

Coastal GasLink
Pipeline Project

Executive Summary

CGL-4703-CGP-EN-RP-001

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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.
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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.

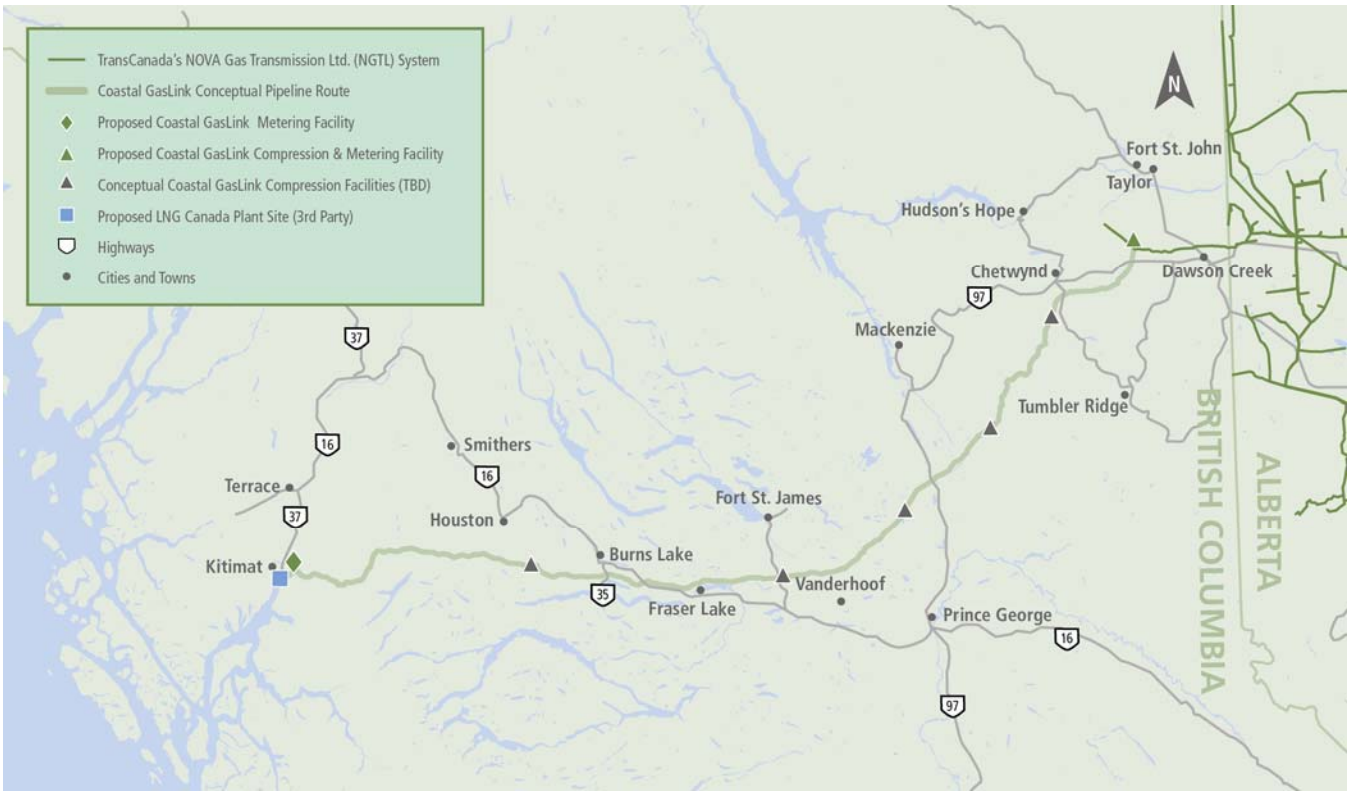

Figure 3-1: Coastal GasLink Conceptual Corridor

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 were 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 (SO_2), 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 (*Wilsonia canadensis*)	Coastal Tailed Frog (*Ascaphus truei*)
Common Nighthawk (*Chordeiles minor*)	Western Toad (*Anaxyrus boreas*),
Olive-sided Flycatcher (*Contopus cooperi*),	Peregrine Falcon (*Falco peregrinus pealei*)
Peregrine Falcon (*Falco peregrinus anatum*)	Short-eared Owl (*Asio flammeus*)
Northern Goshawk (*Accipiter gentilis laingi*) ,	Western Screech-Owl (*Megascops kennicottii kennicottii*)
Marbled Murrelet (*Brachyramphus marmoratus*)	Band-tailed Pigeon (*Patagioenas fasciata*),
Woodland Caribou (*Rangifer tarandus*)	Rusty Blackbird (*Euphagus carolinus*
	Great Blue Heron (*Ardea herodias fannini*)
	Yellow Rail (*Coturnicops noveboracensis*).

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

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.

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.