



Coastal GasLink Pipeline Project

Project Description

CGL4703-CGP-EN-SD-001

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Rev 0

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ABBREVIATIONS AND ACRONYMS

AIA	Archaeological Impact Assessment
AIR	Application Information Requirements
ALR	Agricultural Land Reserve
AT	Alpine Tundra
BC	British Columbia
BC EAO	British Columbia Environmental Assessment Office
BC OGC	British Columbia Oil & Gas Commission
BGC	Biogeoclimatic
BWBS	Boreal white and black spruce
CEAA	<i>Canadian Environmental Assessment Act, 2012</i>
CNPC	Phoenix Energy Holdings Limited (an affiliate of PetroChina Investment (Hong Kong))
Coastal GasLink	Coastal GasLink Pipeline Ltd.
Coastal GasLink Pipeline Project	The Project
CSA	Canadian Standards Association
CWH	Coastal Western Hemlock
DFO	Fisheries and Oceans Canada
EAC	Environmental Assessment Certificate
ESSF	Engelmann spruce-subalpine fir
HDD	Horizontal Directional Drill
IBA	Important Bird Area
km	kilometre
Kogas	Kogas Canada LNG Ltd. (an affiliate of Korea Gas Corporation)
LNG	Liquefied Natural Gas
LNG Canada	LNG Canada Development Inc.
LRMP	Land and Resource Management Plan
LSA	Local Study Area
MFLNRO	Ministry of Forests, Lands and Natural Resource Operations
MH	Mountain Hemlock
Mitsubishi	Diamond LNG Canada Ltd. (an affiliate of Mitsubishi Corporation)
mm	millimetre
NGL	natural gas liquid
NGTL	NOVA Gas Transmission Ltd.
NPS	nominal pipe size
OCC	Operations Control Center
OGAA	<i>Oil & Gas Activities Act</i>
RMZ	Resource Management Zone
ROW	right-of-way
RSA	Regional Study Area
SARA	<i>Species at Risk Act</i>
SBS	Sub-boreal Spruce

SCADA	Supervisory Control and Data Acquisition
Shell	Shell Canada Energy
SRMP	Sustainable Resource Management Plan
TFL	Tree Farm Licence
TransCanada	TransCanada PipeLines Limited.
UWR	Ungulate Winter Range
WHMIS	Workplace Hazardous Materials Information System

1.0 INTRODUCTION

Coastal GasLink Pipeline Ltd. (Coastal GasLink) is proposing to construct and operate an approximately 650 km natural gas pipeline from the area near the community of Groundbirch (approximately 40 km west of Dawson Creek, British Columbia (BC)) to the proposed LNG Canada Development Inc. (LNG Canada) liquefied natural gas (LNG) export facility (LNG Canada export facility) near Kitimat, BC. The Coastal GasLink Pipeline Project (Project) involves the construction of approximately 650 km of 48 inch (NPS 48) (1,219 mm) diameter pipeline and the construction and operation of metering facilities at the receipt and delivery points, and one compressor station with provisions for up to an additional five compressor station sites to allow for future expansion. The Project will have an initial capacity of approximately 1.7 billion cubic feet (bcf)/day (48 million cubic metres (mmcm/d)) with the potential for expansion up to approximately 5 bcf/d (142 mmcm/d). The expansion scenarios do not involve the construction of any additional pipeline; only the number and locations of potential future compressor stations would change. Further detail regarding the potential for expansion is provided in Section 4.1.

The Project might also involve the construction and operation of a natural gas liquid injection facility or a hydrocarbon dew point control facility (or both). In addition to these facilities, the Project would require temporary infrastructure during construction, such as access roads, temporary bridges, stockpile sites, borrow sites, contractor yards and construction camps.

1.1 PROPONENT INFORMATION

Coastal GasLink Pipeline Ltd. is the proponent of the Project and is seeking an environmental certificate pursuant to the BC *Environmental Assessment Act* as well as approval pursuant to the *Canadian Environmental Assessment Act, 2012* and a permit to construct and operate the Project pursuant to the BC *Oil and Gas Activities Act*.

The Project will be designed, owned and operated by Coastal GasLink Pipeline Ltd., a wholly owned subsidiary of TransCanada PipeLines Limited (TransCanada). Coastal GasLink Pipeline Ltd. is the general partner and acts on behalf of each of Coastal GasLink Pipeline East B.C. Limited Partnership (East LP) and Coastal GasLink Pipeline West B.C. Limited Partnership (West LP). The general partner, Coastal GasLink, will legally own and operate the Project assets for the benefit of the two limited partnerships. The East LP will beneficially own Project assets upstream of a point near Vanderhoof, BC and the West LP will beneficially own Project assets downstream of this point. This structure allows for potentially different ownership interests in each of the eastern and western portions of the Project. However, TransCanada will always maintain majority interests in each limited partnership.

Coastal GasLink will draw on TransCanada's expertise, experience and resources in the course of designing, constructing and operating the Project. TransCanada is a leader in the responsible development and reliable operation of North American energy infrastructure, including natural gas pipelines, power generation and gas storage facilities. Having owned and operated Canada's largest natural gas pipeline system for more than 60 years, TransCanada has an established track record for operational excellence and has developed and maintained relationships with landowners, Aboriginal communities and other stakeholders across its pipeline system.

TransCanada operates one of the most sophisticated pipeline systems in the world. Its network of approximately 57,000 km (35,500 mi.) of wholly owned and 11,500 km (7,000 mi.) of partially owned natural gas pipelines connect virtually every major natural gas supply basin and market, transporting 20% of the natural gas consumed in North America.

TransCanada moves 15 bcf of natural gas per day, delivering to local distribution companies and businesses across Canada and the U.S. TransCanada continually explores new ways to help producers reach their markets.

Coastal GasLink Pipeline Ltd. is committed to designing, constructing and operating the Project in a safe and environmentally responsible manner that respects the communities within which it will operate. In this regard, Coastal GasLink will be adopting and implementing many of TransCanada's policies, such as the Stakeholder Engagement Commitment Statement, the Health, Safety and Environment Commitment Statement, and the Aboriginal Relations Policy. Copies of these documents are included in Appendix A.

1.1.1 Proponent Contact Information

The primary contact for the Project is:
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1.2 WEBSITE

The website for the Project is: www.coastalgaslink.com

1.3 REGULATORY FRAMEWORK

The Project is wholly located within the province of BC and involves the construction of more than 40 km of pipeline that is greater than 323.9 mm in diameter. Accordingly, pursuant to Table 8, section 4 of the *Reviewable Projects Regulation*, an Environmental Assessment Certificate pursuant to the British Columbia *Environmental Assessment Act* will be required. A project description is required to initiate the provincial environmental assessment process.

Pursuant to section 14 of the schedule to the federal *Regulations Designating Physical Activities*, a project involving the construction, operation, decommissioning and abandonment of a gas pipeline more than 75 km in length of new right-of-way (ROW) is a designated project. As the Project meets this criteria, it is a designated project and is therefore subject to the provisions of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). Under CEAA 2012, a project description is required to initiate the screening process through which the Canadian Environmental Assessment Agency will determine whether a federal environmental assessment is

required. An Executive Summary is also required and is included in Appendix F (English version) and Appendix G (French version).

This complete document is intended to satisfy both the provincial and federal requirements for a project description, initiating the environmental assessment process under both the BC *Environmental Assessment Act* and CEAA 2012. A concordance table for BC EAO guidance is included in Appendix D, and a concordance table for CEAA requirements is included in Appendix E. Coastal GasLink expects that if an assessment is required under CEAA 2012, the federal and provincial assessment processes would be harmonized pursuant to the *Canada-British Columbia Agreement on Environmental Assessment Cooperation (2004)*.

Coastal GasLink will also require for the Project a permit to construct and operate a pipeline pursuant to section 25 of the BC *Oil and Gas Activities Act (OGAA)*. The pipeline will not be providing utility service. Accordingly, no toll or tariff approvals will be sought from the British Columbia Utilities Commission.

1.3.1 Permits, Licences, Approvals and Authorizations Required

In addition to the authorizations described above, the following permits, licences, approvals and authorizations might be required. The permits and authorizations have been grouped according to the project phase during which they will be required.

Field Programs

- Various permits and authorizations under the BC OGAA, as issued by the BC Oil and Gas Commission (BC OGC), including but not limited to:
 - an approval under the BC *Water Act* for work “in and about a stream”
 - a Licence of Occupation under the BC *Land Act*
 - an approval under the BC *Forests Act* for timber harvesting and disposal on Crown land
- An approval under Section 14 of the BC *Heritage Conservation Act* for a Heritage Inspection Permit
- Fish Research Licence and collection permits from the British Columbia Ministry of Forests, Lands and Natural Resource Operations (BC MFLNRO)

Construction

- Approval under Section 35(2) of the federal *Fisheries Act*
- Approval under Section 5 (2) of the federal *Navigable Waters Protection Act*

- Various permits and authorizations under the BC OGAA, as issued by the BC OGC, including but not limited to:
 - an approval under the BC *Water Act* for work “in and about a stream”
 - a Licence of Occupation under the BC *Land Act*
 - an approval under the BC *Forests Act* for timber harvesting and disposal on Crown land
- Various permits from municipal and provincial authorities pertaining to specific activities, such as burning and clearing.

2.0 GENERAL DESCRIPTION OF THE PROJECT

Coastal GasLink is proposing to construct and operate an approximately 650 km natural gas pipeline from the area near the community of Groundbirch (approximately 40 km west of Dawson Creek, BC) to the proposed LNG Canada export facility near Kitimat, BC. The pipeline length was originally estimated at approximately 700 km; however, based on preliminary corridor reviews, the length is now estimated at approximately 650 km.

The Project also includes the construction and operation of metering facilities at the receipt and delivery points and one compressor station, with provisions for up to an additional five compressor station sites to allow for future expansion. The Project may also involve the construction and operation of a natural gas liquid injection facility or a hydrocarbon dew point control facility (or both). In addition, temporary infrastructure will be required during construction, such as access roads, stockpile sites, borrow sites, contractor yards and construction camps. New electrical power lines and facilities may be required for certain facilities, but are expected to be constructed, owned and operated by third-party power providers. Refer to Section 4 for further details on the Project components.

At this stage, the route for the Project is a conceptual corridor (see Figure 2-1) that will be refined through continued technical, environmental and constructability assessments, as well as consideration of input from Aboriginal groups, landowners and stakeholders.

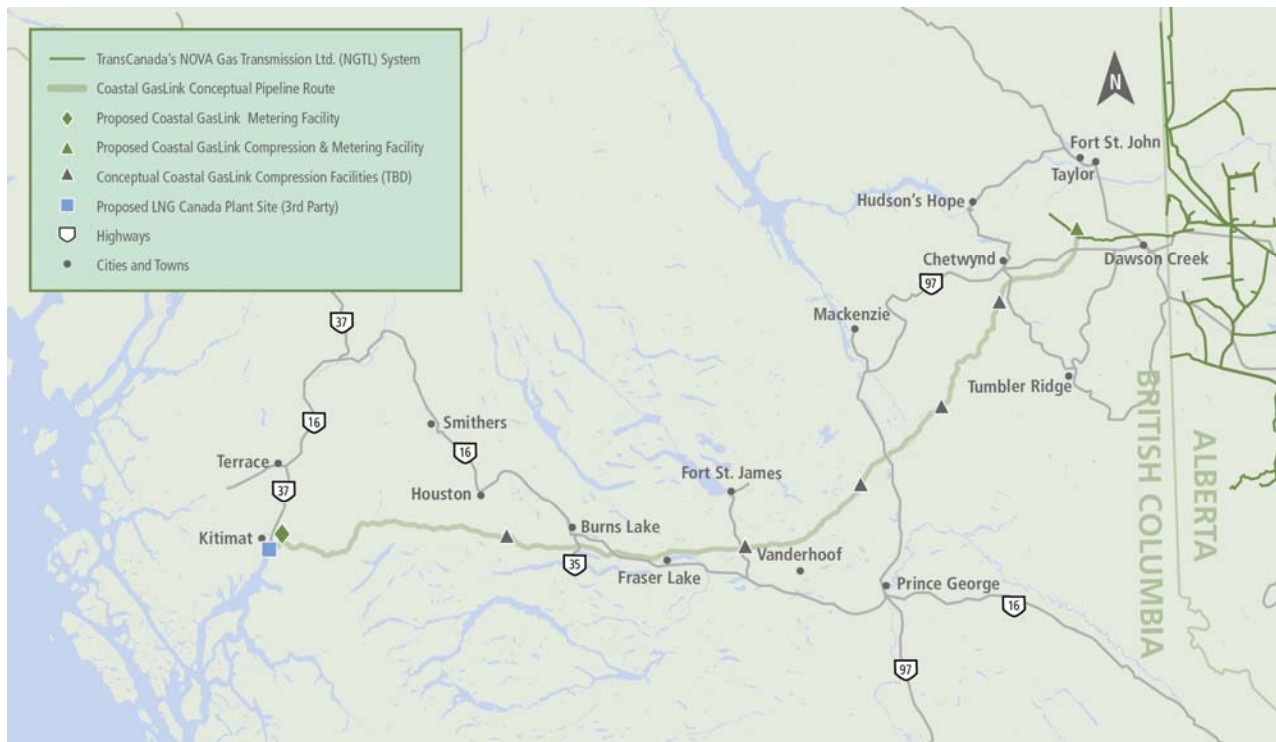


Figure 2-1: Coastal GasLink Conceptual Corridor

2.1 PROJECT PURPOSE AND RATIONALE

The purpose of the Project is to construct and operate a buried pipeline to transport natural gas from the area near the community of Groundbirch (approximately 40 km west of Dawson Creek, BC) to the proposed LNG Canada export facility near Kitimat, BC. The pipeline may also be used to transport additional volumes, if subscribed through the NGTL open season process expected to be held in early 2013. The pipeline will connect natural gas producing areas in northeast BC with the proposed LNG Canada export facility at Kitimat, which will allow for access to new natural gas markets. In addition, the Project will have an interconnection with the existing NGTL System at Groundbirch, which will provide access to other western Canadian natural gas supply.

TransCanada has entered into an agreement with Shell Canada Energy (Shell), to design, build, own and operate the Project, which will provide natural gas transportation service to the proposed LNG Canada export facility near Kitimat, BC. Shell and each of its partners in the LNG Canada export facility, Diamond LNG Canada Ltd. (an affiliate of Mitsubishi Corporation), Kogas Canada LNG Ltd. (an affiliate of Korea Gas Corporation) and Phoenix Energy Holdings Limited (an affiliate of PetroChina Investment (Hong Kong) Limited), are expected to enter into transportation services agreements with Coastal GasLink for transportation service to Kitimat.

In addition, NGTL has indicated that it will hold an open season, which is expected to take place in early 2013, to determine if there is producer interest in shipping natural gas, under NGTL System terms and conditions, on the eastern portion of the Project, to a delivery point in the vicinity of Vanderhoof, BC. If the open season results in subscriptions for NGTL System service to Vanderhoof, NGTL would enter into a transportation agreement with Coastal GasLink to obtain the required pipeline capacity. NGTL would apply to the National Energy Board for approval to extend its services to this delivery point and recover, through its tolls, the costs associated with obtaining capacity on the Project.

2.2 ESTIMATED CAPITAL COST AND EMPLOYMENT

Total expenditures on the Project are presently forecast to be approximately \$4 billion (in 2012 dollars). At this time, Coastal GasLink estimates that there will be approximately 2,000 to 2,500 direct jobs during construction. The specific data required to determine the number of person years of employment are not yet available. However, preliminary estimates that consider the cycle of resource requirements for pipeline construction indicates approximately 2,500 to 3,500 person years of work during construction. About 15 to 20 permanent field positions are expected to be created during the operations and maintenance phase of the Project. The complete Project labour requirements and economic effects will be further defined and assessed as Project planning progresses.

2.3 PROJECT PLANNING UNDERTAKEN TO DATE

To date, Coastal GasLink has undertaken the following studies to define the Project:

- conceptual corridor location studies
- preliminary meter station location studies
- preliminary compressor station location studies
- preliminary natural gas liquid facility location studies
- preliminary hydrocarbon dew point control facility location studies
- a review of existing archaeological information
- environmental overview (including a review of available information about fisheries, wildlife and vegetation values)
- land use and socio-economic overview
- preliminary discussions with regulatory agencies, Aboriginal groups and the public

3.0 AREAS OF FEDERAL INTEREST

The Project as planned does not require federal financial support, nor does the Project require an interest in federal land.

The conceptual corridor crosses the claimed territories of more than 30 Aboriginal groups, which are listed in Section 5.1. The potential environmental effects of the Project may affect various aspects of the livelihood and use of traditional resources of Aboriginal people in the region. Potential effects on Aboriginal people will be considered and mitigation developed through the Project's ongoing program of Aboriginal engagement and the integration of traditional ecological knowledge and the results of traditional land use studies into the environmental assessment.

3.1 FEDERAL AUTHORIZATIONS

Federal authorizations may be required pursuant to the following legislation:

Fisheries Act

The Project may require authorization(s) pursuant to the *Fisheries Act* if Fisheries and Oceans Canada determines that the project may bring about a harmful alteration, disruption or destruction of fish habitat. The Project activities associated with the construction and operation may interact with fish and fish habitat.

Species at Risk Act

The Project may require authorization(s) pursuant to the *Species at Risk Act* if it is determined that the Project will affect a species listed on Schedule 1 of the Act, any part of its critical habitat or the residences of its individuals.

Migratory Birds Convention Act

The Project will comply with the requirements of the *Migratory Birds Convention Act*.

Navigable Waters Protection Act

The Project may require authorization(s) pursuant to the *Navigable Waters Protection Act*, if it is determined that the Project activities include works built in, on, over, under, through or across any navigable water that may interfere with navigation.

4.0 PROJECT OVERVIEW

This section provides a description of the Project components, the schedule and activities in the various phases of the Project.

4.1 SCOPE OF THE PROJECT

The Project scope includes the facilities and activities associated with the construction, operation and maintenance of the Project, as well as foreseeable changes to the Project. Where relevant, the Project also includes the decommissioning, abandonment and reclamation of the pipeline and its associated facilities. The Project components are described as follows:

Pipeline

The approximately 650 km of NPS 48 (1,219 mm) diameter natural gas transmission pipeline will extend from the area near the community of Groundbirch (approximately 40 km west of Dawson Creek, BC) to the proposed LNG Canada export facility near Kitimat, BC. The Project commencement point and end point are in the general vicinity of the coordinates provided in Table 4-1. Maps showing the conceptual corridor are provided in Appendix B.

Table 4-1: Project Location

Project Commencement Point	
Latitude/Longitude	55.4852/120.5018
Universal Transverse Mercator	Zone 10U East 635444 North 6187563
BC Oil and Gas Grid	SW1/4 Section 1, Township 79, Range 19 W6M
Project End Point	
Latitude/Longitude	54.029229/128.68809
Universal Transverse Mercator	Zone 9U East 520431.7386 North 5986818.7386
BC Oil and Gas Grid	D-36-B and C-35-B/103-I-2

Meter Stations

The meter stations involve the installation of metering runs, yard piping, isolation and control valves, electrical, control and telecommunication systems. Currently, the Project includes the installation of metering facilities at:

- the commencement or receipt point of the Project
- the proposed LNG Canada export facility delivery point
- if warranted by the results of the NGTL open season, a delivery point may be required near Vanderhoof, BC.

Compressor Station(s)

The Project currently includes the installation of one compressor station in the area near the community of Groundbirch. Compressor stations will require all-season access from the nearest existing all-season road.

The compressor station design involves the installation of two approximately 30 MW International Organization of Standardization (ISO) rated natural gas fired turbo-compressor packages, complete with discharge gas coolers for each unit and other auxiliary equipment, including high pressure yard piping, isolation valves, electrical, control and gas systems, storage facilities and offices. Potential for emissions is discussed in Section 8.1.2.

Provisions are being considered for additional compressor stations to allow for potential future expansion. Additional volumes may be identified either through the expected phased expansion of the proposed LNG Canada facility or through a commercial open season expected to be held by NGTL early in 2013. One of the potential expansion scenarios being considered would provide for an additional three compressor stations, while a second expansion scenario would involve the installation of five additional compressor stations. The potential need for an expansion and the preferred scenario for that expansion will be selected based on the additional volume of natural gas that the pipeline would need to transport. Once the volume of natural gas is better defined and further engineering design has been completed, one of the expansion scenarios will be selected. The expansion scenarios do not involve the construction of any additional pipeline; only the number and locations of potential future compressor stations would change.

Potential Natural Gas Liquid (NGL) Injection Facility

Coastal GasLink is considering the potential installation of a natural gas liquid injection facility at the commencement point of the Project to control gas heating value. If required, liquids for injection are expected to be transported by a third party via pipeline. The NGL injection facility would control the gas heating value of the gas in the pipeline and involves the installation of liquid storage facilities, injection pumps, and other auxiliary equipment, such as valves, piping, metering, analyzers, and electrical, controls and telecommunication equipment within a planned compressor station yard. Emissions under normal operating conditions will be primarily made up of those associated with electrical power use and minor utility heating of buildings.

Potential Hydrocarbon Dew Point Control Facility

A hydrocarbon dew point control facility may be required at a point near Vanderhoof if volumes are delivered off the Coastal GasLink system, and if gas streams of differing compositions from different customers are combined at the receipt point. The facility would remove hydrocarbon liquids from the delivered gas stream to reflect the composition of gas originally provided at the receipt point. The

hydrocarbon liquids that are removed would be re-injected into the Coastal GasLink system for transportation to Kitimat. Facility components may include heat exchangers, separators, pumps, valves and piping. Emissions under normal operating conditions would be primarily made up of those associated with electrical power use and minor utility heating of buildings. The need for this facility will be determined following the outcome of the NGTL open season.

Mainline Valves

Mainline valves will be installed at meter stations, compressor stations and at other locations along the route, as necessary to comply with Canadian Standards Association (CSA) Z662-11, to enable isolation of pipeline sections, and to facilitate system operations.

Supervisory Control and Data Acquisition (SCADA) System

The Project will include the installation and operation of a SCADA system, linking pipeline and compressor facilities to the existing TransCanada Operations Control Centre (OCC) in Calgary, Alberta, which will allow for the remote monitoring of operational and measurement data.

In-Line Inspection Facilities

The Project will have facilities for launching and receiving in-line inspection tools. These tools allow for internal examination of the pipeline to monitor pipe integrity. The in-line inspection facilities are typically installed at compressor stations and at mainline valve sites. The facilities generally consist of valves, piping and launchers or receivers, depending on the location. The precise location of these facilities will be determined during detailed design.

Cathodic Protection

Cathodic protection is a common method used to protect the pipeline from electrochemical corrosion. A cathodic protection system, including anode beds, rectifiers and associated facilities, will be designed and installed for the pipeline and metering facilities.

Communication Links and Power Supply

The Project will include necessary communication links and power supply to service compressor stations, meter stations and other pipeline facilities. Coastal GasLink expects that power and communication needs will be met through existing sources.

Operations and Maintenance Activities

Throughout the operating life of the pipeline, various operations and maintenance activities are required to ensure safe operation of the pipeline and facilities. These activities include, but are not limited to:

- monitoring and surveillance using both ground based and aerial methods
- managing brush and vegetation
- conducting regular site visits to the pipeline and facilities
- ensuring pipeline maintenance programs are carried out
- maintaining signage

4.2 PROJECT SCHEDULE

The schedule for the Project is outlined in Table 4-2.

Table 4-2: Project Schedule

TransCanada announced the Project	June 5, 2012
Project Description filing to initiate Environmental Assessment	October 2012
Submission of Application for Environmental Assessment Certificate to BC Environmental Assessment Office	Early 2014
Submission of Environmental Impact Statement to Canadian Environmental Assessment Agency	Early 2014
BC OGC application	Initiate early 2014
Receipt of key regulatory approvals	Late 2014 to early 2015
Construction and Commissioning	
Commence Construction	Mid 2015
Pre-Construction (including camps, storage yards, clearing, access and ROW preparation)	Mid 2015 to mid 2017
Mainline Construction (including pipeline, compressor stations and meter stations)	Mid 2016 to 2018
Commissioning	Late 2017 to mid 2018
In-Service	2018
Decommissioning and Abandonment	End of useful life of pipeline (30+ years)

4.3 PIPELINE RIGHT-OF-WAY

The Project is intended to generally parallel existing linear disturbances to the extent practical, with the pipe located in a new construction easement. Dimensions of the pipeline construction ROW will vary depending on the ownership, terrain, construction techniques, access, and the extent and nature of existing ROWs being paralleled. Where the project abuts existing linear disturbance easements, requests will be made to the easement holder for permission to use their easement for workspace where practical and safe, to reduce potential disturbance.

The conceptual corridor is contiguous with existing and proposed pipeline, railway, power line and all-season public highway ROWs for approximately 245 km (40%) of

the total proposed length. Approximately 405 km (60%), of the corridor is currently comprised of non-contiguous ROW.

Routing in areas that are not contiguous to existing disturbances is considered where it is necessary to:

- achieve the shortest practicable route and therefore smallest overall footprint
- accommodate pipeline watercourse crossings
- address Aboriginal, landowner and stakeholder input
- avoid sensitive terrain and environmental areas
- address potential construction issues and requirements

It is anticipated that the construction ROW on level, flat terrain will generally be about 40 to 45 m wide. The actual width will vary along the route taking into account the various terrain conditions encountered. Additional temporary construction workspace will be required at certain locations to facilitate construction and the width of this temporary workspace will vary depending on site characteristics and specific construction activities. In locations where temporary workspace is required, it could range to a width of more than 100 m; however, these wider locations would be localized. Examples of these locations include access roads, potential work camps, side bends, pipe and material storage areas, watercourse crossings, timber decking areas, borrow sites and equipment laydown areas. These areas will be reclaimed and re-vegetated, where appropriate, following construction. These locations and the associated dimensions of necessary extra temporary workspace have not yet been specifically identified.

All areas disturbed by construction will be reclaimed after construction, and a permanent easement maintained for pipeline operations.

4.4 PROJECT ACTIVITIES

Subject to receipt of regulatory and Project approvals, construction of the Project is scheduled to commence in 2015, with completion of construction and an in-service date in 2018. Coastal GasLink proposes to commence pre-construction activities, including ROW clearing and preparation, in 2015. The current schedule provides for the operations and maintenance phase of the Project to commence once the Project is in service. Further description of the project activities is provided in the tables and sections below.

Pipeline construction involves several activities that occur sequentially at any one location. These include development of access where necessary, surveying, clearing, soil conservation and grading, drainage and sediment control, pipe stringing, bending and welding, trenching, lowering-in, backfilling, testing, cleanup and post-construction reclamation. The pipeline ROW will be divided into several construction

spreads, meaning that there will be multiple construction crews carrying out construction activities in parallel at multiple locations along the construction ROW.

Construction of compressor and meter stations is expected to commence concurrent with pipeline construction. Site construction and equipment installation at the compressor and meter stations is expected to take several months.

In addition to the pipeline ROW and associated temporary workspace, lands will be required for staging and stockpile sites, equipment storage and possibly borrow pits (to supply fill material). Existing disturbed areas or areas already designated for such activities will be utilized wherever feasible.

Reclamation of disturbed areas will commence following construction and be completed after the Project is placed into service.

4.4.1 Construction

Pipeline Construction Activities

Standard pipeline construction activities and typical equipment requirements are outlined in Table 4-3.

Table 4-3: Pipeline Construction Activities and Equipment Requirements

Construction Phase	Associated Activities and Equipment Required
Engineering	The pipeline will be designed and constructed in accordance with all applicable CSA standards, TransCanada specifications and BC OGC regulations.
Construction Survey	Activities include line-of-sight clearing with chain saws, flagging and staking of the boundaries of the construction ROW, temporary workspace and facility sites as well as marking trench line and existing utilities. Areas to avoid, such as protected habitats, archaeological sites or rare plant communities, will be appropriately fenced or flagged.
Clearing	Snow, trees, brush and other vegetation will be generally cleared from the construction ROW and extra temporary workspace. Salvageable timber will be cut, decked and hauled to local mills (if merchantable). Non-salvageable vegetative debris will be burned unless required for mulch, corduroy, rollback, etc. Equipment used during clearing activities will include chainsaws, feller-bunchers or other tree clearing equipment, as well as bulldozers and backhoes.
Topsoil Salvage	In agricultural lands, topsoil will be salvaged to ensure that the soil capability is maintained. The width and depth of topsoil salvage depends on the land use, soil conditions, microtopography, regulatory agency requests and grading requirements. Equipment used during topsoil handling activities includes bulldozers, graders and backhoes.
Grading	Following topsoil salvage, grading will be conducted on irregular ground surfaces (including temporary workspace) to provide a safe work surface. Graders, backhoes and bulldozers will be used for this activity. Blasting may be required where hard bedrock is encountered.
Stringing and Welding	The pipe will be transported by truck from the stockpile sites to the ROW. The pipe will be bent, lined up, welded, joint coated and inspected before being lowered into the trench. Equipment used during stringing and welding activities includes pipe trucks, booms, pick-up trucks, welding stations and x-ray or ultrasonic inspection equipment mounted on trucks.

Construction Phase	Associated Activities and Equipment Required
Trenching	The trench will be excavated using tracked excavators to a depth sufficient to ensure the depth of cover is in accordance or in excess of applicable codes. Typical depth of cover will be a minimum of 0.8 m and may vary based on land use and soil condition from 0.6 m to 1.2 m. Trenching will generally occur after stringing, bending and welding. Major road and railway crossings will be installed by boring under the road or railway.
Lowering-In	The pipe will be lowered into the trench using sideboom tractors. Trench dewatering may be necessary at certain locations during lowering-in (e.g., to ensure acceptable bedding for pipe, to prevent the pipe from floating or for performing tie-in welds).
Backfilling	The trench will be backfilled using backhoes, graders, bulldozers or specialized backfilling equipment. Backfill material will generally consist of trench spoil material excavated during trenching. Displaced subsoils will be crowned over the trench to allow for settlement. After settlement; any excess trench spoil will be feathered out over adjacent portions of the ROW.
Testing	The completed pipeline will be pressure tested in sequential segments, using water as the test medium. The water will be drawn from suitable sources and returned to the appropriate watersheds in accordance with permit requirements.
Clean-Up and Post-construction Reclamation	Initial clean-up and reclamation procedures will be initiated immediately following construction using bulldozers, backhoes and graders. Final reclamation will be completed once weather and soil conditions permit, likely in the year following construction. Garbage or debris remaining along the ROW will be removed regularly and disposed of in compliance with local regulations. The ROW contours will be returned to a stable and maintenance-free condition. In agricultural soils, compaction in subsoils will be relieved and the topsoil replaced. All disturbed upland areas will be seeded with an appropriate seed mix and specific land reclamation measures will be applied, as required.
Watercourse Crossings	Watercourse crossing methods will be based on engineering and environmental considerations. Crossing methods typically used during watercourse construction include trenched methods, such as open cut and isolation (e.g., dam and pump, flumes), and trenchless methods, such as boring and horizontal directional drilling (HDD).

Compressor Station Construction Activities

Standard compressor station construction activities and typical equipment requirements are outlined in Table 4-4.

Table 4-4: Compressor Station Construction Activities and Equipment Requirements

Construction Phase	Associated Activities and Equipment Required
Engineering	The proposed compressor station(s) will be designed and constructed in accordance with all applicable CSA standards, industry standards, TransCanada specifications, and BC OGC and other relevant regulations.
Site Preparation	Initial site preparation will involve surveying, clearing, salvage and storage of topsoil, excavating and removal of unsuitable fill, grading, site drainage, placement and compaction of a gravel surface on work areas, laying of foundation and installation of building support pads. Equipment used during site preparation activities will include chainsaws, mowers, feller-bunchers and other timber clearing equipment, as well as bulldozers and backhoes.
Facility Construction	Construction of the new compressor stations will entail building new structures, installing compression, pipe, valves and electronics equipment, tying new pipe into pipelines, pressure testing all piping, testing safety systems and instruments, final commissioning of new equipment and control systems, and perimeter fencing construction. Equipment used during the construction of the compressor stations includes backhoes, cranes and manlifts.

Watercourse Crossing Construction Activities

The conceptual corridor crosses approximately 900 watercourses, most of which are unnamed, minor and ephemeral drainages. However, the conceptual corridor does cross several large rivers and important watercourses. Environmental and engineering studies will be conducted for the Project watercourse crossings; consequently, techniques for each watercourse crossing have not yet been finalized. The following criteria are being considered during this review of crossing techniques:

- fisheries, habitat and water quality issues
- approvals, codes and regulations
- design and constructability issues
- operational requirements

A variety of crossing techniques may be used during the construction of the pipeline. They include conventional trenched crossings and trenchless crossings (i.e., HDD, tunnelling or boring). Horizontal directional drilled crossings work best for large waterbodies in areas with exceptionally vulnerable (water quality, fisheries and habitat) ecosystems and where geotechnical and hydrological conditions are favourable. The criteria for selecting candidate crossings for HDD include:

- presence of highly sensitive fish species, life stages or habitats
- presence of appropriate sub-surface conditions
- exceptionally steep approach slopes in a river valley
- presence of extensive existing pipeline infrastructure at the crossing

Trenched techniques, such as isolated crossing techniques, are best suited for streams and rivers with narrow channels and with lower flow rates. With isolated crossing techniques, the main flow of the stream is isolated from the construction area while a

trench is excavated and the pipe installed. The stream is stabilized and allowed to return to its bed. The three main methods of diverting stream flow in an isolation type crossing are:

- dam the stream and convey the water across the site by pumping
- dam the stream and install a culvert (flume)
- dam the stream and install a superflume for high-flow watercourses

Appendix C lists the major watercourse crossings anticipated for the Project.

4.4.2 Operations and Maintenance

System Protection and Controls

The Project will be controlled from the TransCanada OCC in Calgary. The OCC is staffed 24 hours per day and uses a computer-based SCADA system to continuously monitor and control pipeline operations. The OCC provides operational support to the pipelines TransCanada operates in Canada and portions of the United States. The pipelines currently operated through the OCC are regulated by the National Energy Board, the Alberta Utilities Commission and the United States Federal Energy Regulatory Commission.

The pipeline control system will monitor pipeline flows, pressures, temperatures and equipment status on a continuous basis. The SCADA system will alert the OCC operator of significant operational changes in the pipeline system. Status and control information will be received by the SCADA system.

Emergency Response

The Project will have emergency response plans that meet or exceed regulatory requirements during the construction and operation phases of the Project. For the operation phase, Coastal GasLink will be incorporated into TransCanada's corporate emergency response plan.

TransCanada currently has operations in northeast BC. Coastal GasLink will work with emergency response personnel in the areas in which it operates to ensure appropriate communications, understanding and co-operation. This will ensure that company emergency plans appropriately link into plans maintained by other affected agencies.

Integrated Public Awareness

Coastal GasLink will follow the existing TransCanada Integrated Public Awareness (IPA) Program.

The IPA Program is designed to inform the public of facility locations and operational activities to:

- protect the public from injury
- prevent or minimize effects to the environment
- protect the facilities from damage by the public
- provide an opportunity for ongoing public awareness

Maintenance Programs

Regular preventative maintenance programs will be incorporated into the design and operation of the pipeline. These programs include:

- regular aerial patrols to monitor conditions on the ROW; the frequency is established in accordance with CSA Z662 and is based on considerations of operating pressure, pipeline size, population density, terrain, weather, and agricultural and other land use
- in-line inspections for internal examination of the pipeline to monitor the integrity of the pipeline
- cathodic protection monitoring to ensure corrosion protection is effectively provided on the pipeline
- maintenance of pipeline markers along the ROW

Decommissioning and Abandonment

It is difficult at this time to predict when or how the Project facilities will be decommissioned and abandoned at the end of the Project's useful life. The useful life of the Project is expected to be 30+ years. Decommissioning the Project facilities would be considered at some time in the future, but cannot be meaningfully described at this time. The pipeline industry has experience with pipeline abandonment, and guidance documents are currently available. There are three categories under which pipeline decommissioning and abandonment might fall; removal, abandonment-in-place, and a combination of abandonment-in-place and removal. These would have to be considered based on conditions that prevail at the time of decommissioning.

4.5 RESOURCE AND MATERIAL REQUIREMENTS

4.5.1 Energy and Water Requirements

Compressors proposed for the Project are expected to be fuelled by natural gas. Electricity will only be required for minor utility needs, such as cooling fans, lighting and control. Water requirements at the compressor stations during operations are limited, and water is generally only required for general cleanup, landscaping and potable uses. Water will be transported by truck to the stations.

The environmental assessment (EA) will address water requirements during construction and proposed sources, as well as potential effects, cumulative effects and proposed mitigation.

Withdrawal and return of water for hydrostatic testing of the pipeline will be undertaken with the approval of appropriate regulators, including Fisheries and Oceans Canada (DFO) and the BC OGC, and in compliance with all applicable regulations, guidelines and codes of practice relating to water withdrawal and discharge.

4.5.2 Excavation and Fill Requirements

In addition to the pipeline trench, excavation for pipeline construction will include grading of steep slopes and uneven terrain. Requirements for additional excavation will be addressed in the EA. Fill may be required along the right-of-way where trench rock cannot be replaced directly over the pipeline. Grading and contouring will also be required at the proposed compressor stations, in addition to importing gravel. The EA will address requirements for additional excavation and fill, potential fill sources and any associated environmental effects and proposed mitigation, including any special measures that may be required in special areas as outlined in the Land and Resource Management Plan (LRMP) process.

4.5.3 Toxic and Hazardous Materials

Specific identification of hazardous substances, potential effects, spill prevention and emergency contingencies will be addressed in the EA. Hydrocarbons and hydraulic fluids are the primary toxic materials to be used during construction and operation of the Project. Activities associated with Project construction that may involve other substances of concern include welding and weld testing, hydrostatic testing and HDD or bored crossings. TransCanada has several systems in place (including its pipeline integrity management program, SCADA, aerial and ground patrol, and emergency response systems) to both prevent incidents and ensure rapid and effective response to spills of hazardous materials.

4.5.4 Waste Disposal

During the construction phase of the Project, typical waste includes construction materials (wood lathe, flagging tape, hydraulic fluids from equipment maintenance, and domestic products from camp operation). The pipeline construction contractor will collect waste daily, and will dispose of it at landfill sites appropriate for the nature of the waste. During the operation phase, the facilities are expected to produce waste typical to these facilities, including used compressor and generator oil and filters, air filters and domestic wastewater. Qualified contractors will collect waste and dispose of it at appropriate facilities.

To control Project waste, Coastal GasLink will apply TransCanada's waste management plan, which meets or exceeds requirements under the *BC Environmental*

Management Act. Storage and transportation of waste material will be conducted in accordance with the *Transportation of Dangerous Goods Act*, Workplace Hazardous Materials Information System (WHMIS) and any other provincial regulations.

5.0 ABORIGINAL ENGAGEMENT

Coastal GasLink understands that while the ultimate responsibility for ensuring that the duty to consult is satisfied lies with the Crown, certain aspects of consultation may be delegated to Coastal GasLink. In compliance with BC Environmental Assessment Office (EAO) requirements, Coastal GasLink will develop and submit a First Nations Consultation Plan for approval by the EAO.

Specific consultation approaches will depend on the particular Aboriginal community being consulted and may change over time. The goals of the Project engagement program are to:

- build and maintain positive long-term relationships with Aboriginal groups potentially affected by the Project
- ensure that Aboriginal community input and concerns are gathered, understood and integrated into Project design and execution as appropriate
- ensure that concerns and issues with respect to environmental or socio-economic effects related to Aboriginal communities are addressed, as appropriate

5.1 ABORIGINAL GROUPS

The Project area lies in the claimed territories of approximately 31 Aboriginal groups and two Tribal Councils (see Table 5-1). These groups and the two Tribal Councils are likely to have an interest in the Project, may be affected by the Project and will likely need to be consulted by the Crown. A description of the Coastal GasLink engagement to date with these groups is included in Section 5.2.

Table 5-1: Aboriginal Groups and Tribal Councils in Project Area

First Nations	
Blueberry River First Nations	Burns Lake First Nation (Ts'il Kaz Koh First Nation)
Cheslatta Carrier First Nation	Doig River First Nation
Fort Nelson First Nation	Hagwilget Village Council
Haisla First Nation	Halfway River First Nation
Kitselas First Nation	Kitsumkalum First Nation
Lake Babine Nation	Lax Kw'alaams Indian Band
Lheidli-T'enneh First Nation	McLeod Lake Indian Band
Metlakatla Indian Band	Moricetown First Nation
Nadleh Whut'en First Nation	Nak'azdli First Nation
Nazko First Nation	Nee Tahi Buhn First Nation
Office of the Wet'suwet'en Hereditary Chiefs	Prophet River First Nation

First Nations	
Saik'uz First Nation	Saulteau First Nations
Skin Tye First Nation	Stellat'en First Nation
Takla Lake First Nation	Tl'azt'en First Nation
West Moberly First Nations	Wet'suwet'en First Nation
Yekooche First Nation	
Tribal Councils and Associations	
Carrier Sekani Tribal Council	Treaty 8 Tribal Association
Métis Organizations	
Métis Nation British Columbia	Kelly Lake Métis Settlement Society

5.2 ABORIGINAL ENGAGEMENT ACTIVITIES COMPLETED TO DATE

All potentially affected Aboriginal communities have been provided with initial Project information materials, including a letter introducing the Project and a Project map. In-person meetings have occurred with every identified First Nation, and capacity funding discussions have commenced.

As discussions with Aboriginal communities continue, there may be some that will determine that they do not have an interest in the Project. Conversely, there may be Aboriginal communities that have not yet been identified that may assert an interest in the Project. In both cases, the Project will work with the Aboriginal communities and adjust engagement accordingly.

Additional meetings with Aboriginal communities will be undertaken on an ongoing basis with the following current objectives:

- Continue to build understanding and awareness of the Project
- Understand how individual Aboriginal groups wish to be consulted
- Gather preliminary information on Aboriginal interests and concerns

The Project Description will be shared with Aboriginal groups. The draft Application Information Requirements (AIR) and eventually aspects of the draft EA Certificate (EAC) Application will also be shared with Aboriginal groups and their feedback sought and considered. Input from Aboriginal groups will inform Coastal GasLink's approach to its regulatory applications.

Since the Project was announced publicly in June 2012, Coastal GasLink has been engaging with potentially affected Aboriginal communities along the conceptual corridor. The potential effects of the Project may include various aspects of the livelihood and use of traditional resources of Aboriginal people in the region. Although engagement is in early stages with Aboriginal communities, some common interests and concerns have been raised, such as the cumulative effects of the multiple

major projects being proposed in the region, potential effects on watercourses, wildlife and habitat, employment and economic opportunities, and interest in a common corridor. It is too early in the engagement process to provide specific details about interests and concerns. Coastal GasLink expects that as dialogue progresses, further information will be available to contribute to identifying potential environmental and socio-economic effects, as well as to support a dialogue about effective mitigation and management measures. In addition, Coastal GasLink expects to carry out the traditional ecological knowledge and traditional land use program described in Section 7.5.

Coastal GasLink will provide updated Aboriginal engagement information as the Project progresses through the environmental assessment process, as governed by the terms of any applicable formal agreements between Coastal GasLink and the Aboriginal groups.

6.0 PUBLIC ENGAGEMENT

Coastal GasLink strives to engage stakeholders early and often. This means listening, providing accurate information and responding to stakeholder interests in a prompt and consistent manner.

The objectives of the Public Engagement Plan include:

- Identify potentially interested stakeholders and the nature of their interests
- Provide timely, honest, accurate information to allow for informed, effective and meaningful engagement with the public
- Provide information about the need for the Project, process of approvals, construction practices and potential effects
- Ensure that stakeholders have information on how to be involved in the regulatory process (eg., BC EAO, CEAA and BC OGC approval processes)
- Ensure that all communications materials and platforms are consistent, straightforward and easy to understand
- Ensure there is a variety of means for stakeholders to get involved in the process
- Ensure that stakeholder issues and concerns are gathered, understood and integrated into project design and execution, as appropriate
- Ensure that stakeholders are aware of how their input has shaped or affected the design of the process

Throughout the Project, Coastal GasLink will engage with the public in several ways, which may include:

- Project website, printed materials and videos
- Maintenance of a public contact telephone line and email address providing timely responses to questions and concerns
- Discussions with landowners and Crown tenure holders
- Open houses, information sessions and meetings with landowners, local governments and organizations to raise awareness and to identify and address issues and concerns
- Public notification of events, meetings and the status of the Project using, for example, advertising and mail outs, website and newsletter updates

6.1 REGIONAL AND MUNICIPAL GOVERNMENTS POTENTIALLY AFFECTED

A list of regional districts and municipal governments potentially affected by the Project is provided in Table 6-1. Within the conceptual corridor, only the municipal boundaries of the District of Kitimat and the four regional districts listed in Table 6-1 will be crossed. All other communities are located near the conceptual corridor.

Table 6-1: Regional and Municipal Governments Potentially Affected

Bulkley-Nechako Regional District	City of Dawson Creek
City of Fort St. John	City of Prince George
City of Terrace	District of Chetwynd
District of Fort St. James	District of Houston
District of Hudson's Hope	District of Kitimat
District of Mackenzie	District of Tumbler Ridge
District of Vanderhoof	Fraser-Fort George Regional District
Kitimat-Stikine Regional District	Peace River Regional District
Town of Smithers	Village of Burns Lake
Village of Fraser Lake	Village of Telkwa

Within the conceptual corridor, there are also several unincorporated communities. Coastal GasLink has been providing Project information to the regional districts within which the unincorporated communities are located since the Project announcement in June 2012. Written materials, including informational brochures, have been provided to the regional and municipal officials, as well as presentations by Project representatives at council meetings and Project-specific meetings.

6.2 PUBLIC ENGAGEMENT ACTIVITIES COMPLETED TO DATE

Initial meetings were undertaken with representatives from the municipal and regional governments identified in Table 6-1 from June 13 to July 3, 2012, following telephone conversations with a representative from each community and regional district. Meetings have yet to be arranged with the Village of Telkwa and the District of Taylor.

A Project introduction package was sent out in July 2012 to all potentially affected regional and municipal districts. The package included information about the Project, natural gas pipelines, TransCanada and its approach to stakeholder engagement.

Community information sessions occurred from October 9 to 25, 2012 in the following 16 communities: District of Kitimat, City of Terrace, Town of Smithers, District of Houston, Village of Burns Lake, Village of Fraser Lake, District of Fort St. James, District of Vanderhoof, City of Prince George, District of Mackenzie, District

of Tumbler Ridge, District of Hudson's Hope, District of Chetwynd, City of Dawson Creek, Bear Lake and Groundbirch.

At each information session, Project representatives shared information and responded to questions from the public in a way that was open, transparent and facilitated two-way conversations and continuing dialogue.

Also during October, Council presentations were provided as requested by the following municipalities and regional districts: District of Kitimat, City of Terrace, Town of Smithers, District of Houston, Village of Burns Lake, Village of Fraser Lake, District of Vanderhoof, City of Prince George, District of Mackenzie, District of Tumbler Ridge, District of Hudson's Hope, District of Chetwynd, Peace River Regional District, Regional District of Fraser-Fort George, Regional District of Kitimat-Stikine and Regional District of Bulkley-Nechako.

Coastal GasLink began landowner engagement when the Project was announced. To date, approximately 700 landowners have been identified within the conceptual corridor, and engagement has begun, as summarized:

- During the month of June 2012, notification calls were made to verify contact information and introduce the Project.
- Commencing in mid-July, landowners were called to schedule in-person visits to explain the Project and answer queries or concerns. These scheduling calls are ongoing.
- Commencing in mid-July 2012, in-person visits were conducted with landowners within the conceptual corridor. At each visit, an information package is being provided. These in-person visits are ongoing. In late August 2012, an information package about the Project was mailed to all landowners not visited by that time. As of October 19, 2012, approximately 70% of the landowners within the conceptual corridor had been contacted by telephone or in person to introduce the Project.

6.3 REGULATORY ENGAGEMENT CONDUCTED TO DATE

Coastal GasLink commenced its regulatory engagement following the Project announcement in early June 2012. Coastal GasLink has introduced the Project and discussed the regulatory process with the following agencies:

- Province of British Columbia:
 - BC Environmental Assessment Office
 - BC Oil & Gas Commission
 - Ministry of Aboriginal Relations and Reconciliation
 - Ministry of Energy & Mines

- Ministry of Forests, Lands and Natural Resource Operations
- Federal (Ottawa and Vancouver offices):
 - Canadian Environmental Assessment Agency
 - Major Projects Management Office
 - Fisheries and Oceans Canada
 - Transport Canada
 - Environment Canada

6.4 KEY DISCUSSION TOPICS AND COMMENTS

The communities listed in Table 6-1 have indicated varying levels of interest in the Project. All of them registered a general concern related to the regional environment and the safety of pipeline construction and operation. All of them expressed interest in having access to economic opportunities related to the planning and construction of the Project.

Through a national opinion research firm, Coastal GasLink contacted residents and key stakeholders in communities across northern BC to identify key community priorities. The topics most often mentioned were jobs and economic development, health services, roads and the environment.

Landowner comments during initial meetings include environmental, safety, permitting, agreements, number of pipelines, and damage from survey crews, the pipeline corridor, the depth and size of pipe, increased traffic, and the route location.

All concerns and issues raised have been registered and follow-up discussions will take place with the stakeholders and landowners who raised them.

7.0 PROJECT SETTING

This section provides an overview of the conceptual corridor, and describes the physical, biological and socio-economic environment within the conceptual corridor being considered by the Project, based on existing information. This information will be supplemented, as necessary, by Aboriginal and stakeholder engagement, research, and field studies being undertaken by Coastal GasLink to support the EA.

7.1 CONCEPTUAL CORRIDOR OVERVIEW

The conceptual corridor begins in agricultural lands west of Dawson Creek and proceeds in a southerly direction. After about 10 km, the corridor enters rolling terrain that generally has extensive tree cover, with the exception of logged areas. This tree cover continues for most of the remainder of the corridor. The corridor turns to the southwest, crosses the deeply incised Murray River valley and then crosses agricultural land in the Lone Prairie area. The route then enters the Sukunka River valley, crosses the Sukunka River and travels southwest along the west edge of the valley.

After crossing the Burnt River, the corridor turns west and enters the Rocky Mountains. The terrain is rugged for approximately 60 km, encountering elevations over 1,360 m. The corridor continues south-westerly and the terrain is moderately rolling for approximately 85 km as it enters the Interior Plateau, including crossing the unique geological feature, the Rocky Mountain Trench. The terrain is gently rolling for the remainder of the approximately 315 km across the Interior Plateau. The corridor runs westerly across the Interior Plateau crossing areas of extensive logging and several large river crossings.

The corridor then enters the Coastal Mountains and the terrain becomes more rugged. The corridor includes the Clore River valley before it climbs into the highest pass along its route (i.e., Icy (Nimbus) Pass), located along the north flank of Atna Peak. The maximum elevation within the pass is about 1,445 m, and the length of the route within the pass is about 6 km. The corridor then enters the steeply incised Kitimat River valley and crosses the river. The corridor then continues westerly along the flanks of several valleys, until reaching its terminus near Kitimat, where land use includes previously developed lands for the purposes of industrial activities.

As the Project is currently reviewing the conceptual corridor to better define the detailed pipeline route and facility sites, information about the proximity to residences will be identified and documented on mapping included in the environmental assessment.

Indian Reserves identified as being within approximately 10 km of the conceptual corridor are noted in Table 7-1.

Table 7-1: Indian Reserves within 10 km of the Conceptual Corridor

Indian Reserve	Distance From Conceptual Corridor (km)
KITAMAAT 1	0.0
JUGWEES 5 (Minette Bay)	0.0
FONDEUR 9 (Nadleh Whut'en)	0.2
FRASER LAKE 2 (Nadleh Whut'en)	0.3
NAUTLEY 1 (Nadleh Whut'en)	1.0
KERRY LAKE EAST 9	1.9
NAUTLEY 1	2.0
STELLAQUO 1	2.0
YENSISCHUCK 3	2.5
KERRY LAKE EAST 9	2.7
STELLAQUO 1	2.7
STELLAQUO 1	2.9
STELLAQUO 1	3.0
TACHEEDA LAKE 14	3.3
HENDERSON'S RANCH 11	3.5
STELLAQUO 1	3.9
KERRY LAKE WEST 8	4.0
SEASPUNKUT 4	4.1
SEASPUNKUT 4	4.2
NAUTLEY 1	4.4
STELLAQUO 1	4.4
SEASPUNKUT 4	4.6
STELLAQUO 1	4.8
CHAPEL PARK 28	4.9
STELLAQUO 1	5.0
SEASPUNKUT 4	5.0
KERRY LAKE EAST 9	5.0
STELLAQUO 1	5.1
KITAMAAT 2	5.0
KERRY LAKE WEST 8	5.3
FELIX GEORGE 7	5.9
SEASPUNKUT 4	6.1
ORMONDE CREEK 8	3.0
SHERATON CREEK 19	6.5
CANYON LAKE 7	2.9
KERRY LAKE WEST 8	6.6
SHERATON CREEK 19	6.7

Indian Reserve	Distance From Conceptual Corridor (km)
SHERATON CREEK 19	7.3
KITAMAAT 2	7.0
KERRY LAKE EAST 9	7.5
WALTH 3	8.1
BURNS LAKE 18	7.1
POISON CREEK 17A	7.2
BURNS LAKE 18	7.5
BURNS LAKE 18	7.7
BURNS LAKE 18	8.2
WOYENNE 27	8.4
BURNS LAKE 18	8.3
BURNS LAKE 18	8.4
POISON CREEK 17	8.7
BEES 6	10.4
TSICHGASS 10	10.7

7.2 ENVIRONMENTAL SETTING

The following subsections provide a brief overview of the physical environment, aquatic resources, ecological regions and zones, and vegetation and wildlife communities that will be crossed by the conceptual corridor. This information, in addition to the information in Section 8, will be used to develop the draft Application Information Requirements for submission to the EAO.

7.2.1 Physical Environment

The conceptual corridor crosses four physiographic regions in BC:

- the Great Plains, which is characterized by flat-lying or gently dipping sandstones and shales and generally flat to gently rolling surfaces, with little relief except where they are incised by the Peace and Liard rivers and their tributaries
- the North and Central Plateaus and Mountains, which display the flat to rolling topography of mature erosional surfaces and contain deep drift widespread in broad valleys, while the mountains themselves commonly have a thin cover of drift except on the higher ridges and peaks
- the Interior Plateau, which is characterized by flat to gently rolling uplands of thick till deposits and rock outcrops, dissected by major tributaries of the Fraser River (*e.g.*, Thompson River)

- the Coast Mountains and Islands, which is characterized by rugged mountain terrain with thick till deposits confined to valley bottoms and adjacent lower slopes (Meidinger and Pojar 1991)

Mapping available from Natural Resources Canada (NRCan) identifies that the conceptual corridor crosses some areas with isolated patches of permafrost (0-10%) (NRCan 2003a), an area within the vicinity of historical major flooding (NRCan 2007a), areas of low to moderate seismic hazard (NRCan 2008), several areas within the vicinity of historical forest fire hotspots before 2009 and areas of low to high fire danger rating (NRCan 2009a, 2009b).

There are no historical major landslides, major tornadoes, major hailstorms or major avalanches in the vicinity of the conceptual corridor (NRCan 2007b, 2007c, 2007d, 2009c).

Studies to be carried out during the Project design phase will collect information about potential geohazards and other unique terrain features that require specific consideration in the design of the pipeline and the development of construction and reclamation techniques.

7.2.2 Atmospheric Environment

The conceptual corridor passes through three ecoprovinces or areas with consistent climate: the Sub-Boreal Interior Ecoprovince, the Central Interior Ecoprovince, and the Coast and Mountains Ecoprovince. Ecoprovinces are part of the ecoregion classification system, developed to provide a systematic view of small-scale ecological relationships in the province based on climate and physiography.

The eastern end of the conceptual corridor is in the Sub-Boreal Interior Ecoprovince and has a continental climate. Precipitation is steady, albeit relatively light, throughout the year, with convective storms bringing rain during the summer and the southwest flow bringing snow during winter storms. The Sub-Boreal Interior Ecoprovince experiences warm summers and cold winters. Arctic air frequently dominates during the winter and early spring. This cold air brings heavy snowfall to areas of high elevation.

The Central Interior Ecoprovince is characterized by a flat topography and distinct seasons. Situated on the leeward side of the Coast Mountains, the climate is characterized by colder winters, warmer summers, and a rainy season during the late spring and early summer months. Precipitation is reduced because the Central Interior Ecoprovince is located in the rainshadow of the Coast Mountains. Arctic air moves into the Ecoprovince during the winter and often is trapped and stalls in the narrow valleys of the Central Interior. Rain showers are common in the region during the summer.

The climatic processes of the Coast and Mountains Ecoprovince are influenced by its proximity to the Pacific Ocean. Winters in the Coast and Mountains Ecoprovince are dominated by oceanic low-pressure systems, producing wet conditions and moderate temperatures. In the summer, high-pressure systems prevail, and low-pressure systems are less frequent and tend to stay farther north.

The mean annual precipitation along the conceptual corridor varies from areas with approximately 330 to 570 mm per year to areas that receive as much as 4,000 to 5,000 mm per year, with approximately 20% to 75% of precipitation occurring as snowfall. The mean annual temperature for long-term climatic stations in the Biogeoclimatic (BGC) Zones crossed by the conceptual corridor varies from approximately -4°C to approximately 8°C (Meidinger and Pojar 1991).

7.2.3 Acoustic Environment

Background noise levels in the Project area primarily result from the presence of highways, active Forest Service roads, and industrial activities. Much of the conceptual corridor is located in sparsely populated areas. Back-country noise levels are very low.

7.2.4 Water

The conceptual corridor crosses approximately 320 watercourse crossings through four major drainage basins, including the Peace River Drainage, Fraser River Drainage, Skeena River Drainage and Kitimat River Drainage basins. A more detailed list of watercourse crossings and fish species likely present is included in Appendix C.

Peace River Drainage

Major watershed groups crossed by the conceptual corridor within this drainage include the Murray, Sukunka, Burnt, Anzac, Parsnip, and Crooked rivers. This section of pipeline traverses terrain associated with the Rocky Mountains, Rocky Mountain Foothills, Hart and Misinchinka Ranges. The western section of the corridor within the Peace drainage crosses the Parsnip River in the Rocky Mountain Trench and ascends the Interior plateau and generally lower relief topography through to the Fraser drainage.

Fish species known to occur within this drainage include Arctic grayling, bull trout, rainbow trout, eastern brook trout, mountain whitefish, burbot, northern pike and other non-salmonid freshwater species. Species assemblages are separated by the BC Hydro Bennett Dam on the Peace River.

Fraser River Drainage

The Fraser River system is 1,370 km long and drains an area of about 233,100 km², all within British Columbia. The upper Fraser flows west through a broad mountain-

rimmed trench from the British Columbia/Alberta border to Prince George in central BC. From Prince George, the Fraser flows in a generally southern direction before emptying into the Strait of Georgia at Vancouver. Major hydro-electric developments occur on two of the Fraser River's tributaries. The Kenney Dam on the Nechako River forms the Nechako Reservoir in west-central British Columbia. The Bridge River system in southwest British Columbia has a complex of three dams.

Major watershed groups crossed by the conceptual corridor within this drainage include the Salmon, Stuart and Endako rivers. Fish species known to occur within this drainage include chinook, sockeye and pink salmon, rainbow trout, Dolly Varden, bull trout, kokanee, mountain whitefish, white sturgeon, burbot and other non-salmonid freshwater species.

Skeena River Drainage

The Skeena River system is 570 km long and drains an area of 54,400 km² within west-central BC. Its headwaters are in the Skeena Range of the Coast Mountains. The Skeena River flows northwest from its headwaters towards its confluence with the Bulkley River at Hazelton then towards Prince Rupert. The Skeena empties into Chatham Sound about 45 km southeast of Prince Rupert. There are no major impoundments or diversions within the Skeena drainage.

Major watershed groups crossed by the conceptual corridor within this drainage include the Morice and Clore rivers. Fish species known to occur within the Skeena River include chinook, chum, coho, pink and sockeye salmon, cutthroat and rainbow trout, steelhead (summer or winter-run), Dolly Varden, bull trout, kokanee, mountain whitefish, and pygmy whitefish.

Kitimat River Drainage

The Kitimat River system is 98 km long and drains an area of 3,500 km². The Kitimat River originates in the Kitimat Range of the Coast Mountains in west-central BC and discharges into Douglas Channel near the town of Kitimat. There are no major impoundments or diversions located within the Kitimat River drainage.

Fish species known to occur within this watershed group include chinook, chum, coho and pink salmon, rainbow/steelhead and coastal cutthroat trout, and Dolly Varden, as well as mountain whitefish, sculpin and other non-salmonid freshwater and estuarine species.

Appendix C provides a listing of the major watersheds, rivers and named streams crossed by the conceptual corridor. In addition, information is provided on the likely fish species present in the major rivers crossed.

7.2.5 Terrestrial Environment

Soils

The conceptual corridor crosses agricultural land including several areas that are designated as Agricultural Land Reserves (ALR). A preliminary site review indicates that some compressor stations and metering facilities may be located on ALR land. Further site reviews and data collection will confirm the proposed locations to be included in the environmental assessment. Detailed soils investigations will be completed on agricultural land. Soil parent materials differ along the project corridor, but are expected to consist mainly of till, and glaciofluvial and glaciolacustrine deposits.

The conceptual corridor crosses previously developed land, some of which was used for industrial purposes. During the continued development of the Project, detailed information will be collected to identify the existence of contaminated soils in areas to be disturbed for construction, and to the extent that contaminated soil is encountered, appropriate management measures will be implemented, as required.

7.2.6 Vegetation

The conceptual corridor extends from the Northern Interior to the Coast Region of BC. It begins in the Boreal Plains Ecoprovince in the east, crosses the Boreal Interior Ecoprovince in the central section, and reaches the Coast and Mountains Ecoprovince at its western extent. Along the way, the conceptual corridor traverses six BGC zones, including the Boreal White and Black Spruce (BWBS), Engelmann Spruce-Subalpine Fir (ESSF), Sub-Boreal Spruce (SBS), Alpine Tundra (AT), Mountain Hemlock (MH) and Coastal Western Hemlock (CWH). Nearly 60% of the conceptual corridor runs through the Sub-Boreal Spruce zone.

One hundred and thirty-one provincially listed plant species potentially occur within the Forest Regions and BGC zones intersected by the conceptual corridor. One hundred and one of these are blue-listed (of special concern) and 30 species are red-listed (endangered or threatened; BC Conservation Data Centre 2012). Three of these species are listed on Schedule 1 of the federal *Species at Risk Act*.

One hundred and fourteen provincially listed ecological communities are associated with the Forest Districts and BGC zones intersected by the conceptual corridor. Eighty-eight of these communities are blue-listed and 26 are red-listed. The federal *Species at Risk Act* does not track, rank or regulate ecological communities.

Vegetation within these BGC zones varies considerably. The BWBS occurs within the Interior Boreal Plains of northeastern BC and is characterized by a mixture of upland forests and muskeg (peatland-wetlands). The upland forests of this zone may contain mixed stands of trembling aspen, white spruce and lodgepole pine. Peatlands cover extensive tracts of northeast BC.

The ESSF zone occurs on upper elevation slopes of both the Rockies and eastern slopes of the Coast Range Mountains along the conceptual corridor. Engelmann spruce and subalpine fir comprise the forest canopy of this zone. Above the continuous tree line, the upper elevations of the ESSF zone are characterized by subalpine parkland, a mosaic of meadows with clumps of stunted trees. Whitebark pine is a conifer species that occurs within the subalpine parkland.

True AT occurs above the subalpine parkland and vegetation is limited to low-growing shrubs, mat-forming herbs and sedge meadows. Soils are thin in this zone, and the growing season is brief.

The SBS occurs on the Interior Plateau and is dominated by coniferous forest cover consisting of hybrid white spruce, subalpine fir, lodgepole pine and black spruce. The flat plateaus of the SBS zone include a variety of wetland classes, including marshes, fens and swamps.

The MH zone occupies the higher elevations along the western slopes of the Coast Range Mountains and is dominated by mountain hemlock, and amabilis fir. Additional conifer species occurring in the MH zone include yellow cedar, white pine, Sitka spruce and Douglas fir. Wetlands in the MH zone may occur either in the form of forested bogs or swamps, or lush herbaceous or sedge-dominated subalpine plant communities.

The CWH zone occupies the lower elevation areas west of the Coast Mountains. Western hemlock and western red cedar are the most common conifer species within this zone. Additional coniferous species include amabilis fir, yellow cedar, Douglas fir, grand fir, western white pine and Sitka spruce.

7.2.7 Wetlands

Wetlands of various classes and forms occur throughout all the BGC zones along the conceptual corridor, as described in the vegetation overview above. Forty-five of the blue-listed communities are either wetlands or floodplain ecosystems, and 18 of the red-listed ecosystems are either wetlands or floodplain communities. Forest harvesting has resulted in variously aged stands along the conceptual corridor, including some early seral stands and old growth stands.

7.2.8 Wildlife

The conceptual corridor traverses three BC Ministry of Environment regions: Peace, Omineca and Skeena. Among these regions, 396 species of amphibian, reptile, mammal and bird are known or likely to occur, and of these, 286 species are known or likely to occur within all or a portion of the conceptual corridor. Of the 286 species, about 37% (107 species) are recognized as species of management concern. These include 17 species federally protected under Schedule 1 and Schedule 3 of the *Species at Risk Act* (SARA), 27 species recognized by the Committee on the Status of Endangered Wildlife in Canada, 35 species designated as “red” or “blue” by the

British Columbia Conservation Data Centre and 98 species having a conservation priority rank of 1, 2 or 3 under the BC Conservation Framework; some species are represented in more than one category. Table 7-2 summarizes the SARA listed species and other species of management concern.

Table 7-2: SARA Listed Species and Other Species of Management Concern

“threatened” species on Schedule 1 of SARA	“special concern” species on Schedule 1 of SARA
Canada Warbler (<i>Wilsonia canadensis</i>)	Coastal Tailed Frog (<i>Ascaphus truei</i>)
Common Nighthawk (<i>Chordeiles minor</i>)	Western Toad (<i>Anaxyrus boreas</i>),
Olive-sided Flycatcher (<i>Contopus cooperi</i>),	Peregrine Falcon (<i>Falco peregrinus pealei</i>)
Peregrine Falcon (<i>Falco peregrinus anatum</i>)	Short-eared Owl (<i>Asio flammeus</i>)
Northern Goshawk (<i>Accipiter gentilis laingi</i>) ,	Western Screech-Owl (<i>Megascops kennicottii kennicottii</i>)
Marbled Murrelet (<i>Brachyramphus marmoratus</i>)	Band-tailed Pigeon (<i>Patagioenas fasciata</i>),
Woodland Caribou (<i>Rangifer tarandus</i>)	Rusty Blackbird (<i>Euphagus carolinus</i>
	Great Blue Heron (<i>Ardea herodias fannini</i>)
	Yellow Rail (<i>Coturnicops noveboracensis</i>).
other species of management concern	
Black Swift (<i>Cypseloides niger</i>)	
Sharp-tailed Grouse (<i>Tympanuchus phasianellus</i>)	
Broad-winged Hawk (<i>Buteo platypterus</i>)	
Barn Swallow (<i>Hirundo rustica</i>),	
Le Conte’s Sparrow (<i>Ammodramus leconteii</i>),	
American Bittern (<i>Botaurus lentiginosus</i>)	
Grizzly Bear (<i>Ursus arctos</i>)	
Fisher (<i>Martes pennanti</i>).	

Examples of species recognized as being important for hunting or trapping, and not already mentioned as being a species of management concern, include:

- Marten (*Martes american*)
- American Mink (*Neovison vison*)
- Ermine (*Mustela erminea*)
- American Beaver (*Castor canadensis*)
- Canada Lynx (*Lynx canadensis*)
- Moose (*Alces alces*)
- Elk (*Cervus canadensis*)
- Mule Deer (*Odocoileus hemionus*)
- White-tailed Deer (*Odocoileus virginianus*).

The conceptual corridor traverses four Ungulate Winter Range (UWR) areas, three of which are designated for woodland caribou (southern mountain population) and one for mule deer. For caribou, the route traverses the following herd ranges (from east to

west): Quintette, Hart Ranges and Telkwa. The Quintette and Telkwa herds are blue-listed in BC and designated as threatened on Schedule 1 of the *Species at Risk Act*. The Hart Ranges herd is red-listed in BC and designated as threatened on Schedule 1 of the *Species at Risk Act*. The Hart Ranges herd has a population of 560 animals based on the last census in 2010. In 2008, the Telkwa and Quintette herds had estimated populations of 73 and 195 animals, respectively.

The conceptual corridor traverses (or is close to) one Important Bird Area (IBA) - the Fraser Lake IBA. The conceptual corridor also traverses the Canadian Intermountain Region, an area recognized for its ecological diversity.

7.3 HUMAN ENVIRONMENT SETTING

The proposed Coastal GasLink conceptual corridor crosses the Northeast and Northwest regional districts of BC.

Located to the east of the Rocky Mountains, BC's Northeast Region is characterized by its relatively small population in the context of BC, a growing energy industry and land that is the home of many Treaty 8 First Nations. The Northeast Region is the smallest region in terms of labour force population and accounted for 1.6% of BC's total employment in 2010. The main economic activities in the region include energy, agriculture, forestry, mining and tourism (BC Ministry Jobs, Tourism and Skills Training, 2012a).

The Northwest Region covers the northwest corner of the province and includes two development regions: North Coast and Nechako. Goods industries (i.e., manufacturing, forestry, fishing, mining, quarrying and oil and gas) employ about 28% of the region's workforce. The main economic activities in the North Coast include fishing, forestry, energy, transportation and tourism, while in Nechako, forestry, agriculture, mining and tourism figure prominently (BC Ministry Jobs, Tourism and Skills Training, 2012b).

As of July 2012, the Project has identified the following communities along or near the conceptual corridor:

- Peace River Regional District and the following municipalities:
 - District of Chetwynd
 - City of Dawson Creek
 - City of Fort St. John
 - District of Tumbler Ridge
 - District of Hudson's Hope
- Regional District of Fraser-Fort George and the following municipalities:
 - District of Mackenzie

- City of Prince George
- Regional District of Bulkley-Nechako and the following municipalities:
 - Village of Burns Lake
 - Village of Fraser Lake
 - District of Fort St. James
 - District of Houston
 - District of Vanderhoof
 - Town of Smithers
- Regional District of Kitimat-Stikine and the following municipalities:
 - District of Kitimat
 - City of Terrace

Environmental assessment will include the collection and analysis of baseline socio-economic information in the Project area of influence. This work will examine community characteristics, such as demographics, economic activity and capacity, infrastructure, culture and employment resources. Through engagement with key stakeholders, including social service providers, public safety officials and economic planners in the project area, potential project effects will be discussed and appropriate mitigation measures will be developed for the construction and operations phases of the Project.

In addition, a regional and national macroeconomic model, using established Statistics Canada input-output parameters, will be used to forecast the Project's economic benefits, including gross domestic product, employment (indirect and induced) and labour income. The result of the socio-economic data gathering and analysis will enable the Project to discuss with government and other stakeholders the details of the various plans to enhance project effects.

7.3.1 Land Ownership

Most of the conceptual corridor traverses provincial Crown lands, but about 11% of the corridor crosses private (freehold) lands, including several land parcels held under title to the Haisla Land Trust in the City of Kitimat. The conceptual corridor does not cross any federally owned or administered land. Carrying out the Project is not expected to cause any change to the environment on federal lands, in a province other than BC or outside of Canada.

7.3.2 Land Use

The area crossed by the conceptual corridor supports a variety of activities on private and Crown land. These include:

- forestry

- agriculture and grazing
- mineral and coal exploration and development
- oil and gas
- trapping
- hunting and guide outfitting
- tourism

The conceptual corridor crosses areas subject to Land and Resource Management Plans (LRMP), including Dawson Creek, Vanderhoof, Prince George, Lakes District, Morice and Kalum, and Sustainable Resource Management Plans (SRMP), including Kalum South, Lakes South and Lakes North.

The corridor is also located within the General, Enhanced, Special and Settlement/Agriculture Resource Management Zones (RMZ) of the Dawson Creek Land and Resource Management Plan (LRMP) (BC ILMB 1999). The General RMZ is managed with specific strategies to integrate a wide array of resource values. The Enhanced RMZ is intended for development of resources, such as timber, minerals, and oil and gas, while minimizing impact on other resource values. The Special RMZ supports conservation of one or more resource values, such as habitat, scenery and recreation, while still enabling resource development activities. The Settlement/Agriculture RMZ manages Crown lands consistently with the historical pattern of settlement and agriculture (primarily private lands). The Dawson Creek LRMP supports opportunities for oil and gas transportation.

Near Kitimat, the conceptual corridor traverses the Lakelse River Special Resources Management Zone (SRMZ) Subzone 1 of the Kalum South SRMP under the Kalum LRMP (BC ILMB 2002). This area is an important resource to a variety of interests and values. It is the management intent of the Kalum LRMP to maintain the natural integrity of this highly productive and unique river. The management of the Lakelse River Corridor SRM zone has a conservation orientation but also integrates other resource uses and activities. Management focuses on maintaining fish and wildlife habitat, and a quality angling and recreation experience.

Forestry

Forestry is the dominant industry between Prince George and Kitimat. The mountain pine beetle situation has altered current timber harvest volumes, employment levels and future harvest patterns. The conceptual corridor crosses forested lands in five forest districts including the Peace, Prince George, Vanderhoof, Nadina and Kalum Forest Districts.

Agriculture

The conceptual corridor crosses agricultural lands, predominantly from Groundbirch to Chetwynd. Agricultural crop production and grazing activities occur on both private and Crown land. The route traverses approximately 92.5 km of ALR lands in

four main areas, including near Groundbirch, Fraser Lake, Vanderhoof and south of Houston.

Mineral and Coal Exploration and Development

The mining industry is active in the Peace Regional District. The Peace River coalfield contains an estimated coal resource of 160 billion tons of coal. The coalfield extends for 400 km in northeastern BC, and includes the area around Chetwynd. The corridor crosses a number of coal tenures south of Chetwynd and is located 4 km east of an open pit coal mine (Brule Mine Project), located approximately 40 km south of Chetwynd. The conceptual corridor also traverses mineral tenures at various points along the route near Prince George, Fraser Lake, Houston, and Kitimat.

Oil and Gas

In the Peace Regional District, the predominant industries are mining and oil and gas extraction. Oil and gas exploration and development activities and infrastructure are prevalent in the portion of the Project in northeast BC. These activities include:

- seismic exploration
- pipelines and related facilities
- well sites
- gas processing plants
- access roads

Protected Areas and Recreation Areas

The protected areas and recreation values add to the tourism industry in northern BC and the general Project area. The conceptual corridor does not cross the boundaries of any provincial parks, conservancies, ecological reserves or recreational areas. However, the Burnie River Protected Area is within the area crossed by the conceptual corridor; however, at this time it is uncertain whether the pipeline or any related disturbance would be located within the Protected Area.

Known recreation areas are located in the general vicinity of the conceptual corridor. Outdoor recreational activities, such as hunting, hiking and snowmobiling, are expected to occur throughout the area. Recreational fishing occurs on many watercourses and lakes.

Reserves Defined Under the Indian Act

The conceptual corridor route does not cross any Indian Reserves, as defined under the *Indian Act*; however, it is in the vicinity of more than 70 Indian Reserves and crosses the traditional territories of numerous First Nations. Section 5.1 includes a preliminary list of Aboriginal communities identified as having potential interest in the Project.

7.4 HERITAGE RESOURCES

Heritage Resources are non-renewable resources managed under the *BC Heritage Conservation Act*, and the BC Archaeological Impact Assessment Guidelines. Heritage sites are locations that have significance and cultural value for BC.

Aboriginal interests are also taken into consideration in the management of heritage resources. These resources are important and of value to the scientific, cultural and public communities. In BC, archaeological sites predating 1846 AD are administered by the Archaeology Branch as specified in the BC Archaeological Resource Management Handbook. The BC MFLNRO is responsible for structures and sites of historical age (post-1846). However, post-1846 Aboriginal heritage sites are recognized in the *BC Environmental Assessment Act* and may be protected under the *Heritage Conservation Act* under agreement with Aboriginal groups. The conceptual corridor crosses several archaeologically recognized cultural areas that are characterized by regional adaptations to local environments spanning the last 12,000 years. Although many portions along the conceptual corridor have not been investigated for cultural remains, regional information is available for estimating the nature and time of past land occupation. An Archaeological Impact Assessment (AIA) will be conducted for all areas that might be disturbed during construction of the Project. Areas of moderate and high archaeological potential will be identified, surveyed and assessed.

7.5 TRADITIONAL ECOLOGICAL KNOWLEDGE AND TRADITIONAL LAND USE

Coastal GasLink has initiated an engagement process with potentially affected Aboriginal communities in BC (see Section 5.0). Based on the outcome of this initial engagement process, Coastal GasLink will provide opportunities for Aboriginal communities to participate in collecting traditional ecological knowledge and traditional land use studies for the Project. Such studies will focus on the current use of land for traditional purposes in the study areas identified by the Aboriginal community and will collect knowledge regarding the significance of the sites identified during fieldwork. Coastal GasLink is hopeful that these studies will identify the potential for:

- effects on traditional activities that could be caused by pipeline construction
- effects on heritage and culturally important sites
- effects on species (e.g., caribou) important to traditional hunting activities
- increased access to land

8.0 POTENTIAL PROJECT EFFECTS

The following provides a brief overview of key physical, biological and socio-economic potential effects, as they are currently understood, that may arise from construction and operation of the Project. These issues, and others that are identified through further study and engagement, will be addressed in the environmental assessment.

Valued components (VCs) are specific attributes within the broader categories of environmental, health, heritage, economic and social matters that may be affected by the proposed Project. They are generally selected having regard to their importance to people and ecosystems, and the potential for the proposed Project to interact with them. The selected VCs and associated indicators provide useful categories on which to evaluate potential impacts of the proposed Project and inform the baseline data collection and analysis.

VCs to be considered in the preparation of an application for an environmental assessment certificate will be approved by the EAO, having regard to the requirements of the BC *Environmental Assessment Act* to assess for potentially significant adverse environmental, health, heritage, economic and social effects.

In developing its proposed VCs for consideration and approval by the EAO, Coastal GasLink will use information and views obtained through engagement and consultation with Aboriginal groups, government agencies, local government, stakeholders and the public, as well as land use plans, species recovery plans, VCs used in similar projects, information gathered through route reconnaissance and preliminary assessment, and other relevant information. Coastal GasLink will also ensure that the process and rationale for selecting the VCs is documented in its application for an environmental assessment certificate.

8.1 PHYSICAL, BIOLOGICAL AND SOCIO-ECONOMIC

8.1.1 Aquatic Species and Habitat

The potential effects of the pipeline construction on aquatic species and habitat are well known and understood. These potential effects may arise through construction of watercourse crossings or through erosion, and include the deposition of sediment into watercourses, temporary disturbance of species present at crossings and potential disturbance to fish habitat. Mitigation of these effects will be addressed through a variety of techniques, including erosion and sedimentation control methods and pipeline watercourse crossing techniques that are well known and well documented to address these environmental concerns. These mitigation measures will be tailored to specific locations, approved by regulatory authorities where required, and described in the environmental assessment and environmental protection plans.

8.1.2 Atmospheric Environment – Air Quality

The Project has the potential to interact with the atmospheric environment. Specifically, the construction and operation of a pipeline and compressor stations will result in emissions to the atmosphere.

Construction of the pipeline and associated facilities will require the use of a variety of equipment that burns relatively small amounts of hydrocarbon fuels (e.g., gasoline, diesel and natural gas), resulting in emissions of combustion by-products, including criteria air contaminants (CACs), such as nitrogen oxides (NO_x), sulphur dioxide (SO₂), carbon monoxide (CO) and greenhouse gases (GHGs). However, construction activities are expected to be short-term and transient in nature, and environmental effects will be minimized through the use of environmental protection practices that are known to effectively mitigate potential effects on the receiving environment. Therefore, CAC emissions for construction will not be evaluated quantitatively. Federal regulatory guidance requires that construction-related GHG emissions be estimated for the Project. Therefore, calculated GHG emissions will be compared to relevant provincial and national totals.

Air emissions from the compressor stations during the Operations Phase of the Project are associated with combustion of natural gas in the turbines and may also include combustion by-products for other intermittent sources, such as generators. It is expected that the primary substances of concern for the Operations Phase of the Project will be NO_x, particulate matter (PM_{2.5}) and CO. Emissions of these substances will be estimated and dispersion modelling will be conducted for each compressor station in accordance with regulatory guidance. Dispersion modelling results will be compared to relevant Ambient Air Quality Objectives. Greenhouse gas emissions for each compressor station will also be estimated and compared to relevant provincial and national totals.

8.1.3 Terrestrial Ecosystems, Vegetation and Wildlife

The Project has the potential to affect terrestrial ecosystems as defined through soils, vegetation and wildlife along the route (see Section 7).

The surface disturbance caused by pipeline construction has the potential to result in soil erosion, which will be addressed through soil handling measures to avoid soil loss or transport and maintain soil capability.

Issues include limited loss of forest cover and the potential to create conditions favourable for invasive species. Vegetation species and community distribution along the route will be described in terms of diversity, relative abundance, the presence of species at risk or of special concern and the presence of merchantable timber. Mitigation measures and plans will be formulated to minimize disturbance to vegetation species and communities and address current issues with the merchantable timber resources, such as pine beetle infestation. A site-specific reclamation plan will

be developed to re-vegetate the right-of-way and will include seed mixes and weed-control measures. The goal of the mitigation measures is to minimize the residual effects of the Project on vegetation along the route.

The greatest potential for adverse effects on wildlife and wildlife habitat occurs as a result of construction activities creating potential changes in mortality risk, sensory disturbance levels and habitat availability. Information on wildlife present, which includes the species listed in Section 7.2.8, and wildlife habitat along the route will be collected to identify and assess the effects of the Project on wildlife. The focus of field programs will be species at risk and species of management concern and their habitats. Through the identification of wildlife habitat types, location, suitability, structure, relative use and abundance, as well as sensitive periods during species life stages, measures will be developed to avoid or mitigate potentially adverse effects. Project activities, such as clearing for construction, have the potential to adversely affect migratory birds and their nests. The Project expects to identify measures to avoid or mitigate the potential for adverse effects on migratory birds and their nests, including scheduling certain activities outside the breeding window, to the extent practical.

8.1.4 Land Use and Socio-Economic and Socio-Community Conditions

The conceptual corridor crosses private land and Crown land. Primary land uses in the general Project vicinity are forestry, agriculture, grazing, tourism, hunting, recreation, mineral exploration and development, and rural residential.

The environmental assessment will document current as well as planned land use activities in the corridor. Information will be gathered from regional and local planning documents, as well as relevant LRMP and SRMP documents. Meetings will be held with municipal, regional and provincial government representatives, Crown tenure holders, First Nations, Aboriginal groups and stakeholders to confirm and add to the socio-economic information base compiled for the Project.

Potential land use issues will be identified and mitigation measures developed to avoid project-related effects.

A range of socio-economic effects, both positive and negative, could emerge in the context of the Project. Socio-economic issues span a variety of factors that affect the way people work and live, including economic benefits, housing, access to services, recreation, and land and resource use. Potential effects can be driven by a range of factors, including Project design and policies, individual decisions and values, as well as broader social and economic trends, many of which are inherently dynamic and beyond the scope and control of the Project.

Understanding Project economic, social and health effects are underlying components of the EA, and key aspects of the Project's responsibility to the people residing in the vicinity of the pipeline and facilities that Coastal GasLink will construct and operate.

A general overview of potential economic, social, and health effects is provided below.

Economic

A wide range of economic benefits will emerge in relation to the Project, including employment, gross domestic product, labour income, and government revenues, as well as the enhancement of workforce and business capacity. The Project will create significant short-term employment and contracting opportunities during planning and construction, and a limited number of long-term jobs during Project operations. The Project will also provide fair bidding opportunities for local contracting work.

Development of the pipeline will contribute to continued development of the province's natural gas resources; this in turn creates significant jobs and royalty revenue for the provincial government, which helps pay for social services. Important additional benefits include community investments that will be made through the life of the Project and significant ongoing property taxes paid to regional districts.

Social

Generally, the employment and income effects of projects can lead to positive social outcomes, such as increased living standards, enhanced skills and economic choices, and improvements in quality of life. However, there is often a correlation between the construction phase of major projects, the presence of increased income and workers, and an increase in certain types of social issues affecting family and community well-being.

A side-effect of the rapid pace of development in northern BC is an inadequate amount of housing in some communities, combined with a general strain on the infrastructure (notably roads) of municipalities and regional districts.

Health

The Project may have a range of implications for use and capacity of health services in northern BC during construction. Health and medical care will need to be provided to the large number of workers during the construction period, as well as to operations and maintenance employees in the longer term. The anticipated rise in population during construction, due to direct Project workers, may cause pressure on the capacity of existing health care infrastructure and services.

8.1.5 Visual Landscape and Recreational Resources

Both passive and active recreational landscapes and facilities will be identified within the conceptual corridor. Additionally, key areas of concern identified through the consultation process will be considered in the visual impact assessment process. Available information databases, including the Province of British Columbia visual inventory, will be reviewed.

8.1.6 Aboriginal Communities' Traditional Use, Knowledge and Wisdom

Section 5 describes the Aboriginal communities whose traditional territory is crossed by the conceptual corridor that is being considered by the Coastal GasLink Project.

Coastal GasLink expects to work with directly affected Aboriginal communities to prepare Traditional Use Studies (TUS) for their respective traditional territories. In some cases, these Aboriginal communities will have already prepared such documentation.

While these data and information may be considered confidential by the Aboriginal communities and, therefore, not included in the environmental assessment, the information will be used in the development of mitigation plans and environmental protection plans as governed by agreements between Coastal GasLink and the Aboriginal parties.

8.2 HERITAGE AND ARCHAEOLOGICAL RESOURCES

As part of the environmental assessment, an Archaeological Overview Assessment (AOA) will be undertaken with the involvement of affected Aboriginal communities and under permit to the Heritage Conservation Branch. An Archaeological Impact Assessment (AIA) will be undertaken at sites identified in the AOA.

The results of the archaeological assessment will be used to develop effective protection measures for heritage resource values through mitigation and avoidance techniques.

The anticipated key issues associated with the Project regarding heritage resources include direct and indirect impacts on archaeological sites, paleontological sites and historical sites. Areas of particular interest at this time include areas of high or moderate archaeological potential identified by resource proximity and access, traditional, ethnographic, and historical land use characteristics, and known archaeological site proximity.

All identified sites will be mapped, photographed, recorded, and the sites' relationship to the proposed development's impact zone determined. Based on the results of the initial testing stage, recommendations regarding the mitigation options will be reviewed with affected Aboriginal communities and provided to the appropriate regulatory authority.

8.3 PUBLIC HEALTH EFFECTS

The construction of the Project will result in short-term increases in noise levels, air emissions from construction equipment operation, and dust from vehicle use of access

roads and the pipeline ROW. Operation of the compressor stations will result in noise and air emissions but will be within applicable regulatory requirements.

The environmental assessment will identify water wells and licensed points of diversion. Where necessary, mitigation measures will be implemented to avoid effects on this water infrastructure.

The environmental assessment will undertake noise and air quality assessments and modelling to understand the potential effects of the Project on air quality and the acoustic environment, and to ensure that appropriate mitigation is undertaken to avoid or reduce those potential effects.

8.4 ACCIDENTS AND MALFUNCTIONS

The potential effects of accidents and malfunctions that may occur during the construction and operation of the Project will be considered in the environmental assessment. This assessment will include the potential effects on the biophysical and the human environment leading to the development of effective management and mitigation measures and programs. These measures and programs will be appropriately linked into plans maintained by other affected local agencies (e.g., emergency response plans).

8.5 POTENTIAL CUMULATIVE EFFECTS

A Cumulative Effects Assessment (CEA) will be undertaken for the Project. The CEA will evaluate the residual environmental and socio-economic effects directly associated with the Project, in combination with the likely residual effects arising from other projects and activities that have been or will be carried out in the Project study areas. The other projects and activities to be included in the CEA will be identified as the environmental assessment progresses.

Detailed methodology and rationale used to determine if the proposed Project is expected to have significant adverse cumulative effects and how the other projects will be identified will be provided in Coastal GasLink's application for an environmental assessment certificate. The environmental assessment and the cumulative effects assessment will be informed by:

- approved land use plans that designate the most appropriate activities on the land base
- baseline studies and historical data that factor in the effects of past development and set out the current conditions
- potential overlapping impacts due to present developments

- predicted effects from future developments that are sufficiently certain to proceed

9.0 CONCLUSION

Coastal GasLink is pleased to submit this Project Description to initiate the approval process for this project, which is significant for both British Columbia and Canada. This Project will provide economic benefits to British Columbia and Canada, and in particular to the communities near which it will be located. Coastal GasLink is committed to meaningful relationships with the Aboriginal communities, landowners, municipalities and stakeholders along the Project route to ensure that their interests are taken into account in Project planning. Throughout the Project lifecycle, Coastal GasLink will carry out its activities in a manner that is respectful of the environment.

10.0 REFERENCES

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APPENDIX A

TransCanada Policies

Stakeholder Engagement Commitment Statement

At TransCanada, our reputation matters. We recognize that excellence in stakeholder engagement helps deliver value and ensures we do so in a socially and environmentally responsible manner.

Our four core values of Integrity, Collaboration, Responsibility and Innovation are at the heart of our commitment to stakeholder engagement. These values guide us in our interactions with our stakeholders.

TransCanada generally defines stakeholders as those people or groups who significantly affect, or who may be affected by, our business activities.

We strive to engage stakeholders early and often. Engaging with stakeholders means listening, providing accurate information, and responding to stakeholder interests in a prompt and consistent manner. TransCanada uses two-way communication processes with stakeholders to assist us in reaching better quality business decisions.

The following principles are used as a filter to test and align engagement activities:

- We identify and consider the perspectives of our stakeholders
- We are visible, present and approachable in the community
- We recognize that diverse thoughts, opinions and experiences contribute to better decisions and outcomes
- We take ownership and accountability for our decisions and outcomes
- We track, measure and publicly report on our performance to learn and improve



Dean Cowling,
Vice-President
Community, Safety
& Environment



Don Wishart,
Executive Vice-President
Operations & Major Projects



Russ Girling,
President and CEO

Health, Safety and Environment Commitment

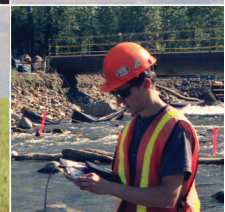
GUIDING PRINCIPLE

The executive leadership team, management and employees at TransCanada are committed to being an industry leader in health, safety and environmental practices, to maintaining a safe and healthy workplace and to protecting environmental quality. We believe excellence in Health, Safety and Environment practices is vital to the well being of all people everywhere and essential to all aspects of our global business.

The following principles will guide and measure our corporate goals and objectives in Health, Safety and Environment:

- We conduct our business so it meets or exceeds all applicable laws and regulations and minimizes risk to our employees, the public and the environment;
- We are committed to continuously improving our Health, Safety and Environment performance;
- We will continually promote employee safety on and off the job;
- We believe all occupational injuries and illnesses are preventable;
- We will respect the diverse environments and cultures in which we operate;
- We will endeavor to do business with companies and contractors which share our expectations for Health, Safety and Environment performance and commitment and we will regularly assess their performance;
- We will use our influence with companies in which we have partial ownership, to meet the Health, Safety and Environment Commitment of TransCanada, and
- We support open communication between TransCanada, the public, the scientific community and policy makers and public interest groups who research, develop and implement standards for Health, Safety and Environmental protection.

As endorsed by TransCanada's Operations Committee.



At TransCanada, we believe all employees are responsible and accountable for Health, Safety and Environment Performance.





ABORIGINAL RELATIONS

TransCanada — COMMITTED TO BEING A GOOD NEIGHBOUR AND TO BUILDING AND MAINTAINING POSITIVE RELATIONSHIPS

TransCanada believes the road to success is supported by cultural exchange and understanding. Traditional land use studies are an important element to our project development process and TransCanada is committed to identifying and preserving important natural and cultural landscapes near our facilities and proposed developments.

For more details:

To reach our **Community, Safety and Environment** department directly, please email us at:
cs_e@transcanada.com

For general information, please call:

1.800.661.3805

Or visit our website at:

www.transcanada.com





OUR APPROACH

Communication — Engagement — Commitment

We recognize the diversity and uniqueness of each community, the significance of the land and traditions, and the importance of building relationships based on mutual respect and trust.

Collaborating with Aboriginal communities

To support safe, healthy and vibrant communities we invest in cultural, educational and environmental initiatives.

Creating an inclusive and supportive working environment

Our Aboriginal human resources strategy supports an inclusive and supportive work environment for our employees.

Our Aboriginal contracting strategy supports opportunities for Aboriginal businesses to engage in our ongoing operations and development of new projects.

We truly appreciate and value the experience and knowledge of our employees and contractors and recognize the enormous contributions made by each individual.

Investing in education

TransCanada has been a long-time contributor

to many educational initiatives. The company awards hundreds of thousands of dollars through scholarships, bursaries, material contributions and in-kind donations to students and educational organizations across the country.

Through these initiatives, we can help support the increasing number of Aboriginal professionals and trades people entering and preparing for tomorrow's workforce, contributing to an outcome beneficial to both the energy and resource industry and the Aboriginal communities.

We are proud of our long-standing commitment to education and will continue to enhance and find new ways of furthering our support.

Awareness

To support TransCanada's employee understanding of Aboriginal history and culture, and the role Aboriginal people play in Canada and in our business, we continue to offer ongoing training programs specifically for our employees and contractors.

The future

TransCanada will continue to review and adapt our Aboriginal Relations Policy, programs and initiatives to meet the changing needs of our business and the Aboriginal communities.

ABORIGINAL RELATIONS POLICY

TransCanada constructs and operates our facilities near many Aboriginal communities across Canada.

TransCanada believes by developing positive, long-term relationships with the Aboriginal communities whose lives may be impacted by our activities, we can conduct our business while respecting the community interests.

TransCanada's Aboriginal Relations Policy must be flexible to address the legal, social and economic realities of Aboriginal communities across Canada.

The following principles guide this policy:

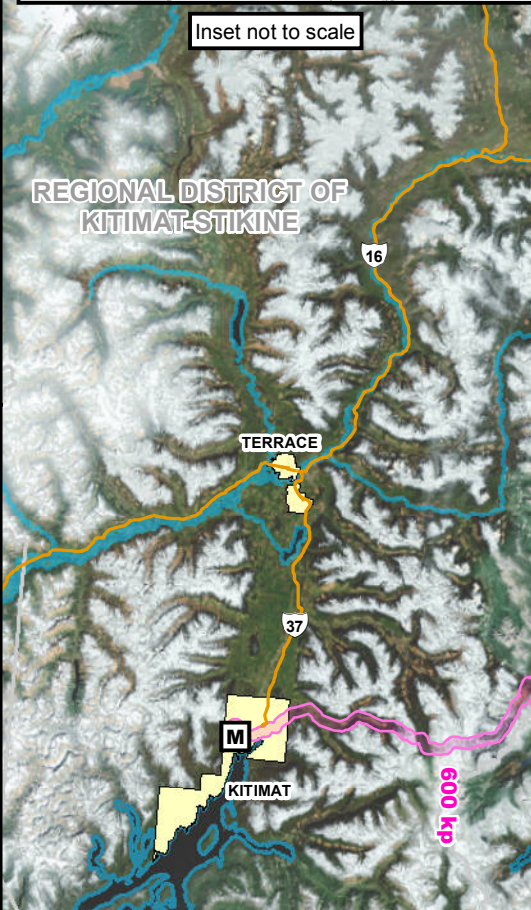
- TransCanada respects the diversity of Aboriginal cultures, recognizes the importance of the land and cultivates relationships based on trust and respect;
- TransCanada works together with Aboriginal communities to identify impacts of company activities on the community's values and needs in order to find mutually acceptable solutions and benefits;
- TransCanada strives to create short and long-term employment opportunities for Aboriginal people impacted by our activities;
- TransCanada supports learning opportunities for Aboriginal people to provide a well-trained source of Aboriginal employees and to build capacity within Aboriginal communities;
- TransCanada respects the legal and Constitutional rights of Aboriginal peoples and recognizes that its relationships with Aboriginal peoples are separate and different from that of the Crown.

All TransCanada employees have a responsibility to help build and maintain relationships with the Aboriginal communities we do business with.



APPENDIX B

Maps of the Conceptual Corridor



Legend

- kp** Kilometer Post (approximate)
- Conceptual Corridor**
- Road - Highway**
- City / Town**
- Potential Future Compressor Station Design Option 1**
- Potential Future Compressor Station Design Option 2**
- Proposed Location of Compressor Station**
- Proposed Location of Gas Dew Point Control Facility**
- Proposed Location of Natural Gas Liquid Injection Facility**
- Proposed Location of Meter Station**
- River / Creek**
- Lake**
- Regional District**

Note: Data sets sourced on this map are defined in the CGP Data Matrix

REVISION	DESCRIPTION
0	Issued, September, 26, 2012
1	Revise conceptual corridor - Lone Prairie, October, 29, 2012

1:1,500,000

Coastal GasLink Pipeline Project

Project Description Key Plan

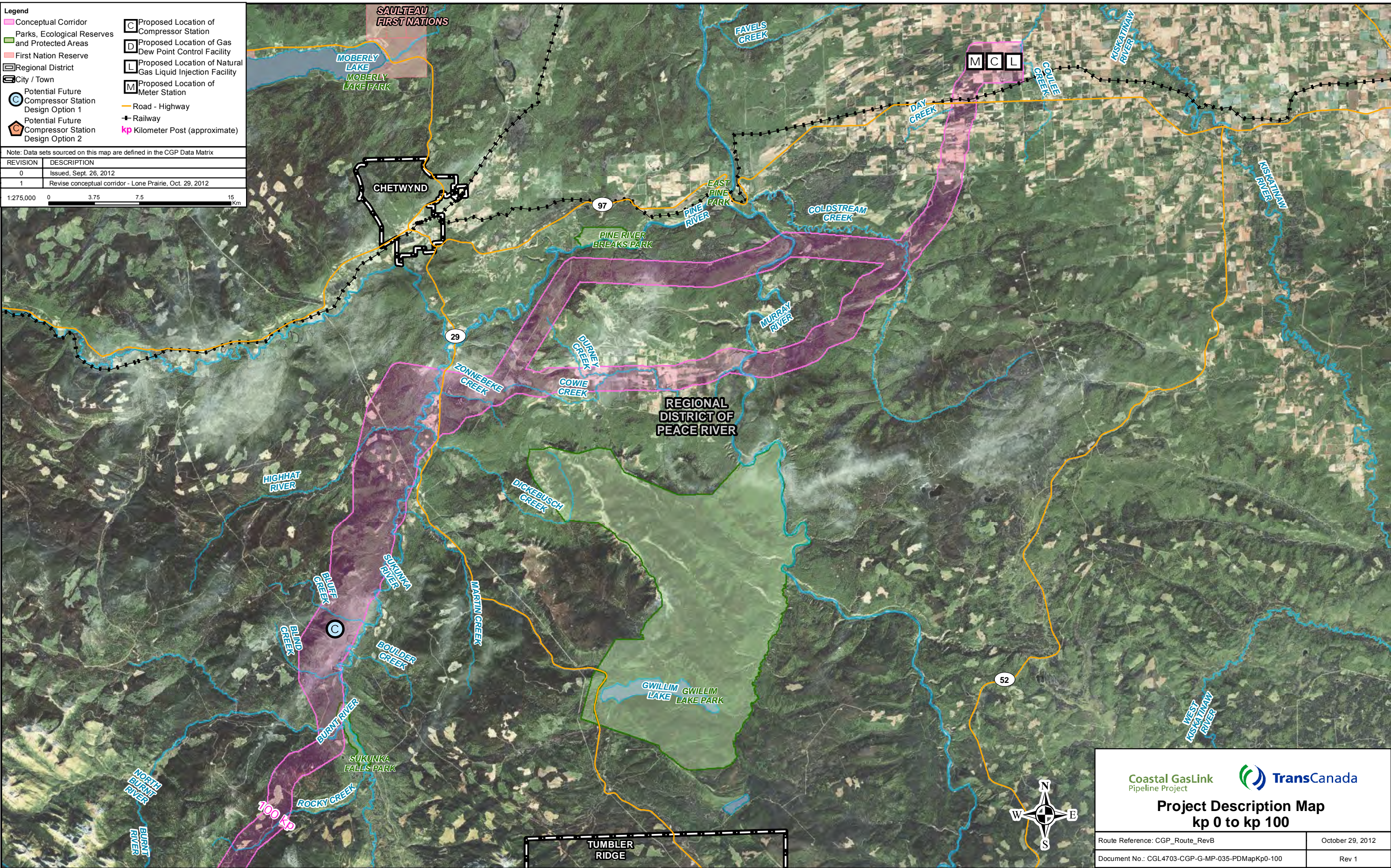
Route Reference: CGP_Route_RevB	October 29, 2012
Document No.: CGL4703-CGP-G-MP-034-PDKeyPlan	Rev 1

- Legend**
- Conceptual Corridor
 - Parks, Ecological Reserves and Protected Areas
 - First Nation Reserve
 - Regional District
 - City / Town
 - Potential Future Compressor Station Design Option 1
 - Potential Future Compressor Station Design Option 2
 - C Proposed Location of Compressor Station
 - D Proposed Location of Gas Dew Point Control Facility
 - L Proposed Location of Natural Gas Liquid Injection Facility
 - M Proposed Location of Meter Station
 - Road - Highway
 - Railway
 - Kilometer Post (approximate)

Note: Data sets sourced on this map are defined in the CGP Data Matrix

REVISION	DESCRIPTION
0	Issued, Sept. 26, 2012
1	Revise conceptual corridor - Lone Prairie, Oct. 29, 2012

1:275,000 0 3.75 7.5 15 Km



Coastal GasLink
Pipeline Project

Project Description Map
kp 0 to kp 100

Route Reference: CGP_Route_RevB

October 29, 2012

Document No.: CGL4703-CGP-G-MP-035-PDMapKp0-100

Rev 1

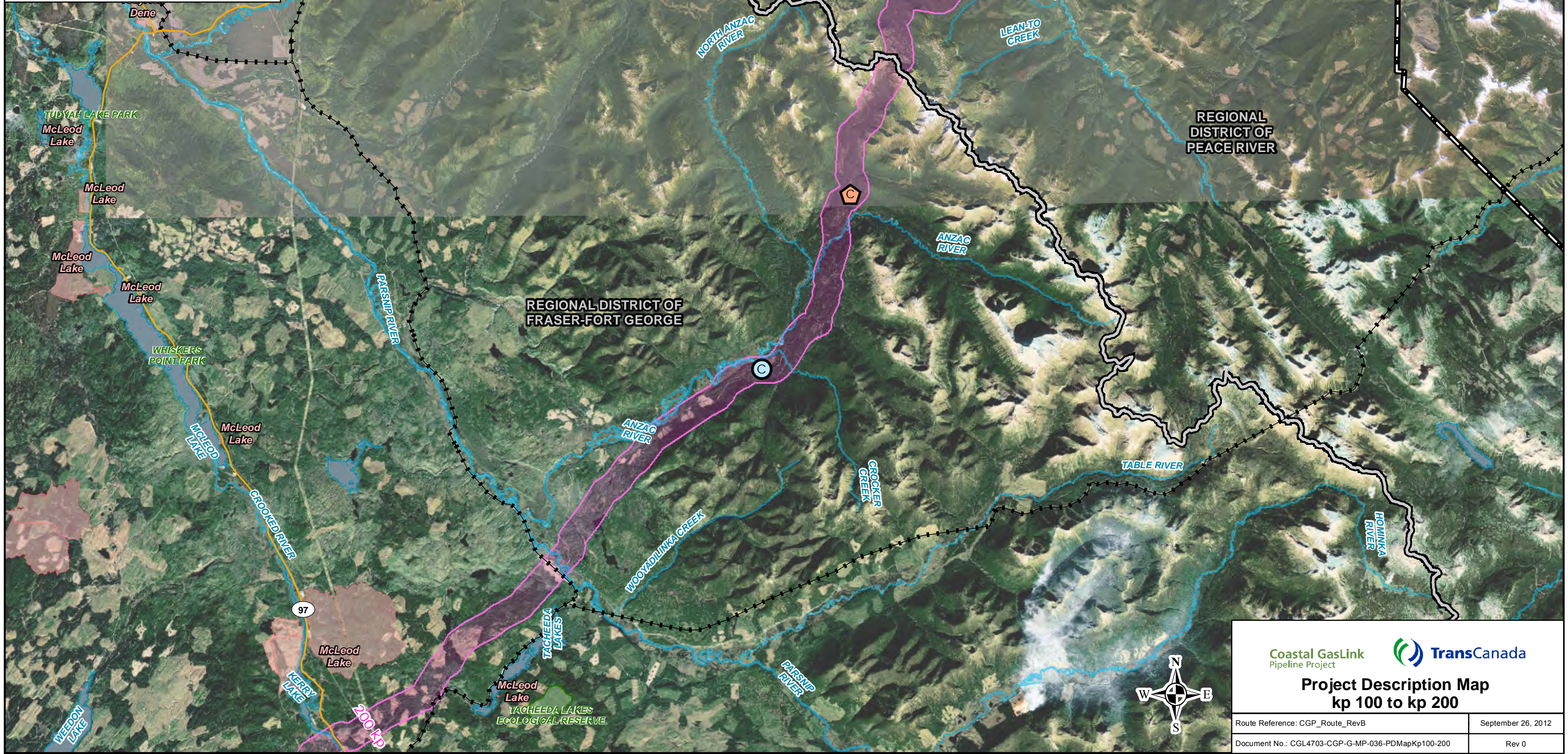
Legend

- Conceptual Corridor
- Parks, Ecological Reserves and Protected Areas
- First Nation Reserve
- Regional District
- City / Town
- Potential Future Compressor Station Design Option 1
- Potential Future Compressor Station Design Option 2
- Proposed Location of Compressor Station
- Proposed Location of Gas Dew Point Control Facility
- Proposed Location of Natural Gas Liquid Injection Facility
- Proposed Location of Meter Station
- Road - Highway
- Railway
- Kilometer Post (approximate)

Note: Data sets sourced on this map are defined in the CGP Data Matrix

REVISION	DESCRIPTION
0	Issued, Sept. 26, 2012

1:275,000 0 3.75 7.5 15 Km



Coastal GasLink
Pipeline Project

Project Description Map kp 100 to kp 200

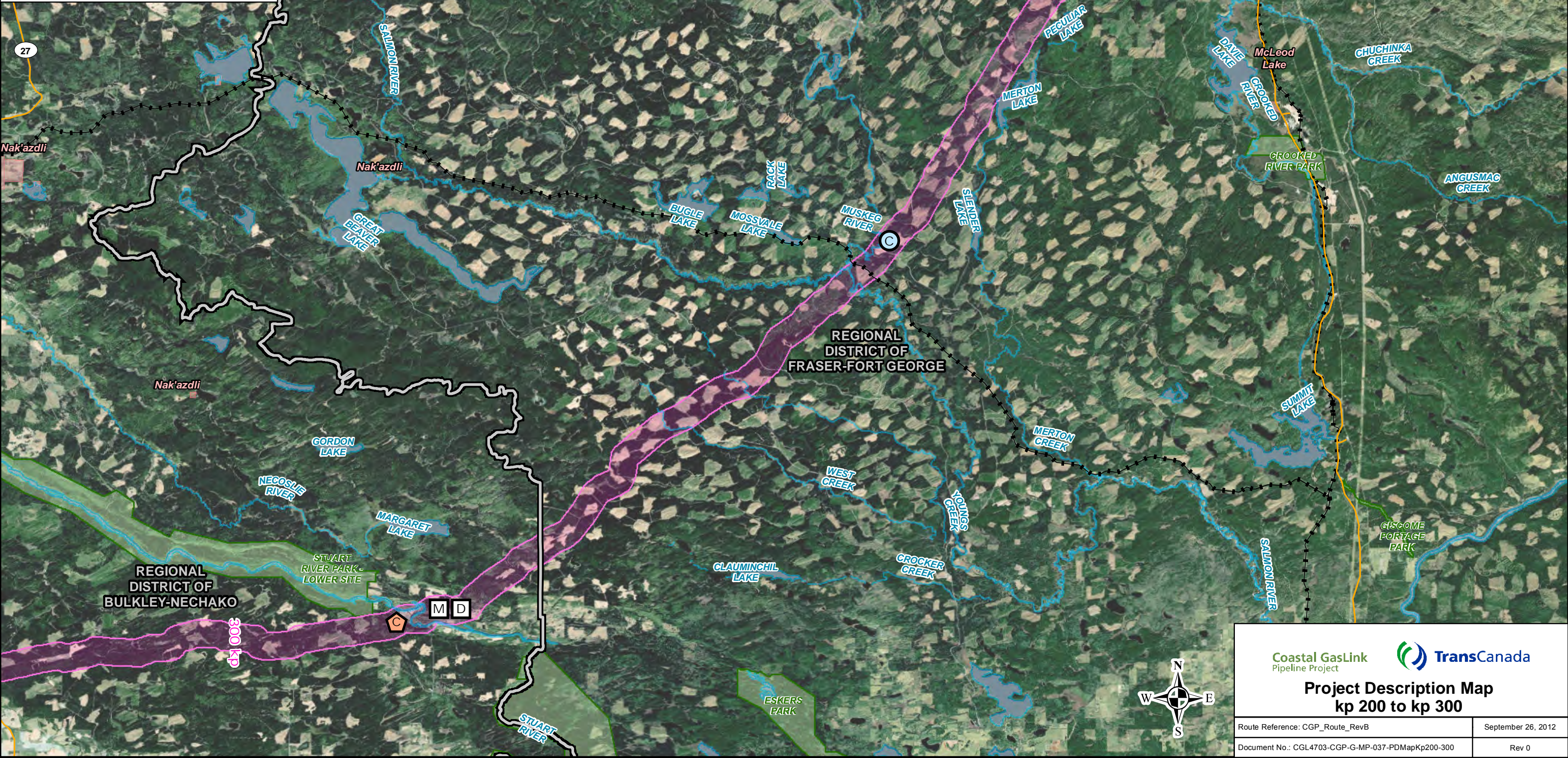
Route Reference: CGP_Route_RevB	September 26, 2012
Document No.: CGL4703-CGP-G-MP-036-PDMapKp100-200	Rev 0

- Legend**
- Conceptual Corridor
 - Parks, Ecological Reserves and Protected Areas
 - First Nation Reserve
 - Regional District
 - City / Town
 - Potential Future Compressor Station Design Option 1
 - Potential Future Compressor Station Design Option 2
 - Proposed Location of Compressor Station
 - Proposed Location of Gas Dew Point Control Facility
 - Proposed Location of Natural Gas Liquid Injection Facility
 - Proposed Location of Meter Station
 - Road - Highway
 - Railway
 - Kilometer Post (approximate)

Note: Data sets sourced on this map are defined in the CGP Data Matrix

REVISION	DESCRIPTION
0	Issued, Sept. 26, 2012

1:275,000 0 3.75 7.5 15 Km



Coastal GasLink
Pipeline Project

Project Description Map kp 200 to kp 300

Route Reference: CGP_Route_RevB	September 26, 2012
Document No.: CGL4703-CGP-G-MP-037-PDMapKp200-300	Rev 0

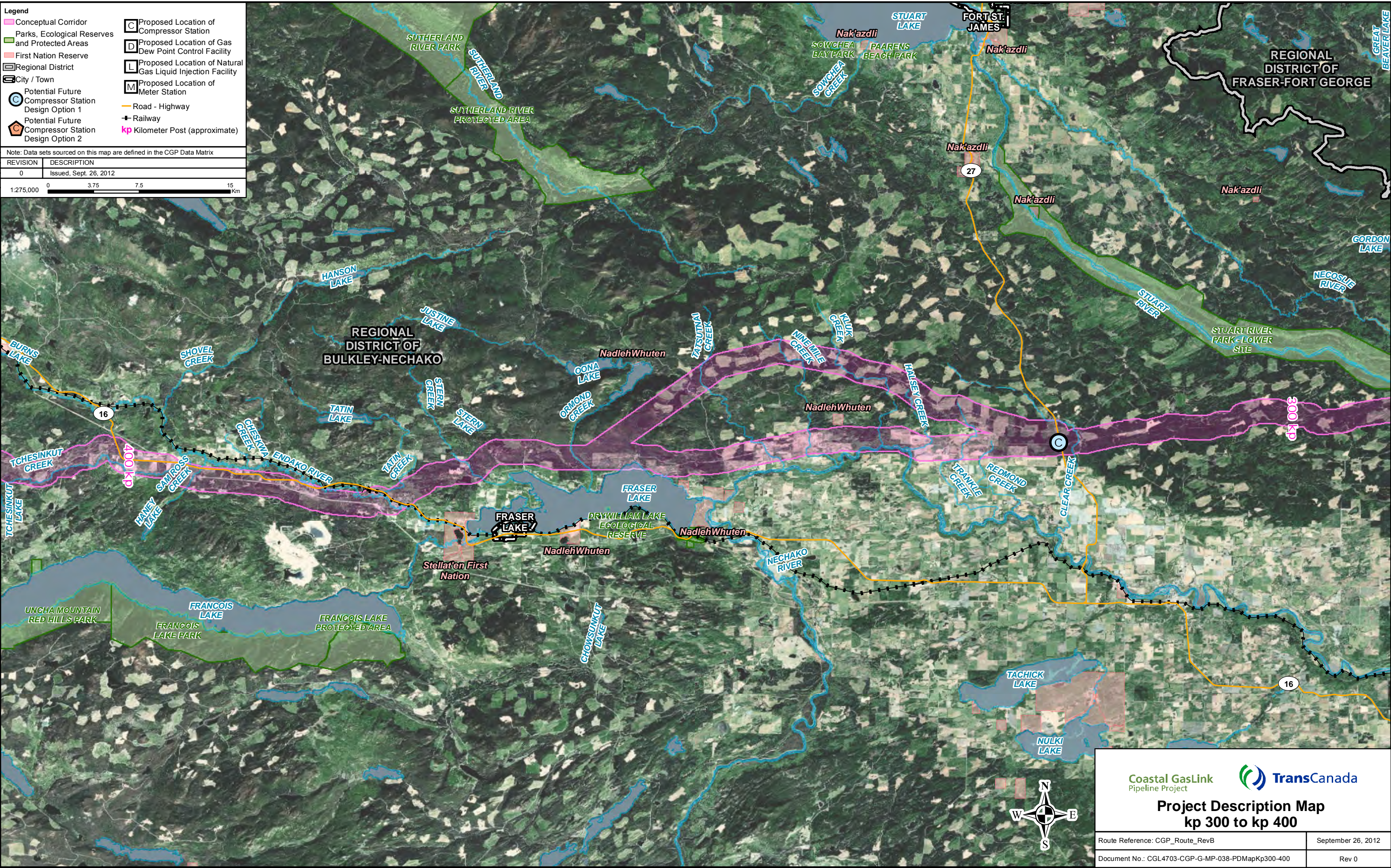
Legend

- Conceptual Corridor
- Parks, Ecological Reserves and Protected Areas
- First Nation Reserve
- Regional District
- City / Town
- Potential Future Compressor Station Design Option 1
- Potential Future Compressor Station Design Option 2
- Proposed Location of Compressor Station
- Proposed Location of Gas Dew Point Control Facility
- Proposed Location of Natural Gas Liquid Injection Facility
- Proposed Location of Meter Station
- Road - Highway
- Railway
- Kilometer Post (approximate)

Note: Data sets sourced on this map are defined in the CGP Data Matrix

REVISION	DESCRIPTION
0	Issued, Sept. 26, 2012

1:275,000 0 3.75 7.5 15 Km



Coastal GasLink Pipeline Project

**Project Description Map
kp 300 to kp 400**

Route Reference: CGP_Route_RevB	September 26, 2012
Document No.: CGL4703-CGP-G-MP-038-PDMapKp300-400	Rev 0

Legend

- Conceptual Corridor
- Parks, Ecological Reserves and Protected Areas
- First Nation Reserve
- Regional District
- City / Town
- Potential Future Compressor Station Design Option 1
- Potential Future Compressor Station Design Option 2
- Proposed Location of Compressor Station
- Proposed Location of Gas Dew Point Control Facility
- Proposed Location of Natural Gas Liquid Injection Facility
- Proposed Location of Meter Station
- Road - Highway
- +— Railway
- kp Kilometer Post (approximate)

Note: Data sets sourced on this map are defined in the CGP Data Matrix

REVISION	DESCRIPTION
0	Issued, Sept. 26, 2012

1:275,000 0 3.75 7.5 15 Km



Coastal GasLink
Pipeline Project

Project Description Map kp 400 to kp 500

Route Reference: CGP_Route_RevB	September 26, 2012
Document No.: CGL4703-CGP-G-MP-039-PDMapKp400-500	Rev 0

Legend

- Conceptual Corridor
- Parks, Ecological Reserves and Protected Areas
- First Nation Reserve
- Regional District
- City / Town
- Potential Future Compressor Station Design Option 1
- Potential Future Compressor Station Design Option 2
- Proposed Location of Compressor Station
- Proposed Location of Gas Dew Point Control Facility
- Proposed Location of Natural Gas Liquid Injection Facility
- Proposed Location of Meter Station
- Road - Highway
- Railway
- Kilometer Post (approximate)

Note: Data sets sourced on this map are defined in the CGP Data Matrix

REVISION	DESCRIPTION
0	Issued, Sept. 26, 2012

1:275,000 0 3.75 7.5 15 Km



Coastal GasLink Pipeline Project

Project Description Map
kp 500 to kp 600

Route Reference: CGP_Route_RevB	September 26, 2012
Document No.: CGL4703-CGP-G-MP-040-PDMapKp500-600	Rev 0

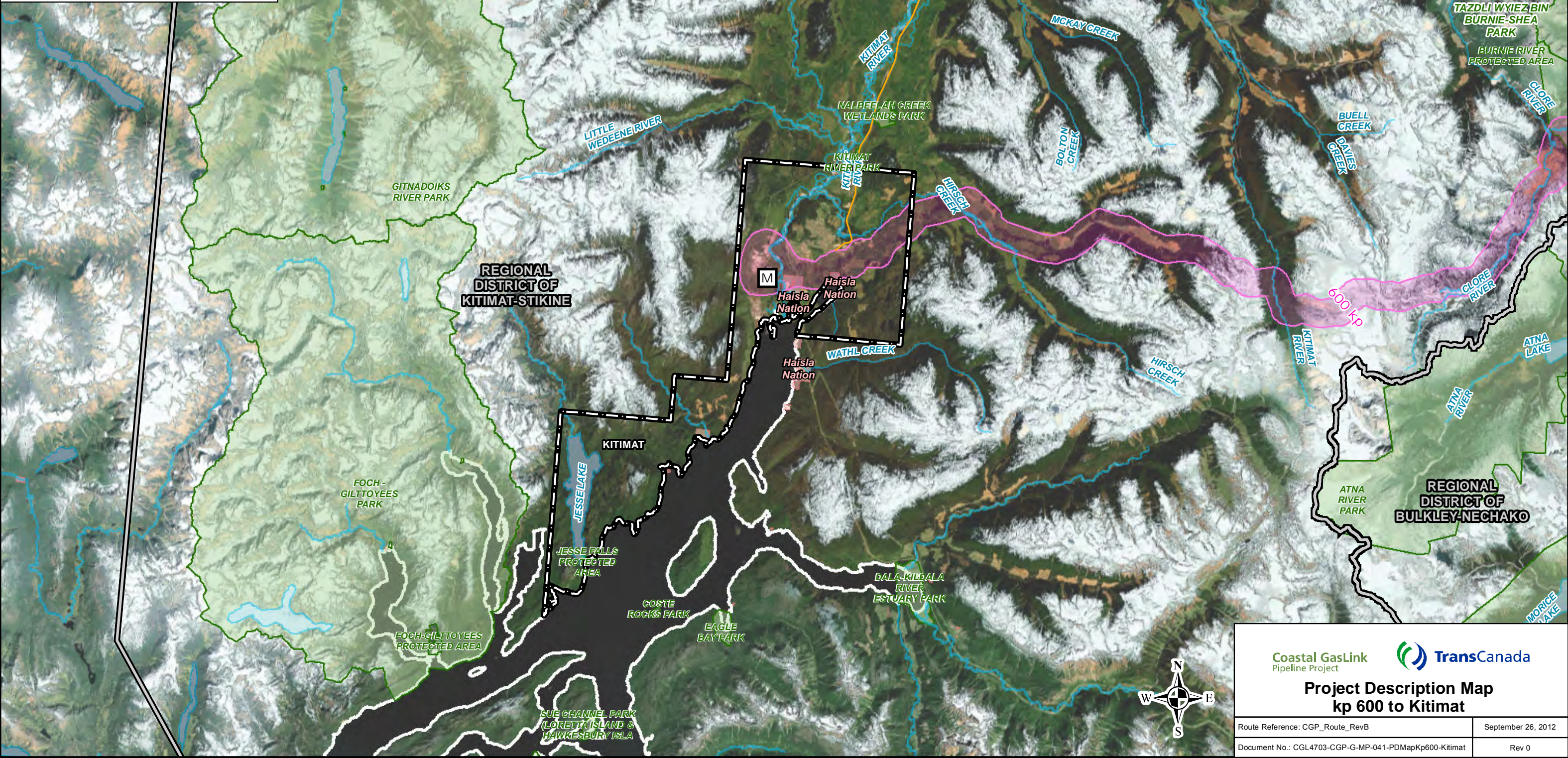
Legend

- Conceptual Corridor
- Parks, Ecological Reserves and Protected Areas
- First Nation Reserve
- Regional District
- City / Town
- Potential Future Compressor Station Design Option 1
- Potential Future Compressor Station Design Option 2
- Proposed Location of Compressor Station
- Proposed Location of Gas Dew Point Control Facility
- Proposed Location of Natural Gas Liquid Injection Facility
- Proposed Location of Meter Station
- Road - Highway
- Railway
- Kilometer Post (approximate)

Note: Data sets sourced on this map are defined in the CGP Data Matrix

REVISION	DESCRIPTION
0	Issued, Sept. 26, 2012

1:275,000 0 3.75 7.5 15 Km



Coastal GasLink Pipeline Project

Project Description Map
kp 600 to Kitimat

Route Reference: CGP_Route_RevB	September 26, 2012
Document No.: CGL4703-CGP-G-MP-041-PDMapKp600-Kitimat	Rev 0

APPENDIX C

Major Watercourse Crossings

Table C-1: Major Watercourse Crossings

Major Watershed	Secondary Watershed	Watercourse Name	Stream Class	Likely Fish Species Present
Peace	Pine River	Sheep Creek	S3/S2	Expected to be fish bearing
Peace	Pine River	Coldstream Creek	S1	Expected to be fish bearing
Peace	Pine River	Murray River	S1	Burbot, Brassy Minnow, Brook Stickleback, Bull Trout, Slimy Sculpin, Dolly Varden, Finescale Dace, Arctic Grayling, Longnose Dace, Longnose Sucker, Mountain Whitefish, Northern Pike, Redside Shiner
Peace	Pine River	Cowie Creek	S3/S2	Expected to be fish bearing
Peace	Pine River	Zonnebeke Creek	S3/S2	Expected to be fish bearing
Peace	Pine River	Dickebusch Creek	S3/S2	Expected to be fish bearing
Peace	Pine River	Sukunka River	S1	Bull Trout, Slimy Sculpin, Dolly Varden, Arctic Grayling, Longnose Sucker, Mountain Whitefish, Northern Pike, Rainbow Trout
Peace	Pine River	Bluff Creek	S3/S2	Expected to be fish bearing
Peace	Pine River	Blind Creek	S3/S2	Expected to be fish bearing
Peace	Pine River	Burnt River	S1	Bull Trout, Slimy Sculpin, Dolly Varden, Arctic Grayling, Longnose Sucker, Mountain Whitefish, Rainbow Trout
Peace	Pine River	Rocky Creek	S1	Expected to be fish bearing
Peace	Parsnip River	Anzac River	S1	Burbot, Prickly Sculpin, Slimy Sculpin, Longnose Sucker, Dolly Varden, Arctic Grayling, Largescale Sucker, Lake Whitefish, Mountain Whitefish, Rainbow Trout
Peace	Parsnip River	Crocker Creek	S2/S1	Expected to be fish bearing
Peace	Parsnip River	Parsnip River	S1	Burbot, Bull Trout, Prickly Sculpin, Slimy Sculpin, Largescale Sucker, Dolly Varden, Arctic Grayling, Kokanee, Longnose Dace, Longnose Sucker, Lake Whitefish, Mountain Whitefish, Northern Pikeminnow, Peamouth Chub, Rainbow Trout, Redside Shiner, White Sucker
Peace	Peace River	Redrocky Creek	S2/S1	Expected to be fish bearing
Peace	Peace River	Crooked River	S1	Prickly Sculpin, Largescale Sucker, Dolly Varden, Longnose Sucker, Lake Whitefish, Mountain Whitefish, Northern Pikeminnow, Peamouth Chub, Rainbow Trout
Fraser	Fraser River	Salmon River	S1	Burbot, Brassy Minnow, Prickly Sculpin, Chinook Salmon, Dolly Varden, Kokanee, Leopard Dace, Mountain Whitefish, Northern Pikeminnow, Pink Salmon, Rainbow Trout, Redside Shiner
Fraser	Fraser River	Youngs Creek	S3/S2	Expected to be fish bearing
Fraser	Fraser River	West Creek	S3/S2	Expected to be fish bearing
Fraser	Stuart River	Chinohchey Creek	S2	Expected to be fish bearing
Fraser	Stuart River	Gravel Creek	S3/S2	Expected to be fish bearing

Major Watershed	Secondary Watershed	Watercourse Name	Stream Class	Likely Fish Species Present
Fraser	Stuart River	Stuart River	S1	Burbot, Bridgelip Sucker, Chinook Salmon, Coho Salmon, Largescale Sucker, Dolly Varden, Kokanee, Longnose Dace, Longnose Sucker, Northern Pikeminnow, Peamouth Chub, Rainbow Trout, Redside Shiner, Sockeye Salmon, Whitefish (General), White Sturgeon
Fraser	Stuart River	Breadalbane Creek	S3	Expected to be fish bearing
Fraser	Nechako River	Clear Creek	S3	Expected to be fish bearing
Fraser	Nechako River	Redmond Creek	S3/S2	Expected to be fish bearing
Fraser	Nechako River	Trankle Creek	S3	Expected to be fish bearing
Fraser	Nechako River	Halsey Creek	S3	Expected to be fish bearing
Fraser	Nechako River	Kluk Creek	S2	Expected to be fish bearing
Fraser	Nechako River	Nine Mile Creek	S2	Expected to be fish bearing
Fraser	Nechako River	Tatsutnai Creek	S2	Expected to be fish bearing
Fraser	Nechako River	Ormond Creek	S2	Expected to be fish bearing
Fraser	Nechako River	Stern Creek	S2	Expected to be fish bearing
Fraser	Nechako River	Endako River	S1	Burbot, Prickly Sculpin, Chinook Salmon, Kokanee, Leopard Dace, Lake Chub, Longnose Dace, Longnose Sucker, Mountain Whitefish, Northern Pikeminnow, Rainbow Trout, Redside Shiner, Sockeye Salmon
Fraser	Nechako River	Sam Ross Creek	S3	Expected to be fish bearing
Fraser	Nechako River	Tchesinkut Creek	S2	Expected to be fish bearing
Fraser	Nechako River	Tchesinkut Creek	S2	Expected to be fish bearing
Fraser	Nechako River	Allin Creek	S2	Expected to be fish bearing
Fraser	Nechako River	Parrott Creek	S2	Expected to be fish bearing
Skeena	Bulkley River	Owen Creek	S2	Expected to be fish bearing
Skeena	Bulkley River	Fenton Creek	S2	Expected to be fish bearing
Skeena	Bulkley River	Lamprey Creek	S2	Expected to be fish bearing
Skeena	Bulkley River	Cedric Creek	S3	Expected to be fish bearing

Major Watershed	Secondary Watershed	Watercourse Name	Stream Class	Likely Fish Species Present
Skeena	Bulkley River	Morice River	S1	Bull Trout, Chinook Salmon, Chum Salmon, Coho Salmon, Cutthroat Trout, Dolly Varden, Lamprey, Longnose Dace, Longnose Sucker, Mountain Whitefish, Northern Pikeminnow, Pink Salmon, Pygmy Whitefish, Rainbow Trout, Sockeye Salmon, Steelhead
Skeena	Bulkley River	Gosnell Creek	S1	Expected to be fish bearing
Skeena	Zymoetz River	Clore River	S1	Burbot, Chinook Salmon, Coho Salmon, Cutthroat Trout, Dolly Varden, Kokanee, Mountain Whitefish, Rainbow Trout, Steelhead
Kitimat	North Coast Rivers	Kitimat River	S1	Cutthroat Trout, Coastrange Sculpin, Prickly Sculpin, Chinook Salmon, Chum Salmon, Coho Salmon, Cutthroat Trout, Dolly Varden, Eulachon, Kokanee, Pink Salmon, Pacific Lamprey, Sockeye Salmon, Staghorn Sculpin, Steelhead, Threespine Stickleback
Kitimat	North Coast Rivers	Hirsch Creek	S1	Expected to be fish bearing
Kitimat	North Coast Rivers	Pine Creek	S3	Expected to be fish bearing

APPENDIX D

Concordance with the BC Environmental Assessment Office Guidance
for a Project Description

**Table D-1: Concordance with the
BC Environmental Assessment Office Guidance for a Project Description**

BC EAO Guidance	Section of CGL PD
Proponent Information	
<ul style="list-style-type: none"> The proponent's name and the representative managing the project. Contact information, including a mailing address, phone and fax numbers, and email addresses. Corporate information, including a website address, particulars of company incorporation, and partners' names (if applicable). 	1.0
General Background Information	
<ul style="list-style-type: none"> The type and size of the project, with specific reference to the thresholds set out in the Reviewable Projects Regulation. 	1.0 and 4.0
<ul style="list-style-type: none"> Project purpose and rationale 	2.0
<ul style="list-style-type: none"> Estimated capital cost. 	2.0
<ul style="list-style-type: none"> Number of construction jobs (in person years) and operating jobs (actual number). 	2.0
<ul style="list-style-type: none"> Location (latitude and longitude). 	4.0
Project Overview	
<ul style="list-style-type: none"> A brief description of the major on-site and off-site project components, including options if the final site selections are not yet available. 	4.0
<ul style="list-style-type: none"> A conceptual site plan and map(s) at sufficient scale to allow for clear location of all major components of the project (proponents may wish to include photographs if these would be helpful to understanding the nature and location of the proposed project). 	Appendix B
<ul style="list-style-type: none"> The project's duration, including decommissioning if appropriate. 	4.0
<ul style="list-style-type: none"> The project's potential environmental, economic, social, heritage and health effects (in general terms). 	8.0
Land Use Setting	
<ul style="list-style-type: none"> A general description of existing land use in the vicinity of the project site. Whether the project and its components are situated on private or Crown land. Information about First Nations interests where asserted claims to rights or title are known. 	7.0
Proposed Development Schedule	
<ul style="list-style-type: none"> A tentative schedule for submitting an application for an environmental assessment certificate and developing the project (should a certificate be issued). 	4.0
Consultation Activities	
<ul style="list-style-type: none"> A summary of consultation activities that have been carried out with First Nations, the public and local governments. 	5.0 and 6.0
Required Permits	
<ul style="list-style-type: none"> A list of required permits, if known. 	1.0

APPENDIX E

Concordance with the Federal *Prescribed Information for the Description of a Designated Project Regulation*

**Table E-1: Concordance with
Canadian Environmental Assessment Agency Guidance for a Project Description**

CEAA Guidance	Section of CGL PD
General Information	
1. The project's name, nature and proposed location.	1.0, 2.0
2. The proponent's name and contact information and the name and contact information of their primary representative for the purpose of the description of the project.	1.0
3. A description of and the results of any consultations undertaken with any jurisdictions and other parties including Aboriginal peoples and the public.	5.0 and 6.0
4. Other relevant information, including (a) the environmental assessment and regulatory requirements of other jurisdictions; and (b) information concerning any environmental study that is being or has been conducted of the region where the project is to be carried out.	1.0 and 7.0
Project Location Information	
5. A description of the project's context and objectives.	10 and 2.0
6. The provisions in the schedule to the Regulations Designating Physical Activities describing the project in whole or in part.	
7. A description of the physical works that are related to the project including their purpose, size and capacity.	2.0 and 4.0
8. The anticipated production capacity of the project and a description of the production processes to be used, the associated infrastructure and any permanent or temporary structures.	2.0 and 4.0
9. A description of all activities to be performed in relation to the project.	
10. A description of any solid, liquid, gaseous or hazardous waste that is likely to be generated during any phase of the project and of plans to manage those wastes.	
11. A description of the anticipated phases of and the schedule for the project's construction, operation, decommissioning and abandonment.	4.0
Project Location Information	
12. A description of the project's location, including (a) its geographic coordinates; (b) site maps produced at an appropriate scale in order to determine the project's overall location and the spatial relationship of the project components; (c) the legal description of land to be used for the project, including the title, deed or document and any authorization relating to a water lot; (d) the project's proximity to any permanent, seasonal or temporary residences; (e) the project's proximity to reserves, traditional territories as well as lands and resources currently used for traditional purposes by Aboriginal peoples; and (f) the project's proximity to any federal lands.	4.0 and 7.0 Appendix B
Federal Involvement	
13. A description of any financial support that federal authorities are, or may be, providing to the project.	3.0
14. A description of any federal land that may be used for the purpose of carrying out the project.	7.0

Table E-1: Concordance with Canadian Environmental Assessment Agency Guidance for a Project Description (cont'd)

CEAA Guidance	Section of CGL PD
15. Any federal legislative or regulatory requirements that may be applicable including a list of permits, licences or other authorizations that may be required in order to carry out the project.	1.0
Environmental Effects	
16. A description of the physical and biological setting. 17. A description of any changes that may be caused, as a result of carrying out the project, to <ul style="list-style-type: none"> (a) fish as defined in section 2 of the Fisheries Act and fish habitat as defined in subsection 34(1) of that Act; (b) aquatic species, as defined in subsection 2(1) of the Species at Risk Act; and (c) migratory birds, as defined in subsection 2(1) of the Migratory Birds Convention Act, 1994. 18. A description of any changes to the environment that may occur, as a result of carrying out the project, on federal lands, in a province other than the province in which the project is proposed to be carried out or outside of Canada. 19. Information on the effects on Aboriginal peoples of any changes to the environment that may be caused as a result of carrying out the project, including effects on health and socio-economic conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes or on any structure, site or thing	7.0 and 8.0
Summary	
An executive summary of the information required under sections 1 to 19 in French and English	

APPENDIX F

Executive Summary – English Version



Coastal GasLink Pipeline Project

Executive Summary

CGL-4703-CGP-EN-RP-001

October 30, 2012

Rev 0

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EXECUTIVE SUMMARY

[English Version]

1.0 GENERAL INFORMATION

Coastal GasLink Pipeline Ltd. (Coastal GasLink) is proposing to construct and operate a natural gas pipeline from the area near the community of Groundbirch (approximately 40 km west of Dawson Creek, BC) to the proposed LNG Canada Development Inc. (LNG Canada) liquefied natural gas (LNG) export facility (LNG Canada export facility) near Kitimat, BC. The Coastal GasLink Pipeline Project (Project) involves the construction of approximately 650 km of 48 inch (NPS 48) (1,219 mm) diameter pipeline as well as the construction and operation of metering facilities at the receipt and delivery points, and one compressor station with provisions for up to an additional five compressor station sites to allow for future expansion. The Project will have an initial capacity of approximately 1.7 billion cubic feet (bcf)/day (48 million cubic metres (mmcm/d)) with the potential for expansion up to approximately 5 bcf/d (142 mmcm/d). The expansion scenarios do not involve the construction of any additional pipeline, only the number and locations of potential future compressor stations would change. Further detail regarding the potential for expansion is provided in Section 4.1.

2.0 PROPONENT CONTACT INFORMATION

Name of Designated Project	Coastal GasLink Pipeline Project
Name of Proponent	Coastal GasLink Pipeline Ltd. is a wholly owned subsidiary of TransCanada PipeLines Limited (TransCanada). Coastal GasLink Pipeline Ltd. is the general partner for the Coastal GasLink Pipeline East B.C. Limited Partnership and the Coastal GasLink Pipeline West B.C. Limited Partnership.
Address	Coastal GasLink Pipeline Project 450 – 1 st Street SW, Calgary, AB T2P 5H1
Telephone	(403) 920-7769
Fax	(403) 920-2442
Primary Contact	Karen Etherington Director, Environmental and Regulatory Permitting Email: karen_etherington@transcanada.com
Secondary Contact	Joel Forrest Director, Regulatory Law & Services Email: joel_forrest@transcanada.com
Lead Executive of Coastal GasLink	Rick Gateman President, Coastal GasLink Pipeline Ltd. Email: rick_gateman@transcanada.com

3.0 PROJECT OVERVIEW

Coastal GasLink is proposing to construct and operate an approximately 650 km natural gas pipeline from the area near the community of Groundbirch (approximately 40 km west of Dawson Creek, BC) to the proposed LNG Canada export facility near Kitimat, BC. The pipeline length was originally estimated at approximately 700 km; however, based on preliminary corridor reviews, the length is now estimated at approximately 650 km. The Project also includes the construction and operation of metering facilities at the receipt and delivery points and one compressor station, with provisions for up to an additional five compressor station sites to allow for future expansion. The Project may also involve the construction and operation of a natural gas liquid injection facility or a hydrocarbon dew point control facility (or both). In addition, temporary infrastructure will be required during construction, such as access roads, stockpile sites, borrow sites, contractor yards and construction camps. New electrical power lines and facilities may be required for certain facilities, but are expected to be constructed, owned and operated by third-party power providers. Refer to Section 4 for further details on the Project components.

At this stage, the route for the Project is a conceptual corridor (see Figure 3-1) that will be refined through continued technical, environmental and constructability assessments, as well as consideration of input from Aboriginal groups, landowners and stakeholders.

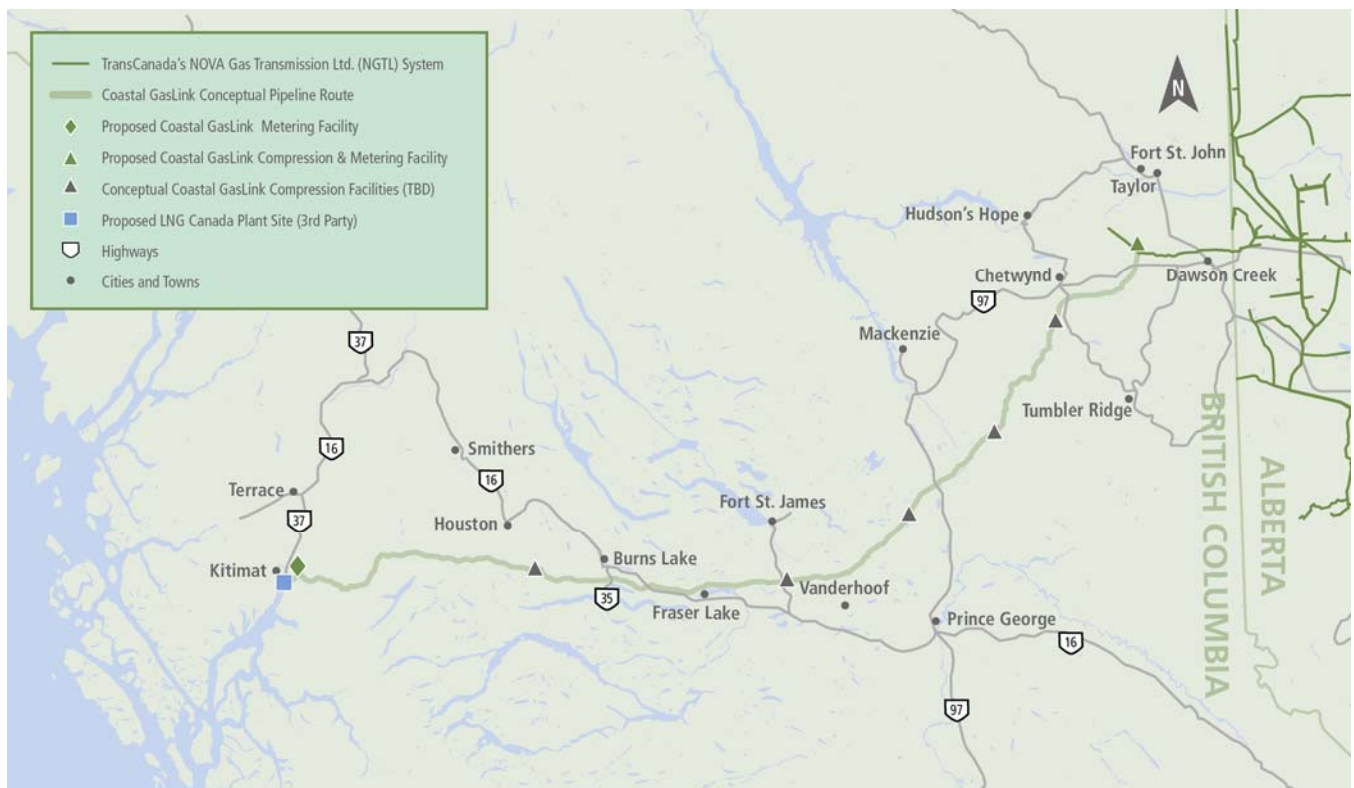


Figure 3-1: Coastal GasLink Conceptual Corridor

Project Purpose and Rationale

The purpose of the Project is to construct and operate a buried pipeline to transport natural gas from the area near the community of Groundbirch (approximately 40 km west of Dawson Creek, BC) to the proposed LNG Canada export facility near Kitimat, BC. The pipeline may also be used to transport additional volumes if subscribed through the NOVA Gas Transmission Ltd. (NGTL) open season process to be held in early 2013. The pipeline will connect natural gas producing areas in northeast BC with the proposed LNG Canada export facility at Kitimat that will allow for access to new natural gas markets. In addition, the Project will have an interconnection with the existing NGTL System at Groundbirch, which will provide access to other western Canadian natural gas supply.

The Project is expected to be in operation for more than 30 years.

3.1 Regulatory Framework

The Project is wholly located within the province of BC and involves the construction of more than 40 km of pipeline that is greater than 323.9 mm in diameter. Accordingly, pursuant to Table 8, section 4 of the *Reviewable Projects Regulation*, an Environmental Assessment Certificate pursuant to the British Columbia *Environmental Assessment Act* will be required. A project description is required to initiate the provincial environmental assessment process.

Pursuant to section 14 of the Schedule to the federal *Regulations Designating Physical Activities*, a project involving the construction, operation, decommissioning and abandonment of a gas pipeline more than 75 km in length of new right-of-way (ROW) is a designated project. As the Project meets this criteria, it is a designated project and is therefore subject to the provisions of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). Under CEAA 2012, a project description is required to initiate the screening process through which the Canadian Environmental Assessment Agency (CEAA) will determine whether a federal environmental assessment is required.

This document is intended to satisfy both the provincial and federal requirements for a project description, initiating the environmental assessment process under both the BC *Environmental Assessment Act* and CEAA 2012. Coastal GasLink expects that if an assessment is required under CEAA 2012, the federal and provincial assessment processes would be harmonized pursuant to the *Canada-British Columbia Agreement on Environmental Assessment Cooperation* (2004).

Coastal GasLink will also require for the Project a permit to construct and operate a pipeline pursuant to section 25 of the BC *Oil and Gas Activities Act* (OGAA). The pipeline will not be providing utility service. Accordingly, no toll or tariff approvals will be sought from the British Columbia Utilities Commission.

In addition to the authorizations described above, the following permits, licences, approvals and authorizations might be required. The permits and authorizations have been grouped according to the phase of the project during which they will be required.

Field Programs

- Various permits and authorizations under the BC OGAA, as issued by the BC Oil and Gas Commission (BC OGC), including but not limited to:
 - an approval under the BC *Water Act* for work “in and about a stream”
 - a Licence of Occupation under the BC *Land Act*
 - an approval under the BC *Forests Act* for timber harvesting and disposal on Crown land
- An approval under Section 14 of the BC *Heritage Conservation Act* for a Heritage Inspection Permit
- Fish Research Licence and collection permits from the British Columbia Ministry of Forests, Lands and Natural Resource Operations (BC MFLNRO)

Construction

- Approval under Section 35(2) of the federal *Fisheries Act*
- Approval under Section 5(2) of the federal *Navigable Waters Protection Act*
- Various permits and authorizations under the BC OGAA, as issued by the BC Oil and Gas Commission (BC OGC), including but not limited to:
 - an approval under the BC *Water Act* for work “in and about a stream”
 - a Licence of Occupation under the BC *Land Act*
 - an approval under the BC *Forests Act* for timber harvesting and disposal on Crown land
- Various permits from municipal and provincial authorities pertaining to specific activities, such as burning and clearing.

3.2 Areas of Federal Interest

The Project as planned does not require federal financial support, nor does the Project require an interest in federal land.

The conceptual corridor crosses the claimed territories of more than 30 Aboriginal groups, which are listed in Section 7.0. The potential environmental effects of the Project may affect various aspects of the livelihood and use of traditional resources of Aboriginal people in the region. Potential effects on Aboriginal people will be

considered and mitigation developed through the Project's ongoing program of Aboriginal engagement and the integration of traditional ecological knowledge and the results of traditional land use studies into the environmental assessment.

3.2.1 Federal Authorizations

Federal authorizations may be required pursuant to the following legislation:

Fisheries Act

The Project may require authorization(s) pursuant to the *Fisheries Act* if Fisheries and Oceans Canada determines that the project may bring about a harmful alteration, disruption or destruction of fish habitat. The Project activities associated with the construction and operation may interact with fish and fish habitat.

Species at Risk Act

The Project may require authorization(s) pursuant to the *Species at Risk Act* if it is determined that the Project will affect a species listed on Schedule 1 of the Act, any part of its critical habitat or the residences of its individuals.

Migratory Birds Convention Act

The Project will comply with the requirements of the *Migratory Birds Convention Act*.

Navigable Waters Protection Act

The Project may require authorization(s) pursuant to the *Navigable Waters Protection Act*, if it is determined that the Project activities include works built in, on, over, under, through or across any navigable water that may interfere with navigation.

3.3 Regulatory Harmonization

Coastal GasLink expects that if an assessment is required under CEAA 2012, the federal and provincial assessment processes would be harmonized pursuant to the Canada-British Columbia Agreement on Environmental Assessment Cooperation (2004).

4.0 PROJECT OVERVIEW

This section provides a description of the Project components, the schedule and activities in the various phases of the Project.

4.1 Scope of the Project

The Project includes the facilities and activities associated with the construction, operation and maintenance of the Project, as well as foreseeable changes to the Project. Where relevant, the Project also includes the decommissioning, abandonment and reclamation of the pipeline and its associated facilities. The Project components are described as follows:

Pipeline

The approximately 650 km of NPS 48 (1,219 mm) diameter natural gas transmission pipeline will extend from the area near the community of Groundbirch (approximately 40 km west of Dawson Creek, BC) to the proposed LNG Canada export facility near Kitimat, BC. The Project commencement point and end point are in the general vicinity of the coordinates provided in Table 4-1.

Table 4-1: Project Location

Project Commencement Point	
Latitude/Longitude	55.4852/120.5018
Universal Transverse Mercator	Zone 10U East 635444 North 6187563
BC Oil and Gas Grid	SW1/4 Section 1, Township 79, Range 19 W6M
Project End Point	
Latitude/Longitude	54.029229/128.68809
Universal Transverse Mercator	Zone 9U East 520431.7386 North 5986818.7386
BC Oil and Gas Grid	D-36-B and C-35-B/103-I-2

Meter Stations

The meter stations involve the installation of metering runs, yard piping, isolation and control valves, electrical, control and telecommunication systems. Currently, the Project includes the installation of metering facilities at the receipt and delivery points.

Compressor Station(s)

The Project currently includes the installation of one compressor station comprised of two approximately 30 MW natural gas fired turbo-compressor packages in the Groundbirch area. Compressor stations will require all-season access from the nearest existing all-season road. The compressor station design also involves the installation of discharge gas coolers for each unit and other auxiliary equipment, including high pressure yard piping, isolation valves, electrical, control and telecommunication systems, storage facilities and offices.

Provisions are being considered for additional compressor stations to allow for potential future expansion. Additional volumes may be identified either through the expected phased expansion of the proposed LNG Canada facility or through a commercial open season expected to be held by NGTL early in 2013. One of the

potential expansion scenarios being considered would provide for an additional three compressor stations, while a second expansion scenario would involve the installation of five additional compressor stations. The potential need for an expansion and the preferred scenario for that expansion will be selected based on the additional volume of natural gas that the pipeline would need to transport. Once the volume of natural gas is better defined and further engineering design has been completed, one of the expansion scenarios will be selected. The expansion scenarios do not involve the construction of any additional pipeline; only the number and locations of potential future compressor stations would change.

Potential Natural Gas Liquid (NGL) Injection Facility

Coastal GasLink is considering the potential installation of a natural gas liquid injection facility at the commencement point of the Project to control gas heating value. If required, liquids for injection are expected to be transported by a third party via pipeline. The NGL injection facility would control gas heating value of the gas in the pipeline and involves the installation of liquid storage facilities, injection pumps, and other auxiliary equipment, such as valves, piping, metering, analyzers, and electrical, controls and telecommunication equipment within a planned compressor station yard. Emissions under normal operating conditions will be primarily made up of those associated with electrical power use and minor utility heating of buildings.

Potential Hydrocarbon Dew Point Control Facility

A hydrocarbon dew point control facility may be required at a point near Vanderhoof if volumes are delivered off the Coastal GasLink system, and if gas streams of differing compositions from different customers are combined at the receipt point. The facility would remove hydrocarbon liquids from the delivered gas stream to reflect the composition of gas originally provided at the receipt point. The hydrocarbon liquids that are removed would be re-injected into the Coastal GasLink system for transportation to Kitimat. Facility components may include heat exchangers, separators, pumps, valves and piping. Emissions under normal operating conditions would be primarily made up of those associated with electrical power use and minor utility heating of buildings. The need for this facility will be determined following the outcome of the NGTL open season.

Mainline Valves

Mainline valves will be installed at meter stations, compressor stations and at other locations along the route, as necessary to comply with Canadian Standards Association (CSA) Z662-11, to enable isolation of pipeline sections, and to facilitate system operations.

Supervisory Control and Data Acquisition (SCADA) System

The Project will include the installation and operation of a SCADA system, linking pipeline and compressor facilities to the existing TransCanada Operations Control

Centre (OCC) in Calgary, Alberta, which will allow for the remote monitoring of operational and measurement data.

In-Line Inspection Facilities

The Project will have facilities for launching and receiving in-line inspection tools. These tools allow for internal examination of the pipeline to monitor pipe integrity. The in-line inspection facilities are typically installed at compressor stations and at mainline valve sites. The facilities generally consist of valves, piping and launchers or receivers, depending on the location. The precise location of these facilities will be determined during detailed design.

Cathodic Protection

Cathodic protection is a common method used to protect the pipeline from electrochemical corrosion. A cathodic protection system, including anode beds, rectifiers and associated facilities, will be designed and installed for the pipeline and metering facilities.

Communication Links and Power Supply

The Project will include necessary communication links and power supply to service compressor stations, meter stations and other pipeline facilities. Coastal GasLink expects that power and communication needs will be met through existing sources.

Operations and Maintenance Activities

Throughout the operating life of the pipeline, various operations and maintenance activities are required to ensure safe operation of the pipeline and facilities. These activities include, but are not limited to:

- monitoring and surveillance using both ground based and aerial methods
- managing brush and vegetation
- conducting regular site visits to the pipeline and facilities
- ensuring pipeline maintenance programs are carried out
- maintaining signage

4.2 Project Schedule

Pending receipt of all necessary regulatory approvals, the proposed schedule for the Project is outlined in Table 4-2.

Table 4-2: Project Schedule

TransCanada announced the Project	June 5, 2012
Project Description filing to initiate Environmental Assessment	October 2012
Submission of Application for Environmental Assessment Certificate to BC Environmental Assessment Office	Early 2014
Submission of Environmental Impact Statement to Canadian Environmental Assessment Agency	Early 2014
BC OGC application	Initiate early 2014
Receipt of key regulatory approvals	Late 2014 to early 2015
Construction and commissioning	
Commence construction	Mid 2015
Pre-Construction (including camps, storage yards, clearing, access and ROW preparation)	Mid 2015 to mid 2017
Mainline construction (including pipeline, compressor stations and meter stations)	Mid 2016 to 2018
Commissioning	Late 2017 to mid 2018
In-Service	2018
Decommissioning and abandonment	End of useful life of pipeline (30+ years)

4.3 Project Activities

Subject to receipt of regulatory and Project approvals, construction of the Project is scheduled to commence in 2015, with completion of construction and an in-service date in 2018. Coastal GasLink proposes to commence pre-construction activities, including ROW clearing and preparation, in 2015. The current schedule provides for the operations and maintenance phase of the Project to commence once the Project is in service. Further description of the project activities is provided in the tables and sections below.

Pipeline construction involves several activities that occur sequentially at any one location. These include development of access where necessary, surveying, clearing, soil conservation and grading, drainage and sediment control, pipe stringing, bending and welding, trenching, lowering-in, backfilling, testing, cleanup and post-construction reclamation. The pipeline ROW will be divided into several construction spreads, meaning that there will be multiple construction crews carrying out construction activities in parallel at multiple locations along the construction ROW.

Construction of compressor and meter stations is expected to commence concurrent with pipeline construction. Site construction and equipment installation at the compressor and meter stations is expected to take several months.

In addition to the pipeline ROW and associated temporary workspace, lands will be required for staging and stockpile sites, equipment storage and possibly borrow pits (to supply fill material). Existing disturbed areas or areas already designated for such activities will be utilized wherever feasible.

Reclamation of disturbed areas will commence following construction and be completed after the Project is placed into service.

During the operations and maintenance phase, primary activities will include:

- continuously monitoring pipeline operations through TransCanada's Operations Control Centre (OCC)
- ensuring emergency response plans are appropriately linked into plans maintained by affected agencies
- informing the public of facility locations and operational activities through the Integrated Public Awareness program
- carrying out regular preventative maintenance programs.

It is difficult at this time to predict when or how the Project facilities will be decommissioned and abandoned at the end of the Project's useful life. The useful life of the Project is expected to be 30+ years. At the end of the life of the pipeline, Coastal GasLink will decommission, abandon and reclaim the pipeline and right-of-way having regard for the regulatory requirements at that time.

5.0 ENVIRONMENTAL SETTING AND POTENTIAL EFFECTS

5.1 Physical Environment

The conceptual pipeline corridor crosses four physiographic regions in BC:

- the Great Plains
- the North and Central Plateaus and Mountains
- the Interior Plateau dissected by major tributaries of the Fraser River (e.g., Thompson River)
- the Coast Mountains and Islands

Studies to be carried out during the Project design phase will collect information about potential geohazards and other unique terrain features that require specific

consideration in the design of the pipeline and the development of construction and reclamation techniques.

5.2 Atmospheric Environment

The Project has the potential to interact with the atmospheric environment. Specifically, the construction and operation of a pipeline and its associated compressor station will result in emissions to the atmosphere. Construction of the pipeline and associated facilities will require the use of a variety of equipment that burns relatively small amounts of hydrocarbon fuels (e.g., gasoline, diesel and natural gas), resulting in emissions of combustion by-products, including criteria air contaminants (CACs), such as nitrogen oxides (NO_x), sulphur dioxide (SO₂), carbon monoxide (CO) and greenhouse gases (GHGs). Construction activities are expected to be short-term and transient in nature.

Air emissions from the compressor stations during the Operations Phase of the Project are associated with combustion of natural gas in the turbines. These emissions during the Operations Phase of the Project will include NO_x, particulate matter (PM_{2.5}) and CO. Emissions of these substances will be estimated and dispersion modelling will be conducted for each compressor station in accordance with regulatory guidance. Dispersion modelling results will be compared to relevant Ambient Air Quality Objectives. Greenhouse gas emissions for each compressor station will also be estimated and compared to relevant provincial and national totals.

5.3 Acoustic Environment

Background noise levels in the Project area primarily result from the presence of highways, active Forest Service roads, and industrial activities. Much of the conceptual corridor is located in sparsely populated areas. Back-country noise levels are very low.

The construction of the Project will result in short-term increases in noise levels from construction equipment operation. Noise levels resulting from the operation of the compressor stations will be within applicable regulatory requirements.

5.4 Aquatic Species and Habitat

The conceptual corridor crosses approximately 320 watercourses through four major drainage basins, including the Peace River Drainage, Fraser River Drainage, Skeena River Drainage and Kitimat River Drainage basins. Many crossings also include unnamed, minor or ephemeral drainages. These basins all support many species of anadromous and freshwater fish, including those listed in Table 5-1.

Table 5-1: Major Basins and Likely Fish Species

Peace River basin	Fraser River basin	Skeena River basin	Kitimat River basin
Arctic grayling, bull trout, rainbow trout, eastern brook trout, mountain whitefish, burbot, northern pike, and other non-salmonid freshwater species	Chinook, sockeye and pink salmon, rainbow trout, Dolly Varden, bull trout, kokanee, mountain whitefish, white sturgeon, burbot, and other non-salmonid freshwater species	Chinook, chum, coho, pink and sockeye salmon, cutthroat and rainbow trout, steelhead (summer and/or winter-run), Dolly Varden, bull trout, kokanee, mountain whitefish, and pygmy whitefish	Chinook, chum, coho and pink salmon, rainbow/steelhead and coastal cutthroat trout and Dolly Varden, as well as mountain whitefish, sculpin, and other non-salmonid freshwater and estuarine species

The White Sturgeon (*Acipensertransmontanus*) is found in the Stuart River in the Fraser River drainage and is listed as endangered under Schedule 1 of the *Species at Risk Act*. As a result, there is the potential for construction activities to adversely affect this species and its habitat. Given the large number and diversity of species that may be encountered as a result of construction and operation of the Project, there is the potential for project-related activities to affect fish and fish habitat.

The potential effects of the pipeline construction on aquatic species and habitat are well known and understood. These potential effects may arise through construction of watercourse crossings or through erosion and include the deposition of sediment into watercourses, temporary disturbance of species present at crossings and potential disturbance to fish habitat.

5.5 Terrestrial Ecosystems, Vegetation and Wildlife

The Project has the potential to affect terrestrial ecosystems as defined through soils, vegetation and wildlife along the route.

Soils

The conceptual corridor crosses agricultural lands including several areas that are designated as Agricultural Land Reserves (ALR). A preliminary site review indicates that some compressor stations and metering facilities may be located on ALR lands. Further site reviews and data collection will confirm the proposed locations to be included in the environmental assessment. Detailed soils investigations will be completed on agricultural lands. Soil parent materials differ along the project corridor, but are expected to consist mainly of till, and glaciofluvial and glaciolacustrine deposits.

The conceptual corridor crosses previously developed lands, some of which were used for industrial purposes. During the continued development of the Project, detailed information will be collected to identify the existence of contaminated soils

in areas to be disturbed for construction, and to the extent that contaminated soil is encountered, appropriate management measures will be implemented, as required.

Vegetation and Wetlands

The conceptual corridor extends from the Northern Interior to the Coast Region of BC. It begins in the Boreal Plains Ecoprovince in the east, crosses the Boreal Interior Ecoprovince in the central section, and reaches the Coast and Mountains Ecoprovince at its western extent. Along the way, the conceptual corridor traverses six Biogeoclimatic (BGC) Zones, including the Boreal White and Black Spruce (BWBS), Engelmann Spruce-Subalpine Fir (ESSF), Sub-Boreal Spruce (SBS), Alpine Tundra (AT), Mountain Hemlock (MH) and Coastal Western Hemlock (CWH). Nearly 60% of the conceptual corridor runs through the Sub-Boreal Spruce zone. Vegetation within these BGC zones varies considerably. The BWBS occurs within the Interior Boreal Plains of northeastern BC and is characterized by a mixture of upland forests and muskeg (peatland-wetlands). The upland forests of this zone may contain mixed stands of trembling aspen, white spruce and lodgepole pine. Peatlands cover extensive tracts of northeast BC.

One hundred thirty-one provincially listed plant species potentially occur within the Forest Regions and BGC Zones intersected by the conceptual corridor. One hundred and one of these are blue-listed (of special concern) and 30 species are red-listed (endangered or threatened; BC Conservation Data Centre 2012). Three of these species are listed on Schedule 1 of the Federal *Species at Risk Act*.

One hundred and fourteen provincially listed ecological communities are associated with the Forest Districts and BGC zones intersected by the conceptual corridor. Eighty-eight of these communities are blue-listed and 26 are red-listed. The federal *Species at Risk Act* does not track, rank or regulate ecological communities.

Wetlands of various classes and forms occur throughout all the BGC zones along the conceptual corridor, as described in the vegetation overview above. Forty-five of the blue-listed communities are either wetlands or floodplain ecosystems, and 18 of the red-listed ecosystems are either wetlands or floodplain communities. Forest harvesting has resulted in variously aged stands along the conceptual corridor, including some early seral stands and old growth stands.

Issues include limited loss of forest cover and the potential to create conditions favourable for invasive species. Vegetation species and community distribution along the route will be described in terms of diversity, relative abundance, the presence of species at risk or of special concern and the presence of merchantable timber. Mitigation measures and plans will be formulated to minimize disturbance to vegetation species and communities and address current issues with the merchantable timber resources, such as pine beetle infestation. A site-specific reclamation plan will be developed to re-vegetate the right-of-way and will include seed mixes and weed-

control measures. The goal of the mitigation measures is to avoid or minimize the residual effects of the Project on vegetation along the route.

Wildlife

The conceptual corridor traverses three BC Ministry of Environment regions: Peace, Omineca and Skeena. Among these regions, 396 species of amphibian, reptile, mammal and bird are known or likely to occur, and of these, 286 species are known or likely to occur within all or a portion of the conceptual corridor. Of the 286 species, about 37% (107 species) are recognized as species of management concern. These include 17 species federally protected under Schedule 1 and Schedule 3 of the *Species at Risk Act* (SARA), 27 species recognized by the Committee on the Status of Endangered Wildlife in Canada, 35 species designated as “red” or “blue” by the British Columbia Conservation Data Centre and 98 species having a conservation priority rank of 1, 2 or 3 under the BC Conservation Framework; some species are represented in more than one category. Table 5-2 summarizes the SARA listed species and other species of management concern.

Table 5-2: SARA Listed Species and Other Species of Management Concern

“threatened” species on Schedule 1 of SARA	“special concern” species on Schedule 1 of SARA
Canada Warbler (<i>Wilsonia canadensis</i>)	Coastal Tailed Frog (<i>Ascaphus truei</i>)
Common Nighthawk (<i>Chordeiles minor</i>)	Western Toad (<i>Anaxyrus boreas</i>),
Olive-sided Flycatcher (<i>Contopus cooperi</i>),	Peregrine Falcon (<i>Falco peregrinus pealei</i>)
Peregrine Falcon (<i>Falco peregrinus anatum</i>)	Short-eared Owl (<i>Asio flammeus</i>)
Northern Goshawk (<i>Accipiter gentilis laingi</i>) ,	Western Screech-Owl (<i>Megascops kennicottii kennicottii</i>)
Marbled Murrelet (<i>Brachyramphus marmoratus</i>)	Band-tailed Pigeon (<i>Patagioenas fasciata</i>),
Woodland Caribou (<i>Rangifer tarandus</i>)	Rusty Blackbird (<i>Euphagus carolinus</i>
	Great Blue Heron (<i>Ardea herodias fannini</i>)
	Yellow Rail (<i>Coturnicops noveboracensis</i>).

other species of management concern	
Black Swift (<i>Cypseloides niger</i>)	
Sharp-tailed Grouse (<i>Tympanuchus phasianellus</i>)	
Broad-winged Hawk (<i>Buteo platypterus</i>)	
Barn Swallow (<i>Hirundo rustica</i>),	
Le Conte’s Sparrow (<i>Ammodramus leconteii</i>),	
American Bittern (<i>Botaurus lentiginosus</i>)	
Grizzly Bear (<i>Ursus arctos</i>)	
Fisher (<i>Martes pennanti</i>).	

Examples of species recognized as being important for hunting or trapping, and not already mentioned as being a species of management concern, include:

- Marten (*Martes americana*)
- American Mink (*Neovison vison*)
- Ermine (*Mustela erminea*)
- American Beaver (*Castor canadensis*)
- Canada Lynx (*Lynx canadensis*)
- Moose (*Alces alces*)
- Elk (*Cervus canadensis*)
- Mule Deer (*Odocoileus hemionus*)
- White-tailed Deer (*Odocoileus virginianus*).

The conceptual corridor traverses four Ungulate Winter Range (UWR) areas, three of which are designated for woodland caribou (southern mountain population) and one for mule deer. For caribou, the route traverses the following herd ranges (from east to west): Quintette, Hart Ranges and Telkwa. The Quintette and Telkwa herds are blue-listed in BC and designated as threatened on Schedule 1 of the *Species at Risk Act*. The Hart Ranges herd is red-listed in BC and designated as threatened on Schedule 1 of the *Species at Risk Act*. The Hart Ranges herd has a population of 560 animals based on the last census in 2010. In 2008, the Telkwa and Quintette herds had estimated populations of 73 and 195 animals, respectively.

The conceptual corridor traverses (or is close to) one Important Bird Area (IBA) - the Fraser Lake IBA. The conceptual corridor also traverses the Canadian Intermountain Region, an area recognized for its ecological diversity.

The greatest potential for adverse effects on wildlife and wildlife habitat occurs as a result of construction activities creating potential changes in mortality risk, sensory disturbance levels and habitat availability. Information on wildlife present and wildlife habitat along the route will be collected to identify and assess the effects of the Project on wildlife. The focus of field programs will be species at risk and species of management concern and their habitats. Through the identification of wildlife habitat types, location, suitability, structure, relative use and abundance, as well as sensitive periods during species life stages, measures will be developed to avoid or mitigate potentially adverse effects.

The Coastal GasLink Pipeline Project has the potential to affect habitat used by many species of migratory birds for various life stages, including migration and nesting and, therefore, the *Migratory Birds Convention Act*, 1994 applies to the Project. There is potential for activities associated with construction and operation of the Coastal GasLink Pipeline Project to adversely affect individuals and nests of migratory bird species. The potential effects of the Coastal GasLink Pipeline Project on migratory birds and their nests will be included in the assessment of Project and cumulative

effects. Mitigation measures will be developed to reduce or eliminate adverse Project effects on migratory birds and their nests.

5.6 Land and Land Use

Most of the conceptual corridor traverses provincial Crown lands, but about 11% of the corridor crosses private (freehold) lands, including several land parcels held under title to the Haisla Land Trust in the City of Kitimat. The conceptual corridor does not cross any federally owned or administered land. Carrying out the Project is not expected to cause any change to the environment on federal lands, in a province other than BC or outside of Canada.

The area crossed by the conceptual corridor supports a variety of activities on private and Crown land. These include:

- forestry
- agriculture and grazing
- mineral and coal exploration and development
- oil and gas
- trapping
- hunting and guide outfitting
- tourism

Protected Areas and Recreation Areas

The protected areas and recreation values add to the tourism industry in northern BC and the general Project area. The conceptual corridor does not cross the boundaries of any provincial parks, conservancies, ecological reserves or recreational areas. However, the Burnie River Protected Area is within the area crossed by the conceptual corridor; however, at this time it is uncertain whether the pipeline or any related disturbance would be located within the Protected Area.

Known recreation areas are located in the general vicinity of the conceptual corridor. Outdoor recreational activities, such as hunting, hiking and snowmobiling, are expected to occur throughout the area. Recreational fishing occurs on many watercourses and lakes.

Reserves Defined Under the Indian Act

The conceptual corridor route does not cross any Indian Reserves, as defined under the *Indian Act*; however, it is in the vicinity of more than 70 Indian Reserves and crosses the traditional territories of numerous First Nations. Section 7 includes a preliminary list of Aboriginal communities identified as having potential interest in the Project.

5.7 Heritage and Archaeological Resources

Heritage Resources are non-renewable resources managed under the *BC Heritage Conservation Act*, and the BC Archaeological Impact Assessment Guidelines. Heritage sites are locations that have significance and cultural value for BC. Aboriginal interests are also taken into consideration in the management of heritage resources. These resources are important and of value to the scientific, cultural and public communities.

The conceptual corridor crosses several archaeologically recognized cultural areas. Although many portions along the conceptual corridor have not been investigated for cultural remains, regional information is available for estimating the nature and time of past land occupation. The anticipated key issues associated with the Project regarding heritage resources include direct and indirect impacts on archaeological sites, paleontological sites and historical sites.

An Archaeological Impact Assessment (AIA) will be conducted for all areas that might be disturbed during construction of the Project. Areas of moderate and high archaeological potential will be identified, surveyed and assessed.

5.8 Traditional Ecological Knowledge and Traditional Land Use

Coastal GasLink has initiated an engagement process with potentially affected Aboriginal communities in BC (see section 7.0). Based on the outcome of this initial engagement process, Coastal GasLink will provide opportunities for Aboriginal communities to participate in collecting traditional ecological knowledge and conducting traditional land use studies for the Project. Such studies will focus on the current use of land for traditional purposes in the study areas identified by the Aboriginal community and will collect knowledge regarding the significance of the sites identified during fieldwork. Coastal GasLink is hopeful that these studies will identify the potential for:

- effects on traditional activities that could be caused by pipeline construction
- effects on heritage and culturally important sites
- effects on species (e.g., caribou) important to traditional hunting activities
- increased access to land

5.9 Toxic and Hazardous Materials

Hydrocarbons and hydraulic fluids are the primary toxic materials to be used during construction and operation of the Project. TransCanada has several systems in place (including its pipeline integrity management program, SCADA, aerial and ground patrol, and emergency response systems) to both prevent incidents and ensure rapid and effective response to spills of hazardous materials.

5.10 Waste Disposal

During the construction phase of the Project, typical waste includes construction materials (wood lathe, flagging tape, hydraulic fluids from equipment maintenance, and domestic products from camp operation). During the Operation phase, the facilities are expected to produce waste, such as used compressor and generator oil and filters, air filters and domestic wastewater. To control Project waste, Coastal GasLink will apply TransCanada's waste management plan, which meets or exceeds requirements under the *BC Environmental Management Act*. Storage and transportation of waste material will be conducted in accordance with the *Transportation of Dangerous Goods Act*, Workplace Hazardous Materials Information System (WHMIS) and any other provincial regulations.

5.11 Accidents and Malfunctions

The potential effects of accidents and malfunctions that may occur during the construction and operation of the Project will be considered in the environmental assessment. This assessment will include the potential effects on the biophysical and human environment leading to the development of effective management and mitigation measures and programs. These measures and programs will be appropriately linked into plans maintained by affected agencies (e.g., emergency response plans).

6.0 POTENTIAL CUMULATIVE EFFECTS

A Cumulative Effects Assessment (CEA) will be undertaken for the Project. The CEA will evaluate the residual environmental and socio-economic effects directly associated with the Project, in combination with the likely residual effects arising from other projects and activities that have been or will be carried out in the Project study areas. The other projects and activities to be included in the CEA will be identified as the environmental assessment progresses.

7.0 ABORIGINAL ENGAGEMENT

The conceptual corridor crosses the claimed territories of more than 31 Aboriginal groups (see Table 7-1). These groups and the two Tribal Councils in the region are likely to have an interest in the Project, may be affected by the Project and will likely require further consultations, including with the Crown.

Table 7-1: Aboriginal Groups and Tribal Councils in Project Area

First Nations	
Blueberry River First Nations	Burns Lake First Nation (Ts'il Kaz Koh First Nation)
Cheslatta Carrier First Nation	Doig River First Nation
Fort Nelson First Nation	Hagwilget Nation Village Council
Haisla First Nation	Halfway River First Nation
Kitselas First Nation	Kitsumkalum First Nation
Lake Babine First Nation	Lax Kw'alaams Indian Band
Lheidli-T'enneh First Nation	McLeod Lake Indian Band
Metlakatla Indian Band	Moricetown First Nation
Nadleh Whut'en First Nation	Nak'azdli First Nation
Nazko First Nation	Nee Tahi Buhn First Nation
Office of the Wet'suwet'en Hereditary Chiefs	Prophet River First Nation
Saik'uz First Nation	Saulteau First Nations
Skin Tyee First Nation	Stellat'en First Nation
Takla Lake First Nation	Tl'azt'en First Nation
West Moberly First Nations	Wet'suwet'en First Nation
Yekooche First Nation	
Tribal Councils and Associations	
Carrier Sekani Tribal Council	Treaty 8 Tribal Association
Métis Organizations	
Métis Nation British Columbia	Kelly Lake Métis Settlement Society

All potentially affected Aboriginal communities have been provided with initial Project information materials, including a letter introducing the Project and a Project map. In-person meetings have occurred with every identified First Nation and capacity funding discussions have commenced.

As discussions with Aboriginal communities continue, there may be some that will determine that they do not have an interest in the Project. Conversely, there may be Aboriginal communities that have not yet been identified that may assert an interest in the Project. In both cases, the Project will work with the Aboriginal communities and adjust engagement accordingly.

Additional meetings with Aboriginal communities will be undertaken on an ongoing basis with the following current objectives:

- Continue to build understanding and awareness of the Project
- Understand how individual Aboriginal groups wish to be consulted

- Gather preliminary information on Aboriginal interests and concerns

Since the Project was announced publicly in June 2012, Coastal GasLink has been engaging with potentially affected Aboriginal communities along the conceptual corridor. The potential effects of the Project may include various aspects of the livelihood and use of traditional resources of Aboriginal people in the region. Although engagement is in early stages with Aboriginal communities, some common interests and concerns have been raised, such as the cumulative effects of the multiple major projects being proposed in the region, potential effects on watercourses, wildlife and habitat, employment and economic opportunities, and interest in a common corridor. It is too early in the engagement process to provide specific details about interests and concerns. Coastal GasLink expects that as dialogue progresses, further information will be available to contribute to identifying potential environmental and socio-economic effects, as well as to support a dialogue about effective mitigation and management measures. In addition, Coastal GasLink expects to carry out its traditional ecological knowledge and traditional land use program.

8.0 PUBLIC ENGAGEMENT

Coastal GasLink strives to engage stakeholders early and often. This means listening, providing accurate information and responding to stakeholder interests in a prompt and consistent manner.

The objectives of the Public Engagement Plan include:

- Identify potentially interested stakeholders and the nature of their interests
- Provide timely, honest, accurate information to allow for informed, effective and meaningful engagement with the public
- Provide information about the need for the Project, process of approvals, construction practices and potential effects
- Ensure that stakeholders have information on how to be involved in the regulatory process (e.g., BC EAO, CEAA and BC OGC approval processes)
- Ensure that all communications materials and platforms are consistent, straightforward and easy to understand
- Ensure there is a variety of means for stakeholders to get involved in the process
- Ensure that stakeholder issues and concerns are gathered, understood and integrated into project design and execution, as appropriate
- Ensure that stakeholders are aware of how their input has shaped or affected the design of the process.

9.0 CONCLUSION

Coastal GasLink is pleased to submit this Project Description to initiate the approval process for this Project, which is significant for both British Columbia and Canada. This Project will provide economic benefits to British Columbia and Canada, and in particular to the communities near which it will be located. Coastal GasLink is committed to meaningful relationships with the Aboriginal communities, landowners, municipalities and stakeholders along the Project route to ensure that their interests are taken into account in Project planning. Throughout the Project lifecycle, Coastal GasLink will carry out its activities in a manner that is respectful of the environment.

APPENDIX G

Executive Summary – French Version



Coastal GasLink

Pipeline Project

Projet de pipeline Coastal GasLink

Résumé de la description du projet

CGL4703-CGP-EN-RP-001

30 octobre 2012

(Révisé 07 novembre 2012)

Rev 0

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Ceci constitue une traduction de la version anglaise officielle du document. En cas de différences entre les versions anglaise et française, la version anglaise prévaut.

RÉSUMÉ

1.0 RENSEIGNEMENTS GÉNÉRAUX

Coastal GasLink Pipeline Ltd. (Coastal GasLink) propose de construire et d'exploiter un pipeline de gaz naturel qui s'étendrait de la région de Groundbirch (à environ 40 km à l'ouest de Dawson Creek, en Colombie-Britannique (C.-B.)), jusqu'à l'installation d'exportation de gaz naturel liquéfié (GNL) que LNG Canada Development Inc. (LNG Canada) propose de construire près de Kitimat (C.-B.). Le projet de pipeline Coastal GasLink (le projet) consiste à aménager un gazoduc de 48 pouces (1 219 mm) de diamètre (NPS 48) et d'environ 650 kilomètres (km) de long, ainsi qu'à construire et exploiter des installations de comptage aux points de réception et de livraison du pipeline et une station de compression, des emplacements pour jusqu'à cinq stations de compression supplémentaires prévus à des fins d'expansion. Le projet pourra transporter au départ environ 1,7 milliard de pieds cubes par jour (Gpi3/j) de gaz, soit 48 millions de mètres cubes par jour (Mm3/j), et sa capacité pourra être portée éventuellement à quelque 5 Gpi3/j (141 Mm3/j). Les scénarios d'expansion n'exigent pas la construction d'un pipeline supplémentaire; seuls le nombre et l'emplacement d'éventuelles stations de compression changeraient. La section 4.1 fournit plus de renseignements concernant une possibilité d'expansion.

2.0 COORDONNÉES DU PROMOTEUR

Titre du projet désigné	Projet de pipeline Coastal GasLink
Nom du promoteur	Coastal GasLink Pipeline Ltd. est une filiale en propriété exclusive de TransCanada PipeLines Limited (TransCanada). Elle est associée commanditée des sociétés en commandite Coastal GasLink Pipeline East B.C. Limited Partnership et Coastal GasLink Pipeline West B.C. Limited Partnership.
Adresse	Projet de pipeline Coastal GasLink 450 – 1st Street SW Calgary (Alberta) T2P 5H1
Téléphone	403-920-7769
Télécopieur	403-920-2442
Personne-ressource principale	Karen Etherington Directrice, permis environnementaux et réglementaires Courriel : karen_etherington@transcanada.com
Personne-ressource secondaire	Joel Forrest Directeur, droit et services réglementaires Courriel : joel_forrest@transcanada.com
Dirigeant principal de Coastal GasLink	Rick Gateman Président, Coastal GasLink Pipeline Ltd. Courriel : rick_gateman@transcanada.com

3.0 APERÇU DU PROJET

Coastal GasLink propose d'aménager un gazoduc d'environ 650 km qui s'étendrait de la région de l'agglomération de Groundbirch, située à environ 40 km à l'ouest de Dawson Creek (C.-B.), jusqu'à l'installation d'exportation proposée de LNG Canada, à proximité de Kitimat (C.-B.). Coastal GasLink avait estimé au départ que le pipeline aurait environ 700 km de long, mais les révisions actuellement apportées au tracé indiquent que sa longueur serait plus proche de 650 km. Le projet comprend également la construction et l'exploitation d'installations de comptage aux points de réception et de livraison du pipeline, ainsi que d'une station de compression, les emplacements de jusqu'à cinq stations de compression supplémentaires étant prévus à des fins d'expansion. Le projet pourrait aussi comprendre l'aménagement et l'exploitation d'installations pour l'injection de liquides de gaz naturel et (ou) pour la régulation du point de rosée des hydrocarbures. De plus, des infrastructures temporaires seront requises durant la construction, notamment des chemins d'accès, des sites d'empilage des conduites, des aires de stockage, des bancs d'emprunt et des baraquements de chantier. Le projet pourrait exiger de nouvelles installations ou lignes électriques pour alimenter certaines installations, mais celles-ci seraient aménagées, détenues et exploitées par de tiers fournisseurs d'électricité. La section 4 fournit plus de précisions sur les composantes du projet.

Pour l'instant, le tracé du projet est défini sous la forme d'un couloir conceptuel, qui sera affiné au fil des évaluations techniques et environnementales, et des études de constructibilité, ainsi qu'à la lumière des avis des groupes autochtones, propriétaires fonciers et parties prenantes. La figure 3-1 représente le tracé conceptuel du projet, comme il est proposé actuellement.

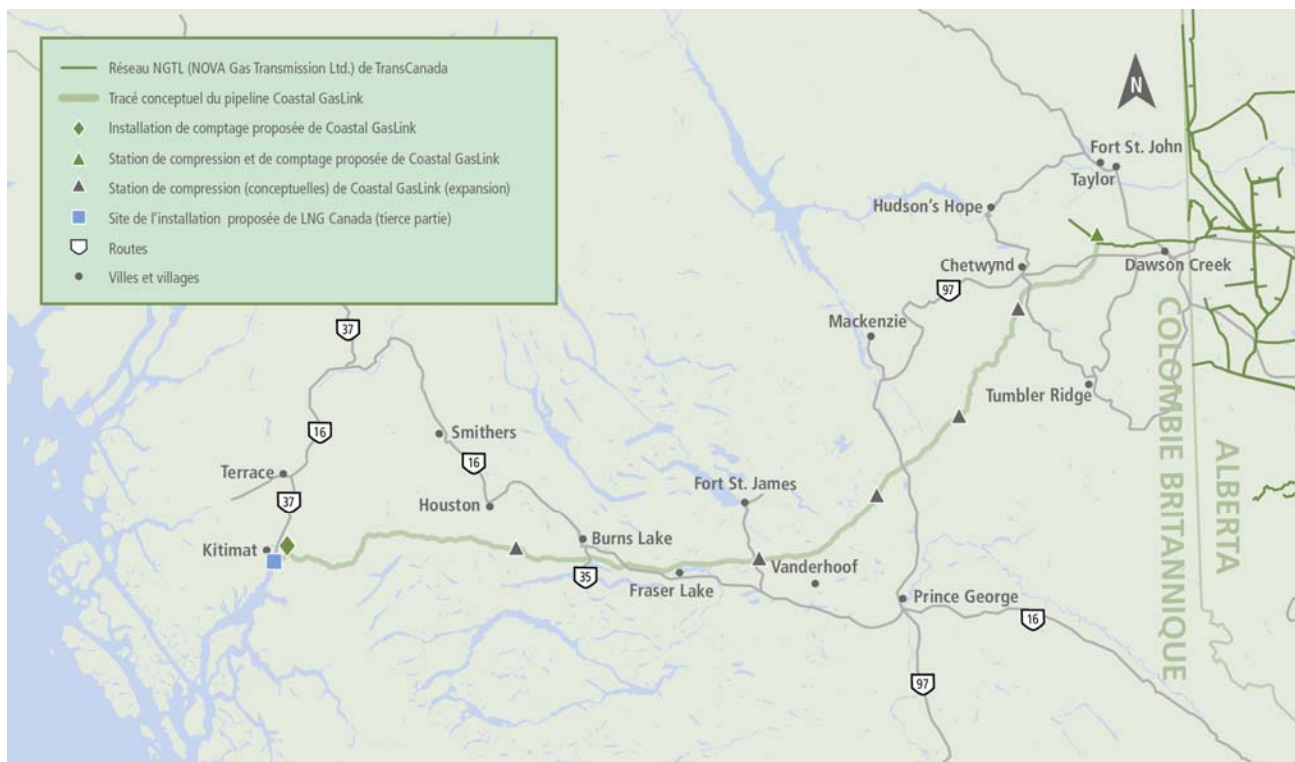


Figure 3-1: Couloir conceptuel de Coastal GasLink

3.1 Raison d'être du projet et justification

Le projet consiste en la construction et l'exploitation d'un pipeline enfoui qui acheminera le gaz naturel de la région de Groundbirch, située à environ 40 km à l'ouest de Dawson Creek (C.-B.), jusqu'à l'installation d'exportation proposée de LNG Canada, à proximité de Kitimat (C.-B.). Le pipeline pourrait éventuellement transporter des volumes supplémentaires de gaz dans le cadre d'un processus d'appel de soumissions que NOVA Gas Transmission Ltd. (NGTL) prévoit lancer au début de 2013. Le gazoduc reliera les zones de production de gaz naturel du nord-est de la Colombie-Britannique à l'installation d'exportation de LNG Canada proposée à Kitimat, laquelle ouvrira de nouveaux marchés pour le gaz naturel. En outre, grâce à une interconnexion avec le réseau de NGTL existant à Groundbirch, le projet donnera accès à d'autres approvisionnements en gaz naturel de l'Ouest canadien.

Il est prévu d'exploiter le projet pendant plus de 30 ans.

3.2 Cadre réglementaire

Le projet est situé entièrement en Colombie-Britannique et comporte l'aménagement de plus de 40 km de pipelines ayant plus de 323,9 mm de diamètre. Par conséquent, suivant l'article 4 du tableau 8 du *Reviewable Projects Regulation* (règlement sur les

projets sujets à révision), il est prévu que la réalisation du projet exigera la délivrance d'un certificat d'évaluation environnementale en vertu de la *Environmental Assessment Act* (loi sur l'évaluation environnementale) de la Colombie-Britannique. Une description du projet doit être déposée pour lancer le processus d'évaluation environnementale.

Selon l'article 14 de l'annexe du Règlement désignant les activités concrètes, un projet consistant à construire, exploiter, désaffecter et cesser d'exploiter un gazoduc d'une longueur de plus de 75 km sur une nouvelle emprise est un projet désigné. Comme le projet actuel répond au critère susmentionné, le pipeline Coastal GasLink représente un projet désigné et, à ce titre, il est assujéti à la Loi canadienne sur l'évaluation environnementale, 2012 (LCEE 2012). Aux termes de la LCEE 2012, une description du projet est requise pour mettre en branle le processus d'examen préalable au cours duquel l'Agence canadienne d'évaluation environnementale (ACEE) déterminera si une évaluation environnementale doit être effectuée au palier fédéral.

Le présent document vise à satisfaire aux exigences tant fédérales que provinciales à relatives à une de description de projet, et amorce donc le processus d'évaluation environnementale exigé sous le régime de la Environmental Assessment Act de la Colombie-Britannique et de la LCEE 2012. Si le projet doit faire l'objet d'une évaluation environnementale en vertu de la LCEE 2012, Coastal GasLink s'attend à ce qu'il y ait coordination des processus d'évaluation entre les paliers fédéral et provincial, comme le prévoit l'Entente de collaboration entre le Canada et la Colombie-Britannique en matière d'évaluation environnementale (2004).

Aux termes de l'article 25 de la Oil and Gas Activities Act (OGAA – loi sur les activités pétrolières et gazières) de la Colombie-Britannique, le projet exige aussi la délivrance d'un permis autorisant la construction et l'exploitation d'un pipeline. Il ne s'agira pas d'un pipeline de service public. Par conséquent, il n'y aura pas lieu de solliciter l'approbation de droits ou de tarifs auprès de la Utilities Commission (commission des services publics) de la Colombie-Britannique.

Par ailleurs, à part les autorisations mentionnées ci-dessus, la réalisation du projet pourrait nécessiter l'obtention d'autres permis, licences, approbations et autorisations. Nous les présentons ci-dessous selon l'étape du projet à laquelle ils seront requis:

Programmes sur le terrain

- Divers permis et autorisations en vertu de la OGAA de la Colombie-Britannique, délivrés par la BC Oil and Gas Commission (BC OGC – Commission du pétrole et du gaz de la C.-B.), y compris les suivants, mais sans y être limités :

- une approbation, en vertu de la *Water Act* (loi sur l'eau) de la Colombie-Britannique, concernant la réalisation de travaux à l'intérieur et autour d'un cours d'eau,
- un permis d'occupation en vertu de la *Land Act* (loi sur les terres) de la Colombie-Britannique,
- une autorisation, en vertu de la *Forests Act* (loi sur les forêts) de la Colombie-Britannique, concernant la récolte et l'utilisation du bois d'œuvre de terres publiques;
- Un permis, en vertu de l'article 14 de la *Heritage Conservation Act* (loi sur la conservation du patrimoine) de la Colombie-Britannique, autorisant une inspection du patrimoine;
- Des permis de recherche sur le poisson et de prélèvement, délivrés par le ministère des Forêts, des Terres et de l'Exploitation des ressources naturelles de la Colombie-Britannique;

Construction

- Une approbation en vertu du paragraphe 35(2) de la *Loi fédérale sur les pêches*;
- Une approbation accordée par le ministre des Transports en vertu du paragraphe 5(1) de la *Loi fédérale sur la protection des eaux navigables*;
- Divers permis et autorisations en vertu de la OGAA de la Colombie-Britannique, délivrés par la BC OGC, y compris les suivants, mais sans y être limités:
 - une approbation, en vertu de la *Water Act* de la Colombie-Britannique, concernant la réalisation de travaux à l'intérieur et autour d'un cours d'eau,
 - un permis d'occupation en vertu de la *Land Act* de la Colombie-Britannique,
 - une autorisation, en vertu de la *Forests Act* de la Colombie-Britannique, concernant la récolte et l'utilisation du bois d'œuvre de terres publiques;
- Divers permis autorisant des activités précises, comme le brûlage et le déboisement, délivrés par des instances municipales et provinciales.

3.3 Questions d'intérêt fédéral

Tel qu'il est envisagé, le projet ne nécessite pas l'aide financière du gouvernement fédéral ni la cession d'un intérêt foncier relatif au territoire domanial.

Le couloir conceptuel traverse les territoires revendiqués de plus de 30 groupes autochtones, dont la liste figure à la section 7. Les effets environnementaux éventuels du projet peuvent toucher aux moyens de subsistance des peuples autochtones de la région et à leur utilisation traditionnelle des ressources. Le promoteur tiendra compte des effets possibles sur les peuples autochtones, et des stratégies d'atténuation seront

conçues grâce au programme continu de participation des Autochtones mis en place pour le projet et à l'intégration dans l'évaluation environnementale du projet du savoir écologique traditionnel des Autochtones en plus des résultats des études portant sur l'utilisation traditionnelle du territoire.

3.3.1 Autorisations fédérales

Des autorisations pourraient être requises de la part d'organismes fédéraux, en vertu des lois suivantes :

Loi sur les pêches

Le projet pourrait nécessiter une ou plusieurs autorisations en vertu de la *Loi sur les pêches* si Pêches et Océans Canada détermine que la réalisation du projet pourrait entraîner la détérioration, la destruction ou la perturbation de l'habitat du poisson. Il pourrait y avoir des interactions entre les activités de construction et d'exploitation associées au projet et le poisson et son habitat.

Loi sur les espèces en péril

Une ou plusieurs autorisations peuvent être requises en vertu de la *Loi sur les espèces en péril* (LEP) s'il est établi que le projet touchera une espèce sauvage inscrite à l'annexe 1 de cette loi, tout élément de son habitat essentiel ou la résidence de ses individus.

Loi de 1994 sur la convention concernant les oiseaux migrateurs

Le projet respectera les exigences de la loi précitée.

Loi sur la protection des eaux navigables

Une ou plusieurs autorisations peuvent être requises en vertu de la *Loi sur la protection des eaux navigables* s'il est établi que la réalisation du projet comporte la construction d'ouvrages dans des eaux navigables, ou sur, sous, au-dessus ou à travers celles-ci, qui peuvent nuire à la navigation.

3.4 Harmonisation des processus réglementaires

Si le projet est assujéti à une évaluation environnementale aux termes de la LCEE 2012, Coastal GasLink s'attend à ce qu'il y ait coordination des processus

d'évaluation entre les paliers fédéral et provincial, comme le prévoit l'*Entente de collaboration entre le Canada et la Colombie-Britannique en matière d'évaluation environnementale (2004)*.

4.0 DESCRIPTION GÉNÉRALE DU PROJET

La présente section décrit les composantes du projet, le calendrier prévu et les activités réalisées aux diverses étapes de son exécution.

4.1 Portée du projet

Le projet englobe les installations et d'activités associées à sa construction, son exploitation et son entretien, de même que toutes les modifications prévisibles le concernant. Le cas échéant, le projet comprend aussi la désaffectation et la cessation d'exploitation du pipeline et des installations connexes, de même que la remise en état des lieux. Une description des composantes du projet est présentée ci-dessous.

Pipeline

Un pipeline de transport de gaz naturel NPS 48 (1 219 mm de diamètre) qui s'étend sur environ 650 km de la région de Groundbirch, près de Dawson Creek (C.-B.), jusqu'à l'installation d'exportation proposée de LNG Canada, à proximité de Kitimat (C.-B.). Les points d'origine et de terminaison du projet se trouvent aux environs des coordonnées indiquées dans le tableau 4-1 qui suit :

Tableau 4-1: Emplacement du projet

Point d'origine	
Latitude/Longitude	55.4852/120.5018
Coordonnées de la Transverse universelle de Mercator (TUM)	Zone 10U Est 635444 Nord 6187563
Quadrillage des secteurs gaziers et pétroliers de la C.-B.	SO1/4 Section 1, Canton 79, Rang 19 O6M
Point de terminaison	
Latitude/Longitude	54.029229/128.68809
Coordonnées TUM	Zone 9U Est 520431.7386 Nord 5986818.7386
Quadrillage des secteurs gaziers et pétroliers de la C.-B.	D-36-B et C-35-B/103-I-2

Stations de comptage

L'aménagement des stations de comptage suppose la mise en place de tronçons de comptage, de tuyauterie extérieure, de vannes d'isolement et de réglage, et de

dispositifs électriques, de commande et de télécommunications. Pour le moment, des installations de comptage sont prévues aux points de réception et de livraison.

Station(s) de compression

Le projet comprend actuellement l'aménagement d'une seule station de compression, dans la région de Groundbirch, composée de deux ensembles turbocompresseurs d'environ 30 MW chacun, alimentés au gaz naturel. La ou les stations de compression devront être accessibles à longueur d'année à partir de la route toutes saisons existante la plus proche. La conception des stations de compression prévoit l'installation de refroidisseurs des gaz de refoulement pour chaque unité et d'autres équipements auxiliaires, y compris de la tuyauterie extérieure haute pression, des vannes d'isolement, des appareils électriques, de commande et de télécommunications, ainsi que des installations de stockage et des bureaux.

L'aménagement de stations de compression supplémentaires est envisagé, en prévision d'une expansion éventuelle. L'agrandissement progressif attendu de l'installation proposée de LNG Canada ou le résultat du processus d'appel de soumissions commerciales que NGTL prévoit lancer au début de 2013 pourraient amener des volumes supplémentaires de gaz. Un des scénarios d'expansion possibles à l'étude consiste dans l'ajout de trois stations de compression, tandis qu'un deuxième scénario comporte l'aménagement de cinq stations de compression de plus. Le besoin éventuel d'accroître la capacité du pipeline et le scénario d'expansion à privilégier dépendront du volume additionnel de gaz naturel que le pipeline doit transporter. Un des scénarios d'expansion sera retenu une fois que l'on sera mieux fixé sur la quantité de gaz à transporter et que la conception technique sera plus avancée. Les scénarios d'expansion ne prévoient pas la pose de canalisations supplémentaires, ne modifiant que le nombre de stations de compression éventuelles et leur emplacement.

Installation éventuelle pour l'injection de liquides de gaz naturel

Une éventuelle installation d'injection de liquides de gaz naturel (LNG) est envisagée au point d'origine du projet pour réguler le pouvoir calorifique du gaz. Au besoin, les liquides à injecter seraient transportés par un tiers au moyen d'un pipeline.

L'installation d'injection de LGN servirait à régler le pouvoir calorifique du gaz contenu dans le pipeline et suppose la mise en place de réservoirs de stockage de liquides, de pompes d'injection et d'autres équipements auxiliaires, comme des vannes, de la tuyauterie, des compteurs, des analyseurs et des dispositifs électriques, de commande et de télécommunications, à l'intérieur d'une station de compression prévue. Dans des conditions normales d'exploitation, les émissions produites par l'installation seront composées essentiellement de celles qui sont associées à l'utilisation d'énergie électrique et à une consommation mineure de chaleur pour le chauffage de bâtiments.

Installation de régulation éventuelle du point de rosée des hydrocarbures

Une installation pour la régulation du point de rosée des hydrocarbures pourrait être requise à proximité de Vanderhoof si des quantités de gaz sont livrées par le réseau de Coastal GasLink à partir de cet endroit et que des flux gazeux de compositions diverses et provenant de clients différents ont été combinés au point d'origine du pipeline. L'installation enlèverait les hydrocarbures liquides du flux gazeux livré de sorte que sa composition ressemble à celle du gaz fourni au point de réception. Les hydrocarbures liquides retirés du gaz seraient réinjectés dans le réseau de Coastal GasLink en vue du transport jusqu'à Kitimat. L'installation pourrait comprendre des échangeurs de chaleur, des séparateurs, des pompes, des vannes et des tuyaux. Dans des conditions normales d'exploitation, les émissions produites par l'installation seraient essentiellement celles qui sont associées à l'utilisation d'énergie électrique et à une consommation mineure de chaleur pour le chauffage de bâtiments. Les résultats du processus d'appel de soumissions de NGTL détermineront si l'installation est nécessaire ou non.

Vannes de canalisation principale

Des vannes de canalisation principales seront installées aux stations de comptage et de compression, ainsi qu'aux autres endroits requis le long du tracé pour respecter les exigences de la norme Z662-11 de l'Association canadienne de normalisation (CSA), isoler les segments de pipeline les uns des autres et faciliter l'exploitation du réseau.

Système de télésurveillance et d'acquisition de données (SCADA)

Le projet comprend la mise en place et l'exploitation d'un système SCADA reliant le pipeline et les installations de compression au centre de commande et d'exploitation (CCE) existant de TransCanada, situé à Calgary (Alberta). Le système permettra de suivre l'exploitation du réseau à distance et de recevoir les données de mesure.

Dispositifs pour l'inspection interne

Le projet sera pourvu de dispositifs pour le lancement et la réception d'outils d'inspection interne. Ces outils permettent d'examiner l'intérieur du pipeline pour en contrôler l'intégrité. D'ordinaire, les dispositifs d'inspection interne sont situés dans les stations de compression et aux emplacements des vannes de canalisation principale. Ils se composent habituellement de vannes, de tuyaux et de sas de départ ou d'arrivée, selon l'endroit. On déterminera l'emplacement précis des dispositifs à l'étape de la conception détaillée.

Protection cathodique

La protection cathodique est une méthode couramment employée pour protéger le pipeline de la corrosion électrochimique. Un système de protection cathodique,

comprenant des lits d'anodes, des redresseurs et des dispositifs connexes, sera conçu et mis en place pour le pipeline et les installations de comptage.

Lignes de communication et alimentation électrique

Le projet comprendra des lignes de communication et des systèmes d'alimentation électrique qui desserviront les stations de compression et de comptage, et d'autres installations pipelinières. Coastal GasLink prévoit que les sources existantes pourront répondre à ces besoins.

Exploitation et activités d'entretien

Pendant toute la durée de service du pipeline, il faudra entreprendre divers travaux et activités d'entretien pour garantir l'exploitation en toute sécurité du pipeline et des installations connexes. Ces activités comprendront ce qui suit, sans y être limité :

- surveillance et contrôle par voie terrestre et aérienne;
- gestion des broussailles et de la végétation;
- visites sur place périodiques le long du pipeline et aux installations;
- programmes d'entretien du pipeline;
- maintien de la signalisation.

4.2 Échéancier du projet

Sous réserve de l'obtention de toutes les autorisations réglementaires requises, l'échéancier présenté au tableau 4-2 est proposé pour le projet.

Tableau 4-2: Échéancier du projet

TransCanada annonce le projet de pipeline Coastal GasLink	5 juin 2012
Dépôt de la description du projet pour lancer le processus d'évaluation environnementale	Octobre 2012
Dépôt de la demande de certificat d'évaluation environnementale auprès de la <i>BC Environmental Assessment Office</i> (BC EAO - bureau des évaluations environnementales de la Colombie-Britannique)	Début de 2014
Dépôt de l'étude d'impact environnemental auprès de l'Agence canadienne d'évaluation environnementale	Début de 2014
Demande auprès de la BC OGC	Début de 2014
Obtention des principales autorisations réglementaires	Fin de 2014 – début de 2015
Construction et mise en service Mise en chantier Travaux de préconstruction (baraquements, sites d'entreposage, déboisement et préparation de l'emprise, y compris les chemins d'accès, etc.)	Milieu de 2015 Milieu de 2015 – milieu de 2017

Construction de la canalisation principale (pipeline, stations de compression, stations de comptage, etc.)	Milieu de 2016 – 2018
Mise en service	Fin de 2017 – milieu de 2018
Début de l'exploitation	2018
Désaffectation et cessation d'exploitation	Fin de la vie utile du pipeline (30 ans ou plus)

4.3 Activités liées au projet

Sous réserve de l'obtention des autorisations réglementaires et des approbations internes relatives au projet, la construction du projet est censée débuter en 2015 et se terminer avec sa mise en service en 2018. Coastal GasLink propose d'entreprendre les activités de préconstruction, y compris le déboisement et la préparation de l'emprise, en 2015. Selon l'échéancier prévu, l'étape de l'exploitation et de l'entretien débute au moment de la mise en service. Les activités liées au projet sont décrites plus en détail dans les tableaux et les sections qui suivent.

La construction d'un pipeline comporte un certain nombre d'activités qui se déroulent séquentiellement dans un endroit donné. Elles comprennent, entre autres, l'aménagement d'accès aux chantiers, au besoin, l'arpentage, le déboisement, la conservation du sol et le terrassement, la régulation du drainage et le contrôle des sédiments, la distribution des tubes le long du tracé, le cintrage et le soudage des tubes, le creusement de la tranchée et la mise en fouille de la canalisation, le remblayage, l'essai, de même que le nettoyage et la remise en état des lieux après la construction. L'emprise pipelinière sera divisée en un certain nombre de tronçons de construction, de sorte que plusieurs équipes d'ouvriers travailleront parallèlement à plusieurs endroits le long de l'emprise.

La mise en place des stations de compression et de comptage devrait débuter au même moment que la construction du pipeline. On prévoit que l'aménagement des sites des stations et l'installation de l'équipement prendront plusieurs mois.

Outre l'emprise du pipeline et les aires de travail temporaires connexes, des terrains seront requis comme aires de rassemblement et d'empilage, zones d'entreposage du matériel et, éventuellement, comme bancs d'emprunt (sources de matériaux de remblai). Dans la mesure du possible, des zones perturbées antérieurement ou des aires déjà désignées pour de tels usages seront utilisées.

La remise en état des zones perturbées débutera dès la fin des travaux de construction et sera achevée après la mise en service du projet.

L'étape de l'exploitation et de l'entretien comportera les principales activités suivantes :

- surveiller constamment l'exploitation du pipeline à partir du CCE de TransCanada;
- faire en sorte que les plans d'intervention d'urgence du projet soient reliés convenablement aux plans d'urgence des autres organismes concernés;
- renseigner le public sur l'emplacement des installations et les activités liées à l'exploitation grâce au programme intégré de sensibilisation du public;
- exécuter un programme d'entretien préventif périodique.

Pour le moment, il est difficile de prédire quand ou comment la désaffectation et la cessation d'exploitation des installations du projet seront effectuées au terme de leur vie utile. Selon toute vraisemblance, la durée de vie utile du projet sera de 30 ans ou plus. À la fin de la vie utile du pipeline, Coastal GasLink procédera à la désaffectation et la cessation d'exploitation du pipeline, et à la remise en état de l'emprise, en conformité avec les exigences réglementaires en vigueur à ce moment-là.

5.0 CADRE ENVIRONNEMENTAL ET EFFETS POTENTIELS DU PROJET

5.1 Milieu physique

Le couloir conceptuel du pipeline traverse quatre régions physiographiques de la Colombie-Britannique, soit :

- les grandes plaines,
- les plateaux et les montagnes du centre-nord,
- le plateau intérieur disséqué par les principaux affluents du fleuve Fraser (la rivière Thompson, par exemple),
- la chaîne côtière et les îles.

Les études qu'il est prévu de réaliser à l'étape de la conception du projet serviront à recueillir de l'information sur les géorisques possibles et les autres caractéristiques uniques du terrain auxquels il faut prêter une attention particulière dans la conception du pipeline et la mise au point des méthodes de construction et de remise en état.

5.2 Milieu atmosphérique

Des interactions sont possibles entre le projet et le milieu atmosphérique. Plus particulièrement, la construction et l'exploitation d'un pipeline et des stations de compression connexes produisent des émissions dans l'atmosphère. L'aménagement du pipeline et des installations connexes exigera l'emploi de divers équipements qui brûlent des quantités relativement petites de combustibles d'hydrocarbures (par exemple, essence, carburant diesel et gaz naturel) et dégagent des produits de combustion tels que les principaux contaminants atmosphériques (PCA), dont des oxydes d'azote (NOx), du dioxyde de soufre (SO₂) et du monoxyde de carbone (CO), et des gaz à effet de serre (GES). Il est prévu que les travaux de construction seront de caractère transitoire et à court terme.

À l'étape de l'exploitation, les émissions atmosphériques émanant des stations de compression résultent de la combustion de gaz naturel dans les turbines. Dans le cas du projet, les émissions produites au cours de l'exploitation comprendront notamment des NOx, des matières particulaires (MP2.5) et du CO. Ces émissions seront estimées et une modélisation de la dispersion sera effectuée pour chaque station de compression, conformément aux directives des organismes de réglementation. Les résultats de la modélisation de la dispersion seront comparés aux objectifs de qualité de l'air ambiant pertinents. Les émissions de gaz à effet de serre seront également estimées à chaque station de compression et comparées aux émissions totales nationales et provinciales.

5.3 Milieu acoustique

Dans la zone d'implantation du projet, le bruit de fond tient principalement à la présence de routes, de chemins forestiers actifs et d'activités industrielles. Une grande partie du couloir conceptuel passe dans des secteurs peu densément peuplés. Le niveau sonore dans l'arrière-pays est très peu élevé.

La construction du projet provoquera une hausse à court terme du niveau sonore, en raison de l'utilisation d'équipements de construction. Le bruit causé par l'exploitation des stations de compression respectera les limites réglementaires pertinentes.

5.4 Espèces et habitat aquatiques

Le couloir conceptuel traverse environ 320 cours d'eau dans quatre bassins hydrographiques importants, soit les bassins de la rivière de la Paix, du Fraser, de la rivière Skeena et de la rivière Kitimat. Un bon nombre des franchissements touchent des drainages non désignés, d'importance secondaire ou éphémères. Tous ces bassins font vivre une multitude d'espèces de poisson anadromes et dulçaquicoles, dont les suivantes :

Tableau 5-1: Principaux bassins et espèces piscicoles probables

Bassin de la rivière de la Paix	Bassin du Fraser	Bassin de la rivière Skeena	Bassin de la rivière Kitimat
Ombre de l'Arctique, omble à tête plate, truite arc-en-ciel, omble de fontaine, ménomini de montagnes, lotte, grand brochet et autres salmonidés d'eau douce.	Saumon quinnat, saumon sockeye, saumon rose, truite arc-en-ciel, crabe à pois, omble à tête plate, kokani, ménomini de montagnes, esturgeon blanc, lotte et autres espèces d'eau douce, autres que les salmonidés.	Saumon quinnat, saumon kéta, saumon coho, saumon rose et saumon sockeye, truite fardée et truite arc-en-ciel, , truite arc-en-ciel anadrome (remonte de l'été ou de l'hiver), crabe à pois, omble à tête plate, kokani, ménomini de montagnes et ménomini pygmée.	Saumon quinnat, saumon kéta, saumon coho et saumon rose, truite arc-en-ciel / truite arc-en-ciel anadrome et truite fardée côtière, crabe à pois, ménomini de montagnes, chabot et autres espèces d'eau douce, autres que les salmonidés, et espèces estuariennes.

L'esturgeon blanc (*Acipensertransmontanus*) fréquente la rivière Stuart, dans le bassin du Fraser, et est répertorié en tant qu'espèce en voie de disparition à l'annexe 1 de la *Loi sur les espèces en péril*. En conséquence, les travaux de construction pourraient avoir des effets délétères sur cette espèce et son habitat. Étant donné le grand nombre et la diversité des espèces que la construction et l'exploitation du projet sont susceptibles de toucher, il est possible que les activités liées au projet aient des conséquences sur le poisson et son habitat.

Les effets potentiels de la construction du pipeline sur les espèces et l'habitat aquatiques sont bien connus et compris. Ils peuvent découler de la construction des franchissements de cours d'eau, ou se produire sous l'effet de l'érosion; ces effets comprennent notamment la sédimentation des cours d'eau, la perturbation temporaire des espèces présentes aux franchissements de cours d'eau et la perturbation possible de l'habitat du poisson.

5.5 Écosystèmes terrestres, végétation et espèces sauvages

Le projet est susceptible d'influer sur les écosystèmes terrestres rencontrés le long du tracé, notamment au niveau des sols, de la végétation et des espèces sauvages.

Sols

Le couloir conceptuel traverse des terres agricoles, dont plusieurs régions ayant la désignation de réserve de terres agricoles (RTA). L'examen préliminaire des sites révèle que certaines des stations de compression et installations de comptage pourraient être situées sur des terres désignées RTA. Des études plus poussées des sites et la collecte de données supplémentaires permettront de confirmer les emplacements proposés d'installations qu'il convient d'inclure dans l'évaluation environnementale du projet. Coastal GasLink procédera à des reconnaissances détaillées des sols sur les terres agricoles. Le matériau d'origine du sol varie le long

du couloir du projet, mais il est probablement constitué surtout de till et de dépôts glaciofluviaux et glacio-lacustres.

Le couloir conceptuel traverse des terres mises en valeur antérieurement, dont certaines étaient affectées à des usages industriels. Au cours de l'élaboration continue du projet, le promoteur recueillera des renseignements détaillés pour déterminer la présence de sols contaminés dans des secteurs qui seront perturbés par les travaux de construction et, si des zones de contamination sont relevées, il prendra les mesures de gestion qui s'imposent.

Végétation et zones humides

Le couloir conceptuel s'étend de l'intérieur septentrional à la région côtière de la Colombie-Britannique. Il débute dans l'écoprovince des plaines boréales, à l'est, traverse l'écoprovince de l'intérieur boréal, dans la partie centrale, et rejoint l'écoprovince de la côte et des montagnes, à son extrémité ouest. Sur ce parcours, il passe par six zones biogéoclimatiques (BGC), notamment la zone boréale de l'épinette blanche et de l'épinette noire (BEBN), la zone du sapin sub-alpin et de l'épinette d'Engelmann (SSEE), la zone subboréale de l'épicéa (SBE), la zone de toundra alpine (TA), la zone montagneuse de la pruche (MP) et la zone côtière de la pruche de l'Ouest (CPO). Près de 60 % du couloir s'étend dans la zone subboréale de l'épicéa. La végétation varie considérablement d'une zone BGC à l'autre. La zone BEBN fait partie des plaines boréales de l'intérieur, dans le nord-est de la province, et est caractérisée par un mélange de forêts sèches et de fondrières (tourbières et zones humides). Dans cette zone, les forêts sèches peuvent être constituées de peuplements mélangés de peuplier faux-tremble, d'épinette blanche et de pin tordu latifolié. Le nord-est de la province est recouvert de grandes superficies de tourbières.

Dans les régions forestières et les zones BGC croisées par le couloir conceptuel, on retrouve 131 espèces de plantes répertoriées au palier provincial. De celles-ci, 101 espèces sont inscrites sur la liste « bleue » (espèces préoccupantes) et 30 espèces figurent sur la liste « rouge » (espèces en voie de disparition ou menacées; Centre de données sur la conservation de la Colombie-Britannique, 2012). Trois des espèces en question sont inscrites à l'annexe 1 de la *Loi sur les espèces en péril* du Canada.

Aux districts forestiers et zones BGC traversés par le couloir conceptuel sont associées 114 éco-communautés répertoriées au palier provincial. De celles-ci, 88 sont inscrites sur la liste « bleue » et 26 sur la liste « rouge ». Les éco-communautés ne sont pas suivies, classées ou réglementées sous le régime de la *Loi sur les espèces en péril*.

Diverses classes et formes de zones humides se retrouvent dans toutes les zones BGC situées le long du couloir conceptuel, telles qu'elles sont décrites ci-dessus dans l'aperçu de la végétation. Quarante-cinq des communautés inscrites sur la liste « bleue » constituent des écosystèmes de milieu humide ou de plaine inondable, et

18 des écosystèmes figurant sur la liste « rouge » représentent des communautés de milieu humide ou de plaine inondable. L'exploitation forestière a produit des peuplements de différents âges le long du tracé éventuel, y compris des peuplements de transition hâtifs et de vieux peuplements.

Une perte limitée de couvert forestier et le risque de créer des conditions propices pour des espèces envahissantes comptent parmi les enjeux du projet. La distribution des communautés et des espèces de végétation le long du tracé sera décrite en fonction de leur diversité, de leur abondance relative, de la présence d'espèces préoccupantes ou en péril et de la présence de bois marchand. Des mesures et des plans d'atténuation seront mis au point afin de réduire le plus possible les perturbations causées aux espèces et communautés végétales et d'aborder les problèmes actuels associés aux ressources de bois marchand, notamment l'infestation par le dendroctone du pin ponderosa. Un plan de remise en état sera conçu en fonction de chaque site afin de rétablir la végétation sur l'emprise, et il précisera les mélanges de semences à employer ainsi que des mesures de lutte contre les mauvaises herbes. Les mesures d'atténuation ont pour but de prévenir les effets résiduels sur la végétation le long du tracé ou de les réduire au minimum.

Espèces sauvages

Le couloir conceptuel coupe trois régions administrées par le ministère de l'Environnement de la Colombie-Britannique, celles de Peace, d'Omineca et de Skeena. On dénombre 396 espèces d'amphibiens, de reptiles, d'oiseaux et de mammifères présentes ou susceptibles d'être présentes dans ces régions. De celles-ci, 286 espèces se retrouvent, ou pourraient se retrouver, dans l'ensemble ou une partie du couloir conceptuel. Parmi ces espèces, environ 37 % (107 espèces) sont reconnues comme des espèces qui suscitent des préoccupations sur le plan de la gestion. Celles-ci comprennent 17 espèces protégées au palier fédéral en vertu de l'annexe 1 et de l'annexe 3 de la *Loi sur les espèces en péril*, 27 espèces reconnues par le Comité sur la situation des espèces en péril au Canada, 35 espèces désignées par le Centre de données sur la conservation de la Colombie-Britannique comme espèces inscrites sur les listes « rouge » ou « bleue », et 98 espèces classées au rangs de priorité 1, 2 ou 3 selon le Cadre de conservation de la Colombie-Britannique. Certaines espèces se retrouvent dans plus d'une catégorie. Le tableau ci-dessous présente un résumé des espèces répertoriées dans la LEP et des autres espèces qui suscitent des préoccupations sur le plan de la gestion.

Tableau 5-2: Espèces visées par la LEP et autres espèces suscitant des préoccupations sur le plan de la gestion

Espèces « menacées » inscrites à l'annexe 1 de la LEP	Espèces désignées « préoccupantes »
Paruline du Canada (<i>Wilsonia canadensis</i>)	Grenouille-à-queue côtière (<i>Ascaphus truei</i>)
Engoulevent d'Amérique (<i>Chordeiles minor</i>)	Crapaud de l'Ouest (<i>Anaxyrus boreas</i>),
Moucherolle à côtés olive (<i>Contopus cooperi</i>),	Faucon pèlerin de la sous-espèce <i>pealei</i> (<i>Falco peregrinus pealei</i>)
Faucon pèlerin de la sous-espèce <i>anatum</i> (<i>Falco peregrinus anatum</i>)	Hibou des marais (<i>Asio flammeus</i>)
Autour des palombes (<i>Accipiter gentilis laingi</i>) ,	Petit-duc des montagnes de la sous-espèce <i>kennicottii</i> (<i>Megascops kennicottii kennicottii</i>)
Guillemot marbré (<i>Brachyramphus marmoratus</i>)	Pigeon à queue barrée (<i>Patagioenas fasciata</i>),
Caribou des bois (<i>Rangifer tarandus</i>)	Quiscale rouilleux (<i>Euphagus carolinus</i>
	Grand héron de la sous-espèce <i>fannini</i> (<i>Ardea herodias fannini</i>)
	Rôle jaune (<i>Coturnicops noveboracensis</i>).
Autres espèces suscitant des préoccupations sur le plan de la gestion	
Martinet sombre (<i>Cypseloides niger</i>)	
Tétras à queue fine (<i>Tympanuchus phasianellus</i>)	
Petite buse (<i>Buteo platypterus</i>)	
Hirondelle rustique (<i>Hirundo rustica</i>),	
Bruant de Le Conte (<i>Ammodramus leconteii</i>),	
Butor d'Amérique (<i>Botaurus lentiginosus</i>)	
Ours grizzli (<i>Ursus arctos</i>)	
Pékan (<i>Martes pennanti</i>).	

Les espèces suivantes sont réputées d'intérêt pour la chasse et le piégeage et ne sont pas mentionnées ailleurs en tant qu'espèces suscitant des préoccupations sur le plan de la gestion :

- Martre d'Amérique (*Martes american*),
- Vison d'Amérique (*Neovison vison*),
- Ermine (*Mustela erminea*),
- Castor du Canada (*Castor canadensis*),
- Lynx du Canada (*Lynx canadensis*),
- Orignal (*Alces alces*),
- Wapiti (*Cervus canadensis*),

- Cerf hémione (*Odocoileus hemionus*),
- Cerf de Virginie (*Odocoileus virginianus*).

Le couloir conceptuel traverse quatre aires d'hivernage des ongulés, dont trois sont associées au caribou des bois (population des montagnes du Sud), et une au cerf hémione. Dans le cas du caribou, le tracé traverse (d'est en ouest) les aires de répartition des troupeaux de Quintette, des chaînons Hart et de la Telkwa. Les populations de caribous de Quintette et de la Telkwa sont inscrites sur la liste « bleue » de la Colombie-Britannique et désignées espèces « menacées » à l'annexe 1 de la *Loi sur les espèces en péril*. Le troupeau des chaînons Hart figure sur la liste « rouge » provinciale et est aussi désigné espèce « menacée » à l'annexe 1 de cette même loi. Le troupeau des chaînons Hart se chiffre à 560 individus, selon le dernier recensement effectué en 2010. En 2008, les troupeaux de Quintette et de la Telkwa avaient une population estimative de 73 et 195 individus, respectivement.

Le couloir conceptuel traverse (ou avoisine) une aire importante de nidification (AIN), celle du lac Fraser. Il traverse également la région intramontagnarde canadienne, zone reconnue pour sa diversité écologique.

Pour ce qui concerne les espèces sauvages et leur habitat, ce sont les activités de construction qui risquent le plus de causer des effets négatifs en raison des changements qu'elles entraînent du point de vue du risque de mortalité, du degré de perturbation sensorielle et de la disponibilité d'habitat. Des renseignements seront recueillis sur les espèces sauvages présentes le long du tracé et les habitats fauniques afin de cerner et d'évaluer les effets éventuels du projet sur la faune. Les habitats fauniques seront recensés selon le type, l'emplacement, l'adéquation, la structure, l'utilisation relative et l'abondance, y compris les périodes de sensibilité aux diverses étapes du cycle de vie de l'espèce, et des mesures seront conçues pour éviter ou atténuer les effets négatifs éventuels.

Le projet de pipeline Coastal GasLink est susceptible d'avoir des effets sur l'habitat utilisé par bon nombre d'espèces d'oiseaux migrateurs à diverses étapes de leur cycle de vie, dont la migration et la nidification. En conséquence, le projet tombe sous le coup de la *Loi de 1994 sur la convention concernant les oiseaux migrateurs*. Il est possible que les activités associées à la construction et à l'exploitation du projet aient des effets délétères sur des individus et des nids d'espèces d'oiseaux migrateurs, et ces effets seront examinés dans le cadre de l'évaluation du projet et des effets cumulatifs. Des mesures d'atténuation seront conçues afin de réduire ou de supprimer les effets négatifs du projet sur les oiseaux migrateurs et leurs nids.

5.6 Terres et formes d'utilisation

Le couloir conceptuel se trouve en majeure partie sur des terres publiques provinciales, sauf pour environ 11 % du parcours qui traverse des terres privées (tenure franche) ainsi que plusieurs parcelles dont le titre est détenu en fiducie par la *Haisla Land Trust*, dans la ville de Kitimat. Le couloir ne traverse pas de terres appartenant à l'État fédéral ou administrées par lui. La réalisation du projet ne devrait pas entraîner de changements à l'environnement sur le territoire domaniale, dans une province autre que la Colombie-Britannique, ou à l'extérieur du Canada.

Le secteur traversé par le couloir conceptuel donne lieu à une gamme d'activités sur des terres privées et publiques, notamment les suivantes :

- exploitation forestière
- agriculture et pacage
- prospection et mise en valeur de minéraux et du charbon
- extraction de gaz et de pétrole
- piégeage
- chasse et services de guide
- tourisme.

Zones protégées et aires de loisirs

Les zones protégées et les valeurs récréatives contribuent à l'industrie du tourisme dans le Nord de la Colombie-Britannique et la zone générale du projet. Le couloir conceptuel ne franchit pas les limites de parcs provinciaux, d'aires de conservation, de réserves écologiques ou d'espaces de loisirs. Cependant, la zone protégée de la rivière Burnie se trouve sur le parcours du couloir conceptuel, mais on ne sait pas, à ce stade-ci, si le pipeline ou une source de perturbation connexe s'y trouvera.

Des aires de loisirs connues sont situées dans le voisinage général du couloir conceptuel et il est présumé que des activités de plein air, comme la chasse, la randonnée pédestre et la motoneige, se pratiquent dans toute la région. De nombreux lacs et cours d'eau attirent des amateurs de pêche sportive.

Réserves au sens de la *Loi sur les Indiens*

Le tracé du couloir conceptuel ne traverse pas de réserves indiennes, selon la définition de la *Loi sur les Indiens*, mais il passe à proximité de plus de 70 réserves indiennes et traverse les territoires traditionnels d'un bon nombre de Premières Nations. Une liste provisoire des collectivités autochtones que le projet est susceptible d'intéresser est présentée à la section 7.

5.7 Ressources patrimoniales et archéologiques

Les ressources patrimoniales sont des ressources non renouvelables administrées suivant la *Heritage Conservation Act* et les *Archaeological Impact Assessment Guidelines* (directives sur l'évaluation de l'incidence archéologique) de la Colombie-Britannique. Les sites patrimoniaux sont des lieux d'une haute importance et valeur culturelle pour la province. Les intérêts autochtones sont également pris en compte dans la gestion des ressources patrimoniales. Les communautés scientifiques et culturelles, et le grand public, attachent de la valeur et de l'importance à ces ressources.

Le couloir conceptuel traverse plusieurs zones culturelles reconnues d'intérêt archéologique. Des reconnaissances visant à repérer la présence de vestiges culturels n'ont pas été effectuées sur de nombreuses parties du tracé, mais la nature et l'époque des occupations antérieures du territoire peuvent être estimées à partir des données régionales disponibles. En ce qui touche les richesses patrimoniales, les principaux enjeux prévus du projet résident dans les conséquences éventuelles, directes et indirectes, sur des sites archéologiques, paléontologiques et historiques.

Une évaluation de l'incidence sur les ressources archéologiques (EIRA) sera menée dans tous les secteurs susceptibles de subir des perturbations pendant la construction du projet, et les zones présentant un potentiel archéologique moyen et élevé seront recensées, arpentées et évaluées.

5.8 Savoir écologique traditionnel et utilisation traditionnelle du territoire

Coastal GasLink a entamé un processus de consultation auprès des collectivités autochtones de la Colombie-Britannique susceptibles d'être touchées par le projet (voir la section 7.0). Selon l'issue de cette première démarche de consultation, elle leur offrira la possibilité de participer à la collecte du savoir écologique traditionnel et aux études sur l'utilisation traditionnelle du territoire menées en rapport avec le projet. Ces études seront centrées sur l'utilisation actuelle des terres à des fins traditionnelles dans les zones d'étude, que déterminera la collectivité autochtone, et viseront à recueillir des connaissances sur l'importance des sites relevés au cours des travaux sur le terrain. Coastal GasLink espère que les études feront ressortir si la construction du pipeline peut avoir une incidence sur les éléments suivants :

- effets sur les activités traditionnelles;
- effets sur les sites patrimoniaux ou d'importance culturelle;
- effets sur des espèces importantes (le caribou, par exemple) du point de vue des activités de chasse traditionnelles;
- accès accru au territoire

5.9 Matières toxiques et dangereuses

Les hydrocarbures et les fluides hydrauliques seront les principales substances toxiques utilisées au cours de la construction et l'exploitation du projet. TransCanada a en place un certain nombre de mécanismes (y compris son programme de gestion de l'intégrité des pipelines, le SCADA, le programme des reconnaissances aériennes et terrestres, et les systèmes d'intervention en cas d'urgence) qui servent à prévenir les incidents et à garantir une intervention rapide et efficace s'il se produit un déversement de matières dangereuses.

5.10 Élimination des déchets

À l'étape de la construction, les déchets types seront des résidus de construction (rebuts de tour à bois, ruban de signalisation, fluides hydrauliques provenant de l'entretien de l'équipement et déchets ménagers des baraquements de chantier). Pendant l'exploitation, on s'attend à ce que les installations produisent des rebuts tels que l'huile et filtres usés de compresseurs et de génératrices, filtres à air et eaux usées domestiques. Pour maîtriser les détritiques associés au projet, Coastal GasLink mettra en œuvre le plan de gestion des déchets de TransCanada, lequel atteint ou dépasse les normes de la *Environmental Management Act* (loi sur la gestion environnementale) de la Colombie-Britannique. Le stockage et le transport des déchets obéiront aux prescriptions de la *Loi sur le transport des marchandises dangereuses*, aux exigences du Système d'information sur les matières dangereuses utilisées au travail (SIMDUT) et à toute réglementation provinciale pertinente.

5.11 Accidents et défaillances

Les effets éventuels des accidents et défaillances susceptibles de se produire pendant la construction et l'exploitation du projet seront pris en compte dans l'évaluation environnementale. Cette dernière recensera les effets possibles sur les milieux humain et biophysique afin de mettre au point des mesures et des programmes efficaces de gestion et d'atténuation, lesquels seront reliés convenablement aux plans des autres organismes locaux intéressés (plans d'intervention d'urgence, par exemple).

6.0 EFFETS CUMULATIFS POTENTIELS

Une évaluation des effets cumulatifs (EEC) sera menée à l'égard du projet pour cerner les effets résiduels, d'ordre environnemental et socioéconomique, qui peuvent découler directement de la réalisation du projet, combinée à celle d'autres projets et activités passés ou futurs menés dans les zones d'étude. Coastal GasLink déterminera les autres projets et activités dont il convient de tenir compte dans l'EEC à mesure qu'avance l'évaluation environnementale.

7.0 PARTICIPATION DES AUTOCHTONES

Le couloir conceptuel traverse les territoires revendiqués de plus de 31 groupes autochtones (voir le tableau 7-1). Ces groupes et les deux conseils tribaux de la région sont susceptibles de s'intéresser au projet, ils pourraient être touchés par sa réalisation et exigeront probablement des consultations plus poussées, y compris avec la Couronne.

Tableau 7-1 : Groupes autochtones et conseils tribaux dans la zone du projet

Premières nations	
Premières Nations de Blueberry River	Première Nation de Burns Lake (Première nation Ts'il Kaz Koh)
Première Nation Cheslatta Carrier	Première Nation de Doig River
Première Nation de Fort Nelson	Conseil du Village Hagwilget
Première Nation Haisla	Première Nation de Halfway River
Première Nation Kitselas	Première Nation de Kitsumkalum
Première Nation de Lake Babine	Bande indienne des Lax Kw'alaams
Première Nation Lheidli-T'enneh	Bande indienne de McLeod Lake
Bande indienne Metlakatla	Première Nation de Moricetown
Première Nation Nadleh Whut'en	Première Nation Nak'azdli
Première Nation Nazko	Première Nation Nee Tahi Buhn
Bureau des chefs héréditaires du peuple Wet'suwet'en	Première Nation de Prophet River
Première Nation Saik'uz	Premières Nations de Saulteau
Première Nation des Skin Tyee	Première Nation Stellat'en
Première Nation de Takla Lake	Première Nation Tl'azt'en
Premières Nations de West Moberly	Première Nation Wet'suwet'en
Première Nation Yekooche	
Associations et conseils tribaux	
Conseil tribal Carrier Sekani	Association tribale du Traité 8
Organismes métis	
Société d'établissement métis de Kelly Lake	Nation métisse de la Colombie-Britannique

Toutes les collectivités autochtones susceptibles d'être touchées par le projet ont reçu une trousse d'information, comprenant une lettre qui présente le projet et une carte du projet.

À mesure que se poursuivront les entretiens avec les collectivités autochtones, il se pourrait que certaines d'entre elles déterminent que le projet ne les intéresse pas. En

revanche, d'autres collectivités autochtones non encore recensées pourraient affirmer avoir un intérêt dans le projet. Dans un cas comme dans l'autre, le promoteur du projet entend collaborer avec les groupes autochtones et adapter son programme de participation des Autochtones en conséquence.

Coastal GasLink continuera d'avoir des rencontres régulières avec les collectivités autochtones, afin de poursuivre les objectifs suivants :

- continuer à faire connaître le projet et à y sensibiliser les populations touchées;
- comprendre de quelle manière chaque groupe autochtone souhaite être consulté;
- recueillir des renseignements préliminaires sur les intérêts et les sujets de préoccupation des Autochtones.

Depuis l'annonce publique du projet en juin 2012, Coastal GasLink entretient des rapports avec les collectivités autochtones vivant le long du couloir conceptuel qui sont susceptibles d'être touchées par le projet. Le projet pourrait influencer sur différents aspects de la subsistance des peuples autochtones de la région et sur l'utilisation qu'ils font des ressources traditionnelles. Même si le processus de participation des collectivités autochtones n'en est qu'à ses débuts, il s'en dégage certains intérêts et sujets de préoccupation communs, dont les effets cumulatifs des nombreux projets de grande envergure envisagés dans la région, les effets éventuels sur les cours d'eau, les animaux sauvages et leur habitat, les possibilités d'emploi et les perspectives économiques, ainsi que l'intérêt à l'égard d'un couloir commun. Il est encore trop tôt pour fournir plus de précisions sur les intérêts et les préoccupations que les groupes autochtones peuvent entretenir. Coastal GasLink s'attend à ce que la poursuite du dialogue contribue à jeter plus de lumière sur les effets éventuels du projet, d'ordre environnemental et socioéconomique, et débouche sur une discussion au sujet de mesures d'atténuation et de gestion efficaces. De plus, Coastal GasLink prévoit mener son programme de collecte du savoir écologique traditionnel et des études sur l'utilisation traditionnelle des terres.

8.0 PARTICIPATION DU PUBLIC

Coastal gaslink s'efforce de consulter les parties prenantes au plus tôt et fréquemment. Cela signifie se mettre à leur écoute, leur fournir des renseignements exacts et donner suite à leurs intérêts d'une manière prompte et conséquente.

Le programme de participation du public de Coastal GasLink vise notamment les objectifs suivants :

- recenser les parties prenantes éventuelles et déterminer la nature de leurs intérêts;
- fournir des renseignements exacts et véridiques, en temps opportun, pour favoriser une participation avisée, valable et efficace du public;

- renseigner le public sur la nécessité du projet, les processus d’approbation, les méthodes de construction et les effets éventuels;
- faire en sorte que les parties prenantes sachent de quelle façon elles peuvent participer au processus de réglementation (par exemple, les processus d’approbation de la BC EAO, de l’ACEE et de la BC OGC);
- garantir que tous les documents et les supports de communication sont cohérents, explicites et compréhensibles;
- offrir aux parties prenantes divers moyens de participer au processus;
- s’assurer de cerner et de comprendre les enjeux et les sujets de préoccupation des parties prenantes, et en tenir compte dans la conception et l’exécution du projet, comme il convient;
- veiller à ce que les parties prenantes sachent comment leurs avis ont façonné la conception du projet ou influé sur celle-ci.

9.0 CONCLUSION

Coastal GasLink a le plaisir de soumettre la présente description de projet afin d’amorcer le processus d’approbation de ce projet important pour la Colombie-Britannique et le Canada. Le projet amènera des retombées économiques dans la province et le Canada, et tout particulièrement dans les collectivités à proximité desquelles il sera situé. Coastal GasLink est déterminée à établir des rapports fructueux avec les collectivités autochtones intéressées, ainsi qu’avec les propriétaires fonciers, les municipalités et les autres parties prenantes le long du tracé, afin de garantir qu’il soit bien tenu compte de leurs intérêts au cours de la planification du projet. Tout au long du cycle de vie du projet, Coastal GasLink mènera ses activités dans le plus grand respect de l’environnement.