signed submission in the form required by the director; and
- and any other information required by the regional manager or district manager.

The appraisal summary report summarizes information from the cruise compiled from each cutting authority area. An appraisal summary report and timber mark will be generated for each Cutting Permit issued.

Following harvest, all utilized and unutilized timber will be accounted for through a waste and residue survey. Applicable stumpage and waste fees will be charged to WCGT Ltd.

During clearing , reference guidance documents and plans will be developed to maintain regulatory compliance and management plan commitments. Execution plans will aid core Project staff and contractors in Project oversight and execution for the clearing phase of the Project.

WCGT Ltd. will employ Harvesting Supervisors during clearing to ensure all timber is processed according to the applicable purchase agreements, all timber is accurately marked, and any timber not planned for hauling is scaled and volumes added to the timber volume and reconciliation reports.

Harvesting Supervisors will work directly with harvesting contractors to ensure timber within merchantable stands is being salvaged according to the TSS and log buyers manufacturing specifications; reduce fibre waste during harvesting; ensure proper decking and processing; complete timber marking, ensure field scaling; coordinate log haul; and assist with final reporting. If WCGT Ltd. cannot coordinate the hauling and movement of salvaged timber to a place that will eliminate the spread of forest pests, WCGT Ltd. may employ a forest health specialist to monitor mitigation effectiveness of the strategies outlined in the forest pest management strategy.

7.2.5 Post-Timber Salvage Restoration

This subsection will include a summary of how merchantable and non-merchantable timber, waste, and debris will be incorporated into the RP and how this may be utilized in accomplishing desired outcomes of other condition plans.

8. Mitigation Measures

8.1 WCGT Forest Pest Management Strategies

The WCGT Ltd. forest pest approach will incorporate the provincial Forest Health Program and any regional and district forest health strategies that will prevent or mitigate the increased risk of pest occurrence, establishment, or movement from Project clearing and construction activities. The forest pest approach will outline requirements for monitoring and reporting of pest infestations and any adaptive management implemented. If it is determined there is a current forest health concern in a specific district and area of the Project, WCGT Ltd. will develop a focused strategy to eliminate, avoid, and implement a targeted strategy to mitigate Project activities from proliferating the existing infestation or outbreak of pests or pathogens.

Specific risk of forest pest spread strategies include:

- Analysis of available data to determine if there are recent occurrences of forest pest infestations along the Project route.
- Analysis of available data to determine if there are any occurrences of noxious, nuisance, intrusive, or invasive weed infestations along the Project route.
- Collection of field data to verify or identify any current infestations.
- Develop standard operating procedures and monitoring programs to mitigate confirmed pest infestations, if applicable.
- Develop management plans to mitigate the general establishment or spread of pests or pathogens that may not be established however clearing and construction activities may provide the conditions for establishment or movement.
- Windthrow Management: The creation of new linear edges in intact stands (especially old growth forests) increases the risk of windthrow. Increased windthrow is known to have a positive influence on the spread of forest pests. A monitoring plan will be established to document existing conditions and subsequent changes as a result of newly created edges. Mitigation measures will be implemented to prevent forest health and forest fuel loading issues arising from windthrown trees as part of the RP.
- Coordinate timber movement and hauling outside of known pest emergence windows.

8.2 Forest Health and Pest Mitigation

Forest health and pest mitigation on the Project will closely follow the provincial, regional, and district recommendations and strategies for general mitigation. If it is determined there is a current forest health concern in a specific district and area of the Project, WCGT Ltd. will develop a focused strategy to eliminate and avoid spread and implement a targeted strategy to mitigate Project activities from proliferating the existing infestation or outbreak of pests or pathogens. Mitigation measures will be adapted as required.

A summary of engagement in which forest pest management and monitoring was discussed during the development of the TSS will be documented and presented in this section.

9. Monitoring Program

To meet Condition 30 of the Certificate, WCGT Ltd. will implement a monitoring program to test the effectiveness of mitigation implemented on the Project footprint. Other monitoring plans pertaining to salvage operations that will be implemented during the TSS are in the Linkages Table of Section 2.2.

Reporting on mitigation effectiveness and compliance is described in Section 8.

Should monitoring programs indicate that the measures implemented were not adequate or were ineffective at avoiding or reducing potential residual effects on TSS operations, follow-up measures will be implemented as described in Adaptive Management Section 10.

The monitoring timeframe will be described in the TCEMP. Reporting on mitigation effectiveness and compliance is described in the TCEMP. Should monitoring programs indicate that the measures implemented were not adequate or were ineffective at avoiding or reducing potential residual effects on wildlife and wildlife habitat, follow-up measures will be implemented.

10. Timber Salvage Adaptive Management

10.1 Adaptive Management for Timber Salvage Utilization Concerns

Continual inspections by site supervisors during timber salvage activities will inform the need for any additional corrective measures or modification of measures. Corrective measures may involve implementing modified, alternate, or additional mitigation or remedial measures that may include, but are not limited to:

- Waste and Low Value Timber Utilization
- Forest Health and Pest Mitigation

Table 10-1. Examples of Corrective Actions

Goal	Example Target	Example of Underperforming Mitigation	Example of Corrective Action
High fibre utilization where planned	Full utilization except for cull and defect	Excessive merchantable volume in slash piles	<ul style="list-style-type: none"> ▪ Coordinator works with contractor to improve utilization and reduce waste
No Project-related forest pest spread	Elimination of pest spread	Pests spread to healthy forest after transport	<ul style="list-style-type: none"> ▪ Salvage movement to occur outside of pest emergence window

10.2 Adaptive Management for Expected Future Conditions

A fundamental tenet of adaptive management is the need to state explicitly the expected future condition of all the indicators. Those statements express how the indicators are expected to respond to the targets defined in the individual applicable condition plans. Each value is represented by one or more indicators for which targets need to be stated. Targets identify an expected or desirable future condition of an indicator.

Predictive models have been created for ecological, economic and social indicators. When such models were not available, the expected future conditions were made by using informed professional and stakeholder judgement. The work of creating the statements of expected future conditions for the indicators and assessing how performance contributes to the stated future condition was assigned to subgroups appropriate to the indicators of the Valued Environmental Component and will be shown in the Linkages Table in Section 2.2.

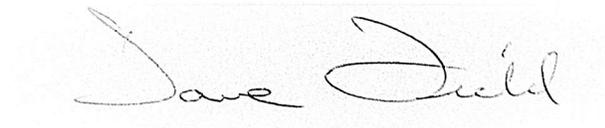
This TSS incorporates adaptive management for all indicators impacted by the TSS, by following the TSS EMS, the AMP (Condition 22), the TCEMP (Condition 35), and WWHMP (Condition 19). Collectively, these individual management systems and plans provide the adaptive management protocols for meeting operational and mitigation requirements of the TSS.

11. Timber Salvage Reporting Requirements

WGCT Ltd. will provide a reconciliation report that includes a scaled volume comparison to the timber volume estimate to BC MFLNRORD and BC EAO on an annual basis until harvest activities are complete.

12. Professional Authentication

This Timber Salvage Strategy is being developed and signed by the QP listed as follows. This individual will be directly responsible for providing professional services and submitting accurate work as directed by WCGT Ltd. in support of the submission as required by the BC EAO.



Dave Field, RPF 1199

Date: 11/5/2021

Appendix A
BC Oil and Gas Commission Industry Bulletin

BC Oil and Gas Commission Industry Bulletin

INDUSTRY BULLETIN 2015-26 September 18, 2015 Change to Fibre Utilization Plan Requirements

Effective Date: Oct. 1, 2015

As part of a review of current application requirements in advance of the Business Transition Strategy system implementation, the BC Oil and Gas Commission (Commission) determined that Fibre Utilization Plans are no longer required to be submitted with applications. This change reduces duplication and streamlines with related government processes. The documentation affected by this change has been updated on the Commission's website.

BACKGROUND The Commission has required submission of Fibre Utilization Plans since Dec. 12, 2008 to encourage utilization of Crown timber harvested by oil and gas operators, and to provide estimates of timber volumes involved. The Commission has concluded that the plans are no longer necessary as standard industry practices relating to timber utilization are consistent with government policy, and volume estimates can be tracked just as accurately using existing government data and information systems.

If you have any questions regarding this bulletin, please contact: Viva Wolf Executive Director, Regional Operations BC Oil and Gas Commission.