

Energy East Pipeline Project

Project Description Volume 1

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Submitted to:
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LIST OF ACRONYMS

AANDC	Aboriginal Affairs and Northern Development Canada
AB	Alberta
AQHI	Air Quality Health Index
AQI	Air Quality Index
BAPE	Bureau d'audiences publique sur l'environnement
Cacouna tank terminal	Cacouna Energy East Tank Terminal
Canadian Mainline	TransCanada Mainline from Empress, AB to St. Lazare, QC, where it connects with the Trans Québec & Maritimes Pipeline Inc.
Canaport marine terminal	Canaport Energy East marine terminal
CEAA 2012	<i>Canadian Environmental Assessment Act, 2012</i>
CP	cathodic protection
CPCN	Certificate of Public Convenience and Necessity
CPTAQ	Commission de protection du territoire agricole
CSSC	Canadian System of Soil Classification
conversion segments	Prairie, Ontario West, Northern Ontario, and North Bay Shortcut segments of the Energy East Mainline
DFO	Fisheries and Oceans Canada
EMRB	Environmental Monitoring and Reporting Branch
Energy East	Energy East Pipeline Ltd.
Energy East Mainline	Proposed oil pipeline from Hardisty, AB to Saint John, NB comprised of eight mainline segments – Alberta, Prairie, Ontario West, Northern Ontario, North Bay Shortcut, Ontario East, Québec, and New Brunswick.
EOC	Emergency Operations Center
EPRP	emergency preparedness and response
ESA	Environmental and Socio-Economic Assessment
ESD	emergency shutdown
FTE	full time equivalent
ha	hectare
Hardisty tank terminal	Hardisty D Energy East Tank Terminal
HDD	horizontal directionally drilled
HSE	Health, Safety and Environment
IBA	Important Bird Area
IMO	International Maritime Organization

Irving Oil	Irving Oil Limited
km	kilometre
laterals	Cromer, Montréal and Lévis pipelines to the Energy East Mainline
LAA	Local Assessment Area
LNG	liquefied natural gas
m	metre
MB	Manitoba
MDDEFP	Ministère du Développement durable, de l'Environnement, de la Faune et des Parcs
mm	millimetre
Moosomin tank terminal	Moosomin Energy East Tank Terminal
MOP	maximum operating pressure
MPMO	Major Projects Management Office
new mainline	Alberta, Ontario East, Québec, and New Brunswick segments of the Energy East Mainline
NB	New Brunswick
NEB	National Energy Board
NEB Act	<i>National Energy Board Act</i> , as amended
North Bay Shortcut	Canadian Mainline Line 1200-2
Northern Ontario Line	Canadian Mainline Lines 100-3 and 100 -4
NPS	nominal pipe size
NS	Nova Scotia
OCC	Oil Control Center
OCC	Operations Control Centre
OCIMF	Oil Companies International Marine Forum
OEB	Ontario Energy Board
OHF	Oil handling facility
OMNR	Ontario Ministry of Natural Resources
ON	Ontario
OPR	<i>National Energy Board Onshore Pipeline Regulations</i>
OWES	Ontario Wetland Evaluation System
PA	Public Awareness Program
PDA	Project Development Area
PFP	Participant Funding Program

Project	Energy East Project
PNA	Protected Natural Area
QC	Québec
RAA	Regional Assessment Area
RCM	Regional County Municipalities
ROW	right-of-way
S₀₂	sulphur dioxide
Saint John marine terminal	Saint John Energy East Marine Terminal
Saint John tank terminal	Saint John Energy East Tank Terminal
SARA	<i>Species at Risk Act</i>
SCADA	supervisory control and data acquisition system
SESAA	Southeast Saskatchewan Airshed Association
SK	Saskatchewan
TAP	Tanker Acceptance program
TERMPOL	Technical Review Process of Marine Terminal Systems and Transshipment Sites
TK	traditional knowledge
TLU	traditional land use
TransCanada	TransCanada PipeLines Limited
TRS	total reduced sulphur
TWS	temporary workspace
UDA	Groupe Conseil UDA inc.
US	United States
WMA	Wildlife Management Area

1.0 INTRODUCTION

1.1 NAME AND NATURE OF PROJECT

Energy East Pipeline Ltd. (Energy East) proposes to construct and operate a 4,500 km oil pipeline system from Hardisty, Alberta (AB) to Saint John, New Brunswick (NB) to transport crude oil from Hardisty, AB and Moosomin, Saskatchewan (SK) to delivery points in Québec (QC) and NB (Energy East Project or the Project). The delivery points include three existing refineries in Eastern Canada and two new marine terminals, one at Cacouna, QC and the other at Saint John, NB, that will allow for the export of crude oil to international markets.

The Project is intended to transport up to 175,000 cubic metres per day (1.1 million barrels of crude oil per day) and is scheduled to be in-service by the end of 2018.

As proposed, the Project will require the acquisition of existing natural gas facilities from TransCanada PipeLines Limited (TransCanada) and the conversion of those facilities to oil service, in addition to new construction. While conversion is an essential component of the Project, the ability of TransCanada to meet its natural gas firm service commitments will be maintained.

This responsible approach limits potential environmental effects through the re-purposing of existing infrastructure while providing an integrated system through which Canadian crude oil can more readily reach new and existing markets in Canada and beyond.

1.2 INVESTING IN CANADA

According to an independent study, commissioned by TransCanada, the Energy East Project will have significant benefits for Canada.¹

The six-year development and construction phase of the Project will generate an estimated 10,000 direct full-time equivalent (FTE) jobs across the country, including 2,300 during the development period and 7,700 during the construction period. The 40-year operations phase is expected to sustain 1,000 full time jobs across Canada, all directly related to the pipeline's operation. Thousands of indirect and induced jobs are also expected to be generated by the Project across all provinces along the route.

¹ *Energy East – The Economic Benefits of TransCanada's Canadian Mainline Conversion Project*, Deloitte & Touche LLP and affiliated entities, September 2013, <http://www.energyeastpipeline.com/benefits/by-province/>

Energy East will generate an estimated \$10 billion in additional gross domestic product for the Canadian economy during the six-year development and construction phase and \$25.3 billion during the 40-year operations phase.

In addition, the Project will connect a secure supply of crude oil from Western Canada to refineries and terminals in Eastern Canada, reducing Canada's reliance on imported oil from overseas.

1.3 PROJECT NEED

The Project is proposed in response to significant commercial demand by Western Canadian producers to improve access to markets in Eastern Canada and offshore markets. This demand was tested in an open season in 2013 which resulted in long term shipping commitments of approximately 143,000 cubic metres per day (900,000 barrels per day) of service.

Eastern Canadian refineries will benefit from the Project due to access to lower cost feedstock, a stable and long term supply of crude oil and increased negotiating power for long term crude oil supply contracts. Access to Western Canadian crude oil will help to maintain the competitiveness of this industry which is a significant employer in regions where this activity occurs. By improving takeaway capacity and market diversification for Western Canadian crude oil, the Project will improve the pricing producers receive for their product, thereby improving the competitiveness of this important segment of the Canadian economy.

1.4 PROJECT PROPONENTS

The Project will be constructed and owned by Energy East Pipeline Ltd., a wholly owned subsidiary of TransCanada Oil Pipelines (Canada) Ltd., as general partner on behalf of:

- Energy East Pipeline Limited Partnership in respect of all aspects of the pipeline system other than the new marine terminal in Saint John, NB (Saint John marine terminal)
- Energy East Canaport Marine Terminal Limited Partnership in respect of the Saint John marine terminal

TransCanada Oil Pipelines (Canada) Ltd. is a limited partner of TransCanada.

TransCanada will operate the Project on behalf of Energy East pursuant to an agreement with Energy East, except for the jetty facilities at the Saint John marine terminal for which the operator will be a subsidiary of Irving Oil Limited (Irving Oil).

1.4.1 TransCanada

TransCanada is a leader in the responsible development and reliable operation of North American energy infrastructure, including:

- natural gas pipelines
- oil pipelines
- power generation
- gas storage facilities

With more than 60 years of experience building pipelines safely and reliably, TransCanada has an established track record for operational excellence and has developed and maintained relationships with landowners, Aboriginal communities and stakeholders across its entire pipeline system.

TransCanada's network of approximately 68,500 km wholly owned and 11,500 km partially owned pipelines connect virtually every major natural gas supply basin and market, transporting approximately 20% of the gas consumed in North America.

TransCanada's existing Keystone Pipeline System is a 4,250 km crude oil pipeline system, beginning in Hardisty, AB and extending south to the United States (US) Midwest and Gulf Coast. The pipeline system currently has the capacity to deliver up to 94,000 cubic metres per day (590,000 barrels per day) of Canadian crude oil into North American refining markets. Since 2010, the pipeline has safely delivered over 87 million cubic metres (550 million barrels) of crude oil to the US Midwest.

TransCanada also owns and operates Marketlink, LLC. Marketlink allows customers to transport crude oil from the market hub at Cushing, Oklahoma to the Gulf Coast refining market on facilities that form part of the Keystone Pipeline System.

1.4.2 Irving Oil Limited

Founded in 1924, Irving Oil is a family-owned and privately-held energy processing, transporting, and marketing company headquartered in Saint John, NB.

Irving owns and operates the largest oil refinery in Canada. Located southeast of Saint John, the Irving Oil refinery produces more than 48,000 cubic metres (300,000 barrels) of energy products per day. The refinery is currently supplied with crude oil delivered primarily by oil tanker to Irving's Canaport deep-water marine terminal. It is served by the Canaport crude oil receiving terminal, which was constructed for crude oil in 1970.

Adjacent to Irving Oil's crude oil receiving is the Canaport LNG facility, which is a joint venture partnership between Irving Oil and Repsol. This LNG facility, which has been in operation since 2009, has a maximum send-out capacity of 28 million cubic metres (1.2 billion cubic feet) of natural gas per day.

1.5 COMPREHENSIVE NEB FILING

The Energy East Project is a federal work and undertaking subject to the regulatory jurisdiction of the National Energy Board (NEB). The Project will be subject to NEB regulation for its entire life cycle, from planning and design, through construction and operation, to abandonment.

TransCanada and Energy East expect to file a comprehensive application in third quarter 2014 for a Certificate of Public Convenience and Necessity (CPCN) and various other approvals under the *National Energy Board Act* (NEB Act) to:

- transfer existing natural gas assets from TransCanada to Energy East
- convert the transferred TransCanada assets to oil transportation service
- construct new oil transportation facilities
- operate converted and new oil transportation facilities as an integrated oil pipeline system
- charge a fee for oil transportation services according to a tolling methodology and tariff

1.6 TRANSFER OF EXISTING GAS ASSETS FOR CONVERSION TO OIL SERVICE

TransCanada owns and operates the Canadian Mainline natural gas pipeline system. The Canadian Mainline has transported natural gas from Western Canada to Eastern Canada for over 55 years.

As part of this Project, portions of the Canadian Mainline from Burstall, SK to Iroquois, ON will be transferred from TransCanada to Energy East, including:

- Prairies Section – Line 100-4
- Northern Ontario Line – Line 100-4 and portions of Line 100-3
- North Bay Shortcut – Line 1200-2

TransCanada will continue to meet its firm service natural gas transportation obligations. This includes new firm service requirements from a new capacity open season that closed on January 15, 2014 for service commencing on November 1, 2016. While firm requirements can be met on the Prairies section and the Northern Ontario Line after the transfer with the facilities that will remain in gas service, some additional capacity will be required to meet firm requirements in the Eastern Triangle portion of the Canadian Mainline.

Accordingly, TransCanada has begun preliminary work for a project to loop up to approximately 370 km of 914 mm (NPS 36) pipe of the Canadian Mainline between Markham, ON and Iroquois, ON, and to provide for additional compression at existing TransCanada compressor stations.

TransCanada will seek regulatory approval for the gas facilities through a separate application to the NEB in third quarter 2014. A Project Description for the new gas facilities is expected to be submitted to the NEB in first quarter 2014.

1.7 FEDERAL ENVIRONMENTAL ASSESSMENT

An environmental assessment of the Energy East Project is required under both the NEB Act and the *Canadian Environmental Assessment Act* (CEAA 2012). The scope of that assessment is set out in Volume 2, Section 1.2, of this Project Description.

1.7.1 Provincial Assessments and Processes

As a federal work and undertaking subject to the regulatory jurisdiction of the NEB, the Project is not subject to environmental assessment under provincial legislation. However, and notwithstanding federal jurisdiction, Energy East may choose to engage provincial assessment processes or participate in provincial consultative processes for aspects of the Project to enhance engagement and facilitate provincial and other stakeholder participation in the NEB process.

For example, in QC, Energy East intends to take the necessary steps to engage two processes established under provincial legislation:

- environmental assessment, which Energy East expects will include a public hearing process conducted by the Bureau d'audiences publique sur l'environnement (BAPE) under the *Environmental Quality Act*
- consideration of the use and the acquisition of rights to agricultural land by the Commission de protection du territoire agricole (CPTAQ) under *An Act Respecting the Preservation of Agricultural Land and Agricultural Activities* and *An Act Respecting the Acquisition of Farm Land by Non-Residents*

Another example is ON, where the Minister of Energy has asked the Ontario Energy Board (OEB) to prepare a report on Project impacts for Ontario, including on natural gas consumers in terms of rates, reliability and access to supply, the natural environment and pipeline safety, local and Aboriginal communities, and the short and long term economy. The report will be informed by the information and perspectives received from Aboriginal groups, community members, province-wide stakeholder groups and industrial natural gas consumers during an OEB public consultation process, which is currently underway, and will be used by Ontario in determining its position on the Project. The report is expected to be filed with the Minister in summer 2014. TransCanada and Energy East will participate in the public consultation and information gathering process, as appropriate.

1.7.2 TERMPOL Review

In addition to federal authorizations, Energy East has voluntarily initiated the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) review process for the Cacouna Energy East marine terminal (Cacouna marine terminal) and Canaport Energy East marine terminal (Canaport marine terminal) and the associated marine shipping activities. Energy East intends to submit the final TERMPOL report to the NEB for its consideration as part of Energy East regulatory review process.

1.7.3 Marine Shipping

Marine shipping activities are an integral part of the Project. These activities are governed under the *Canada Shipping Act* and related legislation and regulations administered by Transport Canada and the Canadian Coast Guard. All vessels calling at the Saint John and Cacouna marine terminals will be required to comply with these regulations.

Transport Canada's regulations and standards, under the *Canada Shipping Act, 2001* and the *Arctic Waters Pollution Prevention Act*, combined with international conventions and standards established by the International Maritime Organization (IMO), provide the framework for marine safety, pollution prevention, enforcement, and oil spill preparedness.

1.7.4 Other Permits and Approvals

In addition to approvals under the NEB Act, permits and approvals may be required under other, applicable federal and provincial legislation. These are further described in Section 6.0 of this PD.

1.8 REGULATORY PURPOSE AND SCOPE OF THE PROJECT DESCRIPTION

This Project Description was prepared to engage and support the environmental assessment process and in anticipation of the submission of the comprehensive application to the NEB. It is presented in two volumes and describes the Project in accordance with the guidance provided on the NEB's website,² the Major Projects Management Office's (MPMO) *Guide to Preparing a Project Description for a Major Resource Project*, and the *Prescribed Information for the Description of a Designated Project Regulation* enacted under CEAA 2012. It is intended to:

- facilitate an efficient regulatory review of the Project by the NEB
- facilitate determination of the scope of the Project, as well as the scope and type of assessment required pursuant to the NEB Act and CEAA 2012

² <http://www.neb-one.gc.ca/clf-nsi/rpblctn/ctsndrgltn/rrggnmgpnb/prpplctnprjctdscripn-eng.html>

- provide the Crown with sufficient information to begin consultation with Aboriginal communities that might potentially be affected by the Project
- provide the NEB with sufficient information to initiate its Participant Funding Program (PFP), Enhanced Aboriginal Engagement, and public consultation activities
- inform other regulatory authorities, Aboriginal communities, landowners, and stakeholders

1.9 PRELIMINARY PROJECT SCOPE

The preliminary scope of the Project includes the following:

- converting approximately 3,000 km of up to 1067 mm (NPS 42) of existing gas pipelines and appurtenances to oil service
- constructing new mainline pipe segments totalling approximately 1,500 km of up to 1067 mm (NPS 42) pipe
- installing laterals and terminal interconnection pipelines

Related components will also be required, including:

- oil storage tanks and custody transfer metering
- pump stations
- delivery meter stations
- mainline block valve sites (also known as shut-off valves)
- pressure control facilities
- facilities for marine tanker loading at Cacouna, QC and in Saint John, NB

The final scope of the Project will reflect progress in ongoing design and construction planning, as well as engagement with Aboriginal communities, stakeholders and applicable government agencies.

Figure 1-1 is an overview map of the Project and TransCanada's existing oil pipelines.

At this stage in project planning, approximately 3,600 km of the proposed pipeline length is projected to be located either within existing rights-of-way (ROW) or alongside existing linear disturbances such as pipelines, railways, roads, and electrical power lines. The remaining length, or about 984 km, is projected to be installed in new ROW, where existing pipeline ROW or linear disturbances are either not present or could not be paralleled due to constructability and other considerations.

Temporary infrastructure such as access roads, construction camps, stockpile sites and contractor yards will be required during construction. New permanent access roads will also be needed for pipeline and terminal operations. New electrical power lines will be required to operate most of the new pump stations, tank terminals,

marine terminals and valve sites. These power lines will be constructed, owned and operated by third-party power providers.

1.9.1 Energy East Pipeline

The Energy East Pipeline is divided into eight mainline segments that together total approximately 4,500 km (Energy East Mainline). These mainline segments are subdivided into a total of 71 sections that are each named for the corresponding upstream pump station.

Table 1-1 provides a breakdown between the segments and their sections.

Table 1-1: Pipeline Segments and Sections along the Energy East Mainline

Mainline Segment Names	Mainline Section Names	Province
Energy East Mainline – Alberta Segment ¹	Hardisty, Lakesend, Monitor, Oyen, and Cavendish	AB, SK
Energy East Mainline – Prairie Segment ²	Liebenthal, Cabri, Stewart Valley, Herbert, Chaplin, Caron, Belle Plaine, Regina, Kendal, Grenfell, Whitewood, Moosomin	SK
	Crandall, Rapid City, Wellwood, Portage La Prairie, Oakville, Ile Des Chênes, Spruce	MB
Energy East Mainline – Ontario West Segment ³	Falcon Lake, Kenora, Vermilion Bay, Dryden, Ignace, Martin, Upsala, Dog River, Eagle Head, Nipigon, Jellicoe	MB, ON
Energy East Mainline – Northern Ontario Segment ³	Geraldton, Klotz Lake, Hearst, Calstock, Mattice, Kapuskasing, Smooth Rock Falls, Potter, Ramore, Kirkland Lake, Halleybury, Marten River	ON
Energy East Mainline – North Bay Shortcut Segment ³	North Bay, Mattawa, Deux Rivières, Pembroke Renfrew, Stittsville	ON
Energy East Mainline – Ontario East Segment ¹	Iroquois, Alexandria	ON
Energy East Mainline – Québec Segment ¹	Lachute, Maschouche, Maskinonge, Saint-Maurice, Donnacona, Lévis, Cap Saint Ignace, Rivières Ouelle, Cacouna, Saint Honore, Degelis	QC
Energy East Mainline – New Brunswick Segment ¹	Grand Falls, Plaster Rock, Napadogan, Cumberland, Hampton	NB
<p>Note:</p> <ol style="list-style-type: none"> 1. New mainline segment. 2. The Prairie segment of the Energy East Mainline extends to the existing Spruce pump station. The Prairie Section of the Canadian Mainline extends to the Ile des Chene pump station, where it connects to the Great Lakes Gas Transmission system (see Figure 2-3). 3. Conversion segments (i.e., Ontario West, Northern Ontario and Ontario East). 		

1.10 ENVIRONMENTAL ASSESSMENT

This Project Description provides a summary of the biophysical and socio-economic baseline features and potential interactions of the Project. The methodology that is

being used for the environmental and socio-economic assessment (ESA) is also provided. See Volume 2, Section 1.0, of this Project Description.

1.10.1 Scope of Project and Scope of Assessment

The following physical works and activities will be included within the scope of the Project for the purpose of environmental assessment pursuant to the requirements of the NEB Act and CEEA 2012:

- construction and operation of approximately 1,500 km of new mainline pipe and related facilities, including:
 - pipeline valves
 - launcher and receiver facilities
 - cathodic protection (CP)
 - communication and control systems
- conversion and operation of approximately 3,000 km of existing natural gas pipelines to oil service from gas service, including the installation of new and refurbished facilities required for liquid operations
- construction and operation of pipeline laterals, terminal interconnections and delivery meter stations
- construction and operation of storage tank terminals and ancillary facilities at:
 - Hardisty, AB
 - Moosomin, SK
 - Cacouna, QC
 - Saint John, NB
- construction and operation of approximately 72 pump stations from Hardisty, AB to Saint John, NB
- construction and operation of marine terminals at Cacouna, QC and Saint John, NB, including mooring and loading facilities
- marine shipping to and from Cacouna, QC and Saint John, NB
- construction and use of permanent access roads for valve sites, pump stations, tank terminals and marine terminals
- construction-related temporary infrastructure, such as:
 - access (e.g., roads, travel lanes and shooflies)
 - pipe and equipment storage sites
 - contractor offices and yards
 - construction camps
- potential deactivation and/or decommissioning of Canadian Mainline facilities that will not be required for oil or gas service in the near to medium term, after conversion
- future decommissioning and abandonment activities

Construction and operation of new power lines and interconnects might be required to supply or augment existing power to pump stations, tank terminals, marine terminals and valve sites. These facilities are distinct physical works that will generally be constructed and operated by third parties and will be subject to provincial regulatory regimes distinct from those governing the proposed construction and operation of the Project. Accordingly, such third-party physical works should be considered only in the context of the cumulative effects assessment.

The factors to be considered in relation to these Project components will be determined by and will reflect the requirements of both the NEB Act and CEAA 2012.

1.11 CROWN CONSULTATION WITH ABORIGINAL COMMUNITIES

Energy East respects the legal and constitutional rights of Aboriginal communities, and recognizes that its relationships with Aboriginal communities are separate and different from the relationships that those communities have with the Crown.

To the extent that the Project triggers the need for Crown consultation with Aboriginal communities, it is critical that such consultation be initiated and completed in a timely way. A key objective of this document is to enable the Crown to begin any necessary consultation as soon as possible.

1.12 PARTICIPANT FUNDING PROGRAM

The Project will require a public hearing under the NEB Act and will trigger the NEB-administered PFP. This program helps fund timely and meaningful participation by eligible parties, such as individuals, landowners and Aboriginal groups, in the NEB's oral hearing process for facility applications.³

Given the nature and number of steps that will be required to complete the Participant Funding Program (PFP), Energy East requests that the NEB's public announcement of PFP availability is made within two months of this Project Description filing, consistent with the timing that the Board used for other recent NOVA Gas Transmission Ltd. applications for a CPCN under the NEB Act.⁴

³ See the *Guide to the National Energy Board Participant Funding Program under the National Energy Board Act*, as revised.

⁴ Refer to the NEB's PFP availability announcements for the North Montney Project (NEB Filing ID: A55180, A55183, A55184) and for the Northwest Mainline Expansion and Leismer to Kettle River Crossover projects (NEB Filing ID: A1X3Y5 and A1X2D4).

1.13 PROPONENT CONTACT INFORMATION

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Figure 1-1: Overview Map of Proposed Project and Existing TransCanada Oil Pipelines

2.0 PROJECT INFORMATION

2.1 MAIN COMPONENTS AND STRUCTURES

2.1.1 Permanent Structures

The Project will have primary permanent facilities as follows:

- approximately 1,518 km of up to 1067 mm (NPS 42) new mainline pipe
- conversion of approximately 2,997 km of up to 1067 mm (NPS 42) segments of the Canadian Mainline from gas to oil service
- pipeline laterals and interconnections, including approximately:
 - 60 km of up to 508 mm (NPS 20) of pipeline between a proposed pump station and a tank terminal at Moosomin, SK (Cromer Lateral)
 - 20 km of up to 1067 mm (NPS 42) from the Project to an existing refinery in Montréal, QC (Montréal Lateral)
 - 10 km of up to 1067 mm (NPS 42) from the Project to an existing refinery in Lévis, QC (Lévis Lateral)
- approximately 10 km of up to 1219 mm (NPS 48) terminal interconnection pipe
- approximately 72 pump stations
- tank terminals at Hardisty, Moosomin, Cacouna and Saint John
- marine terminal and loading facilities at Cacouna, QC and Saint John, NB
- delivery meter stations at the termini of the Montréal and Lévis laterals
- pressure control facility near Burstall, SK, where a change in pipeline maximum operating pressure (MOP) occurs

Table 2-1 summarizes the main components of the Project. Appendix A provides a foldout map showing the pipeline route and main components

The main component locations for the Project are shown in the following figures:

- Figure 2-1 for the Alberta Segment
- Figure 2-2 for the Prairies Segment (Saskatchewan)
- Figure 2-3 for the Prairies Segment (Manitoba)
- Figure 2-4 for the Ontario West to Northern Ontario Segments
- Figure 2-5 for the Northern Ontario to Québec Segments
- Figure 2-6 for the Québec Segment including the Montréal and Lévis Laterals
- Figure 2-7 for the New Brunswick Segment

Table 2-1: Overview of Main Project Components

Component ¹	Alberta	Saskatchewan	Manitoba	Ontario	Québec	New Brunswick	Total
New Mainline Segments (km) ²	281	3	–	104	722	407	1518
Laterals and Interconnects (km)	–	2	58	0	35	5	100
Converted Pipeline Segments (km) ^{2,3}	–	610	450	1,918	–	–	2,997
Total Pipeline Length							4,615 ^{2,3}
No. of Pump Stations:	5	12	8	30	11	5	72
• Mainline	5	12	8	30	11	5	71
• Lateral	–	–	1	–	–	–	1
No. of Tank Terminals	1	1	–	–	1	1	4
No. of Marine Terminals	–	–	–	–	1	1	2
Note:							
1. Final pipeline routing and station quantities will be subject to engineering and environmental site evaluations, Aboriginal and stakeholder engagement, land acquisition and consultation with regulatory agencies.							
2. The numbers in this row have been rounded. See Table 4-2 for a detailed breakdown.							
3. Excludes piping around existing facilities							

2.1.2 Pipeline Components

Table 2-2 is an overview of the main pipeline components.

Table 2-2: Overview of Main Pipeline Components

Component ¹	Starting Point		End Point	
	Latitude	Longitude	Latitude	Longitude
Energy East Mainline – Alberta Segment	52°39'49"N	111°16'16"W	50°40'43"N	109°58'25"W
Energy East Mainline – Prairies Segment	50°40'47"N	109°58'36"W	49°43'38" N	95°9'12" W
Energy East Mainline – Ontario West Segment	49°43'38"N	95°9'12"W	46°22'39" N	79°28'16" W
Energy East Mainline – North Bay Shortcut Segment	46°22'39"N	79°28'16"W	44°53'15" N	75°17'38" W
Energy East Mainline – Ontario East Segment	44°53'22"N	75°17'42"W	45°29'45"N	74°24'08"W
Energy East Mainline – Québec Segment	45°29'45"N	74°24'08"W	47°33'17"N	68°23'00"W
Energy East Mainline – New Brunswick Segment	47°33'17"N	68°23' 00"W	45°13'32.03" N	65°59'44.69"W
Cromer Lateral	49°45'45"N	101°15'05"W	50°12'04"N	101°28'30"W
Montréal Lateral	45°46'38"N	73°31'37"W	45°38'59"N	73°32'23"W
Lévis Lateral	46°44'9"N	71°6'25"W	46°45'56"N	71°11'51 "W
Note:				
1. Final pipeline routing and station locations will be subject to engineering and environmental site evaluations, Aboriginal and stakeholder engagement, land acquisition and consultation with regulatory agencies.				

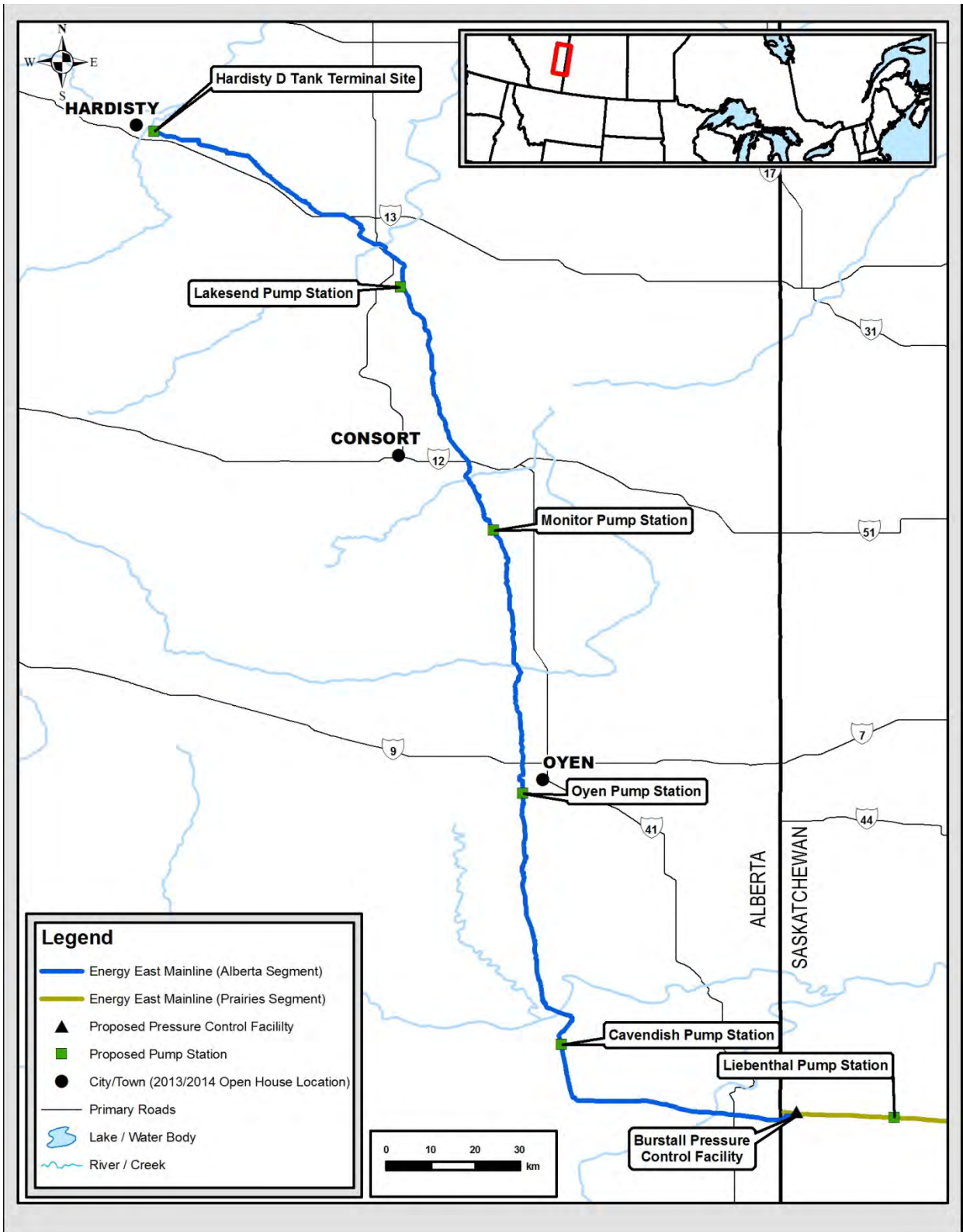


Figure 2-1: Location of Main Project Components – Alberta Segment

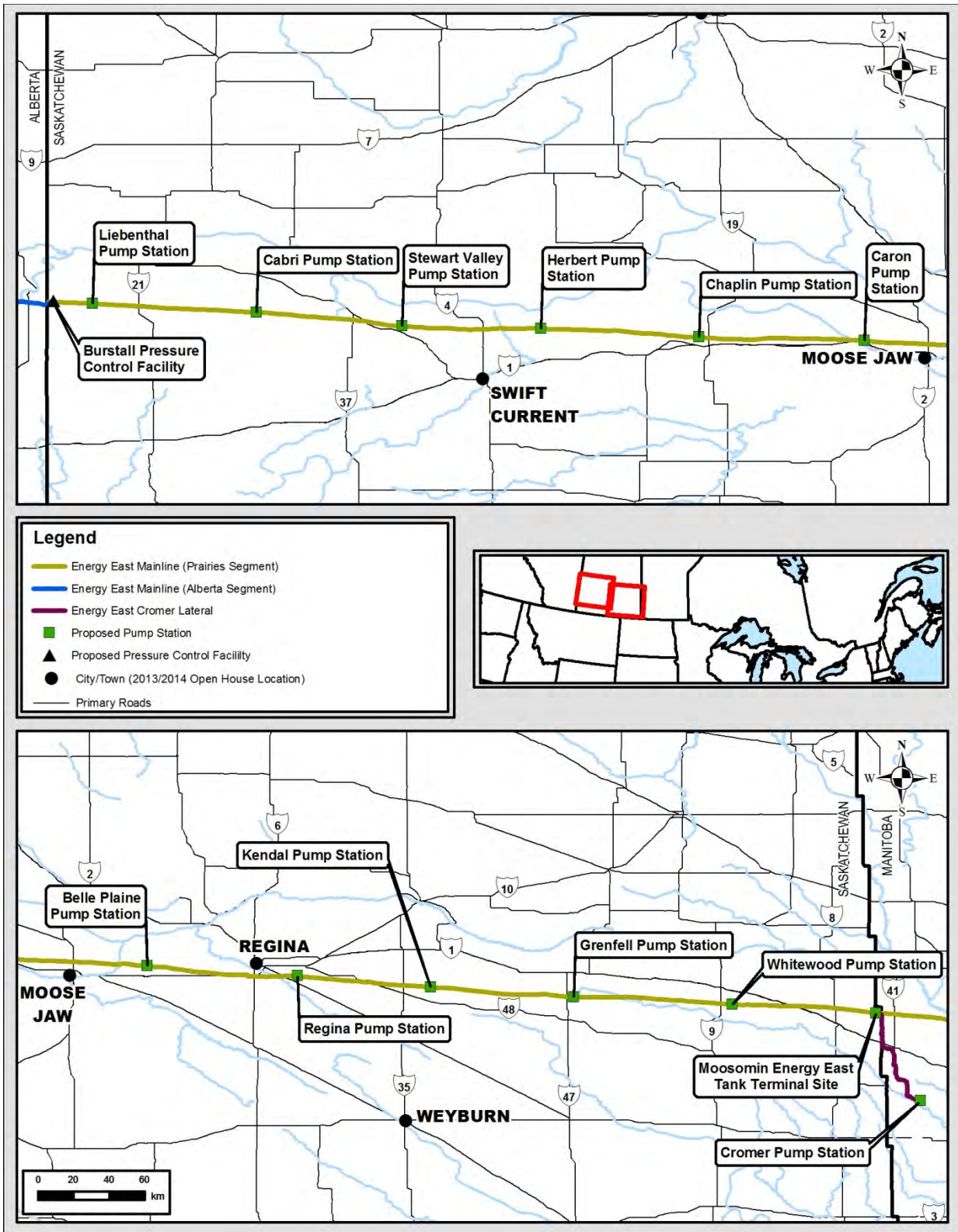


Figure 2-2: Location of Main Project Components – Prairies Segment (Saskatchewan)

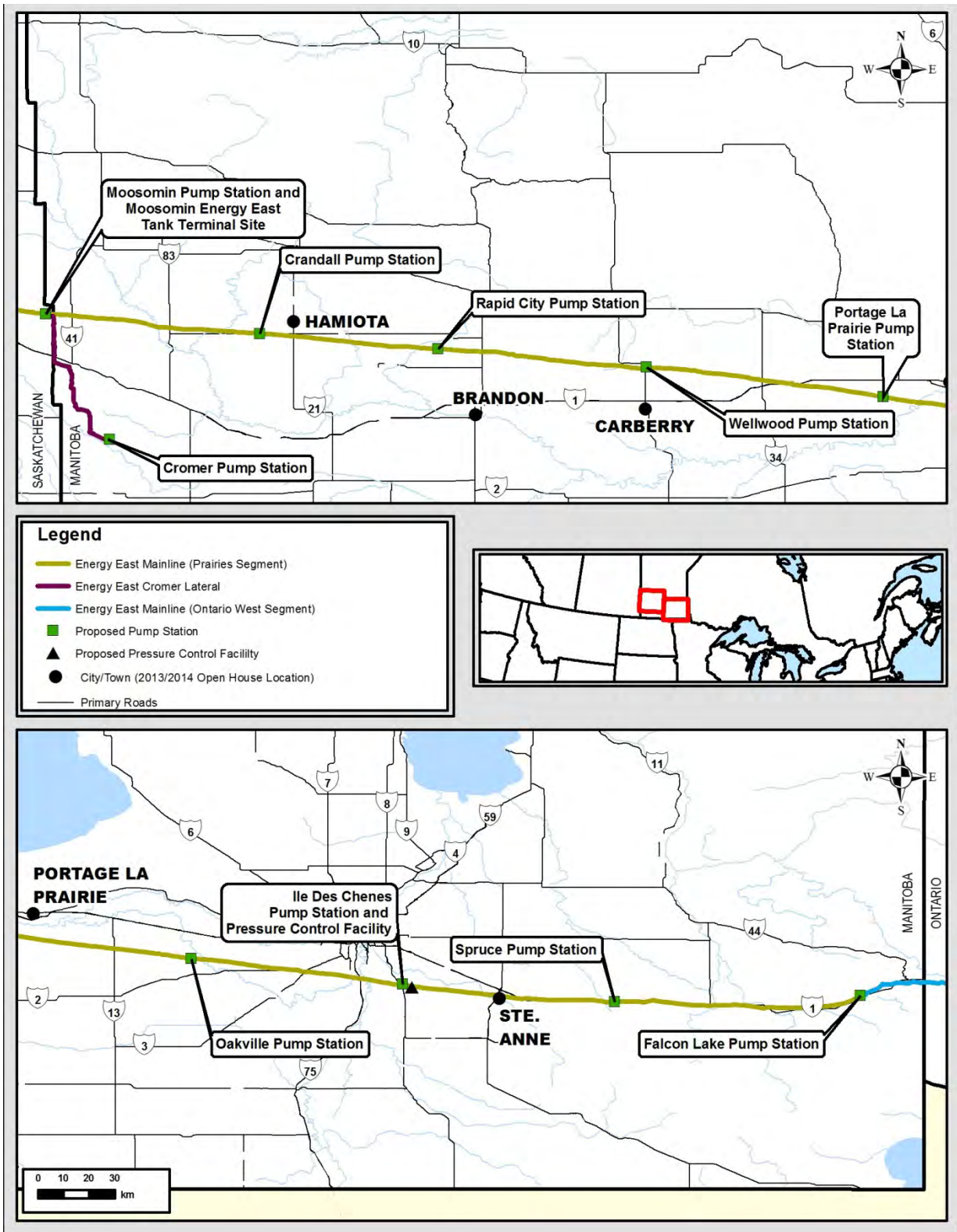


Figure 2-3: Location of Main Project Components – Prairies Segment (Manitoba)

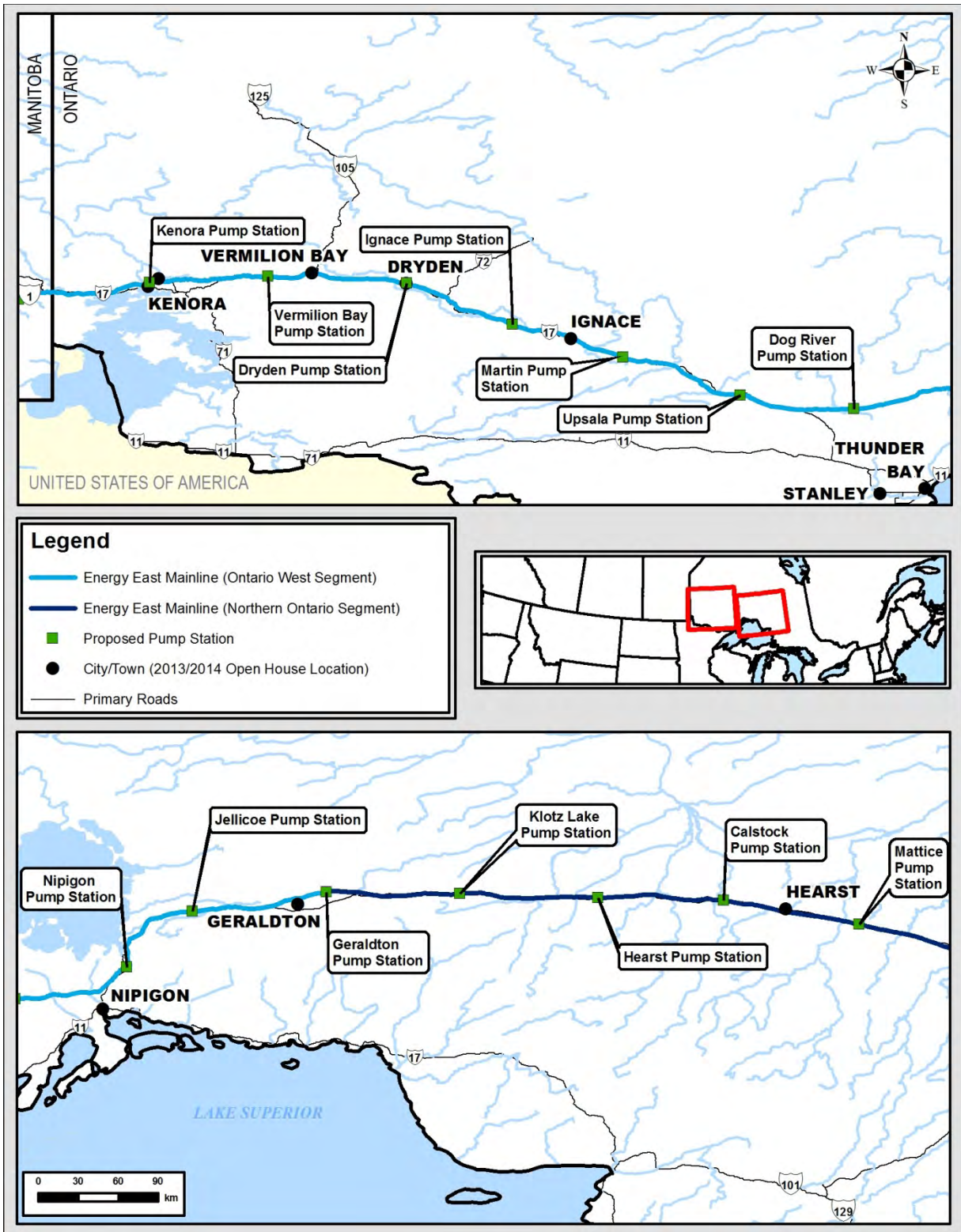


Figure 2-4: Location of Main Project Components – Ontario West and Northern Ontario Segments

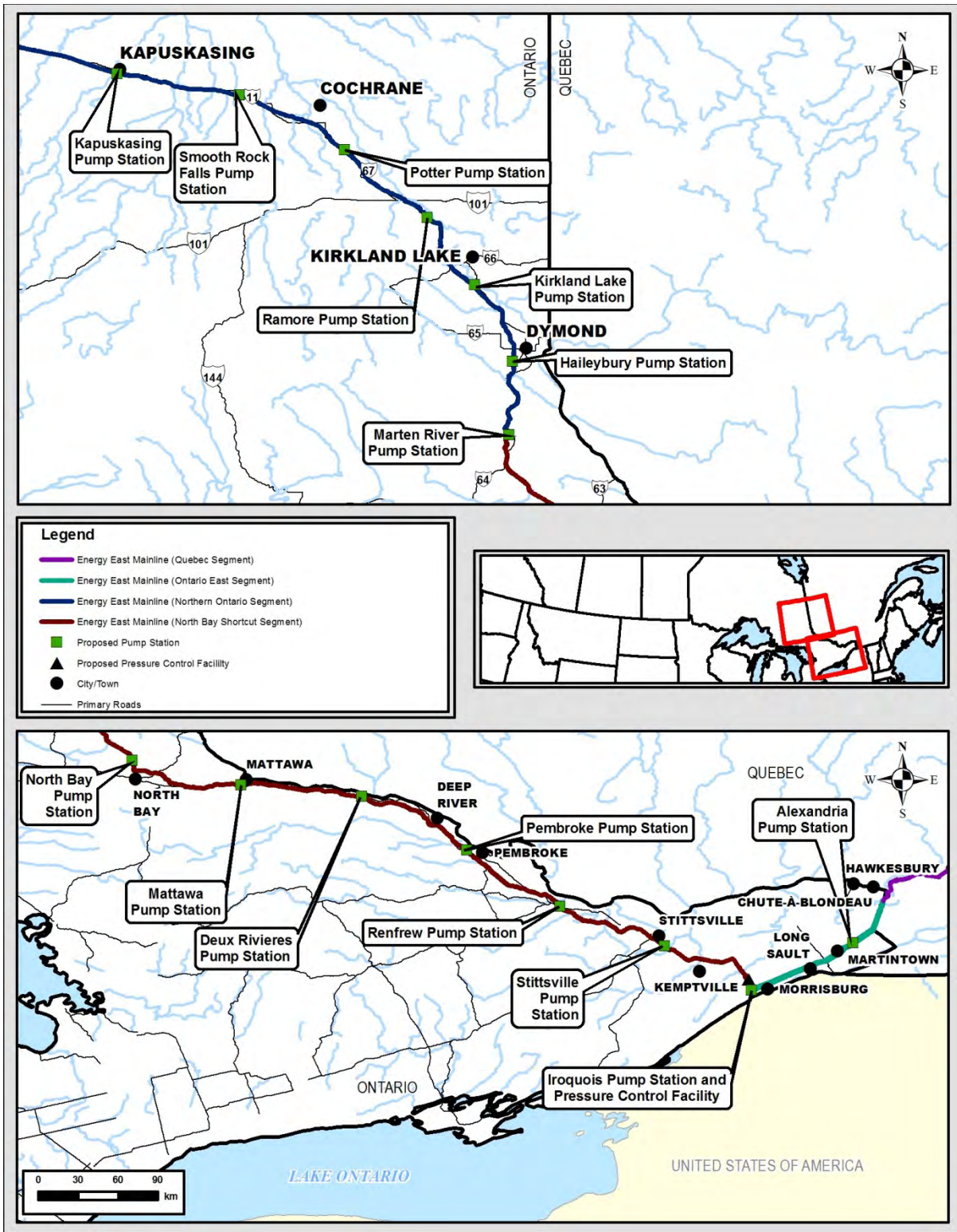


Figure 2-5: Location of Main Project Components – Northern Ontario to Québec Segments (including North Bay Shortcut and Ontario East Segments)

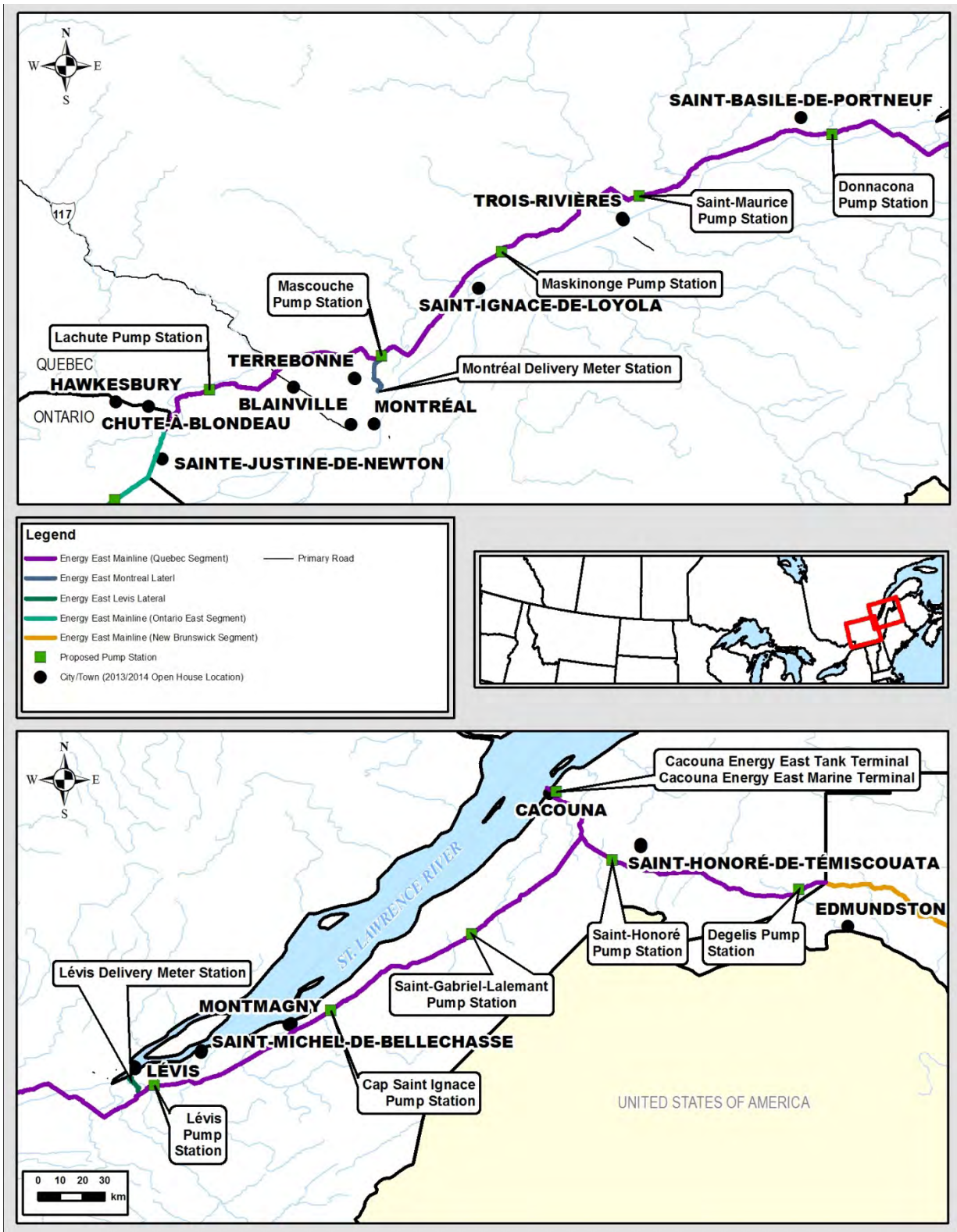


Figure 2-6: Location of Main Project Components – Québec Segment

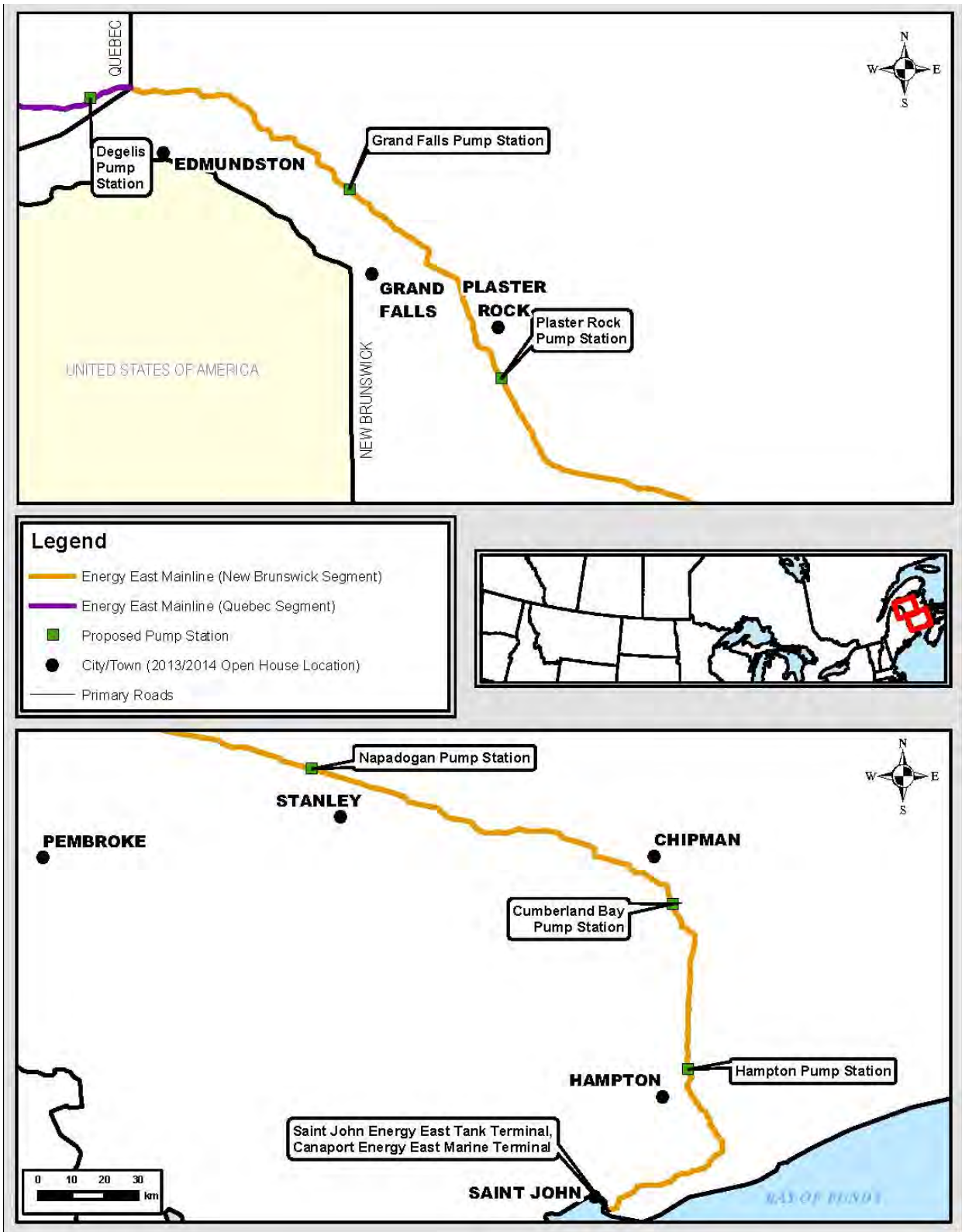


Figure 2-7: Location of Main Project Components – New Brunswick Segment

2.1.3 Pipeline Route Selection

The Project employs a systematic and thorough route selection process using a variety of tools, such as:

- desktop studies
- helicopter reconnaissance
- ground verification and field surveys
- engineering, geotechnical and environmental field studies

This route selection process carefully assesses the overall cost and constructability while taking into account the following:

- total route length
- meeting applicable regulatory requirements
- reducing the environmental footprint

Feedback through stakeholder and Aboriginal engagement programs will also be considered.

Parallel and New Right-of-Way

As shown on Table 2-3, the proposed route for new pipe parallels existing disturbances such as roads, railways, electrical transmission lines, oil and gas pipelines, and utility corridors for approximately 984 km of the total new mainline length of approximately 1,500 km. These previously disturbed areas will be used, where feasible, during construction.

Table 2-3: Summary of Approximate Parallel ROW Lengths

Province	Roads (km)	Railways (km)	Power Lines (km)	Pipelines (km)	Total (km) ¹
Alberta	0.7	0.1	5.1	227.5	233.4
Saskatchewan ²	0.1	0	0	0	0.0
Manitoba ²	2.7	0	0	4.6	7.3
Ontario	0.0	0.1	0.0	93.1	93.2
Québec	40.3	34.6	308.7	167.5	551.1
New Brunswick	1.0	0	98.1	0	99.1
Total	44.6	34.8	411.9	492.9	984.2
Note:					
1. These numbers have been rounded.					
2. These rows include the Cromer, Montréal and Lévis laterals.					

The following figures show the locations of the parallel and non-parallel ROW along the new mainline segments and laterals:

- Figure 2-8 – Alberta Segment
- Figure 2-9 – Cromer Lateral
- Figure 2-10 – Ontario East Segment
- Figure 2-11 – Québec Segment
- Figure 2-12 – New Brunswick Segment
- Figure 2-13 – Montréal and Lévis Laterals

The new ROW is required to:

- accommodate pipeline watercourse crossings
- reflect stakeholder, landowner and Aboriginal feedback
- avoid sensitive terrain and environmental areas
- address potential construction issues and requirements

New Mainline Routes

The Alberta Segment will generally parallel existing pipeline ROW from the Hardisty Energy East Tank Terminal (Hardisty tank terminal) to an interconnection with the existing Canadian Mainline near Burstall, SK, where the Prairie Segment begins.

The Ontario East Segment originates near Iroquois, ON, where the North Bay Shortcut Segment ends. From there, the proposed route parallels the Montréal line on the Canadian Mainline to a point near Cornwall, ON, where it heads in a northeasterly direction alongside an existing pipeline ROW, crossing the Rigaud River to the ON/QC border near St. Eugene, ON.

From the ON/QC border, the proposed Québec Segment route continues to parallel the ROW to Montréal, where it turns to the northeast and follows Highway 50 to Blainville, QC. It continues northeast from Blainville, following Highway 40 and existing ROW until it crosses the St. Lawrence River upstream of Québec City. If feasible, a trenchless crossing of the St. Lawrence River is anticipated. Once across, the route will continue to parallel the St. Lawrence River and Highway 20 to a point southeast of Rivière-du-Loup where it will turn northwest and head into the proposed Cacouna Energy East Tank Terminal (Cacouna tank terminal). From there, the route proceeds south-southeast to the QC/NB border.

The New Brunswick Segment takes a generally southeast route from the QC/NB border to the north of Grand Falls and Fredericton. From there, the route heads south to Saint John and ends at the Saint John tank and marine terminal.

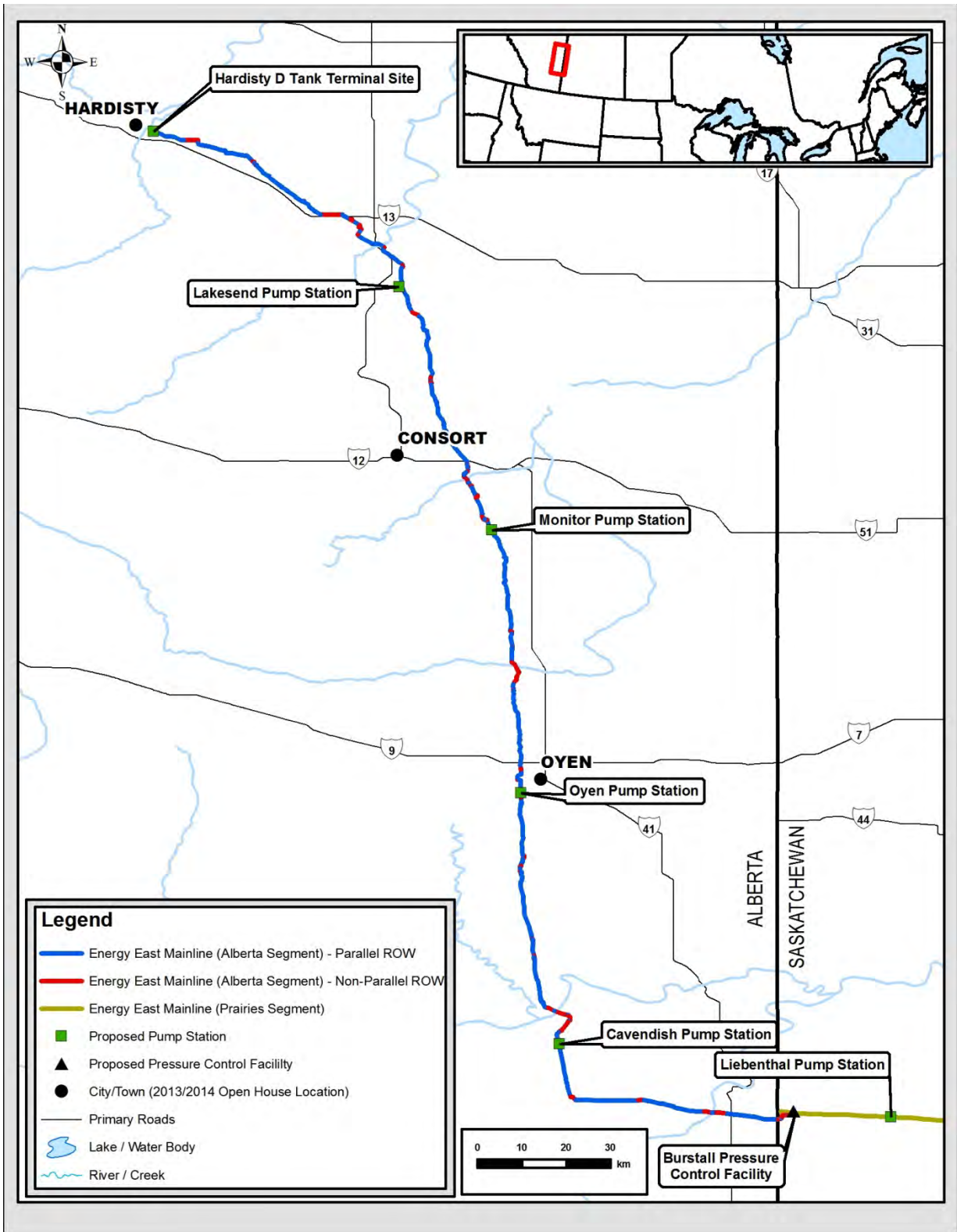
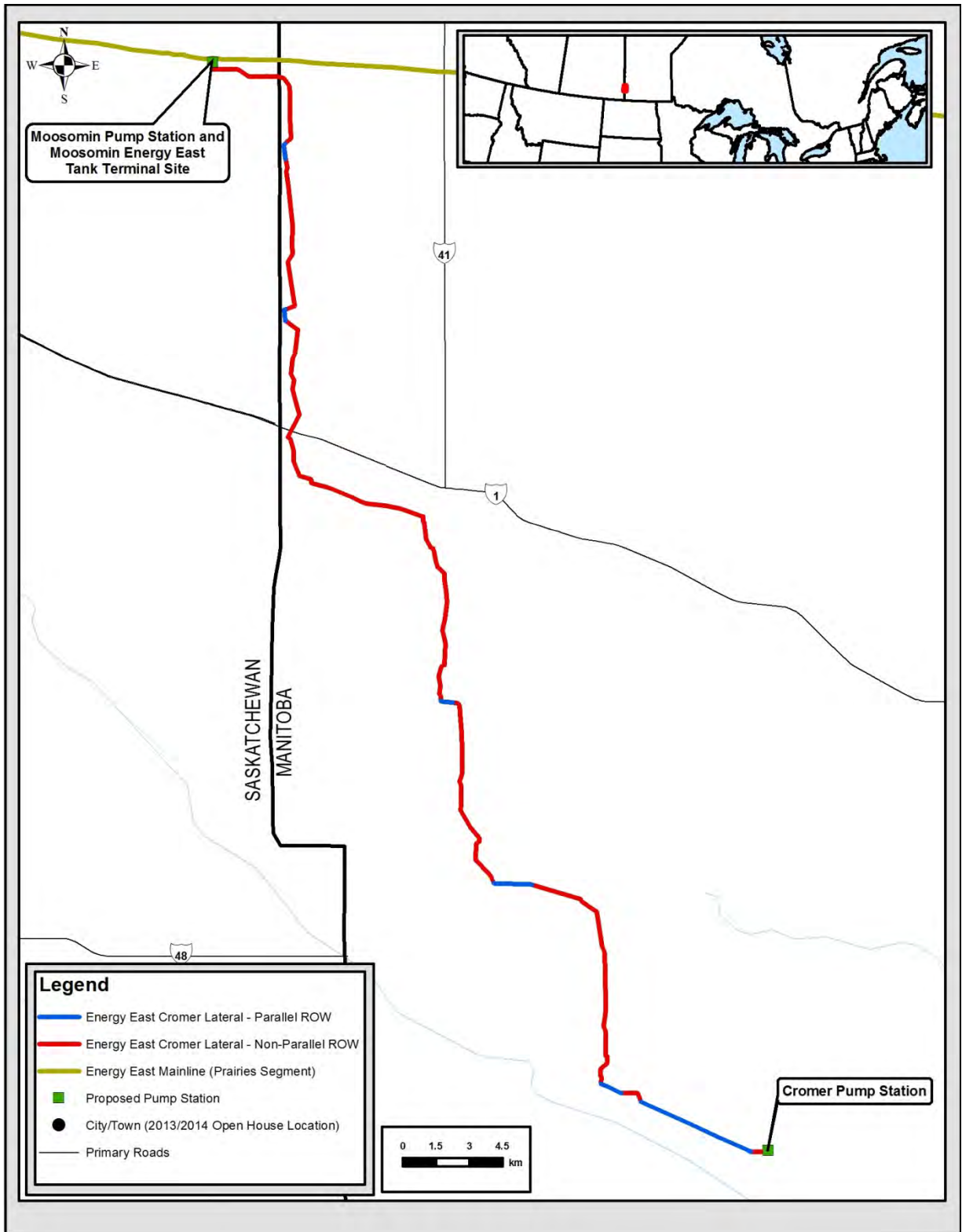


Figure 2-8: Parallel and Non-Parallel ROW – Alberta Segment



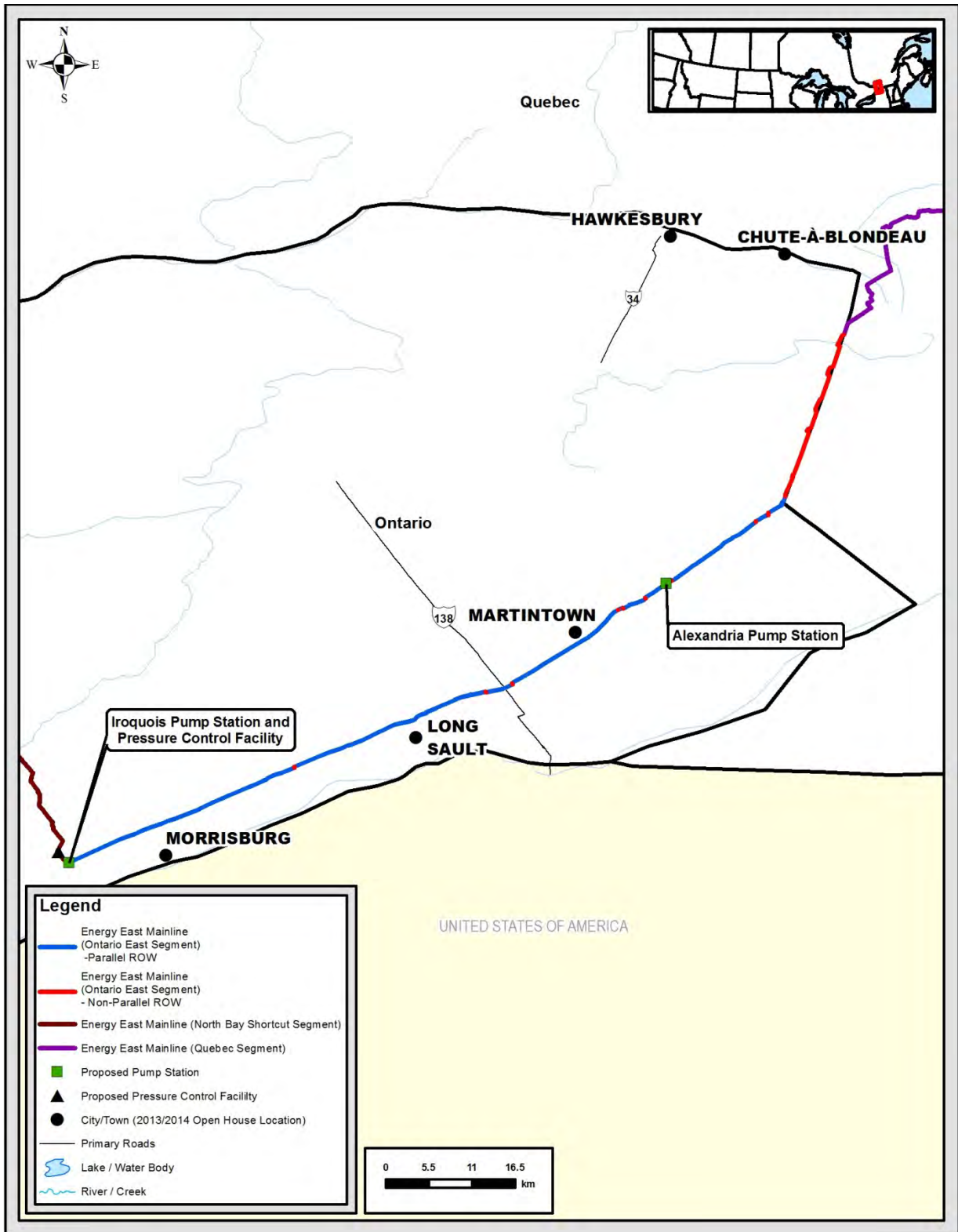


Figure 2-10: Parallel and New ROW – Ontario East Segment

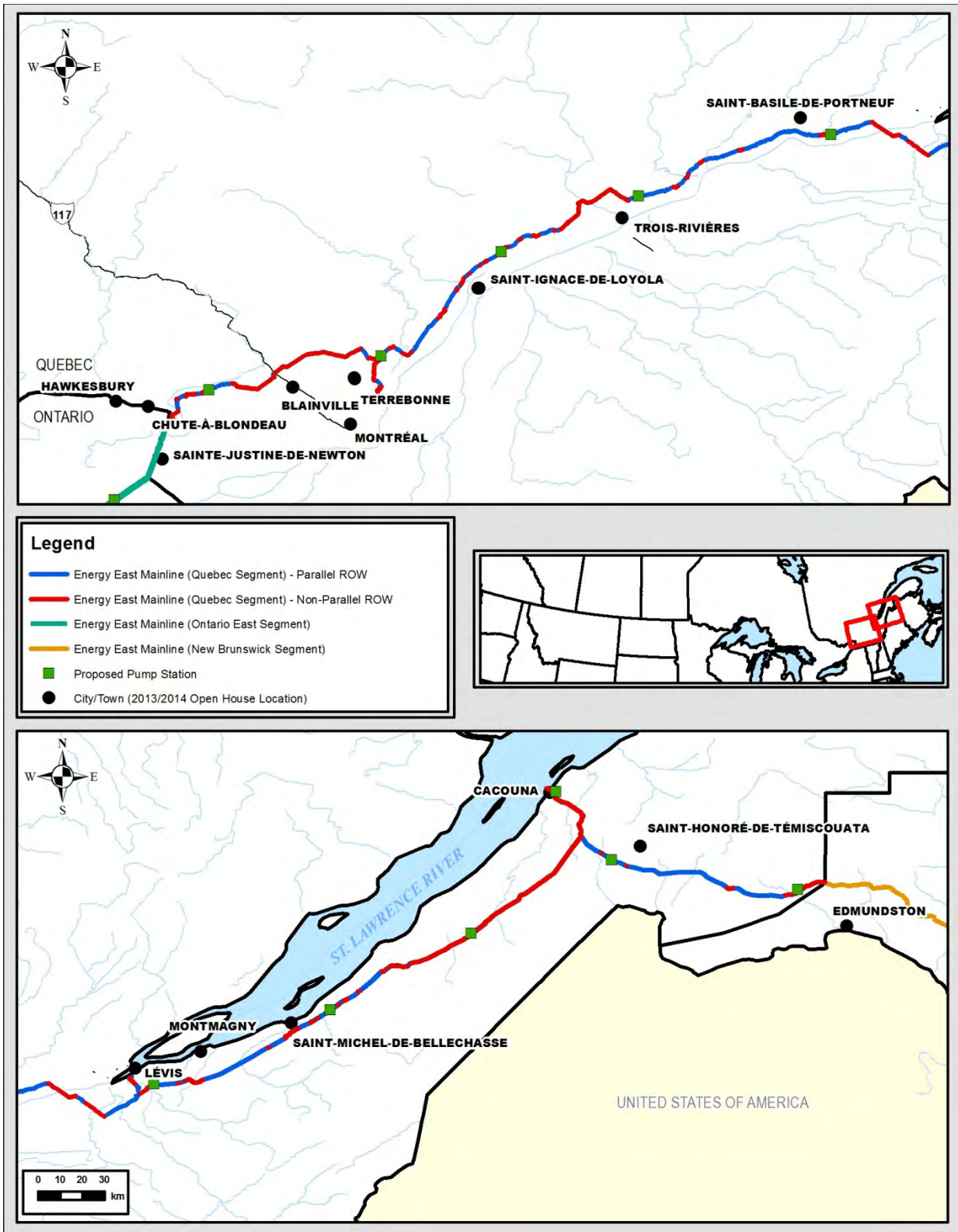


Figure 2-11: Parallel and New ROW – Québec

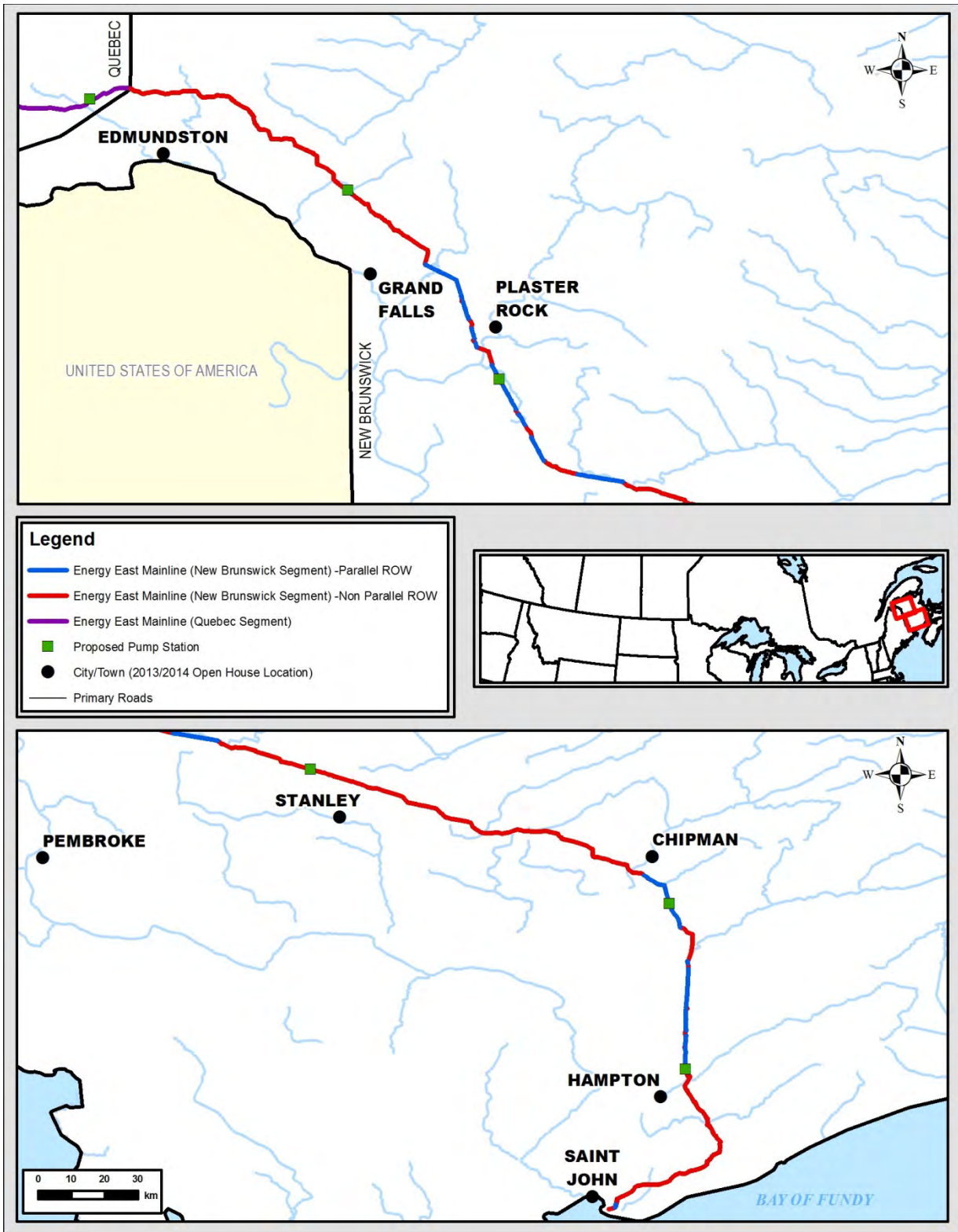


Figure 2-12: Parallel and New ROW – New Brunswick Segment

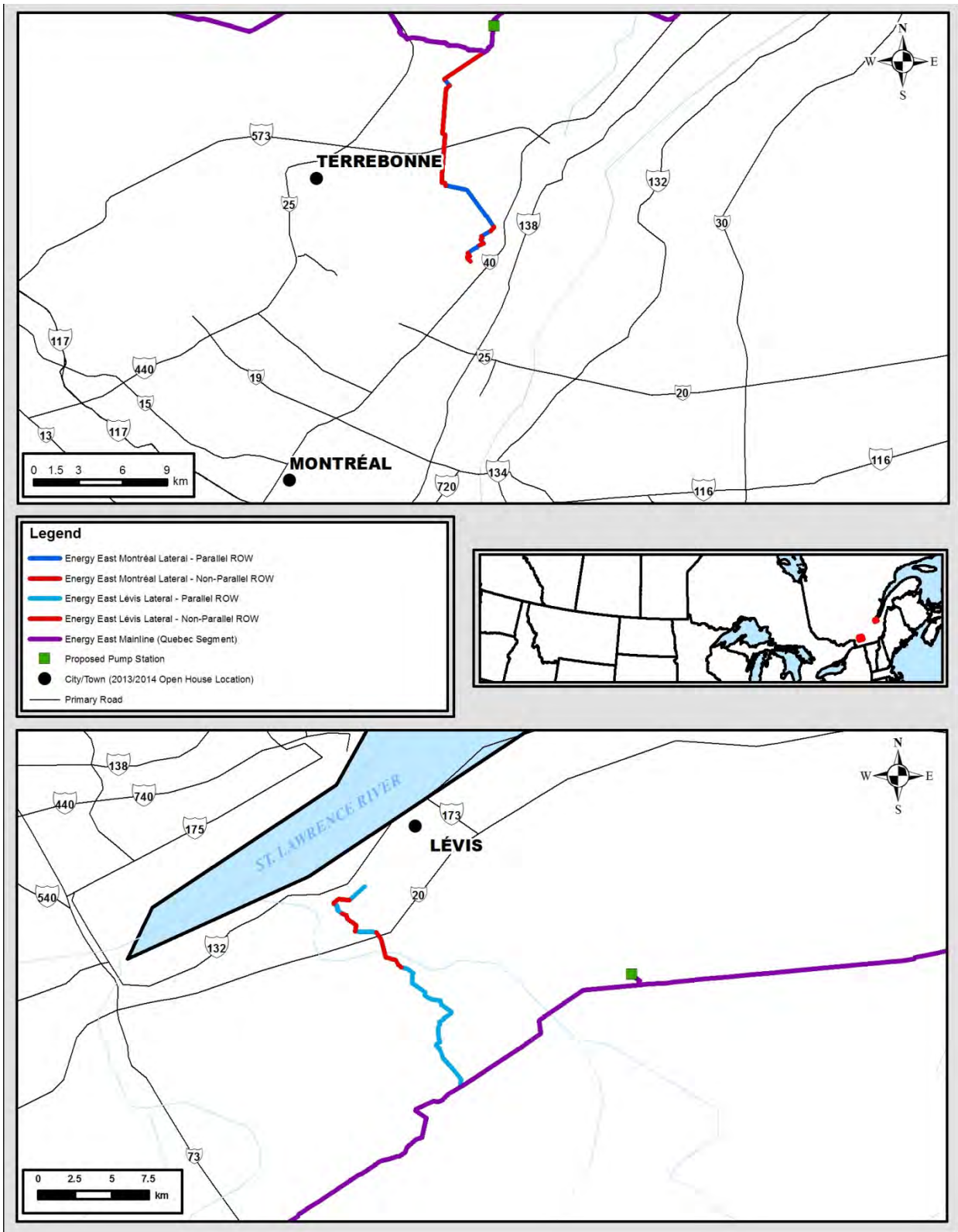


Figure 2-13: Parallel and New ROW – Montréal and Lévis Laterals

Conversion Route

The conversion portion of the Energy East Mainline is located almost entirely within the existing Canadian Mainline ROW through SK, MB and ON, with the exception of minor route re-alignments around existing TransCanada facilities.

Figure 2-14 shows the location of the existing Canadian Mainline sections proposed for conversion. Conversion involves isolating and converting portions of the Canadian Mainline to oil service as follows:

- Line 100-4 (with portions of Line 100-3) in SK and MB
- Line 100-4 (with portions of Line 100-3) through northern ON
- Line 1200-2 through eastern ON

When isolated and connected, these lines will form a single, continuous crude oil line from a connection with the Alberta Segment near Burstall, SK, to a connection with the Québec Segment near Iroquois, ON.

As an important part of the proposed conversion, Energy East will assess the integrity of existing pipeline to be converted by conducting in-line inspections, validating these inspections in the field and where required, repairing or replacing existing pipe.

Minor route re-alignments (e.g., for watercourse crossings, bypass of facilities, or for safety or operability reasons) may be required along the conversion section as the Project evolves.

Laterals

The Cromer Lateral, will start at a proposed pump station near Cromer, MB and end at a proposed tank terminal near Moosomin, SK (Moosomin tank terminal). The lateral will follow a south to north route primarily within MB, crossing into SK near Moosomin.

The Montréal Lateral will connect the Energy East Mainline to an existing refinery on the Island of Montréal. The lateral will cross the Rivière des Mille Îles to the eastern edge of the City of Laval and cross Rivière des Prairies to the Island of Montréal.

The Lévis Lateral will connect the Energy East Mainline to an existing refinery located south of the City of Lévis.

2.1.4 Pipeline Interconnections

Pipeline interconnections, amounting to approximately 10 km of up to 1219 mm (NPS 48) OD pipe, will be required to connect the Cacouna tank terminal to the Cacouna marine terminal and to connect the Saint John tank terminal to the Canaport marine terminal. These pipelines will parallel existing facilities, where practical.

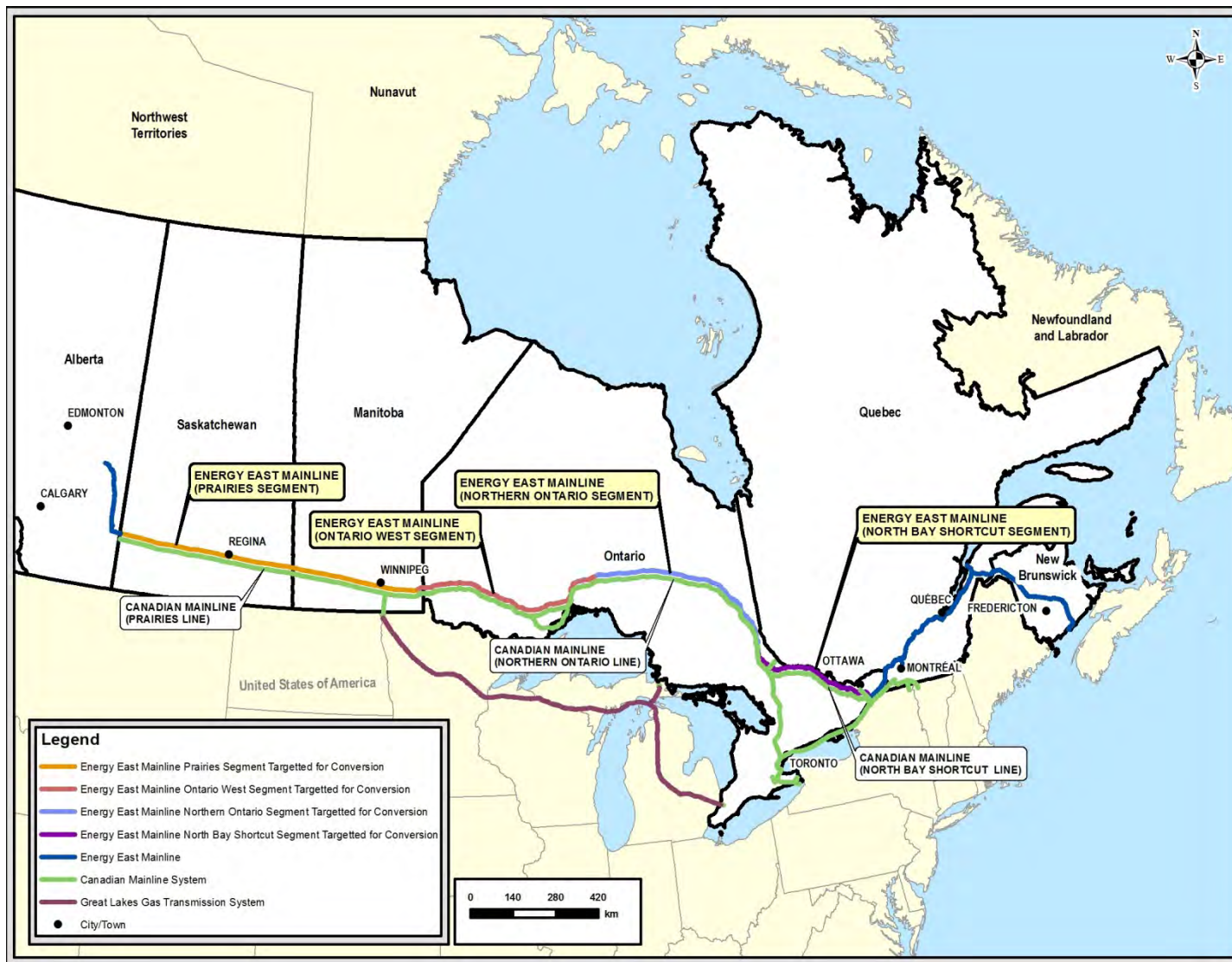


Figure 2-14: Existing Canadian Mainline Sections Targetted for Conversion

2.1.5 Mainline Block Valve Sites

Mainline block valves will be installed along the ROW on new and converted pipeline segments to allow sections of the pipeline to be isolated and minimize the impacts of an accidental release. They will be installed at the following:

- all pump stations
- select watercourse crossings and other environmental locations, based on a potential effect analysis
- other locations as necessary to facilitate system operations

The placement of valve sites is an iterative process that starts by locating valves at pump stations. This is followed by desktop research and field investigations to identify appropriate valve sites between stations. Factors that will be taken into account during this siting process include:

- wetlands and watercourses
- downstream water use
- populated areas
- municipal water intakes
- environmentally sensitive areas
- concerns of landowners and land users
- availability of local infrastructure, including access and power
- regulatory, landowner and stakeholder feedback

Mainline block valves will be remotely controlled and monitored, and will be electrically operated.

2.1.6 Pressure Control Facilities

Pressure control along the pipeline will be achieved by controlling the speed of pumps at pump stations. In addition, a pressure control valve facility will be installed near Burstall, SK, where the higher MOP new mainline pipe connects with the lower MOP conversion pipe. This facility will ensure that the MOP of the downstream section of pipeline will not be exceeded.

Two other locations on the Energy East Mainline involve a change in MOP. These are at Île des Chêne, MB on the Prairie Segment and at Iroquois, ON where the North Bay Shortcut Segment ends and the Ontario East Segment begins.

Table 2-4 provides the preliminary pressure control locations where a change in pipeline MOP occurs.

Table 2-4: Preliminary Pressure Control Locations

Component ¹	Latitude	Longitude
Burstall Pressure Reduction Station	50.678822	-109.973841
Note: 1. See Table 2-5 for the preliminary locations of the Île des Chêne and Iroquois pump stations.		

As shown in Table 2-5, pump stations are located at these points and pressure control will be achieved by controlling pump speed at these or nearby pump stations. Additional pressure control facilities might be installed, if required. This will be determined during detailed design.

2.1.7 Pump Stations

The Project will involve the development of approximately 72 pump stations between Hardisty, AB and Saint John, NB, including initiating pump stations at Hardisty, AB, Moosomin, SK and Cromer, MB.

Pump stations are required to offset pressure losses as the oil travels through the pipeline. The stations will be located at or near existing TransCanada property or on new lands, where required. These permanent sites are fenced.

Power to the proposed pump stations will generally be supplied by third-party providers. However, certain remote pump stations may be self-powered by gas-fired electrical generation facilities located at the stations. They will be included in the ESA for the Project.

Initial pump station locations are determined by pipeline hydraulics, taking into account such factors as pipe size, topography and frictional losses related to oil. Sites are then selected through desktop analysis and field visits taking into account such factors as:

- proximity to the hydraulically selected location
- proximity to existing or planned TransCanada facilities
- proximity to local roads
- power supplies
- land use
- environmental characteristics

Pump stations will typically include:

- electrically-driven pumps
- an electrical substation and electrical equipment shelters
- leak detection and emergency shutdown systems
- station isolation valves
- yard piping

Pump stations will be designed to enable in line inspection of the pipeline. Launchers and receivers will be installed at select pump stations at intervals along the pipeline to enable in line inspection of the pipeline.

Permanent access roads will be constructed into each fenced pump station.

Figure 2-15 is a rendering of a typical pump station.

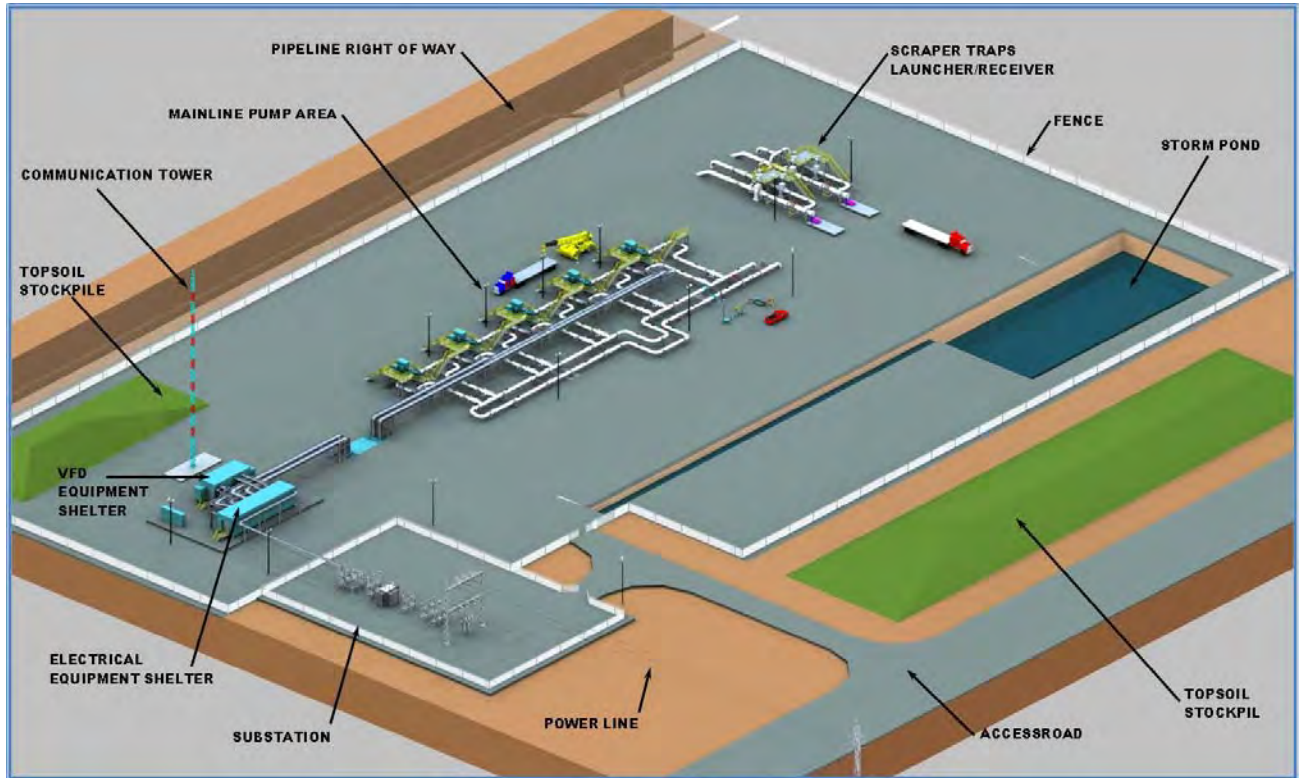


Figure 2-15: Typical Pump Station

Table 2-5 provides the preliminary locations of pump stations based on hydraulic analysis of the projected flow through the pipeline.

Table 2-5: Preliminary Hydraulic Locations of Pump Stations

Pump Station Name	Preliminary Location	
	Latitude	Longitude
Alberta		
Hardisty D Pump Station	52°39'48"N	111° 16' 8" W
Lakesend Pump Station	52°20'53"N	110° 46' 14"W
Monitor Pump Station	51°51'26"N	110° 34' 56"W
Oyen Pump Station	51°19' 31"N	110° 31' 24"W
Cavendish Pump Station	50°49' 3"N	110° 26' 45"W

Table 2-5: Preliminary Hydraulic Locations of Pump Stations (cont'd)

Pump Station Name	Preliminary Location	
	Latitude	Longitude
Saskatchewan		
Liebenthal Pump Station	50° 40' 14"N	109° 46' 23"W
Cabri Pump Station	50° 37' 34"N	108° 56' 31"W
Stewart Valley Pump Station	50° 33' 20"N	108° 12' 11"W
Herbert Pump Station	50° 32' 39"N	107° 29' 58"W
Chaplin Pump Station	50° 30' 5"N	106° 41' 49"W
Caron Pump Station	50° 28' 55"N	105° 51' 26"W
Belle Plaine Pump Station	50° 26' 35"N	105° 9' 35"W
Regina Pump Station	50° 23' 35"N	104° 23' 55"W
Kendal Pump Station	50° 20' 7"N	103° 43' 35"W
Grenfell Pump Station	50° 17' 14"N	103° 0' 8"W
Whitewood Pump Station	50° 14' 57"N	102° 12' 2"W
Moosomin A Pump Station	50° 12' 16"N	101° 28' 21"W
Manitoba		
Cromer Pump Station	49°46'14"N	101°16'45"W
Crandall Pump Station	50°8'7"N	100° 43' 3"W
Rapid City Pump Station	50°4' 59"N	100° 5' 26"W
Wellwood Pump Station	50° 1' 5"N	99° 21' 27"W
Portage la Prairie Pump Station	49° 54' 50"N	98° 31' 24"W
Oakville Pump Station	49° 48' 37"N	97° 44' 5"W
Ile des Chênes Pump Station	49° 43' 12"N	96° 59' 18"W
Spruce Pump Station	49° 39' 27"N	96° 14' 34"W
Falcon Lake Pump Station	49° 40' 47"N	95° 22' 38"W
Ontario		
Kenora Pump Station	49° 47' 26"N	94° 29' 47"W
Vermilion Bay Pump Station	49° 49' 57"N	93° 41' 55"W
Dryden Pump Station	49° 47' 17"N	92° 45' 47"W
Ignace Pump Station	49° 30' 39"N	92° 3' 0"W
Martin Pump Station	49° 17' 20"N	91° 18' 14"W
Upsala Pump Station	49° 2' 1"N	90° 30' 55"W
Dog River Pump Station	48° 56' 25"N	89° 44' 46"W
Eagle Head Pump Station	49° 4' 55"N	88° 51' 21"W
Nipigon Pump Station	49° 17' 42"N	88° 6' 8"W
Jellicoe Pump Station	49° 40' 18"N	87° 39' 31"W
Geraldton Pump Station	49° 48' 13"N	86° 45' 18"W
Klotz Lake Pump Station	49° 47' 37"N	85° 51' 11"W
Hearst Pump Station	49° 45' 47"N	4° 55' 18"W
Calstock Pump Station	49° 44' 51"N	84° 4' 24"W

Table 2-5: Preliminary Hydraulic Locations of Pump Stations (cont'd)

Pump Station Name	Preliminary Location	
	Latitude	Longitude
Mattice Pump Station	49° 35' 12"N	83° 9' 33"W
Kapuskasing Pump Station	49° 23' 20"N	82° 26' 9"W
Smooth Rock Falls Pump Station	49° 14' 44"N	81° 36' 29"W
Potter Pump Station	48° 52' 26"N	80° 53' 56"W
Ramore Pump Station	48° 25' 5"N	80° 20' 22"W
Kirkland Lake Pump Station	47° 57' 56"N	80° 1' 13"W
Haileybury Pump Station	47° 27' 0"N	79° 45' 49"W
Marten River Pump Station	46° 57' 7"N	79° 47' 20"W
North Bay Pump Station	46° 26' 33"N	79° 28' 41"W
Mattawa Pump Station	46° 16' 34"N	78° 44' 34"W
Deux-Rivière Pump Station	46° 12' 1"N	77° 55' 34"W
Pembroke Pump Station	45° 50' 7"N	77° 12' 56"W
Renfrew Pump Station	45° 27' 29"N	76° 35' 11"W
Stittsville Pump Station	45° 11' 20"N	75° 52' 52"W
Iroquois Pump Station	44° 53' 23"N	75° 17' 35"W
Alexandria Pump Station	45° 12' 37"N	74° 36' 24"W
Québec		
Lachute Pump Station	45° 39' 20"N	74° 13' 21"W
Mascouche Pump Station	45° 47' 33"N	73° 31' 31"W
Maskinong Pump Station	46° 12' 50"N	73° 2' 19"W
Saint-Maurice Pump Station	46° 26' 19"N	72° 28' 51"W
Donnacona Pump Station	46° 41' 15"N	71° 42' 3"W
Levis Pump Station	46° 41' 52"N	71° 9' 54"W
Cap-Saint-Ignace Pump Station	47° 2' 13"N	70° 23' 28"W
Saint-Gabriel-Lalemant Pump Station	47° 20' 45"N	69° 49' 7"W
Cacouna Pump Station	47° 55' 14"N	69° 28' 33"W
Saint-Honoré Pump Station	47° 38' 43"N	69° 15' 1"W
Degelis Pump Station	47° 31' 29"N	68° 29' 34"W
New Brunswick		
Grand Falls Pump Station	47° 16' 45"N	67° 47' 40"W
Plaster Rock Pump Station	46° 46' 8"N	67° 23' 7"W
Napadogan Pump Station	46° 24' 53"N	66° 48' 7"W
Cumberland Bay Pump Station	46° 3' 2"N	65° 49' 47"W
Hampton Pump Station	45° 36' 14"N	65° 47' 12"W

2.1.8 Delivery Meter Stations

To measure the volumes of crude oil leaving Energy East pipeline system for existing refineries, new delivery meter stations are proposed at the termini of the Montréal and Lévis laterals. These stations will include custody transfer metering, communication and control systems, and associated piping and valves.

Table 2-6 provides preliminary locations for the lateral delivery meter stations.

Table 2-6: Preliminary Delivery Meter Station Locations

Delivery Station Name	Preliminary Location	
	Latitude	Longitude
Montréal Lateral Delivery Meter Station	45°38'58"N	73°32'20"W
Lévis Lateral Delivery Meter Station	46°45'52"N	71°11'55"W

Figure 2-16 and Figure 2-17 provide a conceptual layout of the Montréal and Lévis delivery meter stations respectively.

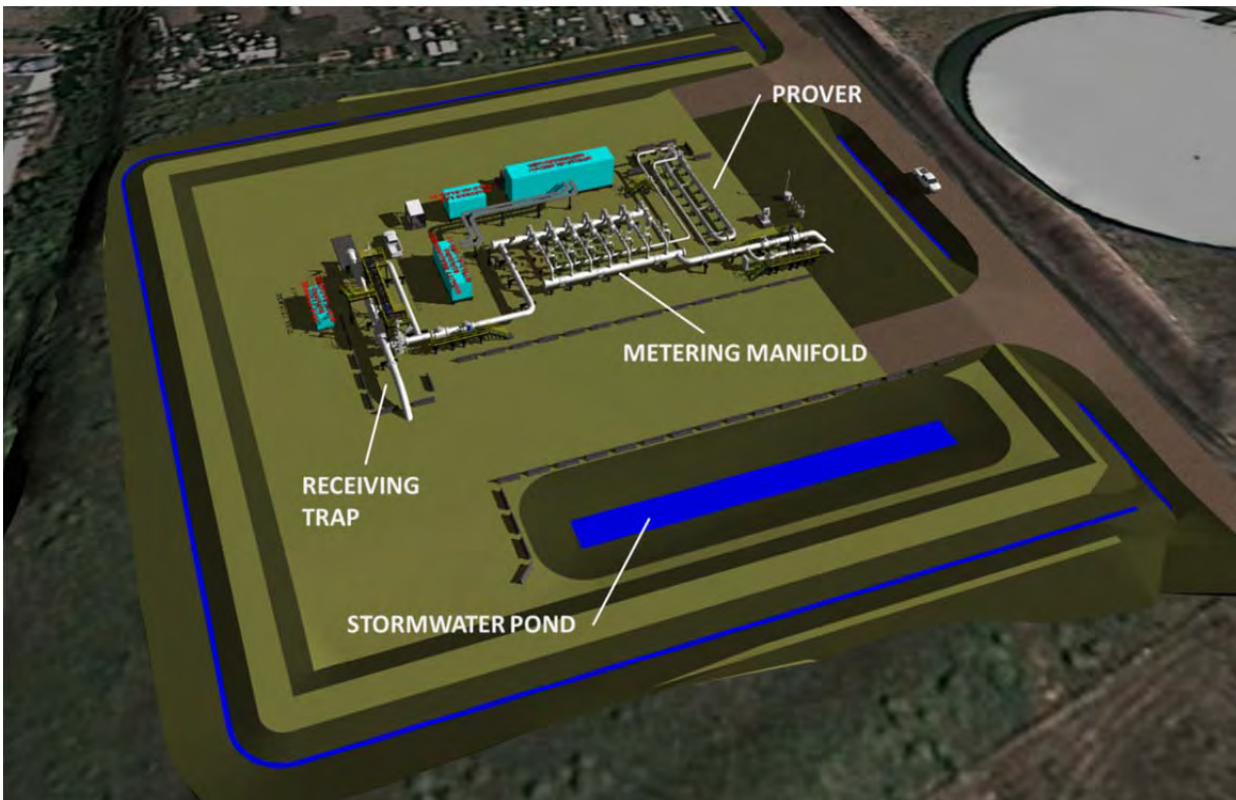


Figure 2-16: Conceptual Layout of the Montréal Delivery Meter Station

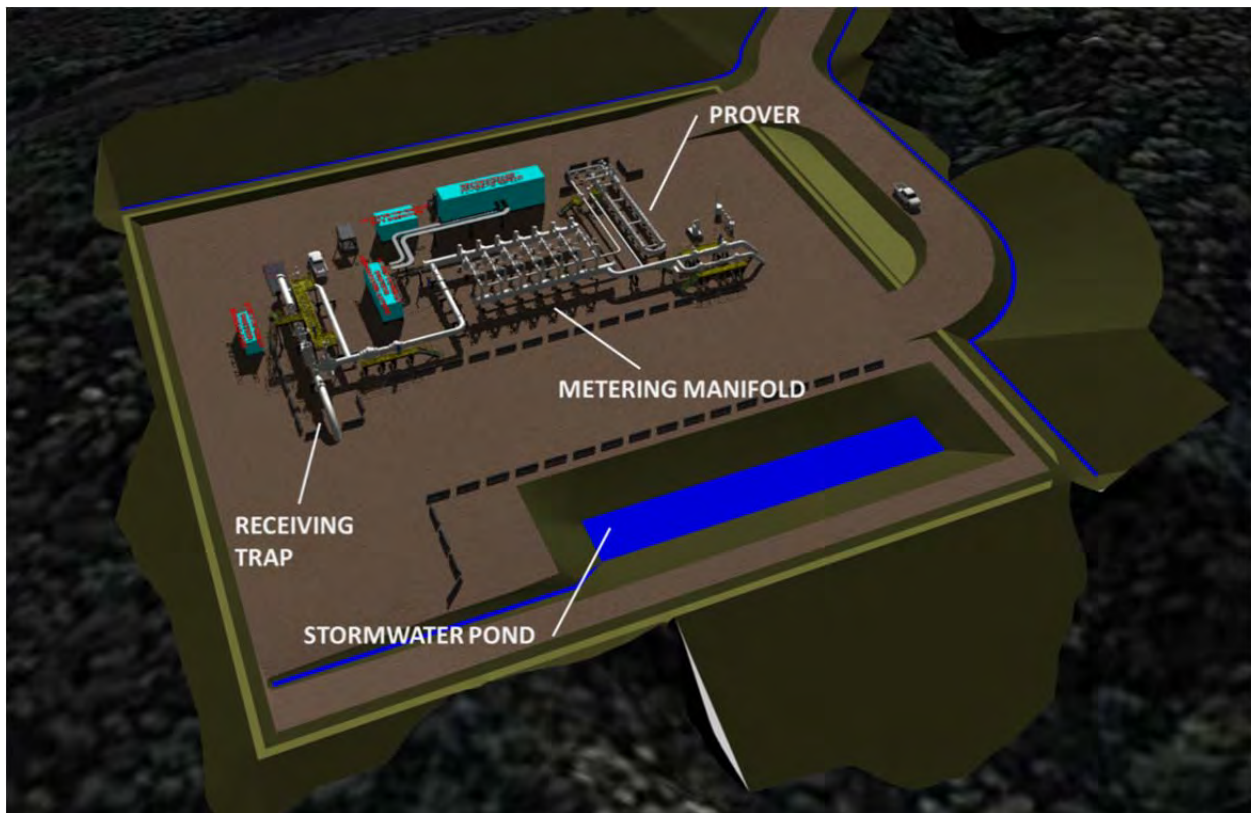


Figure 2-17: Conceptual Layout of the Lévis Delivery Meter Station

2.1.9 Tank Terminals

The Project will require the development of four new tank terminals with storage tanks of various sizes to meet commercial and operational needs. Common elements of the tank terminals might include:

- oil storage tanks with capacity up to 500,000 barrels
- tank leak detection and containment systems
- booster and transfer pumps
- interconnecting valve manifolds and piping
- custody transfer metering
- fire protection system
- emergency shutdown systems

Table 2-7 provides preliminary tank terminal locations.

Table 2-7: Preliminary Tank Terminal Locations

Component	Latitude	Longitude
Hardisty D Energy East Tank Terminal	52°39'50"N	111°16'37"W
Moosomin A Energy East Tank Terminal	50°12'9"N	101°28'33"W
Cacouna A Energy East Tank Terminal	47°55'36"N	69°28'41"W
Saint John A Energy East Tank Terminal	45°13'29"N	65°59'53"W

Hardisty D Energy East Tank Terminal

Up to 14 storage tanks will be installed at the Hardisty D tank terminal. These tanks will receive oil from incoming pipelines and from existing and planned storage terminals in the Hardisty area. They will provide batching and storage facilities for the Project.

Figure 2-18 is a conceptual layout of the Hardisty tank terminal.

Moosomin Energy East Tank Terminal

Three storage tanks are anticipated at the Moosomin tank terminal, which will be located just inside the MB/SK boundary adjacent to the existing TransCanada Moosomin compressor station. The terminal will receive crude oil from the Cromer Lateral and provide batching and storage facilities for injection into the Energy East Mainline. The terminal site is being designed to accommodate future tank expansion.

Figure 2-19 provides a conceptual layout of the Moosomin tank terminal.

Cacouna Energy East Tank Terminal

Up to 12 storage tanks will be installed at the Cacouna tank terminal, which will be located north of the town of Cacouna on existing industrial zoned land. The terminal will receive crude oil from the Project for storage until loaded on crude oil tankers at the Cacouna Marine Terminal.

Figure 2-20 provides a conceptual layout of the Cacouna tank terminal.

Saint John Energy East Tank Terminal

Up to 18 storage tanks will be installed at the Saint John tank terminal, which will be located adjacent to existing terminal facilities near Saint John, NB. The terminal will receive crude oil from the Project for storage until loaded on crude oil tankers at the Canaport Energy East marine terminal or sent to the Irving Oil refinery.

Figure 2-21 provides a conceptual layout of the Saint John tank terminal.

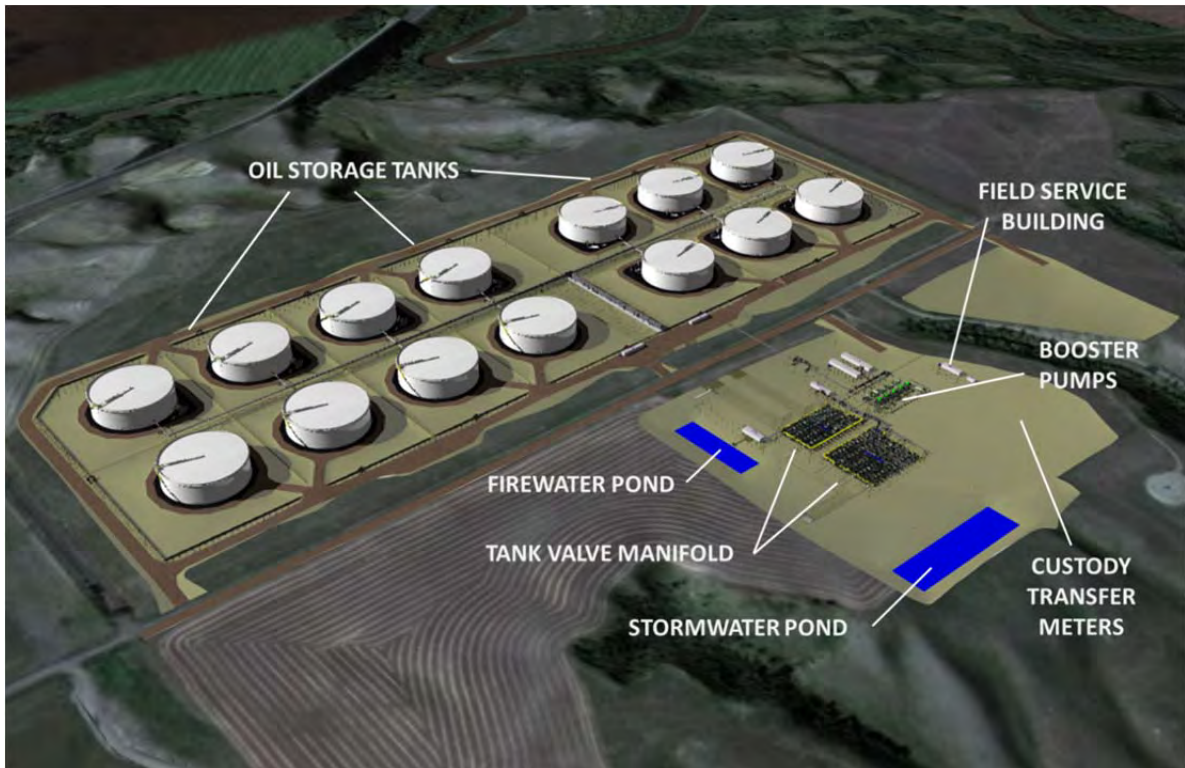


Figure 2-18: Conceptual Layout of the Hardisty D Energy East Tank Terminal

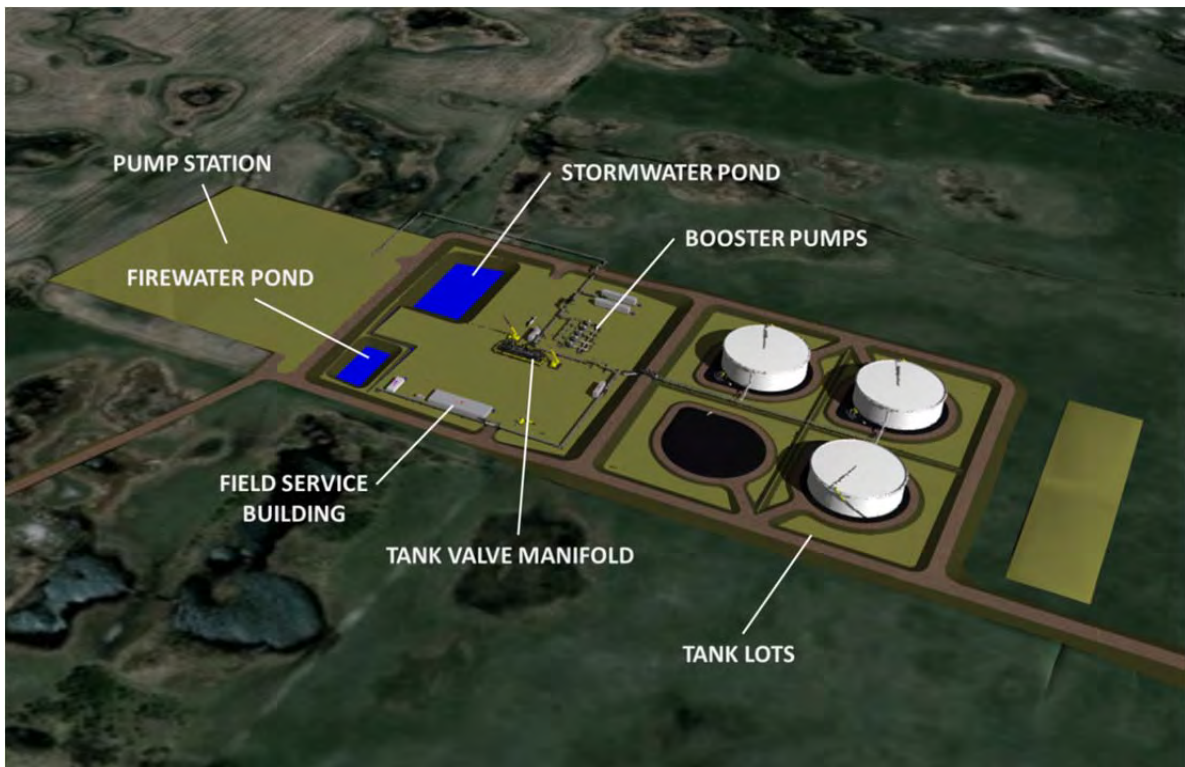


Figure 2-19: Conceptual Layout of the Moosomin Energy East Tank Terminal

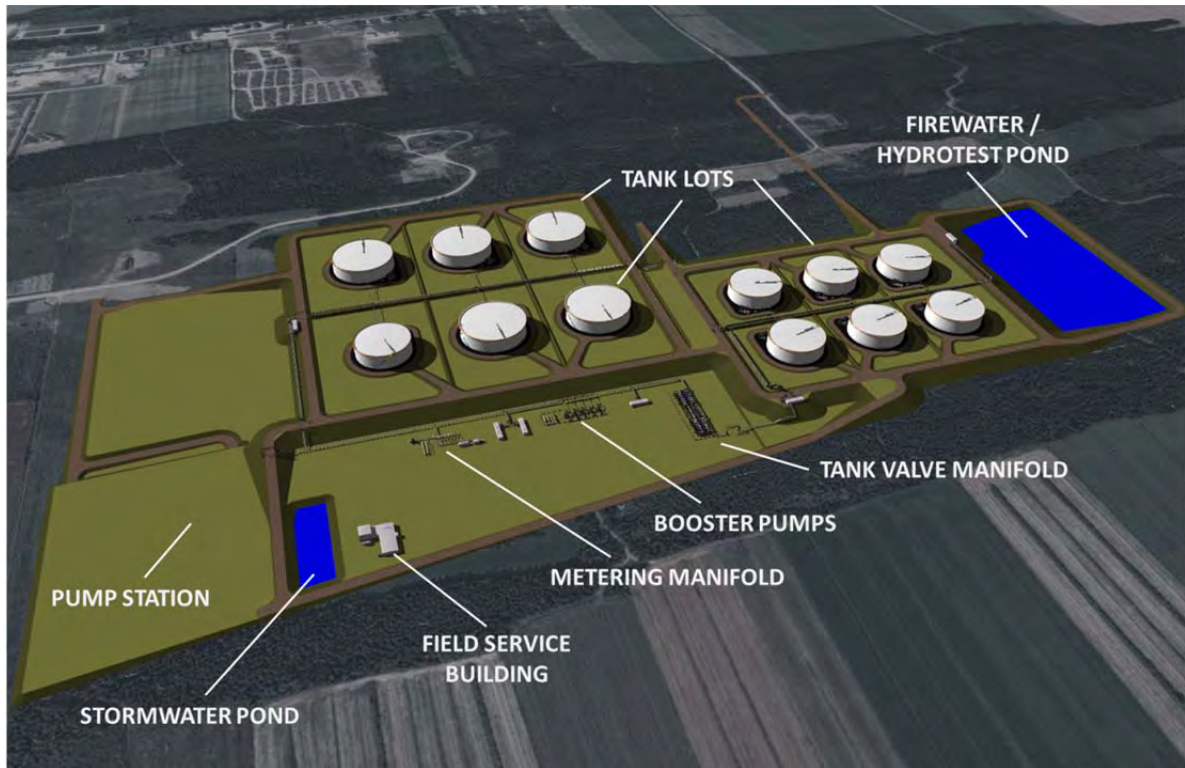


Figure 2-20: Conceptual Layout of the Cacouna Energy East Tank Terminal

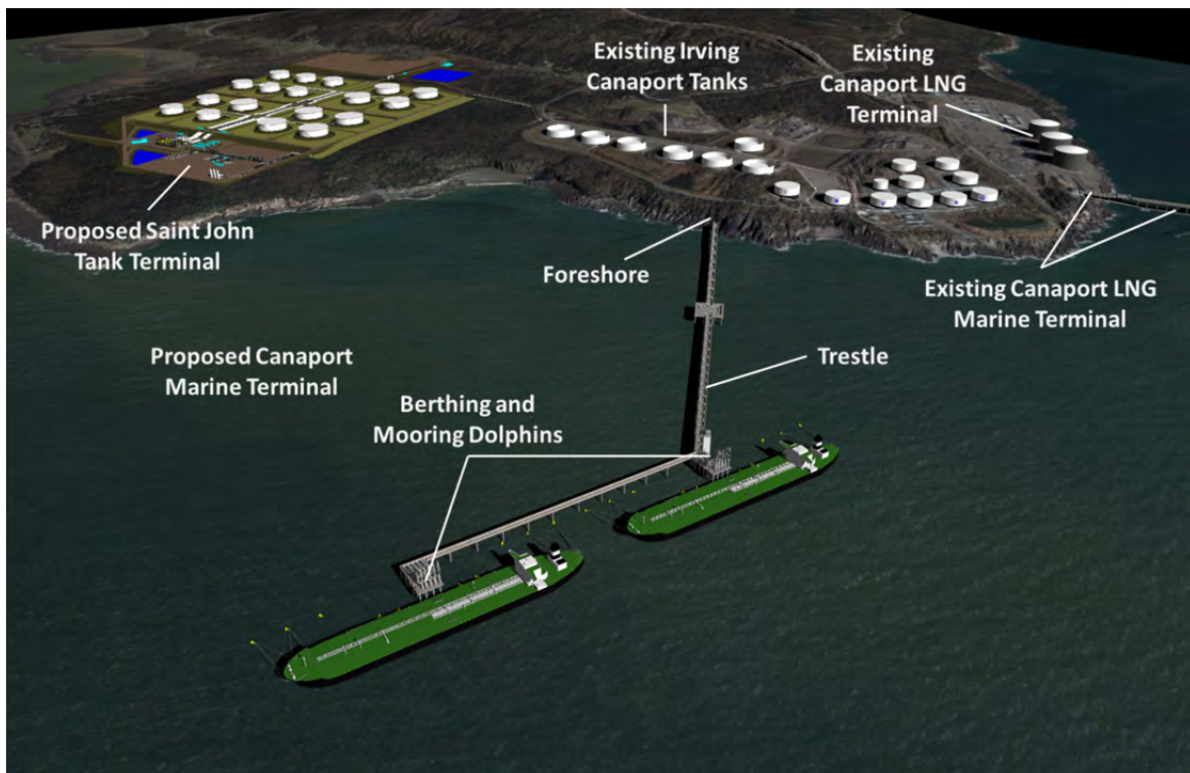


Figure 2-21: Conceptual Layout of the Saint John Energy East Tank Terminal

2.1.10 Marine Terminals

Table 2-8 provides preliminary locations for the marine terminal facilities.

Table 2-8: Preliminary Marine Terminal Locations

Component	Latitude	Longitude
Cacouna Marine Terminal	47°56'26"N	69°31'16"W
Saint John Marine Terminal	45°12'27"N	66°0'12"W

Marine terminals will have offshore and onshore facilities. The offshore facilities include:

- two tanker loading platforms, equipped with crude oil loading systems which contain:
 - piping
 - loading arms
 - vapour return arms
 - emergency shutdown (ESD) and isolation system
- berthing and mooring dolphins and walkways
- an access trestle supporting a pipe rack and roadway access to and from shore

The onshore facilities include:

- vapour incinerators
- LPG storage tanks
- fire systems

A marine vapour collection system including blowers, vapour incinerators and a stack will be installed to reduce potential environmental effects.

Cacouna Energy East Marine Terminal

The Cacouna marine terminal will be located on the eastern shore of the St. Lawrence River in the immediate vicinity of the existing Port of Gros-Cacouna, QC. The marine terminal will be developed to support the loading of crude carriers which have a capacity of 700,000 to 1.1 million barrels of oil through a two-berth arrangement and a single trestle. These carriers are known as “Aframax” and “Suezmax,” respectively.

An additional foreshore facility at Cacouna includes a batch displacement tank.

A conceptual layout of the proposed Cacouna marine terminal is shown in Figure 2-22.

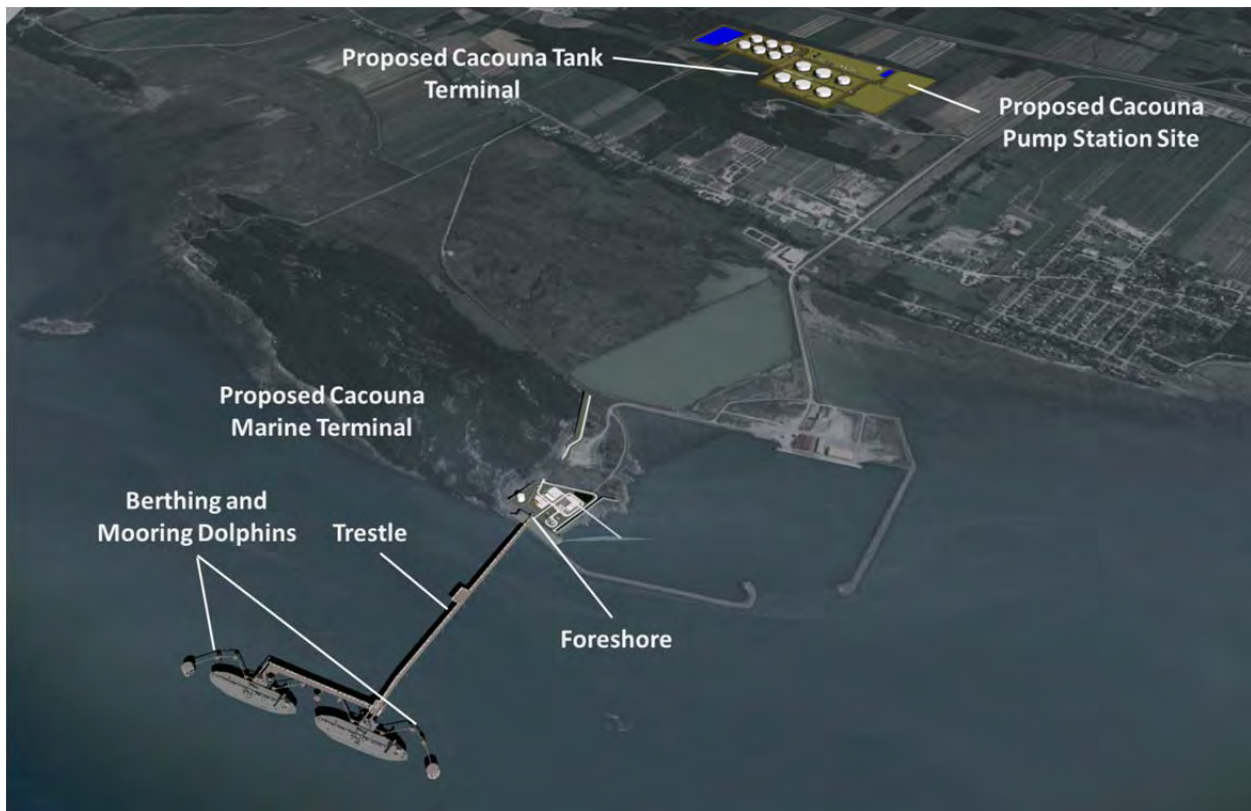


Figure 2-22: Conceptual Layout of the Cacouna Energy East Marine Terminal

Saint John Marine Terminal

The Saint John marine terminal will be located on the western shore of the Bay of Fundy to the southeast of the port of Saint John.

Located 8 km south of the existing Irving Oil refinery and Canaport LNG marine facilities near Saint John, new marine loading facilities will be developed to support the loading of Suezmax and very large crude carriers with a capacity of 175,000 cubic metres (1.1 million barrels) to 350,000 cubic metres (2.2 million barrels) of crude oil through a two-berth arrangement and a single trestle.

Because of the topography of the area, there is a lack of foreshore space so most of the foreshore facilities will be located at the tank terminal location about 500 m away.

A conceptual layout is shown in Figure 2-23.

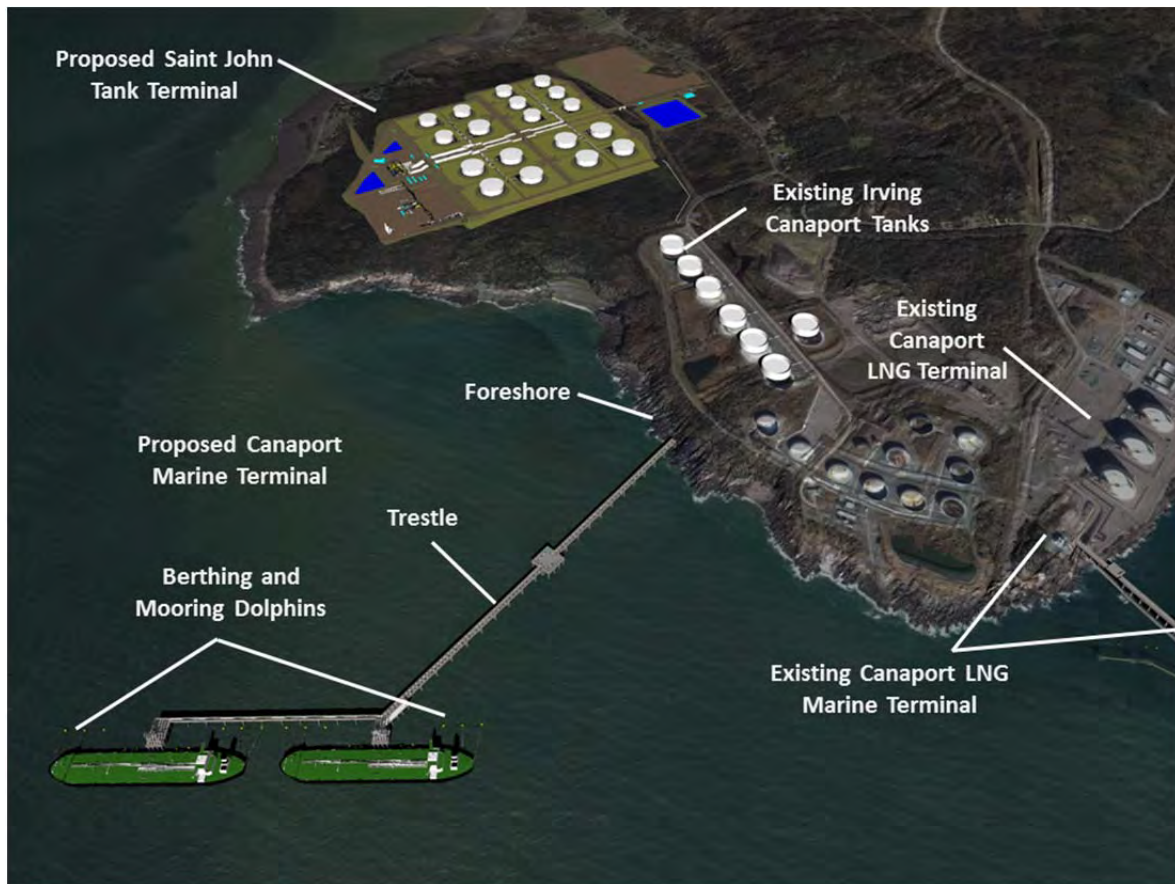


Figure 2-23: Conceptual Layout of the Saint John Marine Terminal

2.2 COMMON COMPONENTS

2.2.1 Supervisory Control and Data Acquisition System

A supervisory control and data acquisition (SCADA) system will be installed to remotely monitor and control stations, terminals and valve sites. The SCADA system provides continuous operating information to control centre operators who will be responsible for operating the EE system. It will be located at TransCanada's Operations Control Centre (OCC) in Calgary, AB.

2.2.2 In-Line Inspection Facilities

Launcher and receiver facilities will be installed to ensure that the entire pipeline can be cleaned and inspected by in-line cleaning and inspection tools.

2.2.3 Cathodic Protection

A cathodic protection system, including anode beds, rectifiers and associated facilities will be installed for the Alberta, Québec and New Brunswick pipeline segments. The

Prairie, Ontario West, Northern Ontario and North Bay Shortcut segments will share the CP system that currently protects the Canadian Mainline and as a result, no new dedicated CP system will be required to protect these segments. New test stations may be installed at appropriate intervals along these segments to monitor the effectiveness of the applied CP current and to permit access to the pipelines for other corrosion control monitoring activities.

The CP system will be addressed in detailed design.

2.3 PRELIMINARY FOOTPRINT OF MAIN PROJECT COMPONENTS

2.3.1 Construction Right-of-Way and Temporary Workspace

Dimensions of the pipeline construction ROW will vary depending on the ownership, location, and nature of existing parallel right-of-way. Where available and practical, temporary workspace (TWS) will also be obtained from existing contiguous right-of-way to reduce potential disturbance.

The Project generally requires a minimum construction ROW of 32 m in forested lands. In areas of extensive grading, timber storage and for overall construction requirements and safety, additional construction ROW may be required.

In agricultural land, 42 m may be required for safe and efficient construction. In addition to the construction ROW, further land may be required for handling and storing in areas with significant crossings or requiring specialized soils handling.

Where the pipeline route follows existing disturbances such as undeveloped road allowances, the Project can also use those existing disturbances to reduce the requirement for new lands to make up the construction ROW.

In addition, TWS will be required on a site-specific basis at the following crossings:

- highways
- railways
- roads
- pipelines
- watercourses

Construction ROW and TWS may also be required at other locations to accommodate pipeline construction and conversion activities. The construction ROW will be reclaimed after construction, with the permanent easement maintained for pipeline operations.

2.3.2 Mainline Valve Sites

Mainline valve sites will be located within the permanent ROW. TWS will be required at these sites for construction.

Stand-alone block valve sites will be fenced and graded and will contain power and control systems for the valve. Where the block valves are remotely controlled, the facility will include a field rack or skid mounted building to house power, controls and communication equipment.

Access to the valve sites will be along the permanent ROW or by a permanent access road.

2.3.3 Pump Station Sites

A typical pump station has a footprint of about 9 ha. This includes sufficient space for construction activities and laydown areas

2.3.4 Tank Terminals and Delivery Meter Stations

Tank terminals will typically occupy a 40 ha to 80 ha area, depending on the facility, its location and the topography. These sites include sufficient space for construction activities and laydown areas.

Delivery meter stations might be located within the existing refinery properties. They will typically have a footprint of about 3 ha.

2.3.5 Marine Terminals

Marine terminals will typically have a foreshore/onshore footprint of up to 3 ha. The offshore facilities will require a water lot of approximately 15 ha.

A marine vessel exclusion zone will be established around the facility to maintain site safety and security.

2.3.6 Permanent Access Roads

Permanent access roads will be required for operational purposes at all of the proposed pump stations, tank terminals, marine terminals and at some of the mainline valve sites. These roads will be approximately 6 m in width.

2.3.7 Temporary Infrastructure for Construction

During construction, the use of the following lands for temporary infrastructure will be required:

- construction camps
- access roads
- pipe storage sites
- contractor yards
- similar construction-related activities

Changes might also be made to reflect the results of consultation and engagement programs, commercial negotiations, and economic, engineering, and environmental and socio-economic assessments.

The Project application under the NEB Act will reflect changes and refinements to the Project that are made after this Project Description is submitted to the NEB. The application, which will include an ESA, is scheduled for filing with the NEB in third quarter 2014.

The information provided in the NEB application will be based on preliminary design, supported by initial results from field investigation, engagement and consultation programs.

While preliminary information to support the Project will be included in the comprehensive application to the NEB, Energy East expects that supplemental field studies will be required after the application is submitted to confirm preliminary findings in relation to valued ecosystem components such as soils, wetlands, wildlife, aquatics and vegetation.

Throughout the application and regulatory review process, Energy East will provide updated and supplemental information, as appropriate.

3.2 CONSTRUCTION AND IN-SERVICE TIMELINES

To facilitate pipeline and facility construction and to help maximize local contracting, work on temporary infrastructure is currently scheduled to begin during first quarter 2016.

Opportunities to optimize the infrastructure, pipeline and facility construction schedule will be pursued through the project development and regulatory review process. Environmental timing windows will be taken into consideration during detailed construction planning.

The scheduled in-service date for the Project is in fourth quarter 2018.

Given the magnitude of the Project scope, start-up of the pipeline and associated facilities will be staged, leading to the overall in-service date.

3.3 OPERATIONS AND MAINTENANCE

3.3.1 Health, Safety, and Environment

All activities associated with the Project including health, safety, and environmental performance will meet or exceed applicable laws and regulations and will align with the NEB's *Onshore Pipeline Regulations*.

Energy East will address responsibilities for health, safety and environmental (HSE) performance through TransCanada's HSE management system framework supporting safety, emergency management, and environmental protection programs. This framework will apply to the complete life cycle of the Project, from design and construction, through operations to abandonment. It is reviewed and updated on an ongoing basis.

3.3.2 System Protection and Controls

Once the Project facilities are placed in service, they will be monitored and controlled from TransCanada's OCC. This centre is staffed 24 hours a day, 365 days a year. Fully functional back-up computers and a second control centre will also be installed in case there is a failure in the main control centre.

The SCADA system will monitor pipeline flows, pressures, temperatures and equipment status on a continuous basis. It will contain a real-time transient leak detection system that monitors flow metering and other instrumentation across the Energy East system. Should the SCADA system determine that an abnormal operating condition exists, it will generate alarms to alert OCC operators who are responsible for immediately shutting down the pipeline if the SCADA system analysis indicates that a leak might have occurred.

Project facilities will also have local safety systems to react to abnormal operational events.

3.3.3 Emergency Preparedness and Response

The Project facilities will be incorporated into TransCanada's emergency management system. TransCanada will be accountable for emergency management for the Energy East system.

Energy East will undertake comprehensive emergency preparedness and response planning for the Project. The plan will cover any emergency that could be encountered and will be capable of responding to the worst-case scenario. Specific response plans will also be developed, where appropriate.

Among other things, Energy East will have dedicated on-call staff located along the entire pipeline route and at the terminals. They will be trained in TransCanada's emergency response procedures and while they are on call, their primary responsibility will be to respond to any emergency.

Energy East will also be prepared with appropriate response equipment for containment, recovery, and storage. Examples of such equipment include:

- response vessels
- work boats
- wildlife response trailers
- containment booms
- skimmers, pads and other absorbent materials

This equipment will be stored in strategic locations along the pipeline route, including marine terminals and environmentally sensitive areas. Storage sites will be selected based on community feedback, the results of risk assessments, and other considerations.

Before the Project facilities are put into operation, Energy East will work with external emergency response personnel to ensure appropriate:

- communications protocols
- operations and product awareness
- mutual understanding of emergency response procedures

This helps ensure that company emergency plans appropriately link into plans maintained by other affected agencies.

Once the pipeline has been commissioned and turned over to operations, TransCanada's emergency management system will be used to manage all emergency events associated with this line.

When activated, the emergency management system, establishes an Incident Command Post at the site, supported by a regional Emergency Operations Centre (EOC) local to the area and a corporate EOC in Calgary. TransCanada will use its Incident Command System and will address the event in a unified command approach with local emergency services. Communications will be established between the site and the EOC through the use of an emergency communication conference line.

Emergency Response Marine

Working with certified response organizations in the Saint John and Cacouna areas, Energy East will establish a project-specific level of preparedness for marine activities. The level of preparedness will be informed by the TERMPOL review that is underway and through discussions with stakeholders including:

- response organizations
- port authorities
- regulatory agencies
- other stakeholders

3.3.4 Public Awareness

TransCanada's existing public awareness (PA) program will be used during the operations phase of the Project.

The PA program is designed to increase awareness of pipeline safety and thereby protect the public, environment and TransCanada facilities. It reaches the affected public, excavators and contractors, emergency response providers and local public officials, educating them about living and working safely near TransCanada facilities. It provides safety messaging on special incident response notification and/or evacuation measures, as appropriate, and information about TransCanada's Integrity Management Program.

3.3.5 Maintenance and Integrity Programs

TransCanada's standard preventative maintenance programs will be incorporated into the design and operation of the proposed Project facilities. These programs include:

- aerial patrols
- internal inspections
- cathodic protection monitoring
- pipeline markers at roads and pipeline watercourse crossings
- planned maintenance activities

3.4 MARINE OPERATIONS

Energy East will employ a strict Tanker Acceptance Program (TAP) to ensure that vessels scheduled to berth at the marine terminals meet the industry standards for safety and environmental protection and conform to the design limits of the terminal.

All tankers calling at both terminals will be boarded by a local pilot and assisted by local tugs familiar with the navigational waters and procedures. Operational practises and procedures will be clearly defined and agreed between all parties (terminal operator, pilots, Port Authority, tug company) prior to the start of terminal operations.

Loading will typically take 24 to 48 hours to complete depending on the size of tanker. During loading the displaced inert gas contained in the ship's cargo holds will be collected through a vapour loading arm and transferred back to shore for destruction. Loading operations will be continuously monitored by the berth operator and marine control center on the foreshore.

Energy East will be completing a TERMPOL review for both Cacouna and Canaport. Many of the detailed studies required to confirm navigational safety and emergency preparedness are being undertaken as part of TERMPOL. The recommendations from these studies will be incorporated into the design and operation of the terminals.

3.5 DECOMMISSIONING, ABANDONMENT AND SITE RECLAMATION

The Project is expected to operate for 40 years or more. Decommissioning and abandonment activities will comply with applicable federal and provincial regulatory requirements in force at the time. Additional information will be provided in Energy East's comprehensive application to the NEB.

4.0 LAND

4.1 LAND OWNERSHIP

Table 4-1 summarizes the various types of land crossed by the Project.

Table 4-1: Land Ownership along Pipeline Route

Land Type	Approximate Percentage of Land Crossed ¹	Length ¹ (km)
Alberta Segment		
Private (Freehold)	63	177.8
Provincial (Crown)	6	18.1
Federal	0	0.0
Municipal	31	88.2
Total	100	284.1
Prairies Segment ²		
Private (Freehold)	85	964.0
Provincial (Crown)	14	160.0
Federal	1	14.9
Municipal	0	0.0
Total	100	1,138.9
Ontario West, Northern Ontario and North Bay Shortcut Segments		
Private (Freehold)	38	738.1
Provincial (Crown)	59	1139.2
Federal	1	16.7
Municipal	1	23.9
Total	100	1,917.9
Ontario East Segment		
Private (Freehold)	97	101.7
Provincial (Crown)	3	2.7
Federal	0	0.0
Municipal	0	0.0
Total	100	104.4
Québec Segment ³		
Private (Freehold)	80	580.0
Provincial (Crown) ⁴	16	112.0
Federal	2	17.8
Municipal	2	11.9
Total	100	721.7

Table 4-1: Land Ownership along Pipeline Route (cont'd)

Land Type	Approximate Percentage of Land Crossed ¹	Length ¹ (km)
New Brunswick Segment		
Private (Freehold)	68	276.7
Provincial (Crown)	32	130.4
Federal	0	0.2
Municipal	0	0.1
Total	100	407.4
Project Totals		
Private (Freehold)	–	2,838.3
Provincial (Crown)	–	1,562.4
Federal	–	49.6
Municipal	–	124.1
Total New Mainline Segments	–	1,517.6
Total Conversion Segments	–	2,996.8
TOTAL OVERALL		4,574.4
Note:		
1. The information on this table is current as of January 22, 2014.		
2. The Prairie Segment totals include the Cromer Lateral.		
3. The Québec Segment totals include the Montréal and Lévis laterals.		
4. Crown (provincial) land in Québec includes public land owned by the Ministère du Développement Durable de l'Environnement, de la Faune et des Parcs (MDDEFP), Ministère des Ressources Naturelles (MRN) and other ministries and provincial agencies (e.g., Ministères des Transport, Hydro-Québec).		

4.1.1 Federally Owned and Administered Land

Table 4-2 lists federally owned or administered land traversed by the Project.

Table 4-2: Federally Owned or Administered Land by Province

Province	Federally Owned and Administered Land	Entity Responsible for Administration
Alberta	none	none
Saskatchewan	Assiniboine Indian Reserve (Carry the Kettle First Nation)	Aboriginal Affairs and Northern Development Canada
Manitoba	none	none
Ontario	Agriculture Canada Kapuskasing Experimental Farm (Agriculture and Agri-Food Canada Research Branch)	Agriculture and Agri-Food Canada
	Canadian Forces Base Petawawa	Department of National Defence
Québec	Mirabel Airport	Transport Canada
New Brunswick	Saint John Airport Inc.	Transport Canada

4.1.2 Consultation with Landowners and Occupants

More than 5,500 landowners have been identified along the Energy East Mainline route. Consultation is underway with landowners to:

- introduce the Project
- identify early routing concerns and recommendations
- notify affected landowners about field surveys

To date, landowners on the new mainline segments and laterals have been or will be presented with a project overview map during survey acknowledgement and consultation meetings. Landowners on the conversion and new mainline segments have been or will be provided with project information packages and invited to community open houses for the Project.

Following the established process in Québec, Energy East commenced consultation with the UPA and is conducting meetings with landowner groups. These landowner meetings are in addition to the landowner consultation activities described above.

Registered Crown occupants have been or will be notified and consulted. Other occupants will be consulted prior to activities being conducted on the surface of lands they occupy.

4.2 LAND USE

The Project will use approximately 3,000 km of TransCanada's existing Canadian Mainline pipeline system in SK (Line 100-4), MB (Line 100-4 and Line 100-3) and northern ON (Line 100-3 and Line 1200-2). The new mainline segments of the Project consist of:

- 281 km in AB
- 63 km in SK and MB (including the Cromer Lateral)
- 104 km in eastern ON
- 711 km in QC (including the Montréal and Lévis laterals)
- 401 km in NB

Agriculture and forestry are the predominant land uses encountered along the Project route. Throughout the Project, there are small areas of native prairie, shrubland, urban development, farmsteads, recreation and waterbodies such as wetlands, streams and rivers.

4.2.1 Industry

Agriculture is the predominant industry along the Project's route through the provinces below:

- AB
- SK
- western MB
- the new mainline portion of ON

Through ON and QC, agriculture and forestry are the predominant industries, whereas forestry is the primary industry in NB. Other industries throughout the country include:

- oil and gas development
- sodium sulphate and potash mining (particularly in the western provinces)
- peat harvesting and processing (in QC)
- logging and tree farming
- sand and gravel extraction
- windmill operations
- aerospace facility
- hydroelectric development

4.2.2 Recreation

No provincially or federally designated recreational areas are crossed by the Project; however, there are many recreational activities that occur throughout the Project areas such as:

- hunting
- fishing
- hiking
- nature study
- wildlife viewing
- camping
- cottaging
- quading
- snowmobiling
- water sports (e.g., boating, kayaking, and canoeing)

4.2.3 Designated Environmental and Cultural Sites

Alberta

While the Alberta Segment does not traverse any protected areas, provincial parks or national parks, the proposed route crosses nine environmentally significant areas within the parkland and grassland natural regions. Seven of these environmentally significant areas are of national concern and two are of international concern.

The proposed pipeline crosses through the following Important Bird Areas (IBAs):

- Cavendish Railline
- eastern boundary of Gooseberry Lake
- Sounding Lake

The designation of IBAs does not restrict development but construction through these areas may require additional mitigation to avoid or minimize any adverse effects.

The Alberta Segment passes through two areas with high palaeontological potential and numerous fossil sites – the Sounding Creek area (marine deposits and ammonite remains) and the South Saskatchewan River valley (dinosaur-bearing beds and microfossil sites). The Alberta Segment also traverses areas of high potential for pre-contact and historic period archaeological sites. Any construction that could affect pre-contact or historic period archeological sites will require approval from Alberta Ministry of Culture and Community Spirit.

Saskatchewan

The Saskatchewan portion of the Prairies Segment crosses the following wildlife habitat protection areas and wildlife management zones:

- the Great Sandhills Ecological Reserve
- Fish and Wildlife Development Fund Land
- two IBAs:
 - Cabri Area
 - Pelican Lake

The Great Sandhills Ecological Reserve designation restricts development and requires a proponent to submit a technical proposal for review by the Saskatchewan Ministry of Environment. Based on this review, a ministerial approval may be required before proceeding with a project. No new facilities associated with Energy East are currently planned to occur within the Great Sandhills Ecological Reserve. However, if during detailed design, Energy East determines that new facilities or construction activities are required for conversion from gas to oil service within the Great Sandhills Ecological Reserve, Energy East will submit a technical proposal for review by the Saskatchewan Ministry of Environment.

A Fish and Wildlife Development Fund Lands designation does not restrict development but a permit issued by the Ministry of Environment under the *Provincial Lands Act* will be required.

The designation of IBAs does not restrict development but construction through these areas may require additional mitigation to avoid or minimize any adverse effects.

Although the Project traverses wildlife habitat protection areas and wildlife management zones, land disturbance on the conversion segment is expected to be confined to localized areas.

The Cromer Lateral does not cross any lands with special zoning or designations; and is completely located on freehold land.

The SK portions of the Prairies Segment and Cromer Lateral do not pass through any areas of palaeontological sensitivity. However, the Prairies Segment through SK traverses areas of high potential for pre-contact and historic period archaeological sites. Any construction that could affect pre-contact or historic period archeological sites will require approval from Saskatchewan Ministry of Parks, Culture and Sport.

Manitoba

The Manitoba portion of the Prairies Segment traverses the Whiteshell Provincial Park, located in eastern MB. It also crosses the Whitemud Watershed Wildlife Management Area (WMA). Any construction within these areas will require approval from the Government of Manitoba.

The MB portion of the Cromer Lateral does not cross any lands with special zoning or designations; this section is completely located on freehold land.

The MB portions of Prairie Segment and Cromer Lateral do not pass through any areas of palaeontological sensitivity. However, the Prairies Segment in MB traverses several archaeological sites that were identified during earlier assessments of the existing Canadian Mainline (e.g., the highly significant Miniota Site where the existing pipeline crosses the Assiniboine River). Any construction that could affect pre-contact or historic period archeological sites will require approval from Manitoba Ministry of Culture, Heritage, Sport and Consumer Protection.

Although the Project traverses designated environmental and/or cultural sites, land disturbance on the MB portion of the Prairies Segment is expected to be confined to localized areas.

Ontario

The Ontario West, Northern Ontario, and North Bay Shortcut segments traverse a total of eight provincial parks and two conservation authority boundaries (the South Nation Conservation Authority and the Raisin Region Conservation Authority). These conservation authority boundaries are local watershed management agencies in partnerships with government, landowners, and other organizations. Although the Project traverses these designated environmental sites, land disturbance on the conversion segments is expected to be confined to localized areas. Construction within the provincial parks and the conservation authority boundaries will require approval from the Ontario Ministry of Natural Resources (OMNR) and also from Conservation Authorities.

The Ontario East Segment does not cross any protected areas, provincial parks, or national parks but could potentially pass through several provincially-significant and

locally-significant wetlands as determined by the Ontario Ministry of Natural Resources, where various species of management concern are located. Construction within designated wetlands will require approval from the OMNR and also from Conservation Authorities.

The Ontario East Segment is expected to be within 1 km of seven registered archaeological sites, two of which are immediately adjacent to the proposed ROW. Any construction that could affect archeological sites will require approval from the Ontario Ministry of Tourism, Culture and Sport.

Québec

The Québec Segment traverses the following areas:

- the Marais de Gros-Cacouna IBA
- the Plaine inondable de Saint-Barthélemy IBA
- two natural reserves (Réserve naturelle de l'Archipel-du-Mitan and Réserve naturelle des battures de Saint-Augustin-de-Desmaures)
- one designated plant habitat (Rivière-des-Mille-Îles)
- one provincially designated muskrat habitats (Rivière des Prairies)
- two provincially designated waterfowl gathering areas (Anse du Vieux Moulin and Ilets Dombourg)
- approximately 197 km of provincially designated white-tailed deer overwintering areas

The designation of IBAs does not restrict development but construction through these areas may require additional mitigation to avoid or minimize any adverse effects. Construction within the two natural reserves, designated wildlife and plant habitats, waterfowl gathering areas and white-tailed deer overwintering areas will require approval from the Québec Ministère du Développement durable, de l'Environnement, de la Faune et des Parcs (the Minister of Sustainable Development, Environment, Wildlife and Parks).

The proposed route for the Québec Segment is within the protection perimeter area of the Maison Therrien, a protected cultural heritage building. Any construction that could affect archeological sites and/or protected heritage buildings will require approval from the Ministère de la Culture et des Communication.

New Brunswick

The New Brunswick Segment does not cross any Protected Natural Areas (PNAs), national parks or provincial parks. However, along the northern part of the proposed route, the segment crosses a protected watershed and a candidate PNA, as well as a

second candidate PNA further south. Five other candidate PNAs are located within 1 km of the proposed route. The route also passes through a number of conservation forest stands and deer wintering areas within Crown lands. It could potentially pass through several provincially significant wetlands as well. Construction within any of these areas will require approval from either the NB Department of Natural Resources or the NB Department of Environment and Local Government.

The New Brunswick Segment passes through numerous areas of elevated archaeological potential, predominantly surrounding watercourses or waterbodies based on the Archaeological Services archaeological potential map and potential palaeo-shoreline maps. In addition, there are 29 archaeological (pre-contact and historic sites, historic plane wrecks, traditional travel/portage routes) or heritage resource sites (Euro-Canadian cemeteries, built heritage sites/designated provincial historic sites, and cultural landscapes) identified within 1 km of the proposed route.

Any construction that could affect pre-contact or historic period archeological sites will require approval from the New Brunswick Department of Tourism, Heritage and Culture, Archaeological Services Unit, Heritage Branch.

5.0 STAKEHOLDER AND ABORIGINAL ENGAGEMENT

5.1 STAKEHOLDER ENGAGEMENT PROGRAM

5.1.1 Program Overview

The stakeholder engagement program for the Project has been designed, and is being conducted, in accordance with the principles of TransCanada's stakeholder engagement framework.

Engagement for Energy East started in the second quarter of 2013. Engagement activities will continue for the duration of the Project.

The program is intended to enable the development and maintenance of positive relationships by:

- providing clear, relevant and timely information about TransCanada and the Project
- identifying concerns of community leaders and other interested stakeholders
- providing an opportunity for stakeholders to provide feedback on the Project
- answering questions stakeholders have about TransCanada and the Project
- fostering relationships between Energy East and communities along the proposed route
- ensuring NEB engagement process requirements are met or exceeded

Engagement activities and communication tools have and may include:

- a Project email address (energyeast@transcanada.com/energieest@transcanada.com)
- a Project webpage and (www.energyeastpipeline.com and www.oleoducenergieest.com)
- the Project toll free telephone number (1-855-895-8750)
- TransCanada social media forums (Twitter, YouTube)
- project-specific fact sheets (see Appendix B), letters and electronic mailouts
- news releases
- TransCanada program brochures (community investment, corporate profile), and the NEB brochure (*A Proposed Pipeline or Power Line Project: What you Need to Know*)
- personal contacts with stakeholders including face-to-face meetings, presentations and telephone calls
- newspaper, radio and television advertisements

- open houses
- project newsletters and information packages

5.1.2 Community Engagement

The engagement program for the Project will be accomplished through:

- preliminary stakeholder identification and material development
- stakeholder notification and engagement
- transition to operations

Preliminary Stakeholder Identification and Material Development

By a combination of desktop research and personal contacts, Energy East identified a preliminary list of potential stakeholders in the Project area. This list has been, and continues to be, updated as additional stakeholders are identified.

Stakeholder Notification and Engagement

Stakeholder notification began in the second quarter of 2013. Early stakeholder notification has involved providing information on the Project, including proposed facility locations and on key project-related activities. Information on how stakeholders could provide input into project planning and the NEB's regulatory review process has also been provided.

As the Project evolves, stakeholders are being provided with a variety of means to receive and obtain additional information about the Project including through updated fact sheets, open houses, and presentations to local communities. As well, Energy East is implementing programs and strategies to build or strengthen relationships with local communities.

The engagement program is designed to recognize the diversity of stakeholders and their interests across the proposed conversion and new mainline segments. The engagement team is organized into four regional teams that tailor information at a regional level and recognize stakeholder preferences. Engagement team members speak English, French or both and materials, displays and open houses are provided in English, French or bilingual, depending on community preferences.

Throughout the stakeholder engagement process, Energy East will work with stakeholders to resolve or mitigate any concerns or issues.

Transition to Operations

Stakeholder engagement activities for the Project will be transitioned to the Public Awareness program for operations. The PA program was described in Section 3.3.4 of this Project Description.

To help ensure a seamless transition to the PA program, the process begins during construction of the Project. The PA program for the Project is expected to be implemented by TransCanada's regional offices.

5.1.3 Stakeholders

Community and Government Stakeholders

Energy East is engaging with a broad range of stakeholders on the Project, including:

- landowners
- land users (e.g., guides, outfitters, and trappers)
- community members
- municipal leaders and representatives (e.g., regional districts and municipalities)
- provincial and federal elected officials
- government agencies and representatives
- non-governmental organizations
- general public and citizen groups with common interests

Table 5-1 provides a provincial breakdown of the municipalities that has identified as potentially having an interest in the Project.

Table 5-1: Summary of Municipalities

Province	Municipalities (Towns, Cities, Counties)
Alberta	38
Saskatchewan	92
Manitoba	57
Ontario	99
Québec	174
New Brunswick	31
TOTAL	491

5.1.4 Open Houses

In the second half of 2013, Energy East hosted 61 community open houses across the six provinces from AB to NB. These events were attended by a total of 4,100 registered guests. Additional open houses are planned for 2014. Table 5-2 summarizes the 2013 open houses. Further information will be provided in the comprehensive application to the NEB for the Project.

Table 5-2: Summary of 2013 Community Open Houses

Province	Number of Open Houses	Total Registered Guests
Alberta	3	32
Saskatchewan	8	155
Manitoba	6	104
Ontario	22	1,558
Québec	13	726
New Brunswick	9	1,525
TOTAL	61	4,100

5.1.5 Preliminary Stakeholder Feedback

As described above, Energy East has initiated preliminary discussions with stakeholders that have enabled it to better understand the complexities of routing and siting alternatives for the Project. After reviewing the various alternatives and taking into account stakeholder and community feedback to date, Energy East narrowed its selection to the new pipeline routes and terminal locations identified in this Project Description. Engagement on pump station locations is underway.

In addition to routing and facility siting alternatives, preliminary discussions with communities and other stakeholders have identified some areas of interest and potential concern. At a high level, these include:

- business opportunities and employment
- construction methods and timing
- economic benefits to communities
- emergency response planning
- facilities and pipeline routing
- marine facilities and marine habitats and wildlife
- pipeline safety and integrity
- properties of product transported in pipeline
- training and employment opportunities
- watercourse crossings and water quality
- wetlands, wildlife and wildlife habitats

5.2 ABORIGINAL ENGAGEMENT PROGRAM

5.2.1 Program Overview

The Aboriginal engagement program for the Project is designed to assist Energy East in understanding and addressing the interests and concerns of Aboriginal communities with respect to the Project and to address the following:

- identify Aboriginal communities that might have some interest or concern relating to the Project
- provide ongoing project-related information
- work with the communities to obtain local and traditional knowledge (TK) and traditional land use (TLU) in relation to the Project area
- obtain socio-economic information relating to the Project
- facilitate economic participation in the Project
- identify potential concerns about the Project
- determine appropriate mitigation strategies

Through information exchange and dialogue, Energy East will continue to work with individual communities to address identified concerns and potential effects. Local and TK will be integrated into the design of the Project and plans for mitigation will be developed and implemented, as appropriate and available. Where opportunities exist, Energy East will work with the communities to help enhance capacity, including project-related training and employment.

Energy East will continue to provide information and outreach to those communities that have not to date, responded to the Project's efforts to engage them.

5.2.2 List of Aboriginal Communities

As part of its Aboriginal engagement program, Energy East considers the proximity of the Project area to:

- reserves under the *Indian Act*
- Métis settlements and communities
- areas identified by Aboriginal communities as their TLU areas
- known areas of current TLU
- areas under land claim negotiations or areas with unresolved Aboriginal title or both
- treaty land entitlement areas

Energy East has developed an initial list of Aboriginal communities that may be affected by the Project (see Table 5-3). In developing that list, Energy East has conferred with Aboriginal Affairs and Northern Development Canada (AANDC) and the MPMO. The list is expected to evolve as engagement progresses.

Table 5-3: Summary of Aboriginal Communities and Organizations

Province	Number of Aboriginal Communities and Organizations
Alberta	12
Saskatchewan	23
Manitoba	19
Ontario	63
Québec	22
New Brunswick	16
TOTAL	155

The Aboriginal communities and organizations listed in Table 5-4 have been advised of the Project and will be provided with a link to this PD on the NEB website. Hard copies will be provided, on request, in English, French or both official languages.

Table 5-4: Preliminary List of Aboriginal Communities and Organizations

Community or Organization	Approximate Distance from the Energy East Mainline (km) ¹
Alberta	
Blood Tribe	222.1
Ermineskin Tribe	149.5
Frog Lake First Nation	147.6
Louis Bull	157.4
Métis Nation of Alberta: Head Office	177.9
Métis Nation of Alberta: Region #2	182.2
Métis Nation of Alberta: Region #3	248.4
Montana First Nation	147.1
Piikani Nation	264.4
Saddle Lake Cree Nation	144.6
Samson Cree	144.5
Siksika Nation	175.7
Saskatchewan	
Carry the Kettle First Nation	0.0
Cowessess First Nation	27.9
George Gordon First Nation	39.0
Kahkewistahaw First Nation	13.8
Kawacatoose First Nation	122.1
Little Black Bear First Nation	75.5
Métis Nation of Saskatchewan	181.1
MNS Eastern Region 3	46.3

Table 5-4: Preliminary List of Aboriginal Communities and Organizations (cont'd)

Community or Organization	Approximate Distance from the Energy East Mainline (km) ¹
Saskatchewan (cont'd)	
MNS Western Region 3	6.9
Muscowpetung First Nation	43.4
Muskowekwan First Nation	3.0
Nekaneet First Nation	103.3
Ocean Man First Nation	44.2
Ochapowace First Nation	1.0
Okanese First Nation	31.5
Pasqua First Nation #79	43.4
Peepeekisis Cree Nation No. 81	62.0
Pheasant Rump Nakota First Nation	44.0
Piapot First Nation	7.1
Sakimay First Nations	5.3
Standing Buffalo Dakota Nation	52.4
Star Blanket Cree Nation	47.0
White Bear First Nation	54.0
Manitoba	
Birdtail Sioux First Nation	10.7
Brokenhead Ojibway Nation	25.6
Buffalo Point First Nation	59.9
Canupawakpa Dakota First Nation	50.2
Dakota Plains First Nation	10.4
Dakota Tipi First Nation	6.3
Gamblers First Nation	42.7
Keeseekoowenin First Nation	60.0
Long Plain First Nation	7.0
Manitoba Métis Federation	11.6
MMF Southeast Region	90.1
MMF Southwest Region	18.4
Rolling River First Nation	45.8
Roseau River Anishinabe First Nation Government	56.4
Sagkeeng First Nation	106.6
Sandy Bay Ojibway First Nation	67.1
Sioux Valley Dakota Nation	30.5
Swan Lake First Nation	11.3
Waywayseecappo First Nation Treaty 4 – 1874	57.4

Table 5-4: Preliminary List of Aboriginal Communities and Organizations (cont'd)

Community or Organization	Approximate Distance from the Energy East Mainline (km) ¹
Ontario	
Algonquin Consultation Office	35.7
Algonquin of Greater Golden Lake	5.8
Algonquins of Pikwakanagan	22.0
Animbiigoo Zaagi'igan Anishinaabek (Lake Nipigon First Nation)	1.7
Anishnaabeg of Naongashing (Big Island)	32.1
Antoine First Nation	5.8
Aroland First Nation	47.9
Big Grassy River First Nation	56.2
Biinjitiwaabik Zaaging Anishinaabek - Rocky Bay First Nation	1.4
Bingwi Neyaashi Anishinaabek (Sand Point First Nation)	1.0
Bonnechere Algonquin First Nation	35.8
Brunswick House First Nation	191.0
Chapleau Cree First Nation	189.8
Chapleau Ojibway First Nation	191.8
Constance Lake First Nation	7.3
Flying Post First Nation	84.8
Fort William First Nation	77.2
Ginoogaming First Nation	7.9
Grassy Narrows First Nation	37.5
Iskatewizaagegan #39 Independent First Nation (Shoal Lake #39 First Nation)	8.0
Kiashe Zaaging Anishinaabek (Gull Bay First Nation)	83.0
Kijicho Manito Madaouskarini (Bancroft)	93.4
Lac Des Mille Lacs First Nation	10.8
Lac Seul First Nation	68.2
Long Lake #58 First Nation	1.2
Matachewan First Nation	32.4
Matawa First Nations	66.9
Mattagami First Nation	105.3
Mattawa-North Bay Algonquin First Nation	5.8
Métis Nation of Ontario (MNO)	27.5
MNO Northwestern Ontario/Treaty #3	0.5
MNO: Lake Superior North (Michipicoten/Lakehead/Nipigon)	241.6

Table 5-4: Preliminary List of Aboriginal Communities and Organizations (cont'd)

Community or Organization	Approximate Distance from the Energy East Mainline (km) ¹
Ontario (cont'd)	
MNO: Mattawa/Nipissing	3.4
MNO: Northeastern Ontario (James Bay/Abitibi/Temiskaming)	250.2
MNO: Ottawa River and Southwestern Ontario	27.5
Migisi Sahgaigan (Eagle Lake) First Nation	7.3
Missanabie Cree First Nation	160.3
Mohawks of Akwesasne	12.3
Moose Cree First Nation	226.9
Naothkamegwanning (Whitefish Bay First Nation)	33.9
Nipissing First Nation	29.0
Northwest Angle No.33 First Nation	37.0
Northwest Angle No. 37 First Nation	27.4
Obashkaandagaang (Washagamis Bay)	9.0
Ochiichagwe'babigo'ining (Dalles)	10.8
Ojibways of the Pic River First Nation	130.4
Ojibways of Onigaming First Nation	69.2
Ottawa Algonquin First Nation	5.8
Pays Plat First Nation	60.3
Red Rock Indian Band	7.0
Red Sky Métis Independent Nation	70.3
Shabot Obaadjiwan Algonquin First Nation (Sharbot Lake)	72.6
Shoal Lake No. 40 First Nation	13.7
Snimikobi (Ardoch) Algonquin First Nation	85.1
Taykwa Tagamou Nation (New Post First Nation)	13.5
Temagami First Nation	20.0
Wabaseemoong Independent First Nations	37.4
Wabauskang First Nation	64.9
Wabigoon Lake Ojibway Nation	7.4
Wabun Tribal Council	50.9
Wahgoshig First Nation	34.6
Wauzhushk Onigum - Rat Portage	7.3
Whitney and Area Algonquins	84.0
Québec	
Abénakis de Wôlinak	14.2
Abénakis d'Odanak	24.2

Table 5-4: Preliminary List of Aboriginal Communities and Organizations (cont'd)

Community or Organization	Approximate Distance from the Energy East Mainline (km) ¹
Québec (cont'd)	
Algonquin Anishinabeg Nation Tribal Council	114.0
Atikamekw d'Otipciwan First Nation	320.3
Conseil de la Nation Inuus Essipit	49.4
Conseil des Inuus de Pessamit	151.1
Conseil des Montagnais du Lac-St- Jean (Mashteuiatsh)	224.5
Eagle Village First Nation - Kipawa	54.0
Huron-Wendat Nation (Wendake)	18.6
Kitigan Zibi Anishinabeg	110.3
La Nation Micmac de Gespeg	N/A
Les Atikamekw de Manawan	160.2
Long Point First Nation	93.9
Micmacs of Gespapegiag	205.0
Mi'gmaq of Listuguj	139.6
Mi'gmawei Mawiomi Secretariat	129.4
Mohawks of Kahnawá:ke	34.2
Mohawks of Kanehsatà:ke	22.3
Première Nation Malecite de Viger	1.3
Timiskaming First Nation	22.1
Wemotaci First Nation	161.4
Wolf Lake First Nation	41.7
New Brunswick	
Assembly of First Nations' Chiefs in New Brunswick	27.1
Buctouche First Nation	129.1
Burnt Church/ Esgenoôpetitj First Nation	170.6
Eel Ground First Nation	97.5
Eel River Bar First Nation	141.5
Elsipogtog First Nation	98.8
Fort Folly First Nation	133.9
Indian Island Nation	141.9
Kingsclear First Nation	36.3
Madawaska Maliseet First Nation	10.0
Metepenagiag Mi'kmaq Nation (Red Bank First Nation)	104.1
Oromocto First Nation	32.5
Pabineau First Nation	179.9

Table 5-4: Preliminary List of Aboriginal Communities and Organizations (cont'd)

Community or Organization	Approximate Distance from the Energy East Mainline (km) ¹
New Brunswick (cont'd)	
Saint Mary's First Nation	15.6
Tobique First Nation	2.0
Woodstock First Nation	45.5
Note: 1. These distances were estimated based on publicly available data, including the AANDC website.	

5.3 PRELIMINARY ABORIGINAL FEEDBACK

As described above, Energy East has initiated preliminary discussions with some Aboriginal communities. These discussions have enabled Energy East to identify and better understand some areas of interest and potential concern. At a high-level, these areas include:

- Aboriginal agreements and protocols
- Aboriginal interests and treaty rights
- Aboriginal trapping, hunting and fishing
- business opportunities and employment
- construction methods and timing
- cumulative effects of mining, pipelines and other energy developments
- economic benefits or participation
- emergency response management plans
- facilities and pipeline routing
- pipeline incidents
- pipeline integrity, particularly the conversion section
- proposed protected areas
- safety
- training and employment opportunities
- vegetation and wetlands
- watercourse crossings and water quality
- wildlife and wildlife habitat

Energy East continues to discuss opportunities for infrastructure development regarding electrical power to pump stations in northern ON with local and government agencies, power providers and First Nation communities.

The following figures show the approximate locations of the Aboriginal communities for which spatial data was available:

- Figure 5-1 for Alberta
- Figure 5-2 for Saskatchewan – Liebenthal to Chaplin
- Figure 5-3 for Saskatchewan – Chaplin to Kendal
- Figure 5-4 for Saskatchewan – Kendal to Moosomin
- Figure 5-5 for Manitoba – Moosomin to Portage
- Figure 5-6 for Manitoba – Portage to Falcon Lake
- Figure 5-7 for Ontario West – Kenora to Ignace
- Figure 5-8 for Ontario West – Ignace to Jellicoe
- Figure 5-9 for Ontario East – Jellicoe to Calistock
- Figure 5-10 for Ontario East – Calistock to Kirkland Lake
- Figure 5-11 for Ontario East – Kirkland Lake to Deux Rivières
- Figure 5-12 for Ontario East – Deux Rivieries to Alexandria
- Figure 5-13 for Québec – Lachute to Saint Maurice
- Figure 5-14 for Québec – Saint Maurice to Lévis
- Figure 5-15 for Québec – Lévis to Degelis
- Figure 5-16 for New Brunswick – Degelis to Napadagon
- Figure 5-17 for New Brunswick – Napadagon to Hampton

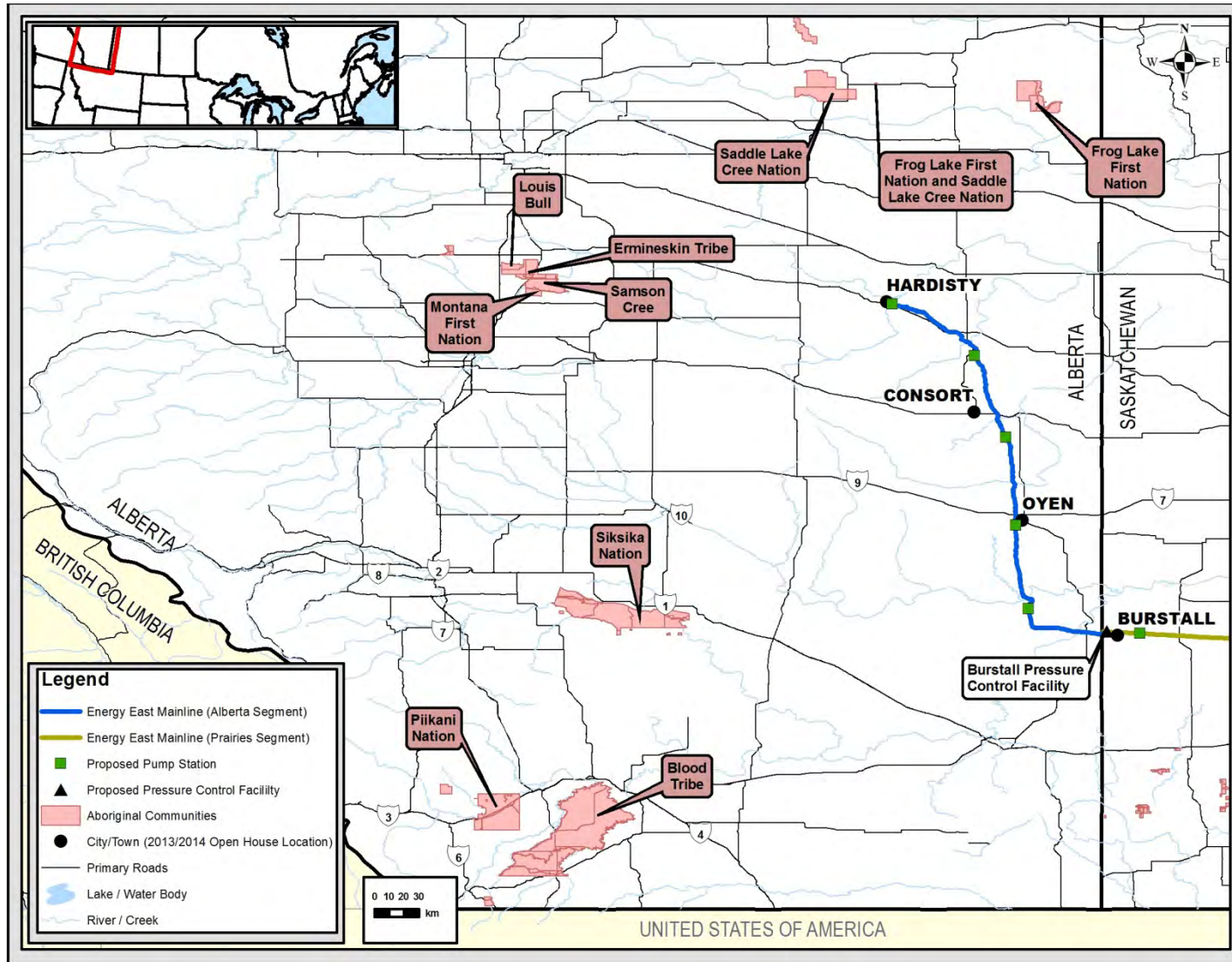


Figure 5-1: Alberta Aboriginal Communities

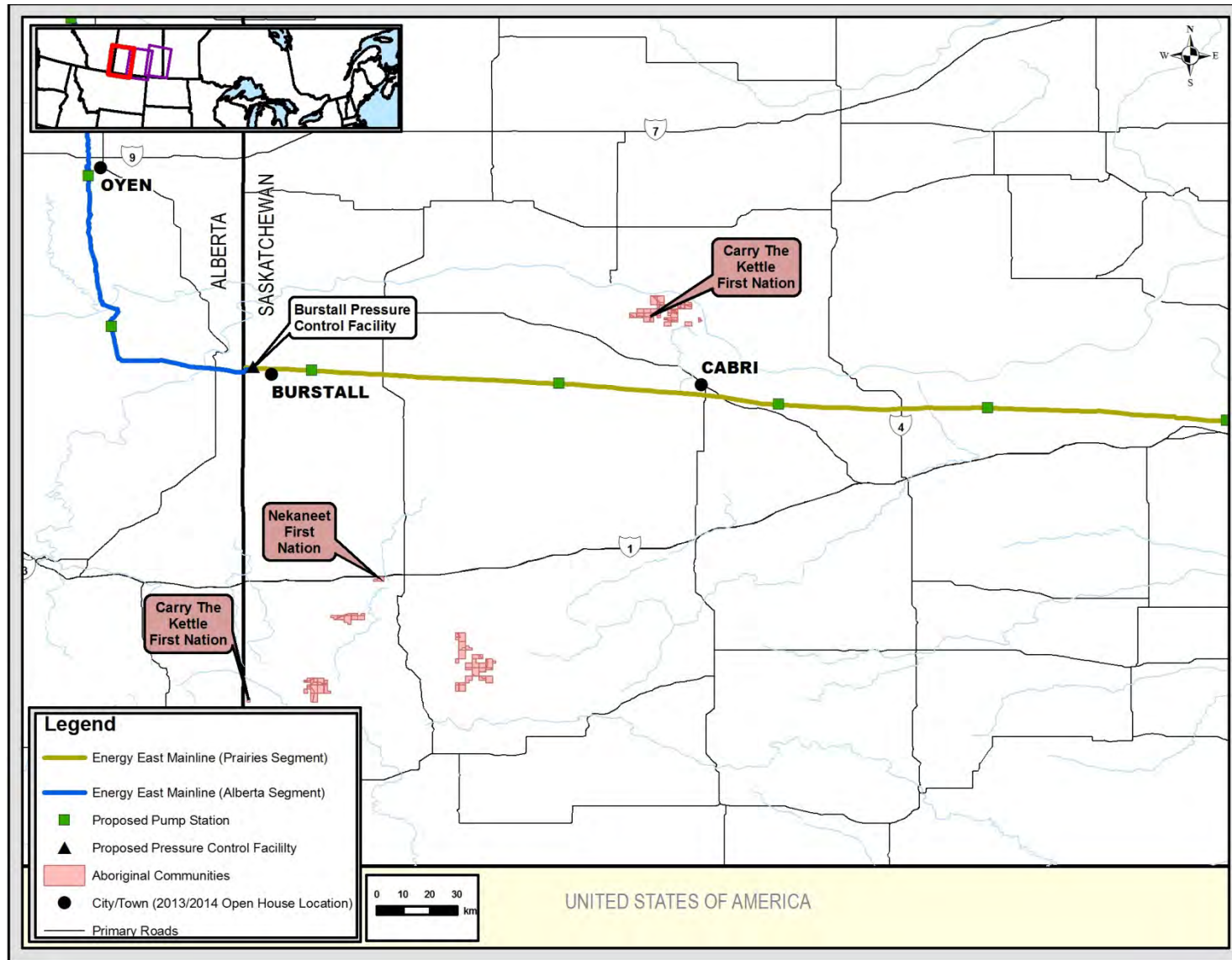


Figure 5-2: Saskatchewan Aboriginal Communities – Liebethal to Chaplin

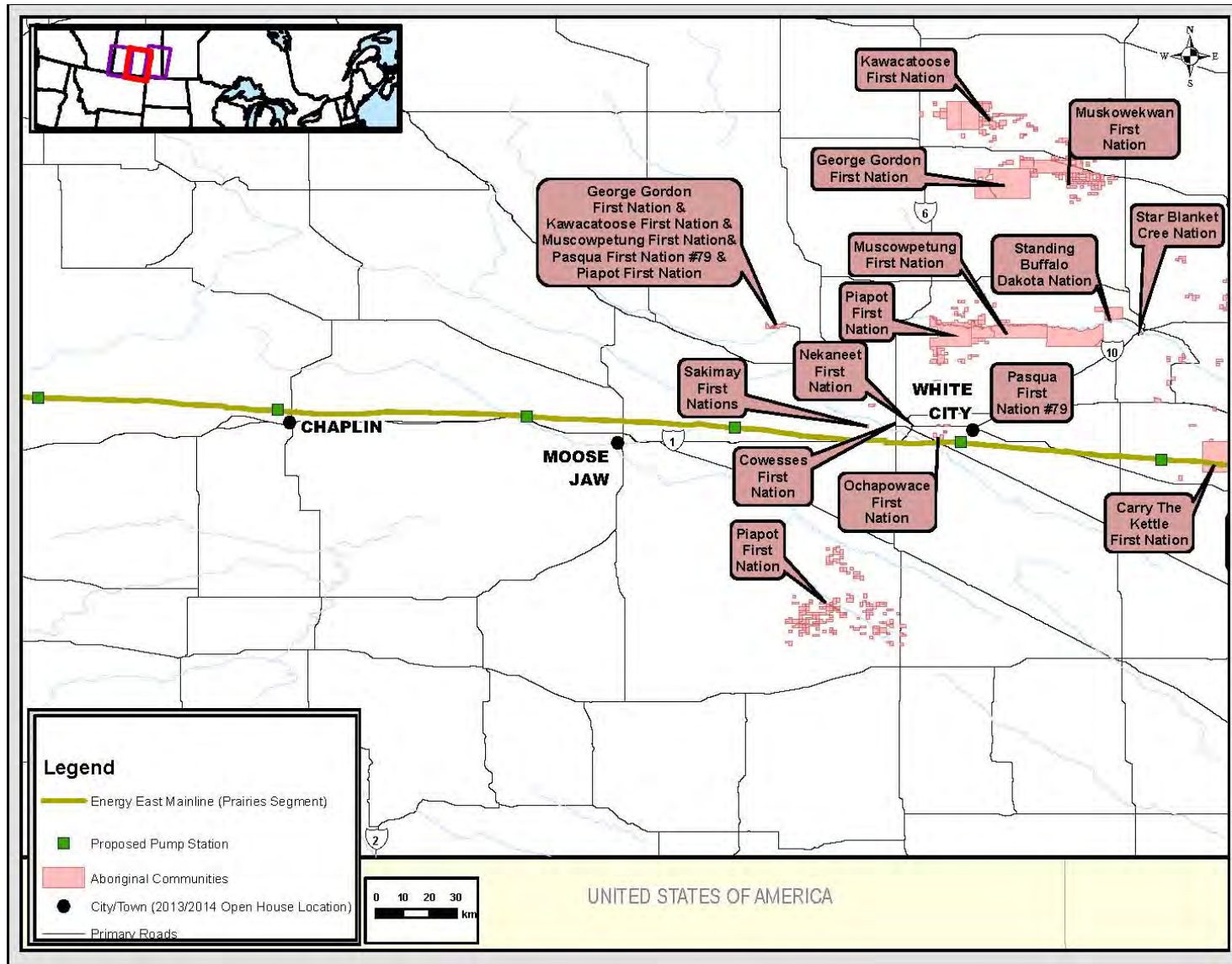


Figure 5-3: Saskatchewan Aboriginal Communities – Chaplin to Kendal

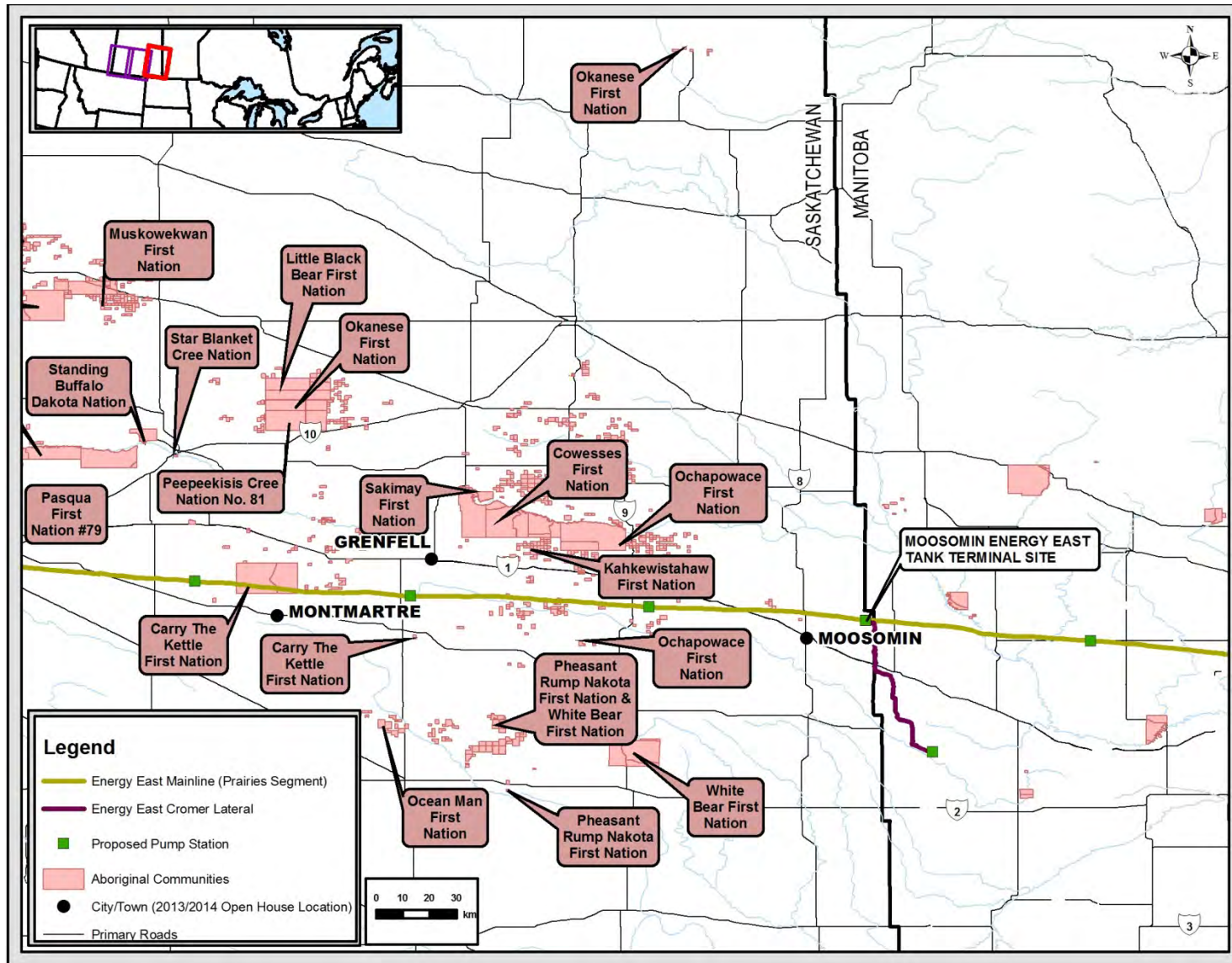


Figure 5-4: Saskatchewan Aboriginal Communities – Kendal to Moosomin

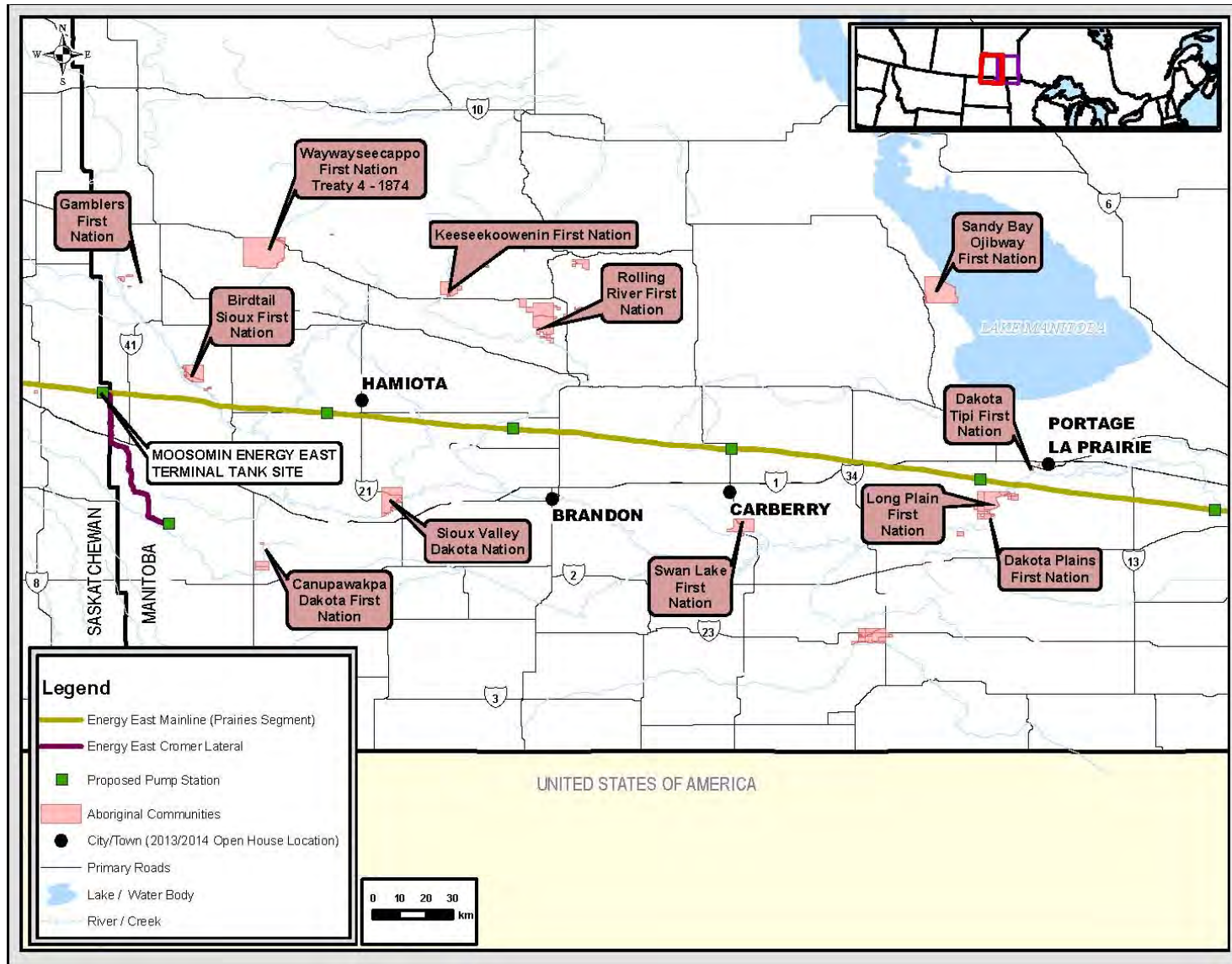


Figure 5-5: Manitoba Aboriginal Communities – Moosomin to Portage

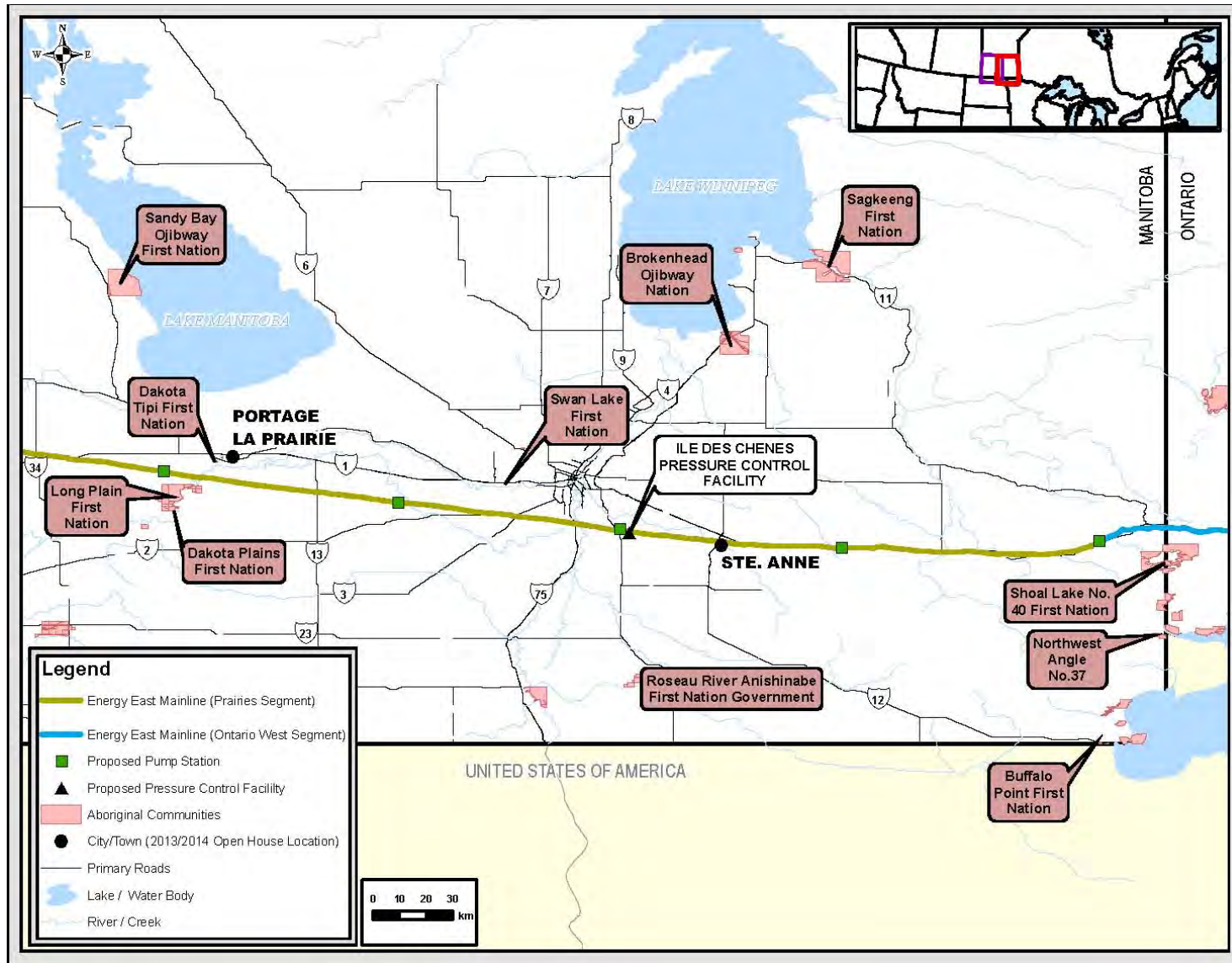


Figure 5-6: Manitoba Aboriginal Communities – Portage to Falcon Lake

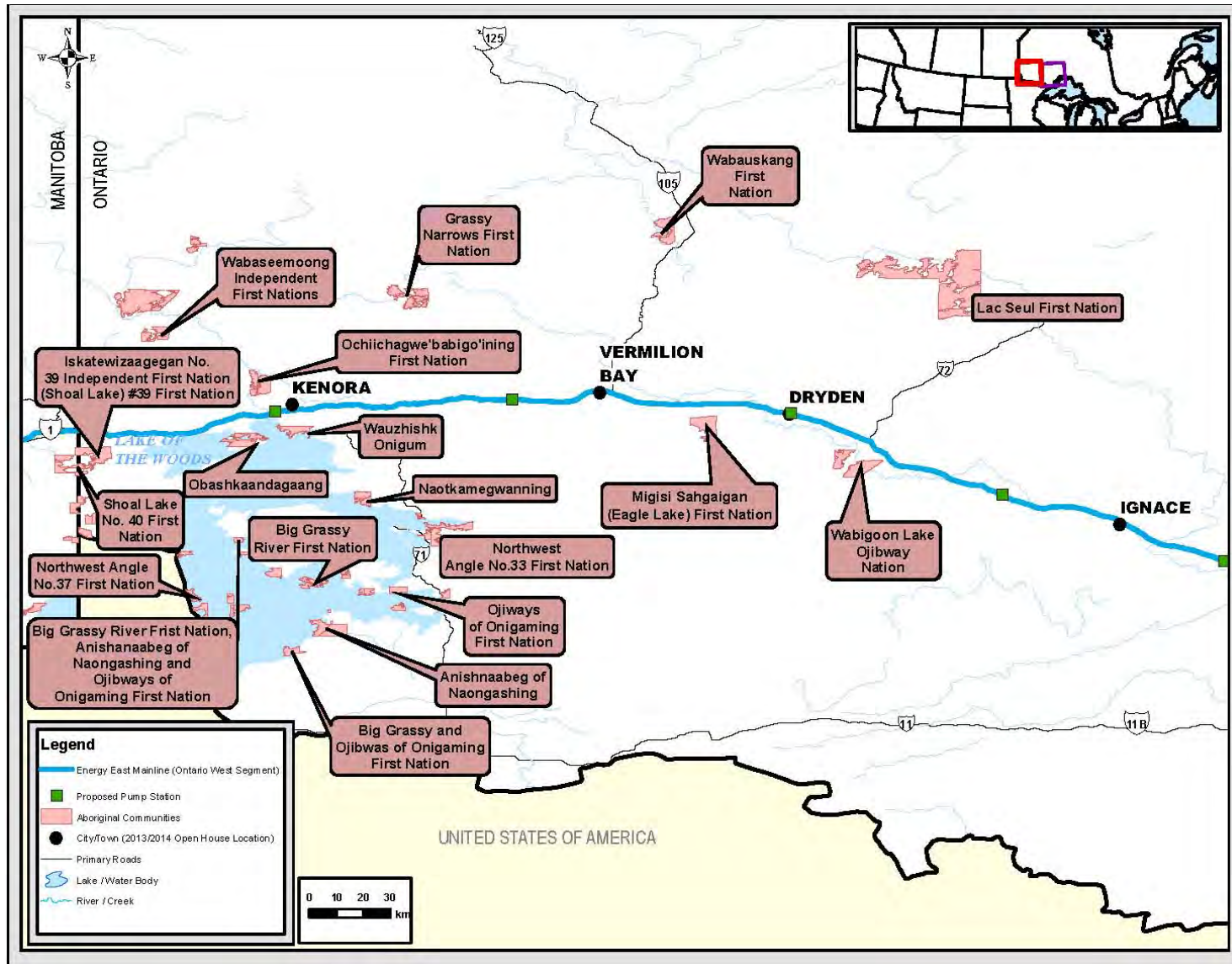


Figure 5-7: Ontario West Aboriginal Communities – Kenora to Ignace

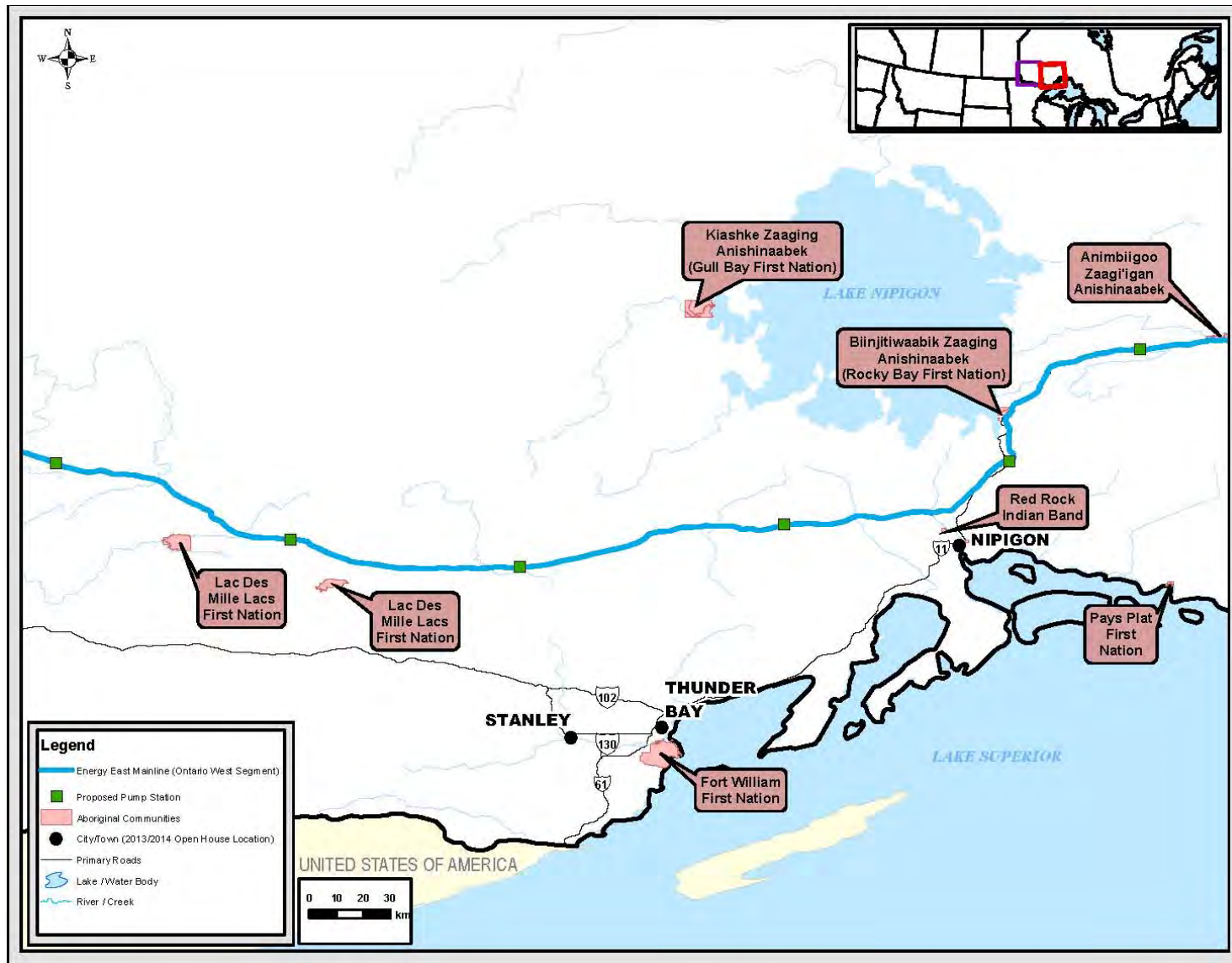


Figure 5-8: Ontario West Aboriginal Communities – Ignace to Jellicoe

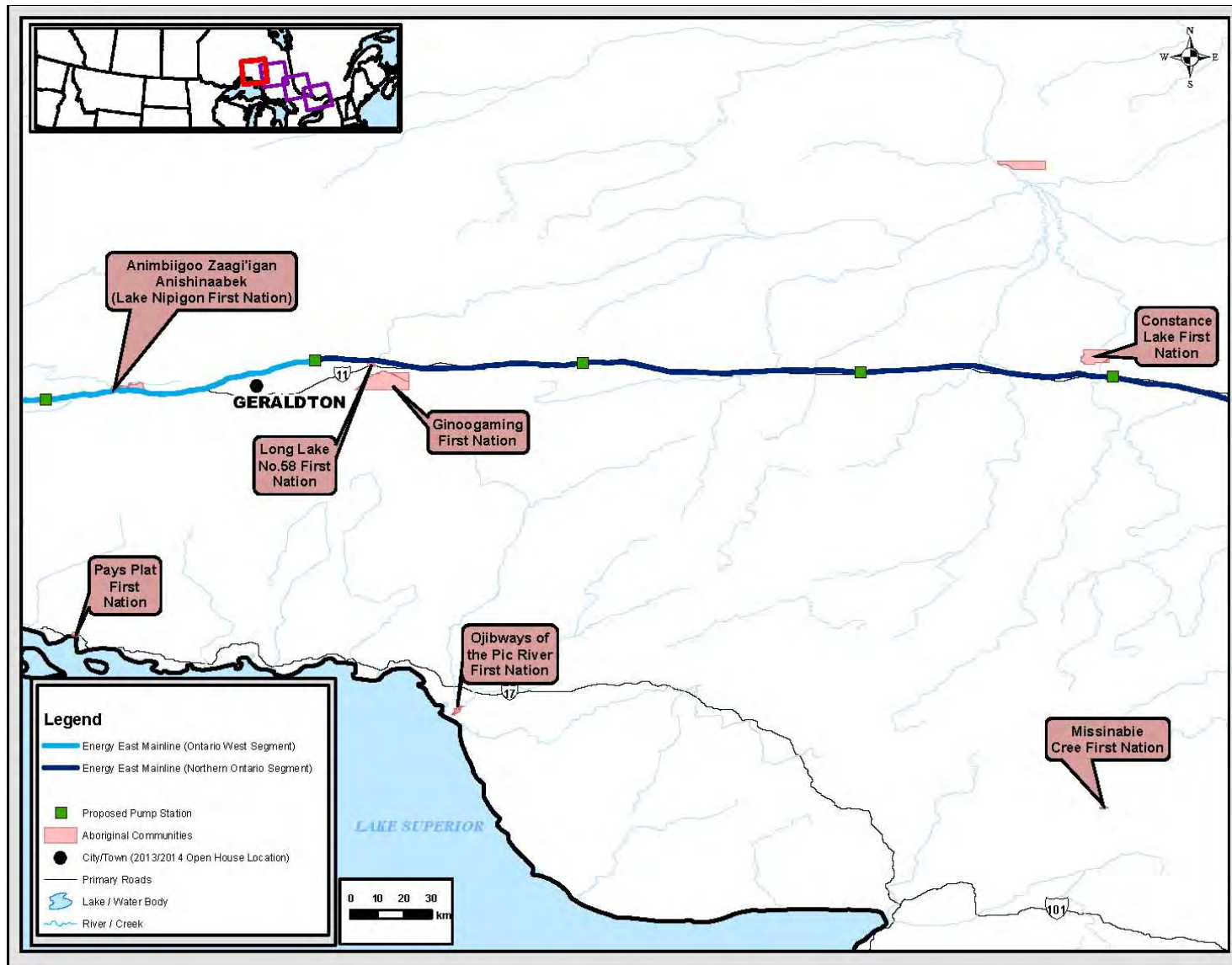


Figure 5-9: Ontario East Aboriginal Communities – Jellicoe to Calistock

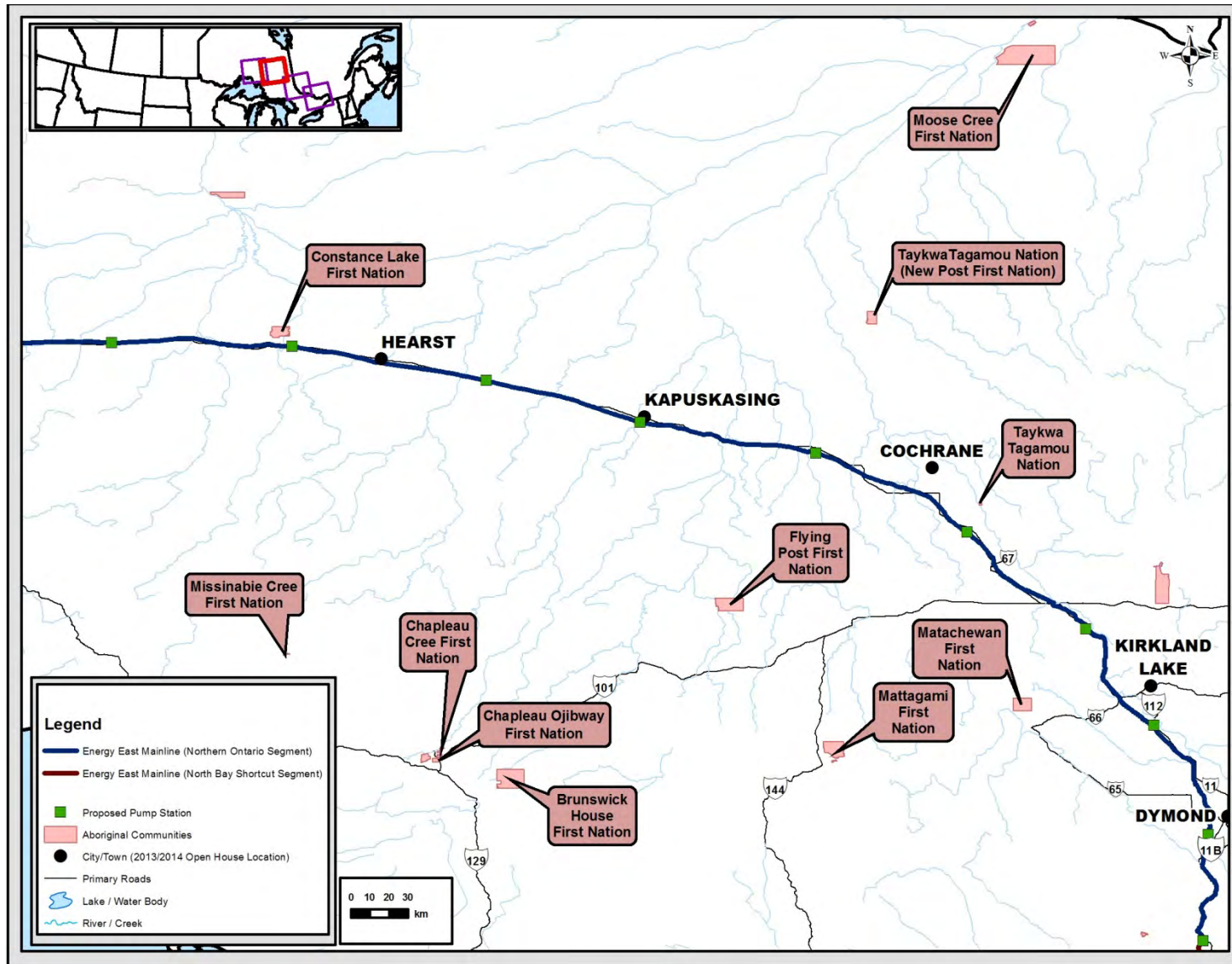


Figure 5-10: Ontario East Aboriginal Communities – Calistock to Kirkland Lake

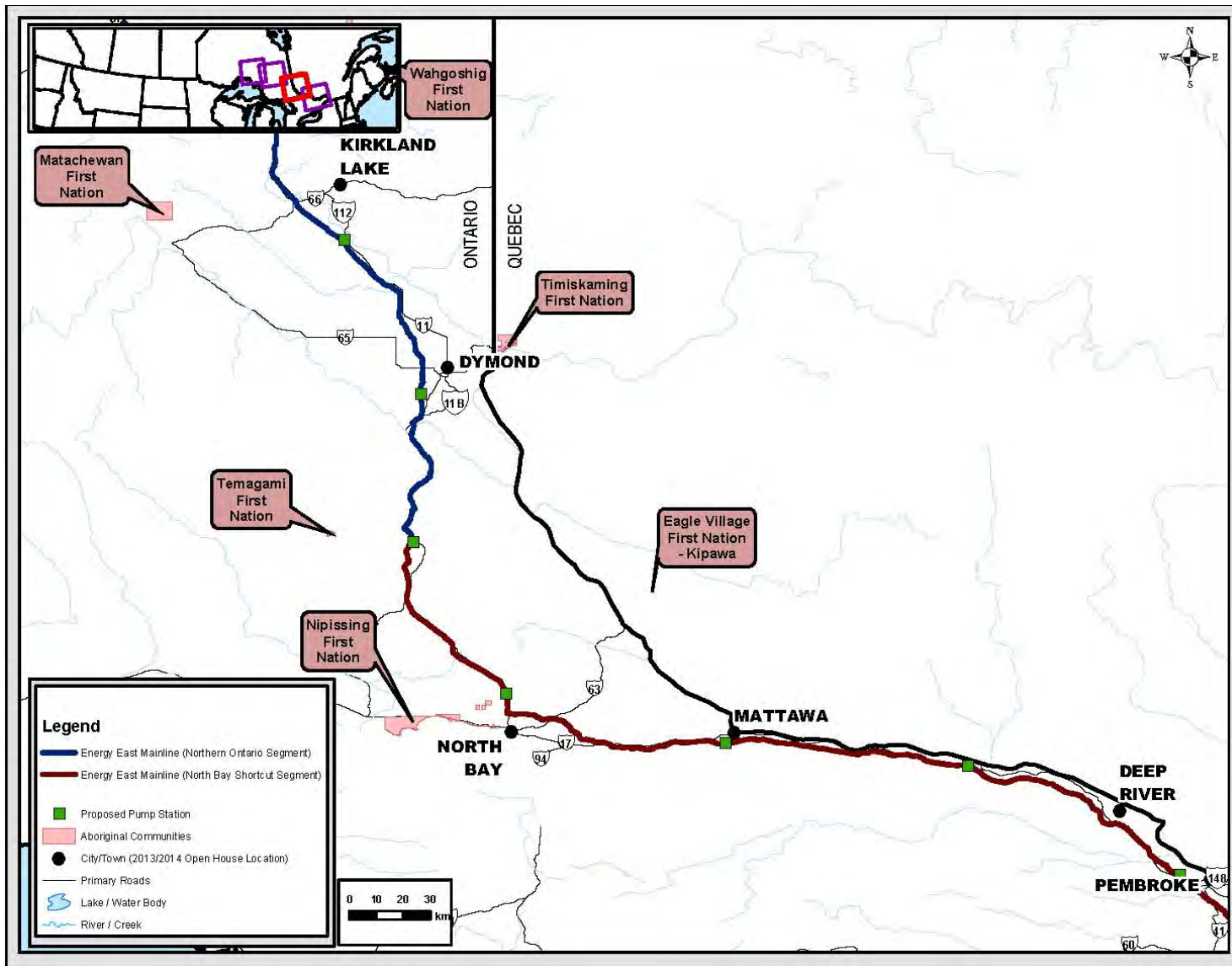


Figure 5-11: Ontario East Aboriginal Communities – Kirkland Lake to Deux Rivieres

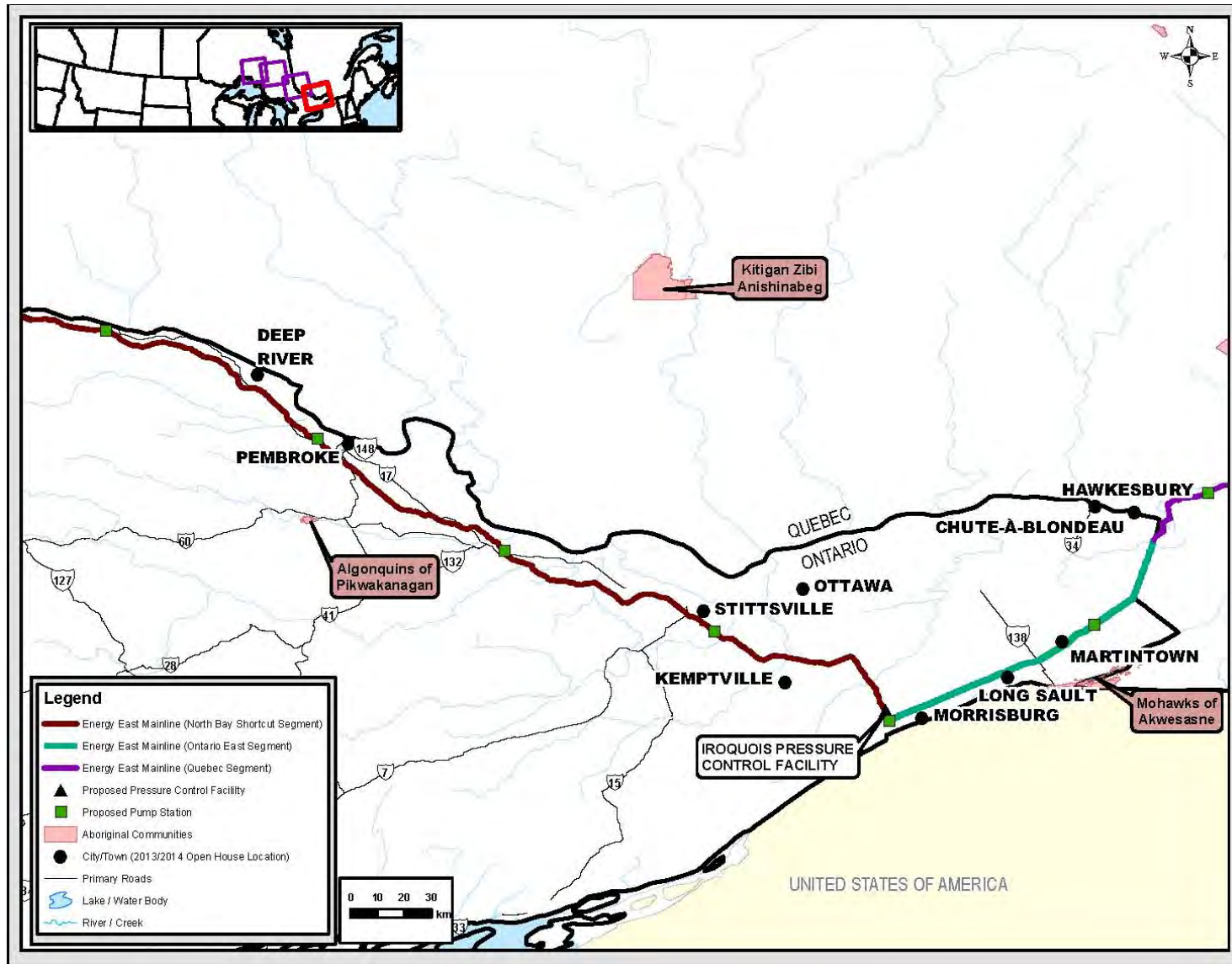


Figure 5-12: Ontario East Aboriginal Communities – Deux Rivieres to Alexandria

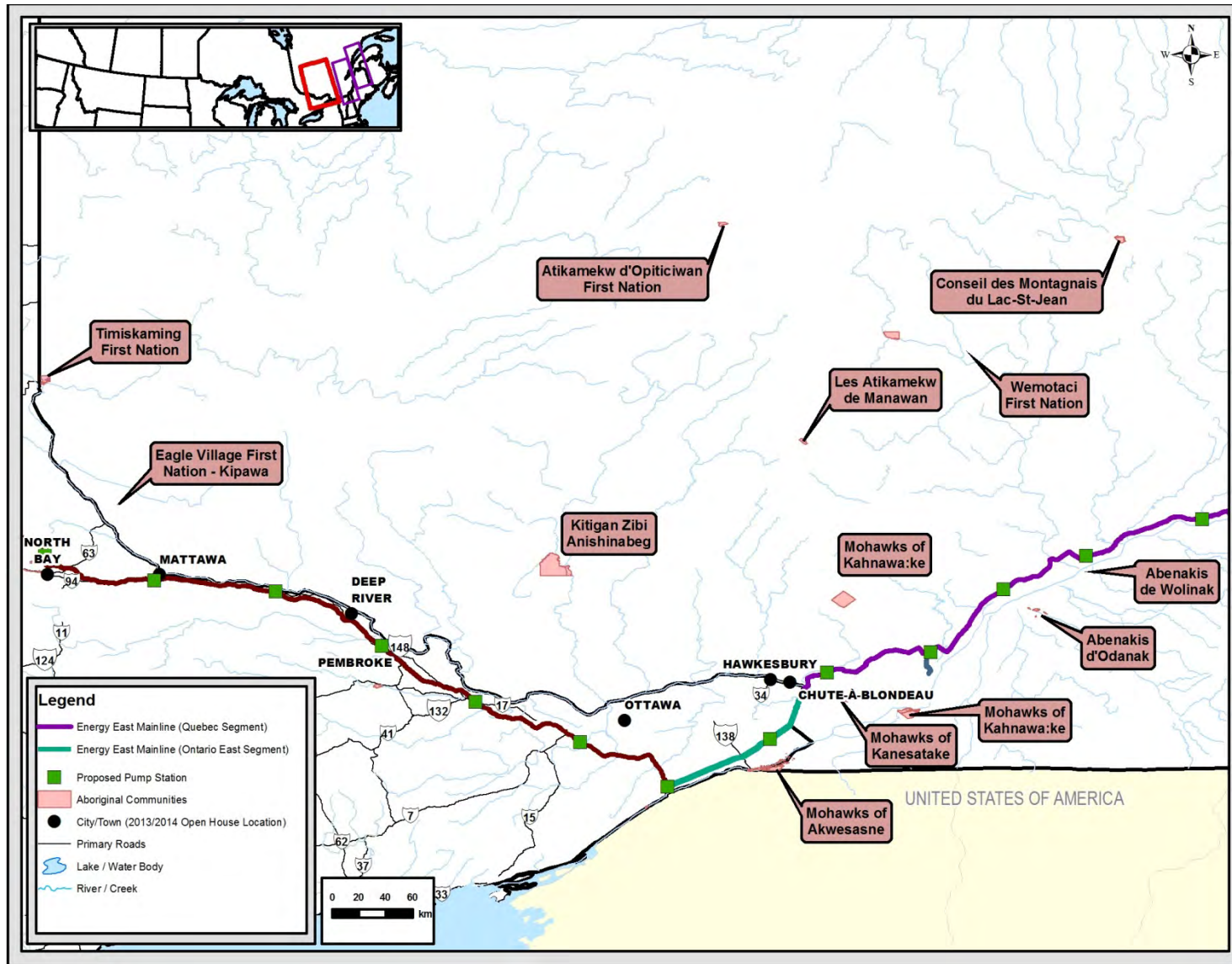


Figure 5-13: Québec Aboriginal Communities – Lachute to Saint Maurice

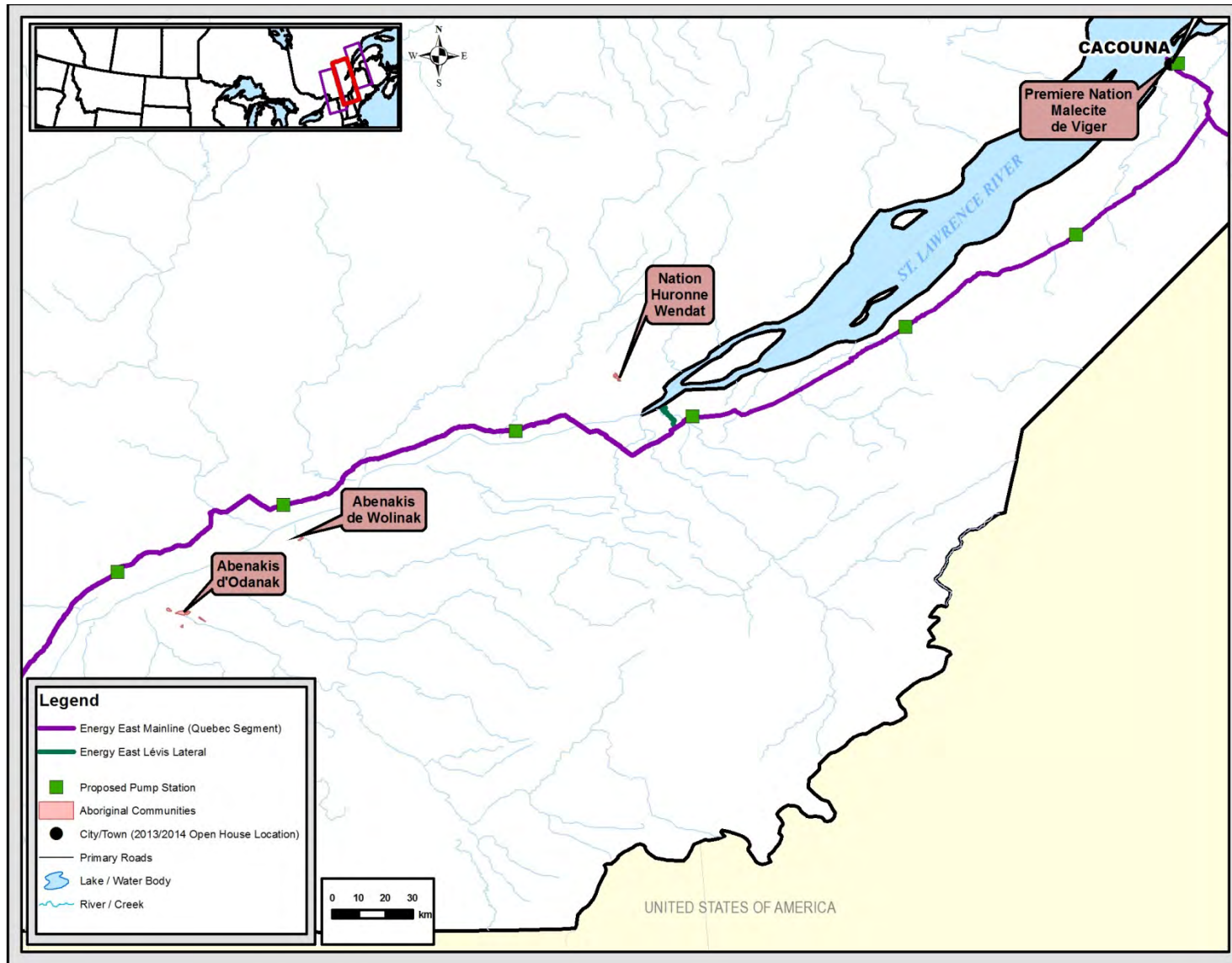


Figure 5-14: Québec Aboriginal Communities – Saint Maurice to Lévis

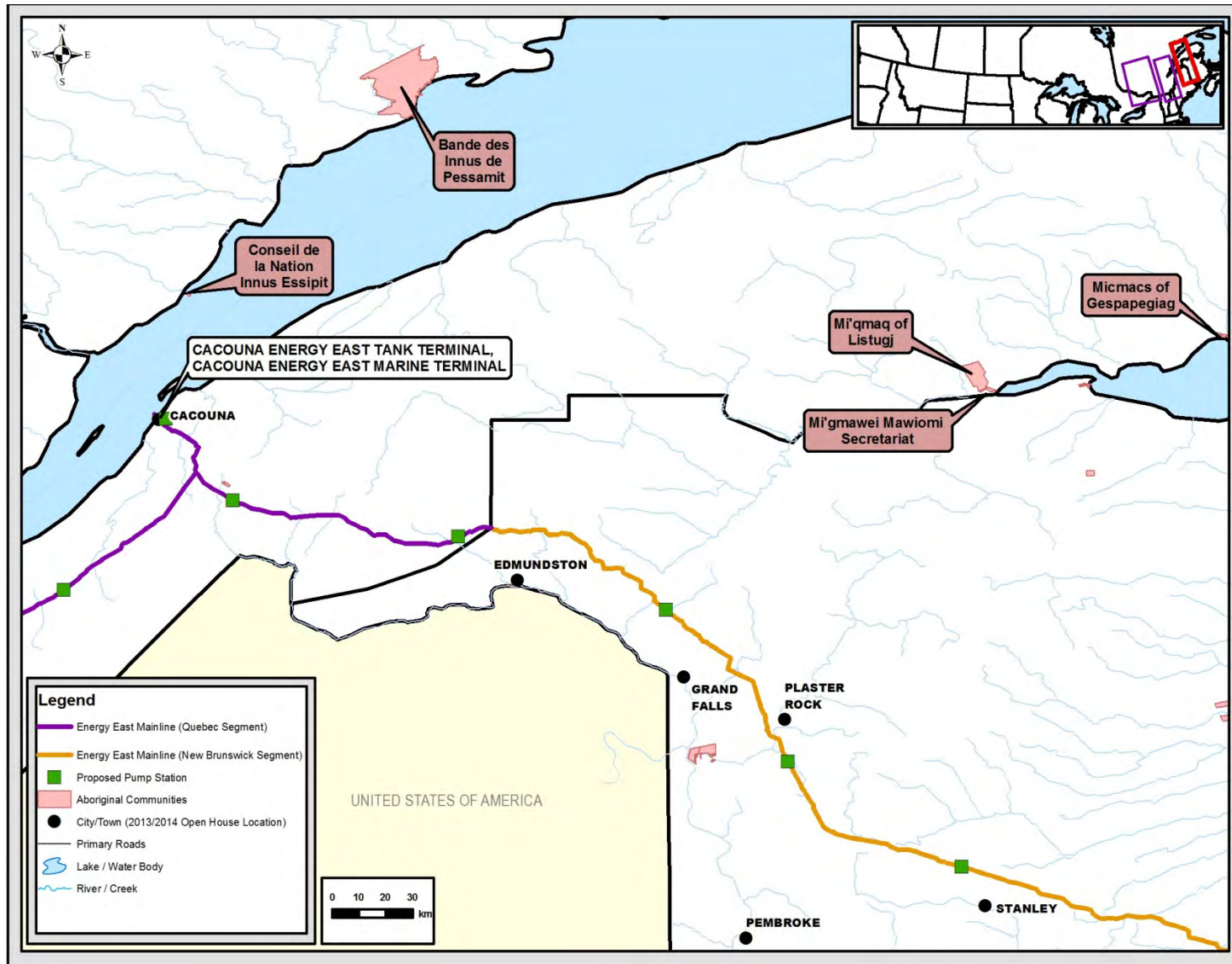


Figure 5-15: Québec Aboriginal Communities – Lévis to Degelis

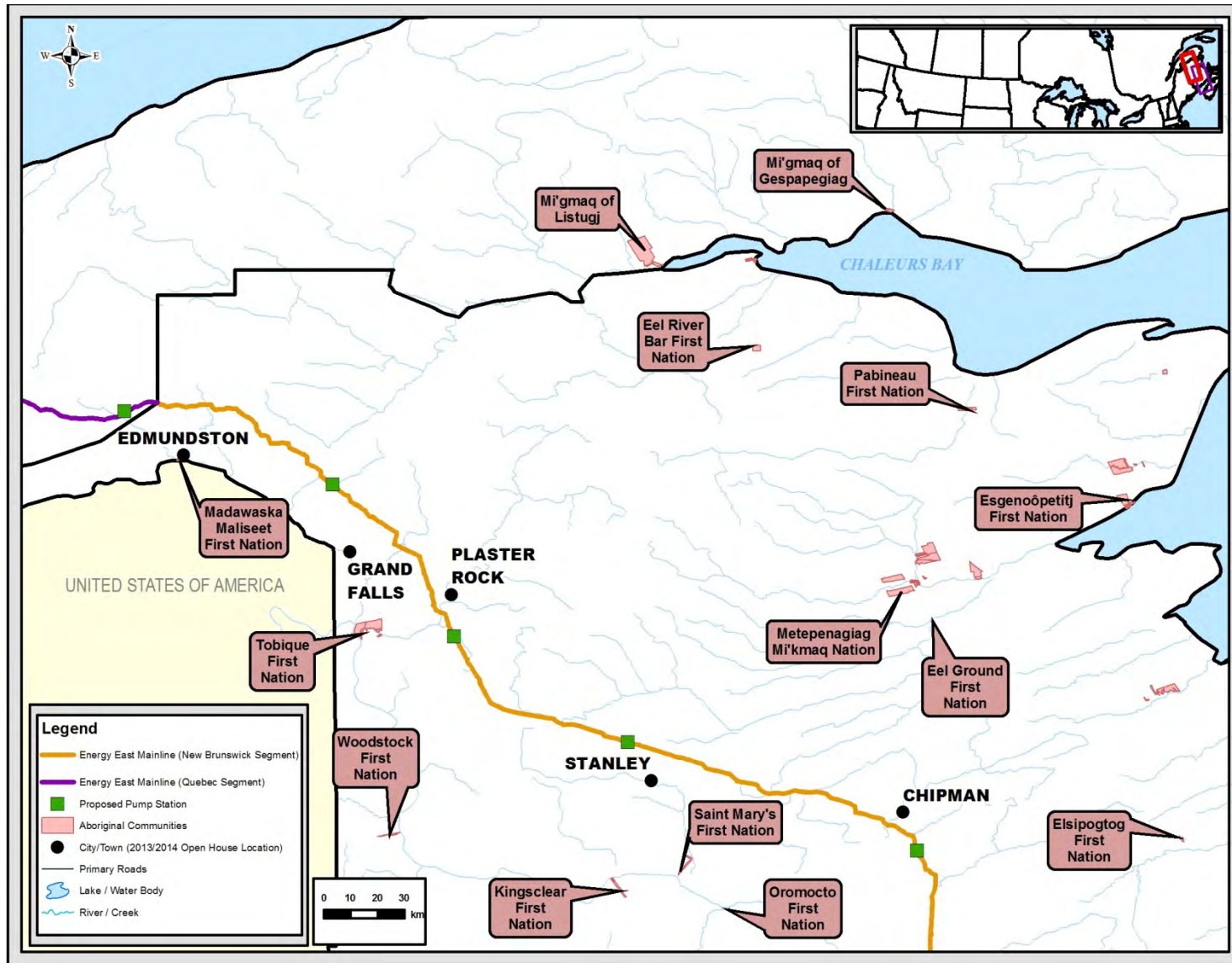


Figure 5-16: New Brunswick Aboriginal Communities – Degelis to Napadogan

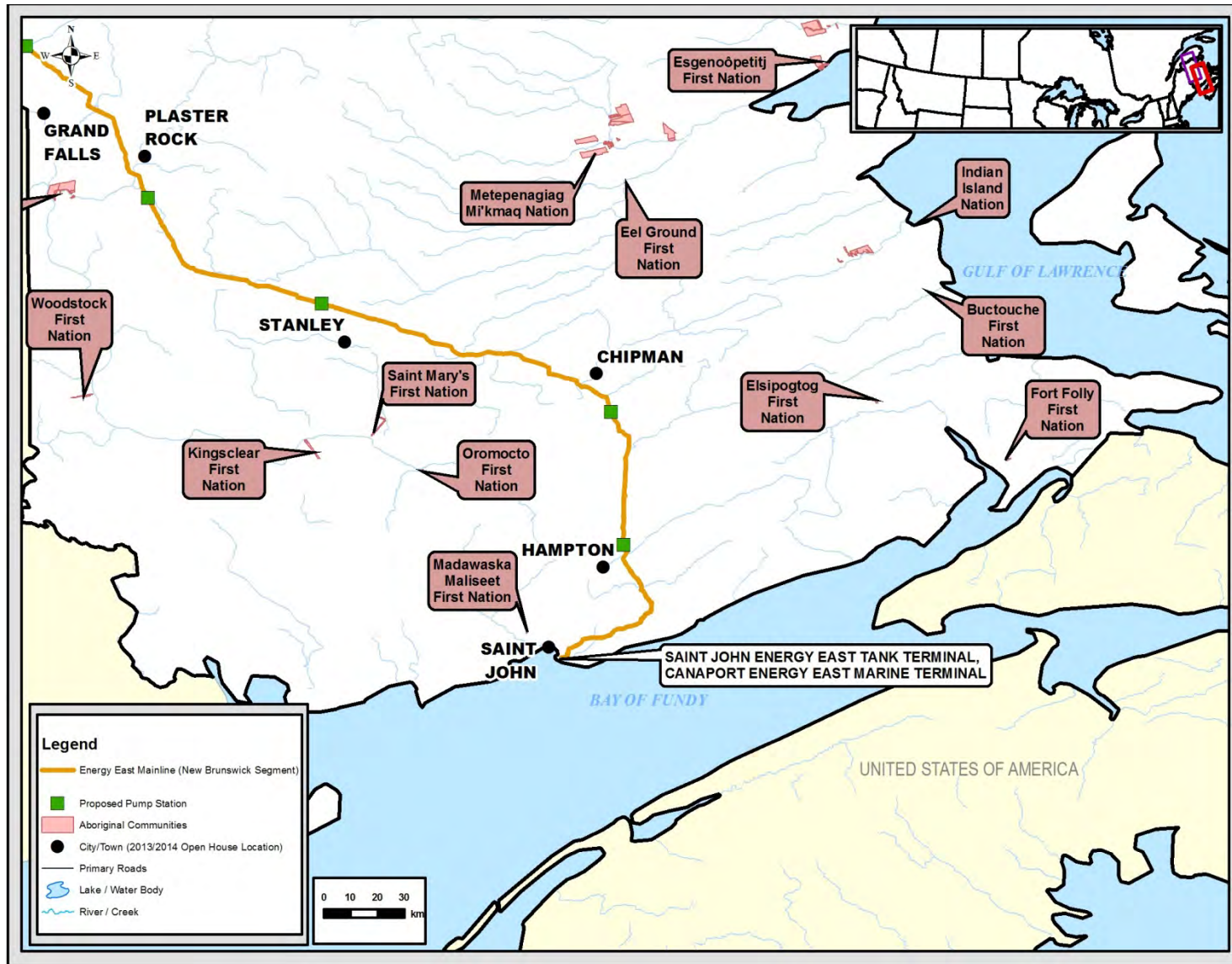


Figure 5-17: New Brunswick Aboriginal Communities – Napadagon to Hampton

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6.0 REGULATORY AUTHORIZATIONS

6.1 FEDERAL AUTHORIZATIONS

In addition to a CPCN and other approvals under the NEB Act, various other federal permits and authorizations may be required for the Project.

A preliminary list is provided in Table 6-1. A final list will be developed in consultation with federal authorities and as design and construction planning progresses for the Project.

Table 6-1: Preliminary List of Federal Regulatory Authorizations and Departments

Department	Authority	Approval
Aboriginal Affairs and Northern Development Canada – SK	<i>Indian Act, 1985</i>	<ul style="list-style-type: none"> • Easement • Work Permit • Access Agreements
Agriculture and Agri-Food Canada	<i>Department of Agriculture and Agri-Food Act</i>	<ul style="list-style-type: none"> • Easement • Work Permit • Access Agreements
Department of National Defence – Canadian Forces Base Petawawa, ON	<i>Federal Real Property Act and Federal Immovables Act</i>	<ul style="list-style-type: none"> • Easement • Work Permit • Access Agreement
Environment Canada	<i>Regulations Respecting Applications for Permits For Disposal at Sea, Canadian Environmental Protection Act, 1999</i>	<ul style="list-style-type: none"> • Section 127: Permit to dispose at sea
	<i>Species at Risk Act</i>	A permit or agreement pursuant to Section 73 of the <i>Species at Risk Act (SARA)</i> might be required if it is determined the Project will have an incidental effect on a listed wildlife species, any part of such species' critical habitat or the residences of such critical species
	<i>Canadian Environmental Protection Act</i>	<ul style="list-style-type: none"> • Disposal at Sea permit • Permit to import, export, or transport hazardous materials
National Energy Board ¹	Section 108 of <i>NEB Act</i>	Approval to install a pipeline along, or under, navigable waters.
	Section 5(1) of the <i>Navigable Waters Protection Act</i>	If required, approval to install a permanent access road crossing structure on, or across, navigable water.
	<i>Fisheries Act</i>	Under the MOU between the NEB and DFO, the NEB will assess potential effects of the project on fish or fish habitat and aquatic species at risk. If the NEB determines that a project could result in serious harm to fish or fish habitat, or adverse effects on species at risk, the NEB will notify DFO that a Fisheries Act authorization and/or SARA permit may be required

Table 6-1: Preliminary List of Federal Regulatory Authorizations and Departments (cont'd)

Department	Authority	Approval
Industry Canada	<i>Radio Communication Act</i>	Section 5: Radio License
Natural Resources Canada	<i>Explosives Act</i>	Section 7 and 8: Ammonium Nitrate Fuel Oil Permit, Temporary Magazine License, Explosives Transportation Permit
Transport Canada ²	<i>Canada Marine Act</i>	<ul style="list-style-type: none"> • Clearance to Enter Waters of a Port • Servitude (Easement or Right of way), Work Permit, Access Agreements • Easement, Work Permits, road rental agreements, Lease, Licence
	Quebec: <i>Federal Real Property and Federal Immovables Act</i> <i>Department of Transport Act</i>	<ul style="list-style-type: none"> • Servitude (Easement or Right-of-Way) • Work Permit • Access Agreements
	New Brunswick: <i>Federal Real Property and Federal Immovables Act</i> <i>Department of Transport Act</i>	<ul style="list-style-type: none"> • Easement • Work Permits • Road Rental Agreements • Lease • Licence
Transport Canada – Saint John Airport Inc.	<i>Federal Real Property and Federal Immovables Act</i> <i>Department of Transport Act</i>	<ul style="list-style-type: none"> • Easement • Work Permits • Road Rental Agreements • Lease • Licence
<p>Note:</p> <ol style="list-style-type: none"> 1. Fisheries and Oceans Canada (DFO). 2013. <i>Measures to Avoid Causing Harm to Fish and Fish Habitat</i>. Available at http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/index-eng.html 2. Responsibility for Transport Canada permitting was transitioned to the NEB under a Memorandum of Understanding, effective July 2013. 		

6.2 PROVINCIAL AUTHORIZATIONS

Various authorizations under provincial legislation may be required to undertake activities ancillary to, but necessary for the construction and operation of the proposed Project.

Preliminary lists of these authorizations are provided in:

- Table 6-2 for Alberta
- Table 6-3 for Saskatchewan
- Table 6-4 for Manitoba
- Table 6-5 for Ontario
- Table 6-6 for Québec
- Table 6-7 for New Brunswick

Final lists will be developed in consultation with the provincial authorities, as design and construction planning progresses.

Table 6-2: Preliminary List of Alberta Regulatory Authorizations

Department	Authority	Approval
Alberta Culture	<i>Historical Resources Act</i>	<ul style="list-style-type: none"> • Archaeological Research Permits • Historical Resources Act clearance
Alberta Energy Regulator	<i>Public Lands Act</i>	<ul style="list-style-type: none"> • Environmental Field Reports to support Surface Right Disposition Applications for Crown Land • Temporary Field Authorization (TFA) Application for Temporary Disturbances on Crown Land and additional Temporary Workspace • Easement - Department Pipeline Agreement • Helicopter landing pad (helipad) – Department Miscellaneous Lease • Access Road – Department License of Occupation • Lease – Departmental Mineral Surface Lease • Valve sites, campsites, Stockpile sites – Departmental Miscellaneous Lease
Alberta Environment and Sustainable Resource Development	<i>Wildlife Act</i>	<ul style="list-style-type: none"> • Wildlife Research Permit and Collection Licence
	<i>Fisheries Act</i>	<ul style="list-style-type: none"> • Fish Research Licence
	<i>Water Act</i>	<ul style="list-style-type: none"> • Code of Practice for watercourse crossings • Code of Practice notification for pipelines and telecommunications lines crossing a water body and for watercourse crossings • Code of Practice for the temporary diversion of water for hydrostatic testing of pipelines
	<i>Environmental Protection and Enhancement Act</i>	<ul style="list-style-type: none"> • Code of Practice Notification for the release of hydrostatic test water from hydrostatic testing of petroleum liquid and gas pipelines
Alberta Transportation	<i>Traffic Safety Act</i>	<ul style="list-style-type: none"> • Alberta Transportation County/Municipal District - Road Crossing Permit
Royal Tyrrell Museum of Palaeontology	<i>Historical Resources Act</i>	<ul style="list-style-type: none"> • Permit to Excavate Palaeontological Resources

Table 6-3: Preliminary List of Saskatchewan Regulatory Authorizations

Department	Authority	Approval
Ministry of Agriculture Crown lands	<i>Oil and Gas Conservation Act</i>	<ul style="list-style-type: none"> • Easement • Lease • Permits • Purchase
Ministry of Environment	<i>Wildlife Act</i>	<ul style="list-style-type: none"> • Scientific Research Permit
	<i>Fisheries Act</i>	<ul style="list-style-type: none"> • Special Collection Permit
	<i>Environmental Management and Protection Act</i>	<ul style="list-style-type: none"> • Permit required for release of hydrostatic test water to environment • Aquatic Habitat Protection Permit • Temporary Water Rights License
	<i>Provincial Lands Act</i>	<ul style="list-style-type: none"> • Miscellaneous Use Permit
Ministry of Parks, Culture and Sport	<i>Heritage Property Act</i>	<ul style="list-style-type: none"> • Heritage Resources Impact Assessment Permit • Heritage Resource Review Referral Form • Heritage Property Act clearance

Table 6-4: Preliminary List of Manitoba Regulatory Authorizations

Department	Authority	Approval
Manitoba Conservation and Water Stewardship	<i>Provincial Parks Act</i>	<ul style="list-style-type: none"> • Research in Provincial Parks and Park Reserves (if required) • Motor Vehicle Permit (if required) • Species at Risk Permit
	<i>Wildlife Act</i>	<ul style="list-style-type: none"> • Application for Wildlife Management Area Use Permit (if required)
	<i>Endangered Species Act</i>	<ul style="list-style-type: none"> • Species at Risk Permit
	<i>Crown Lands Act</i>	<ul style="list-style-type: none"> • Crown Land Work Permit (if required)
	<i>Manitoba Fisheries Act.</i>	<ul style="list-style-type: none"> • Live Fish Handling Permit
	<i>Water Rights Act</i>	<ul style="list-style-type: none"> • Work permit required prior to construction of any water crossings • Temporary Authorization to Withdraw Water • Authorization to Discharge Hydrostatic Test Water • Licence to Construct Water Control Works
	<i>Forest Act</i>	<ul style="list-style-type: none"> • Commercial Timber Permit

Table 6-4: Preliminary List of Manitoba Regulatory Authorizations (cont'd)

Department	Authority	Approval
Crown Lands and Property Agency	<i>Crown Lands Act</i>	<ul style="list-style-type: none"> • Easement • Lease • Permit • Purchase • License of Occupation • Exchange
Manitoba Culture, Heritage, Sport and Consumer Protection	<i>Heritage Resources Act</i>	<ul style="list-style-type: none"> • Heritage Permit to Search for or Excavate a Heritage Object • Heritage Resource Review Referral Form • Heritage Resources Act clearance
Manitoba Infrastructure and Transportation	<i>Highways Protection Act</i>	<ul style="list-style-type: none"> • Limited Access Highway Permit
Manitoba Innovation, Energy and Mines	<i>The Oil and Gas Act. C.C.S.M. c.034</i>	<ul style="list-style-type: none"> • Pipeline Construction Permit
Workplace Safety and Health Division	<i>Workplace Safety and Health Act</i>	<ul style="list-style-type: none"> • Excavation Permit

Table 6-5: Preliminary List of Ontario Regulatory Authorizations

Department	Authority	Approval
Conservation Authorities	<i>Conservation Authority Act</i>	<ul style="list-style-type: none"> • Crossing/construction locations on watercourses/wetlands/flood control areas
Ontario Ministry of the Environment	<i>Ontario Water Resources Act</i>	<ul style="list-style-type: none"> • Permit for the taking of 50,000 l/day or more of water from any one source
Ontario Ministry of Natural Resources	<i>Ontario Endangered Species Act</i>	<ul style="list-style-type: none"> • Permit for an Activity to Assist in the Protection or Recovery of a Species, to result in Overall Benefit to a Species, or that will result in Significant Economic or Social Benefit to Ontario
	<i>Fish and Wildlife Conservation Act</i>	<ul style="list-style-type: none"> • Licence to Collect fish for Scientific Purposes • Letter of Authorization under the Fish and Wildlife Conservation Act to drain a beaver pond
	<i>Public Lands Act</i>	<ul style="list-style-type: none"> • Letter of Authorizations and/or Permits for impacts to Crown land • Easement • Licence • Work Permit
Ontario Ministry of Tourism, Culture and Sport	<i>Ontario Heritage Act</i>	<ul style="list-style-type: none"> • Ontario Heritage Act clearance • Built Heritage and Cultural Heritage Landscape clearance
Ontario Ministry of Transportation	<i>Highway Traffic Act</i>	<ul style="list-style-type: none"> • Heavy/Oversize Load Transportation Permit
	<i>Public Transportation and Highway Improvement Act</i>	<ul style="list-style-type: none"> • Encroachment Permit • Building and Land Use Permit / Entrance Permit

Table 6-6: Preliminary List of Québec Regulatory Authorizations

Department	Authority	Approval
Commission de protection du territoire agricole du Québec	<i>Loi sur la protection du territoire et des activités agricoles</i> (P-41.1)	<ul style="list-style-type: none"> Authorization for all facilities (above ground and underground), permanent Right-of-Way and work areas located in agricultural zone
	<i>Loi sur l'acquisition de terres agricoles par des non-résidents</i> (A-4.1)	<ul style="list-style-type: none"> Authorization for any purchased of land located in the agricultural zone by non-resident
Ministère de la Culture et des Communication	<i>Loi sur le patrimoine culturel</i> (P-9.002)	<ul style="list-style-type: none"> Authorization for activities in protection perimeter of a designated cultural heritage building
Ministère du Développement durable, de l'Environnement, de la Faune et des Parcs	<i>Loi sur la qualité de l'environnement</i> Q-2	<ul style="list-style-type: none"> Certificate of authorization under <i>article 22</i> de la <i>Loi sur la qualité de l'environnement</i> for activities in wetlands and watercourses
	<i>Loi sur les espèces menacées et vulnérables</i> (E-12.01)	<ul style="list-style-type: none"> Authorization for activities in the habitat of a plant species designated as threatened or vulnerable
	<i>Loi sur la conservation et la mise en valeur de la faune</i> (C-61.1)	<ul style="list-style-type: none"> Authorization for activities in designated wildlife habitat
	<i>Loi sur la conservation du patrimoine naturelle</i> (C-61.01)	<ul style="list-style-type: none"> Authorization for activities in protected areas
Ministère des Ressources naturelles	<i>Loi sur les terres du domaine de l'État</i> (T-8.1)	<ul style="list-style-type: none"> Authorization for construction (general for pre-work, wood cutting, temp workspace) Servitude (Easement or Right-of-Way)
Regional County Municipalities (RCM)	<i>Loi sur les compétences municipales</i> (C-47.1)	<ul style="list-style-type: none"> Watercourse crossings under regional jurisdiction Requests to the RCM for a certificate of compliance with the RCM regulation/bylaw.
Municipalities	–	<ul style="list-style-type: none"> Requests to the municipalities for a certificate of compliance with the municipal regulation/bylaw. Crossing agreements for construction (water system, sewage system, roads)
Public and private owners of public utilities	–	<ul style="list-style-type: none"> Crossing agreements for public utilities (railways, roads, power lines, telecommunication lines, pipelines)

Table 6-7: Preliminary List of New Brunswick Regulatory Authorizations

Department	Authority	Approval
New Brunswick Department of Environment and Local Government	<i>Clean Water Act</i>	<ul style="list-style-type: none"> Watercourse and Wetland Alteration Permit (Surface Water Protection) Watershed Protected Area Designation Order (Application for an Exemption) Approval to Construct, Modify or Operate a source – effluent Approval of discharge point Approval of water supply and quality

Table 6-7: Preliminary List of New Brunswick Regulatory Authorizations (cont'd)

Department	Authority	Approval
New Brunswick Department of Environment and Local Government (cont'd)	<i>Clean Environment Act</i>	<ul style="list-style-type: none"> • Water Quality Regulation requirements (Clean Environment Act, Section 3) • Site Approval - petroleum storage and handling • Environmental Approval - petroleum storage and handling • Storage License - petroleum storage and handling • Withdrawal of Storage Tanks from Services - petroleum storage and handling • Approval to join pipes of a distribution systems of a municipal, rural or other water distribution system • Approval of any source of wastewater work or waterworks • Approval of any cease of wastewater work or waterworks
	<i>Clean Air Act</i>	<ul style="list-style-type: none"> • Approval to Construct
New Brunswick Department of Energy and Mines	<i>Quarriable Substances Act</i>	<ul style="list-style-type: none"> • Quarry Permit
New Brunswick Department of Natural Resources	<i>Forest Fires Act</i>	<ul style="list-style-type: none"> • Burning Permit • Work Permit
	<i>Crown Lands and Forests Act</i>	<ul style="list-style-type: none"> • Coastal Land Use Permit • Easement • Harvesting Permit • License of Occupation • Permanent work room agreement • Road Rental Agreements • Lease • License
New Brunswick Department of Tourism, Heritage and Culture, Archaeological Services Unit, Heritage Branch	<i>Heritage Conservation Act</i>	<ul style="list-style-type: none"> • Site Alteration Permit • Archaeological Field Research Permit • Heritage Conservation Act clearance
New Brunswick Department of Transportation and Infrastructure	<i>Highway Act</i>	<ul style="list-style-type: none"> • Culvert Installation • Highway Usage Permit • Highway Access Permit
	<i>Motor Vehicle Act</i>	<ul style="list-style-type: none"> • Oversize Load Permits • Oversize-Overweight Load Permits • Special Move Permits

6.3 REGIONAL AND MUNICIPAL APPROVALS

Energy East may require a variety of permits and authorizations from regional, municipal and other local authorities as well as from third-party utilities, railway and pipeline companies. These approvals will be confirmed as Project planning and design progress.

Typical regional, municipal and other local government approvals may include:

- electrical permits
- access road permits
- permissions to cross county and regional district roads
- water use
- health approval for industrial camps